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**BEFORE THE  
NATIONAL ENERGY BOARD**

**NORTH AMERICAN ELECTRIC )  
RELIABILITY CORPORATION )**

**PETITION OF THE  
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION  
FOR APPROVAL OF PROPOSED RELIABILITY STANDARDS  
FAC-001-1, FAC-003-3, PRC-004.21a and PRC-005-1.1b**

The North American Electric Reliability Corporation (“NERC”) hereby requests approval of the proposed Reliability Standards — FAC-001-1 – Facility Connection Requirements, FAC-003-3 – Transmission Vegetation Management, PRC-004-2.1a – Analysis and Mitigation of Transmission and Generation Protection System Misoperations and PRC-005-1.1b - Transmission and Generation Protection System Maintenance and Testing, which were approved by the NERC Board of Trustees<sup>1</sup> on February 9, 2012 and May 9, 2012.<sup>2</sup>

The proposed Reliability Standards improve reliability by addressing the application of Reliability Standards to generator interconnection Facilities (also referred to as generator tie-lines), which will allow entities to clearly understand the scope of their expected compliance responsibilities. The Reliability Standards set forth the responsibilities of those Generator Owners and Generator Operators that own or operate a

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<sup>1</sup> FAC-001-1 and PRC-004-2.1a were approved on February 9, 2012; FAC-003-3 and PRC-005-1.1b were approved on May 9, 2012.

<sup>2</sup> Unless otherwise designated, all capitalized terms shall have the meaning set forth in the Glossary of Terms Used in NERC Reliability Standards, available here: [http://www.nerc.com/files/Glossary\\_of\\_Terms.pdf](http://www.nerc.com/files/Glossary_of_Terms.pdf).

generator interconnection Facility and interface with the portion of the Bulk Electric System where Transmission Owners and Transmission Operators then take over ownership and operating responsibility.

All Bulk Power System owners, operators and users are required to register with NERC. The process for registration is described in the NERC Rules of Procedure, Section 500 and Appendix 5A. The NERC Compliance Registry is a listing of all organizations registered and therefore subject to compliance with approved Reliability Standards.

In the past, certain Generator Owners and Generator Operators with generator interconnection Facilities have been registered with NERC as Transmission Owners and Transmission Operators.<sup>3</sup> In several of these registration appeal proceedings, the Federal Energy Regulatory Commission (“FERC”) has encouraged NERC, the Regional Entities and registered entities to identify specific Reliability Standards with which Generator Owners and Generator Operators must comply if they own and/or operate generator interconnection Facilities, including transmission lines. In the instant filing, NERC is proposing approval of four Reliability Standards to be applicable to generators that would otherwise apply to the Transmission Owner and/or Transmission Operator functions. This would obviate the need to register all generators as Transmission Owners and/or Transmission Operators with respect to generator interconnection Facilities, unless individual circumstances warrant otherwise.

Application of these four Reliability Standards would ensure generators are focused on their primary functions-- to perform the duties associated with owning a

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<sup>3</sup> See e.g., *New Harquahala Generating Co., LLC*, 123 FERC ¶ 61,173 (2008); *Cedar Creek Wind Energy, LLC et al.*, 135 FERC ¶ 61,141 (2011).

generation asset, and to operate their generation equipment (including interconnection Facilities) in a reliable manner. Consistent with these considerations, the following revisions are proposed to FAC-001-1, FAC-003-3, PRC-004-2.1a and PRC-00501.1b, which would apply to all Generator Owners and Generator Operators that own or operate generator interconnection Facilities:

- FAC-001-1 requires a Generator Owner to document and publish Facility connection requirements if and when it executes an Agreement to evaluate the reliability impact of interconnecting a third party Facility to its existing generation interconnection Facility.
- FAC-003-3 requires a Generator Owner with a qualifying interconnection Facility to perform vegetation management on the qualifying Facility.
- PRC-004-2.1a makes clear that generator interconnection Facilities are also the responsibility of Generator Owners in the context of this standard.
- PRC-005-1.1b makes clear that generator interconnection Facilities are also the responsibility of Generator Owners in the context of this standard.

NERC is hereby requesting approval of the proposed Reliability Standards, the associated implementation plan, Violation Risk Factors (“VRFs”) and Violation Severity Levels (“VSLs”), and retirement of currently effective Reliability Standards as detailed below. Specifically, NERC requests approval of the following:

- Approval of the following Reliability Standards included in **Exhibit B**, effective the first day of the first calendar quarter that is one year following approval:
  - FAC-001-1
  - FAC-003-3
- Approval of the following Reliability Standards included in **Exhibit B**, effective the first day following the approval:

- PRC-004-2.1a
- PRC-005-1.1b
- Approval of the implementation plans for the Reliability Standards which are included in **Exhibit D**;
- Approval of the retirement of the following Reliability Standards, effective midnight immediately prior to the first day of the first calendar quarter that is one year following the approval of the Reliability Standards in this filing:
  - FAC-001-0
  - FAC-003-1
- Approval of the retirement of the following Reliability Standards, effective midnight immediately prior to approval of the Reliability Standards in this filing:
  - PRC-004-2a
  - PRC-005-1b

## **I. EXECUTIVE SUMMARY**

The proposed Reliability Standards represent an improvement over the currently effective standards because they ensure that there are no reliability gaps in (1) the development of Facility connection requirements when a third party requests interconnection to a Generator Owner Facility and (2) the performance of vegetation management on Bulk Electric System Facilities. The proposed Reliability Standards also clarify the responsibility for generator interconnection Facilities with respect to the analysis and mitigation of protection system misoperations and protection system maintenance and testing.

Collectively, these changes address the reliability gap regarding generator interconnection Facilities for the vast majority of Generator Owners and Generator Operators. Except as necessary on a fact-specific basis, these are the only standards that need to be applied to Generator Owners and Generator Operators to ensure the

appropriate inclusion of generator interconnection Facilities in NERC's Reliability Standards.

The submission of this filing will not have the effect of de-registering any entity from the NERC Compliance Registry. Any changes to registration will continue to be governed by the NERC Rules of Procedure and this filing does not affect the rights of any party thereunder.

## **II. NOTICES AND COMMUNICATIONS**

Notices and communications with respect to this filing may be addressed to the following:

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## **III. BACKGROUND**

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

NERC develops Reliability Standards in accordance with Section 300 (Reliability Standards Development) of its Rules of Procedure and the NERC Standard Processes

Manual.<sup>4</sup> NERC's proposed rules provide for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in developing Reliability Standards. The development process is open to any person or entity with a legitimate interest in the reliability of the bulk power system. NERC considers the comments of all stakeholders, and a vote of stakeholders and the NERC Board of Trustees is required to approve a Reliability Standard before the Reliability Standard is submitted to the applicable governmental authorities for approval. The Reliability Standards submitted herein were approved by the NERC Board of Trustees on February 9, 2012 and May 9, 2012.<sup>5</sup>

**b. History of Related FERC Orders**

FERC has addressed the issue of generator interconnection Facilities in several fact-specific orders regarding appeals of NERC registration findings.

1. New Harquahala Generating Company, LLC

The *New Harquahala* decision, *New Harquahala Generating Co., LLC*, 123 FERC ¶ 61,173 (2008) upheld the Western Electricity Coordinating Council's ("WECC") determination to register the New Harquahala Generating Company ("Harquahala") as a Transmission Owner and Transmission Operator based on Harquahala's 26-mile 500 kV interconnection facilities that connect the plant with the Hassayampa transmission substation.

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<sup>4</sup> The NERC Rules of Procedure are available here: <http://www.nerc.com/page.php?cid=1%7C8%7C169>. The current NERC Standard Processes Manual is available here: [http://www.nerc.com/files/Appendix\\_3A\\_StandardsProcessesManual\\_20120131.pdf](http://www.nerc.com/files/Appendix_3A_StandardsProcessesManual_20120131.pdf).

<sup>5</sup> FAC-001-1 and PRC-004-2.1a were approved on February 9, 2012; FAC-003-3 and PRC-005-1.1b were approved on May 9, 2012.

## 2. Cedar Creek and Milford Wind

On June 16, 2011, FERC denied the appeals of two registry decisions in which NERC found that two entities, Cedar Creek Wind Energy, LLC (“Cedar Creek”) and Milford Wind Corridor Phase I, LLC (“Milford”) were properly included on the NERC Compliance Registry as Transmission Owners (“TOs”) and Transmission Operators (“TOPs”). *Cedar Creek Wind Energy, LLC et al.*, 135 FERC ¶ 61,141 (2011)(“June 16 Order”). In the June 16 Order, FERC identified certain minimum TO and TOP standards with which Milford and Cedar Creek must comply. FERC also suggested but did not impose a list of other relevant standards, and ordered NERC, WECC, and the affected generators to negotiate whether to apply any additional standards applicable to TO and TOP entities, and directed NERC to submit a compliance filing identifying those standards. FERC asserted there would be reliability gaps for these two registered entities unless there were requirements imposed for the two wind facilities that addressed: “(1) coordination of protection systems, (2) operations and operating credentials, and (3) restoration and development and communications of system operating limits.”<sup>6</sup>

Requests for rehearing of certain aspects of FERC’s order were filed by NERC, Cedar Creek and Milford. In the order on rehearing, FERC clarified that it intended the following minimum list of Reliability Standards to apply to Milford and Cedar Creek and directed NERC and WECC to determine if any additional Reliability Standards should apply to Milford and Cedar Creek:<sup>7</sup>

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<sup>6</sup> 135 FERC ¶ 61,241 at P 63 (2011).

<sup>7</sup> *Cedar Creek Wind Energy, LLC et al.*, 137 FERC ¶ 61,141 at P 29 (2011) (“In the June 16 Order, based on the facts of those cases, we stated that Cedar Creek and Milford must comply with certain transmission owner/operator Reliability Standards and that the negotiations that FERC ordered were to

- FAC-003-1, Requirements R1, R2;
- FAC-014-2, Requirement R2;
- PER-003-1, Requirements R1, R1.1, R1.2;
- PRC-001-1, Requirements R2, R2.2, R4;
- PRC-004-1, Requirement R1;
- TOP-001, Requirement R1 and
- TOP-004-2, Requirements R6, R6.1, R6.2, R6.3, R6.4.

FERC issued an order on November 17, 2011 denying rehearing and partially granting clarification.<sup>8</sup> As in *New Harquahala*, FERC ruled that its decision was fact-specific and applied only to these two entities and that it was not making a determination with respect to all Generator Owners and Generator Operators..

On December 2, 2011, NERC, submitted a compliance filing in response to the June 16 Order identifying 68 requirements or sub-requirements of 12 Reliability Standards with which Cedar Creek and Milford will comply. This compliance filing was accepted by FERC on June 13, 2012.<sup>9</sup> FERC noted that “[t]his order does not preclude NERC from pursuing a generic approach, which NERC is pursuing through the standards development process in Project 2010-07.”<sup>10</sup> The instant filing addresses the issues considered in Project 2010-07.

### **c. History of Project 2010-07**

As part of its work on Project 2010-07—Generator Requirements at the Transmission Interface, the standard drafting team (“SDT”) reviewed 34 Reliability Standards and 102 requirements to determine what changes are necessary to close a reliability gap with respect to what is commonly known as the generator interconnection

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determine whether any *additional* Reliability Standards and Requirements should be applicable to Cedar Creek and Milford.[ June 16 Order, 135 FERC ¶ 61,241 at P 72, 88].”

<sup>8</sup> *Cedar Creek Wind Energy, LLC et al.*, 137 FERC ¶ 61,141 (2011).

<sup>9</sup> *Cedar Creek Wind Energy, LLC et al.*, 139 FERC ¶ 61,214 (2012).

<sup>10</sup> *Id.* at P 19.

Facility. Following the *New Harquahala* decision, NERC announced the formation of the Ad Hoc Group for Generator Requirements at the Transmission Interface. The Ad Hoc Group issued a report (“Ad Hoc Report”) that addressed many of the Reliability Standards and requirements reviewed by the SDT.

The Ad Hoc Report proposed a solution that was based on the introduction of two new glossary terms – Generator Interconnection Facility and Generator Interconnection Operational Interface – and the modification of five existing NERC Glossary terms – Transmission, Generator Owner, Generator Operator, Right-of-Way, and Vegetation Inspection – along with companion changes to NERC’s Statement of Compliance Registry Criteria to incorporate the changes to the definitions for Generator Owner and Generator Operator. Following the report, a Standard Authorization Request (“SAR”) was approved and a drafting team was formed to consider the recommendations of the Ad Hoc Report. The Project 2010-07 drafting team carefully considered the Ad Hoc Report’s recommendations and all industry comments submitted on the draft SAR. The proposed definitions and definition changes that formed the basis of the Ad Hoc Report were the subject of many industry comments. In many of the proposed standard changes, the Ad Hoc Report simply suggested adding references to “Generator Interconnection Facilities” to standards that were already applicable to Generator Owners or Generator Operators. The drafting team determined that these minor insertions were not necessary in the vast majority of standards, as those interconnection Facilities are inherently accounted for in a standard where a Generator Owner or Generator Operator is an applicable entity. The drafting team considered and settled on a more focused approach,

whereby a select number of Reliability Standards not currently applicable to generating entities were modified.

1. Technical Justification, Review of Suggested Reliability Standards

As noted above, the drafting team reviewed and assessed the appropriate applicability of a number of Reliability Standards, including those cited in the Ad Hoc Report and the standards raised in the June 16 Order. The proposed modifications to FAC-001, FAC-003, PRC-004, and PRC-005 Reliability Standards will result in the application of certain Reliability Standards to generators without the need to register them as Transmission Owners or Transmission Operators only as a result of sole-purpose interconnection Facilities. This will close potential reliability gaps that exist today.

The drafting team acknowledges that some Facilities used solely to connect generators to the transmission system are more complex and may therefore require individual assessment. The reliability gaps associated with such Facilities should not be addressed simply through application of all standards applicable to Transmission Owners and Transmission Operators, but instead through an assessment of the impact of such a Facility on neighboring transmission Facilities. Such assessment should then be used to determine exactly which Reliability Standards and requirements should apply to that Facility and whether additional entity registration is warranted. This assessment should, at a minimum, be based upon the output of transmission planning and operating studies used by the Reliability Coordinator, Transmission Operator and Transmission Planner in complying with applicable Reliability Standards (specifically, IRO, TOP and TPL). The following are evaluations of specific standards raised that are *not* included in this petition

and are included to provide a more complete picture of the assessments made by the drafting team in the course of Project 2010-07.

- **EOP-003-1—Load Shedding Plans** – The drafting team concluded that it was unnecessary to extend applicability of this standard to Generator Operator entities because PRC-001-1 already includes the requirement that Transmission Operators coordinate their underfrequency load shedding programs (“UFLS”) with underfrequency isolation of generating units. This coordination includes any UFLS settings of equipment owned or operated by Generator Operators. Further, there would be no load to shed on sole-use generator interconnection Facilities, so even if EOP-003-1 was applied to Generator Operators, there would be no role for the Generator Operators. In general, Generator Operators typically do not have the technical expertise or access to the data necessary for the high-level coordination that this standard requires, so even if the standard was applied to them, they may not be able to execute its requirements. For these reasons, the drafting team concluded that there was no reliability gap to address with respect to EOP-003-1.
- **EOP-005-1—System Restoration Plans** –GO blackstart requirements have already been appropriately addressed through the standards development process. EOP-005-2, which was approved by FERC in Order No. 749, will become effective in 2013, and this standard includes system restoration requirements for Generator Operators.<sup>11</sup> It would be an unnecessary use of industry and applicable governmental authority resources for the drafting team to suggest additional changes to EOP-005, when they have already been vetted and approved by the industry and the applicable governmental authorities to appropriately include Generator Operator requirements (which include generator interconnection Facilities because Generator Operators are already responsible for those Facilities). Even under the currently effective EOP-005-1, the Transmission Operator is required to coordinate its restoration plan with Generator Owners and Balancing Authorities within its area under Requirement R4.
- **FAC-014-2—Establish and Communicate System Operating Limits** – The drafting team found that this standard should not be revised to include Generator Operators. Under the versions of FAC-008-1, Requirement R1, FAC-009-1, and FAC-008-3, Requirements R1, R2, and R6, Generator Owners are already required to document the facility ratings for a generator interconnection circuit greater than 100kV. Those facility ratings must respect the most limiting applicable equipment ratings in the circuit and consider operating limitations and ambient conditions, and the ratings would be conveyed by the Generator Owner to the Generator Operator if they are not the same entity. Those voltage limits are, appropriately, set by the Transmission Owner or Transmission Operator with which the Generator Owner or Generator Operator interconnects. Therefore, the drafting team believes that adding

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<sup>11</sup> *System Restoration Reliability Standards*, Order No. 749, 134 FERC ¶ 61,215 (2011), *order on clarification*, Order Nos. 748-A and 749-A, 136 FERC ¶ 61,030 (2011).

the Generator Owner to FAC-014-2, Requirement R2, would be redundant and confuse responsibilities that are already clearly established under currently effective standards. Further, entities with a limited view (of only their Facility) should not be responsible for setting Interconnection Reliability Operating Limits or System Operating Limits, as these are interconnection and system limits. The drafting team believes this should be the responsibility of entities with a wide-area view, as shown in the standards today.

- **IRO-005-2—Reliability Coordination** – The drafting team considered the applicability of this requirement to generator entities, but PRC-001-1, Requirement R2, already requires the Generator Operator to notify reliability entities of relay or equipment failures. The drafting team believes that a Special Protection System is a form of protection system and therefore any degradation or potential failure to operate as expected would be required to be reported by the Generator Operator to reliability entities (Balancing Authorities, Transmission Operators, and Reliability Coordinators). Modifying this standard would not have been necessary, but IRO-005-2 was retired in October 2011 and replaced by IRO-005-3a. IRO-005-3a does still include a requirement related to Special Protection Systems, but as with IRO-005-2, Generator Operators do not need to be added to the standard because their handling of protection systems is already addressed in PRC-001-1, Requirement R2. IRO-005-3a will be retired when IRO-005-4 (approved by NERC’s Board of Trustees in August 2011) is approved, and IRO-005-4 has no requirements relating to Special Protection Systems. IRO-010-1a will then be the sole standard to cover those issues, in Requirements R1 and R3. While those requirements do not specifically mention Special Protection Systems, they relate to the “data specification for data and information to building and maintain models to support Real-Time monitoring, Operational Planning Analyses, and Real-Time Assessments.” If there are Special Protection Systems that exist and they impact the BES, then the Reliability Coordinator will be asking for the status and the Generator Owner or Generator Operator will be providing it.
- **PER Standards-Operating Personnel Training** – In conducting its review of all standards that might need to apply to Generator Owners and Generator Operators, the drafting team considered the requirements in PER-001-0, PER-002-0, and PER-003-1, which FERC has discussed in several orders.

FERC addressed PER-001 and PER-002 in Order Nos. 693 and 742.<sup>12</sup> In Order No. 693, FERC directed NERC to expand the applicability of the personnel training Reliability Standard, PER-002-0, to include “generator operators centrally-located at a generation control center with a direct impact on the reliable operation of the Bulk-

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<sup>12</sup> *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693 at P 1393, FERC Stats. & Regs. ¶ 31,242, *order on reh’g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007); *System Personnel Training Reliability Standards*, Order No. 742, 133 FERC ¶ 61,159 (2010), FERC Stats. & Regs. ¶ 61,762 (Nov. 18, 2010), *order on clarification*, 134 FERC ¶ 61,078 (2011).

Power System...”<sup>13</sup> In Order No. 742, FERC reaffirmed this, stating that it is "not modifying the Order No. 693 directive regarding training for certain generator operator dispatch personnel, nor are we expanding a generator operator's responsibilities."<sup>14</sup>

Centrally-located generator operators working at a generation control center typically dispatch the output from multiple generating units. As such, they can be called upon to comply with orders from their Balancing Authority that may have a significant impact on the reliable operation of the BES. Generator Operators who deal with interconnection Facilities at individual generating plants, on the other hand, typically do not receive reliability-based orders specific to the interconnection Facilities and are therefore not covered by Order 742 and thus do not appear to be a concern of FERC's. Further, the drafting team believes responsibilities are already appropriately assigned under currently effective Reliability Standards, such as TOP-001-1, Requirement R3, which requires Generator Operators to follow the directives of the appropriate Transmission Operators, so any orders passed along from the Balancing Authorities would be communicated by Transmission Operators to Generator Operators under that standard.

In its June 16 order on Milford/Cedar Creek FERC expressed concern (at PP 67, 81) that operational control over the transmission line breakers owned by the entities in question are not under the control of NERC certified operators, and that PER-003-1 should thus apply to Generator Operators. The drafting team found no evidence that the kinds of training requirements for operating the breakers of the generator interconnection facilities cited by FERC exist elsewhere for other entities that operate breakers on lines. For instance, Transmission Owners that are not also Transmission Operators are not required to undergo any sort of training.

- **PRC-001-1—System Protection Coordination** – The drafting team considered that because PRC-001-1 already applies to Generator Operators, appropriate coordination with respect to system protection is already covered under the Reliability Standard.

Requirement R2, which applies to both the Generator Operator and Transmission Operator, uses the general terms “relay or equipment failures,” which would include not only generator relaying, but generator interconnection relaying where the Generator Operator has operational responsibility for the protection system (relay or equipment). The Generator Operator is required to notify the Transmission Operator and Host Balancing Authority in R2.1 only “if a protective relay or equipment failure reduces system reliability.” Requirement R2.2 requires the affected Transmission Operator to notify its Reliability Coordinator and affected Transmission Operators and Balancing Authorities. Thus, applying R2.2 to a Generator Operator would be redundant to R2.1. The drafting team believes it is appropriate to apply R2.2 only to the “wide area” Transmission Operator because a failure on a sole-use generator

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<sup>13</sup> Order No. 693 at P 1393.

<sup>14</sup> Order No. 742 at P 84 (internal citation omitted).

interconnection Facility would not reduce system reliability. Regarding Requirement R4, the drafting team considered that a sole-use generator interconnection Facility would not constitute a major transmission line or major interconnection with neighboring Generator Operators, Transmission Operators, and Balancing Authorities. The drafting team also found that Requirement R6, which requires “area” monitoring, was more appropriate for the Transmission Operator in light of its wide area view of the system.

PRC-001 also illustrates how the different approaches used by FERC and the drafting team resolved coordination of protection systems differently. FERC found in Cedar Creek and Milford that coordination of protection systems would occur for each entity if they were registered as Transmission Owners and Transmission Operators, and if PRC-001-1, R2, R2.2, R4 and R6 applied. Since it was seeking to find what TO/TOP standards should apply to Generator Owners and Generator Operators, the drafting team found that PRC-001-1 R2.1 already applies to generators and that because they are required to notify their Transmission Operator, the coordination sought in R2.2 would occur without applying R2.2 to Generator Operator entities or registering a Generator Owner/Generator Operator as a Transmission Owner/Transmission Operator. For R4 and R6, the drafting team determined that a sole-use generator interconnection Facility does not constitute a major transmission line or major interconnection with neighboring Generator Operators, Transmission Operators, and Balancing Authorities. R6 requires “area” monitoring that is normally performed by a Transmission Operator, not a Generator Operator. The drafting team determined that “area” in the context of Reliability Standards is typically comprised of numerous Facilities, possibly not owned by the same entity, but for which there needed to be entities assigned with the responsibility to ensure operational reliability. The Balancing Authority and Transmission Operator bear responsibility for Facilities located in their respective areas and the Reliability Coordinator has oversight over its area (which could include multiple Balancing Authority and Transmission Operator areas); by this logic, there is no “area” for the Generator Operator to monitor and PRC-001-1 could not and should not apply to those entities except as it does already.

- **TOP-001-1—Reliability Responsibilities and Authority** – TOP-001-1 ensures that system operators have the authority to take actions to maintain BES Facilities within operating limits. The drafting team considered that Generator Operator responsibilities and authority are already addressed in the standard as written. The drafting team found that TOP-001-1 gives the Transmission Operator the necessary decision-making authority over operation of all generator Facilities up to the point of interconnection. TOP-001-1, Requirement R1, requires Transmission Operators to have clear responsibility and decision-making authority to “take whatever actions are needed to ensure the reliability of its area and shall exercise specific authority to alleviate operating emergencies.” TOP-001-1, Requirement R3, appropriately requires the Generator Operator to comply with reliability directives issued by the Transmission Operator “unless such actions would violate safety, equipment, regulatory or statutory requirements.” These requirements effectively give the Transmission Operator the necessary decision-making authority over operation of all

generator Facilities up to the point of interconnection. Thus, no changes to TOP-001-1 are necessary to ensure the reliability of the BES. TOP-001-2, which has been approved by NERC's Board of Trustees, addresses Transmission Operator and Generator Operator responsibilities in a similar way in Requirement R1.

- **TOP-004-2—Transmission Operations** – TOP-004-2, Requirement R6, is concerned with the formal policies and procedures to provide for coordination of activities that may impact reliability. When it comes to switching a generator interconnection Facility in and out of service, TOP-001-1, Requirement R3, already requires Generator Operators to comply with reliability directives issued by the Transmission Operator. TOP-002-2, Requirement R3 provides further back up with the Generator Owner requirement to coordinate its current-day, next-day, and seasonal operations with its Host Balancing Authority and Transmission Service Provider, which are in turn required to coordinated with their respective Transmission Operators. Thus, all appropriate coordination that might be proposed by applying TOP-004-2 to Generator Operators is already addressed in other standards. TOP-004-2 has been proposed for retirement under Project 2007-03—Real-time Transmission Operations, whose standards have been approved by the NERC Board of Trustees. Complementary standards TOP-001-1, Requirement R3 and TOP-002-2, Requirement R3 have also been proposed for retirement, but their requirements will be covered under proposed IRO-001-3 Requirements R2, R3, and R4 and proposed TOP-003-2, approved MOD-001-1a Requirements R1 and R2, and approved MOD-030-2 Requirement R3 (respectively).
- **TOP-006-1—Monitoring System Conditions** - The drafting team asserted in its discussions that there was no material difference between PRC-001-1, Requirement R1 and TOP-006-1, where the former requires knowledge of the purpose and limitations of protection system schemes applied in its area, and the latter requires knowledge of “the appropriate technical information concerning protective relays.” The reliability objective is thus achieved by compliance with PRC-001-1, Requirement R1. TOP-006-1 has been proposed for retirement under Project 2007-03—Real-time Transmission Operations, whose standards have been approved by the NERC Board of Trustees.
- **TOP-008-1—Response to Transmission Limit Violations** - The drafting team concluded that there is no reliability benefit to adding this requirement. TOP-001-1 R7 (“Each Transmission Operator and Generator Operator shall not remove Bulk Electric System facilities from service if removing those Facilities would burden neighboring systems unless...”) and its parts give the Generator Operator authority over its facilities, which would, for the Generator Operator, include the generator interconnection facility. If there is an outage, R7.1 requires the Generator Operator to notify and coordinate with its interconnecting Transmission Operator, which is required to notify the Reliability Coordinator and other affected TOPs. TOP-008-1 has been proposed for retirement under Project 2007-03—Real-time Transmission Operations, whose standards have been approved by the NERC Board of Trustees.

The appropriate coordination requirements, currently addressed in TOP-001-1 R7, are addressed in the proposed TOP-001-2 R5 and proposed TOP-003-2, R5.

**IV. JUSTIFICATION FOR APPROVAL OF THE PROPOSED RELIABILITY STANDARDS**

**a. Basis and Purpose of Reliability Standards and Improvements in this Revision**

As discussed above, the proposed Reliability Standards present a comprehensive approach to setting forth the responsibilities for the majority of Generator Owners and Generator Operators with generator interconnection Facilities. The following paragraphs explain the changes made and how the new standards improve reliability when compared to the existing standards.

**i. FAC-001-1**

FAC-001-0 was submitted on April 3, 2006. The primary purpose of proposed FAC-001-1 is to establish Facility connection and performance requirements for Transmission Owners and Generator Owners in order to avoid adverse impacts on reliability.

**Proposed Requirements**

- **R1.** The Transmission Owner shall document, maintain, and publish Facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements. The Transmission Owner's Facility connection requirements shall address connection requirements for:
  - 1.1.** Generation Facilities,
  - 1.2.** Transmission Facilities, and
  - 1.3.** End-user Facilities
  
- **R2.** Each applicable Generator Owner shall, within 45 days of having an executed Agreement to evaluate the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to

- the interconnected Transmission systems (under FAC-002-1), document and publish its Facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements.
- **R3.** Each Transmission Owner and each applicable Generator Owner (in accordance with Requirement R2) shall address the following items in its Facility connection requirements:
    - 3.1.** Provide a written summary of its plans to achieve the required system performance as described in Requirements R1 or R2 throughout the planning horizon:
      - 3.1.1.** Procedures for coordinated joint studies of new Facilities and their impacts on the interconnected Transmission systems.
      - 3.1.2.** Procedures for notification of new or modified Facilities to others (those responsible for the reliability of the interconnected Transmission systems) as soon as feasible.
      - 3.1.3.** Voltage level and MW and MVAR capacity or demand at point of connection.
      - 3.1.4.** Breaker duty and surge protection.
      - 3.1.5.** System protection and coordination.
      - 3.1.6.** Metering and telecommunications.
      - 3.1.7.** Grounding and safety issues.
      - 3.1.8.** Insulation and insulation coordination.
      - 3.1.9.** Voltage, Reactive Power, and power factor control.
      - 3.1.10.** Power quality impacts.
      - 3.1.11.** Equipment Ratings.
      - 3.1.12.** Synchronizing of Facilities.
      - 3.1.13.** Maintenance coordination.
      - 3.1.14.** Operational issues (abnormal frequency and voltages).
      - 3.1.15.** Inspection requirements for existing or new Facilities.
      - 3.1.16.** Communications and procedures during normal and emergency operating conditions.
  - **R4.** The Transmission Owner shall maintain and update its Facility connection requirements as required. The Transmission Owner shall make documentation of these requirements available to the users of the transmission system, the Regional Entity, and ERO on request (five business days).

Requirement R1 has been modified to reflect the fact that the term “Facilities” is a defined term. Requirement R2 is a new Requirement that is intended to apply to applicable Generator Owners. Requirement R3 has been modified to apply to applicable Generator Owners. There is the potential for a reliability gap if this standard is not

modified so that it applies to a Generator Owner *if and when it executes an Agreement* to evaluate the reliability impact of interconnecting a third party Facility to its existing generation interconnection Facility.

The intent of this modified language is to start the compliance clock when the Generator Owner executes an Agreement to perform the reliability assessment required in FAC-002-1. This step is expected to occur if a Generator Owner is compelled by a regulatory body to allow such interconnection. Assuming that a regulatory body would require a Generator Owner to evaluate such an interconnection request, the drafting team expects the Generator Owner and the third party to execute some form of an Agreement. The drafting team intentionally excluded a specific reference to the form of Agreement (such as a feasibility study) in deference to stakeholder suggestions to avoid comingling of commercial and reliability issues in Reliability Standards.

While the scenario described in the proposed FAC-001-1 may be rare, in the past (*e.g., Alta Wind I, LLC et al.*, 134 FERC ¶ 61,109 at P. 19 (2011) and *Sky River, LLC*, 134 FERC ¶ 61,064 at P. 13 (2011)), Generator Owners have received or have been directed to execute interconnection requests for their Facilities, and it is important to clarify the responsibilities related to such a request in NERC's Reliability Standards. While such regulatory action might also result in the Generator Owner being registered for other functions, such as Transmission Owner, Transmission Planner, and/or Transmission Service Provider, the drafting team decided the proposed revision provides appropriate reliability coverage until any additional registration is required and ensures that the standard does not impact any Generator Owner that never executes an Agreement as described in the standard.

Generator Owners have one year to comply with proposed FAC-001-1 as detailed in the implementation plan. One year is adequate for allowing Generator Owners with one or more in-place, executed interconnection Agreements to become compliant. Any Generator Owner that executes an Agreement after the standard becomes enforceable will have one year of awareness of the potential applicability of FAC-001-1, along with forty-five days after the execution of the Agreement, to document and publish its facility connection requirements.

Requirement R4 has been modified to reflect the fact that the term “Facilities” is a defined term.

**ii. FAC-003-3**

FAC-003-1 was submitted on April 3, 2006. FAC-003-2 was filed on February 2, 2012. The primary purpose of proposed FAC-003-3 is to maintain a reliable electric transmission system by using a defense-in-depth strategy to manage vegetation located on transmission rights of way and minimize encroachments from vegetation located adjacent to the right of way, thus preventing the risk of those vegetation-related outages that could lead to Cascading.

**Proposed Requirements<sup>15</sup>**

- **R1.** Each applicable Transmission Owner and applicable Generator Owner shall manage vegetation to prevent encroachments into the MVCD of its applicable line(s) which are either an element of an IROL, or an element of a Major WECC Transfer Path; operating within their Rating and all Rated Electrical Operating Conditions of the types shown below:
  1. An encroachment into the MVCD as shown in FAC-003-Table 2, observed in Real-time, absent a Sustained Outage,
  2. An encroachment due to a fall-in from inside the ROW that caused a vegetation-related Sustained Outage,

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<sup>15</sup> Internal references omitted.

3. An encroachment due to the blowing together of applicable lines and vegetation located inside the ROW that caused a vegetation-related Sustained Outage,
  4. An encroachment due to vegetation growth into the MVCD that caused a vegetation related Sustained Outage.
- **R2.** Each applicable Transmission Owner and applicable Generator Owner shall manage vegetation to prevent encroachments into the MVCD of its applicable line(s) which are not either an element of an IROL, or an element of a Major WECC Transfer Path; operating within its Rating and all Rated Electrical Operating Conditions of the types shown below:
    1. An encroachment into the MVCD, observed in Real-time, absent a Sustained Outage,
    2. An encroachment due to a fall-in from inside the ROW that caused a vegetation-related Sustained Outage,
    3. An encroachment due to blowing together of applicable lines and vegetation located inside the ROW that caused a vegetation-related Sustained Outage,
    4. An encroachment due to vegetation growth into the line MVCD that caused a vegetation-related Sustained Outage

Requirements R1 and R2 have been modified to apply to applicable Generator Owners. Proposed FAC-003-3 now requires a Generator Owner with qualifying interconnection Facilities to perform vegetation management. The current iterations of FAC-003 are only applicable to Transmission Owners, and thus Generator Owners with overhead lines are not currently required to perform any kind of vegetation management on their overhead lines. Many of these lines are less than one mile long, regularly staffed (in the sense that employees routinely walk around under the lines in the switchyard), and the lines run over a paved surface. For these lines, it is logical that Generator Owners not be required to perform vegetation management; there is no vegetation to manage.

Other generator interconnection Facilities, however, are longer than one mile and run through areas that may be densely populated with trees and other plants. When it comes to vegetation management, these lines should be treated as though they are transmission lines; the risk of outages from vegetation located on a right-of-way for a

generator-owned line is similar to the risk for Transmission Owners. Thus, these lines have been incorporated into proposed FAC-003-3 and treated the same as other transmission lines for the purposes of vegetation management. Proposed FAC-003-3 includes exception language (4.3.1) that excludes Facilities shorter than one mile with clear line of sight from the fenced area of the generating station switchyard to the point of interconnection because, as discussed above, in many cases, generation Facilities are staffed and the overhead portion is within line-of-sight or is over a paved surface. The other applicability qualifications included for Generator Owners (4.3.1.1, 4.3.1.2, and 4.3.1.3) mimic the qualifications applied to Transmission Owners (4.2.1, 4.2.2, and 4.2.3).

There are two effective dates associated with FAC-003-3. The first gives Generator Owners one year, as detailed in the implementation plan, to develop documented vegetation maintenance strategies, procedures, processes, or specifications as outlined in Requirement R3. The second effective date allows Generator Owners two years, as detailed in the implementation plan, to comply with Requirements R1, R2, R4, R5, R6, and R7. This second effective date gives Generator Owners sufficient time to begin executing the maintenance strategies, procedures, processes, or specifications documented in the first year.

These effective dates take into consideration that Generator Owners were not previously required to comply with the vegetation management standard, and should be afforded adequate time, up to two years, to do so.

**iii. PRC-004-2.1a**

PRC-004-1 was submitted on April 3, 2006. On June 6, 2011, NERC filed an interpretation of Requirements R1 and R3 of PRC-004-1 and Requirements R1 and R2 of PRC-005-1.

The primary purpose of proposed PRC-004-2.1a is to ensure that all transmission and generation Protection System Misoperations affecting the reliability of the Bulk Electric System are analyzed and mitigated. While there was no reliability gap in the previous version of the standard, if applied literally, there was the possibility for the misperception that the Generator Owner was only responsible for analyzing its generator Protection System Misoperations, exclusive of its generator interconnection Facility.

**Proposed Requirements**

- **R1.** The Transmission Owner and any Distribution Provider that owns a transmission Protection System shall each analyze its transmission Protection System Misoperations and shall develop and implement a Corrective Action Plan to avoid future Misoperations of a similar nature according to the Regional Entity's procedures.
- **R2.** The Generator Owner shall analyze its generator and generator interconnection Facility Protection System Misoperations, and shall develop and implement a Corrective Action Plan to avoid future Misoperations of a similar nature according to the Regional Entity's procedures.
- **R3.** The Transmission Owner, any Distribution Provider that owns a transmission Protection System, and the Generator Owner shall each provide to its Regional Entity, documentation of its Misoperations analyses and Corrective Action Plans according to the Regional Entity's procedures.

Requirement R2 has been modified by inserting the phrase "generator interconnection Facility." The standard drafting team generally rejected inserting the phrase "generator interconnection Facility" into the Requirements of Reliability Standards because this insertion is not typically the best method by which to add clarity,

especially when generator interconnection Facilities are already the responsibility of the Generator Owners or Generator Operators that own and operate them. However, in the case of PRC-004-2, the specific phrasing of R2 (“The Generator Owners shall analyze its generator Protection System Misoperations...”) could lead to confusion regarding whether an interconnection Facility is included. Thus, the drafting team inserted language in PRC-004-2 in order to add clarity. The change to R2 makes clear that generator interconnection Facilities are also part of Generator Owners’ responsibility in the context of this standard. Given the nature of these changes, no additional time for compliance is needed and all requirements will become effective upon approval.

**iv. PRC-005-1.1b**

PRC-005-1 was submitted on April 3, 2006.<sup>16</sup> On June 6, 2011, NERC filed an interpretation of Requirements R1 and R3 of PRC-004-1 and Requirements R1 and R2 of PRC-005-1. The primary purpose of proposed PRC-005-1.1b is to ensure that all transmission and generation Protection Systems affecting the reliability of the Bulk Electric System are maintained and tested.

**Proposed Requirements**

- **R1.** Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation or generator interconnection Facility Protection System shall have a Protection System maintenance and testing program for Protection Systems that affect the reliability of the BES. The program shall include:
  - R1.1.** Maintenance and testing intervals and their basis.
  - R1.2.** Summary of maintenance and testing procedures.
- **R2.** Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation or generator interconnection Facility Protection System shall provide documentation of its Protection System maintenance and testing program and the

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<sup>16</sup> Order No. 693 at P 1474.

implementation of that program to its Regional Entity on request (within 30 calendar days). The documentation of the program implementation shall include:

**R2.1.** Evidence Protection System devices were maintained and tested within the defined intervals.

**R2.2.** Date each Protection System device was last tested/maintained.

The proposed changes to Requirement R1 and R2 are clarifying changes. While there was no reliability gap in the previous version of the standard, if applied literally, there was the possibility for the misperception that the Generator Owner was only responsible for analyzing its generator Protection System, exclusive of its generator interconnection Facility Protection System. The changes to R1 and R2 make clear that generator interconnection Facilities are also part of Generator Owners' responsibility in the context of this standard. Given the nature of these changes, no additional time for compliance is needed and all requirements will become effective upon approval.

**b. Enforceability of the Proposed Reliability Standards**

The proposed Reliability Standards contain measures that support each standard requirement by clearly identifying what is required and how the requirement will be enforced. The VSLs also provide further guidance on the way that NERC will enforce the requirements of the standard.

i. Violation Risk Factors and Violation Severity Levels

The revisions proposed in FAC-001-1 required additional work on VRFs and VSLs, and the proposed FAC-003-3 revisions required a minor update to VSL assignments. The VRFs and VSLs for the proposed standards comport with NERC and FERC guidelines related to their assignment. For a detailed review of the VRFs, the VSLs, and the analysis of how the VRFs and VSLs were determined using these

guidelines, please see **Exhibit F**. Regarding the VSLs, they have been developed based on the situations an auditor may find during a typical compliance audit.

V. **SUMMARY OF THE RELIABILITY STANDARD DEVELOPMENT PROCEEDINGS**

The development record for proposed Reliability Standards FAC-001-1, FAC-003-3, PRC-004-2.1a, and PRC-005-1.1b is summarized below. **Exhibit E** contains the Consideration of Comments Reports created during the development of the Reliability Standards. **Exhibit G** contains the complete record of development for the standards.

**a. SAR Development**

Project 2010-07 was initiated on January 15, 2010, and revised on November 30, 2010. The SAR was initiated by the Ad Hoc Group for Generator Requirements at the Transmission Interface to address significant industry concern regarding the application of Transmission Owner and Transmission Operator requirements to the registration of Generator Owners and Generator Operators as Transmission Owners and Transmission Operators, based on the Facilities that connect the generators to the interconnected grid.

After review of comments received in response to the SAR, NERC and FERC Staff input, and additional industry input, the drafting team produced a White Paper, posted for comment from March 4, 2011 to April 4, 2011, that narrowed the scope of the project to two standards. The drafting team determined that FAC-001-1 and FAC-003-3 would move forward in the Standards Development Process for revision to address the reliability gap for interconnection Facilities of the Generator Owner and expectations for the Generator Operator in operating those Facilities. A majority of commenters agreed

with the premise of the White Paper that a limited number of changes to specific standards was preferable to developing new definitions or revising existing definitions.

#### **b. Overview of the Standard Drafting Team**

The technical expertise of the ERO is derived from the standard drafting team. For this project, the team consisted of six industry experts with expertise in a variety of fields, including civil engineering, electrical engineering and generator interconnection. Each individual is considered to be an expert in his field. Members of this standard drafting team provided a diversity of experience. A detailed set of biographical information for each of the team members is included along with the SDT roster in **Exhibit H**.

#### **c. The First Posting**

The first drafts of FAC-001-1, FAC-003-3, and FAC-003-X<sup>17</sup> were posted for a formal comment period from June 17, 2011 to July 17, 2011. Forty-three sets of comments were received, with comments from 143 different people from approximately 100 companies representing 9 of the 10 Industry Segments. Based on comments received, NERC made modifications to the standards including:

- Clarifying language in FAC-001, R2 regarding activation times to document and publish Facility connection requirements.
- Clarifying in FAC-001, R3 that only Generator Owners applicable in accordance with R2 are required to comply with the requirement

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<sup>17</sup> At the time of posting, FAC-003-1 was the current version of the standard. However, another version of the standard, FAC-003-2, was under development in a separate standards project (Project 2007-07) at the time of posting. Therefore, to account for two possible outcomes with the FAC-003 standard, the drafting team chose to make changes to two different versions of the FAC-003 standard. The drafting team chose to refer to the changes made to then-currently effective standard FAC-003-1 as FAC-003-X, and to changes made to the standard under development in Project 2010-07 as FAC-003-3 for the purposes of this project.

- Removing the Generator Owner from R4 of FAC-001 because of redundancy with R2.
- Altering the half-mile length qualifier of the line in FAC-003 to one “that extends greater than one mile beyond the fenced area of the generating station switchyard...”

Some commenters requested that NERC include for consideration those standards and requirements listed in the June 2011 Cedar Creek and Milford orders. NERC concluded that no additional changes were necessary to achieve the reliability goal of the project. As a result of this posting, NERC also proposed a minor clarifying change in PRC-004-2 with no changes to the applicability of the standard.

#### **d. The Second Posting and Initial Ballot**

The second formal comment period was held from October 5, 2011 to November 18, 2011, and included a revised version of PRC-004-2.1. A technical justification document was provided to industry along with the standards. Forty sets of comments were received from 123 different individuals from approximately 86 companies representing all ten of the NERC industry segments. In response to comments received, the drafting team made minor typographical corrections and clarifications. The drafting team also made a change to FAC-003 Part 4.3.1 to include a reference to line of sight “Overhead transmission lines that extend greater than one mile (1.609 kilometers) beyond the fenced area of the generating switchyard or do not have a clear line of sight from the switchyard fence to the point of interconnection and are...” Modifications to the standards included:

- In FAC-001-1, the drafting team corrected a typo in the Applicability section 4.2.1 to change “within” to “with”; corrected a typo in the VSLs for R3 to ensure that parts 3.1.1 through 3.1.16 were referenced, rather than just 3.1.1 through 3.1.6; and changed references to “Transmission System” to “interconnected Transmission systems” to ensure consistency with the language elsewhere in the standard and in FAC-002-1.
- In FAC-003-X and FAC-003-3, the drafting team added a clarifying reference to line of sight in the GO exemption in section 4.3.1. of both versions; corrected a typo in 4.3.1.2 of FAC-003-3; and changed “RE” to “Regional Entity” in 4.3.1 of FAC-003-X.
- The drafting team also modified FAC-003-X and FAC-003-3 Part 4.3.1 to include a reference to line of sight to clarify the exception language based on the intent that was agreed upon by the stakeholder body.
- In PRC-004-2.1, the drafting team added a reference to the generator interconnection Facility to the data retention section of the standard (for consistency with the language in R2) and corrected a typo in the Version History.

During this balloting period, the drafting team found that standard PRC-005-1a required wording changes with respect to generator interconnection Facilities to comport with changes made to PRC-004-2.1. One minority issue not resolved was the drafting team’s continuing encouragement for NERC to reexamine standards and requirements addressed in the FERC orders on Milford and Cedar Creek. In response, NERC

expanded its technical justification document to include any standard or requirement cited by the FERC orders on Milford and Cedar Creek.

An initial ballot was held from November 9, 2011 to November 18, 2011. FAC-001-1 achieved a quorum of 88.22% and an approval of 86.94%. FAC-003-3 achieved a quorum of 85.08% and an approval of 85.71%. FAC-003- achieved a quorum of 84.82% and an approval of 85.31%. PRC-004-2.1 achieved a quorum of 84.29% and an approval of 96.09%.

**e. Third Posting, Recirculation Ballot and Appeal**

A recirculation ballot of FAC-001-1, FAC-003-3, FAC-003-X, and PRC-004-2.1 was conducted from December 14, 2011 to December 23, 2011. FAC-001-1 achieved a quorum of 88.48% and an approval of 90.10%. FAC-003-3 achieved a quorum of 87.17% and an approval of 85.38%. FAC-003-x achieved a quorum of 86.91% and an approval of 85.03%. PRC-004-2.1 achieved a quorum of 86.65% and an approval of 96.43%.

On January 20, 2012, Exelon Corporation submitted a Level 1 appeal through the NERC Reliability Standards Appeals Process stating that the Standard Processes Manual had been violated in the recirculation ballot. In its appeal, Exelon contended that there was an improperly implemented, substantive change to the FAC-003-X and FAC-003-3 standards (specifically R4.3.1) regarding “line of sight” between the successive and recirculation ballot. After review, NERC’s Vice President of Standards and Training determined that changes made to the standards were in fact substantive and the Standards Development Process had been violated. As a result, the recirculation ballots for FAC-003-X and FAC-003-3 were voided and the standards were remanded to the drafting

team. However, because the appeal did not concern standards FAC-001-1 and PRC-004-2.1a, NERC was able to continue development of these standards for NERC Board of Trustees approval. From January 4, 2012 to January 13, 2012, NERC conducted a non-binding poll on FAC-001-1 VRFs and VSLs.

**f. Board of Trustees Approval of FAC-001-1 and PRC-004-2.1a**

The final drafts of FAC-001-1 and PRC-004-2.1a were presented to the NERC Board of Trustees on February 9, 2012. NERC staff provided a summary of the improvements made to the two standards, as well as a summary of minority issues and associated drafting team responses. The NERC Board of Trustees approved the standards, and NERC staff recommended that the standards be filed with applicable governmental authorities. NERC staff chose to await the ongoing development of the remainder of the standards associated with Project 2010-07, and to file with applicable governmental authorities once the project was completed.

**g. Fourth Posting – Formal Comment Period and Second Initial and Successive Ballots**

Revised Reliability Standard PRC-005-1.1a was posted for a formal comment period from March 2, 2012 to April 16, 2012. Nineteen set of comments were received, including comments from 65 different people from approximately thirty-eight companies representing nine of the ten NERC industry segments. No changes were made to the standard. An initial ballot of PRC-005-1.1a took place from April 6, 2012 to April 16, 2012, and passed with an 88.95% quorum and a 92.41% approval.

As required by NERC's Vice President of Standards and Training and the Standards Committee in response to Exelon Corporation's Level 1 appeal, the proposed FAC-003-3 and FAC-003-X were posted concurrently for a formal comment period from

March 9, 2012 to April 9, 2012. NERC received 22 sets of comments, including comments from 83 different people from approximately 76 companies representing 9 of 10 NERC industry segments. Several minor changes were made to FAC-003-X and FAC-003-3 in response to the comments received.

In FAC-003-X:

- The Applicability section was reformatted to make it clear that the standard applies on a Facility by Facility basis (as in FAC-003-3), not simply to all generator interconnection Facilities owned by a Generator Owner with at least one qualifying generator interconnection Facility.
- In the Purpose section, Right-of-Way was capitalized because it is an approved NERC glossary term and “North American Electric Reliability Council” was changed to “North American Electric Reliability Corporation.”
- Regional Entity was added back to the Applicability section of the standard. Requirement R4 was assigned to the Regional Entity, and the Project 2010-07 did not have the authority, based on the scope outlined in its SAR, to modify that requirement. Thus, Regional Entity remained in the Applicability section. In all cases, Regional Entity has been spelled out rather than referred to as “RE.”
- New boilerplate language, recently approved by NERC legal staff, was added to the Effective Dates section of the standard and the Implementation Plan.

In FAC-003-3:

- A typo was found in the Severe VSL for R2; the previous reference to “Transmission Owner” was changed to “responsible entity,” as in all other FAC-003-3 VSLs.
- New boilerplate language, recently approved by NERC legal staff, was added to the Effective Dates section of the standard and the Implementation Plan.

In the Successive Ballot conducted from March 30, 2012 to April 9, 2012, FAC-003-X achieved an 80.10% quorum and 85.01% approval, and FAC-003-3 achieved an 80.37% quorum and 85.18% approval.

#### **h. Fifth Posting – Recirculation Ballot**

Final drafts of proposed standards FAC-003-X, FAC-003-3, and PRC-005-1.1b were posted for a recirculation ballot from April 24, 2012 to May 3, 2012. FAC-003-x achieved a quorum of 81.94% and an approval of 87.32%. FAC-003-3 achieved a quorum of 81.72% and an approval of 87.34%. PRC-005-1.1a achieved a quorum of 90.44% and an approval of 93.23%.

#### **i. Board of Trustees Approval of FAC-003-3 and PRC-005-1.1b**

Final drafts of FAC-003-3<sup>18</sup> and PRC-005-1.1b were presented to the NERC Board of Trustees on May 9, 2012. NERC staff provided a summary of the improvements made to the standard, as well as a summary of minority issues and associated drafting team responses. The Board of Trustees approved the standards and recommended that they be filed with applicable regulatory authorities.

### **VI. CONCLUSION**

Accordingly, the proposed Reliability Standards should be approved because they serve the important reliability goal of ensuring that responsibility for generator interconnection Facilities is addressed the NERC Reliability Standards where necessary requirements were either absent or unclear. Collectively, these changes address the reliability gap regarding generator interconnection Facilities for the vast majority of Generator Owners and Generator Operators. They achieve that goal without generally requiring the registration of Generator Owners and Generator Operators as Transmission

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<sup>18</sup> Although FAC-003-X earned industry approval through the Standards Development Process, NERC staff presented only FAC-003-3 to the NERC Board of Trustees for Approval. FAC-003-2 was filed on February 2, 2012. In the case that FAC-003-2 and FAC-003-3 do not receive regulatory approval, NERC staff will present FAC-003-X to the NERC Board of Trustees for approval and eventual regulatory filing in order to accommodate the changes made to the FAC-003 standard in Project 2010-07.

Owners and Transmission Operators and reduce associated regulatory uncertainty. Except as necessary on a fact-specific basis, these are the only standards that need to be applied to Generator Owners and Generator Operators to ensure the appropriate inclusion of generator interconnection Facilities in NERC's Reliability Standards.

For the reasons set forth above, NERC respectfully requests:

- approval of the proposed Reliability Standards included in **Exhibit B**, effective as proposed herein;
- approval of the implementation plans included in **Exhibit D**;
- approval of the retirement of Reliability Standards, effective as proposed herein.

Respectfully submitted,

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## **EXHIBIT A**

### **Reliability Standards Criteria**

The discussion below explains how the proposed Reliability Standards have met or exceeded the reliability standards criteria:

**1. Proposed Reliability Standards are designed to achieve a specified reliability goal and contain a technically sound means to achieve that goal.**

The proposed standards achieve the specific reliability goal of addressing the application of Reliability Standards to generator interconnection Facilities which will allow entities to understand the scope of their compliance responsibilities.

**2. Proposed Reliability Standards are applicable only to users, owners and operators of the bulk power system, and are clear and unambiguous as to what is required and who is required to comply.**

The proposed revisions to these Reliability Standards apply to applicable Generator Owners and are clear and unambiguous as to what is required and who is required to comply.

**3. Proposed Reliability Standards include clear and understandable consequences and a range of penalties (monetary and/or non-monetary) for a violation.**

The proposed Reliability Standards include clear and understandable consequences.

**4. Proposed Reliability Standards identify clear and objective criterion or measure for compliance, so that they can be enforced in a consistent and non-preferential manner.**

The proposed Reliability Standards contain measures that support each requirement by clearly identifying what is required and how the requirement will be enforced. These measures, included below, help provide clarity regarding how the

requirements will be enforced, and ensure that the requirements will be enforced in a clear, consistent, and non-preferential manner and without prejudice to any party.

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

The proposed Reliability Standards achieve their reliability goals effectively and efficiently.

**6. Proposed Reliability Standards are not “lowest common denominator,” *i.e.*, do not reflect a compromise that does not adequately protect Bulk-Power System reliability.**

The proposed Reliability Standards do not reflect a “lowest common denominator” approach. To the contrary, the proposed standards represents a significant improvement over the previous version as described herein.

**7. Proposed Reliability Standards are designed to apply throughout North America to the maximum extent achievable with a single Reliability Standard while not favoring one geographic area or regional model.**

The proposed Reliability Standards apply throughout North America and do not favor one geographic area or regional model.

**8. Proposed Reliability Standards cause no undue negative effect on competition or restriction of the grid beyond any restriction necessary for reliability.**

The proposed Reliability Standards do not restrict the available transmission capability or limit use of the bulk-power system in a preferential manner.

**9. The implementation times for the proposed Reliability Standard are reasonable.**

The proposed effective dates for the standards are just and reasonable and appropriately balance the urgency in the need to implement the standards against the

reasonableness of the time allowed for those who must comply to develop necessary procedures, software, facilities, staffing or other relevant capability.

This will allow applicable entities adequate time to ensure compliance with the requirements. The proposed effective dates are explained in the proposed Implementation Plans, attached as **Exhibit D**.

**10. The Reliability Standards were developed in an open and fair manner and in accordance with the Reliability Standard development process.**

The proposed Reliability Standards were developed in accordance with NERC's ANSI- accredited processes for developing and approving Reliability Standards. Section V, *Summary of the Reliability Standard Development Proceedings*, details the processes followed to develop the standard (for a more thorough review, please see the complete development history included as **Exhibit G**).

These processes included, among other things, multiple comment periods, pre-ballot review periods, and balloting periods. Additionally, all drafting team meetings were properly noticed and open to the public. The initial and recirculation ballots both achieved a quorum and exceeded the required ballot pool approval levels.

**11. NERC explains any balancing of vital public interests in the development of proposed Reliability Standards.**

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

**12. Proposed Reliability Standards consider any other appropriate factors.**

No other negative factors relevant to whether the proposed Reliability Standards are just and reasonable were identified.

**EXHIBITS B - H**

(Available on the NERC Website at

[http://www.nerc.com/fileUploads/File/Filings/Attachments\\_GOTO\\_Filing](http://www.nerc.com/fileUploads/File/Filings/Attachments_GOTO_Filing))