



January 13, 2011

VIA ELECTRONIC FILING

Ms. Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

**Re: *North American Electric Reliability Corporation,
Docket No. RM06-16-000***

Dear Ms. Bose:

The North American Electric Reliability Corporation (“NERC”) hereby submits this petition in accordance with Section 215(d)(1) of the Federal Power Act (“FPA”) and Part 39.5 of the Federal Energy Regulatory Commission’s (“FERC”) regulations seeking approval of the following proposed Interconnection Reliability Operations and Coordination (“IRO”) standards, set forth as **Exhibit A** to this petition that were approved by the NERC Board of Trustees on November 4, 2010:

- IRO-006-5 — Transmission Loading Relief; and
- IRO-006-EAST-1 — TLR Procedure for the Eastern Interconnection.

NERC also seeks approval of a new definition for inclusion in the NERC Glossary of Terms that is included in the new standard:

- Market Flow — the total amount of power flowing across a specified Facility or set of Facilities due to a market dispatch of generation internal to the market to serve Load internal to the market.

Additionally, NERC requests FERC approval for implementation plans that call for the retirement of the following items and a new effective date, pending the approval of IRO-006-5 and IRO-006-EAST-1:

- Retirement of the term “Reallocation”;
- Retirement of IRO-006-4.1 and IRO-006-4.1 Attachment 1;
- Retirement of the regional differences within IRO-006-4.1; and
- An effective date of the first day of the first calendar quarter after the date the standards are approved by the Commission.

This filing discusses the new standards and one Glossary term, including how the standards meet the criteria identified by FERC in Order No. 672¹ for approving Reliability Standards, and the basis for the retirement of the other listed items.

This filing consists of the following:

- This transmittal letter;
- A table of contents;
- A narrative description explaining how the proposed Reliability Standards and Glossary term meet FERC’s requirements;
- Reliability Standards and Glossary term submitted for approval (**Exhibit A**);
- Reliability Standard Proposed for Retirement (**Exhibit B**);
- Implementation Plan submitted for approval (**Exhibit C**);
- Standard Drafting Team Roster (**Exhibit D**); and
- Development Record of the proposed Reliability Standards and Implementation Plans (**Exhibit E**).

Please contact me if you have any questions regarding this filing.

Respectfully submitted,

/s/ Holly A. Hawkins

Holly A. Hawkins

*Attorney for North American Electric
Reliability Corporation*

¹ See *Rules Concerning Certification of the Electric Reliability Organization; Procedures for the Establishment, Approval and Enforcement of Electric Reliability Standards*, FERC Stats. & Regs., ¶ 31,204 at PP 320-338 (“Order No. 672”), *order on reh’g*, FERC Stats. & Regs. ¶ 31,212 (2006) (“Order No. 672-A”).

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

**NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION**

**) Docket No. RM06-16-000
)**

**PETITION OF THE NORTH AMERICAN ELECTRIC RELIABILITY
CORPORATION FOR APPROVAL OF PROPOSED NEW
INTERCONNECTION RELIABILITY OPERATIONS AND COORDINATION
RELIABILITY STANDARDS, GLOSSARY TERM
AND IMPLEMENTATION PLAN**

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Exhibit A — Reliability Standards Proposed for Approval

Exhibit B — Reliability Standard Proposed for Retirement

Exhibit C — Implementation Plan Proposed for Approval

Exhibit D — Standard Drafting Team Roster

Exhibit E — Record of Development of Proposed Reliability Standards and Implementation Plans

I. INTRODUCTION

The North American Electric Reliability Corporation (“NERC”)¹ hereby requests the Federal Energy Regulatory Commission (“FERC”) to approve, in accordance with Section 215(d)(1) of the Federal Power Act (“FPA”)² and Section 39.5 of FERC’s regulations, 18 C.F.R. § 39.5 the following new Reliability Standards:

- IRO-006-5 — Transmission Loading Relief; and
- IRO-006-EAST- 1 — TLR Procedure for the Eastern Interconnection.

NERC also seeks approval of a new definition for inclusion in the NERC Glossary of Terms that is in used in the new standard:

- Market Flow- the total amount of power flowing across a specified Facility or set of Facilities due to a market dispatch of generation internal to the market to serve Load internal to the market.

Additionally, NERC requests FERC approval for an implementation plan that calls for the retirement of the following items and a new effective date, pending the approval of IRO-006-5 and IRO-006-EAST-1:

- Retirement of the term “Reallocation”
- Retirement of IRO-006-4.1 and IRO-006-4.1 Attachment 1
- Retirement of the regional differences within IRO-006-4.1
- An effective date of the first day of the first calendar quarter after the date the standards are approved by the Commission.

The NERC Board of Trustees approved the proposed new Reliability Standards, Glossary Term, and Implementation Plan on November 4, 2010. In this filing, NERC requests that FERC

¹ NERC has been certified by FERC as the electric reliability organization (“ERO”) authorized by Section 215 of the Federal Power Act. FERC certified NERC as the ERO in its order issued July 20, 2006 in Docket No. RR06-1-000. 116 FERC ¶ 61,062 (2006) (“ERO Certification Order”).

² 16 U.S.C. 824o.

approve the proposed Reliability Standards and make them effective in accordance with the implementation plan accompanying this filing.

NERC also requests that FERC approve the proposed Violation Risk Factors (“VRFs”) and Violation Severity Levels (“VSLs”) associated with the requirements proposed in this filing.

Exhibit A to this filing sets forth the proposed Reliability Standards and definitions. **Exhibit B** includes the Reliability Standard proposed for retirement. **Exhibit C** includes the Implementation Plan proposed for approval. **Exhibit D** presents the roster for the drafting team that developed the proposed Reliability Standards. **Exhibit E** contains the complete development record of the proposed Reliability Standards and Implementation Plans. NERC is also filing these proposed Reliability Standards, definition, and implementation plan with applicable governmental authorities in Canada.

II. NOTICES AND COMMUNICATIONS

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

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*Persons to be included on FERC's service list are indicated with an asterisk.

III. BACKGROUND

a. Regulatory Framework

By enacting the Energy Policy Act of 2005,³ Congress entrusted FERC with the duties of approving and enforcing rules to ensure the reliability of the Nation's bulk power system, and with the duties of certifying an ERO that would be charged with developing and enforcing mandatory Reliability Standards, subject to FERC approval. Section 215 states that all users, owners, and operators of the bulk power system in the United States will be subject to the FERC-approved Reliability Standards.

The principal purpose of the proposed Reliability Standards is to describe the implementation and coordination requirements associated with Interconnection-wide congestion management procedures. In the past, the single, continent-wide NERC standard included

³ Energy Policy Act of 2005, Pub. L. No. 109-58, Title XII, Subtitle A, 119 Stat. 594, 941 (2005 (codified at 16 U.S.C. § 824o)).

language requiring the Reliability Coordinator to utilize specific Interconnection-wide procedures, and provided details for the Eastern Interconnection procedure in an associated Appendix but only links to the procedures for use in the WECC and ERCOT Interconnections. In this version of the proposed continent-wide IRO-006-5 standard, the industry approved the elimination of requirements associated with the Interconnection-wide processes, instead providing references to those processes. This has reduced the potential for conflict between the continent-wide standard and any regional standards or procedures. Additionally, the industry approved the conversion of the Appendix that previously included the details for the Eastern Interconnection Transmission Loading Relief (TLR) procedure into an Interconnection-wide Reliability Standard, IRO-006-EAST-1, with associated Measures and Compliance information.

To resolve potential discrepancies, NERC recommends the retirement of the existing FERC-approved Reliability Standard, a Glossary term, and the associated regional differences coincident with the implementation of the proposed standards.

b. Basis for Approval of Proposed Reliability Standard

Section 39.5(a) of FERC's regulations requires the ERO to file with FERC for its approval each Reliability Standard that the ERO proposes to become mandatory and enforceable in the United States, and each modification to an approved Reliability Standard that the ERO proposes to be made effective. FERC has the regulatory responsibility to approve standards that protect the reliability of the bulk power system. In discharging its responsibility to review, approve, and enforce mandatory Reliability Standards, FERC is authorized to approve those proposed Reliability Standards that meet the criteria detailed by Congress:

The Commission may approve, by rule or order, a proposed reliability standard or modification to a reliability standard if it determines that the standard is just,

*reasonable, not unduly discriminatory or preferential, and in the public interest.*⁴

When evaluating proposed Reliability Standards, FERC is required by statute to give “due weight” to the technical expertise of the ERO. Order No. 672 provides guidance on the fifteen factors FERC will consider when determining whether proposed Reliability Standards meet the statutory criteria.⁵

The modified standards proposed in this filing serve several important reliability and policy goals:

- They clearly identify the coordination obligation between entities when Interconnection-wide procedures happen to impact transactions that transfer power from one Interconnection to another (IRO-006-5 Requirement R1).
- They move all key reliability elements of the previous standard that were intended to apply solely to Eastern Interconnection TLR into a separate Interconnection-wide Reliability Standard (IRO-006-EAST-1).
- They move all key reliability elements of the Eastern Interconnection TLR procedure that were previously in an Appendix into that same Interconnection-wide Reliability Standard (IRO-006-EAST-1).
- They eliminate the Regional Differences associated with the enhanced congestion management processes used by PJM, MISO, and SPP, instead incorporating the concept of “Market Flow” directly into the Reliability Standard (IRO-006-EAST-1). This ensures that the reliability aspects of those processes are explicitly identified and enforceable.
- They eliminate the potential for any conflict between the Continent-wide standard and any associated regional processes by removing the requirement that Reliability

⁴ Section 215(d)(2) of the FPA, 16 U.S.C. § 824o(d)(2) (2000).

⁵ Order No. 672 at PP 320-338.

Coordinators use the regional processes, instead deferring to other Interconnection-wide Reliability Standards to specify the reliability details of those processes.

c. Reliability Standards Development Procedure

NERC develops Reliability Standards in accordance with Section 300 (Reliability Standards Development) of its Rules of Procedure and the NERC *Reliability Standards Development Procedure*, which is incorporated into the Rules of Procedure as Appendix 3A. In its ERO Certification Order, FERC found that 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 and thus satisfies certain of the criteria for approving Reliability Standards.⁶

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 for submission to FERC.

The proposed Reliability Standards set out in **Exhibit A** have been developed and approved by industry stakeholders using NERC's *Reliability Standards Development Procedure*.⁷ A narrative of this process appears in section VI of this filing. These proposed Reliability Standards were approved by the NERC Board of Trustees on November 4, 2010.

⁶ Order No. 672 at PP 268, 270.

⁷ NERC's *Reliability Standards Development Procedure* is available on NERC's website at http://www.nerc.com/fileUploads/File/Standards/RSDP_V6_1_12Mar07.pdf. Note that FERC approved the new *Reliability Standards Processes Manual* on September 3, 2010 (FERC Docket No. RR10-12-000), which replaces the *Reliability Standards Development Procedure Version 7* in its entirety. The *Standards Processes Manual* was not used to develop the standard proposed in this filing because it was not yet FERC approved.

d. Progress in Improving Proposed Reliability Standards

NERC continues to develop new and revised Reliability Standards that address the issues NERC identified in its initial filing of proposed Reliability Standards on April 4, 2006, the concerns noted in the FERC Staff Report issued on May 11, 2006, and the directives FERC has made in several subsequent orders pertaining to Reliability Standards.⁸

NERC has filed with the regulatory authorities in the U.S. and Canada petitions to approve numerous Reliability Standards that were proposed as new, modified, or retired Reliability Standards, as well as several interpretations, and, in the U.S., FERC has taken action on a large number of these standards and interpretations.

IV. JUSTIFICATION FOR APPROVAL OF PROPOSED RELIABILITY STANDARDS

a. Section Overview

The discussion in this section is intended to demonstrate that the proposed Reliability Standards meet the criteria for approval established by FERC. That is, the proposed Reliability Standards are just, reasonable, not unduly discriminatory or preferential and in the public interest.⁹

The standard drafting team roster is provided in **Exhibit D**. The complete development record for the proposed Reliability Standards is available in **Exhibit E**. This extensive development record includes successive drafts of the Reliability Standards, the Implementation Plan, the ballot pool, and the final ballot results by ballot pool members, and stakeholder

⁸ *Rules Concerning Certification of the Electric Reliability Organization: Procedures for the Establishment, Approval and Enforcement of Electric Reliability Standards*, Order No. 672, 71 FR 8662 (February 17, 2006), FERC Stats. & Regs. ¶ 31,204 (2006), *order on reh'g*, Order No. 672-A, 71 FR 19814 (April 18, 2006), FERC Stats. & Regs. ¶ 31,212 (2006). (*Order 672*).

Mandatory Reliability Standards for the Bulk-Power System, 118 FERC ¶ 61,218, FERC Stats. & Regs. ¶ 31,242 (2007) (“Order No. 693”), *order on reh'g*, *Mandatory Reliability Standards for the Bulk-Power System*, 120 FERC ¶ 61,053 (“Order No. 693-A”) (2007).

⁹ *See* Order No. 672.

comments received during the development of these Reliability Standards, as well as a discussion regarding how those comments were considered in developing the Reliability Standards.

The discussion of each of the two proposed Reliability Standards presented sequentially below is followed by discussion of the standard that is recommended for retirement when the new Reliability Standards become effective. If a requirement recommended for retirement was addressed in Order No. 693, the directive has been identified, and the work done to meet the directive is described.

DISCUSSION OF IRO-006-5

NERC proposes the addition of a new standard IRO-006-5 to the current suite of FERC-approved Reliability Standards. IRO-006-5 is presented in **Exhibit A** of this filing.

a. Demonstration that the proposed Reliability Standard is just, reasonable, not unduly discriminatory or preferential and in the public interest

To approve a Reliability Standard proposed by the ERO, FERC must determine, after notice and opportunity for public hearing, that the standard is just, reasonable, not unduly discriminatory or preferential and in the public interest.¹⁰ In Order No. 672, FERC identified a number of criteria it will use to analyze Reliability Standards proposed for approval to ensure they are just, reasonable, not unduly discriminatory or preferential, and in the public interest. Consideration of how the proposed standard IRO-006-5 meets the guidelines identified by FERC in Order No. 672 as necessary to concluding a Reliability Standard meets the statutory criteria follows:

1. Proposed Reliability Standards must be designed to achieve a specified reliability goal

¹⁰ Section 215(d)(2)(A) of the FPA; 18 C.F.R. §39.5.

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

IRO-006-5 ensures that actions related to Interconnection-wide congestion management procedures are coordinated across Interconnections when such coordination is needed. In other words, if a congestion management action in one Interconnection requires action from a party in another interconnection, the responding party must either comply with the request or provide the requestor with a reliability reason why it cannot comply. This ensures that the requesting entity will have an understanding of what actions are (or are not) being taken with regard to its request, even if those actions are taking place outside what would be considered their “normal” scope of authority.

2. *Proposed Reliability Standards must contain a technically sound method to achieve the goal*

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

This reliability standard addresses a problem related to coordinated operations across Interconnections. When implementing interconnection-wide congestion management within a single Interconnection, all parties involved are operating under the same set of rules and protocols. However, when energy is scheduled over a DC tie between Interconnections that are operating asynchronously to each other, and that schedule is to be curtailed as part of an

Interconnection-wide congestion management effort, one party is being asked to honor the rules that are applicable within another Interconnection. This has the potential to cause confusion, which may lead to denial of the curtailment (which would continue to negatively affect the associated reliability problem) or the creation of scheduling error at the DC Tie (leaving one or both Interconnections operating in an unbalanced state). The industry currently uses interchange scheduling tools to minimize this potential. This requirement makes the necessary coordination a mandatory part of the process. IRO-006-5 achieves this goal by explicitly requiring either a) compliance with the request for curtailment, or b) communication to the requestor that it cannot comply with the request for a specific reliability reason.

3. *Proposed Reliability Standards must be applicable to users, owners, and operators of the bulk power system, and not others*

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

Reliability Standard IRO-006-5 applies to Reliability Coordinators and Balancing Authorities, which are entities specified in the NERC Functional Model as users, owners, and operators of the bulk power system.

4. *Proposed Reliability Standards must be clear and unambiguous as to what is required and who is required to comply*

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

The single requirement in IRO-006-5 is clear in identifying the required performance (what) and the responsible entity (who). The performance required of users, owners, and operators of the bulk power system is specified in Requirement R1 of the proposed standard:

- R1. Each Reliability Coordinator and Balancing Authority that receives a request pursuant to an Interconnection-wide transmission loading relief procedure (such as Eastern Interconnection TLR, WECC Unscheduled Flow Mitigation, or congestion management procedures from the ERCOT Protocols) from any Reliability Coordinator, Balancing Authority, or Transmission Operator in another Interconnection to curtail an Interchange

Transaction that crosses an Interconnection boundary shall comply with the request, unless it provides a reliability reason to the requestor why it cannot comply with the request.

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

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

NERC has assigned a VRF and a set of VSLs to the requirement. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.¹¹ The table below shows the VRF and VSLs resulting in the indicated range of penalties for violations of the one requirement in the proposed IRO-006-5 standard. The proposed VSL is consistent with the Commission’s VSL guidelines addressed in the VSL Orders issued on June 19, 2008 and November 20, 2008.¹²

| R# | VRF | VSL Lower | VSL Moderate | VSL High | VSL Severe |
|----|------|-----------|--------------|----------|---|
| R1 | High | | | | The responsible entity received a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority, or Transmission Operator, but the entity neither complied with the request, nor provided a reliability reason why it could not comply with the request. |

¹¹ See http://www.nerc.com/files/Appendix4B_Sanctions_Guidelines_Effective_20080115.pdf

¹² *North American Electric Reliability Corp.*, 123 FERC ¶ 61,284 (2008) (“June VSL Order”), *order on reh’g, North American Electric Reliability Corp.*, 125 FERC ¶ 61,212 (2008) (“November VSL Order”).

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

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

The proposed Reliability Standard identifies clear and objective criteria in the language of the requirement so that that the standard can be enforced in a consistent and non-preferential manner. The language in the requirement is unambiguous with respect to the applicable entity expectations. The single requirement of IRO-006-5 has a single associated measure of compliance that will assist those enforcing the standard in enforcing it in a consistent and non-preferential manner. The proposed measure is as follows:

M1. Each Reliability Coordinator and Balancing Authority shall provide evidence (such as dated logs, voice recordings, Tag histories, and studies, in electronic or hard copy format) that, when a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure was made from another Reliability Coordinator, Balancing Authority, or Transmission Operator in that other Interconnection, it complied with the request or provided a reliability reason why it could not comply with the request (R1).

7. Proposed Reliability Standards should achieve a reliability goal effectively and efficiently, but do not necessarily have to reflect “best practices” without regard to implementation cost

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

The standard has been developed with consideration of implementation cost. Current practices have not been changed; accordingly, implementation costs are expected to be low while achieving the reliability goals expected of the standard effectively and efficiently.

8. Proposed Reliability Standards cannot be “lowest common denominator,” i.e., cannot reflect a compromise that does not adequately protect bulk power system reliability

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

The standard does not aim at “lowest common denominator.” The proposed IRO-006-5 continues an obligation established in previous versions of the standard (most recently, in IRO-006-4.1a Requirements R3 and R4). As such, no compromise has been made against the requirements that have been previously approved by the Commission. It should be noted, however, that some of the requirements previously included in the currently effective IRO-006-4.1a standard are now being proposed for inclusion in the new IRO-006-EAST-1 standard, as their applicability is more appropriate at the Interconnection level. Additionally, the proposed standard eliminates IRO-006-4.1a Requirement R5, as it simply required entities to adhere to mandatory standards regarding applicable Interchange scheduling to which they are already required to adhere.

9. *Proposed Reliability Standards may consider costs to implement for smaller entities but not at consequence of less than excellence in operating system reliability*

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

The proposed Reliability Standard does not reflect any differentiation in requirements based on size. All applicable entities are Reliability Coordinators or Balancing Authorities, both of which are already required to have the communication equipment necessary to implement this requirement. Given these already established minimum levels of capability, the proposed

standard will have little or no impact on cost, and therefore will not achieve less than excellence in operating system reliability based on cost considerations for smaller entities.

10. Proposed Reliability Standards must be designed to apply throughout North America to the maximum extent achievable with a single Reliability Standard while not favoring one area or approach

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

The requirement in this standard applies throughout North America, with no exceptions.

It is intended to work in tandem with three other standards – the Eastern Interconnection standard IRO-006-EAST-1 (included in this filing), the Western Interconnection standard IRO-006-WECC-1 (currently filed and pending with the Commission), and the Texas Interconnection standard (currently in development within TRE, and tentatively titled IRO-006-TRE-1).

11. Proposed Reliability Standards should cause no undue negative effect on competition or restriction of the grid

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

While the standard may intentionally restrict the grid and may at times have negative impacts on commercial operations, it does so to ensure the overall reliability of the Bulk Power System. Accordingly, there is no undue negative effect on competition or restriction of the grid.

12. The implementation time for the proposed Reliability Standards must be reasonable

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

The proposed Implementation Plan (*see Exhibit C*) does not allow a lengthy time period for entities to become fully compliant. NERC believes the standard makes no changes to current practice, and therefore can be implemented in the United States within one calendar quarter of receiving Commission approval.

13. The Reliability Standard development process must be open and fair

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

NERC develops Reliability Standards in accordance with Section 300 (Reliability Standards Development) of its Rules of Procedure and the NERC *Reliability Standards Development Procedure*,¹³ which was incorporated into the Rules of Procedure as Appendix 3A. In its ERO Certification Order, FERC found that 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

¹³ *Reliability Standards Development Procedure* is available on NERC's website at http://www.nerc.com/fileUploads/File/Standards/RSDP_V6_1_12Mar07.pdf. Note that FERC approved the new *Reliability Standards Processes Manual* on September 3, 2010 (FERC Docket No. RR10-12-000), which replaces the *Reliability Standards Development Procedure Version 7* in its entirety. The *Standards Processes Manual* was not used to develop the standard proposed in this filing because it was not yet FERC approved.

approve a Reliability Standard for submission to FERC. The drafting team developed this standard by following the *Reliability Standards Development Procedure*, without exception.

14. Proposed Reliability Standards must balance with other vital public interests

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

The standard does not conflict with any identified vital public interests.

15. Proposed Reliability Standard must not conflict with prior FERC Rules or Orders.

Order No. 672 at P 444. *a potential conflict between a Reliability Standard under development and a Transmission Organization function, rule, order, tariff, rate schedule, or agreement accepted, approved, or ordered by the Commission should be identified and addressed during the ERO's Reliability Standard Development Process.*

The standard does not conflict with any prior FERC Rules or Orders.

16. Proposed Reliability Standards must consider any other relevant factors

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

Order No. 672 at P 337. *In applying the legal standard to review of a proposed Reliability Standard, the Commission will consider the general factors above. The ERO should explain in its application for approval of a proposed Reliability Standard how well the proposal meets these factors and explain how the Reliability Standard balances conflicting factors, if any. The Commission may consider any other factors it deems appropriate for determining if the proposed Reliability Standard is just and reasonable, not unduly discriminatory or preferential, and in the public interest. The ERO applicant may, if it chooses, propose other such general factors in its ERO application and may propose additional specific factors for consideration with a particular proposed Reliability Standard.*

No other factors for FERC's consideration were identified in the development of these proposed Reliability Standards.

DISCUSSION OF IRO-006-EAST-1

NERC proposes the addition of a new Reliability Standard IRO-006-EAST-1 to the current suite of FERC-approved Reliability Standards. IRO-006-EAST-1 is presented in **Exhibit A** of this filing.

a. Demonstration that the proposed reliability standard is just, reasonable, not unduly discriminatory or preferential and in the public interest

In order to approve a Reliability Standard proposed by the ERO, FERC must determine, after notice and opportunity for public hearing, that the standard is just, reasonable, not unduly discriminatory or preferential and in the public interest.¹⁴ In Order No. 672, FERC identified a number of criteria it will use to analyze Reliability Standards proposed for approval to ensure they are just, reasonable, not unduly discriminatory or preferential, and in the public interest.

Discussion regarding how the proposed IRO-006-EAST-1 standard meets the guidelines identified by FERC in Order No. 672 as necessary to concluding a Reliability Standard meets the statutory criteria follows.

1. Proposed Reliability Standards must be designed to achieve a specified reliability goal

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

IRO-006-EAST-1 is designed to provide an Interconnection-wide transmission loading relief procedure (TLR) for the Eastern Interconnection that can be used to prevent and/or mitigate potential or actual System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) exceedances to maintain reliability of the Bulk Electric System (BES).

¹⁴ Section 215(d)(2)(A) of the FPA; 18 C.F.R. §39.5.

2. Proposed Reliability Standards must contain a technically sound method to achieve the goal

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

This standard provides clear guidance on the actions a Reliability Coordinator must undertake when implementing Interconnection-wide congestion management in the Eastern Interconnection. While system operators can control how much electricity is generated and with which generator it is produced, electricity will flow based on consumption at a given moment, and the electrical characteristics of the system and topology of the system at that moment. To some extent, and in certain areas, this control is augmented by the ability to also direct controllable demand side resources to consume, or not consume load through various programs. Accordingly, various parts of the country have developed methods for addressing the transmission congestion that can develop due to the flow of electricity. These methods all deal with changing generation dispatch, topology, or demand to ensure that power flows approaching or exceeding reliability limits can be appropriately managed. In some cases, such actions can be taken locally (within the Balancing Authority, region, or sub-region) to actively manage the constraint. In others, entities outside the local area but still within the same Interconnection are causing or contributing to these energy flows. In these cases, Reliability Coordinators invoke Interconnection-wide congestion management procedures to manage the congestion.

IRO-006-EAST-1 lists the specific reliability actions to initiate and respond to a request for Interconnection-wide congestion management. The first requirement was developed in recognition of the August 14 Blackout Report, which noted that TLR should not be considered as

a timely way to mitigate an actual IROL exceedance.¹⁵ The second requirement describes the need to identify actions and urgency related to the invocation of the procedure. The third requirement addresses the communication of those actions to other Reliability Coordinators. The fourth requirement mandates that Reliability Coordinators receiving requests to take actions under the authority of this standard must take such actions or take alternate actions. Together, these requirements ensure that the Eastern Interconnection procedures for Interconnection-wide congestion management are implemented at appropriate times, that the resultant actions desired are communicated, and that those actions are undertaken in a timely manner when necessary. The actions described in IRO-006-EAST-1 are consistent with the processes currently used in the Eastern Interconnection, and properly achieve the stated goal of the standard.

3. Proposed Reliability Standards must be applicable to users, owners, and operators of the bulk power system, and not others

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

Reliability Standard IRO-006-EAST-1 applies to Reliability Coordinators in the Eastern Interconnection and no others. The Reliability Coordinator is one of the entities specified in the NERC Functional Model, and the proposed Reliability Standard is therefore only applicable to users, owners, and operators of the bulk power system.

4. Proposed Reliability Standards must be clear and unambiguous as to what is required and who is required to comply

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

¹⁵ See Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations (<http://www.nerc.com/filez/blackout.html>)

Each of the requirements is clear in identifying the required performance (what) and the responsible entity (who) required to comply with the standard. Requirements R1 through R4 of the proposed standard clearly identify the applicable entities and what is expected.

- R1. When acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T_V , each Reliability Coordinator shall initiate, prior to or concurrently with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated), one or more of the following actions:
- Inter-area redispatch of generation
 - Intra-area redispatch of generation
 - Reconfiguration of the transmission system
 - Voluntary load reductions (e.g., Demand-side Management)
 - Controlled load reductions (e.g., load shedding)
- R2. To ensure operating entities are provided with information needed to maintain an awareness of changes to the Transmission System, when initiating the Eastern Interconnection TLR procedure to prevent or mitigate an SOL or IROL exceedance, and at least every clock hour (with the exception of TLR-1, where an hourly update is not required) after initiation up to and including the hour when the TLR level has been identified as TLR Level 0, the Reliability Coordinator shall identify:
- 2.1. A list of congestion management actions to be implemented, and
 - 2.2. One of the following TLR levels: TLR-1, TLR-2, TLR-3A, TLR-3B, TLR-4, TLR-5A, TLR-5B, TLR-6, TLR-0 1
- R3. Upon the identification of the TLR level and a list of congestion management actions to be implemented, the Reliability Coordinator initiating this TLR procedure shall:
- 3.1. Notify all Reliability Coordinators in the Eastern Interconnection of the identified TLR level
 - 3.2. Communicate the list of congestion management actions to be implemented to 1) all Reliability Coordinators in the Eastern Interconnection, and 2) those Reliability Coordinators in other Interconnections responsible for curtailing Interchange Transactions crossing Interconnection boundaries identified in the list of congestion management actions.
 - 3.3. Request that the congestion management actions identified in Requirement R2, Part 2.1 be implemented by:
 - 1.) Each Reliability Coordinator associated with a Sink Balancing Authority for which Interchange Transactions are to be curtailed,
 - 2.) Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which Network

Integration Transmission Service or Native Load is to be curtailed, and

- 3.) Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which its Market Flow is to be curtailed.

R4. Each Reliability Coordinator that receives a request as described in Requirement R3, Part 3.3. shall, within 15 minutes of receiving the request, implement the congestion management actions requested by the issuing Reliability Coordinator as follows:

- Instruct its Balancing Authorities to implement the Interchange Transaction schedule change requests.
- Instruct its Balancing Authorities to implement the Network Integration Transmission Service and Native Load schedule changes for which the Balancing Authorities are responsible.
- Instruct its Balancing Authorities to implement the Market Flow schedule changes for which the Balancing Authorities are responsible.
- If an assessment shows that one or more of the congestion management actions communicated in Requirement R3, Part 3.3 will result in a reliability concern or will be ineffective, the Reliability Coordinator may replace those specific actions with alternate congestion management actions, provided that:
 - The alternate congestion management actions have been agreed to by the initiating Reliability Coordinator, and
 - The assessment shows that the alternate congestion management actions will not adversely affect reliability.

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

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

Each requirement, in its entirety, is assigned a single VRF and a single set of VSLs.

These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines. The table below shows the VRFs and VSLs, resulting in the indicated range of penalties for violations. The proposed VRFs and VSLs are consistent with the

Commission’s VSL guidelines as addressed in the VSL Orders issued on June 19, 2008 and November 20, 2008.¹⁶

| R# | VRF | VSL Lower | VSL Moderate | VSL High | VSL Severe |
|----|--------|--|---|---|--|
| R1 | High | | | | When acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL’s Tv, the Reliability Coordinator did not initiate one or more of the actions listed under R1 prior to or in conjunction with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated). |
| R2 | Medium | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take as | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take as | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take as specified by the requirement for three clock hours during the period |

¹⁶ *North American Electric Reliability Corp.*, 123 FERC ¶ 61,284 (2008) (“June VSL Order”), *order on reh’g*, *North American Electric Reliability Corp.*, 125 FERC ¶ 61,212 (2008) (“November VSL Order”).

| | | | | | |
|----|--------|---|---|--|---|
| | | as specified by the requirement for one clock hour during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | specified by the requirement for two clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | specified by the requirement for three clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | from initiation up to the hour when the TLR level was identified as TLR Level 0. |
| R3 | Medium | The initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level (3.1). | | The initiating Reliability Coordinator did not communicate the list of congestion management actions to one or more of the Reliability Coordinators listed in Requirement R3, Part 3.2. OR The initiating Reliability Coordinator requested some, but not all, of the Reliability Coordinators identified in Requirement R3, Part 3.3 to implement the identified congestion management actions. | The initiating Reliability Coordinator requested none of the Reliability Coordinators identified in Requirement R3, Part 3.3 to implement the identified congestion management actions. |
| R4 | High | | | | The responding Reliability |

| | | | | | |
|--|--|--|--|--|---|
| | | | | | <p>Coordinator did not, within 15 minutes of receiving a request, either 1.) implement all the requested congestion management actions, or 2.) implement none or some of the requested congestion management actions and replace the remainder with alternate congestion management actions, provided that: assessment showed that the actions replaced would have resulted in a reliability concern or would have been ineffective, the alternate congestion management actions were agreed to by the initiating Reliability Coordinator, and assessment determined that the alternate congestion management actions would not adversely affect reliability.</p> |
|--|--|--|--|--|---|

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

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

The proposed Reliability Standard identifies clear and objective criteria in the language of the requirement so that that the standard can be enforced in a consistent and non-preferential manner. The language in the requirements is unambiguous with respect to the applicable entity expectations. Additionally, each requirement of IRO-006-EAST-1 has an associated measure of compliance that will assist those enforcing the standard in enforcing it in a consistent and non-preferential manner. The proposed measures are as follows:

- M1. Each Reliability Coordinator shall provide evidence (such as dated logs, voice recordings, or other information in electronic or hard-copy format) that when acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's Tv, the Reliability Coordinator initiated one or more of the actions listed in R1 prior to or concurrently with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated)(R1).
- M2. Each Reliability Coordinator shall provide evidence (such as dated logs, voice recordings, or other information in electronic or hard-copy format) that at the time it initiated the Eastern Interconnection TLR procedure, and at least every clock hour after initiation up to and including the hour when the TLR level was identified as TLR Level 0, the Reliability Coordinator identified both the TLR Level and a list of congestion management actions to be implemented (R2).
- M3. Each Reliability Coordinator shall provide evidence (such as dated logs, voice recordings, or other information in electronic or hard-copy format) that after it identified a TLR level and a list of congestion management actions to take, it 1.) notified all Reliability Coordinators in the Eastern Interconnection of the TLR Level, 2.) communicated the list of actions to all Reliability Coordinators in the Eastern Interconnection and those Reliability Coordinators in other Interconnections responsible for curtailing Interchange Transactions crossing Interconnection boundaries identified in the list of congestion management actions, and 3.) requested the Reliability Coordinators identified in Requirement R3 Part 3.2 to implement the congestion management actions identified in Requirement R2 Part 2.1 (R3).

M4. Each Reliability Coordinator shall provide evidence (such as dated logs, voice recordings, or other information in electronic or hard-copy format) that within fifteen minutes of the receipt of a request as described in R3, the Reliability Coordinator complied with the request by either 1.) implementing the communicated congestion management actions requested by the issuing Reliability Coordinator, or 2.) implementing none or some of the communicated congestion management actions requested by the issuing Reliability Coordinator, and replacing the remainder with alternate congestion management actions if assessment showed that some or all of the congestion management actions communicated in R3 would have resulted in a reliability concern or would have been ineffective, the alternate congestion management actions were agreed to by the initiating Reliability Coordinator, and assessment showed that the alternate congestion management actions would not adversely affect reliability (R4).

7. *Proposed Reliability Standards should achieve a reliability goal effectively and efficiently — but do not necessarily have to reflect “best practices” without regard to implementation cost*

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

The standard has been developed with consideration of implementation cost. Current practices have not been changed; accordingly, implementation costs are expected to be low while achieving the reliability goals expected of the standard effectively and efficiently.

8. *Proposed Reliability Standards cannot be “lowest common denominator,” i.e., cannot reflect a compromise that does not adequately protect bulk power system reliability*

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

The methods in the standard do not employ a “lowest common denominator” approach. The proposed IRO-006-EAST-1 continues obligations that were established in previous versions of the standard (most recently, in IRO-006-4.1 Requirements R1, R2, and R3 and Attachment 1).

As such, no compromise has been made relative to the requirements that have been previously approved by the Commission.

9. *Proposed Reliability Standards may consider costs to implement for smaller entities but not at consequence of less than excellence in operating system reliability*

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

The proposed Reliability Standard does not reflect any differentiation in requirements based on size, and all applicable entities are Reliability Coordinators (which by definition require a wide-area view and sufficient monitoring capability to meet that requirement). Given these already established minimum levels of capability, the proposed standard will have little or no impact on cost, and therefore will not achieve less than excellence in operating system reliability based on cost considerations for smaller entities.

10. *Proposed Reliability Standards must be designed to apply throughout North America to the maximum extent achievable with a single Reliability Standard while not favoring one area or approach*

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

The requirements in this Reliability Standard apply to Reliability Coordinators in the Eastern Interconnection. Unlike most NERC standards, this standard deals with requirements on an Interconnection-wide basis, rather than a Regional or continent-wide basis. It is within the

scope of the ERO to develop standards that apply on an Interconnection wide, basis, as it helps ensure uniformity in inter-regional operations.

11. Proposed Reliability Standards should cause no undue negative effect on competition or restriction of the grid

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

While the standard may intentionally restrict the grid and may at times have negative impacts on commercial operations, it does so to ensure the overall reliability of the Bulk Power System, which is clearly in the public interest. Accordingly, there is no undue negative effect on competition or restriction of the grid.

12. The implementation time for the proposed Reliability Standards must be reasonable

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

The Implementation Plan (see **Exhibit C**) does allow an appropriate time period for entities to become fully compliant balancing both urgency and reasonableness. The standard makes no changes to current practice, and therefore can be implemented in the Eastern Interconnection within one calendar quarter of Commission approval.

13. The Reliability Standard Development Process must be open and fair

Order No. 672 at P 334. *Further, in considering whether a proposed Reliability Standard meets the legal standard of review, we will entertain comments about whether the ERO implemented its Commission-approved Reliability Standard development process for the development of the particular proposed Reliability Standard in a proper manner, especially whether the process was open and fair. However, we caution that we will not be sympathetic to arguments by interested parties that choose, for whatever reason, not to participate in the ERO's Reliability Standard*

development process if it is conducted in good faith in accordance with the procedures approved by the Commission.

Through NERC, the industry develops Reliability Standards in accordance with Section 300 (Reliability Standards Development) of the FERC approved Rules of Procedure and the NERC *Reliability Standards Development Procedure*,¹⁷ which was incorporated into the Rules of Procedure as Appendix 3A. In its ERO Certification Order, FERC found that 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 for submission to FERC. The drafting team developed this standard by following the Reliability Standards development process.

14. Proposed Reliability Standards must balance with other vital public interests

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

The Reliability Standard does not conflict with any identified vital public interests.

15. Proposed Reliability Standards must not conflict with prior FERC Rules or Orders

Order No. 672 at P 444. *a potential conflict between a Reliability Standard under development and a Transmission Organization function, rule, order, tariff, rate schedule, or agreement accepted, approved, or ordered by the Commission should be identified and addressed during the ERO's Reliability Standard Development Process.*

The standard does not conflict with any prior FERC Rules or Orders.

¹⁷ *Reliability Standards Development Procedure* is available on NERC's website at http://www.nerc.com/fileUploads/File/Standards/RSDP_V6_1_12Mar07.pdf. Note that FERC approved the new *Reliability Standards Processes Manual* on September 3, 2010 (FERC Docket No. RR10-12-000), which replaces the *Reliability Standards Development Procedure Version 7* in its entirety. The *Standards Processes Manual* was not used to develop the standard proposed in this filing because it was not yet FERC approved.

16. Proposed Reliability Standards must consider any other relevant factors

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

Order No. 672 at P 337. *In applying the legal standard to review of a proposed Reliability Standard, the Commission will consider the general factors above. The ERO should explain in its application for approval of a proposed Reliability Standard how well the proposal meets these factors and explain how the Reliability Standard balances conflicting factors, if any. The Commission may consider any other factors it deems appropriate for determining if the proposed Reliability Standard is just and reasonable, not unduly discriminatory or preferential, and in the public interest. The ERO applicant may, if it chooses, propose other such general factors in its ERO application and may propose additional specific factors for consideration with a particular proposed Reliability Standard.*

NERC considered this requirement and cannot identify any other factors for FERC's consideration in the development of these proposed standards.

b. Violation Risk Factor and Violation Severity Level Assignments

The proposed Reliability Standard includes VRFs and VSLs. The ranges of penalties for violations are based on the applicable VRF and VSLs and will be administered based on the sanctions table and supporting penalty determination process described in the FERC-approved NERC Sanction Guidelines, included as Appendix 4B in NERC's Rules of Procedure. Each requirement, in its entirety, has an associated VRF and a set of VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

Assignment of Violation Risk Factors

The TLR Standard Drafting Team applied the following criteria when proposing VRFs for the requirements in IRO-006-5.

High Risk Requirement

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

Medium Risk Requirement

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

Lower Risk Requirement

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.¹⁸

The team also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:¹⁹

Guideline (1) — Consistency with the Conclusions of the Final Blackout Report

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

¹⁸ These three levels of risk are defined by NERC and recognized by FERC in the May 18, 2007 Order at P9, and the November 16, 2007 Order at Appendix A.

¹⁹ North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 (2007) (“VRF Rehearing Order”).

In the VRF Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:²⁰

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

Guideline (2) — Consistency within a Reliability Standard

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

Guideline (3) — Consistency among Reliability Standards

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

Guideline (4) — Consistency with NERC’s Definition of the Violation Risk Factor Level

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

Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation

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

The following discussion addresses how the drafting team considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that

²⁰ *Id.* at n. 15.

encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The team believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

There is one requirement in IRO-006-5:

- R1. Each Reliability Coordinator and Balancing Authority that receives a request pursuant to an Interconnection-wide transmission loading relief procedure (such as Eastern Interconnection TLR, WECC Unscheduled Flow Mitigation, or congestion management procedures from the ERCOT Protocols) from any Reliability Coordinator, Balancing Authority, or Transmission Operator in another Interconnection to curtail an Interchange Transaction that crosses an Interconnection boundary shall comply with the request, unless it provides a reliability reason to the requestor why it cannot comply with the request.
[Violation Risk Factor: High] [Time Horizon: Real-time Operations]

• **VRF for IRO-006-5, Requirement R1:**

- FERC’s Guideline 2 — because there is only one requirement in this standard, the VRF application is by default consistent within the standard.
- FERC’s Guideline 3 — the assignment of the VRF is consistent with the VRFs in the related Interconnection-wide standard, IRO-006-EAST-1.
- FERC’s Guideline 4 — because this is a real-time requirement that reinforces an operator action directly related to preventing or mitigating a potential or actual SOL or IROL violation, there is potential that a violation could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures. This criteria establishes the VRF for this requirement as “High.”
- FERC’s Guideline 5 —the requirement does not co-mingle more than one obligation. Additionally, the VRF is already set at “High,” and can be raised no further.

There are four requirements in IRO-006-EAST-1:

- R1. When acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL’s T_V , each Reliability Coordinator shall initiate, prior to or concurrently with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this

procedure if already initiated), one or more of the following actions: [Violation Risk Factor: High] [Time Horizon: Real-time Operations]

- Inter-area redispatch of generation
- Intra-area redispatch of generation
- Reconfiguration of the transmission system
- Voluntary load reductions (e.g., Demand-side Management)
- Controlled load reductions (e.g., load shedding)

- **VRFs for IRO-006-EAST-1, Requirements R1**

- FERC’s Guideline 2 — the assignment of the VRF is consistent with the VRFs in the other requirements in the standard.
- FERC’s Guideline 3 — the assignment of the VRF is consistent with the VRFs in the related Interconnection-wide standard, IRO-006-5.
- FERC’s Guideline 4 — because this is a real-time requirement that reinforces an operator action directly related to preventing or mitigating a potential or actual SOL or IROL violation, there is potential that a violation could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures. This criteria establishes the VRF for this requirement as “High.”
- FERC’s Guideline 5 — the requirement does not co-mingle more than one obligation. Additionally, the VRF is already set at “High,” and can be raised no further.

- R2. To ensure operating entities are provided with information needed to maintain an awareness of changes to the Transmission System, when initiating the Eastern Interconnection TLR procedure to prevent or mitigate an SOL or IROL exceedance, and at least every clock hour (with the exception of TLR-1, where an hourly update is not required) after initiation up to and including the hour when the TLR level has been identified as TLR Level 0, the Reliability Coordinator shall identify: [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]
 - 2.1. A list of congestion management actions to be implemented, and
 - 2.2. One of the following TLR levels: TLR-1, TLR-2, TLR-3A, TLR-3B, TLR-4, TLR-5A, TLR-5B, TLR-6, TLR-0 1

- **VRFs for IRO-006-EAST-1, Requirements R2**

- FERC’s Guideline 2 — the assignment of the VRF is consistent with the VRFs in the other requirements in the standard.
- FERC’s Guideline 3 — the assignment of the VRF is consistent with the VRFs in the related Interconnection-wide standard, IRO-006-5.

- FERC’s Guideline 4 — while this is a real-time requirement that is related to preventing or mitigating a potential or actual SOL or IROL exceedance, the requirement itself is only a list of potential actions that can be taken. To the extent the Reliability Coordinator does not undertake this action consistently as described in the requirement, it does not hinder or prevent them from taking action to mitigate or prevent the related exceedance. Accordingly, a violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. This criteria establishes the VRF for this requirement as “Medium.”
 - FERC’s Guideline 5 — while the requirement co-mingles more than one obligation, neither obligation exceeds the criteria for a “Medium” VRF.
- R3. Upon the identification of the TLR level and a list of congestion management actions to be implemented, the Reliability Coordinator initiating this TLR procedure shall: [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]
- 3.1. Notify all Reliability Coordinators in the Eastern Interconnection of the identified TLR level
 - 3.2. Communicate the list of congestion management actions to be implemented to 1) all Reliability Coordinators in the Eastern Interconnection, and 2) those Reliability Coordinators in other Interconnections responsible for curtailing Interchange Transactions crossing Interconnection boundaries identified in the list of congestion management actions.
 - 3.3. Request that the congestion management actions identified in Requirement R2, Part 2.1 be implemented by:
 - 1.) Each Reliability Coordinator associated with a Sink Balancing Authority for which Interchange Transactions are to be curtailed,
 - 2.) Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which Network Integration Transmission Service or Native Load is to be curtailed, and
 - 3.) Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which its Market Flow is to be curtailed.

- **VRFs for IRO-006-EAST-1, Requirements R3**

- FERC’s Guideline 2 — the assignment of the VRF is consistent with the VRFs in the other requirements in the standard.
- FERC’s Guideline 3 — the assignment of the VRF is consistent with the VRFs in the related Interconnection-wide standard, IRO-006-5.

- FERC’s Guideline 4 — while this is a real-time requirement that is related to preventing or mitigating a potential or actual SOL or IROL exceedance, the requirement itself is only a list of potential actions that can be taken. To the extent the Reliability Coordinator does not undertake this action consistently as described in the requirement, it does not hinder or prevent them from taking action to mitigate or prevent the related exceedance. Accordingly, a violation of the requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures. This criteria establishes the VRF for this requirement as “Medium.”
 - FERC’s Guideline 5 — while the requirement co-mingles more than one obligation, neither obligation exceeds the criteria for a “Medium” VRF.
- R4. Each Reliability Coordinator that receives a request as described in Requirement R3, Part 3.3. shall, within 15 minutes of receiving the request, implement the congestion management actions requested by the issuing Reliability Coordinator as follows: [Violation Risk Factor: High] [Time Horizon: Real-time Operations]
- Instruct its Balancing Authorities to implement the Interchange Transaction schedule change requests.
 - Instruct its Balancing Authorities to implement the Network Integration Transmission Service and Native Load schedule changes for which the Balancing Authorities are responsible.
 - Instruct its Balancing Authorities to implement the Market Flow schedule changes for which the Balancing Authorities are responsible.
 - If an assessment shows that one or more of the congestion management actions communicated in Requirement R3, Part 3.3 will result in a reliability concern or will be ineffective, the Reliability Coordinator may replace those specific actions with alternate congestion management actions, provided that:
 - The alternate congestion management actions have been agreed to by the initiating Reliability Coordinator, and
 - The assessment shows that the alternate congestion management actions will not adversely affect reliability.
- **VRFs for IRO-006-EAST-1, Requirements R4**
 - FERC’s Guideline 2 — the assignment of the VRF is consistent with the VRFs in the other requirements in the standard.
 - FERC’s Guideline 3 — the assignment of the VRF is consistent with the VRFs in the related Interconnection-wide standard, IRO-006-5.
 - FERC’s Guideline 4 — because this is a real-time requirement that reinforces an operator action directly related to preventing or mitigating a potential or actual SOL or IROL violation, there is potential that a violation could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of

instability, separation, or cascading failures. This criteria establishes the VRF for this requirement as “High.”

- FERC’s Guideline 5 — While the requirement co-mingles more than one obligation, the VRF is already set at “High,” and can be raised no further.

As discussed above, NERC believes that the three of the five Requirements merit a “high” Violation Risk Factor. However, while NERC recognizes that TLR is explicitly discussed as Recommendation 31 in the August 14 Blackout Report, NERC does not agree that any requirement that is related to TLR should by default be elevated to a Violation Risk Factor of “High” in contravention of the Violation Risk Factor definitions.

IRO-006-5 R1, IRO-006-EAST-1 R1, and IRO-006-EAST-1 R4 have a direct impact on the reliable operation of the bulk power system. An entity that does not implement a curtailment as required in IRO-006-5-R1 is either: 1) moving both interconnections to an unbalanced state, or b) continuing to contribute to the problem being experienced by the requesting entity. An entity that violates IRO-006-EAST-1 R1 is taking action that has been identified as potentially unreliable in the August 14th Blackout Report and discussed extensively by the Commission in its previous rulings. Additionally, an entity that violates IRO-006-EAST-1 R4 is continuing to contribute to the problem being experienced by the requesting entity. A violation of any of these three requirements could “directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures,” which is the criteria for assignment of a “High” VRF.

However, a Reliability Coordinator that does not choose a TLR Level and list of actions and then communicate that list of actions is not likely to be impacting the reliable operation of the Bulk Power System in a manner that would “directly cause or contribute to bulk electric

system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures.” While NERC agrees that such obligations related to communication are helpful from a coordination perspective, and that the absence of such communications would likely have some impact to reliability, NERC does not believe those impacts would meet the criteria required to assign a “High” VRF.

As a part of drafting this standard, the team sought to develop a standard that could be relatively “implementation neutral.” In other words, should the implementation of TLR change (for commercial reasons or otherwise), the core reliability elements of the standard should not need to be changed. The consideration of this aspect guided the team in developing the VRFs. If, instead of choosing a TLR Level and a list of actions and communicating it to other Reliability Coordinators, the initiating Reliability Coordinator simply directed Generator Operators to redispatch, could they protect the reliability of the system? While there might be degradation in reliability due to a lack of coordination, the Reliability Coordinator could take such action in a way that would not “directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or ... place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures.” As such, NERC believes that the VRFs for Requirements R2 and R3 are appropriately set at “Medium,” and that for violations of these requirements, any determination of sanctions should begin at this point and be adjusted to fit the facts of each specific case.

Violation Severity Levels

The VSLs are presented below, followed by an analysis of how the VSLs meet the FERC Guidelines for assessing VSLs:

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

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

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

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

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

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

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

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

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

In order to comply with FERC VSL Guideline 1, included below is a discussion of the new VSLs relative to level of compliance established with the previously approved version of the standard.

VSLs for IRO-006-5

| R# | VRF | VSL Lower | VSL Moderate | VSL High | VSL Severe |
|----|------|-----------|--------------|----------|---|
| R1 | High | | | | The responsible entity received a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority, or Transmission Operator, but the entity neither complied with the request, nor provided a reliability reason why it could not comply with the request. |

- FERC’s Guideline 1 — The VSL is equally or more stringent than the VSLs previously established related to IRO-006-4.1a, R3 and R4.
- FERC’s Guideline 2 — The VSL is binary in nature and therefore at the “Severe” level, and the VSL uses no ambiguous language.
- FERC’s Guideline 3 — The language of the VSL is consistent with that of the requirement.
- FERC’s Guideline 4 — The VSL is based on a single violation of the requirement.

VSLs for IRO-006-EAST-1

| R# | VSL Lower | VSL Moderate | VSL High | VSL Severe |
|----|-----------|--------------|----------|--|
| R1 | | | | When acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL’s Tv, the Reliability Coordinator did not initiate one or more of the actions listed under R1 prior to or in conjunction with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated). |

- FERC’s Guideline 1 — The VSL is consistent with the VSL previously established related to IRO-006-4.1, R1.1 (which was also binary in nature and “Severe”).

- FERC’s Guideline 2 — The VSL is binary in nature and therefore at the “Severe” level, and the VSL uses no ambiguous language.
- FERC’s Guideline 3 — The language of the VSL is consistent with that of the requirement, only omitting the specific details of the actions.
- FERC’s Guideline 4 — The VSL is based on a single violation of the requirement.

| R# | VSL Lower | VSL Moderate | VSL High | VSL Severe |
|----|--|---|---|---|
| R2 | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take as specified by the requirement for one clock hour during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take as specified by the requirement for two clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take as specified by the requirement for three clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take as specified by the requirement for three clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. |

- FERC’s Guideline 1 — The VSL addresses details previously unaddressed explicitly in the standard. As such, a comparison between this standard and its previous version cannot easily be made. We believe this additional detail has made the standard and VSL more stringent than the previous approved version.
- FERC’s Guideline 2 — The VSL is graded; and the VSL uses no ambiguous language.

- FERC’s Guideline 3 — The language of the VSL is consistent with that of the associated requirement.
- FERC’s Guideline 4 — The VSL is based on a single violation of the requirement. Since the requirement mandates ongoing updates on a periodic basis, judging the severity of the violation based on whether or not that periodicity was observed is appropriate.

| R# | VSL Lower | VSL Moderate | VSL High | VSL Severe |
|----|---|--------------|--|---|
| R3 | The initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level (3.1). | | The initiating Reliability Coordinator did not communicate the list of congestion management actions to one or more of the Reliability Coordinators listed in Requirement R3, Part 3.2. OR The initiating Reliability Coordinator requested some, but not all, of the Reliability Coordinators identified in Requirement R3, Part 3.3 to implement the identified congestion management actions. | The initiating Reliability Coordinator requested none of the Reliability Coordinators identified in Requirement R3, Part 3.3 to implement the identified congestion management actions. |

- FERC’s Guideline 1 — The VSL addresses details previously unaddressed explicitly in the standard. As such, a comparison between this standard and its

previously approved version cannot easily be made. We believe this additional detail has made the standard and VSL more stringent than previous versions.

- FERC’s Guideline 2 — The VSL is graded, and the VSL uses no ambiguous language.
- FERC’s Guideline 3 — The language of the VSL is consistent with that of the associated requirement.
- FERC’s Guideline 4 — The VSL is based on a single violation of the requirement.

| R# | VSL Lower | VSL Moderate | VSL High | VSL Severe |
|----|--------------|-----------------|-------------|---|
| R4 | | | | <p>The responding Reliability Coordinator did not, within 15 minutes of receiving a request, either 1.) implement all the requested congestion management actions, or 2.) implement none or some of the requested congestion management actions and replace the remainder with alternate congestion management actions, provided that: assessment showed that the actions replaced would have resulted in a reliability concern or would have been ineffective, the alternate congestion management actions</p> |

| | | | | |
|--|--|--|--|--|
| | | | | were agreed to by the initiating Reliability Coordinator, and assessment determined that the alternate congestion management actions would not adversely affect reliability. |
|--|--|--|--|--|

- FERC’s Guideline 1 — The VSL addresses details previously unaddressed explicitly in the standard. As such, a comparison between this standard and the previously approved version cannot easily be made. We believe this additional detail has made the standard and VSL more stringent than previous versions.
- FERC’s Guideline 2 — The VSL is binary in nature and therefore at the “Severe” level, and the VSL uses no ambiguous language.
- FERC’s Guideline 3 — The language of the VSL is consistent with that of the requirement, only omitting the specific details of the actions to instruct
- FERC’s Guideline 4 — The VSL is based on a single violation of the requirement.

V. Implementation of IRO-006-5 and IRO-006-EAST-1

NERC has requested an effective date of the first day of the first calendar quarter after the date the standards are approved by the Commission. NERC believes the standards make no changes to current practice, and therefore can be implemented in the United States within one calendar quarter of Commission approval.

At that time, the new standards will supersede the existing IRO-006-4.1 and its associated Attachment 1; IRO-006-4 should be retired coincident with the effective date of the new standards. The Regional Differences within IRO-006-4 should be also be retired when IRO-006-5 and IRO-006-EAST-1 become effective. Finally, the definition of “Reallocation” should be

removed from the Glossary when IRO-006-5 and IRO-006-EAST-1 become effective. The term “Reallocation” is a commercial term used to describe a process for determining which entities are curtailed when curtailments are required, and is therefore outside the scope of the reliability standard. NERC has verified that “Reallocation” is not used in any other approved standard.

VI. Order No. 693 Directives Relative to IRO-006-5 and IRO-006-EAST-1

The Commission has issued directives related to the standards in three general areas. The first area has to do with the use of TLR in response to an actual IROL. The second is related to practices currently in use in WECC and ERCOT. The third has to do with the Violation Risk Factors for the standard.

The following directives are related to the use of TLR in response to an actual IROL:

From Order No. 713-A

36. As discussed above, based on the ERO’s response we believe that our understanding of Requirement R1.1 comports with that of the ERO. While IRO-006-4, Requirement R1.1, should be implemented and enforced with the above understanding, we believe that the term “alone” in the provision could be improved to more precisely convey that it is a violation of Requirement R1.1 to rely on the TLR procedure when an entity is in the process of mitigating an IROL violation and the entity has not taken more immediate and effective means to achieve relief. Accordingly, pursuant to section 215(d)(5) of the FPA, the Commission directs the ERO to develop a modification of Requirement R1.1 with respect to the term “alone,” consistent with this discussion.

Requirement R1 of IRO-006-EAST-1 reads as follows:

- R1. When acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL’s T_V , each Reliability Coordinator shall initiate, prior to or concurrently with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated), one or more of the following actions: [Violation Risk Factor: High] [Time Horizon: Real-time Operations]
- Inter-area redispatch of generation
 - Intra-area redispatch of generation

- Reconfiguration of the transmission system
- Voluntary load reductions (e.g., Demand-side Management)
- Controlled load reductions (e.g., load shedding)

Stakeholders have agreed that the word “alone” did not clearly convey the full intent of the standard, and modified the requirement to make it unambiguous. When acting to mitigate the magnitude and duration of an IRO exceedance, entities are required to implement alternate procedures either prior to or concurrent with the invocation of the TLR procedure. Delaying the implementation of alternate procedures in order to implement TLR would not be consistent with implementing those procedures “prior to or concurrently with” the invocation of TLR as described in the requirement, and would constitute a violation of the standard. This language more fully captures the intent of the word “alone” as it was used in IRO-006-4.1.

The following directive relates to practices currently in use in WECC and ERCOT:

From Order No. 693

964. ... In addition, the Commission approves the WECC and ERCOT load relief procedures as superior to the national Reliability Standard. As identified in the NOPR, the Commission directs the ERO to modify the WECC and ERCOT procedures to ensure consistency with the standard form of the Reliability Standards including Requirements, Measures and Levels of Non- Compliance.

WECC has already developed and filed with the Commission a regional standard related to its Interconnection-wide congestion management procedures, and is the subject of a current Notice of Proposed Rulemaking.²¹ We believe that IRO-006-5 and IRO-006-EAST-1 address the Commission’s concerns related to the potential for conflict between the regional and continent-wide standard as expressed in the aforementioned NOPR. TRE is in the process of developing a regional standard related to the congestion management processes used within

²¹ *Western Electric Coordinating Council Qualified Transfer Path Unscheduled Flow Relief Regional Reliability Standard*. 133 FERC ¶ 61,074 (2010)

ERCOT, and expects to have the standard approved by its Board of Directors within the second quarter of 2011.

VII. SUMMARY OF THE RELIABILITY STANDARD DEVELOPMENT PROCEEDINGS

a. Development History

NERC and NAESB made the decision to separate the commercial and reliability standards of the TLR standard in August 2004. The Joint Interface Committee, consisting of NERC, NAESB, and the ISO/RTO Council, supported this decision. At that time, NERC and NAESB planned to use the IRO-006-0 standard as the basis and migrate to Version 1 (IRO-006-1) by the end of 2005, completely separating the commercial and reliability aspects of the standard.

NERC and the industry formed a Joint NERC/NAESB TLR Task Force and held eight meetings to complete this separation. In June 2005, this team voted unanimously on the details of the separation and agreed that each organization would begin work on the Version 1 portion of the separated reliability standards.

In accord with the NERC and NAESB process for joint development and maintenance of reliability standards, the NAESB Business Practice Subcommittee completed its process to develop the requisite business practice requirements as demonstrated by approval of the Wholesale Electric Quadrant (“WEQ”) Executive Committee and subsequent member ratification on April 10, 2006. NAESB decided to hold the ratified business practices until NERC completed its reliability portion of the split so that both organizations could make their filings with the FERC at the same time.

In 2005, as a precursor to the submission of a standards authorization request (“SAR”), NERC posted the split agreed to by NERC and NAESB for industry comment. NERC received 12 sets of comments, six in favor of the split and six against the split. Those who submitted negative comments expressed the following concerns: that the future management and coordination of the standards would be more difficult; there is a desire to keep the standards in one accessible location; and that NAESB business practices will be included in the Interchange Distribution Calculator (“IDC”) Reference Document. After extensive deliberation on the comments, the NERC Operating Reliability Subcommittee (“ORS”) submitted a SAR to the NERC Standard Authorization Committee (now the Standards Committee) in July 2005. In its December 2006 conference call, the Standards Committee approved the SAR and directed the assembly of a standard drafting team, utilizing the individuals serving on the SAR development team as the initial members. Accordingly, NERC formed the NERC TLR Standard Drafting Team in late 2006 under Project 2006-08 in the *Reliability Standards Development Plan: 2007-2009*.

Scope of Work Assigned to Project 2006-08 Standard Drafting Team

The TLR Standard Drafting team elected to undertake modifications to the standard in three phases. In the first phase, the team worked jointly with the North American Energy Standards Board (NAESB) to separate the reliability and commercial aspects of IRO-006-4. This work also included the development of measures, compliance elements, and other standard components to meet the requirements of the NERC *Reliability Standards Development Procedure*. In conducting the first phase of this work, the team retained the original requirements to the extent possible to avoid creating new elements that could have precipitated lengthy debates and delayed implementation of the split. However, where in the judgment of the

team the reliability standard requirements as written were deemed to create difficulties in developing the necessary measures and compliance elements, the team re-worded and clarified the requirements to achieve those objectives. This work (Reliability Standard IRO-006-4) was approved by NERC's Board of Trustees on October 9, 2007, and subsequently approved by the Commission on March 19, 2009.²²

In the second phase, NERC worked with NAESB to determine the appropriate curtailment threshold for use in the PJM, MISO, and SPP calculations of Market Flow as described in their IRO-006-4 Regional Differences.²³ It was determined that the work for NERC consisted solely of the administration and oversight of the related field trial; no changes to NERC's Reliability Standard were required, other than the ultimate elimination of the Regional Differences specified in the standard (which is included in this filing).

The third and final phase, which is the subject of this filing, includes the changes needed to elevate the overall quality of the reliability standard and to address additional technical issues identified by stakeholders during prior comment periods and by the Commission in its orders and assessments.

The First Posting

NERC posted the first drafts of these standards for a thirty-day comment period, from October 30, 2008, to December 1, 2008 (for this posting, IRO-006-EAST-1 was referred to as IRO-006-EI-1).

²² *Modification of Interchange and Transmission Loading Relief Reliability Standards; and Electric Reliability Organization Interpretation of Specific Requirements of Four Reliability Standards*. 126 FERC ¶ 61,252 (2009) (Order No. 713-A)

²³ The Regional differences were primarily based on the implementation of market based mechanisms for interfacing with the TLR process. These differences were absorbed into IRO-006-EAST-1, necessitating the creation of the term "market flow" to describe the related concepts. This definition of this term was balloted and approved as part of the standard through the standards development process.

There were 12 sets of comments received from 40 different people from approximately 30 companies representing 9 of the 10 industry segments that make up the NERC constituency.

- Commenters suggested that “reallocation” be footnoted to reference NAESB’s business practices.
- Commenters proposed the definition of “Market Flow” be modified to replace the phrase “Market Flow Calculation Methodology” with more explicit language.
- Commenters expressed concerns with how the concepts of “interconnection wide” and/or “regional” standards were being addressed.
- Commenters pointed out that TLR-0 was undefined.

In response to these comments, the drafting team began working on the next draft of the standards. The team added the footnote regarding NAESB, made modifications to the definition of Market flow, and added TLR-0 to the Appendix of the Eastern Interconnection standard. Based on concerns expressed regarding potential conflicts inherent in the relationship between the Continent-wide standard and regional standards, the SDT eliminated IRO-006-5 R1 (which explicitly required the Reliability Coordinator to use a specific Interconnection-wide congestion management procedure). Instead, it was determined that IRO-006-EI-1 will continue to be treated as an Eastern Interconnection standard, and therefore apply to all Reliability Coordinators within the Eastern Interconnection, and the other regions (WECC and ERCOT) would develop separate regional standards to address their Interconnection-wide procedures. In order to comply with NERC’s published numbering convention, the standard was renamed as IRO-006-EAST-01.

On January 22, 2008, NERC staff met with FERC staff briefly to answer questions regarding the use of the Interchange Distribution Calculator and the TLR process. Based on comments expressed at that meeting, the TLR Drafting Team made changes to IRO-006-EAST-1

R1 to make clear that when experiencing an actual Interconnection Reliability Operating Limit (IROL) violation, the first responsibility of a Reliability Coordinator is to mitigate the IROL violation, which may then be followed with initiation or continuing management of the TLR process as appropriate. The modifications makes the standard more consistent with Recommendation 31 from the Blackout Report, which states that the TLR process is “not fast and predictable enough for use (in) situations in which an Operating Security Limit is close to or actually being violated. NERC should develop an alternative to TLRs that can be used quickly to address alert and emergency conditions.”²⁴

The Second Posting

NERC posted the second draft of these standards for a forty-five-day comment period from February 19, 2009, to April 6, 2009. There were 17 sets of comments received from 60 different people from approximately 40 companies representing 8 of the 10 industry segments that make up the NERC constituency. Most comments received on the standards were favorable.

- Some entities questioned whether NERC was allowed to create an Interconnection-wide standard
- Some entities suggested that including the Transmission Operator as a responding entity in IRO-006- did not make sense, while others suggested that the Interchange Authority should be included in the standard
- Several entities questioned whether reloading should be included in the standard.
- Several entities expressed concern with the VSLs for the standards.

The team felt that an Interconnection-wide standard was both allowed under the ERO rules and appropriate in this specific case. The drafting team removed the Transmission

²⁴ See Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations at pg. 163 (<http://www.nerc.com/docs/docs/blackout/ch7-10.pdf>)

Operator from IRO-006-5 as suggested, but did not add the Interchange Authority, believing that any role for the Interchange Authority should be addressed in the Interchange, Scheduling, and Coordination (“INT”) standards. The drafting team also removed the concept of mandatory reloading, as reloading is generally not required to meet reliability objectives and may in some cases not be desired by the transmission customer. Finally, the drafting team attempted to clarify the VSLs in the next draft of the standards.

The Third Posting

NERC posted the third draft of these standards for a thirty-day comment period from July 13, 2009, to August 13, 2009. There were 15 sets of comments received from 70 different people from approximately 50 companies representing 9 of the 10 industry segments that make up the NERC constituency.

In general, the majority of comments received were supportive of the changes proposed by the drafting team. Based on stakeholder comments, the drafting team made the following changes:

The drafting team combined Requirements R4 and R5, and established the time for the Reliability Coordinator to take action as 15 minutes.

- The drafting team clarified in IRO-006-5, Requirement R1 that an entity must comply with a request to curtail an Interchange Transaction “unless it provides to the requestor a reliability reason that it cannot comply with the request.”
- The drafting team deleted Appendix A of IRO-006-EAST-1 and instead incorporated the table from the Appendix into Requirement R2. The system conditions were relabeled as examples, a footnote was added to explain the role of the table, and a sentence was added

that stated “TLR levels are neither required nor expected to be issued in numerical order of level.”

- The drafting team clarified that a Reliability Coordinator’s experience may be used to determine if requested TLR actions are appropriate, and made this clear by replacing “analysis” with “assessment” in IRO-006-EAST-1 Requirement R4.
- Additionally, the drafting team reviewed the use of the verb “direct” in the previous version of the standard. Following discussion regarding the steps of TLR and what is expected to happen in each of those steps, it was determined that the Reliability Coordinator is not issuing directives when implementing TLR. The issuance of TLR and the associated instructions to take action are made unilaterally by the Reliability Coordinator(s). Balancing Authorities are expected to review the requests for action and verify that they can be implemented reliably. To the extent they cannot be implemented reliably, Balancing Authorities are expected to work with their Reliability Coordinator in determining the best course of action. For Interchange Transactions, this Balancing Authority discretion is discussed in INT-005-3 R1.1 and INT- 006-3 R1.1. For NITS, Native Load, and Market Flow, it is addressed implicitly in IRO-005-3 R6 and TOP-002-2a R4. Accordingly, rather than use the verb “direct,” the team modified the standard to use the verb “instruct.”

The Fourth Posting

NERC posted the fourth draft of these standards for a forty-five-day comment period from October 27, 2009, to November 30, 2009. There were 15 sets of comments received from 70 different people from approximately 40 companies representing 9 of the 10 industry segments that make up the NERC constituency.

Several minor changes were made to the standards based on suggestions received during the comment period:

- Several entities suggested that it be clear that Reliability Coordinators must initiate, not complete, the actions requested within 15 minutes. IRO-006-EAST-1 R4 was modified to make it clear that the actions must be initiated, not completed.
- Several entities expressed concern that the TLR levels listed in IRO-006-EAST-1 still seemed to imply an obligation to adhere to the criteria as provided in the examples. In response, the drafting team removed the examples into a separate reference document.
- Several entities suggested that there was no need to explicitly identify “responding Reliability Coordinators” in the Applicability section of IRO-006-EAST-1. Upon further reflection, the drafting team agreed, and modified the applicability accordingly.
- One entity expressed concern that IRO-006-5 R1 allowed entities to simply supply a reliability reason without clearly indicating that the reason must be justified. The drafting team added the word “valid” to make this clear.
- One entity identified a typographical error where Measure 1 of IRO-006-5 was missing a word. The error was corrected.
- One entity suggested improvements to the definition of Market Flow to make it clear that market flow was caused by generation internal to a market serving load internal to that same market. The definition was changed.
- Several commenters objected to the requirement to update a TLR-1 on an hourly basis. However, the requirement to re-issue TLR Level 1 every hour is already required in IRO-006-4, Attachment 1, Section 1.4.4. This standard does not change this obligation.

- Some commenters suggested that the standard, by not explicitly allowing for them, could restrict the use of proxy Flowgates. The drafting team clarified that this is not the intent.
- Some commenters suggested that the standard not limit the actions that can be performed concurrently with TLR as specified in IRO-006-EAST-1 R1. The drafting team believed that if a new method to mitigate congestion is developed other than the five actions listed, it can be included in the standard following industry review of its effectiveness in achieving the mitigation objective. No change was made.
- Some entities questioned if IDC logs were acceptable evidence to show compliance with the standard. The drafting team pointed out that all four of the measures clearly indicate that Logs are an acceptable form of evidence, and that the measure allows for the provision of “other information.”

The Fifth Posting and Balloting

NERC posted the fifth draft of these standards for a forty-five-day comment period from May 21, 2010, to July 6, 2010. The standards were balloted during this period from June 23, 2010 to July 6, 2010, and a non-binding poll of the Violation Risk Factors and Violation Severity Levels was conducted concurrently. There were 12 sets of comments received from 40 different people from approximately 30 companies representing 9 of the 10 industry segments that make up the NERC constituency. The ballot results were as follows:

Quorum: 87.04%

Weighted Segment Vote for Approval: 84.98%

In the non-binding poll of the VRFs and VSLs, 80% of those who registered to participate provided an opinion, and 86% of those who provided an opinion indicated support.

Entities suggested minor clarifications, corrections, and language changes that the drafting team believed improved the overall quality of the standard.

- Some entities had concerns with the potential subjectivity of the requirement in IRO-006-5 Requirement R1 for a “valid” reason. The drafting team acknowledged their concerns, reconsidered the reasoning behind the addition of the word “valid,” determined that the word was not needed, and eliminated the word from the requirement.
- Several entities objected to the need to reissue TLR-1 each hour as specified in IRO-006-EAST-1 Requirement R2. Upon further review of the current standard, as well as the current implementation of the Interchange Distribution Calculator (IDC), it was determined that such updates are not required for TLR-1. The phrase “with the exception of TLR-1, where an hourly update is not required” was added to the requirement.
- Some entities expressed concern that the list of TLR levels and conditions, which was moved into a supporting document, would be more appropriately included as an attachment or a requirement. The drafting team responded that since the information does not actually represent any specific required action, it is more appropriate to maintain this information in a separate document. To assist entities in locating the information, the drafting team added a footnote to standard.

Following these minor changes, the standards proceed to recirculation ballot. The ballot results were as follows:

Quorum: 88.26%

Weighted Segment Vote for Approval: 93.93%

NERC staff presented the standards to the Board of Trustees at their November 4, 2010 meeting. At that meeting, the Board of Trustees approved the standards for filing with the Commission.

VIII. CONCLUSION

For the reasons stated above, NERC requests that FERC approve two new Reliability Standards, IRO-006-5 and IRO-006-EAST-1 and the new Glossary term as set out in **Exhibit A**, in accordance with Section 215(d)(1) of the FPA and Part 39.5 of FERC’s regulations. NERC also requests that the implementation plan, as set forth in **Exhibit C**, be approved as part of this filing. In accordance with the Implementation Plan, NERC additionally requests approval of: (1) retirement of the term “Reallocation”; (2) retirement of IRO-006-4 and IRO-006-4 Attachment 1; (3) Retirement of the regional differences within IRO-006-4; and (4) An effective date of the first day of the first calendar quarter after the date the standards are approved by the Commission.

NERC requests that approvals be made effective in accordance with the effective date provisions set forth in the proposed Reliability Standards.

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David N. Cook
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Respectfully submitted,

/s/ Holly A. Hawkins

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CERTIFICATE OF SERVICE

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

Dated at Washington, D.C. this 13th day of January, 2011.

/s/ Holly A. Hawkins
Holly A. Hawkins
Attorney for North American Electric
Reliability Corporation

Exhibit A

Reliability Standards Proposed for Approval

Proposed New Standard IRO-006-5

A. Introduction

1. **Title:** Reliability Coordination — Transmission Loading Relief (TLR)
2. **Number:** IRO-006-5
3. **Purpose:** To ensure coordinated action between Interconnections when implementing Interconnection-wide transmission loading relief procedures to prevent or manage potential or actual SOL and IROL exceedances to maintain reliability of the bulk electric system.
4. **Applicability:**
 - 4.1. Reliability Coordinator.
 - 4.2. Balancing Authority.
5. **Proposed Effective Date:** First day of the first calendar quarter following the date this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required; the standard becomes effective on the first day of the first calendar quarter after the date this standard is approved by the NERC Board of Trustees.

B. Requirements

- R1. Each Reliability Coordinator and Balancing Authority that receives a request pursuant to an Interconnection-wide transmission loading relief procedure (such as Eastern Interconnection TLR, WECC Unscheduled Flow Mitigation, or congestion management procedures from the ERCOT Protocols) from any Reliability Coordinator, Balancing Authority, or Transmission Operator in another Interconnection to curtail an Interchange Transaction that crosses an Interconnection boundary shall comply with the request, unless it provides a reliability reason to the requestor why it cannot comply with the request. [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]

C. Measures

- M1. Each Reliability Coordinator and Balancing Authority shall provide evidence (such as dated logs, voice recordings, Tag histories, and studies, in electronic or hard copy format) that, when a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure was made from another Reliability Coordinator, Balancing Authority, or Transmission Operator in that other Interconnection, it complied with the request or provided a reliability reason why it could not comply with the request (R1).

D. Compliance

1. **Compliance Monitoring Process**
 - 1.1. **Compliance Enforcement Authority**

Regional Entity.
 - 1.2. **Compliance Monitoring and Enforcement Processes:**

The following processes may be used:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.3. Data Retention

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

- The Reliability Coordinator and Balancing Authority shall maintain evidence to show compliance with R1 for the most recent twelve calendar months plus the current month.
- If a Reliability Coordinator or Balancing Authority is found non-compliant, it shall keep information related to the non-compliance until found compliant or for the duration specified above, whichever is longer.

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

1.4. Additional Compliance Information

None.

Violation Severity Levels

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|----------|--|
| R1 | | | | <p>The responsible entity received a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority, or Transmission Operator, but the entity neither complied with the request, nor provided a reliability reason why it could not comply with the request.</p> |

E. Variances

None.

F. Associated Documents

None.

G. Version History

| Version | Date | Action | Change Tracking |
|----------------|-------------------|---|------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | August 8, 2005 | Revised Attachment 1 | Revision |
| 3 | February 26, 2007 | Revised Purpose and Attachment 1 related to NERC NAESB split of the TLR procedure | Revision |
| 4 | October 23, 2007 | Completed NERC/NAESB split | Revision |
| 5 | TBD | Removed Attachment 1 and made into a new standard, eliminated unnecessary requirements. | Revision |
| 6 | November 4, 2010 | Approved by the Board of Trustees | |

Proposed New Standard IRO-006-EAST-1
(Includes Proposed Definition for Market Flow)

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Market Flow: the total amount of power flowing across a specified Facility or set of Facilities due to a market dispatch of generation internal to the market to serve Load internal to the market.

A. Introduction

1. **Title: Transmission Loading Relief Procedure for the Eastern Interconnection**
2. **Number:** IRO-006-EAST-1
3. **Purpose:** To provide an Interconnection-wide transmission loading relief procedure (TLR) for the Eastern Interconnection that can be used to prevent and/or mitigate potential or actual System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) exceedances to maintain reliability of the Bulk Electric System (BES).
4. **Applicability:**
 - 4.1. Reliability Coordinators in the Eastern Interconnection.
5. **Proposed Effective Date:** First day of the first calendar quarter following the date this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter after the date this standard is approved by the NERC Board of Trustees.

B. Requirements

- R1.** When acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T_V , each Reliability Coordinator shall initiate, prior to or concurrently with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated), one or more of the following actions: [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]
 - Inter-area redispatch of generation
 - Intra-area redispatch of generation
 - Reconfiguration of the transmission system
 - Voluntary load reductions (e.g., Demand-side Management)
 - Controlled load reductions (e.g., load shedding)
- R2.** To ensure operating entities are provided with information needed to maintain an awareness of changes to the Transmission System, when initiating the Eastern Interconnection TLR procedure to prevent or mitigate an SOL or IROL exceedance, and at least every clock hour (with the exception of TLR-1, where an hourly update is not required) after initiation up to and including the hour when the TLR level has been identified as TLR Level 0, the Reliability Coordinator shall identify: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]
 - 2.1. A list of congestion management actions to be implemented, and
 - 2.2. One of the following TLR levels: TLR-1, TLR-2, TLR-3A, TLR-3B, TLR-4, TLR-5A, TLR-5B, TLR-6, TLR-0¹

¹ For more information on TLR levels, please see "Implementation Guideline for Reliability Coordinators: Eastern Interconnection TLR Levels Reference Document."

- R3.** Upon the identification of the TLR level and a list of congestion management actions to be implemented, the Reliability Coordinator initiating this TLR procedure shall: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]
- 3.1.** Notify all Reliability Coordinators in the Eastern Interconnection of the identified TLR level
 - 3.2.** Communicate the list of congestion management actions to be implemented to 1.) all Reliability Coordinators in the Eastern Interconnection, and 2.) those Reliability Coordinators in other Interconnections responsible for curtailing Interchange Transactions crossing Interconnection boundaries identified in the list of congestion management actions.
 - 3.3.** Request that the congestion management actions identified in Requirement R2, Part 2.1 be implemented by:
 - 1.) Each Reliability Coordinator associated with a Sink Balancing Authority for which Interchange Transactions are to be curtailed,
 - 2.) Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which Network Integration Transmission Service or Native Load is to be curtailed, and
 - 3.) Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which its Market Flow is to be curtailed.
- R4.** Each Reliability Coordinator that receives a request as described in Requirement R3, Part 3.3. shall, within 15 minutes of receiving the request, implement the congestion management actions requested by the issuing Reliability Coordinator as follows: [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]
- Instruct its Balancing Authorities to implement the Interchange Transaction schedule change requests.
 - Instruct its Balancing Authorities to implement the Network Integration Transmission Service and Native Load schedule changes for which the Balancing Authorities are responsible.
 - Instruct its Balancing Authorities to implement the Market Flow schedule changes for which the Balancing Authorities are responsible.
 - If an assessment determines shows that one or more of the congestion management actions communicated in Requirement R3, Part 3.3 will result in a reliability concern or will be ineffective, the Reliability Coordinator may replace those specific actions with alternate congestion management actions, provided that:
 - The alternate congestion management actions have been agreed to by the initiating Reliability Coordinator, and
 - The assessment shows that the alternate congestion management actions will not adversely affect reliability.

C. Measures

- M1.** Each Reliability Coordinator shall provide evidence (such as dated logs, voice recordings, or other information in electronic or hard-copy format) that when acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T_v , the Reliability Coordinator initiated one or more of the actions listed in R1 prior to or concurrently with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated)(R1).
- M2.** Each Reliability Coordinator shall provide evidence (such as dated logs, voice recordings, or other information in electronic or hard-copy format) that at the time it initiated the Eastern Interconnection TLR procedure, and at least every clock hour after initiation up to and including the hour when the TLR level was identified as TLR Level 0, the Reliability Coordinator identified both the TLR Level and a list of congestion management actions to be implemented (R2).
- M3.** Each Reliability Coordinator shall provide evidence (such as dated logs, voice recordings, or other information in electronic or hard-copy format) that after it identified a TLR level and a list of congestion management actions to take, it 1.) notified all Reliability Coordinators in the Eastern Interconnection of the TLR Level, 2.) communicated the list of actions to all Reliability Coordinators in the Eastern Interconnection and those Reliability Coordinators in other Interconnections responsible for curtailing Interchange Transactions crossing Interconnection boundaries identified in the list of congestion management actions, and 3.) requested the Reliability Coordinators identified in Requirement R3 Part 3.2 to implement the congestion management actions identified in Requirement R2 Part 2.1 (R3).
- M4.** Each Reliability Coordinator shall provide evidence (such as dated logs, voice recordings, or other information in electronic or hard-copy format) that within fifteen minutes of the receipt of a request as described in R3, the Reliability Coordinator complied with the request by either 1.) implementing the communicated congestion management actions requested by the issuing Reliability Coordinator, or 2.) implementing none or some of the communicated congestion management actions requested by the issuing Reliability Coordinator, and replacing the remainder with alternate congestion management actions if assessment showed that some or all of the congestion management actions communicated in R3 would have resulted in a reliability concern or would have been ineffective, the alternate congestion management actions were agreed to by the initiating Reliability Coordinator, and assessment showed that the alternate congestion management actions would not adversely affect reliability (R4).

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity.

1.2. Compliance Monitoring and Enforcement Processes:

The following processes may be used:

- Compliance Audits
- Self-Certifications

- Spot Checking
- Compliance Violation Investigations
- Self-Reporting
- Complaints

1.3. Data Retention

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

- The Reliability Coordinator shall maintain evidence to show compliance with R1, R2, R3, and R4 for the past 12 months plus the current month.
- If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.

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

1.4. Additional Compliance Information

None.

3. Violation Severity Levels

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|--|---|---|---|
| R1 | | | | When acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T _v , the Reliability Coordinator did not initiate one or more of the actions listed under R1 prior to or in conjunction with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated). |
| R2 | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take as specified by the requirement for one clock hour during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take as specified by the requirement for two clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take as specified by the requirement for three clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take as specified by the requirement for four or more clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. |

Standard IRO-006-EAST-1 — TLR Procedure for the Eastern Interconnection

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|---|--------------|---|--|
| R3 | The initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level (3.1). | N/A | <p>The initiating Reliability Coordinator did not communicate the list of congestion management actions to one or more of the Reliability Coordinators listed in Requirement R3, Part 3.2.</p> <p>OR</p> <p>The initiating Reliability Coordinator requested some, but not all, of the Reliability Coordinators identified in Requirement R3, Part 3.3 to implement the identified congestion management actions.</p> | The initiating Reliability Coordinator requested none of the Reliability Coordinators identified in Requirement R3, Part 3.3 to implement the identified congestion management actions. |
| R4 | | | | The responding Reliability Coordinator did not, within 15 minutes of receiving a request, either 1.) implement all the requested congestion management actions, or 2.) implement none or some of the requested congestion management actions and replace the remainder with alternate congestion |

Standard IRO-006-EAST-1 — TLR Procedure for the Eastern Interconnection

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|----------|---|
| | | | | <p>management actions, provided that: assessment showed that the actions replaced would have resulted in a reliability concern or would have been ineffective, the alternate congestion management actions were agreed to by the initiating Reliability Coordinator, and assessment determined that the alternate congestion management actions would not adversely affect reliability.</p> |

E. Variances

None.

F. Associated Documents

Implementation Guideline for Reliability Coordinators:
Eastern Interconnection TLR Levels Reference Document

G. Revision History

| Version | Date | Action | Tracking |
|----------------|-------------|--|-----------------|
| 1 | | Creation of new standard, incorporating concepts from IRO-006-4 Attachment; elimination of Regional Differences, as the standard allows the use of Market Flow | New |

Exhibit B

Reliability Standard IRO-006-4.1 Proposed for Retirement

A. Introduction

1. **Title:** Reliability Coordination — Transmission Loading Relief (TLR)
2. **Number:** IRO-006-4.1
3. **Purpose:** The purpose of this standard is to provide Interconnection-wide transmission loading relief procedures that can be used to prevent or manage potential or actual SOL and IROL violations to maintain reliability of the Bulk Electric System.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
 - 4.2. Transmission Operators.
 - 4.3. Balancing Authorities.
5. **Effective Date:** December 10, 2009

B. Requirements

- R1.** A Reliability Coordinator experiencing a potential or actual SOL or IROL violation within its Reliability Coordinator Area shall, with its authority and at its discretion, select one or more procedures to provide transmission loading relief. These procedures can be a “local” (regional, interregional, or sub-regional) transmission loading relief procedure or one of the following Interconnection-wide procedures: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]
- This requirement simply states; the RC has the authority to act, the RC should know at what limits he/she needs to act, the RC has pre-identified regional, interregional and sub-regional TLR procedures.
- R1.1.** The Interconnection-wide Transmission Loading Relief (TLR) procedure for use in the Eastern Interconnection provided in Attachment 1-IRO-006-4. The TLR procedure alone is an inappropriate and ineffective tool to mitigate an IROL violation due to the time required to implement the procedure. Other acceptable and more effective procedures to mitigate actual IROL violations include: reconfiguration, redispatch, or load shedding.
- Comment: see FERC Order 693 paragraph 964 regarding recommendation for using tools other than TLR to mitigate an actual IROL.
- R1.2.** The Interconnection-wide transmission loading relief procedure for use in the Western Interconnection is the WECC Unscheduled Flow Reduction Procedure provided at: http://www.wecc.biz/documents/library/UFAS/UFAS_mitigation_plan_rev_2001-clean_8-8-03.pdf.
- R1.3.** The Interconnection-wide transmission loading relief procedure for use in ERCOT is provided as Section 7 of the ERCOT Protocols, posted at: <http://www.ercot.com/mktrules/protocols/current.html>
- Note: the URL has changed.
- R2.** The Reliability Coordinator shall only use local transmission loading relief or congestion management procedures to which the Transmission Operator experiencing the potential or actual SOL or IROL violation is a party. [*Violation Risk Factor: Low*] [*Time Horizon: Operations Planning*]
- R3.** Each Reliability Coordinator with a relief obligation from an Interconnection-wide procedure shall follow the curtailments as directed by the Interconnection-wide procedure. A Reliability Coordinator desiring to use a local procedure as a substitute for curtailments as directed by the

Interconnection-wide procedure shall obtain prior approval of the local procedure from the ERO. [*Violation Risk Factor: Low*] [*Time Horizon: Operations Planning*]

- R4.** When Interconnection-wide procedures are implemented to curtail Interchange Transactions that cross an Interconnection boundary, each Reliability Coordinator shall comply with the provisions of the Interconnection-wide procedure. [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]
- R5.** During the implementation of relief procedures, and up to the point that emergency action is necessary, Reliability Coordinators and Balancing Authorities shall comply with applicable Interchange scheduling standards. [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]

Comment: R5 will be reviewed during Phase 3 of the TLR drafting team work. See white paper for explanation of the three phases of changes to this standard.

C. Measures

- M1.** Each Reliability Coordinator shall be capable of providing evidence (such as logs) that demonstrate when Eastern Interconnection, WECC, or ERCOT Interconnection-wide transmission loading relief procedures are implemented, the implementation follows the respective established procedure as specified in this standard (R1, R1.1, R1.2 and R1.3).
- M2.** Each Reliability Coordinator shall be capable of providing evidence (such as written documentation) that the Transmission Operator experiencing the potential or existing SOL or IROL violations is a party to the local transmission loading relief or congestion management procedures when these procedures have been implemented (R2).
- M3.** Each Reliability Coordinator shall be capable of providing evidence (such as NERC meeting minutes) that the local procedure has received prior approval by the ERO when such procedure is used as a substitute for curtailment as directed by the Interconnection-wide procedure (R3).
- M4.** Each Reliability Coordinator shall be capable of providing evidence (such as logs) that the responding Reliability Coordinator complied with the provisions of the Interconnection-wide procedure as requested by the initiating Reliability Coordinator when requested to curtail an Interchange Transaction that crosses an Interconnection boundary (R4).
- M5.** Each Reliability Coordinator and Balancing Authority shall be capable of providing evidence (such as Interchange Transaction Tags, operator logs, voice recordings or transcripts of voice recordings, electronic communications, computer printouts) that they have complied with applicable Interchange scheduling standards INT-001, INT-003, and INT-004 during the implementation of relief procedures, up to the point emergency action is necessary (R5).

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Monitoring Responsibility

Regional Entity.

1.2. Compliance Monitoring Period and Reset Time Frame

Compliance Monitoring Period: One calendar year.

Reset Period: One month without a violation.

1.3. Data Retention

The Reliability Coordinator shall maintain evidence for eighteen months for M1, M4, and M5.

The Reliability Coordinator shall maintain evidence for the duration the Transmission Operator is party to the procedure in effect plus one calendar year thereafter for M2.

The Reliability Coordinator shall maintain evidence for the approved duration of the procedure in effect plus one calendar year thereafter for M3.

1.4. Additional Compliance Information

Each Reliability Coordinator and Balancing Authority shall demonstrate compliance through self-certification submitted to its Compliance Monitor annually and reporting by exception. The Compliance Monitor may also use scheduled on-site reviews every three years, and investigations upon complaint, to assess performance.

Each Reliability Coordinator and Balancing Authority shall have the following available for its Compliance Monitor to inspect during a scheduled, on-site review or within 5 days of a request as part of an investigation upon complaint:

1.4.1 Operations logs, voice recordings or transcripts of voice recordings or other documentation providing the evidence of its compliance to all the requirements for all Interconnection-wide TLR procedures that it has implemented during the review period.

1.4.2 TLR reports.

2. Violation Severity Levels

2.1. Lower. There shall be a lower violation severity level if any of the following conditions exist:

2.1.1 For each TLR in the Eastern Interconnection, the Reliability Coordinator violates one (1) requirement of the applicable Interconnection-wide procedure (R1)

2.1.2 The Reliability Coordinators or Balancing Authorities did not comply with applicable Interchange scheduling standards during the implementation of the relief procedures, up to the point emergency action is necessary (R5).

2.1.3 When requested to curtail an Interchange Transaction that crosses an Interconnection boundary utilizing an Interconnection-wide procedure, the responding Reliability Coordinator did not comply with the provisions of the Interconnection-wide procedure as requested by the initiating Reliability Coordinator (R4).

2.2. Moderate. There shall be a moderate violation severity level if any of the following conditions exist:

2.2.1 For each TLR in the Eastern Interconnection, the Reliability Coordinator violated two (2) to three (3) requirements of the applicable Interconnection-wide procedure (R1).

2.3. High. There shall be a high violation severity level if any of the following conditions exist:

2.3.1 For each TLR in the Eastern Interconnection, the applicable Reliability Coordinator violated four (4) to five (5) requirements of the applicable Interconnection-wide procedure (R1).

2.4. Severe. There shall be a severe violation severity level if any of the following conditions exist:

- 2.4.1 For each TLR in the Eastern Interconnection, the Reliability Coordinator violated six (6) or more of the requirements of the applicable Interconnection-wide procedure (R1).
- 2.4.2 A Reliability Coordinator implemented local transmission loading relief or congestion management procedures to relieve congestion but the Transmission Operator experiencing the congestion was not a party to those procedures (R2).
- 2.4.3 A Reliability Coordinator implemented local transmission loading relief or congestion management procedures as a substitute for curtailment as directed by the Interconnection-wide procedure but the local procedure had not received prior approval from the ERO (R3).
- 2.4.4 While attempting to mitigate an existing IROL violation in the Eastern Interconnection, the Reliability Coordinator applied TLR as the sole remedy for an existing IROL violation.
- 2.4.5 While attempting to mitigate an existing constraint in the Western Interconnection using the “WSCC Unscheduled Flow Mitigation Plan”, the Reliability Coordinator did not follow the procedure correctly.
- 2.4.6 While attempting to mitigate an existing constraint in ERCOT using Section 7 of the ERCOT Protocols, the Reliability Coordinator did not follow the procedure correctly.

E. Regional Differences

1. [PJM/MISO Enhanced Congestion Management](#) (Curtailment/Reload/Reallocation) Waiver approved March 25, 2004. To be retired upon completion of the field test, and in the interim the Regional Difference will be contained in both the NERC and NAESB standards.

This section on Regional Differences is highlighted for transfer to NAESB following completion of the MISO/PJM/SPP field test as described in the white paper.

2. Southwest Power Pool (SPP) Regional Difference – Enhanced Congestion Management (Curtailment/Reload/Reallocation). The SPP regional difference, which is equivalent to the PJM/MISO waiver, shall apply within the SPP region as follows:

This regional difference impacts actions on behalf of those SPP Balancing Authorities that are participating in the SPP market. This regional difference does not impact those Balancing Authorities for which SPP will continue to act as the Reliability Coordinator but that are not participating in the SPP market.

SPP shall calculate the impacts of SPP market flow on all facilities included in SPP’s Coordinated Flowgate List. SPP shall conduct sensitivity studies to determine which external flowgates (outside SPP’s footprint) are significantly impacted by the market flows of SPP’s control zones (currently the balancing areas that exist today in the IDC). SPP shall perform studies to determine which external flowgates SPP will monitor and help control. An external flowgate selected by one of the studies will be considered a Coordinated Flowgate (CF).

In its calculation, SPP shall consider market flow impacts as the impacts of energy dispatched by the SPP market and self-dispatched energy serving load in the market footprint, but not tagged. SPP shall use a method equivalent to the PJM/MISO Market Flow Calculation methodology identified in the PJM/MISO waiver. Impacts of tagged transactions representing delivery of energy not dispatched by the SPP market and energy dispatched by the market but delivered outside the footprint will not be included in market flow.

SPP shall separate the market flow impacts for current hour and next hour into their appropriate priorities and shall provide those market flow impacts to the IDC. The market flows will be represented in the IDC and made available for curtailment under the appropriate TLR Levels. The market flow impacts will not be represented by conventional interchange transaction tags.

The SPP method will impact the following sections of the TLR Procedure:

Network and Native Load (NNL) Calculations — The SPP regional difference modifies Attachment 1-IRO-006-1 Section 5 “Parallel Flow Calculation Procedure for Reallocating or Curtailing Firm Transmission Service” within the SPP region.

Section 5 of Attachment 1-IRO-006-1 requires that the “Per Generator Method without Counter Flow” methodology be utilized to calculate the portion of parallel flows on any Constrained Facility due to Network Integration (NI) transmission service and service to Native Load (NL) of each balancing authority.

SPP shall use a “Market Flow Calculation” methodology to calculate the portion of parallel flows on all facilities included in the RTO’s “Coordinated Flowgate List” due to NI service or service to NL of each balancing authority.

The Market Flow Calculation differs from the Per Generator Method in the following ways:

- The contribution from all market area generators will be taken into account.
- In the Per Generator Method, only generators having a GLDF greater than 5% are included in the calculation. Additionally, generators are included only when the sum of the maximum generating capacity at a bus is greater than 20 MW. The market flow calculations will use all positively impacting flows down to 0% with no threshold. Counter flows will not be included in the market flow calculation.
- The contribution of all market area generators is based on the present output level of each individual unit.
- The contribution of the market area load is based on the present demand at each individual bus.

By expanding on the Per Generator Method, the market flow calculation evolves into a methodology very similar to the “Per Generator Method” method, while providing increased Interchange Distribution Calculator (IDC) granularity. Counter flows are also calculated and tracked in order to account for and recognize that either the positive market flows may be reduced or counter flows may be increased to provide appropriate relief on a flowgate.

These NNL values will be provided to the IDC to be included and represented with the calculated NNL values of other Balancing Authorities for the purposes of identifying and obtaining required NNL relief across a flowgate in congestion under a TLR Level 5A/5B.

Pro Rata Curtailment of Non-Firm Market Flow Impacts — The SPP regional difference modifies Attachment 1-IRO-006-1 Appendix B “Transaction Curtailment Formula” within the SPP region.

Appendix B “Transaction Curtailment Formula” details the formula used to apply a weighted impact to each non-firm tagged Interchange Transaction (Priorities 1 thru 6) for the purposes of Curtailment by the IDC. For the purpose of Curtailment, the non-firm market flow impacts (Priorities 2 and 6) submitted to the IDC by SPP should be curtailed pro-rata as is done for Interchange Transaction using firm transmission service. This is because several of the values

needed to assign a weighted impact using the process listed in Appendix B will not be available:

- Distribution Factor (no tag to calculate this value from)
- Impact on Interface value (cannot be calculated without Distribution Factor)
- Impact Weighting Factor (cannot be calculated without Distribution Factor)
- Weighted Maximum Interface Reduction (cannot be calculated without Distribution Factor)
- Interface Reduction (cannot be calculated without Distribution Factor)
- Transaction Reduction (cannot be calculated without Distribution Factor)

While the non-firm market flow impacts submitted to the IDC are to be curtailed pro rata, the impacting non-firm tagged Interchange Transactions could still use the existing processes to assign the weighted impact value.

Assignment of Sub-Priorities — The SPP regional difference modifies Attachment 1-IRO-006-1 Appendix E “How the IDC Handles Reallocation”, Section E2 “Timing Requirements”, within the SPP region.

Under the header “IDC Calculations and Reporting” in Section E2 of Appendix E to Attachment 1-IRO-006-1, the following requirement exists: “In a TLR Level 3a the Interchange Transactions using Non-firm Transmission Service in a given priority will be further divided into four sub-priorities, based on current schedule, current active schedule (identified by the submittal of a tag ADJUST message), next-hour schedule, and tag status. Solely for the purpose of identifying which Interchange Transactions to be loaded under a TLR 3a, various MW levels of an Interchange Transaction may be in different sub-priorities. The sub-priorities are shown in the following table:

| Priority | Purpose | Explanation and Conditions |
|----------|--|--|
| S1 | To allow a flowing Interchange Transaction to maintain or reduce its current MW amount in accordance with its energy profile. | The MW amount is the lowest between currently flowing MW amount and the next-hour schedule. The currently flowing MW amount is determined by the e-tag ENERGY PROFILE and ADJUST tables. If the calculated amount is negative, zero is used instead. |
| S2 | To allow a flowing Interchange Transaction that has been curtailed or halted by TLR to reload to the lesser of its current-hour MW amount or next-hour schedule in accordance with its energy profile. | The Interchange Transaction MW amount used is determined through the e-tag ENERGY PROFILE and ADJUST tables. If the calculated amount is negative, zero is used instead. |
| S3 | To allow a flowing Transaction to increase from its current-hour schedule to its next-hour schedule in accordance with its energy profile. | The MW amounts used in this sub-priority is determined by the e-tag ENERGY PROFILE table. If the calculated amount is negative, zero is used instead. |
| S4 | To allow a Transaction that had never | The Transaction would not be allowed |

| | | |
|--|---|---|
| | <p>started and was submitted to the Tag Authority after the TLR (level 2 or higher) has been declared to begin flowing (i.e., the Interchange Transaction never had an active MW and was submitted to the IDC after the first TLR Action of the TLR Event had been declared.)</p> | <p>to start until all other Interchange Transactions submitted prior to the TLR with the same priority have been (re)loaded. The MW amount used is the sub-priority is the next-hour schedule determined by the e-tag ENERGY PROFILE table.</p> |
|--|---|---|

SPP shall use a “Market Flow Calculation” methodology to calculate the amount of energy flowing across all facilities included in the RTO’s “Coordinated Flowgate List” that is associated with the operation of the SPP market. This energy is identified as “market flow.”

These market flow impacts for current hour and next hour will be separated into their appropriate priorities and provided to the IDC by SPP. The market flows will then be represented and made available for curtailment under the appropriate TLR Levels.

Even though these market flow impacts (separated into appropriate priorities) will not be represented by conventional “tags,” the impacts and their desired levels will still be provided to the IDC for current hour and next hour. Therefore, for the purposes of reallocation, a sub-priority (S1 thru S4) should be assigned to these market flow impacts by the NERC IDC as follows, using comparable logic as would be used if the impacts were in fact tagged transactions.

| Priority | Purpose | Explanation and Conditions |
|----------|---|--|
| S1 | To allow existing market flow to maintain or reduce its current MW amount. | The currently flowing MW amount is the amount of market flow existing after the RTO has recognized the constraint for which TLR has been called. If the calculated amount is negative, zero is used instead. |
| S2 | To allow market flow that has been curtailed or halted by TLR to reload to its desired amount for the current-hour. | This is the difference between the current hour unconstrained market flow and the current market flow. If the current-hour unconstrained market flow is not available, the IDC will use the most recent market flow since the TLR was first issued or, if not available, the market flow at the time the TLR was first issued. |
| S3 | To allow a market flow to increase to its next-hour desired amount. | This is the difference between the next hour and current hour unconstrained market flow. |

To be retired upon completion of the field test, and in the interim the Regional Difference will be contained in both the NERC and NAESB standards.

F. Associated Documents

Version History

Standard IRO-006-4.1 — Reliability Coordination — Transmission Loading Relief

| Version | Date | Action | Change Tracking |
|----------------|-------------------|---|------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | August 8, 2005 | Revised Attachment 1 | Revision |
| 3 | February 26, 2007 | Revised Purpose and Attachment 1 related to NERC NAESB split of the TLR procedure | Revision |
| 4 | October 23, 2007 | Approved by Board of Trustees | Revision |
| 4.1 | April 15, 2009 | The URL in R1.2. was corrected. | Errata |
| 4.1 | December 10, 2009 | Approved by FERC — Added approved effective date | Update |

PLEASE NOTE: items designated for inclusion in the NAESB TLR business practice following completion of the standard revision were deleted. Please see the mapped document to see which items were move to NAESB and what future changes are expected.

Attachment 1 — IRO-006

Transmission Loading Relief Procedure — Eastern Interconnection

Purpose

This standard defines procedures for curtailment and reloading of Interchange Transactions to relieve overloads on transmission facilities modeled in the Interchange Distribution Calculator.

Applicability

This standard only applies to the Eastern Interconnection.

The flexibility for ISOs and RTOs to use redispatch is contained explicitly in the NAESB business practice Section 1.3.

1. Transmission Loading Relief (TLR) Procedure

1.1. Initiation only by Reliability Coordinator. A Reliability Coordinator shall be the only entity authorized to initiate the TLR Procedure.

1.1.1. Requesting relief on transmission facilities. Any Transmission Operator may request from its Reliability Coordinator relief on the transmission facilities it operates. A Reliability Coordinator shall review these requests for relief and determine the appropriate relief actions.

1.2. Mitigating SOL and IROL violations. A Reliability Coordinator may utilize the TLR Procedure to mitigate potential or existing System Operating Limit (SOL) violations or to prevent or mitigate Interconnection Reliability Operating Limit (IROL) violations on any transmission facility modeled in the IDC. However, the TLR procedure is an inappropriate and ineffective tool as a sole means to mitigate existing IROL violations due to the time required to implement the procedure. Reconfiguration, redispatch, and load shedding are more timely and effective in mitigating existing IROL violations

1.3. Sequencing of TLR Levels and taking emergency action. The Reliability Coordinator shall not be required to follow the TLR Levels in their numerical sequence (Section 2, “TLR Levels”). Furthermore, if a Reliability Coordinator deems that a transmission loading condition could jeopardize Bulk Electric System reliability, the Reliability Coordinator shall have the authority to enter TLR Level 6 directly, and immediately direct the Balancing Authorities or Transmission Operators to take such actions as redispatching generation, or reconfiguring transmission, or reducing load to mitigate the critical condition until Interchange Transactions can be reduced utilizing the TLR Procedure or other methods to return the system to a secure state.

1.4. Notification of TLR Procedure implementation. The Reliability Coordinator initiating the use of the TLR Procedure shall notify other Reliability Coordinators and Balancing Authorities and Transmission Operators, and must post the initiation and progress of the TLR event on the appropriate NERC web page(s).

This notification is automated in the Interchange Distribution Calculator (IDC) and populates a message on the NERC RCIS.

1.4.1. Notifying other Reliability Coordinators. The Reliability Coordinator initiating the TLR Procedure shall inform all other Reliability Coordinators via the Reliability Coordinator Information System (RCIS) that the TLR Procedure has been implemented.

Actions expected. The Reliability Coordinator initiating the TLR Procedure shall indicate the actions expected to be taken by other Reliability Coordinators.

1.4.2. Notifying Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify Transmission Operators and Balancing Authorities in its Reliability Area when entering and leaving any TLR level.

1.4.3. Notifying Sink Balancing Authorities. The Reliability Coordinator for the sink Balancing Authority shall be responsible for directing the Sink Balancing Authority to curtail the Interchange Transactions as specified by the Reliability Coordinator implementing the TLR Procedure.

This notification is automated in the Interchange Distribution Calculator (IDC) and populates a message on the NERC RCIS.

Notification order. Within a Transmission Service Priority level, the Sink Balancing Authorities whose Interchange Transactions have the largest impact on the Constrained Facilities shall be notified first if practicable.

1.4.4. Updates. At least once each hour, or when conditions change, the Reliability Coordinator implementing the TLR Procedure shall update all other Reliability Coordinators (via the RCIS). Transmission Operators and Balancing Authorities who have had Interchange Transactions impacted by the TLR will be updated by their Reliability Coordinator.

1.5. Obligations. All Reliability Coordinators shall comply with the request of the Reliability Coordinator who initiated the TLR Procedure, unless the initiating Reliability Coordinator agrees otherwise.

1.6. Consideration of Interchange Transactions. The administration of the TLR Procedure shall be guided by information obtained from the IDC.

1.6.1. Interchange Transactions not in the IDC. Reliability Coordinators shall also treat known Interchange Transactions that may not appear in the IDC in accordance with the procedures in this document.

1.6.2. Transmission elements not in IDC. When a Reliability Coordinator is faced with an overload on a transmission element that is not modeled in the IDC, the Reliability Coordinator shall use the best information available to curtail Interchange Transactions in order to operate the system in a reliable manner. The Reliability Coordinator shall use its best efforts to ensure that Interchange Transactions with a Transfer Distribution Factor of less than the Curtailment Threshold on the transmission element not modeled in the IDC are not curtailed.

1.6.3. Questionable IDC results. Any Reliability Coordinator who believes the curtailment list from the IDC for a particular TLR event is incorrect shall use its best efforts to communicate those adjustments necessary to bring the curtailment list into conformance with the principles of this Procedure to the initiating Reliability Coordinator. Causes of questionable IDC results may include:

- Missing Interchange Transactions that are known to contribute to the Constraint.
- Significant change in transmission system topology.
- TDF matrix error.

Impacts of questionable IDC results may include:

- Curtailment that would have no effect on, or aggravate the constraint.
- Curtailment that would initiate a constraint elsewhere.

If other Reliability Coordinators are involved in the TLR event, all impacted Reliability Coordinators shall be in agreement before any adjustments to the Curtailment list are made.

1.6.4. Curtailment that would cause a constraint elsewhere. A Reliability Coordinator shall be allowed to exempt an Interchange Transaction from Curtailment if that Reliability Coordinator is aware that the Interchange Transaction Curtailment directed by the IDC would cause a constraint to occur elsewhere. This exemption shall only be allowed after the Reliability Coordinator has consulted with the Reliability Coordinator who initiated the Curtailment.

1.7 Logging. The Reliability Coordinator shall complete the NERC Transmission Loading Relief Procedure Log whenever it invokes TLR Level 2 or above, and send a copy of the log via email to NERC within two business days of the TLR event for posting on the NERC website.

Creation and distribution of the TLR Procedure Log is now automated in the IDC.

1.8 TLR Event Review. The Reliability Coordinator shall report the TLR event to the Operating Reliability Subcommittee in accordance with TLR review processes established by NERC as required.

1.8.1 Providing information. Transmission Operators and Balancing Authorities within the Reliability Coordinator’s Area, and all other Reliability Coordinators, including Transmission Operators and Balancing Authorities within their respective Reliability Areas, shall provide information, as requested by the initiating Reliability Coordinator, in accordance with TLR review processes established by NERC.

1.8.2 Market Committee reviews. The Market Committee may conduct reviews of certain TLR events based on the size and number of Interchange Transactions that are affected, the frequency that the TLR Procedure is called for a particular Constrained Facility, or other factors.

The Market Committee no longer exists and this requirement will be removed in Phase 3.

1.8.3 Operating Reliability Subcommittee reviews. The Operating Reliability Subcommittee shall conduct reviews to ensure proper implementation and for “lessons learned.”

2. Transmission Loading Relief (TLR) Levels

Introduction

This section describes the various levels of the TLR Procedure. The description of each level begins with the circumstances that define the TLR Level, followed by the procedures to be followed.

The decision that a Reliability Coordinator makes in selecting a particular TLR Level often depends on the transmission loading condition and whether the Interchange Transaction is using Non-firm Point-to-Point Transmission Service or Firm Point-to-Point Transmission Service. There are further considerations that depend on whether the Constrained Facility is on or off the Contract Path. It is important to note that an Interchange Transaction using Firm Point-to-Point Transmission Service on all Contract Path links is considered a “firm” Interchange Transaction even if the Constrained Facility is off the Contract Path.

2.1. TLR Level 1 — Notify Reliability Coordinators of potential SOL or IROL Violations

2.1.1. The Reliability Coordinator shall use the following circumstances to establish the need for TLR Level 1:

- The transmission system is secure.
- The Reliability Coordinator foresees a transmission or generation contingency or other operating problem within its Reliability Area that could cause one or more transmission facilities to approach or exceed their SOL or IROL.

2.1.2. Notification procedures. The Reliability Coordinator shall notify all Reliability Coordinators via the Reliability Coordinator Information System (RCIS) as soon as the condition is foreseen. All affected Reliability Coordinators shall check to ensure that Interchange Transactions are posted in the IDC.

2.2. TLR Level 2 — Hold transfers at present level to prevent SOL or IROL Violations

2.2.1. The Reliability Coordinator shall use the following circumstances to establish the need for entering TLR Level 2:

- The transmission system is secure.
- One or more transmission facilities are expected to approach, or are approaching, or are at their SOL or IROL.

2.3 TLR Level 3a — Reallocation of Transmission Service by curtailing Interchange Transactions using Non-firm Point-to-Point Transmission Service to allow Interchange Transactions using higher priority Transmission Service

2.3.1. The Reliability Coordinator shall use the following circumstances to establish the need for entering TLR Level 3a:

- The transmission system is secure.
- One or more transmission facilities are expected to approach, or are approaching, or are at their SOL or IROL.
- Transactions using Non-firm Point-to-Point Transmission Service are flowing that are at or above the Curtailment Threshold on those facilities.

- The Transmission Provider has previously approved a higher priority Point-to-Point Transmission Service reservation over which a Transmission Customer wishes to begin an Interchange Transaction.

2.4. TLR Level 3b — Curtail Interchange Transactions using Non-Firm Transmission Service Arrangements to mitigate a SOL or IROL Violation

2.4.1. The Reliability Coordinator shall use the following circumstances to establish the need for entering TLR Level 3b:

- One or more transmission facilities are operating above their SOL or IROL, or
- Such operation is imminent and it is expected that facilities will exceed their reliability limit unless corrective action is taken, or
- One or more Transmission Facilities will exceed their SOL or IROL upon the removal from service of a generating unit or another transmission facility.
- Transactions using Non-firm Point-to-Point Transmission Service are flowing that are at or above the Curtailment Threshold on those facilities.

2.5 TLR Level 4 — Reconfigure Transmission

2.5.1. The Reliability Coordinator shall use the following circumstances to establish the need for entering TLR Level 4:

- One or more Transmission Facilities are above their SOL or IROL, or
- Such operation is imminent and it is expected that facilities will exceed their reliability limit unless corrective action is taken.

2.5.2. Reconfiguration procedures. The issuance of a TLR Level 4 shall result in the curtailment, in the current hour and the next hour, of all Interchange Transactions using Non-firm Point-to-Point Transmission Service that are at or above the Curtailment Threshold that impact the Constrained Facilities. If a SOL or IROL violation is imminent or occurring, the Reliability Coordinator(s) shall request that the affected Transmission Operators reconfigure transmission on their system, or arrange for reconfiguration on other transmission systems, to mitigate the constraint.

2.6. TLR Level 5a — Reallocation of Transmission Service by curtailing Interchange Transactions using Firm Point-to-Point Transmission Service on a pro rata basis to allow additional Interchange Transactions using Firm Point-to-Point Transmission Service

2.6.1. The Reliability Coordinator shall use the following circumstances to establish the need for entering TLR Level 5a:

- The transmission system is secure.
- One or more transmission facilities are at their SOL or IROL.
- All Interchange Transactions using Non-firm Point-to-Point Transmission Service that are at or above the Curtailment Threshold have been curtailed.
- The Transmission Provider has been requested to begin an Interchange Transaction using previously arranged Firm Transmission Service that would result in a SOL or IROL violation.

- No further transmission reconfiguration is possible or effective.

2.7. TLR Level 5b — Curtail Interchange Transactions using Firm Point-to-Point Transmission Service to mitigate an SOL or IROL violation

2.7.1. The Reliability Coordinator shall use following circumstances to establish the need for entering TLR Level 5b:

- One or more Transmission Facilities are operating above their SOL or IROL, or
- Such operation is imminent, or
- One or more Transmission Facilities will exceed their SOL or IROL upon the removal from service of a generating unit or another transmission facility.
- All Interchange Transactions using Non-firm Point-to-Point Transmission Service that are at or above the Curtailment Threshold have been curtailed.
- No further transmission reconfiguration is possible or effective.

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2.8. Curtailment of Interchange Transactions Using Firm Transmission Service

2.8.1. The Reliability Coordinator shall direct the curtailment of Interchange Transactions using Firm Transmission Service that are at or above the Curtailment Threshold for the following TLR Levels:

2.8.1.1. TLR Level 5a. Enable additional Interchange Transactions using Firm Point-to-Point Transmission Service to be implemented after all Interchange Transactions using Non-firm Point-to-Point Service have been curtailed, or

2.8.1.2. TLR Level 5b. Mitigate a SOL or IROL violation that remains after all Interchange Transactions using Non-firm Transmission Service has been curtailed under TLR Level 3b, and following attempts to reconfigure transmission under TLR Level 4.

2.9. TLR Level 6 — Emergency Procedures

2.9.1 The Reliability Coordinator shall use following circumstances to establish the need for entering TLR Level 6:

- One or more Transmission Facilities are above their SOL or IROL.
- One or more Transmission Facilities will exceed their SOL or IROL upon the removal from service of a generating unit or another transmission facility.

2.9.2 Implementing emergency procedures. If the Reliability Coordinator deems that transmission loading is critical to Bulk Electric System reliability, the Reliability Coordinator shall immediately direct the Balancing Authorities and Transmission Operators in its Reliability Area to redispatch generation, or reconfigure transmission, or reduce load to mitigate the critical condition until Interchange Transactions can be reduced utilizing the TLR Procedures or other procedures to return the system to a secure state. All Balancing Authorities and Transmission Operators shall comply with all requests from their Reliability Coordinator.

2.10 TLR Level 0 — TLR concluded

2.10.1 Interchange Transaction restoration and notification procedures. The Reliability Coordinator initiating the TLR Procedure shall notify all Reliability Coordinators within the Interconnection via the RCIS when the SOL or IROL violations are mitigated and the system is in a reliable state, allowing Interchange Transactions to be reestablished at its discretion. Those with the highest transmission priorities shall be reestablished first if possible.

3. Requirements

- 3.1** The Reliability Coordinator shall be allowed to call a TLR 3b at any time to help mitigate a SOL or IROL violation.
- 3.2** The Reliability Coordinator shall Reallocate Interchange Transactions using Non-firm Point-to-Point Transmission for the next hour to maintain the desired flow using Reallocation in accordance with the following timing specification:
 - 3.2.1** If issued prior to XX: 25, Non-firm Interchange Transactions will be curtailed to meet the desired current hour relief
 - 4.2.1.1** At XX: 25 a Reallocation will be performed to maintain the desired flow at the top of the following hour
 - 3.2.2** If issued after XX: 25, Non firm Interchange Transactions will be curtailed to meet the desired current hour relief and a Reallocation will be performed to maintain the target flow identified for the current hour.
 - 3.2.3** Transactions must be in the IDC by the Approved-tag Submission Deadline for Reallocation.
- 3.3** The IDC shall issue ADJUST Lists to the Generation and Load Balancing Authority Areas and the Purchasing-Selling Entity who submitted the tag. The ADJUST List will include: (recommended to be moved to Attachment 2)
 - 3.3.1** Interchange Transactions using Non-firm Point-to-Point Transmission Service that are to be curtailed or held during current and next hours. (recommended to be moved to Attachment 2)
 - 3.3.2** Interchange Transactions using Firm Point-to-Point Transmission Service that were entered after XX:25 or issuance of TLR 3b (see Case 3 in Appendix F). (recommended to be moved to Attachment 2)
- 3.4** The Sink Balancing Authority shall send the ADJUST Lists back to the IDC as soon as possible to ensure the most accurate calculations for actions subsequent to the TLR 3b being called. (recommend to be moved to Attachment 2)
- 3.5** The Reliability Coordinator will no longer be required to call a TLR Level 3a as soon as the SOL or IROL violation that caused the TLR 3b to be called has been mitigated due to the inherent next hour Reallocation that takes place for the top of the next hour in the TLR Level 3b. (recommend to be moved to Attachment 2)

Appendices for Transmission Loading Relief Standard

PLEASE NOTE: items designated for inclusion in the NAESB TLR business practice following completion of the standard revision were deleted from this version of the NERC standard. Please see the mapped document to see which requirements were moved to NAESB and what future changes are expected. Appendices B, D, G, and the sub-priority portions of E-2 have been moved to NAESB, The appendices below (A, C, E, F) will be renumbered in the final standard.

Appendix A. Transaction Management and Curtailment Process.

Appendix C. Sample NERC Transmission Loading Relief Procedure Log.

Appendix E. How the IDC Handles Reallocation.

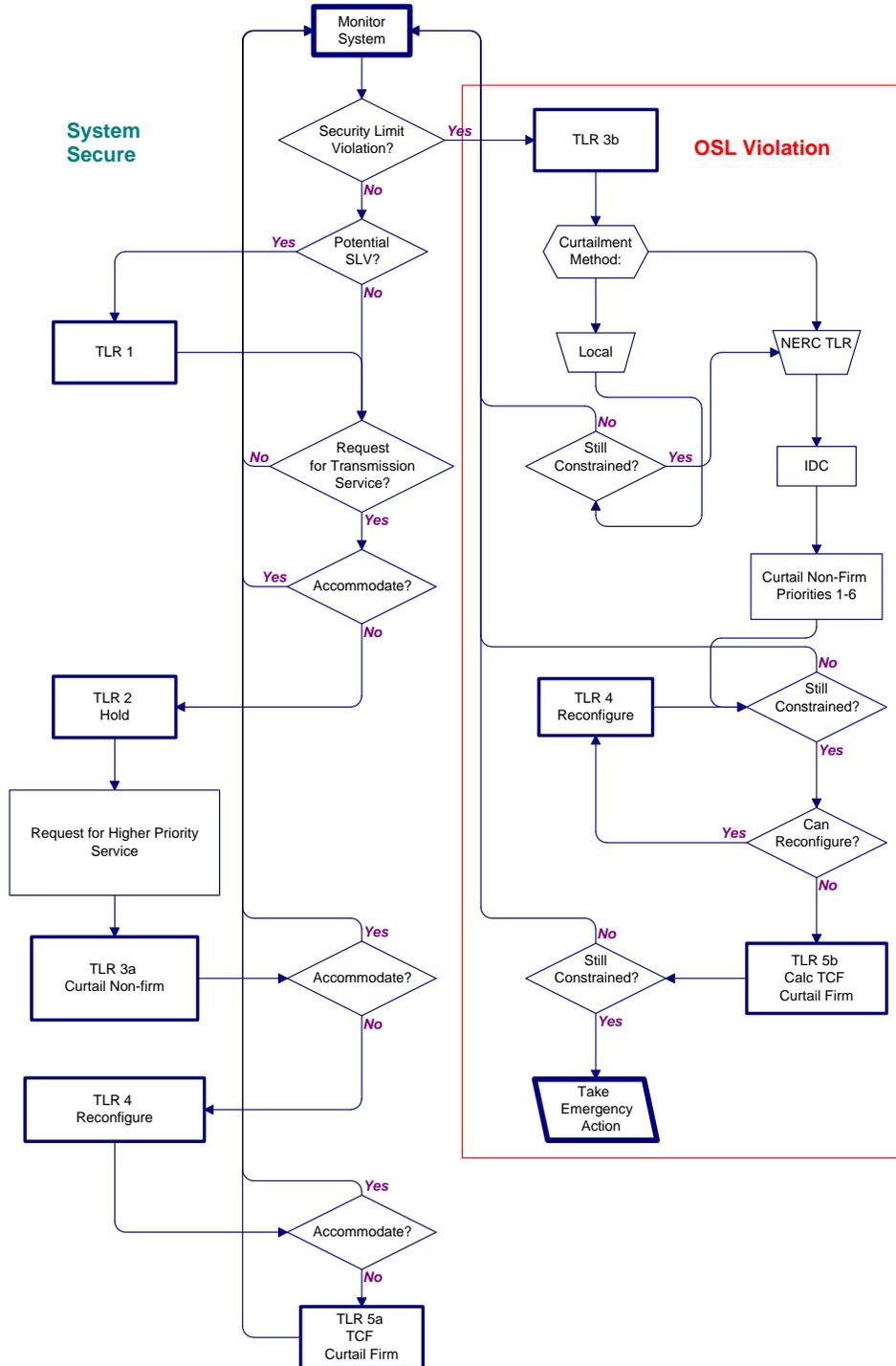
Section E1: Summary of IDC Features that Support Transaction Reloading/Reallocation.

Section E2: Timing Requirements.

Appendix F. Considerations for Interchange Transactions using Firm Point-to-Point Transmission Service.

Appendix A. Transaction Management and Curtailment Process

This flowchart depicts an overview of the Transaction Management and Curtailment process. Detailed decisions are not shown.



Appendix E. How the IDC Handles Reallocation

The IDC algorithms reflect the Reallocation and reloading principles in this Appendix, as well as the reporting requirements, and status display. The IDC will obtain the Tag Submittal Time from the Tag Authority and post the Reloading/Reallocation information to the NERC TLR website.

A summary of IDC features that support the Reallocation process is provided in Attachment E1. Details on the interface and display features are provided in Attachment E2. Refer to Version 1.7.095 NERC Transaction Information Systems Working Group (TISWG) *Electronic Tagging Functional Specification* for details about the E-Tag system.

E1. Summary of IDC Features that Support Transaction Reloading/Reallocation

The following is a summary of IDC features and E-Tag interface that support Reloading/Reallocation:

Information posted from IDC to NERC TLR website.

1. Restricted directions (all source/sink combinations that impact a Constrained Facility(ies) with TLR 2 or higher) will be posted to the NERC TLR website and updated as necessary.
2. TLR Constrained Facility status and Transfer Distribution Factors will continue to be posted to NERC TLR website.
3. Lowest priority of Interchange Transactions (marginal “bucket”) to be Reloaded/Reallocated next-hour on each TLR Constrained Facility will be posted on NERC TLR website. This will provide an indication to the market of priority of Interchange Transactions that may be Reloaded/Reallocated the following hours.

IDC Logic, IDC Report, and Timing

1. The Reliability Coordinator will run the IDC the Reloading/Reallocation report at approximately 00:26. The IDC will prompt the Reliability Coordinator to enter a maximum loading value. The IDC will alarm if the Reliability Coordinator does not enter this value and issue a report by 00:30 or change from TLR 3a Level. The Report will be distributed to Balancing Authorities and Transmission Operators at 00:30. This process repeats every hour as long as the approved tag submission deadline for Reallocation is in effect (or until the TLR level is reduced to 1 or 0).
2. For Interchange Transactions in the restricted directions, tags must be submitted to the IDC by the approved tag submission deadline for Reallocation to be considered for Reallocation next-hour. The time stamp by the Tag Authority is regarded the official tag submission time.
3. Tags submitted to IDC after the approved tag submission deadline for Reallocation will not be allowed to start or increase but will be considered for Reallocation the next hour.
4. Interchange Transactions in restricted directions that are not indicated as “PROCEED” on the Reload/Reallocation Report will not be permitted to start or increase next hour.

Reloading/Reallocation Transaction Status

Reloading/Reallocation status will be determined by the IDC for all Interchange Transactions. The Reloading/Reallocation status of each Interchange Transaction will be listed on IDC reports and NERC TLR website as appropriate. An Interchange Transaction is considered to be in a restricted direction if it is at or above the Curtailment Threshold. Interchange Transactions below the Curtailment Threshold are unrestricted and free to flow subject to all applicable Reliability Standards and tariff rules.

1. **HOLD.** Permission has not been given for Interchange Transaction to start or increase and is waiting for the next Reloading/Reallocation evaluation for which it is a candidate. Interchange Transactions with E-tags submitted to the Tag Authority prior to TLR 2 or higher being declared (pre-tagged) will change to CURTAILED Status upon evaluation that does not permit them to start or increase.

Standard IRO-006-4.1 — Reliability Coordination — Transmission Loading Relief

Transactions with E-tags submitted to Tag Authority after TLR 2 or higher was declared (post-tagged) will retain HOLD Status until given permission to proceed or E-Tag expires.

2. **CURTAILED.** Transactions for which E-Tags were submitted to Tag Authority prior to TLR 2 or higher being declared (pre-tagged) and ordered to be curtailed totally, curtailed partially, not permitted to start, or not permitted to increase. Interchange Transactions (pre-tagged or post-tagged) that were flowing and ordered to be reduced or totally curtailed. The Balancing Authority will indicate to the IDC through the E-Tag adjustment table the Interchange Transaction's curtailed values.
3. **PROCEED:** Interchange Transaction is flowing or has been permitted to flow as a result of Reloading/Reallocation evaluation. The Balancing Authority will indicate through the E-Tag adjustment table to IDC if Interchange Transaction will reload, start, or increase next-hour per Purchasing-Selling Entity's energy schedule as appropriate.

Reallocation/Reloading Priorities

1. Interchange Transaction candidates are ranked for loading and curtailment by priority as per Section 4, "Principles for Mitigating Constraints On and Off the Contract Path." This is called the "Constrained Path Method," or CPM. (secondary, hourly, daily, ... firm etc). Interchange Transactions are curtailed and loaded pro-rata within priority level per TLR algorithm.
2. Reloading/Reallocation of Interchange Transactions are prioritized first by priority per CPM. E-Tags must be submitted to the IDC by the approved tag submission deadline for Reallocation of the hour during which the Interchange Transaction is scheduled to start or increase to be considered for Reallocation.
3. During Reloading/Reallocation, Interchange Transactions using lower priority Transmission Service will be curtailed pro-rata to allow higher priority transactions to reload, increase, or start. Equal priority Interchange Transactions will not reload, start, or increase by pro-rata Curtailment of other equal priority Interchange Transactions.
4. Reloading of Interchange Transactions using Non-firm Transmission Service with CURTAILED Status will take precedence over starting or increasing of Interchange Transactions using Non-firm Transmission Service of the same priority with PENDING Statuses.
5. Interchange Transactions using Firm Point-to-Point Transmission Service will be allowed to start as scheduled under TLR 3a as long as their E-Tag was received by the IDC by the approved tag submission deadline for Reallocation of the hour during which the Interchange Transaction is due to start or increase, regardless of whether the E-tag was submitted to the Tag Authority prior to TLR 2 or higher being declared or not. If this is the initial issuance of the TLR 3a, Interchange Transactions using Firm Point-to-Point Transmission Service will be allowed to start as scheduled as long as their E-Tag was received by the IDC by the time the TLR is declared.

Total Flow Value on a Constrained Facility for Next Hour

1. The Reliability Coordinator will calculate the change in net flow on a Constrained Facility due to Reallocation for the next hour based on:
 - Present constrained facility loading, present level of Interchange Transactions, and Balancing Authorities NNative Load responsibility (TLR Level 5a) impacting the Constrained Facility,
 - SOLs or IROLs, known interchange impacts and Balancing Authority NNative Load responsibility (TLR Level 5a) on the Constrained Facility the next hour, and
 - Interchange Transactions scheduled to begin the next hour.

Standard IRO-006-4.1 — Reliability Coordination — Transmission Loading Relief

2. The Reliability Coordinator will enter a maximum loading value for the constrained facility into the IDC as part of issuing the Reloading/Reallocation report.
3. The Reliability Coordinator is allowed to call for TLR 3a or 5a when approaching a SOL or IROL to allow maximum transactional flow next hour, and to manage flows without violating transmission limits.
4. The simultaneous curtailment and Reallocation for a Constrained Facility is allowed. This reduces the flow over the Constrained Facility while allowing Interchange Transactions using higher priority Transmission Service to start or increase the next hour. This may be used to accommodate change in flow next-hour due to changes other than Point-to-Point Interchange Transactions while respecting the priorities of Interchange Transactions flowing and scheduled to flow the next hour. The intent is to reduce the need for using TLR 3b, which prevents new Interchange Transactions from starting or increasing the next hour.
5. The Reliability Coordinator must allow Interchange Transactions to be reloaded as soon as possible. Reloading must be in an orderly fashion to prevent a SOL or IROL violation from (re)occurring and requiring holding or curtailments in the restricted direction.

E2. Timing Requirements

TLR Levels 3a and 5a Issuing/Processing Time Requirement

1. In order for the IDC to be reasonably certain that a TLR Level 3a or 5a re-allocation/reloading report in which all tags submitted by the approved tag submission deadline for Reallocation are included, the report must be generated no earlier than 00:25 to allow the 10-minute approval time for Transactions that start next hour.
2. In order to allow a Reliability Coordinator to declare a TLR Level 3a or 5a at any time during the hour, the TLR declaration and Reallocation/Reloading report distribution will be treated as independent processes by the IDC. That is, a Reliability Coordinator may declare a TLR Level 3a or 5a at any time during the course of an hour. However, if a TLR Level 3a or 5a is declared for the next hour prior to 00:25 (see Figure 5 at right), the Reallocation/Reloading report that is generated will be made available to the issuing Reliability Coordinator only for previewing purposes, and cannot be distributed to the other Reliability Coordinators or the market. Instead, the issuing Reliability Coordinator will be reminded by an IDC alarm at 00:25 to generate a new Reallocation/Reloading report that will include all tags submitted prior to the approved tag submission deadline for Reallocation.
3. A TLR Level 3a or 5a Reallocation/Reloading report must be confirmed by the issuing Reliability Coordinator prior to 00:30 in order to provide a minimum of 30 minutes for the Reliability Coordinators with tags sinking in its Reliability Area to coordinate the Reallocation and Reloading with the Sink Balancing Authorities. This provides only 5 minutes (from 00:25 to 00:30) for the issuing Reliability Coordinator to generate a Reallocation/Reloading report, review it, and approve it.
4. The TLR declaration time will be recorded in the IDC for evaluating transaction sub-priorities for Reallocation/Reloading purposes (see Subpriority Table, in the **IDC Calculations and Reporting** section below).

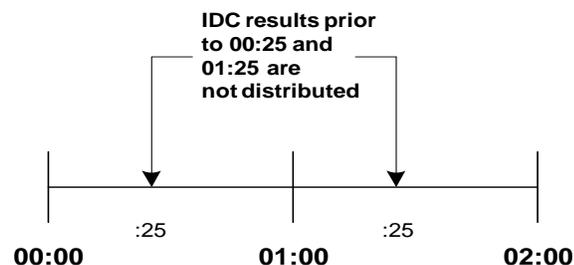


Figure 5 - IDC report may be run prior to 00:25, but results are not distributed.

Re-Issuing of a TLR Level 2 or Higher

Each hour, the IDC will automatically remind the issuing Reliability Coordinator (via an IDC alarm) of a TLR level 2 or higher declared in the previous hour or earlier about re-issuing the TLR. The purpose of the reminder is to enable the Reliability Coordinator to Reallocate or reload currently halted or curtailed Interchange Transactions next hour. The reminder will be in the form of an alarm to the issuing Reliability Coordinator, and will take place at 00:25 so that, if the Reliability Coordinator re-issues the TLR as a TLR level 3a or 5a, all tags submitted prior to the approved tag submission deadline for Reallocation are available in the IDC.

IDC Assistance with Next Hour Point-to-Point Transactions

In order to assist a Reliability Coordinator in determining the MW relief required on a Constrained Facility for the next hour for a TLR level 3a or 5a, the IDC will calculate and present the total MW impact of all currently flowing and scheduled Point-to-Point Transactions for the next hour. In order to assist a Reliability Coordinator in determining the MW relief required on a Constrained Facility for the next hour during a TLR level 5a, the IDC will calculate and present the total MW impact of all currently flowing and scheduled Point-to-Point Transactions for the next hour as well as Balancing Authority with flows due to service to Network Customers and Native Load. The Reliability Coordinator will then be requested to provide the total incremental or decremental MW amount of flow through the Constrained Facility that can be allowed for the next hour. The value entered by the Reliability Coordinator and the IDC-calculated amounts will be used by the IDC to identify the relief/reloading amounts (delta

Standard IRO-006-4.1 — Reliability Coordination — Transmission Loading Relief

incremental flow value) on the constrained facility. The IDC will determine the Transactions to be reloaded, reallocated, or curtailed to make room for the Transactions using higher priority Transmission Service. The following examples show the calculation performed by IDC to identify the “delta incremental flow:”

Example 1

| | |
|---|---|
| Flow to maintain on Facility | 800 MW |
| Expected flow next hour from Transactions using Point-to-Point Transmission Service | 950 MW |
| Contribution from flow next hour from service to Network customers and Native Load | -100 MW |
| Expected Net flow next hour on Facility | 850 MW |
| Amount of Transactions using Point-to-Point Transmission Service to hold for Reallocation | $850 \text{ MW} - 800 \text{ MW} = 50 \text{ MW}$ |
| Amount to enter into IDC for Transactions using Point-to-Point Transmission Service | $950 \text{ MW} - 50 \text{ MW} = 900 \text{ MW}$ |

Example 2

| | |
|---|---|
| Flow to maintain on Facility | 800 MW |
| Expected flow next hour from Transactions using Point-to-Point Transmission Service | 950 MW |
| Contribution from flow next hour from service to Network customers and Native Load | 50 MW |
| Expected Net flow next hour on Facility | 1000 MW |
| Amount of Transactions using Point-to-Point Transmission Service to hold for Reallocation | $1000 \text{ MW} - 800 \text{ MW} = 200 \text{ MW}$ |
| Amount to enter into IDC for Transactions using Point-to-Point Transmission Service | $950 \text{ MW} - 200 \text{ MW} = 750 \text{ MW}$ |

Example 3

| | |
|---|---|
| Flow to maintain on Facility | 800 MW |
| Expected flow next hour from Transactions using Point-to-Point Transmission Service | 950 MW |
| Contribution from flow next hour from service to Network customers and Native Load | -200 MW |
| Expected Net flow next hour on Facility | 750 MW |
| Amount of Transactions using Point-to-Point Transmission Service to hold for Reallocation | $750 \text{ MW} - 800 \text{ MW} = -50 \text{ MW}$ None are held |

For a TLR levels 3b or 5b the IDC will request the Reliability Coordinator to provide the MW requested relief amount on the Constrained Facility, and will not present the current and next hour MW impact of Point-to-Point transactions. The Reliability Coordinator-entered requested relief amount will be used by the IDC to determine the Interchange Transaction Curtailments and flows due to service to Network Customers and Native Load (TLR Level 5b) in order to reduce the SOL or IROL violation on the Constrained Facility by the requested amount.

IDC Calculations and Reporting

At the time the TLR report is processed, the IDC will use all candidate Interchange Transactions for Reallocation that met the approved tag submission deadline for Reallocation plus those Interchange Transactions that were curtailed or halted on the previous TLR action of the same TLR event. The IDC will calculate and present an Interchange Transactions Halt/Curtailment list that will include reload and Reallocation of Interchange Transactions. The Interchange Transactions are prioritized as follows:

1. All Interchange Transactions will be arranged by Transmission Service Priority according to the Constrained Path Method. These priorities range from 1 to 6 for the various non-firm Transmission Service products (TLR levels 3a and 3b). Interchange Transactions using Firm Transmission Service (priority 7) are used only in TLR levels 5a and 5b. Next-Hour Market Service is included at priority 0 (Recommended to be placed in Attachment 2).

Examples of Interchange Transactions using Non-firm Transmission Service sub-priority settings begin in the **Transaction Sub-priority Examples** following sections

2. All Interchange Transactions using Firm Transmission Service will be put in the same priority group, and will be Curtailed/Reallocated pro-rata, independent of their current status (curtailed or halted) or time of submittal with respect to TLR issuance (TLR level 5a). Under a TLR 5a, all Interchange Transactions using Non-firm Transmission Service that is at or above the Curtailment Threshold will have been curtailed and hence sub-prioritizing is not required.

All Interchange Transactions processed in a TLR are assigned one of the following statuses:

| | |
|------------|--|
| PROCEED: | The Interchange Transaction has started or is allowed to start to the next hour MW schedule amount. |
| CURTAILED: | The Interchange Transaction has started and is curtailed due to the TLR, or it had not started but it was submitted prior to the TLR being declared (level 2 or higher). |
| HOLD: | The Interchange Transaction had never started and it was submitted after the TLR being declared – the Interchange Transaction is held from starting next hour or the transaction had never started and it was submitted to the IDC after the Approved-Tag Submission Deadline – the Interchange Transaction is to be held from starting next hour and is not included in the Reallocation calculations until following hour. |

Upon acceptance of the TLR Transaction Reallocation/reloading report by the issuing Reliability Coordinator, the IDC will generate a report to be sent to NERC that will include the PSE name and Tag ID of each Interchange Transaction in the IDC TLR report. The Interchange Transaction will be ranked according to its assigned status of HOLD, CURTAILED or PROCEED. The reloading/Reallocation report will be made available at NERC's public TLR website, and it is NERC's responsibility to format and publish the report.

Tag Reloading for TLR Levels 1 and 0

When a TLR Level 1 or 0 is issued, the Constrained Facility is no longer under SOL or IROL violation and all Interchange Transactions are allowed to flow. In order to provide the Reliability Coordinators with

a view of the Interchange Transactions that were halted or curtailed on previous TLR actions (level 2 or higher) and are now available for reloading, the IDC provides such information in the TLR report.

New Tag Alarming

Those Interchange Transactions that are at or above the Curtailment Threshold and are *not* candidates for Reallocation because the tags for those Transactions were not submitted by the approved tag submission deadline for Reallocation will be flagged as HOLD and must not be permitted to start or increase during the next hour. To alert Reliability Coordinators of those Transactions required to be held, the IDC will generate a report (for viewing within the IDC only) at various times. The report will include a list of all HOLD Transactions. In order not to overwhelm the Reliability Coordinator with alarms, only those who issued the TLR and those whose Transactions sink within their Reliability Area will be alarmed. An alarm will be issued for a given tag only once and will be issued for all TLR levels for which halting new Transactions is required: TLR Level 2, 3a, 3b, 5a and 5b.

Tag Adjustment

The Interchange Transactions with statuses of HOLD, CURTAILED or PROCEED must be adjusted by a Tag Authority or Tag Approval entity. Without the tag adjustments, the IDC will assume that Interchange Transactions were not curtailed/held and are flowing at their specified schedule amounts.

1. Interchange Transactions marked as CURTAILED should be adjusted to a cap equal to, or at the request of the originating PSE, less than the reallocated amount (shown as the MW CAP on the IDC report). This amount may be zero if the Transaction is fully curtailed.
2. Interchange Transaction marked as PROCEED should be adjusted to reload (NULL or to its MW level in accordance with its Energy Profile in the adjusted MW in the E-Tag) if the Interchange Transaction has been previously adjusted; otherwise, if the Interchange Transaction is flowing in full, the Tag Authority need not issue an adjust.
3. Interchange Transactions marked as HOLD should be adjusted to 0 MW.

Special Tag Status

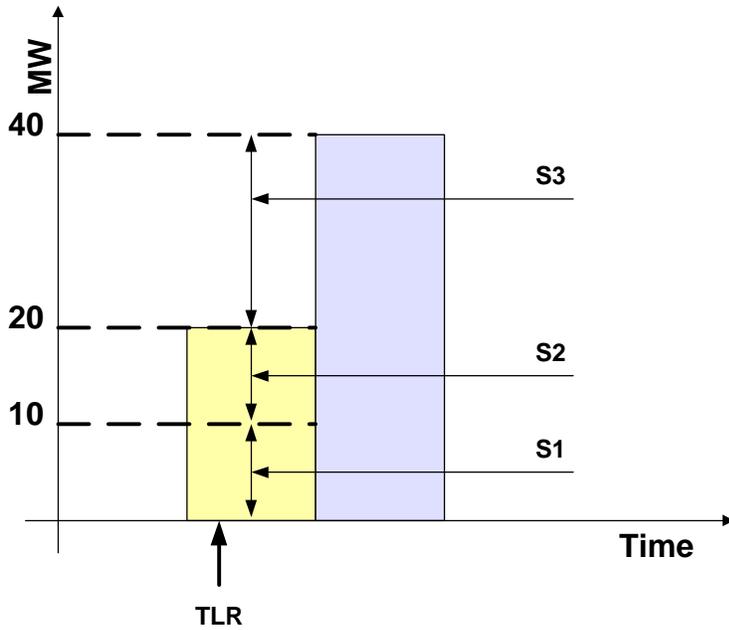
There are cases in which a tag may be marked with a composite state of ATTN_REQD to indicate that tag Authority/Approval failed to communicate or there is an inconsistency between the validation software of different tag Authority/Approval entities. In this situation, the tag is no longer subject to passive approval and its status change to IMPLEMENT may take longer than 10 minutes. Under these circumstances, the IDC may have a tag that is issued prior to the Tag Submittal Deadline that will not be a candidate for Reallocation. Such tags, when approved by the Tag Authority, will be marked as HOLD and must be halted.

Transaction Sub-Priority Examples

The following describes examples of Interchange Transactions using Non-firm Transmission Service sub-priority setting for an Interchange Transaction under different circumstances of current-hour and next-hour schedules and active MW flowing as modified by tag adjust table in E-Tag.

Example 1 – Transaction curtailed, next-hour Energy Profile is higher

| | |
|---|-------|
| Energy Profile: Current hour | 20 MW |
| Actual flow following curtailment: Current hour | 10 MW |
| Energy Profile: Next hour | 40 MW |

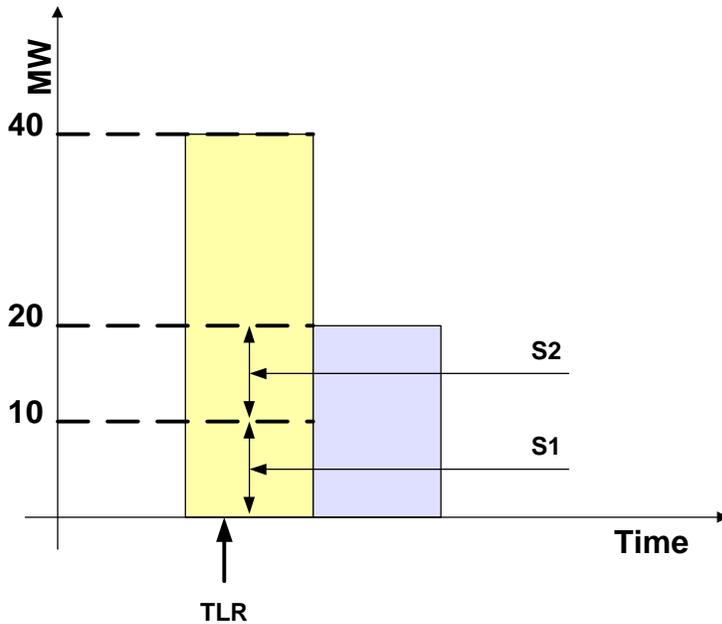


Sub-priorities for Transaction MW:

| <i>Sub-Priority</i> | <i>MW Value</i> | <i>Explanation</i> |
|---------------------|-----------------|---------------------------------------|
| S1 | 10 MW | Maintain current curtailed flow |
| S2 | +10 MW | Reload to current hour Energy Profile |
| S3 | +20 MW | Load to next hour Energy Profile |
| S4 | | |

Example 2 – Transaction curtailed, next-hour Energy Profile is lower

| | |
|---|-------|
| Energy Profile: Current hour | 40 MW |
| Actual flow following curtailment: Current hour | 10 MW |
| Energy Profile: Next hour | 20 MW |

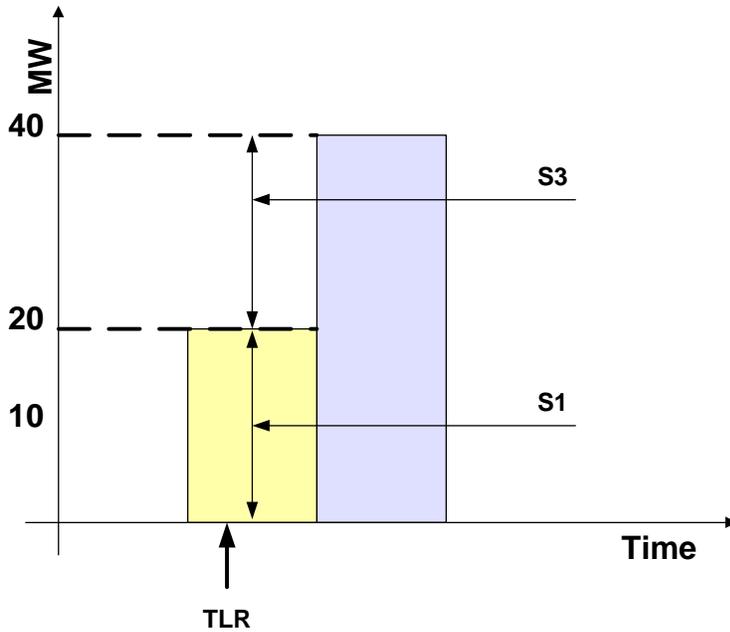


Sub-priorities for Transaction MW:

| <i>Sub-Priority</i> | <i>MW Value</i> | <i>Explanation</i> |
|---------------------|-----------------|---|
| S1 | 10 MW | Maintain current curtailed flow |
| S2 | +10 MW | Reload to <i>lesser</i> of current and next-hour Energy Profile |
| S3 | +0 MW | Next-hour Energy Profile is 20MW, so no change in MW value |
| S4 | | |

Example 3 – Transaction not curtailed, next-hour Energy Profile is higher

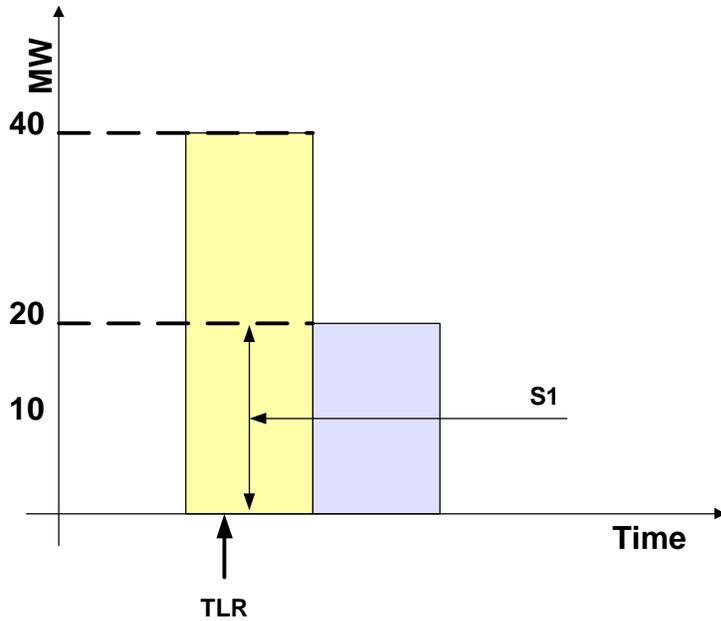
| | |
|---|------------------------|
| Energy Profile: Current hour | 20 MW |
| Actual flow following curtailment: Current hour | 20 MW (no curtailment) |
| Energy Profile: Next hour | 40 MW |



| Sub-Priority | MW Value | Explanation |
|--------------|----------|---|
| S1 | 20 MW | Maintain current flow (not curtailed) |
| S2 | +0 MW | Reload to <i>lesser</i> of current and next-hour Energy Profile |
| S3 | +20 MW | Next-hour Energy Profile is 40MW |
| S4 | | |

Example 4 – Transaction not curtailed, next-hour Energy Profile is lower

| | |
|---|------------------------|
| Energy Profile: Current hour | 40 MW |
| Actual flow following curtailment: Current hour | 40 MW (no curtailment) |
| Energy Profile: Next hour | 20 MW |

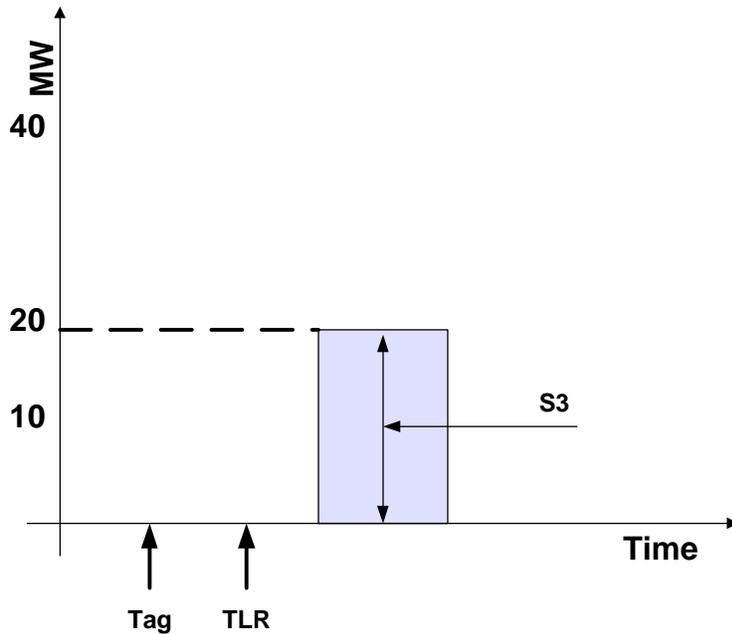


Sub-priorities for Transaction MW:

| <i>Sub-Priority</i> | <i>MW Value</i> | <i>Explanation</i> |
|---------------------|-----------------|---|
| S1 | 20 MW | Reduce flow to next-hour Energy Profile (20MW) |
| S2 | +0 MW | Reload to <i>lesser</i> of current and next-hour Energy Profile |
| S3 | +0 MW | Next-hour Energy Profile is 20MW |
| S4 | | |

Example 5 — TLR Issued before Transaction was scheduled to start

| | |
|---|--|
| Energy Profile: Current hour | 0 MW |
| Actual flow following curtailment: Current hour | 0 MW (Transaction scheduled to start <i>after</i> TLR initiated) |
| Energy Profile: Next hour | 20 MW |



| <i>Sub-Priority</i> | <i>MW Value</i> | <i>Explanation</i> |
|---------------------|-----------------|--------------------------------------|
| S1 | 0 MW | Transaction was not allowed to start |
| S2 | +0 MW | Transaction was not allowed to start |
| S3 | +20 MW | Next-hour Energy Profile is 20MW |
| S4 | +0 | Tag submitted prior to TLR |

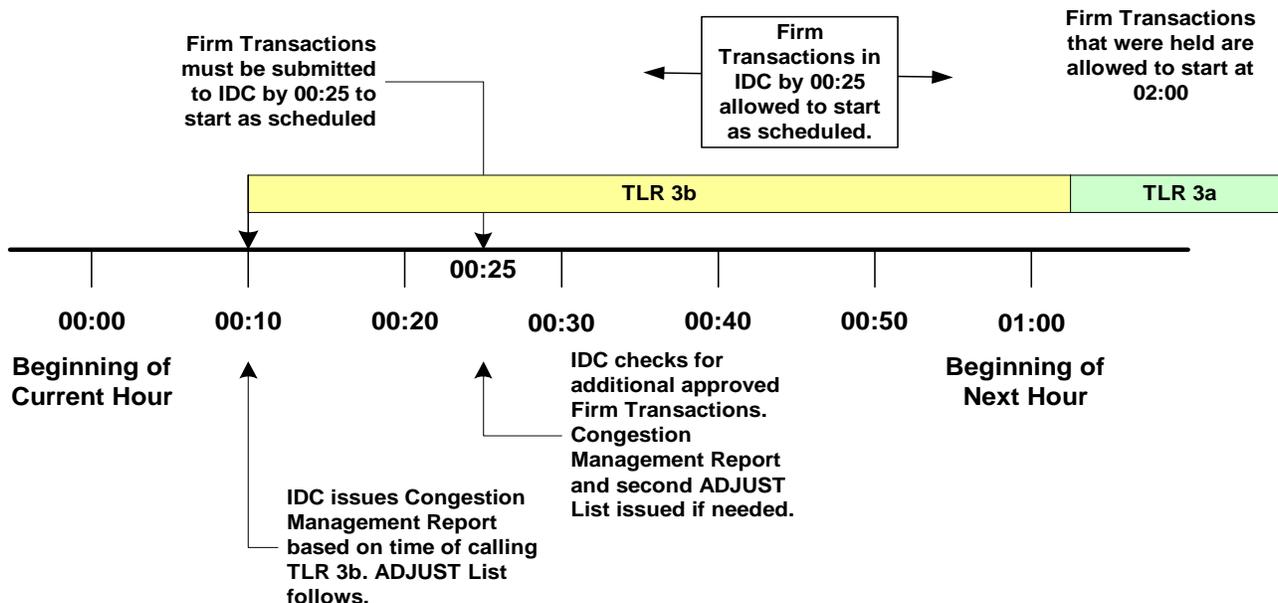
Appendix F. Considerations for Interchange Transactions

Using Firm Point-to-Point Transmission Service

The following cases explain the circumstances under which an Interchange Transaction using Firm Point-to-Point Transmission Service will be allowed to start as scheduled during a TLR 3b:

Case 1: TLR 3b is called between 00:00 and 00:25 and the Interchange Transaction using Firm Point-to-Point Transmission Service is submitted to IDC by 00:25.

The IDC will examine the current hour (00) and next hour (01) for all Interchange Transactions.



The IDC will issue an ADJUST List based upon the time the TLR 3b is called. The ADJUST List will include curtailments of Interchange Transactions using Non-firm Point-to-Point Transmission Service as necessary to allow room for those Interchange Transactions using Firm Point-to-Point Transmission Service to start as scheduled.

At 00:25, the IDC will check for additional Interchange Transactions using Firm Point-to-Point Transmission Service that were submitted to the IDC by that time and issue a second ADJUST List if those additional Interchange Transactions are found.

All existing or new Interchange Transactions using Non-firm Point-to-Point Transmission Service that are increasing or expected to start during the current hour or next hour will be placed on HALT or HOLD. There is no Reallocation of lower-priority Interchange Transactions using Non-firm Point-to-Point Transmission Service.

Interchange Transactions using Firm Point-to-Point Transmission Service that were submitted to the IDC by 00:25 will be allowed to start as scheduled.

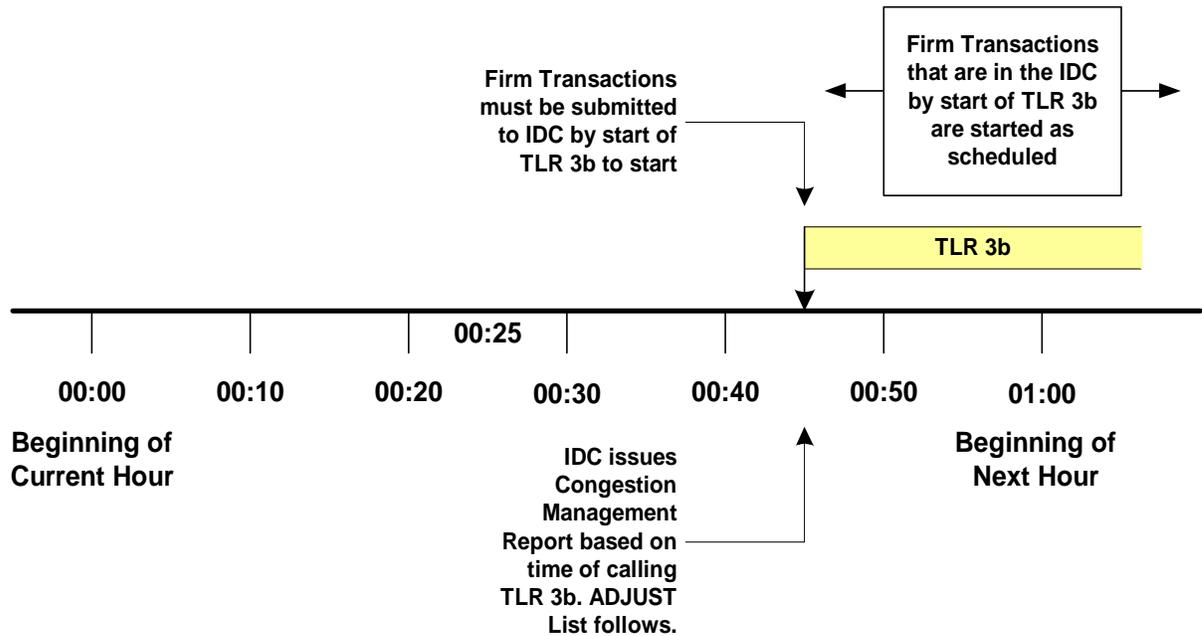
Interchange Transactions using Firm Point-to-Point Transmission Service that were submitted to the IDC after 00:25 will be held.

Once the SOL or IROL violation is mitigated, the Reliability Coordinator shall call a TLR Level 3a (or lower). If a TLR Level 3a is called:

Interchange Transactions using Firm Point-to-Point Transmission Service that were submitted to the IDC by 00:25 will be allowed to start as scheduled at 02:00.

Interchange Transactions using Non-firm Point-to-Point Transmission Service that were held may then be reallocated to start at 02:00.

Case 2: TLR 3b is called after 00:25 and the Interchange Transaction using Firm Point-to-Point Transmission Service is submitted to the IDC no later than the time at which the TLR 3b is called.



The IDC will examine the current hour (00) and next hour (01) for all Interchange Transactions.

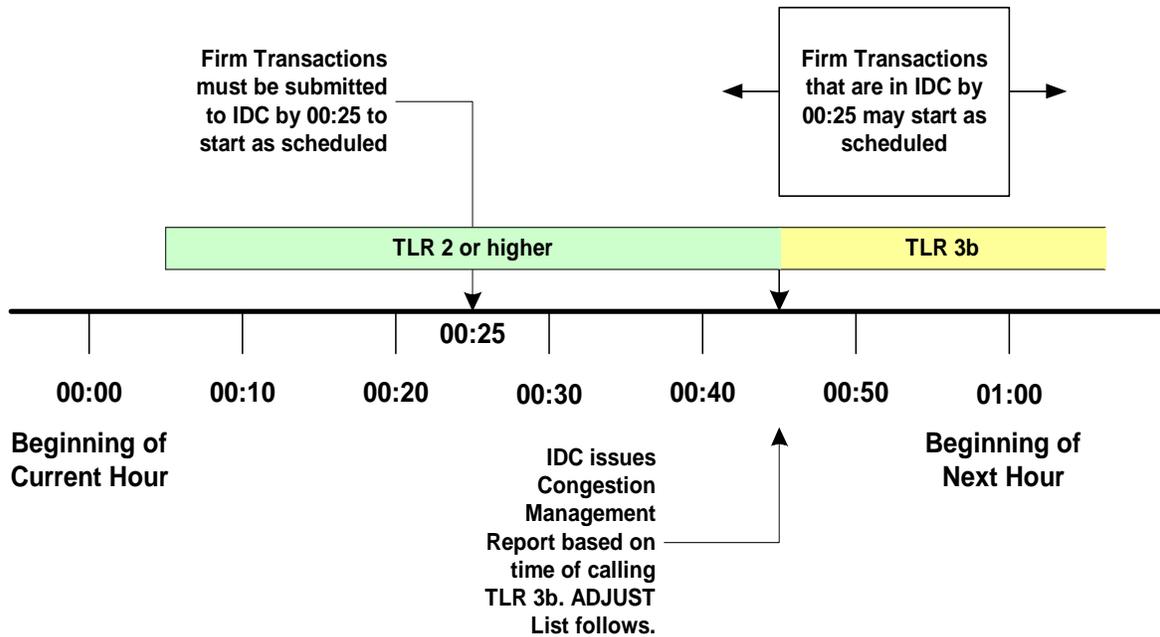
The IDC will issue an ADJUST List at the time the TLR 3b is called. The ADJUST List will include additional curtailments of Interchange Transactions using Non-firm Point-to-Point Transmission Service as necessary to allow room for those Interchange Transactions using Firm Point-to-Point Transmission Service to start at as scheduled.

All existing or new Interchange Transactions using Non-firm Point-to-Point Transmission Service that are increasing or expected to start during the current hour or next hour will be placed on HALT or HOLD. There is no Reallocation of lower-priority Interchange Transactions using Non-firm Point-to-Point Transmission Service.

Interchange Transactions using Firm Point-to-Point Transmission Service that were submitted to the IDC by the time the TLR 3b was called will be allowed to start at as scheduled.

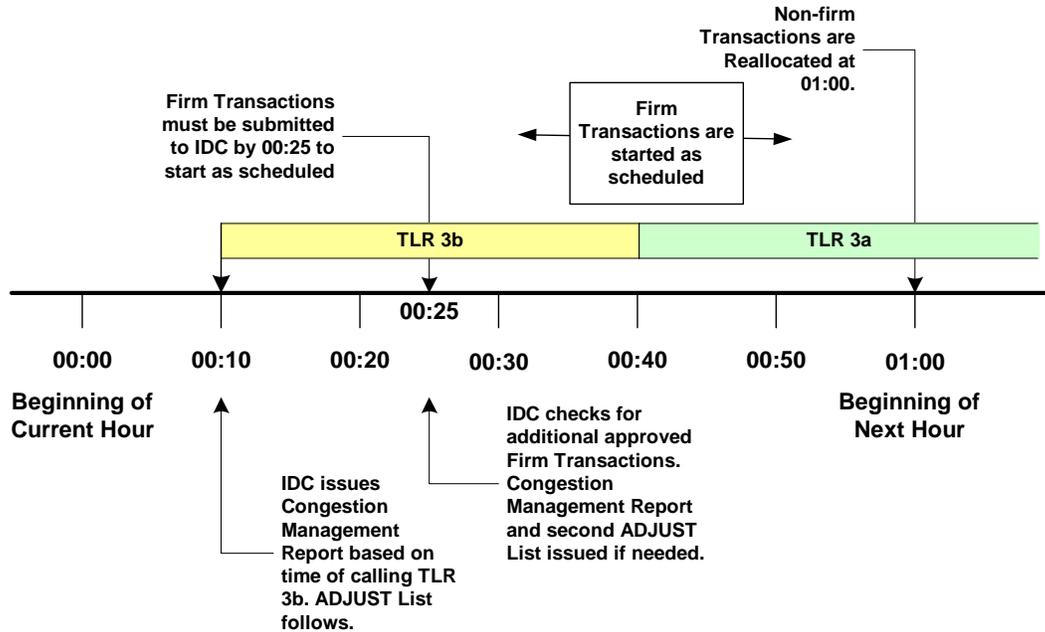
Interchange Transaction using Firm Point-to-Point Transmission Service that were submitted to the IDC after the TLR 3b was called will be held until the next issuance for TLR (either TLR 3b, 3a, or lower level).

Case 3. TLR 2 or higher is in effect, a TLR 3b is called after 00:25, and the Interchange Transaction using Firm Point-to-Point Transmission Service is submitted to the IDC by 00:25.



If a TLR 2 or higher has been issued and 3B is subsequently issued, then only those Interchange Transactions using Firm Point-to-Point Transmission Service that had been submitted to the IDC by 00:25 will be allowed to start as scheduled. All other Interchange Transactions are held.

Case 4. TLR 3b is called before 00:25 and the Interchange Transaction is submitted to the IDC by 00:25. TLR 3a is called at 00:40.

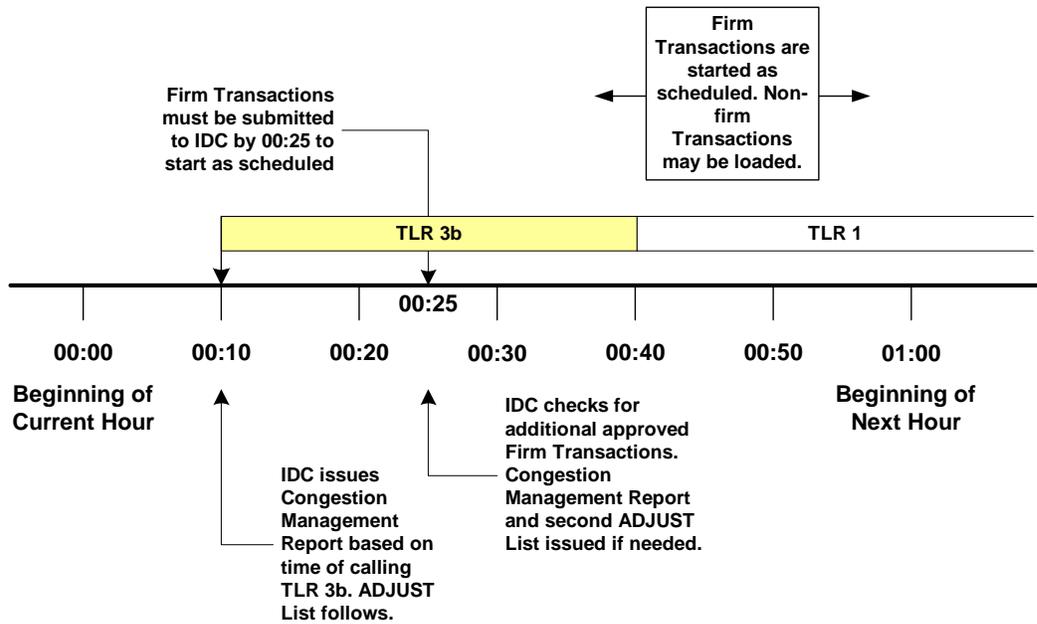


Same as Case 1, but TLR Level 3b ends at 00:40 and becomes TLR Level 3a.

All Interchange Transactions using Firm Point-to-Point Transmission Service will start as scheduled if in by the time the 3A is declared.

All Interchange Transactions using Non-firm Point-to-Point Transmission Service are reallocated at 01:00.

Case 5. TLR 3b is called before 00:25 and the Interchange Transaction is submitted to the IDC by 00:25. TLR 1 is called at 00:40.



Same as Case 1, but TLR Level 3b ends at 00:40 and becomes TLR Level 1.

All Interchange Transactions using Firm Point-to-Point Transmission Service will start as scheduled.

All Interchange Transactions using Non-firm Point-to-Point Transmission Service may be loaded immediately.

Exhibit C

Proposed Implementation Plan

Implementation Plan for Standard IRO-006-5 (Reliability Coordination — Transmission Loading Relief (TLR)) and IRO-006-EI-1 (Loading Relief Procedure for the Eastern Interconnection)

Prerequisite Approvals

There are no other reliability standards or Standard Authorization Requests (SARs), approved or in progress, that must be implemented before these standards can be implemented.

Modified Definitions

The definition of “Reallocation” should be removed from the Glossary when IRO-006-5 and IRO-006-EI-1 become effective. The drafting team has verified that the term, “Reallocation” is not used in any other approved standard.

Modified Standards

IRO-006-4, and associated Attachment 1, should be retired when IRO-006-5 and IRO-006-EI-1 become effective.

The Regional Differences within IRO-006-4 should be retired when IRO-006-5 and IRO-006-EI-1 become effective.

Compliance with Standards

Once the standards become effective, the responsible entities identified in the applicability section of the standards must comply with the requirements. These include:

- Reliability Coordinators
- Balancing Authorities

Proposed Effective Date

The standards will become effective on the first day of the first calendar quarter after the date the standards are approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standards becomes effective on the first day of the first calendar quarter after the date the standards are approved by the NERC Board of Trustees.

Exhibit D

Standard Drafting Team Roster

Transmission Loading Relief (TLR) Drafting Team (Project 2006-08)

| | | | |
|-----------------|---|---|---|
| Chairman | P.S. (Ben) Li President | Ben Li Associates, Inc. 37 Goldring Crescent Markham, Ontario L6C 1Y6 | (647) 388-1498 (905) 887-2235 Fx ben@benli.ca |
| | Daryn Barker Sr. Analyst - Market Policy | E.ON-US Energy Services Inc. 220 W. Main Street 7th Floor Louisville, Kentucky 40202 | (502) 627-3296 daryn.barker@ eon-us.com |
| | Bill Blevins | Electric Reliability Council of Texas, Inc. 2705 West Lake Drive Taylor, Texas 76574 | bblevins@ ercot.com |
| | James Busbin Supervisor - Bulk Power Operations (System Dispatcher) | Southern Company Services, Inc. 600 N. 18th Street Birmingham, Alabama 35291-2625 | (205) 257-6357 (205) 257-6663 Fx jybusbin@ southernco.com |
| | James Eckelkamp Wholesale Power | Progress Energy 411 Fayetteville Street Mall PEB 10A Raleigh, North Carolina 27601 | (919) 546-2776 (919) 546-3374 Fx james.eckelkamp@ pgnmail.com |
| | Robert Paul Humberson Transmission Scheduling and Security Manager | Western Area Power Administration - Rocky Mountain Region 5555 E. Crossroads Blvd. Loveland, Colorado 80538-3700 | (970) 461-7327 (970) 461-7423 Fx humber@wapa.gov |
| | Frank Koza Executive Director, System Operations | PJM Interconnection, L.L.C. 955 Jefferson Avenue Valley Forge Corporate Center Norristown, Pennsylvania 19403-2497 | (610) 666-4228 (610) 666-4282 Fx kozaf@pjm.com |
| | David F. Lemmons Senior Manager, Market Operations | Xcel Energy, Inc. 550 15th Street Suite 1200 Denver, Colorado 80202 | (303) 571-6520 (303) 308-7608 Fx david.f.lemmons@ xcelenergy.com |
| | Thomas J Mallinger, P.E. Interregional Coordinator | Midwest ISO, Inc. P.O. Box 4202 Carmel, Indiana 46082-4202 | (317) 249-5421 (317) 249-5910 Fx tmallinger@ midwestiso.org |
| | Dave Marton Senior Engineer | FirstEnergy Solutions 395 Ghent Road Akron, Ohio 44333 | (330) 315-7420 (330) 315-6773 Fx dpmarton@ firstenergycorp.com |
| | Narinder K. Saini Policy Consultant | Entergy Services, Inc. 5201 W. Barraque Pine Bluff, Arkansas 71602 | (870) 543-5420 (870) 541-4528 Fx nsaini@ entergy.com |
| | Don Shipley Manager, SPP Reliability South | Southwest Power Pool 415 N. McKinley Suite 140 Little Rock, Arkansas 72205 | (501) 614-3581 Fx dshipley@spp.org |

**NERC Standards
Process Manager**

Maureen E. Long
Director of Standards Process

North American Electric Reliability
Corporation
116-390 Village Boulevard
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(609) 452-8060
(609) 452-9550 Fx
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nerc.net

**NERC Staff
Coordinator**

Andrew J. Rodriguez
Manager of Business Practice
Coordination

North American Electric Reliability
Corporation
1120 G Street, N.W.
Suite 990
Washington, D.C. 20005-3801

(202) 393-3998
(202) 393-3955 Fx
andy.rodriquez@
nerc.net

Exhibit E

Record of Development of Proposed Reliability Standards

When completed, email to: gerry.cauley@nerc.net

Standard Authorization Request Form

| | |
|----------------------------|---|
| Title of Proposed Standard | Reliability Coordination – Transmission Loading Relief IRO-006-0 |
| Request Date | 07/14/05 |

| SAR Requestor Information | SAR Type (Put an 'x' in front of one of these selections) | |
|---|---|---------------------------------|
| Name Roger Harszy - Chairman Operating Reliability Subcommittee | <input type="checkbox"/> | New Standard |
| Primary Contact Roger Harszy | <input checked="" type="checkbox"/> | Revision to existing Standard |
| Telephone (317) 249-5400 | <input type="checkbox"/> | Withdrawal of existing Standard |
| Fax (317) 249-5910 | | |
| E-mail rharszy@midwestiso.org | <input type="checkbox"/> | Urgent Action |

Purpose/Industry Need (Provide one or two sentences)

In August 2004, NERC and NAESB agreed to immediately begin a joint effort to update the Eastern Interconnection TLR Procedure, as reflected in Attachment 1 to reliability standard IRO-006-0, to divide the reliability requirements and business practices, and to incorporate other necessary improvements to the TLR procedure. In December 2004 NERC and NAESB formed the joint TLR Subcommittee to clarify and focus Attachment 1 to NERC reliability standard IRO-006-0 on the TLR requirements that are necessary for reliability, as distinguished from those TLR requirements that are business practices.

Reliability Functions

| The Standard will Apply to the Following Functions (Check box for each one that applies by double clicking the grey boxes.) | | |
|---|-------------------------------|---|
| <input checked="" type="checkbox"/> | Reliability Authority | Ensures the reliability of the bulk transmission system within its Reliability Authority area. This is the highest reliability authority. |
| <input checked="" type="checkbox"/> | Balancing Authority | Integrates resource plans ahead of time, and maintains load-interchange-resource balance within its metered boundary and supports system frequency in real time |
| <input type="checkbox"/> | Interchange Authority | Authorizes valid and balanced Interchange Schedules |
| <input type="checkbox"/> | Planning Authority | Plans the bulk electric system |
| <input type="checkbox"/> | Resource Planner | Develops a long-term (>1year) plan for the resource adequacy of specific loads within a Planning Authority area. |
| <input type="checkbox"/> | Transmission Planner | Develops a long-term (>1 year) plan for the reliability of transmission systems within its portion of the Planning Authority area. |
| <input checked="" type="checkbox"/> | Transmission Service Provider | Provides transmission services to qualified market participants under applicable transmission service agreements |
| <input checked="" type="checkbox"/> | Transmission Owner | Owns transmission facilities |
| <input checked="" type="checkbox"/> | Transmission Operator | Operates and maintains the transmission facilities, and executes switching orders |
| <input type="checkbox"/> | Distribution Provider | Provides and operates the “wires” between the transmission system and the customer |
| <input checked="" type="checkbox"/> | Generator Owner | Owns and maintains generation unit(s) |
| <input checked="" type="checkbox"/> | Generator Operator | Operates generation unit(s) and performs the functions of supplying energy and Interconnected Operations Services |
| <input checked="" type="checkbox"/> | Purchasing-Selling Entity | The function of purchasing or selling energy, capacity and all necessary Interconnected Operations Services as required |
| <input checked="" type="checkbox"/> | Market Operator | Integrates energy, capacity, balancing, and transmission resources to achieve an economic, reliability-constrained dispatch. |
| <input checked="" type="checkbox"/> | Load-Serving Entity | Secures energy and transmission (and related generation services) to serve the end user |

Reliability and Market Interface Principles

| Applicable Reliability Principles (Check boxes for all that apply by double clicking the grey boxes.) | |
|--|--|
| <input checked="" type="checkbox"/> | 1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards. |
| <input type="checkbox"/> | 2. The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand. |
| <input checked="" type="checkbox"/> | 3. Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably. |
| <input checked="" type="checkbox"/> | 4. Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented. |
| <input checked="" type="checkbox"/> | 5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk electric systems. |
| <input type="checkbox"/> | 6. Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified and have the responsibility and authority to implement actions. |
| <input checked="" type="checkbox"/> | 7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis. |
| Does the proposed Standard comply with all of the following Market Interface Principles? (Select 'yes' or 'no' from the drop-down box by double clicking the grey area.) | |
| 1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes | |
| 2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes | |
| 3. An Organization Standard shall neither mandate nor prohibit any specific market structure. Yes | |
| 4. An Organization Standard shall not preclude market solutions to achieving compliance with that Standard. Yes | |
| 5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes | |

Detailed Description (Provide enough detail so that an independent entity familiar with the industry could draft, modify, or withdraw a Standard based on this description.)

NERC and NAESB formed the joint TLR Subcommittee with the charge to review Attachment 1 (Transmission Loading Relief Procedure — Eastern Interconnection) of IRO-006-0 (Reliability Coordination — Transmission Loading Relief), and to identify each reliability requirement and business practice embedded within the the TLR procedure. The joint NERC/NAESB TLR Subcommittee completed its charge on June 1, 2005, when the subcommittee approved a revised Attachment 1 to IRO-006-0 and a revision to the NAESB TLR business practices. The revised TLR reliability standards, (i.e. Attachment 1), are attached to this Standards Authorization Request.

During the course of the TLR subcommittee's effort to separate Attachment 1 into reliability standards under NERC's purview and business practices under NAESB's purview, the subcommittee developed a matrix, which identified the disposition of each paragraph in the existing Attachment 1. That matrix is also attached to this Standards Authorization Request.

This reliability standards development effort will begin by assessing for completeness and accuracy the revised Attachment 1 developed by the TLR Subcommittee using the subcommittee's matrix as a guide.. The end state of this standard development effort is a revised Attachment 1 to reliability standard IRO-006-0.

Related Standards

| Standard No. | Explanation |
|--------------|---|
| IRO-006-0 | Attachment 1 (TLR Procedure) to be replaced by a similar document addressing only the reliability elements of the TLR Procedure. |
| IRO-006-0 | The urgent action revision to Attachment 1 that addressed the holding of dynamic schedules during TLR Level 1-4 will be incorporated into the NAESB TLR business practices. |
| | |
| | |

Related SARs

| SAR ID | Explanation |
|--------|-------------|
| | |
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Regional Differences

| Region | Explanation |
|---------------|--------------------|
| ECAR | |
| ERCOT | |
| FRCC | |
| MAAC | |
| MAIN | |
| MAPP | |
| NPCC | |
| SERC | |
| SPP | |
| WECC | |

Related NERC Operating Policies or Planning Standards

| ID | Explanation |
|-----------|--------------------|
| | |
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| | |

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

This form is to be used to submit comments on the proposed Draft 1 of the Proposed Reliability Coordination- Transmission Loading Relief SAR. Comments must be submitted by **September 2, 2005**. You may submit the completed form by emailing it to: sarcomm@nerc.com with the words “Reliability Coordination- Transmission Loading Relief SAR” in the subject line. If you have questions please contact Mark Ladrow at mark.ladrow@nerc.net or by telephone at 609-452-8060.

ALL DATA ON THIS FORM WILL BE TRANSFERRED AUTOMATICALLY TO A DATABASE AND IT IS THEREFORE IMPORTANT TO ADHERE TO THE FOLLOWING REQUIREMENTS:

- DO:**
- Do enter text only, with no formatting or styles added.
 - Do use punctuation and capitalization as needed (except quotations).
 - Do use more than one form if responses do not fit in the spaces provided.
 - Do submit any formatted text or markups in a separate WORD file.

- DO NOT:**
- Do not insert tabs or paragraph returns in any data field.
 - Do not use numbering or bullets in any data field.
 - Do not use quotation marks in any data field.
 - Do not submit a response in an unprotected copy of this form.

| Individual Commenter Information | | |
|--|--------------------------|--|
| (Complete this page for comments from one organization or individual.) | | |
| Name: | | |
| Organization: | | |
| Telephone: | | |
| Email: | | |
| NERC Region | | Registered Ballot Body Segment |
| <input type="checkbox"/> ERCOT | <input type="checkbox"/> | 1 - Transmission Owners |
| <input type="checkbox"/> ECAR | <input type="checkbox"/> | 2 - RTOs, ISOs, Regional Reliability Councils |
| <input type="checkbox"/> FRCC | <input type="checkbox"/> | 3 - Load-serving Entities |
| <input type="checkbox"/> MAAC | <input type="checkbox"/> | 4 - Transmission-dependent Utilities |
| <input type="checkbox"/> MAIN | <input type="checkbox"/> | 5 - Electric Generators |
| <input type="checkbox"/> MAPP | <input type="checkbox"/> | 6 - Electricity Brokers, Aggregators, and Marketers |
| <input type="checkbox"/> NPCC | <input type="checkbox"/> | 7 - Large Electricity End Users |
| <input type="checkbox"/> SERC | <input type="checkbox"/> | 8 - Small Electricity End Users |
| <input type="checkbox"/> SPP | <input type="checkbox"/> | 9 - Federal, State, Provincial Regulatory or other Government Entities |
| <input type="checkbox"/> WECC | <input type="checkbox"/> | |
| <input type="checkbox"/> NA - Not Applicable | <input type="checkbox"/> | |

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

Background Information:

In August 2004, NERC and NAESB agreed to immediately begin a joint effort to update the Eastern Interconnection TLR Procedure, as reflected in Attachment 1 to reliability standard IRO-006-0, to divide the reliability requirements and business practices, and to incorporate other necessary improvements to the TLR procedure. In December 2004 NERC and NAESB formed the joint TLR Subcommittee to clarify and focus Attachment 1 to NERC reliability standard IRO-006-0 on the TLR requirements that are necessary for reliability, as distinguished from those TLR requirements that are business practices.

The subject SAR is required to revise Attachment 1 (Transmission Loading Relief Procedure — Eastern Interconnection) of IRO-006-0 (Reliability Coordination — Transmission Loading Relief) in accordance with the final work products of the NERC/NAESB TLR Subcommittee. NERC representatives to the TLR Subcommittee included members of the IDC Working Group, the Distribution Factors Working Group, the Reliability Coordinator Working Group, the Operating Reliability Subcommittee, the Operating Committee, and NERC staff.

Please review the SAR, as well as the additional information related to the SAR, posted on the NERC website and complete this Comment Form to provide feedback to the requestor on the proposed standards.

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

1. Do you believe there is a reliability need for this proposed standard change? If not, please explain in the comment area.

Yes

No

Comments:

2. Do you believe the TLR Subcommittee appropriately divided the elements of TLR business practices vs. TLR reliability requirements? If not, please explain in the comment area.

Yes

No

Comments: We feel that the division between business practices and reliability standards may not have gone far enough. The reliability standards should focus on establishing the criteria for initiation of different TLR levels and the required timeframes for relief. Business practices should focus on how the curtailments are executed to achieve the relief levels in the timeframes required by the reliability standard.

3. Do you believe there are still elements of TLR business practices that remain in the proposed TLR reliability requirements? If not, please explain in the comment area.

Yes

No

Comments: Everything in the proposed Attachment 1 - IRO-006-0 from Section 3 to the end of Attachment 1, including Appendices A and B, should be removed from the reliability standard and incorporated into the TLR Business Practices document. This material gets into the internal workings of the tool itself rather than dealing with the overall guiding principle of providing, and maintaining, relief within a specific timeframe.

4. Do you believe there are still elements of TLR reliability requirements that remain in the proposed TLR business practices? If not, please explain in the comment area.

Yes

No

Comments: Sections 3.2.1, 3.2.1.1 and 3.2.1.2 should be moved to the reliability standard since they deal more with how and why a Level 2 TLR is initiated than with the internal workings of the IDC.

5. Do you have any other comments on these proposed changes?

Yes

No

Comments: Section 1.5.1 of Attachment 1 refers to treatment of Interchange Transactions not in the IDC in accordance with NAESB business practices, but we could not find any reference to this treatment in the TLR business practices.

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

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 - Do not use numbering or bullets in any data field.
 - Do not use quotation marks in any data field.
 - Do not submit a response in an unprotected copy of this form.

| Individual Commenter Information | |
|--|---|
| (Complete this page for comments from one organization or individual.) | |
| Name: | Dan Rochester |
| Organization: | Independent Electricity System Operator (IESO), Ontario |
| Telephone: | (905) 855-6363 |
| Email: | Dan.Rochester@ieso.ca |
| NERC Region | Registered Ballot Body Segment |
| <input type="checkbox"/> ERCOT | <input type="checkbox"/> 1 - Transmission Owners |
| <input type="checkbox"/> ECAR | <input checked="" type="checkbox"/> 2 - RTOs, ISOs, Regional Reliability Councils |
| <input type="checkbox"/> FRCC | <input type="checkbox"/> 3 - Load-serving Entities |
| <input type="checkbox"/> MAAC | <input type="checkbox"/> 4 - Transmission-dependent Utilities |
| <input type="checkbox"/> MAIN | <input type="checkbox"/> 5 - Electric Generators |
| <input type="checkbox"/> MAPP | <input type="checkbox"/> 6 - Electricity Brokers, Aggregators, and Marketers |
| <input checked="" type="checkbox"/> NPCC | <input type="checkbox"/> 7 - Large Electricity End Users |
| <input type="checkbox"/> SERC | <input type="checkbox"/> 8 - Small Electricity End Users |
| <input type="checkbox"/> SPP | <input type="checkbox"/> 9 - Federal, State, Provincial Regulatory or other Government Entities |
| <input type="checkbox"/> WECC | |
| <input type="checkbox"/> NA - Not Applicable | |

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

Background Information:

In August 2004, NERC and NAESB agreed to immediately begin a joint effort to update the Eastern Interconnection TLR Procedure, as reflected in Attachment 1 to reliability standard IRO-006-0, to divide the reliability requirements and business practices, and to incorporate other necessary improvements to the TLR procedure. In December 2004 NERC and NAESB formed the joint TLR Subcommittee to clarify and focus Attachment 1 to NERC reliability standard IRO-006-0 on the TLR requirements that are necessary for reliability, as distinguished from those TLR requirements that are business practices.

The subject SAR is required to revise Attachment 1 (Transmission Loading Relief Procedure — Eastern Interconnection) of IRO-006-0 (Reliability Coordination — Transmission Loading Relief) in accordance with the final work products of the NERC/NAESB TLR Subcommittee. NERC representatives to the TLR Subcommittee included members of the IDC Working Group, the Distribution Factors Working Group, the Reliability Coordinator Working Group, the Operating Reliability Subcommittee, the Operating Committee, and NERC staff.

Please review the SAR, as well as the additional information related to the SAR, posted on the NERC website and complete this Comment Form to provide feedback to the requestor on the proposed standards.

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

- 1. Do you believe there is a reliability need for this proposed standard change? If not, please explain in the comment area.**

Yes

No

Comments: We do not feel there is a reliability need for the proposed standard "change". We would contend that the change provides confusion to a very important reliability process. In order to understand the process the standard and the business practice are necessary.

- 2. Do you believe the TLR Subcommittee appropriately divided the elements of TLR business practices vs. TLR reliability requirements? If not, please explain in the comment area.**

Yes

No

Comments: The reliability and business practices within the TLR process are integrated to such an extent that the details need to remain contained within a single document for clarity. Concerns regarding the ability to effectively manage the model and the process with the current proposed split need to be addressed. The ability to follow developing market issues must also be retained. Steps 1.4.1, 1.4.1.1, 1.5, 1.5.1, 1.6, 1.7, 2.1.2, 2.2.2, 2.4.2, 2.5.2, 3.2.1.2, 3.3.1.2, 7.1, are reliability related and should remain in the standard. The dynamic schedule part of 1.6.6 was added to the Standard in June of this year with approval of 100% of the ballot body. It should remain as part of this standard.

- 3. Do you believe there are still elements of TLR business practices that remain in the proposed TLR reliability requirements? If not, please explain in the comment area.**

Yes

No

Comments:

- 4. Do you believe there are still elements of TLR reliability requirements that remain in the proposed TLR business practices? If not, please explain in the comment area.**

Yes

No

Comments: See comments in question 2.

- 5. Do you have any other comments on these proposed changes?**

Yes

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

No

Comments: The IESO does not fully support the modifications proposed in this SAR. The proposed change provides confusion to a very important reliability process. Also the proposed standard references a NAESB standard which is inconsistent with the NERC Standards Process Manual which says "All mandatory requirements of a reliability standard shall be within an element of the standard. Supporting documents to aid in the implementation of a standard may be referenced by the standard but are not part of the standard itself." There are mandatory parts of the proposed standard in the NAESB business practice that are necessary for the successful implementation of this reliability standard. With the two documents being modified by separate entities there is a good chance that the documents will not be coordinated and kept in synchronization when changes are made. As acknowledged by the TLR Subcommittee that worked to create this proposed split, the business practices and reliability aspects of TLR are very intertwined. In effect, the information in both the proposed NERC and NAESB standard must be simultaneously available to the Operators in the Control Room, in order for them to operate the system reliably. While the effort to create this initial split in the TLR standards has been completed, consideration should be given as to how this split will be maintained, if going forward, before it is adopted by the industry. Operator training issues, as well as the ownership and funding of the IDC tool should be considered in this evaluation before such a significant step is taken on a standard that is fundamental to the reliability of the Eastern Interconnection. This is an important process that requires a complete understanding of the impact of separating the business practice from the reliability concepts. It is not clear that the current proposed document split will retain the integrity of the TLR process. The potential negative impact of degrading the RC's ability to manage loop flow dictates that any change in documentation and responsibility must proceed carefully.

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

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 - Do submit any formatted text or markups in a separate WORD file.

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 - Do not submit a response in an unprotected copy of this form.

| Individual Commenter Information | | |
|--|-------------------------------------|--|
| (Complete this page for comments from one organization or individual.) | | |
| Name: | | |
| Organization: | | |
| Telephone: | | |
| Email: | | |
| NERC Region | | Registered Ballot Body Segment |
| <input type="checkbox"/> ERCOT | <input type="checkbox"/> | 1 - Transmission Owners |
| <input type="checkbox"/> ECAR | <input type="checkbox"/> | 2 - RTOs, ISOs, Regional Reliability Councils |
| <input type="checkbox"/> FRCC | <input type="checkbox"/> | 3 - Load-serving Entities |
| <input type="checkbox"/> MAAC | <input type="checkbox"/> | 4 - Transmission-dependent Utilities |
| <input type="checkbox"/> MAIN | <input type="checkbox"/> | 5 - Electric Generators |
| <input type="checkbox"/> MAPP | <input checked="" type="checkbox"/> | 6 - Electricity Brokers, Aggregators, and Marketers |
| <input type="checkbox"/> NPCC | <input type="checkbox"/> | 7 - Large Electricity End Users |
| <input checked="" type="checkbox"/> SERC | <input type="checkbox"/> | 8 - Small Electricity End Users |
| <input type="checkbox"/> SPP | <input type="checkbox"/> | 9 - Federal, State, Provincial Regulatory or other Government Entities |
| <input type="checkbox"/> WECC | | |
| <input type="checkbox"/> NA - Not Applicable | | |

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

Background Information:

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The subject SAR is required to revise Attachment 1 (Transmission Loading Relief Procedure — Eastern Interconnection) of IRO-006-0 (Reliability Coordination — Transmission Loading Relief) in accordance with the final work products of the NERC/NAESB TLR Subcommittee. NERC representatives to the TLR Subcommittee included members of the IDC Working Group, the Distribution Factors Working Group, the Reliability Coordinator Working Group, the Operating Reliability Subcommittee, the Operating Committee, and NERC staff.

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**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

1. Do you believe there is a reliability need for this proposed standard change? If not, please explain in the comment area.

Yes

No

Comments:

2. Do you believe the TLR Subcommittee appropriately divided the elements of TLR business practices vs. TLR reliability requirements? If not, please explain in the comment area.

Yes

No

Comments:

3. Do you believe there are still elements of TLR business practices that remain in the proposed TLR reliability requirements? If not, please explain in the comment area.

Yes

No

Comments:

4. Do you believe there are still elements of TLR reliability requirements that remain in the proposed TLR business practices? If not, please explain in the comment area.

Yes

No

Comments:

5. Do you have any other comments on these proposed changes?

Yes

No

Comments: As NAESB and NERC standards are approved and implemented which require close coordination between the two organizations, the need for a common "Operations Manual" may become necessary for System Operators.

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

This Operations Manual should provide real time standard requirements applicable to the System Operators on NERC and NAESB standards related to their daily decision-making authority. This SAR for TLR is a potential standard that would fit the type of requirements that should be contained in the Manual.

As future changes to the requirements of standards contained in the Manual occur within either NERC or NAESB, coordination between the two organizations will be very important to ensure changes to the complementary standard within the other organization is implemented.

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

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| Organization: | | |
| Telephone: | | |
| Email: | | |
| NERC Region | | Registered Ballot Body Segment |
| <input type="checkbox"/> ERCOT | <input type="checkbox"/> | 1 - Transmission Owners |
| <input type="checkbox"/> ECAR | <input checked="" type="checkbox"/> | 2 - RTOs, ISOs, Regional Reliability Councils |
| <input type="checkbox"/> FRCC | <input type="checkbox"/> | 3 - Load-serving Entities |
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| <input type="checkbox"/> WECC | <input type="checkbox"/> | |
| <input type="checkbox"/> NA - Not Applicable | | |

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

Background Information:

In August 2004, NERC and NAESB agreed to immediately begin a joint effort to update the Eastern Interconnection TLR Procedure, as reflected in Attachment 1 to reliability standard IRO-006-0, to divide the reliability requirements and business practices, and to incorporate other necessary improvements to the TLR procedure. In December 2004 NERC and NAESB formed the joint TLR Subcommittee to clarify and focus Attachment 1 to NERC reliability standard IRO-006-0 on the TLR requirements that are necessary for reliability, as distinguished from those TLR requirements that are business practices.

The subject SAR is required to revise Attachment 1 (Transmission Loading Relief Procedure — Eastern Interconnection) of IRO-006-0 (Reliability Coordination — Transmission Loading Relief) in accordance with the final work products of the NERC/NAESB TLR Subcommittee. NERC representatives to the TLR Subcommittee included members of the IDC Working Group, the Distribution Factors Working Group, the Reliability Coordinator Working Group, the Operating Reliability Subcommittee, the Operating Committee, and NERC staff.

Please review the SAR, as well as the additional information related to the SAR, posted on the NERC website and complete this Comment Form to provide feedback to the requestor on the proposed standards.

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

1. Do you believe there is a reliability need for this proposed standard change? If not, please explain in the comment area.

Yes

No

Comments: This proposed standard change was not initiated due to reliability needs. NPCC Participating members believe that the change is in conflict to very important reliability rules. In order to understand the process the standard and the business practice are necessary.

2. Do you believe the TLR Subcommittee appropriately divided the elements of TLR business practices vs. TLR reliability requirements? If not, please explain in the comment area.

Yes

No

Comments:

- Section 2.6 and 2.7 in the original standard defined step-by-step actions the Operator is to take under TLR Levels 5a and 5b. These actions have been removed and currently reside in the proposed NAESB standard. It is not appropriate for a business practice standard to define actions to be taken by a Reliability Coordinator in real-time operations to resolve a reliability issue.

The need for a TLR is in response to a problem with reliability on the system. The Operator must be presented with all the information that is contained in both the proposed NERC and NAESB standards in order to issue that TLR. If the operator does not know what transactions are available in any given category, they do not know what TLR level is needed to resolve the situation. NPCC participating members do not agree with the assertion that the information contained in the NAESB standard does not impact reliability.

Some aspects of the original IRO-006 are 'business practices,' and that the completed effort generally meets the original intent of splitting the business practice and reliability components. However, seeing the resulting split, it is clear that these business practices have a direct impact on reliability and they should be maintained within one single standard to prevent confusion and conflicts. Also, since the fundamental practice for defining the priorities and treatment of transactions under each TLR level is consistent with the FERC pro-forma tariff, there is minimal subjectivity involved in the business practices that are included in the original NERC standard.

Steps 1.4.1, 1.4.1.1, 1.5, 1.5.1, 1.6, 1.7, 2.1.2, 2.2.2, 2.4.2, 2.5.2, 3.2.1.2, 3.3.1.2, 7.1, are reliability related and should remain in the standard. The dynamic schedule part of 1.6.6 was added to the Standard in June of this year with 100% of the ballot body approval, it should remain as part of this standard.

- 3. Do you believe there are still elements of TLR business practices that remain in the proposed TLR reliability requirements? If not, please explain in the comment area.**

Yes

No

Comments: See response to question 2.

- 4. Do you believe there are still elements of TLR reliability requirements that remain in the proposed TLR business practices? If not, please explain in the comment area.**

Yes

No

Comments: See response to question 2.

- 5. Do you have any other comments on these proposed changes?**

Yes

No

Comments:

This is an important process that requires a complete understanding of the impact of separating the business practice from the reliability concepts. It is not clear that the current proposed document split will retain the integrity of the TLR process. The potential negative impact of degrading the RC's ability to manage loop flow dictates that any change in documentation and responsibility must proceed carefully. NPCC participating Members believe the proposed change provides confusion to a very important reliability process. There are mandatory parts of the proposed standard in the NAESB business practice that are necessary for the successful implementation of this reliability standard. With the two documents being modified by separate entities there is a good chance that the documents will not be coordinated and kept in synchronization when changes are made.

Recommend restoring the reference to RCIS tool in 1.4. That reference was eliminated when the old 1.4.1 was removed.

- The old 1.5.1 was removed. There's a general statement added to 1.2 that says "In addition, a Reliability Coordinator may implement other NERC-approved procedures to request relief to mitigate

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

any other transmission constraints as necessary to preserve the reliability of the system.” But, that phrase does not seem to capture the same intent as the previous 1.5.1 wording.

- Section 1.5.3 the numbering on this section is very confusing. Suggest the following:

1.5.3.1. Causes of questionable IDC results may include: (1) Missing Interchange transactions that are known to contribute to the Constraint, (2) Significant change in transmission system topology, or (3) TDF matrix error.

1.5.3.2 Impacts of questionable IDC results may include: (1) relief that would have no effect on, or aggravate the constraint or (2) that would initiate a constraint elsewhere.

1.5.3.3. If other Reliability Coordinators are involved in the TLR event, all impacted Reliability Coordinators shall be in agreement before any adjustments to the relief request list are made.

- Title of Section 2 should be changed to be only “Transmission Loading Relief (TLR) Levels.”

- Section 3 is missing section 3.1.

- Suggest that Section 3.2 include a reference to the fact that transactions submitted after the XX:25 deadline will put on HOLD.

- Are Section 3.3.3 and Section 3.4.3 referring back to the deadline defined in 3.2? If so, that section should be referenced.

- Text in 3.3.1.1 and 3.3.2 are referring to the same process for reallocation and should use the same terminology. Suggest 3.3.1.1 text be changed to “At XX:25 a reallocation will be performed for the following hour to maintain the target flow identified for the current hour”.

- Text in 3.4.1.1 and 3.4.2 are referring to the same process for reallocation and should use the same terminology. Suggest 3.4.1.1 text be changed to “At XX:25 a reallocation will be performed for the following hour to maintain the target flow identified for the current hour”.

- The section notation of Appendix B should be modified. The Section numbering shown in the index is not how the headings are titled in the Sections. Also, Section F and Section G should not be 5.1 and 5.2; they should be at the highest index level.

General Comment: There have been changes to the congestion management process over the last few years that involve the use of Market information by the IDC. Any new standards addressing the TLR process and the IDC, whether in NERC or NAESB, should consider addressing the current

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

information available to the IDC and include some mention of that information in that standard development. In addition, Operator training issues, as well as the ownership and funding of the IDC tool should be considered in this evaluation before such a significant step is taken on a standard that is fundamental to the reliability of the Eastern Interconnection.

General Comment: One other practical concern that has not been addressed is the ownership, impact and funding of the IDC tool that automates the 'business practices' of implementing a TLR for the Operator. The split of the original NERC IRO-006 should not be adopted until this issue is addressed and resolved.

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

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| Individual Commenter Information | |
|--|---|
| (Complete this page for comments from one organization or individual.) | |
| Name: | Scott R. Cunningham |
| Organization: | Ohio Valley Electric Corporation |
| Telephone: | 740-289-7225 |
| Email: | scunning@ovec.com |
| NERC Region | Registered Ballot Body Segment |
| <input type="checkbox"/> ERCOT | <input type="checkbox"/> 1 - Transmission Owners |
| <input checked="" type="checkbox"/> ECAR | <input checked="" type="checkbox"/> 2 - RTOs, ISOs, Regional Reliability Councils |
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IRO-006-1**

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**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

1. Do you believe there is a reliability need for this proposed standard change? If not, please explain in the comment area.

Yes

No

Comments:

2. Do you believe the TLR Subcommittee appropriately divided the elements of TLR business practices vs. TLR reliability requirements? If not, please explain in the comment area.

Yes

No

Comments:

3. Do you believe there are still elements of TLR business practices that remain in the proposed TLR reliability requirements? If not, please explain in the comment area.

Yes

No

Comments: At times, RTO ramp limitations are invoked when TLR curtailments occur. This issue is not covered in the standard, but seems to be related to a business practice, rather than a reliability issue. Perhaps the ramp limitation should be waived or adjusted if the limitation is caused by the curtailments that occur with the TLR.

4. Do you believe there are still elements of TLR reliability requirements that remain in the proposed TLR business practices? If not, please explain in the comment area.

Yes

No

Comments:

5. Do you have any other comments on these proposed changes?

Yes

No

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

Comments: The use of proxy flowgates is not mentioned at all in the proposed standard. The use of proxy flowgates should not be allowed, except in very unusual circumstances. If use of a proxy flowgate is necessary, such use should be justified and approval from all affected parties should be obtained.

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

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| Email: | | |
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| <input type="checkbox"/> NA - Not Applicable | <input type="checkbox"/> | |

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IRO-006-1**

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**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

1. Do you believe there is a reliability need for this proposed standard change? If not, please explain in the comment area.

Yes

No

Comments:

2. Do you believe the TLR Subcommittee appropriately divided the elements of TLR business practices vs. TLR reliability requirements? If not, please explain in the comment area.

Yes

No

Comments:

3. Do you believe there are still elements of TLR business practices that remain in the proposed TLR reliability requirements? If not, please explain in the comment area.

Yes

No

Comments:

4. Do you believe there are still elements of TLR reliability requirements that remain in the proposed TLR business practices? If not, please explain in the comment area.

Yes

No

Comments:

5. Do you have any other comments on these proposed changes?

Yes

No

Comments:

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IRO-006-1**

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IRO-006-1**

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**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

- 1. Do you believe there is a reliability need for this proposed standard change? If not, please explain in the comment area.**

Yes

No

Comments: The MRO does not believe there is a reliability need for the proposed standard change. We would contend that the change provides confusion to a very important reliability process. In order to understand the process the standard and the business practice are necessary.

- 2. Do you believe the TLR Subcommittee appropriately divided the elements of TLR business practices vs. TLR reliability requirements? If not, please explain in the comment area.**

Yes

No

Comments: Steps 1.4.1, 1.4.1.1, 1.5, 1.5.1, 1.6, 1.7, 2.1.2, 2.2.2, 2.4.2, 2.5.2, 3.2.1.2, 3.3.1.2, 7.1, are reliability related and should remain in the standard. The dynamic schedule part of 1.6.6 was added to the Standard in June of this year with 100% of the ballot body approval, it should remain as part of this standard.

- 3. Do you believe there are still elements of TLR business practices that remain in the proposed TLR reliability requirements? If not, please explain in the comment area.**

Yes

No

Comments:

- 4. Do you believe there are still elements of TLR reliability requirements that remain in the proposed TLR business practices? If not, please explain in the comment area.**

Yes

No

Comments: See comments in question 2.

- 5. Do you have any other comments on these proposed changes?**

Yes

No

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

Comments: It was very difficult to review the changes to the standard without a redline copy. In order to perform our review we made a redline of the original standard. The MRO does not support this modification. The proposed change provides confusion to a very important reliability process. Also the proposed standard references a NAESB standard which is inconsistent with the NERC Standards Process Manual which says "All mandatory requirements of a reliability standard shall be within an element of the standard. Supporting documents to aid in the implementation of a standard may be referenced by the standard but are not part of the standard itself." There are mandatory parts of the proposed standard in the NAESB business practice and are necessary for the successful implementation of this reliability standard. With the two documents being modified by separate entities there is a good chance that the documents will not be coordinated and kept in synchronization when changes are made.

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IRO-006-1**

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| Individual Commenter Information | | |
|--|---|--|
| (Complete this page for comments from one organization or individual.) | | |
| Name: | Raj Rana - Coordinator | |
| Organization: | AEP | |
| Telephone: | 614-716-2359 | |
| Email: | raj_rana@AEP.com | |
| NERC Region | Registered Ballot Body Segment | |
| <input checked="" type="checkbox"/> ERCOT | <input checked="" type="checkbox"/> 1 - Transmission Owners | |
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**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

- 1. Do you believe there is a reliability need for this proposed standard change? If not, please explain in the comment area.**

Yes

No

Comments: We support the NERC/NAESB initiative to split the TLR document in order to extract the business practice aspects. However, there is no reliability need for this proposed standard change. The reliability need in terms of managing power flow relief in a pre-defined time period in order to maintain security of the system did not change. However, this draft does not provide reliability performance specifications, such as X MW or % of relief in Y minutes. The NERC portion of this standard should specify what is needed to maintain the system security in the interconnected environment, while the NAESB portion should specify the road map as to how to do it.

- 2. Do you believe the TLR Subcommittee appropriately divided the elements of TLR business practices vs. TLR reliability requirements? If not, please explain in the comment area.**

Yes

No

Comments: The two documents are overlapping. Same statements in both documents.

- 3. Do you believe there are still elements of TLR business practices that remain in the proposed TLR reliability requirements? If not, please explain in the comment area.**

Yes

No

Comments: We believe that items like firm/non-firm transactions types, TLR levels etc. should be taken out of the reliability portion of this standard. These items should be included in the NAESB portion. The reliability portion should only address the needed relief amount on constrained facilities and the time under which the relief should be provided in order to maintain security of the interconnected network.

- 4. Do you believe there are still elements of TLR reliability requirements that remain in the proposed TLR business practices? If not, please explain in the comment area.**

Yes

No

Comments: No comments. The TLR business practices document is not available.

- 5. Do you have any other comments on these proposed changes?**

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

Yes

No

Comments: Use of proxy flowgates by the reliability coordinators must be prohibited. This practice must be explicitly addressed in this standard because, the use of proxy flowgates not only will result in mis-allocation of corrective actions, but at worst could even result in actions being taken that actually increase flows on the limiting element, instead of decreasing them.

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

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 - Do not submit a response in an unprotected copy of this form.

| Individual Commenter Information | |
|--|---|
| (Complete this page for comments from one organization or individual.) | |
| Name: | |
| Organization: | |
| Telephone: | |
| Email: | |
| NERC Region | Registered Ballot Body Segment |
| <input type="checkbox"/> ERCOT | <input type="checkbox"/> 1 - Transmission Owners |
| <input type="checkbox"/> ECAR | <input type="checkbox"/> 2 - RTOs, ISOs, Regional Reliability Councils |
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| <input type="checkbox"/> WECC | |
| <input type="checkbox"/> NA - Not Applicable | |

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

Group Comments (Complete this page if comments are from a group.)

Group Name: Joint Interchange Scheduling Working Group
Lead Contact: Bert Gumm
Contact Organization: NAESB/NERC
Contact Segment: 1
Contact Telephone: 208-388-5147
Contact Email: rgumm@idahopower.com

| Additional Member Name | Additional Member Organization | Region* | Segment* |
|-------------------------------|---------------------------------------|----------------|-----------------|
| Troy Simpson | Bonneville Power Administration | WECC | 1 |
| Marilyn Franz | Sierra Pacific Power Company | WECC | 1 |
| Jim Hansen | Seattle City Light | WECC | 1 |
| Bert Gumm | Idaho Power Company | WECC | 1 |
| Kathee Downing | PacifiCorp | WECC | 1 |
| Jim Eckelcamp | Progress Energy | SERC | 6 |
| Bob Harshbarger | Puget Sound Energy | WECC | 1 |
| Paul Sorenson | OATI | N/A | |
| Bob Schwermann | Sacramento Municipal Utilities D | WECC | 1 |
| Bonita Smulski | Bonneville Power Admin | WECC | 1 |
| Taryn McPherson | Bonneville Power Admin | WECC | 1 |
| Salah Kitali | Bonneville Power Admin | WECC | 1 |
| Joel Mickey | ERCOT | ERCOT | 2 |
| Andrew Burke | PacifiCorp | WECC | 1 |
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*If more than one Region or Segment applies, indicate the best fit for the purpose of these comments.
Regional acronyms and segment numbers are shown on prior page.

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

Background Information:

In August 2004, NERC and NAESB agreed to immediately begin a joint effort to update the Eastern Interconnection TLR Procedure, as reflected in Attachment 1 to reliability standard IRO-006-0, to divide the reliability requirements and business practices, and to incorporate other necessary improvements to the TLR procedure. In December 2004 NERC and NAESB formed the joint TLR Subcommittee to clarify and focus Attachment 1 to NERC reliability standard IRO-006-0 on the TLR requirements that are necessary for reliability, as distinguished from those TLR requirements that are business practices.

The subject SAR is required to revise Attachment 1 (Transmission Loading Relief Procedure — Eastern Interconnection) of IRO-006-0 (Reliability Coordination — Transmission Loading Relief) in accordance with the final work products of the NERC/NAESB TLR Subcommittee. NERC representatives to the TLR Subcommittee included members of the IDC Working Group, the Distribution Factors Working Group, the Reliability Coordinator Working Group, the Operating Reliability Subcommittee, the Operating Committee, and NERC staff.

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**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

1. Do you believe there is a reliability need for this proposed standard change? If not, please explain in the comment area.

Yes

No

Comments:

2. Do you believe the TLR Subcommittee appropriately divided the elements of TLR business practices vs. TLR reliability requirements? If not, please explain in the comment area.

Yes

No

Comments:

3. Do you believe there are still elements of TLR business practices that remain in the proposed TLR reliability requirements? If not, please explain in the comment area.

Yes

No

Comments:

4. Do you believe there are still elements of TLR reliability requirements that remain in the proposed TLR business practices? If not, please explain in the comment area.

Yes

No

Comments:

5. Do you have any other comments on these proposed changes?

Yes

No

Comments: 1. We request that the scope of this SAR be expanded to include resolving the reloading of curtailed transactions above their reliability limit by an entity other than the initiating entity or above any pre-existing reliability or market profiles. 2. We also request that the scope of the SAR be expanded to include standards for when curtailments may be denied and when

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

curtailments may be issued. 1 - There have been several instances where a curtailment has been issued and then been automatically or manually reloaded above the reliability limit. The automatic reload problem created by the IDC has been resolved by CO-148, automatic reload by other back office applications has not been corrected, nor have manual adjustments. There are several options available for correcting this problem. This should be addressed by specifying requirements and performance measures in the TLR standard and may also be addressed through NAESB business practices and modifications to the e-Tag specification. Also, any pre-existing curtailment levels are lost. JISWG recommends that the entity who has issued the curtailment be the only entity able to authorize the reload. When the reload occurs the energy profile should be limited to the next lowest reliability limit or market adjustment profile. 2- Under normal circumstances, a curtailment (issued for reliability reasons) should not be denied. However, there are some limited circumstances where a curtailment should be denied. For example, if a curtailment comes in and the generator cannot meet the ramp requirements, then the curtailment could be denied and would be reissued for the next scheduling interval. This ensures that the tags reflect actual conditions. In other cases, curtailments are sometimes issued when PSE's cannot make their market level adjustments prior to cutoff. The TLR standard should address those specific reasons for denying a curtailment. Reliability is compromised when curtailments are denied for non-reliability reasons. Reliability may also be compromised when curtailments are issued for non-reliability reasons. If scope of the SAR is adjusted, JISWG volunteers to assist the drafting team with providing specific language for the TLR standard addressing these issues.

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

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|--|---|
| (Complete this page for comments from one organization or individual.) | |
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| Organization: | |
| Telephone: | |
| Email: | |
| NERC Region | Registered Ballot Body Segment |
| <input type="checkbox"/> ERCOT | <input type="checkbox"/> 1 - Transmission Owners |
| <input type="checkbox"/> ECAR | <input type="checkbox"/> 2 - RTOs, ISOs, Regional Reliability Councils |
| <input type="checkbox"/> FRCC | <input type="checkbox"/> 3 - Load-serving Entities |
| <input type="checkbox"/> MAAC | <input type="checkbox"/> 4 - Transmission-dependent Utilities |
| <input type="checkbox"/> MAIN | <input type="checkbox"/> 5 - Electric Generators |
| <input type="checkbox"/> MAPP | <input type="checkbox"/> 6 - Electricity Brokers, Aggregators, and Marketers |
| <input type="checkbox"/> NPCC | <input type="checkbox"/> 7 - Large Electricity End Users |
| <input type="checkbox"/> SERC | <input type="checkbox"/> 8 - Small Electricity End Users |
| <input type="checkbox"/> SPP | <input type="checkbox"/> 9 - Federal, State, Provincial Regulatory or other Government Entities |
| <input type="checkbox"/> WECC | |
| <input type="checkbox"/> NA - Not Applicable | |

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

Background Information:

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**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

- 1. Do you believe there is a reliability need for this proposed standard change? If not, please explain in the comment area.**

Yes

No

Comments:

The interplay between the business practices and reliability practices associated with TLR is so intimate that the two should not be divided into two standards practices. It would be best for the industry that one TLR standard be developed by the two organizations.

- 2. Do you believe the TLR Subcommittee appropriately divided the elements of TLR business practices vs. TLR reliability requirements? If not, please explain in the comment area.**

Yes

No

Comments:

A complete response to this question is inappropriate at this time.

It appears that IRO-006 will be divided into 3 major documents: NERC TLR reliability standards, NAESB business practices, and the IDC Reference Documentation. The answer to this question will require a detailed comparison of all three documents with respect to the existing IRO-006. We do not have the NAESB document in front of us in order to make that detailed comparison. In addition, it does not appear that a detailed comparison of the three documents has been requested since the SAR request states in the last paragraph that the development effort will begin by assessing for completeness and accuracy the revised Attachment 1.

- 3. Do you believe there are still elements of TLR business practices that remain in the proposed TLR reliability requirements? If not, please explain in the comment area.**

Yes

No

Comments:

The NERC TLR reliability standard part of this documentation appears to be all reliability related. However, the IDC Reference Document appears to have significant business practice elements contained in it.

- 4. Do you believe there are still elements of TLR reliability requirements that remain in the proposed TLR business practices? If not, please explain in the comment area.**

Yes

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

No

Comments:

We can not answer this question since we do not have the NAESB proposed TLR business practices in this package.

5. Do you have any other comments on these proposed changes?

Yes

No

Comments:

The SAR contains the statement that the urgent action revision to Attachment 1 addressing dynamic schedules will be incorporated into the NAESB business practices. We suggest starting with IRO-006-1, rather than with IRO-006-0.

Please delete all references to IRO-006-0 (and IRO-006-1) in headers, footers, titles, etc. This new document will result in a new version of IRO--006. This current draft is not version 0 or 1.

Please delete all references to adoption by the NERC Board of Trustees, Effective Date, and all dates because the document we are viewing has not been adopted by the BOT and does not have an Effective Date.

Please provide a redline version showing the draft changes to IRO-006-1. This redline would make review and comment much easier for commentors.

We appreciate the development of the matrix and would probably find it useful for keeping track of the disposition of each requirement in the original IRO-006. However, in its current form we do not understand which columns relate to which documents and the row designations are not clearly understood.

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IRO-006-1**

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| Individual Commenter Information | |
|--|---|
| (Complete this page for comments from one organization or individual.) | |
| Name: | Cheryl Mendrala |
| Organization: | ISO New England |
| Telephone: | 413 535-4184 |
| Email: | cmendrala@iso-ne.com |
| NERC Region | Registered Ballot Body Segment |
| <input type="checkbox"/> ERCOT | <input type="checkbox"/> 1 - Transmission Owners |
| <input type="checkbox"/> ECAR | <input checked="" type="checkbox"/> 2 - RTOs, ISOs, Regional Reliability Councils |
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**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

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**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

- 1. Do you believe there is a reliability need for this proposed standard change? If not, please explain in the comment area.**

Yes

No

Comments: This proposed standard change was not initiated due to reliability needs.

- 2. Do you believe the TLR Subcommittee appropriately divided the elements of TLR business practices vs. TLR reliability requirements? If not, please explain in the comment area.**

Yes

No

Comments:

- Section 2.6 and 2.7 in the original standard defined step-by-step actions the Operator is to take under TLR Levels 5a and 5b. These actions have been removed and currently reside in the proposed NAESB standard. It is not appropriate for a business practice standard to define actions to be taken by a Reliability Coordinator in real-time operations to resolve a reliability issue.

The need for a TLR is in response to a problem with reliability on the system. There is no doubt that the Operator must be presented with all the information that is contained in both the proposed NERC and NAESB standards in order to issue that TLR. If the operator does not know what transactions are available in any given category, they do not know what TLR level is needed to resolve the situation. Therefore, we cannot agree with the assertion that the information contained in the NAESB standard does not impact reliability.

We agree that some aspects of the original IRO-006 are 'business practices,' and agree that the completed effort generally meets the original intent of splitting the business practice and reliability components. However, seeing the resulting split, it is clear that these business practices have a direct impact on reliability and we believe they should be maintained within one single standard to prevent confusion and conflicts. Also, since the fundamental practice for defining the priorities and treatment of transactions under each TLR level is consistent with the FERC pro-forma tariff, there is minimal subjectivity involved in the business practices that are included in the original NERC standard.

- 3. Do you believe there are still elements of TLR business practices that remain in the proposed TLR reliability requirements? If not, please explain in the comment area.**

Yes

No

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

Comments: See response to question 2.

4. Do you believe there are still elements of TLR reliability requirements that remain in the proposed TLR business practices? If not, please explain in the comment area.

Yes

No

Comments: See response to question 2.

5. Do you have any other comments on these proposed changes?

Yes

No

Comments:

- Recommend restoring the reference to RCIS tool in 1.4. That reference was eliminated when the old 1.4.1 was removed.

- The old 1.5.1 was removed. There's a general statement added to 1.2 that says "In addition, a Reliability Coordinator may implement other NERC-approved procedures to request relief to mitigate any other transmission constraints as necessary to preserve the reliability of the system." But, that phrase does not seem to capture the same intent as the previous 1.5.1 wording.

- Section 1.5.3 the numbering on this section is very confusing. Suggest the following:

1.5.3.1. Causes of questionable IDC results may include: (1) Missing Interchange transactions that are known to contribute to the Constraint, (2) Significant change in transmission system topology, or (3) TDF matrix error.

1.5.3.2 Impacts of questionable IDC results may include: (1) relief that would have no effect on, or aggravate the constraint or (2) that would initiate a constraint elsewhere.

1.5.3.3. If other Reliability Coordinators are involved in the TLR event, all impacted Reliability Coordinators shall be in agreement before any adjustments to the relief request list are made.

- Title of Section 2 should be changed to be only "Transmission Loading Relief (TLR) Levels."

- Section 3 is missing section 3.1.

**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

- Suggest that Section 3.2 include a reference to the fact that transactions submitted after the XX:25 deadline will put on HOLD.

- Are Section 3.3.3 and Section 3.4.3 referring back to the deadline defined in 3.2? If so, that section should be referenced.

- Text in 3.3.1.1 and 3.3.2 are referring to the same process for reallocation and should use the same terminology. Suggest 3.3.1.1 text be changed to “At XX:25 a reallocation will be performed for the following hour to maintain the target flow identified for the current hour”.

- Text in 3.4.1.1 and 3.4.2 are referring to the same process for reallocation and should use the same terminology. Suggest 3.4.1.1 text be changed to “At XX:25 a reallocation will be performed for the following hour to maintain the target flow identified for the current hour”.

- The section notation of Appendix B should be modified. The Section numbering shown in the index is not how the headings are titled in the Sections. Also, Section F and Section G should not be 5.1 and 5.2; they should be at the highest index level.

General Comment: There have been changes to the congestion management process over the last few years that involve the use of Market information by the IDC. Any new standards addressing the TLR process and the IDC, whether in NERC or NAESB, should consider addressing the current information available to the IDC and include some mention of that information in that standard development.

General Comment: One other practical concern that has not been addressed is the ownership, impact and funding of the IDC tool that automates the ‘business practices’ of implementing a TLR for the Operator. The split of the original NERC IRO-006 should not be adopted until this issue is addressed and resolved.

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IRO-006-1**

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**Comment Form — Proposed Reliability Coordination — Transmission Loading Relief
IRO-006-1**

1. Do you believe there is a reliability need for this proposed standard change? If not, please explain in the comment area.

Yes

No

Comments: N/A

2. Do you believe the TLR Subcommittee appropriately divided the elements of TLR business practices vs. TLR reliability requirements? If not, please explain in the comment area.

Yes

No

Comments: N/A

3. Do you believe there are still elements of TLR business practices that remain in the proposed TLR reliability requirements? If not, please explain in the comment area.

Yes

No

Comments: N/A

4. Do you believe there are still elements of TLR reliability requirements that remain in the proposed TLR business practices? If not, please explain in the comment area.

Yes

No

Comments: N/A

5. Do you have any other comments on these proposed changes?

Yes

No

Comments: My only concern with the splitting of reliability requirements and business practices is how they will be managed and/or coordinated in the future. I'm not sure what value is added to the reliability of the grid by now having our grid operators manage their respective systems with a NERC manual in one hand and a NAESB manual in the other. Right now the two documents are in synch with one another; however, as we move forward in time, what will be the process for conflict resolution between the two?

Background:

The TLR – General Update SAR drafting team thanks all commenters who submitted comments on the first draft of the SAR and associated proposed revisions to IRO-006. The SAR was posted from August 4 through September 2, 2005. The drafting team asked stakeholders to provide feedback on the SAR and standard through a special SAR Comment Form. There were 12 sets of comments, including comments representing the views of 65 different people from 36 different entities in seven of the eight NERC Regions.

When the first SAR was posted for comment, the requestor had envisioned publishing a NERC standard and an associated NAESB business practice. Many stakeholders indicated that this would be very challenging for use in real-time operations. In response to stakeholder concerns, NAESB and NERC developed and approved the NERC-NAESB Procedure for Joint Development and Coordination. This procedure guides joint development of standards and business practices when the reliability and business practice components are intricately entwined within a proposed standard. This procedure was approved for implementation by the Standards Committee, NERC Board of Trustees and the NAESB Board and is being used to make modifications to IRO-006.

Based on stakeholder comments and changes that have taken place in the industry since the initial posting of the SAR, the drafting team made the following significant changes to the SAR:

- Modified the desired product so that instead of publishing the NERC Reliability Standard as a separate product, will produce a single document with NAESB that includes both the NERC reliability requirements and the NAESB business practices relative to the TLR Procedure. This should satisfy commenters who indicated that having two different documents would be a detriment to reliability. (As envisioned, the NERC/NAESB split would be balloted as soon as possible.)
- Expanded the scope of the SAR to include consideration of **all** the modifications to the standard proposed by FERC and stakeholders as identified on the ‘Standard Review Form’ attached to the revised SAR. This expansion in scope should satisfy the need to improve the overall quality of this standard. The existing standard includes some material that is more appropriate in a technical reference, and some parts of the standard don’t meet the quality criteria established for ERO standards. The expansion in scope brings this SAR into conformance with the *Reliability Standards Development Plan: 2007–2009*.
- Expanded the scope of the SAR to include consideration of modifications previously addressed in the SAR to Modify IRO-006 for Market Information. This should satisfy stakeholders who suggested that having multiple SARs for the same project is not desirable.

With the above conforming changes, the drafting team is recommending that the SAR move forward to standard drafting.

In this ‘Consideration of Comments’ document, stakeholder comments have been organized so that it is easier to see the summary of changes in response to each question posed by the requestor. All comments received on the can be viewed in their original format at:

<http://www.nerc.com/~filez/standards/Reliability-Coordination-Transmission-Loading-Relief.html>

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you

Consideration of Comments on Draft 1 of SAR for General Update to IRO-006 Reliability Coordination — Transmission Loading Relief

can contact the Vice President and Director of Standards, Gerry Cauley at 609-452-8060 or at gerry.cauley@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedure Manual: <http://www.nerc.com/standards/newstandardsprocess.html>

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| Commenter | Organization | Industry Segment | | | | | | | | |
|-------------------------|-----------------|------------------|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Dan Boezio (G1) | AEP | x | | | | | | | | |
| Raj Rana | AEP | x | | x | | x | | | | |
| Ken Goldsmith (G5) | ALT | | | | | | | | | |
| Serhly Kotsan (G1) | Boston Pacific | | | | | | | | | |
| Bonita Smulski (G6) | BPA | x | | | | | | | | |
| Salah Kitali (G6) | BPA | x | | | | | | | | |
| Taryn McPherson (G6) | BPA | x | | | | | | | | |
| Troy Simpson (G6) | BPA | x | | | | | | | | |
| Vinod Kotecha (G3) | ConEd | x | | | | | | | | |
| Bill Aycock (G7) | Entergy | x | | | | | | | | |
| Ed Davis (G7) | Entergy | x | | | | | | | | |
| George Bartlett (G7) | Entergy | x | | | | | | | | |
| James Case (G7) | Entergy | x | | | | | | | | |
| Jay Zimmerman (G7) | Entergy | x | | | | | | | | |
| Maurice Casadaban (G7) | Entergy | x | | | | | | | | |
| Melinda Montgomery (G7) | Entergy | x | | | | | | | | |
| Narinder Saini (G7) | Entergy | x | | | | | | | | |
| Rick Riley (G7) | Entergy | x | | | | | | | | |
| Joel Mickey (G6) | ERCOT | | x | | | | | | | |
| Bert Gumm (G6) | Idaho Power | x | | | | | | | | |
| Dan Rochester | IESO | | x | | | | | | | |
| Khaqan Khan (G3) | IESO | | x | | | | | | | |
| Cheryl Mendrala | ISO New England | | x | | | | | | | |
| Kathleen Goodman (G3) | ISO New England | | x | | | | | | | |
| Mike Gammon (G1) | KCP&L | x | | | | | | | | |
| Todd Fridley (G1) | KCP&L | x | | | | | | | | |
| Dennis Florom (G5) | LES | x | | | | | | | | |

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| | | | | | | | | | | | | |
|-------------------------|-----------------------------|---|---|---|---|---|---|---|---|--|--|---|
| Tom Mielnik (G5) | MEC | | | | | | | | | | | |
| Robert Coish (G5) | MHEB | x | | x | x | x | | | | | | |
| Terry Bilke (G5) | MISO | | x | | | | | | | | | |
| Joe Knight (G5) | MRO | | x | | | | | | | | | |
| Guy Zito (G3) | NPCC | | x | | | | | | | | | |
| Alan Boesch (G5) | NPPD | | | | | | | | | | | |
| Paul Sorenson (G6) | OATI | | | | | | | | | | | |
| Scott Cunningham | Ohio Valley Electric Corp | | x | x | x | x | x | x | x | | | |
| Todd Gosnell (G5) | OPPD | | | | | | | | | | | |
| Andrew Burke (G6) | PacifiCorp | x | | | | | | | | | | |
| Kathee Downing (G6) | PacifiCorp | x | | | | | | | | | | |
| Jim Eckelcamp (G6) | Progress Energy | | | | | | x | | | | | |
| C. Robert Moseley (G4) | PSC of South Carolina | | | | | | | | | | | x |
| David Wright (G4) | PSC of South Carolina | | | | | | | | | | | x |
| Elizabeth Fleming (G4) | PSC of South Carolina | | | | | | | | | | | x |
| G. O'Neal Hamilton (G4) | PSC of South Carolina | | | | | | | | | | | x |
| John Howard (G4) | PSC of South Carolina | | | | | | | | | | | x |
| Mignon Clyburn (G4) | PSC of South Carolina | | | | | | | | | | | x |
| Phil Riley (G4) | PSC of South Carolina | | | | | | | | | | | x |
| Randy Mitchell (G4) | PSC of South Carolina | | | | | | | | | | | x |
| Bob Harshbarger (G6) | Puget Sound Energy | x | | | | | | | | | | |
| Jim Hansen (G6) | Seattle City Light | x | | | | | | | | | | |
| Marilyn Franz (G6) | Sierra Pacific Power Co | x | | | | | | | | | | |
| Bob Schwermann (G6) | SMUD | x | | | | | | | | | | |
| Clifford Shephard (G2) | Southern Company Generation | | | | | | x | | | | | |
| Joel Dison (G2) | Southern Company Generation | | | | | | x | | | | | |
| Lucius Burris (G2) | Southern Company Generation | | | | | | x | | | | | |
| Roman Carter (G2) | Southern Company Generation | | | | | | x | | | | | |
| Steve Lowe (G2) | Southern Company Generation | | | | | | x | | | | | |

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| | | | | | | | | | | | | | | |
|-----------------------|---------------------------|---|---|--|--|--|--|--|--|--|--|--|--|--|
| Jim Busbin (G8) | Southern Company Services | x | | | | | | | | | | | | |
| Jim Viikinsalo (G8) | Southern Company Services | x | | | | | | | | | | | | |
| Marc Butts (G8) | Southern Company Services | x | | | | | | | | | | | | |
| Wayne Guttormson (G5) | SPC | | | | | | | | | | | | | |
| Robert Rhodes (G1) | SPP | | x | | | | | | | | | | | |
| Bob Cochran (G1) | SPS | x | | | | | | | | | | | | |
| Darrick Moe (G5) | WAPA | | | | | | | | | | | | | |
| Mike Crouch (G1) | WFEC | x | | | | | | | | | | | | |
| Jim Maenner (G5) | WPS | | | | | | | | | | | | | |

- G1 – SPP Operating Reliability Working Group
- G2 – Southern Company Generation
- G3 – NPCC CP9 Reliability Standards Working Group
- G4 – Public Service Commission of South Carolina
- G5 – Midwest Reliability Organization
- G6 – Joint Interchange Scheduling Working Group NERC/NAESB
- G7 – Entergy
- G8 – Southern Company Services

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1. Do you believe there is a reliability need for this proposed standard change? If not, please explain in the comment area.

Summary Consideration: While there was no overwhelming consensus on this issue, most commenters indicated there is a reliability-related need for the proposed standard change. Of the commenters who disagreed with the change, some felt that the change was not 'initiated' due to a reliability need and some felt that splitting the standard between NERC and NAESB would lead to confusion.

The original intent of the SAR was to publish both a NERC version of the standard and a NAESB version of the associated business practice. The SAR was revised to indicate that there will be one document published jointly by NERC and NAESB. This should satisfy commenters who indicated that having two documents would be confusing and a detriment to reliability.

| Commenter | Yes | No | Comment |
|--|-----|----|--|
| CP9 Reliability Standards Working Group Guy Zito Kathleen Goodman Khaqan Khan Vinod (Bob) Kotecha | | X | This proposed standard change was not initiated due to reliability needs. NPCC Participating members believe that the change is in conflict to very important reliability rules. In order to understand the process the standard and the business practice are necessary. |
| Response: The proposed change was initiated to clearly distinguish reliability-related requirements from business practice requirements. | | | |
| The revised SAR indicates that there will be joint collaboration and joint publication of the resulting standard. The joint collaboration ensures during development issues can be addressed jointly so that the resulting business practice and reliability standards work together. Using this process the result is that the jointly published standard will include the business practice requirements and the reliability requirements without need for separate documents. | | | |
| ISO NE Cheryl Mendrala | | X | This proposed standard change was not initiated due to reliability needs |
| Response: The proposed change was initiated to clearly distinguish reliability-related requirements from business practice requirements. | | | |
| The revised SAR indicates that there will be joint collaboration and joint publication of the resulting standard. The joint collaboration ensures during development issues can be addressed jointly so that the resulting business practice and reliability standards work together. Using this process the result is that the jointly published standard will include the business practice requirements and the reliability requirements without need for separate documents. | | | |
| Entergy Services, Transmission Ed Davis Rick Riley Jay Zimmerman George Bartlett James Case Bill Aycock Melinda Montgomery Narinder Saini Maurice Casadaban | | X | The interplay between the business practices and reliability practices associated with TLR is so intimate that the two should not be divided into two standards practices. It would be best for the industry that one TLR standard be developed by the two organizations. |
| Response: Agreed. Since the first draft of this SAR was posted, the NERC NAESB Template Procedure for Joint Standards Development and Coordination was developed to ensure proper coordination for standards where there is no easy separation of business and reliability. | | | |
| The revised SAR indicates that there will be joint collaboration and joint publication of the resulting standard. The joint collaboration ensures during development issues can be addressed jointly so that the resulting business practice and reliability standards work together. Using this process the result is that the jointly published standard will include the business practice requirements and the reliability requirements without need for separate documents. | | | |
| AEP Raj Rana | | X | We support the NERC/NAESB initiative to split the TLR document in order to extract the business practice aspects. However, there is no reliability need for this proposed standard change. The reliability need in terms by managing power flow relief in a pre-defined time period in order to maintain security of the system did not change. However, this draft does not provide |

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| | | | |
|---|---|---|--|
| | | | reliability performance specifications, such as X MW or % of relief in Y minutes. The NERC portion of this standard should specify what is needed to maintain the system security in the interconnected environment, while the NAESB portion should specify the road map as to how to do it. |
| <p>Response: The proposed change was initially initiated to clearly distinguish reliability-related requirements from business practice requirements. Since then, other stakeholders and FERC have identified the need for several additional changes to the standard beyond the NERC/NAESB coordinated split of the requirements. The revised SAR has an expanded scope to address all of these proposed changes. Please see the revised SAR.</p> | | | |
| Midwest Reliability Organization Alan Boesch Terry Bilke Robert Coish Dennis Florom Todd Gosnell Wayne Guttormson Jim Maenner Tom Mielnik Darrick Moe Ken Goldsmith Joe Knight | | X | The MRO does not believe there is a reliability need for the proposed standard change. We would contend that the change provides confusion to a very important reliability process. In order to understand the process the standard and the business practice are necessary. |
| <p>Response: The proposed change was initiated to clearly distinguish reliability-related requirements from business practice requirements. The revised SAR indicates that there will be joint collaboration and joint publication of the resulting standard. The joint collaboration ensures during development issues can be addressed jointly so that the resulting business practice and reliability standards work together. Using this process the result is that the jointly published standard will include the business practices and the reliability standards without need for separate documents.</p> | | | |
| IESO, Ontario Dan Rochester | | X | We do not feel there is a reliability need for the proposed standard "change". We would contend that the change provides confusion to a very important reliability process. In order to understand the process the standard and the business practice are necessary. |
| <p>Response: The proposed change was initiated to clearly distinguish reliability-related requirements from business practice requirements. The revised SAR indicates that there will be joint collaboration and joint publication of the resulting standard. The joint collaboration ensures during development issues can be addressed jointly so that the resulting business practice and reliability standards work together. Using this process the result is that the jointly published standard will include the business practices and the reliability standards without need for separate documents.</p> | | | |
| Public Service Commission of South Carolina Phil Riley John E. Howard David A. Wright Randy Mitchell Elizabeth B. Fleming G. O'Neal Hamilton Mignon L. Clyburn C. Robert Moseley | X | | |
| Ohio Valley Electric Corp. Scott R. Cunningham | X | | |
| Joint Interchange Scheduling Working Group Bert Gumm Troy Simpson Marilyn Franz Jim Hansen Kathee Downing Jim Eckelcamp | X | | |

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| | | | |
|---|---|--|-----|
| Bob Harshbarger Paul Sorenson Bob Schwermann Bonita Smulski Taryn McPherson Salah Kitali Joel Mickey Andrew Burke | | | |
| Southern Company – Transmission Jim Busbin Marc Butts Jim Viikinsalo | X | | N/A |
| Operating Reliability Working Group (ORWG) Robert Rhodes Dan Boezio Bob Cochran Mike Crouch Todd Fridley Mike Gammon Serhly Kotsan Robert Rhodes | X | | |
| Southern Company Generation Roman Carter Joel Dison Clifford Shepard Lucius Burris Steve Lowe | X | | |

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2. Do you believe the TLR Subcommittee appropriately divided the elements of TLR business practices vs. TLR reliability requirements? If not, please explain in the comment area.

Summary Consideration: The comments do indicate some support, but not a clear consensus in support of the proposed division of TLR business practices versus TLR reliability requirements. In reviewing the comments, the drafting team notes that several of the comments imply that certain steps in Attachment 1 were proposed to be assigned as business practices, but those steps were not proposed as business practices in the first draft of the SAR.

The modifications made to the SAR should improve this consensus as many of the negative comments indicated that subdividing the requirements into two separate documents would be confusing and under the revised SAR NERC and NAESB will jointly publish a document that includes both the Business Practice requirements and the reliability requirements in a single document.

| Commenter | Yes | No | Comment |
|--|-----|----|--|
| IESO, Ontario Dan Rochester | | X | <p>The reliability and business practices within the TLR process are integrated to such an extent that the details need to remain contained within a single document for clarity. Concerns regarding the ability to effectively manage the model and the process with the current proposed split need to be addressed. The ability to follow developing market issues must also be retained. Steps 1.4.1, 1.4.1.1, 1.5, 1.5.1, 1.6, 1.7, 2.1.2, 2.2.2, 2.4.2, 2.5.2, 3.2.1.2, 3.3.1.2, 7.1, are reliability related and should remain in the standard.</p> <p>The dynamic schedule part of 1.6.6 was added to the Standard in June of this year with approval of 100% of the ballot body. It should remain as part of this standard.</p> |
| <p>Response: In determining how to subdivide the requirements, this is the approach taken by the TLR Task Force: A procedure includes steps that are performed to achieve expected results. It is only one method to achieve those results. If a Reliability Coordinator has options to address congestion and those options are prioritized in order of economic preference then the RC is making choices that would be appropriate under a business practice. In support of this approach, the drafting team believes that the following steps in the TLR Procedure should be assigned to a NAESB Business practice: 1.5.1, 2.2.2, 2.4.2, and 2.5.2. Note that the other steps in the process that you've identified, 1.4.1, 1.4.1.1, 1.5, 1.6, 1.7, 2.1.2, 3.2.1.2, 3.3.1.2, and 7.1 are retained as reliability-steps in the revised SAR. There were no changes to 1.6.6 as part of the approval of IRO-006-02.</p> | | | |
| CP9 Reliability Standards Working Group Guy Zito Kathleen Goodman Khaqan Khan Vinod (Bob) Kotecha | | X | <p>- Section 2.6 and 2.7 in the original standard defined step-by-step actions the Operator is to take under TLR Levels 5a and 5b. These actions have been removed and currently reside in the proposed NAESB standard. It is not appropriate for a business practice standard to define actions to be taken by a Reliability Coordinator in real-time operations to resolve a reliability issue.</p> <p>The need for a TLR is in response to a problem with reliability on the system. The Operator must be presented with all the information that is contained in both the proposed NERC and NAESB standards in order to issue that TLR. If the operator does not know what transactions are available in any given category, they do not know what TLR level is needed to resolve the situation. NPCC participating members do not agree with the assertion that the information contained in the NAESB standard does not impact reliability.</p> <p>Some aspects of the original IRO-006 are 'business practices,' and that the completed effort generally meets the original intent of splitting the business practice and reliability components. However, seeing the resulting split, it is clear that these business practices have a direct impact on reliability and they should be maintained within one single standard to prevent confusion and conflicts. Also, since the fundamental practice for defining the priorities and treatment of transactions under each TLR level is consistent with the FERC pro-forma tariff, there is minimal subjectivity involved in the business practices that are included in the original NERC standard.</p> <p>Steps 1.4.1, 1.4.1.1, 1.5, 1.5.1, 1.6, 1.7, 2.1.2, 2.2.2, 2.4.2, 2.5.2, 3.2.1.2,</p> |

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| | | | 3.3.1.2, 7.1, are reliability related and should remain in the standard. The dynamic schedule part of 1.6.6 was added to the Standard in June of this year with 100% of the ballot body approval, it should remain as part of this standard. |
| <p>/Response: In determining how to subdivide the requirements, this is the approach taken by the TLR Task Force: A procedure includes steps that are performed to achieve expected results. It is only one method to achieve those results. If a Reliability Coordinator has options to address congestion and those options are prioritized in order of economic preference then the RC is making choices that would be appropriate under a business practice. In support of this approach, the drafting team believes that the following steps in the TLR Procedure should be assigned to a NAESB Business practice: 1.5.1, 2.2.2, 2.4.2, and 2.5.2.</p> <p>The revised SAR indicates that there will be joint collaboration and joint publication of the resulting standard. The joint collaboration ensures during development issues can be addressed jointly so that the resulting business practice and reliability standards work together. Using this process the result is that the jointly published standard will include the business practices and the reliability standards without need for separate documents.</p> | | | |
| Operating Reliability Working Group (ORWG) Robert Rhodes Dan Boezio Bob Cochran Mike Crouch Todd Fridley Mike Gammon Serhly Kotsan Robert Rhodes | | X | We feel that the division between business practices and reliability standards may not have gone far enough. The reliability standards should focus on establishing the criteria for initiation of different TLR levels and the required timeframes for relief. Business practices should focus on how the curtailments are executed to achieve the relief levels in the timeframes required by the reliability standard. |
| <p>Response: In determining how to subdivide the requirements, this is the approach taken by the TLR Task Force: A procedure includes steps that are performed to achieve expected results. It is only one method to achieve those results. If a Reliability Coordinator has options to address congestion and those options are prioritized in order of economic preference then the RC is making choices that would be appropriate under a business practice.</p> <p>The revised SAR indicates that there will be joint collaboration and joint publication of the resulting standard. The joint collaboration ensures during development issues can be addressed jointly so that the resulting business practice and reliability standards work together. Using this process the result is that the jointly published standard will include the business practices and the reliability standards without need for separate documents.</p> | | | |
| ISO NE Cheryl Mendrala | | X | <p>- Section 2.6 and 2.7 in the original standard defined step-by-step actions the Operator is to take under TLR Levels 5a and 5b. These actions have been removed and currently reside in the proposed NAESB standard. It is not appropriate for a business practice standard to define actions to be taken by a Reliability Coordinator in real-time operations to resolve a reliability issue.</p> <p>The need for a TLR is in response to a problem with reliability on the system. There is no doubt that the Operator must be presented with all the information that is contained in both the proposed NERC and NAESB standards in order to issue that TLR. If the operator does not know what transactions are available in any given category, they do not know what TLR level is needed to resolve the situation. Therefore, we cannot agree with the assertion that the information contained in the NAESB standard does not impact reliability.</p> <p>We agree that some aspects of the original IRO-006 are 'business practices,' and agree that the completed effort generally meets the original intent of splitting the business practice and reliability components. However, seeing the resulting split, it is clear that these business practices have a direct impact on reliability and we believe they should be maintained within one single standard to prevent confusion and conflicts. Also, since the fundamental practice for defining the priorities and treatment of transactions under each TLR level is consistent with the FERC pro-forma tariff, there is minimal subjectivity involved in the business practices that are included in the original NERC standard.</p> |
| Response: | | | |

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The revised SAR indicates that there will be joint collaboration and joint publication of the resulting standard. The joint collaboration ensures during development issues can be addressed jointly so that the resulting business practice and reliability standards work together. Using this process the result is that the jointly published standard will include the business practices and the reliability standards without need for separate documents.

Note that in the revised SAR, all of the 'step-by-step' actions identified for TLR Levels 5a and 5b appear in the combined document.

In determining how to subdivide the requirements, this is the approach taken by the TLR Task Force: A procedure includes steps that are performed to achieve expected results. It is only one method to achieve those results. If a Reliability Coordinator has options to address congestion and those options are prioritized in order of economic preference then the RC is making choices that would be appropriate under a business practice.

| | | | |
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| Entergy Services, Transmission Ed Davis Rick Riley Jay Zimmerman George Bartlett James Case Bill Aycock Melinda Montgomery Narinder Saini Maurice Casadaban | | X | A complete response to this question is inappropriate at this time. It appears that IRO-006 will be divided into 3 major documents: NERC TLR reliability standards, NAESB business practices, and the IDC Reference Documentation. The answer to this question will require a detailed comparison of all three documents with respect to the existing IRO-006. We do not have the NAESB document in front of us in order to make that detailed comparison. In addition, it does not appear that a detailed comparison of the three documents has been requested since the SAR request states in the last paragraph that the development effort will begin by assessing for completeness and accuracy the revised Attachment 1. |
|---|--|---|--|

Response:
In the future, the drafting team will make sure all documents needed for review are posted. The revised SAR indicates that there will be joint collaboration and joint publication of the resulting standard. The joint collaboration ensures during development issues can be addressed jointly so that the resulting business practice and reliability standards work together. Using this process the result is that the jointly published standard will include the business practices and the reliability standards without need for separate documents.

| | | | |
|-----------------|--|---|---|
| AEP Raj Rana | | X | The two documents are overlapping. Same statements in both documents. |
|-----------------|--|---|---|

Response: Agreed – this duplication will be eliminated as indicated in the revised SAR. The revised SAR indicates that there will be joint collaboration and joint publication of the resulting standard. The joint collaboration ensures during development issues can be addressed jointly so that the resulting business practice and reliability standards work together. Using this process the result is that the jointly published standard will include the business practices and the reliability standards without need for separate documents.

| | | | |
|--|--|---|---|
| Midwest Reliability Organization Alan Boesch Terry Bilke Robert Coish Dennis Florom Todd Gosnell Wayne Guttormson Jim Maenner Tom Mielnik Darrick Moe Ken Goldsmith Joe Knight The 31 Additional MRO Members | | X | Steps 1.4.1, 1.4.1.1, 1.5, 1.5.1, 1.6, 1.7, 2.1.2, 2.2.2, 2.4.2, 2.5.2, 3.2.1.2, 3.3.1.2, 7.1, are reliability related and should remain in the standard. The dynamic schedule part of 1.6.6 was added to the Standard in June of this year with 100% of the ballot body approval, it should remain as part of this standard. |
|--|--|---|---|

Response: In determining how to subdivide the requirements, this is the approach taken by the TLR Task Force: A procedure includes steps that are performed to achieve expected results. It is only one method to achieve those results. If a Reliability Coordinator has options to address congestion and those options are prioritized in order of economic preference then the RC is making choices that would be appropriate under a business practice. In support of this approach, the drafting team believes that the following steps in the TLR Procedure should be assigned to a NAESB Business practice: 1.5.1, 2.2.2, 2.4.2, and 2.5.2.
Note that the other steps in the process that you've identified, 1.4.1, 1.4.1.1, 1.5, 1.6, 1.7, 2.1.2, 3.2.1.2, 3.3.1.2, and

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7.1 are retained as reliability-steps in the revised SAR.

There were no changes to 1.6.6 as part of the approval of IRO-006-02.

| | | | |
|---|---|--|-----|
| Southern Company – Transmission Jim Busbin Marc Butts Jim Viikinsalo | X | | N/A |
| Joint Interchange Scheduling Working Group Bert Gumm Troy Simpson Marilyn Franz Jim Hansen Kathee Downing Jim Eckelcamp Bob Harshbarger Paul Sorenson Bob Schwermann Bonita Smulski Taryn McPherson Salah Kitali Joel Mickey Andrew Burke | X | | |
| Public Service Commission of South Carolina Phil Riley John E. Howard David A. Wright Randy Mitchell Elizabeth B. Fleming G. O'Neal Hamilton Mignon L. Clyburn C. Robert Moseley | X | | |
| Ohio Valley Electric Corp. Scott R. Cunningham | X | | |
| Southern Company Generation Roman Carter Joel Dison Clifford Shepard Lucius Burris Steve Lowe | X | | |

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3. Do you believe there are still elements of TLR business practices that remain in the proposed TLR reliability requirements? If not, please explain in the comment area.

Summary Consideration: Most commenters indicated that the TLR business practices have been removed from the TLR reliability requirements. Some commenters were not able to locate the NAESB Business Practice and could not easily answer this question. In the future, the drafting team will ensure that all documents needed to answer the questions on the comment forms are posted with the comment form.

| Commenter | Yes | No | Comment |
|---|-----|----|--|
| Ohio Valley Electric Corp. Scott R. Cunningham | X | | At times, RTO ramp limitations are invoked when TLR curtailments occur. This issue is not covered in the standard, but seems to be related to a business practice, rather than a reliability issue. Perhaps the ramp limitation should be waived or adjusted if the limitation is caused by the curtailments that occur with the TLR. |
| Response: This is a change that could be addressed with the technical revisions to improve the standard in phase 2 of the proposed revisions. | | | |
| Operating Reliability Working Group (ORWG) Robert Rhodes Dan Boezio Bob Cochran Mike Crouch Todd Fridley Mike Gammon Serhly Kotsan Robert Rhodes | X | | Everything in the proposed Attachment 1 - IRO-006-0 from Section 3 to the end of Attachment 1, including Appendices A and B, should be removed from the reliability standard and incorporated into the TLR Business Practices document. This material gets into the internal workings of the tool itself rather than dealing with the overall guiding principle of providing, and maintaining, relief within a specific timeframe. |
| Response: The drafting team agrees that many parts of Attachment 1 should be placed into either the Business Practices document or in a Technical Reference. The revised SAR indicates that there will be joint collaboration and joint publication of the resulting standard. The joint collaboration ensures during development issues can be addressed jointly so that the resulting business practice and reliability standards work together. Using this process the result is that the jointly published standard will include the business practices and the reliability standards without need for separate documents. Appendix A may be a reference document for both the reliability standard and the business practice – Appendix B is expected to be included in the NAESB business practices. | | | |
| Entergy Services, Transmission Ed Davis Rick Riley Jay Zimmerman George Bartlett James Case Bill Aycock Melinda Montgomery Narinder Saini Maurice Casadaban | X | | The NERC TLR reliability standard part of this documentation appears to be all reliability related. However, the IDC Reference Document appears to have significant business practice elements contained in it. |
| Response: Agreed. The revised SAR indicates that most of the content in the IDC Reference Document (Appendix E) should be translated into a reference document. | | | |
| AEP Raj Rana | X | | We believe that items like firm/non-firm transactions types, TLR levels etc. should be taken out of the reliability portion of this standard. These items should be included in the NAESB portion. The reliability portion should only address the needed relief amount on constrained facilities and the time under which the relief should be provided in order to maintain security of the interconnected network. |
| Response: In determining how to subdivide the requirements, this is the approach taken by the TLR Task Force: A procedure includes steps that are performed to achieve expected results. It is only one method to achieve those | | | |

Consideration of Comments on Draft 1 of SAR for General Update to IRO-006 Reliability Coordination — Transmission Loading Relief

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| <p>results. If a Reliability Coordinator has options to address congestion and those options are prioritized in order of economic preference then the RC is making choices that would be appropriate under a business practice. The Attachment 1 steps of the procedure have been identified by the TLR Taskforce as having both Reliability and business practices within them. As the resulting standard will be published jointly all items are expected to be retained and the distinction of the items as reliability or as business practices will be identified.</p> | | | |
| ISO NE Cheryl Mendrala | | X | See response to question 2. |
| <p>Response: See response to comments on question 2.</p> | | | |
| CP9 Reliability Standards Working Group Guy Zito Kathleen Goodman Khaqan Khan Vinod (Bob) Kotecha | | X | See response to question 2. |
| <p>Response: See response to comments on question 2.</p> | | | |
| Southern Company – Transmission Jim Busbin Marc Butts Jim Viikinsalo | | X | N/A |
| Joint Interchange Scheduling Working Group Bert Gumm Troy Simpson Marilyn Franz Jim Hansen Kathee Downing Jim Eckelcamp Bob Harshbarger Paul Sorenson Bob Schwermann Bonita Smulski Taryn McPherson Salah Kitali Joel Mickey Andrew Burke | | X | |
| Midwest Reliability Organization Alan Boesch Terry Bilke Robert Coish Dennis Florum Todd Gosnell Wayne Guttormson Jim Maenner Tom Mielnik Darrick Moe Ken Goldsmith Joe Knight The 31 Additional MRO Members | | X | |
| Public Service Commission of South Carolina Phil Riley John E. Howard David A. Wright Randy Mitchell Elizabeth B. Fleming G. O'Neal Hamilton | | X | |

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| Mignon L. Clyburn C. Robert Moseley | | | |
| IESO, Ontario Dan Rochester | | X | |
| Southern Company Generation Roman Carter Joel Dison Clifford Shepard Lucius Burris Steve Lowe | | X | |

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4. Do you believe there are still elements of TLR reliability requirements that remain in the proposed TLR business practices? If not, please explain in the comment area.

Summary Consideration: Most commenters indicated that there aren't TLR reliability requirements in the proposed TLR business practices. Some commenters were not able to locate the NAESB Business Practice and could not easily answer this question. In the future, the drafting team will ensure that all documents needed to answer the questions on the comment forms are posted with the comment form.

| Commenter | Yes | No | Comment |
|---|-----|----|--|
| AEP Raj Rana | | | No comments. The TLR business practices document is not available. |
| Response: In the future, the drafting team will make sure all relevant documents are posted. | | | |
| Operating Reliability Working Group (ORWG) Robert Rhodes Dan Boezio Bob Cochran Mike Crouch Todd Fridley Mike Gammon Serhly Kotsan Robert Rhodes | X | | Sections 3.2.1, 3.2.1.1 and 3.2.1.2 should be moved to the reliability standard since they deal more with how and why a Level 2 TLR is initiated than with the internal workings of the IDC. |
| Response: In determining how to subdivide the requirements, this is the approach taken by the TLR Task Force: A procedure includes steps that are performed to achieve expected results. It is only one method to achieve those results. If a Reliability Coordinator has options to address congestion and those options are prioritized in order of economic preference then the RC is making choices that would be appropriate under a business practice. | | | |
| Note that in the revised SAR, 3.2.1.2 is included in the reliability related steps of the procedure. | | | |
| ISO NE Cheryl Mendrala | X | | See response to question 2. |
| Response: See response to comments on question 2. | | | |
| CP9 Reliability Standards Working Group Guy Zito Kathleen Goodman Khaqan Khan Vinod (Bob) Kotecha | X | | See response to question 2. |
| Response: See response to comments on question 2. | | | |
| Midwest Reliability Organization Alan Boesch Terry Bilke Robert Coish Dennis Florom Todd Gosnell Wayne Guttormson Jim Maenner Tom Mielnik Darrick Moe Ken Goldsmith Joe Knight The 31 Additional MRO Members | X | | See comments in question 2. |
| Response: See response to comments on question 2 | | | |
| IESO, Ontario | | X | See comments in question 2. |

Consideration of Comments on Draft 1 of SAR for General Update to IRO-006 Reliability Coordination — Transmission Loading Relief

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| Dan Rochester | | | |
| Response: See response to comments on question 2. | | | |
| Entergy Services, Transmission Ed Davis Rick Riley Jay Zimmerman George Bartlett James Case Bill Aycock Melinda Montgomery Narinder Saini Maurice Casadaban | | X | We can not answer this question since we do not have the NAESB proposal TLR business practices in this package. |
| Response: In the future, the drafting team will make sure all relevant documents are posted. | | | |
| Southern Company – Transmission Jim Busbin Marc Butts Jim Viikinsalo | | X | N/A |
| Joint Interchange Scheduling Working Group Bert Gumm Troy Simpson Marilyn Franz Jim Hansen Kathee Downing Jim Eckelcamp Bob Harshbarger Paul Sorenson Bob Schwermann Bonita Smulski Taryn McPherson Salah Kitali Joel Mickey Andrew Burke | | X | |
| Public Service Commission of South Carolina Phil Riley John E. Howard David A. Wright Randy Mitchell Elizabeth B. Fleming G. O'Neal Hamilton Mignon L. Clyburn C. Robert Moseley | | X | |
| Ohio Valley Electric Corp. Scott R. Cunningham | | X | |
| Southern Company Generation Roman Carter Joel Dison Clifford Shepard Lucius Burris Steve Lowe | | X | |

5. Do you have any other comments on these proposed changes?

Summary Consideration:

The NERC-NAESB Procedure for Joint Development and Coordination was established after the first posting of this SAR, to guide joint development of standards and business practices when the reliability and business practice components are intricately entwined within a proposed standard. This procedure has been approved for implementation by the Standards Committee, NERC Board of Trustees and the NAESB Board and is applicable to the revisions of IRO-006. The revisions made to IRO-006 will be jointly published by NERC and NAESB in a single document, thus eliminating the need for a real-time system operator to have two documents that must be merged together to provide the needed information.

Several commenters suggested modifications to some of the requirement in the standard and/or to some of the steps in the TLR process. The drafting team modified its SAR to clearly indicate that the revisions to IRO-006 will be addressed in phases – with assigning the steps in Attachment 1 of IRO-006 between NERC/NAESB as the first phase – and addressing technical revisions that require field testing, changes to the IDC, and other modifications already identified as needed to improve the overall quality of the standard being addressed following the NERC/NAESB split. Stakeholder suggestions for technical modifications that were made in response to this question have been added to the laundry list of items under the IRO-006 'To Do List'.

| Committer | Yes | No | Comment |
|---|------------|-----------|--|
| Southern Company – Transmission Jim Busbin Marc Butts Jim Viikinsalo | X | | My only concern with the splitting of reliability requirements and business practices is how they will be managed and/or coordinated in the future. I'm not sure what value is added to the reliability of the grid by now having our grid operators manage their respective systems with a NERC manual in one hand and a NAESB manual in the other. Right now the two documents are in synch with one another; however, as we move forward in time, what will be the process for conflict resolution between the two? |
| <p>Response: Note that following the first posting of this SAR, NERC and NAESB jointly developed and adopted a procedure to ensure that when a reliability standard and business practice are 'entwined', the development (and revision) would be coordinated between the two organizations. The revised SAR indicates that there will be joint collaboration and joint publication of the resulting standard. The joint collaboration ensures during development issues can be addressed jointly so that the resulting business practice and reliability standards work together. Using this process the result is that the jointly published standard will include the business practices and the reliability standards without need for separate documents.</p> | | | |
| Operating Reliability Working Group (ORWG) Robert Rhodes Dan Boezio Bob Cochran Mike Crouch Todd Fridley Mike Gammon Serhly Kotsan Robert Rhodes | X | | Section 1.5.1 of Attachment 1 refers to treatment of Interchange Transactions not in the IDC in accordance with NAESB business practices, but we could not find any reference to this treatment in the TLR business practices. |
| <p>Response: This is in Sections 1.1, 1.2, 1.2.11 of NAESB Transmission Loading Relief Business Practice and is shown in the proposed revisions to Attachment 1.</p> | | | |

Consideration of Comments on Draft 1 of SAR for General Update to IRO-006 Reliability Coordination — Transmission Loading Relief

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| <p>ISO NE Cheryl Mendrala</p> | <p>X</p> | <p>Recommend restoring the reference to RCIS tool in 1.4. That reference was eliminated when the old 1.4.1 was removed.</p> <ul style="list-style-type: none"> - The old 1.5.1 was removed. There's a general statement added to 1.2 that says "In addition, a Reliability Coordinator may implement other NERC-approved procedures to request relief to mitigate any other transmission constraints as necessary to preserve the reliability of the system." But, that phrase does not seem to capture the same intent as the previous 1.5.1 wording. - Section 1.5.3 the numbering on this section is very confusing. Suggest the following: <ul style="list-style-type: none"> 1.5.3.1. Causes of questionable IDC results may include: (1) Missing Interchange transactions that are known to contribute to the Constraint, (2) Significant change in transmission system topology, or (3) TDF matrix error. 1.5.3.2 Impacts of questionable IDC results may include: (1) relief that would have no effect on, or aggravate the constraint or (2) that would initiate a constraint elsewhere. 1.5.3.3. If other Reliability Coordinators are involved in the TLR event, all impacted Reliability Coordinators shall be in agreement before any adjustments to the relief request list are made. - Title of Section 2 should be changed to be only "Transmission Loading Relief (TLR) Levels." - Section 3 is missing section 3.1. - Suggest that Section 3.2 include a reference to the fact that transactions submitted after the XX:25 deadline will put on HOLD. - Are Section 3.3.3 and Section 3.4.3 referring back to the deadline defined in 3.2? If so, that section should be referenced. - Text in 3.3.1.1 and 3.3.2 are referring to the same process for reallocation and should use the same terminology. Suggest 3.3.1.1 text be changed to "At XX:25 a reallocation will be performed for the following hour to maintain the target flow identified for the current hour". - Text in 3.4.1.1 and 3.4.2 are referring to the same process for reallocation and should use the same terminology. Suggest 3.4.1.1 text be changed to "At XX:25 a reallocation will be performed for the following hour to maintain the target flow identified for the current hour". - The section notation of Appendix B should be modified. The Section numbering shown in the index is not how the headings are titled in the Sections. Also, Section F and Section G should not be 5.1 and 5.2; they should be at the highest index level. <p>General Comment: There have been changes to the congestion management process over the last few years that involve the use of Market information by the IDC. Any new standards addressing the TLR process and the IDC, whether in NERC or NAESB, should consider addressing the current information available to the IDC and include some mention of that information in that standard development.</p> <p>General Comment: One other practical concern that has not been addressed is the ownership, impact and funding of the IDC tool that automates the 'business practices' of implementing a TLR for the Operator. The split of the original NERC IRO-006 should not be adopted until this issue is addressed and resolved.</p> |
| <p>As noted in the revised SAR, the standard will be revised in phases – the first phase will be limited to the 'NERC/NAESB/ split' – but following that split, the standard drafting team will be focusing on the laundry list of technical improvements to the standard that have already been identified in the SAR – and will add your list to those that will be considered.</p> <p>The reference was moved to NAESB BP 1.4 and changed to refer to generic tool instead of RCIS specifically. This approach limits the number of changes that need to be made to standards when the tool or committee name changes.</p> | | |

Consideration of Comments on Draft 1 of SAR for General Update to IRO-006 Reliability Coordination — Transmission Loading Relief

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| <p>Section 3.1 does appear in the revised proposed changes to Attachment 1.</p> <p>Going forward the changes will be managed from the joint standards development process and there is no anticipated change in the funding or contract agreements to modify the software.</p> <p>The standard drafting team will determine the best way to format and number the steps in the procedure jointly.</p> | | |
| <p>Entergy Services, Transmission Ed Davis Rick Riley Jay Zimmerman George Bartlett James Case Bill Aycock Melinda Montgomery Narinder Saini Maurice Casadaban</p> | <p>X</p> | <p>The SAR contains the statement that the urgent action revision to Attachment 1 addressing dynamic schedules will be incorporated into the NAESB business practices. We suggest starting with IRO-006-1, rather than with IRO-006-0.</p> <p>Please delete all references to IRO-006-0 (and IRO-006-1) in headers, footers, titles, etc. This new document will result in a new version of IRO-006. This current draft is not version 0 or 1.</p> <p>Please delete all references to adoption by the NERC Board of Trustees, Effective Date, and all dates because the document we are viewing has not been adopted by the BOT and does not have an Effective Date.</p> <p>Please provide a redline version showing the draft changes to IRO-006-1. This redline would make review and comment much easier for commenters. We appreciate the development of the matrix and would probably find it useful for keeping track of the disposition of each requirement in the original IRO-006. However, in its current form we do not understand which columns relate to which documents and the row designations are not clearly understood.</p> |
| <p>Response: The standard drafting team will make its revisions to the latest approved version of the standard – which is now IRO-006-03. Headers, footers, etc will be corrected when the draft standard is posted for review and comment. The SAR was revised to identify the scope of changes that will be made, without trying to make all those changes since that is really the work of the standard drafting team – there is no red line to the standard as the proposed changes to the standard will be refined by the standard drafting team. The matrix was confusing and will not be carried forward.</p> | | |
| <p>Joint Interchange Scheduling Working Group Bert Gumm Troy Simpson Marilyn Franz Jim Hansen Kathee Downing Jim Eckelcamp Bob Harshbarger Paul Sorenson Bob Schwermann Bonita Smulski Taryn McPherson Salah Kitali Joel Mickey Andrew Burke</p> | <p>X</p> | <p>1. We request that the scope of this SAR be expanded to include resolving the reloading of curtailed transactions above their reliability limit by an entity other than the initiating entity or above any pre-existing reliability or market profiles. 2. We also request that the scope of the SAR be expanded to include standards for when curtailments may be denied and when curtailments may be issued. 1 - There have been several instances where a curtailment has been issued and then been automatically or manually reloaded above the reliability limit. The automatic reload problem created by the IDC has been resolved by CO-148, automatic reload by other back office applications has not been corrected, nor have manual adjustments. There are several options available for correcting this problem. This should be addressed by specifying requirements and performance measures in the TLR standard and may also be addressed through NAESB business practices and modifications to the e-Tag specification. Also, any pre-existing curtailment levels are lost. JISWG recommends that the entity who has issued the curtailment be the only entity able to authorize the reload. When the reload occurs the energy profile should be limited to the next lowest reliability limit or market adjustment profile. 2- Under normal circumstances, a curtailment (issued for reliability reasons) should not be denied. However, there are some limited circumstances where a curtailment should be denied. For example, if a curtailment comes in and the generator cannot meet the ramp requirements, then the curtailment could be denied and would be reissued for the next scheduling interval. This ensures that the tags reflect actual conditions. In other cases, curtailments are sometimes issued when PSE's cannot make their market level adjustments prior to cutoff. The TLR standard should address those specific reasons for denying a curtailment. Reliability is compromised when curtailments are denied for non-reliability reasons. Reliability may also be compromised when curtailments are issued for non-reliability reasons. If scope of the SAR is adjusted, JISWG volunteers to assist the drafting team with providing specific language for the TLR standard addressing these issues.</p> |
| <p>Response: As noted in the revised SAR, the standard will be revised in phases – the first phase will be limited to the 'NERC/NAESB/ split' – but following that split, the standard drafting team will be focusing on the laundry list of</p> | | |

Consideration of Comments on Draft 1 of SAR for General Update to IRO-006 Reliability Coordination — Transmission Loading Relief

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| <p>technical improvements to the standard that have already been identified in the SAR – and will add your list to those that will be considered.</p> | | |
| <p>AEP Raj Rana</p> | <p>X</p> | <p>Use of proxy flowgates by the reliability coordinators must be prohibited. This practice must be explicitly addressed in this standard because, the use of proxy flowgates not only will result in mis-allocation of corrective actions, but at worst could even result in actions being taken that actually increase flows on the limiting element, instead of decreasing them.</p> |
| <p>Response: As noted in the revised SAR, the standard will be revised in phases – the first phase will be limited to the 'NERC/NAESB/ split' – but following that split, the standard drafting team will be focusing on the laundry list of technical improvements to the standard that have already been identified in the SAR – and will add your list to those that will be considered.</p> | | |
| <p>Midwest Reliability Organization Alan Boesch Terry Bilke Robert Coish Dennis Florom Todd Gosnell Wayne Guttormson Jim Maenner Tom Mielnik Darrick Moe Ken Goldsmith Joe Knight The 31 Additional MRO Members</p> | <p>X</p> | <p>It was very difficult to review the changes to the standard without a redline copy. In order to perform our review we made a redline of the original standard. The MRO does not support this modification. The proposed change provides confusion to a very important reliability process. Also the proposed standard references a NAESB standard which is inconsistent with the NERC Standards Process Manual which says "All mandatory requirements of a reliability standard shall be within an element of the standard. Supporting documents to aid in the implementation of a standard may be referenced by the standard but are not part of the standard itself." There are mandatory parts of the proposed standard in the NAESB business practice and are necessary for the successful implementation of this reliability standard. With the two documents being modified by separate entities there is a good chance that the documents will not be coordinated and kept in synchronization when changes are made.</p> |
| <p>Response: The NERC NAESB Template Procedure for Joint Standards Development and Coordination was developed to ensure proper coordination for standards where there is no easy separation of business and reliability. The approach includes joint collaboration and joint publication of the resulting standard. There will be one jointly published document which covers both the business practice steps and the reliability steps of the Attachment in IRO-006.</p> | | |
| <p>Ohio Valley Electric Corp. Scott R. Cunningham</p> | <p>X</p> | <p>The use of proxy flowgates is not mentioned at all in the proposed standard. The use of proxy flowgates should not be allowed, except in very unusual circumstances. If use of a proxy flowgate is necessary, such use should be justified and approval from all affected parties should be obtained.</p> |
| <p>Response: As noted in the revised SAR, the standard will be revised in phases – the first phase will be limited to the 'NERC/NAESB/ split' – but following that split, the standard drafting team will be focusing on the laundry list of technical improvements to the standard that have already been identified in the SAR – and will add your list to those that will be considered.</p> | | |
| <p>IESO, Ontario Dan Rochester</p> | <p>X</p> | <p>The IESO does not fully support the modifications proposed in this SAR. The proposed change provides confusion to a very important reliability process. Also the proposed standard references a NAESB standard which is inconsistent with the NERC Standards Process Manual which says "All mandatory requirements of a reliability standard shall be within an element of the standard. Supporting documents to aid in the implementation of a standard may be referenced by the standard but are not part of the standard itself." There are mandatory parts of the proposed standard in the NAESB business practice that are necessary for the successful implementation of this reliability standard. With the two documents being modified by separate entities there is a good chance that the documents will not be coordinated and kept in synchronization when changes are made. As acknowledged by the TLR Subcommittee that worked to create this proposed split, the business practices and reliability aspects of TLR are very intertwined. In effect, the information in both the proposed NERC and NAESB standard must be simultaneously available to the Operators in the Control Room, in order for them to operate the system reliably. While the effort to create this initial split in the TLR standards has been completed,</p> |

Consideration of Comments on Draft 1 of SAR for General Update to IRO-006 Reliability Coordination — Transmission Loading Relief

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| | | <p>consideration should be given as to how this split will be maintained, if going forward, before it is adopted by the industry.</p> <p>Operator training issues, as well as the ownership and funding of the IDC tool should be considered in this evaluation before such a significant step is taken on a standard that is fundamental to the reliability of the Eastern Interconnection. This is an important process that requires a complete understanding of the impact of separating the business practice from the reliability concepts. It is not clear that the current proposed document split will retain the integrity of the TLR process. The potential negative impact of degrading the RC's ability to manage loop flow dictates that any change in documentation and responsibility must proceed carefully.</p> |
| <p>Response: The NERC NAESB Template Procedure for Joint Standards Development and Coordination was developed to ensure proper coordination for standards where there is no easy separation of business practices and reliability requirements. The approach includes joint collaboration and joint publication of the resulting standard. The joint collaboration ensures during development issues can be addressed jointly so that the resulting business practice and reliability standards work together. Using this process the result is that the jointly published standard includes the business practices and the reliability standards without need for separate documents.</p> <p>The IDC is the tool that specifies how the Business Practice and the Reliability adjustments are made. The RC specifies how much relief is required and the tool combines the logic based on business practice rules to identify how much relief in each transaction should be distributed. NERC will work jointly to provide training when needed by using the committees and then by providing the necessary materials so the industry can train their staff on</p> | | |
| <p>Southern Company Generation Roman Carter Joel Dison Clifford Shepard Lucius Burris Steve Lowe</p> | X | <p>As NAESB and NERC standards are approved and implemented which require close coordination between the two organizations, the need for a common "Operations Manual" may become necessary for System Operators.</p> |
| <p>Response: The NERC NAESB Template Procedure for Joint Standards Development and Coordination was developed to ensure proper coordination for standards where there is no easy separation of business practices and reliability requirements. The approach includes joint collaboration and joint publication of the resulting standard. The joint collaboration ensures during development issues can be addressed jointly so that the resulting business practice and reliability standards work together. Using this process the result is that the jointly published standard includes the business practices and the reliability standards without need for separate documents.</p> | | |
| <p>CP9 Reliability Standards Working Group Guy Zito Kathleen Goodman Khaqan Khan Vinod (Bob) Kotecha</p> | X | <p>This is an important process that requires a complete understanding of the impact of separating the business practice from the reliability concepts. It is not clear that the current proposed document split will retain the integrity of the TLR process. The potential negative impact of degrading the RC's ability to manage loop flow dictates that any change in documentation and responsibility must proceed carefully. NPCC participating Members believe the proposed change provides confusion to a very important reliability process. There are mandatory parts of the proposed standard in the NAESB business practice that are necessary for the successful implementation of this reliability standard. With the two documents being modified by separate entities there is a good chance that the documents will not be coordinated and kept in synchronization when changes are made.</p> <p>Recommend restoring the reference to RCIS tool in 1.4. That reference was eliminated when the old 1.4.1 was removed.</p> <p>- The old 1.5.1 was removed. There's a general statement added to 1.2 that says "In addition, a Reliability Coordinator may implement other NERC-approved procedures to request relief to mitigate any other transmission constraints as necessary to preserve the reliability of the system." But, that phrase does not seem to capture the same intent as the previous 1.5.1 wording.</p> |

Consideration of Comments on Draft 1 of SAR for General Update to IRO-006 Reliability Coordination — Transmission Loading Relief

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| | | <p>- Section 1.5.3 the numbering on this section is very confusing. Suggest the following:</p> <p>1.5.3.1. Causes of questionable IDC results may include: (1) Missing Interchange transactions that are known to contribute to the Constraint, (2) Significant change in transmission system topology, or (3) TDF matrix error.</p> <p>1.5.3.2 Impacts of questionable IDC results may include: (1) relief that would have no effect on, or aggravate the constraint or (2) that would initiate a constraint elsewhere.</p> <p>1.5.3.3. If other Reliability Coordinators are involved in the TLR event, all impacted Reliability Coordinators shall be in agreement before any adjustments to the relief request list are made.</p> <p>- Title of Section 2 should be changed to be only "Transmission Loading Relief (TLR) Levels."</p> <p>- Section 3 is missing section 3.1.</p> <p>- Suggest that Section 3.2 include a reference to the fact that transactions submitted after the XX:25 deadline will put on HOLD.</p> <p>- Are Section 3.3.3 and Section 3.4.3 referring back to the deadline defined in 3.2? If so, that section should be referenced.</p> <p>- Text in 3.3.1.1 and 3.3.2 are referring to the same process for reallocation and should use the same terminology. Suggest 3.3.1.1 text be changed to "At XX:25 a reallocation will be performed for the following hour to maintain the target flow identified for the current hour".</p> <p>- Text in 3.4.1.1 and 3.4.2 are referring to the same process for reallocation and should use the same terminology. Suggest 3.4.1.1 text be changed to "At XX:25 a reallocation will be performed for the following hour to maintain the target flow identified for the current hour".</p> <p>- The section notation of Appendix B should be modified. The Section numbering shown in the index is not how the headings are titled in the Sections. Also, Section F and Section G should not be 5.1 and 5.2; they should be at the highest index level.</p> <p>General Comment: There have been changes to the congestion management process over the last few years that involve the use of Market information by the IDC. Any new standards addressing the TLR process and the IDC, whether in NERC or NAESB, should consider addressing the current information available to the IDC and include some mention of that information in that standard development. In addition, Operator training issues, as well as the ownership and funding of the IDC tool should be considered in this evaluation before such a significant step is taken on a standard that is fundamental to the reliability of the Eastern Interconnection.</p> <p>General Comment: One other practical concern that has not been addressed is the ownership, impact and funding of the IDC tool that automates the 'business practices' of implementing a TLR for the Operator. The split of the original NERC IRO-006 should not be adopted until this issue is addressed and resolved.</p> |
| <p>Response: As noted in the revised SAR, the standard will be revised in phases – the first phase will be limited to the 'NERC/NAESB/ split' – but following that split, the standard drafting team will be focusing on the laundry list of technical improvements to the standard that have already been identified in the SAR – and will add your list to those that will be considered.</p> <p>The reference was moved to NAESB BP 1.4 and changed to refer to generic tool instead of RCIS specifically. This approach limits the number of changes that need to be made to standards when the tool or committee name changes.</p> <p>Section 3.1 does appear in the revised proposed changes to Attachment 1.</p> <p>Going forward the changes will be managed from the joint standards development process and there is no anticipated change in the funding or contract agreements to modify the software. The standard drafting team will determine the best way to format and number the steps in the procedure jointly.</p> | | |

**Consideration of Comments on Draft 1 of SAR for General Update to IRO-006 Reliability
Coordination — Transmission Loading Relief**

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| Public Service Commission of South Carolina Phil Riley John E. Howard David A. Wright Randy Mitchell Elizabeth B. Fleming G. O'Neal Hamilton Mignon L. Clyburn C. Robert Moseley | | X | |
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Standard Authorization Request Form

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|----------------------------|--|-------------------|
| Title of Proposed Standard | Revisions to IRO-06 Reliability Coordination - General Update | |
| Request Date | 07/14/05 | Revised: 11/20/06 |

| SAR Requestor Information | SAR Type (Put an 'x' in front of one of these selections) |
|----------------------------------|---|
| Name David Zwergel | <input type="checkbox"/> New Standard |
| Primary Contact David Zwergel | <input checked="" type="checkbox"/> Revision to existing Standard |
| Telephone (317) 249-5452 | <input type="checkbox"/> Withdrawal of existing Standard |
| Fax (317) 249-5910 | |
| E-mail dzwergel@midwestiso.org | <input type="checkbox"/> Urgent Action |

Purpose/Industry Need (Provide one or two sentences)

The purpose of this standard is to ensure that overloads on critical transmission system limits are relieved within 30 minutes.

The purpose of revising this standard is to:

1. Provide an adequate level of reliability for the North American bulk power systems — ensure the standard is complete and the requirements are set at an appropriate level to ensure reliability.
2. Ensure it is enforceable as a mandatory reliability standard with financial penalties — the applicability to bulk power system owners, operators, and users, and as appropriate particular classes of facilities, is clearly defined; the purpose, requirements, and measures are results-focused and unambiguous; the consequences of violating the requirements are clear.
3. Incorporate other general issues needed to elevate the quality of the standard and to bring the format of the standard into compliance with the ERO Rules of Procedure as described in the standards development work plan (see attached Standard Review Form and Standard Review Guidelines).

IRO-006 was developed as a Version 0 standard and although it has been updated to address some specific technical concerns, the SARs associated with the changes made to the standard limited modifications to just those modifications that were immediately needed. As the electric reliability organization begins enforcing compliance with reliability standards under Section 215 of the Federal Power Act in the United States and applicable statutes and regulations in Canada, the industry needs a set of clear, measurable, and enforceable reliability standards. The Version 0 standards, while a good foundation, were translated from historical operating and planning policies and guides that were appropriate in an era of voluntary compliance. The Version 0 standards and recent updates were put in place as a temporary starting point to stand up the electric reliability organization and begin enforcement of mandatory standards. However, it is important to update the standards in a timely manner, incorporating improvements to make the standards more suitable for enforcement and to capture prior recommendations that were deferred during the Version 0 translation.

Reliability Functions

| The Standard will Apply to the Following Functions (Check box for each one that applies by double clicking the grey boxes.) | | |
|---|-------------------------------|---|
| <input checked="" type="checkbox"/> | Reliability Authority | Ensures the reliability of the bulk transmission system within its Reliability Authority area. This is the highest reliability authority. |
| <input checked="" type="checkbox"/> | Balancing Authority | Integrates resource plans ahead of time, and maintains load-interchange-resource balance within its metered boundary and supports system frequency in real time |
| <input type="checkbox"/> | Interchange Authority | Authorizes valid and balanced Interchange Schedules |
| <input type="checkbox"/> | Planning Authority | Plans the bulk electric system |
| <input type="checkbox"/> | Resource Planner | Develops a long-term (>1year) plan for the resource adequacy of specific loads within a Planning Authority area. |
| <input type="checkbox"/> | Transmission Planner | Develops a long-term (>1 year) plan for the reliability of transmission systems within its portion of the Planning Authority area. |
| <input checked="" type="checkbox"/> | Transmission Service Provider | Provides transmission services to qualified market participants under applicable transmission service agreements |
| <input checked="" type="checkbox"/> | Transmission Owner | Owns transmission facilities |
| <input checked="" type="checkbox"/> | Transmission Operator | Operates and maintains the transmission facilities, and executes switching orders |
| <input type="checkbox"/> | Distribution Provider | Provides and operates the “wires” between the transmission system and the customer |
| <input checked="" type="checkbox"/> | Generator Owner | Owns and maintains generation unit(s) |
| <input checked="" type="checkbox"/> | Generator Operator | Operates generation unit(s) and performs the functions of supplying energy and Interconnected Operations Services |
| <input checked="" type="checkbox"/> | Purchasing-Selling Entity | The function of purchasing or selling energy, capacity and all necessary Interconnected Operations Services as required |
| <input checked="" type="checkbox"/> | Market Operator | Integrates energy, capacity, balancing, and transmission resources to achieve an economic, reliability-constrained dispatch. |
| <input checked="" type="checkbox"/> | Load-Serving Entity | Secures energy and transmission (and related generation services) to serve the end user |

Reliability and Market Interface Principles

| Applicable Reliability Principles (Check boxes for all that apply by double clicking the grey boxes.) | |
|--|--|
| <input checked="" type="checkbox"/> | 1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards. |
| <input type="checkbox"/> | 2. The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand. |
| <input checked="" type="checkbox"/> | 3. Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably. |
| <input checked="" type="checkbox"/> | 4. Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented. |
| <input checked="" type="checkbox"/> | 5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk electric systems. |
| <input type="checkbox"/> | 6. Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified and have the responsibility and authority to implement actions. |
| <input checked="" type="checkbox"/> | 7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis. |
| Does the proposed Standard comply with all of the following Market Interface Principles? (Select 'yes' or 'no' from the drop-down box by double clicking the grey area.) | |
| 1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes | |
| 2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes | |
| 3. An Organization Standard shall neither mandate nor prohibit any specific market structure. Yes | |
| 4. An Organization Standard shall not preclude market solutions to achieving compliance with that Standard. Yes | |
| 5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes | |

Detailed Description (Provide enough detail so that an independent entity familiar with the industry could draft, modify, or withdraw a Standard based on this description.)

Revisions to this standard fall into three categories:

- A coordinated effort with NAESB to clarify and refine the steps in the Transmission Loading Relief Procedure for the Eastern Interconnection to identify which steps are needed to support reliability and which steps are needed to support a business practice. This should be accomplished as soon as possible and should not wait for other technical changes to the standard.
- A second set of modifications to this standard involves further consideration of a change to the market flow calculation specified in MISO, PJM and SPP regional differences E.1 and E.2 in Standard IRO-006-03 to address a reliability issue when MISO, PJM and SPP are unable to meet their relief obligations during TLR. The proposed modification would change the market flow threshold for MISO, PJM and SPP from 0% to 3%. Based on stakeholder comments, (submitted with the SAR to Modify IRO-006 for Market Information), this change needs to be field tested to verify that it would not have any unforeseen adverse consequences. This change would replace the SPP Urgent Action Regional Difference to IRO-006.
- A third set of modifications includes the changes needed to elevate the overall quality of the standard, and to address the additional technical issues that have been posed with this standard by stakeholders and FERC (see attached Standard Review Form and Reliability Standard Review Guidelines).

The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.

Related Standards

| Standard No. | Explanation |
|--------------|-------------|
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Related SARs

| SAR ID | Explanation |
|--------|-------------|
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Regional Differences

| Region | Explanation |
|---------------|--------------------|
| ECAR | |
| ERCOT | |
| FRCC | |
| MAAC | |
| MAIN | |
| MAPP | |
| NPCC | |
| SERC | |
| SPP | |
| WECC | |

Related NERC Operating Policies or Planning Standards

| ID | Explanation |
|-----------|--------------------|
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| Standard Review Form | | |
|--|---|--|
| Project 2006-08 Transmission Loading Relief | | |
| Standard # | IRO-006-3 | Comments |
| Title | Reliability Coordination – Transmission Loading Relief | Okay |
| Purpose | | 1 st sentence is scope of job, not purpose – poor wording on 30 minute item. No benefit or value proposition. |
| Applicability | | TO not in Requirements. |
| Requirements | <i>Conditions</i> | Okay |
| | <i>Who?</i> | While others are handled within text, PJM/MISO is cited as regional difference but not handled within text. Added SPP regional difference but nothing in text. |
| | <i>Shall do what?</i> | R1 – need something about overloads or similar wording R2 – uses interregional & sub-regional; check capitalization |
| | <i>Result or Outcome</i> | Missing |
| Measures | | Single generic statement. |
| To Do List | <p>FERC NOPR</p> <ul style="list-style-type: none"> o Include a clear warning that TLR procedure is an inappropriate and ineffective tool to mitigate actual IROL violations; o Identify in a Requirement the available alternatives to use of the TLR procedure to mitigate an IROL violation; and o Include Measures and Levels of Non-Compliance that address each Requirement. o (see report for comments on regional differences) <p>FERC staff report</p> <ul style="list-style-type: none"> o R2 doesn't address blackout item that TLR shouldn't be used for SOL violation <p>V0 Industry Comments</p> <ul style="list-style-type: none"> o Usage of TLR log questioned o Some inconsistencies with current usage <p>VRF Comments</p> <ul style="list-style-type: none"> o R2.1, .2 & .3 – not a requirement, just a suggested instruction o R6 – redundant <p>TLR SAR Comments</p> <ul style="list-style-type: none"> o Provide reliability performance specifications, such as X MW or % of relief in Y minutes o Address consideration of ramp limits during TLR o Section 3.2 - include a reference to the fact that transactions submitted after the XX:25 deadline will put on HOLD o 3.3.1.1 and 3.3.2 are referring to the same process for reallocation and should use the same terminology o 3.4.1.1 and 3.4.2 are referring to the same process for reallocation and should use the same terminology | |

| | |
|--------------------|--|
| | <ul style="list-style-type: none">○ Consider addressing the current information available to the IDC and include some mention of that information in that standard development (NERC or NAESB)○ Resolve the reloading of curtailed transactions above their reliability limit by an entity other than the initiating entity or above any pre-existing reliability or market profiles○ Provide criteria to identify when curtailments may be denied and when curtailments may be issued○ Include a requirement that prohibits the Reliability Coordinator's use of proxy flowgates |
| Misc. Items | Several compliance items missing. Inconsistency in handling ERCOT & western vs. eastern TLR procedure (attachment vs. web link). |

Standard Review Guidelines

Applicability

Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted?

Does this reliability standard identify the geographic applicability of the standard, such as the entire North American bulk power system, an interconnection, or within a regional entity area? If no geographic limitations are identified, the default is that the standard applies throughout North America.

Does this reliability standard identify any limitations on the applicability of the standard based on electric facility characteristics, such as generators with a nameplate rating of 20 MW or greater, or transmission facilities energized at 200 kV or greater or some other criteria? If no functional entity limitations are identified, the default is that the standard applies to all identified functional entities.

Purpose

Does this reliability standard have a clear statement of purpose that describes how the standard contributes to the reliability of the bulk power system? Each purpose statement should include a value statement.

Performance Requirements

Does this reliability standard state one or more performance requirements, which if achieved by the applicable entities, will provide for a reliable bulk power system, consistent with good utility practices and the public interest?

Does each requirement identify who shall do what under what conditions and to what outcome?

Measurability

Is each performance requirement stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that requirement?

Does each performance requirement have one or more associated measures used to objectively evaluate compliance with the requirement?

If performance results can be practically measured quantitatively, are metrics provided within the requirement to indicate satisfactory performance?

Technical Basis in Engineering and Operations

Is this reliability standard based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that particular field?

Completeness

Is this reliability standard complete and self-contained? Does the standard depend on external information to determine the required level of performance?

Consequences for Noncompliance

In combination with guidelines for penalties and sanctions, as well as other ERO and regional entity compliance documents, are the consequences of violating a standard clearly known to the responsible entities?

Clear Language

Is the reliability standard stated using clear and unambiguous language? Can responsible entities, using reasonable judgment and in keeping with good utility practices, arrive at a consistent interpretation of the required performance?

Practicality

Does this reliability standard establish requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter?

Capability Requirements versus Performance Requirements

In general, requirements for entities to have ‘capabilities’ (this would include facilities for communication, agreements with other entities, etc.) should be located in the standards for certification. The certification requirements should indicate that entities have a responsibility to ‘maintain’ their capabilities.

Consistent Terminology

To the extent possible, does this reliability standard use a set of standard terms and definitions that are approved through the NERC reliability standards development process?

If the standard uses terms that are included in the NERC Glossary of Terms Used in Reliability Standards, then the term must be capitalized when it is used in the standard. New terms should not be added unless they have a ‘unique’ definition when used in a NERC reliability standard. Common terms that could be found in a college dictionary should not be defined and added to the NERC Glossary.

Are the verbs on the ‘verb list’ from the DT Guidelines? If not – do new verbs need to be added to the guidelines or could you use one of the verbs from the verb list?

Violation Risk Factors (Risk Factor)

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures;

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

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures;

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

Lower Risk Requirement

A requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. A requirement that is administrative in nature;

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

Mitigation Time Horizon

The drafting team should also indicate the time horizon available for mitigating a violation to the requirement using the following definitions:

- **Long-term Planning** — a planning horizon of one year or longer.
- **Operations Planning** — operating and resource plans from day-ahead up to and including seasonal.
- **Same-day Operations** — routine actions required within the timeframe of a day, but not real-time.
- **Real-time Operations** — actions required within one hour or less to preserve the reliability of the bulk electric system.
- **Operations Assessment** — follow-up evaluations and reporting of real time operations.

Violation Severity Levels

The drafting team should indicate a set of violation severity levels that can be applied for the requirements within a standard. ('Violation severity levels' replace existing 'levels of non-compliance.')

The violation severity levels may be applied for each requirement or combined to cover multiple requirements, as long as it is clear which requirements are included.

The violation severity levels should be based on the following definitions:

- **Lower: mostly compliant with minor exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more minor details. Equivalent score: 95% to 99% compliant.
- **Moderate: mostly compliant with significant exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more significant elements. Equivalent score: 85% to 94% compliant.
- **High: marginal performance or results** — The responsible entity has only partially achieved the reliability objective of the requirement and is missing one or more significant elements. Equivalent score: 70% to 84% compliant.
- **Severe: poor performance or results** — The responsible entity has failed to meet the reliability objective of the requirement. Equivalent score: less than 70% compliant.

Compliance Monitor

Replace, 'Regional Reliability Organization' with 'Electric Reliability Organization'

Bulk Electric System

Replace, ‘Bulk Electric System’ with ‘bulk power system’

Fill-in-the-blank Requirements

Do not include any ‘fill-in-the-blank’ requirements. These are requirements that assign one entity responsibility for developing some performance measures without requiring that the performance measures be included in the body of a standard – then require another entity to comply with those requirements.

Every reliability objective can be met, at least at a threshold level, by a North American standard. If we need regions to develop regional standards, such as in under-frequency load shedding, we can always write a uniform North American standard for the applicable functional entities as a means of encouraging development of the regional standards.

Requirements for Regional Reliability Organization

Do not write any requirements for the Regional Reliability Organization. Any requirements currently assigned to the RRO should be re-assigned to the applicable functional entity.

Effective Dates

Must be 1st day of 1st quarter after entities are expected to be compliant – must include time to file with regulatory authorities.

Associated Documents

If there are standards that are referenced within a standard, list the full name and number of the standard under the section called, ‘Associated Documents’.

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. SC authorized the SAR and assembled a drafting team on December 5, 2006.
2. The revisions to IRO-006 to transfer business practice content to NAESB were approved as IRO-006-4 by the Board of Trustees on October 23, 2007.
3. The SDT has developed this first draft for industry consideration.

Description of Current Draft:

This is the first draft of the proposed standard posted for stakeholder comments.

Future Development Plan:

| Anticipated Actions | Anticipated Date |
|--|-------------------------|
| 1. Respond to Comments (Draft 1). | February 26, 2009 |
| 2. Posting for Comment (Draft 2). | February 26, 2009 |
| 3. Respond to Comments (Draft 2). | June 26, 2009 |
| 4. Posting for 30-day Pre-Ballot Review. | June 26, 2009 |
| 5. Initial Ballot. | July 27, 2009 |
| 6. Respond to comments. | September 10, 2009 |
| 7. Recirculation ballot. | September 10, 2009 |
| 8. Board adoption. | October 2009 |

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

A. Introduction

1. **Title:** **Reliability Coordination — Transmission Loading Relief (TLR)**
2. **Number:** **IRO-006-5**
3. **Purpose:** To provide Interconnection-wide transmission loading relief procedures that can be used to prevent or manage potential or actual SOL and IROL violations to maintain reliability of the bulk electric system.
4. **Applicability:**
 - 4.1. Reliability Coordinators.
5. **Proposed Effective Date:** First day of the first calendar quarter that after the date this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter after the date this standard is approved by the NERC Board of Trustees.

B. Requirements

- R1. Each Reliability Coordinator that uses an Interconnection-wide congestion management procedure shall use the procedure for its Interconnection identified below: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]
 - The Interconnection-wide Transmission Loading Relief (TLR) procedure for use in the Eastern Interconnection provided in IRO-006-5-EI.
 - The Interconnection-wide transmission loading relief procedure for use in the Western Interconnection is WECC-IRO-STD-006-0 provided at:
ftp://www.nerc.com/pub/sys/all_updl/standards/rrs/IRO-STD-006-0_17Jan07.pdf.
 - The Interconnection-wide transmission loading relief procedure for use in ERCOT is provided as Section 7 of the ERCOT Protocols, posted at:
<http://www.ercot.com/mktrules/protocols/current.html>
- R2. Each Reliability Coordinator that receives a request pursuant to an Interconnection-wide transmission loading relief procedure listed in R1 above from a Reliability Coordinator in another Interconnection to curtail or reload an Interchange Transaction that crosses an Interconnection boundary shall comply with the request. [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]

C. Measures

D. Compliance

1. **Compliance Monitoring Process**
 - 1.1. **Compliance Enforcement Authority**

Regional Entity.
 - 1.2. **Compliance Monitoring Period and Reset Time Frame**

Not applicable.
 - 1.3. **Data Retention**

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

- The Reliability Coordinator shall maintain evidence to show compliance with R1 and R2 for the most recent calendar year plus the current year.
- If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.

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

1.4. Compliance Monitoring and Enforcement Processes:

The following processes may be used:

- Compliance Audits
- Self-Certifications
- Spot Checking
- Compliance Violation Investigations
- Self-Reporting
- Complaints

1.5. Additional Compliance Information

None.

Violation Severity Levels

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|----------|------------|
| | | | | |
| | | | | |

E. Regional Differences

None.

F. Associated Documents

Version History

| Version | Date | Action | Change Tracking |
|----------------|-------------------|---|------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | August 8, 2005 | Revised Attachment 1 | Revision |
| 3 | February 26, 2007 | Revised Purpose and Attachment 1 related to NERC NAESB split of the TLR procedure | Revision |
| 4 | | Completed NERC/NAESB split | Revision |
| 5 | | Removed Attachment 1 and made into a new standard, eliminated unnecessary requirements. | Revision |

Standard Development Roadmap

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Development Steps Completed:

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Definitions of Terms Used in Standard

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~~**Reallocation:** The total or partial curtailment of Transactions during TLR Level 3a or 5a to allow Transactions using higher priority to be implemented.~~ (To be retired.)

Market Flow: the amount of energy flowing across a specified facility or set of facilities due to the operation of a market that has implemented a “Market Flow Calculation” methodology.

A. Introduction

1. **Title: Transmission Loading Relief Procedure for the Eastern Interconnection**
2. **Number:** IRO-006-EI-1
3. **Purpose:** To provide an Interconnection-wide transmission loading relief procedure (TLR) for the Eastern Interconnection that can be used to prevent and/or mitigate potential or actual System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) violations to maintain reliability of the bulk electric system.
4. **Applicability:**
 - 4.1. Reliability Coordinators in the Eastern Interconnection.
5. **Effective Date:** First day of the first calendar quarter that after the date this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter after the date this standard is approved by the NERC Board of Trustees.

B. Requirements

- R1.** The Reliability Coordinator shall not use the Eastern Interconnection TLR procedure alone to mitigate an actual IROL violation. When responding to an actual IROL violation, each Reliability Coordinator shall implement other actions prior to or in conjunction with the initiation of this TLR procedure, including, but not limited to, the following: reconfiguration, redispatch, use of demand-side management, load shedding.
- R2.** When initiating the Eastern Interconnection TLR procedure to prevent or mitigate a SOL or IROL violation, and at least every clock hour after initiation, up to and including the hour when the TLR level has been identified as TLR Level 0, the Reliability Coordinator shall identify: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]
 - R2.1.** The TLR level in accordance with the criteria in Appendix A, and
 - R2.2.** A proposal for actions to take, based on the TLR level chosen.
- R3.** Upon the identification of the TLR level and a proposal for actions to take based on the TLR level chosen, the Reliability Coordinator initiating this TLR procedure shall: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]
 - R3.1.** Notify all Reliability Coordinators in the Eastern Interconnection of the identified TLR level
 - R3.2.** Communicate the proposed actions to take to:
 - R3.2.1.** All Reliability Coordinators in the Eastern Interconnection, and
 - R3.2.2.** Those Reliability Coordinators in other Interconnections responsible for curtailing or reloading Interchange Transactions crossing Interconnection boundaries identified in the proposed actions.

- R3.3.** Request that the following entities implement the proposed actions identified in R2.2: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]
- R3.3.1.** Each Reliability Coordinator associated with a Sink Balancing Authority in the Eastern Interconnection for which Interchange Transactions are proposed for curtailment or reloading
- R3.3.2.** Each Reliability Coordinators associated with a Balancing Authority in the Eastern Interconnection for which Network Integration Transmission Service or Native Load is proposed for curtailment or reloading
- R3.3.3.** Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection proposed to provide Market Flow curtailment or reloading.
- R3.3.4.** Each Reliability Coordinators associated with a Balancing Authority in the Eastern Interconnection operating a DC-tie for an Interchange Transaction sinking outside the Eastern Interconnection and crossing an interconnection boundary with an Interchange Transaction proposed for curtailment or reloading.
- R4.** Each Reliability Coordinator in the Eastern Interconnection that responds to a request as described in R3.3. shall comply with the request by taking one or more of the following actions: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]
- R4.1.** Implement the communicated actions requested by the issuing Reliability Coordinator as follows:
- Direct its Balancing Authorities to implement the Interchange Transaction schedule change requests.
 - Direct its Balancing Authorities to provide the Network Integrated Transmission Service and Native Load schedule changes for which the Balancing Authorities are responsible.
 - Direct its Balancing Authorities to provide the Market Flow schedule changes for which the Balancing Authorities are responsible.
- R4.2.** Implement a procedure pre-approved by the ERO for use by the responding Reliability Coordinator in lieu of implementing some or all of the requested actions in R4.1, provided that its implementation is expected to prevent or mitigate the SOL or IROL violation with the same or greater effect than the actions not implemented in R4.1.
- R4.3.** Implement alternate actions to those in R4.1 or R4.2 provided that
- R4.3.1.** Analysis shows that some or all of the actions in R4.1 or R4.2 will result in a reliability concern or will be ineffective, and
- R4.3.2.** The alternate actions have been agreed to by the initiating Reliability Coordinator, and
- R4.3.3.** Analysis shows that the alternate actions will not adversely affect reliability.

- R5.** Each Reliability Coordinator that responds to a TLR event shall acknowledge to the initiating Reliability Coordinator the actions it will take pursuant to Requirement R4 within thirty minutes of receiving the request. [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]

C. Measures (Measures and Compliance Information Will Be Added Later)

M1.

D. Compliance

1. Compliance Monitoring Process

- 1.1. Compliance Monitoring Responsibility:**
- 1.2. Compliance Monitoring Period and Reset Time Frame:**
- 1.3. Data Retention**

| Measure | Entity | Data Retention Period |
|----------------|---------------|------------------------------|
| | | |
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| | | |

2. Additional Compliance Information:

- 2.1.**
- 2.2.**

3. Violation Severity Levels

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|----------|------------|
| | | | | |
| | | | | |

E. Regional Differences

None.

F. Associated Documents

Revision History

| Version | Date | Action | Tracking |
|----------------|-------------|---|-----------------|
| 1 | | Creation of new standard, incorporating concepts from IRO-006-4 Attachment; elimination of Regional Differences, as they standard allows the use of Market Flow | New |

Appendix A

The following criteria are intended to assist the Reliability Coordinator in determining what level of TLR to call. However, the Reliability Coordinator has the discretion to choose any of these levels regardless of the criteria listed below, provided the Reliability Coordinator has reliability reasons to take such action.

| Level | System Condition |
|--------|--|
| TLR-1 | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to approach or exceed its SOL or IROL within 8 hours. |
| TLR-2 | <ul style="list-style-type: none"> • At least one Transmission Facility is approaching or is at its SOL or IROL. <ul style="list-style-type: none"> ○ Analysis shows that holding new and increasing non-firm transactions and energy flows for the next hour can prevent exceeding this SOL or IROL. |
| TLR-3a | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL within the next hour. <ul style="list-style-type: none"> ○ Analysis shows that full or partial curtailment or reallocation of non-firm transactions and energy flows can prevent exceeding this SOL and IROL. |
| TLR-3b | <ul style="list-style-type: none"> • At least one Transmission Facility is exceeding its SOL or IROL, or • At least one Transmission Facility is expected to exceed its SOL or IROL within the current hour. <ul style="list-style-type: none"> ○ Analysis shows that full or partial curtailment or reallocation of non-firm transactions and energy flows can prevent exceeding this SOL or IROLs . |
| TLR-4 | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL. • Analysis shows that full curtailment of non-firm transactions and energy flows, or reconfiguration of the transmission system can prevent exceeding this SOL or IROL. |
| TLR-5a | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL when the next-hour's transactions start. • Analysis shows that either of the following sets of actions can prevent exceeding the SOL or IROL: <ul style="list-style-type: none"> ○ Full curtailment non-firm transactions and energy flows, or ○ Reconfiguration of the transmission system, and full or partial curtailment or reallocation of firm transactions and energy flows. |
| TLR-5b | <ul style="list-style-type: none"> • At least one Transmission Facility is exceeding its SOL or IROL, or • At least one Transmission Facility is expected to exceed its SOL or IROL within the current hour. • Analysis shows that either of the following sets of actions can prevent exceeding the SOL or IROL: |

| | |
|--|---|
| | <ul style="list-style-type: none">○ Full curtailment of non-firm transactions and energy flows, or○ Reconfiguration of the transmission system, and full or partial curtailment or reallocation of firm transactions and energy flows.○ |
|--|---|

Implementation Plan for IRO-006-5 — Reliability Coordination — Transmission Loading Relief (TLR) and IRO-006-EI-1 — Loading Relief Procedure for the Eastern Interconnection

Summary

The NERC TLR Drafting Team has developed IRO-006-5 and IRO-006-EI-1 as iterative and incremental improvements to IRO-006-4. This is one of three phases of Project 2006-08. The first phase, the split of the IRO-006-3 and its associated Attachment 1 into NERC and NAESB standards, was completed and approved by the NERC Board of Trustees on October 23, 2007, and filed with regulatory authorities on December 21, 2007. The second phase, which is intended to address any needed modifications to the standards based on the PJM, MISO, and SPP waivers, is currently undergoing Field Testing. This implementation plan addressed the third phase, which is intended to improve the quality of the standards.

The drafting team has made significant revisions to the previous IRO-006-4 and Attachment 1:

1. Converted Attachment 1 into a standard solely for the Eastern Interconnection.
2. Transferred requirements from IRO-006 that were primarily focused on Eastern Interconnection practices to the Eastern interconnection TLR standard.
3. Clarified the roles of entities when responding to curtailment requests from other Interconnections.
4. Removed the requirement that entities comply with the INT standards, as it was redundant.
5. Restructured the Eastern Interconnection TLR standard (previously Attachment 1) to be clearer and specify reliability requirements.

Prerequisite Approvals

There are no other reliability standards or Standard Authorization Requests (SARs), approved, that must be implemented before this standard can be implemented.

Modified Standards

IRO-006-4, and associated Attachment 1, should be retired when IRO-006-5 and IRO-006-EI-1 become effective.

The definition of “Reallocation” should be removed from the Glossary when IRO-006-5 and IRO-006-EI-1 become effective.

The Regional Differences within IRO-006-4 should be retired when IRO-006-5 and IRO-006-EI-1 become effective.

Compliance with Standards

Once the standards become effective, the responsible entities identified in the applicability section of the standards must comply with the requirements. These include:

- Reliability Coordinators

Proposed Effective Date

The standards will become effective on the first day of the first calendar quarter that after the date the standards are approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standards becomes effective on the first day of the first calendar quarter after the date the standards are approved by the NERC Board of Trustees.

Consideration of Comments on 1st Draft of IRO-006-5 and IRO-006-EI-1 — Project 2006-08

The Transmission Loading Relief Standard Drafting Team thanks all commenters who submitted comments on the 1st draft of standards IRO-006-5 — Reliability Coordination — Transmission Loading Relief and IRO-006-EI-1 — TLR Procedure for the Eastern Interconnection. These standards were posted for a 30-day public comment period from October 30, 2008 through December 1, 2008. Stakeholders were asked to provide feedback on the standards through a special electronic comment form. There were 12 sets of comments, including comments from more than 40 different people from approximately 30 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

Based on the comments received, the drafting team has prepared a second draft of the standards. Comments that resulted in modifications to the standards are as follows:

- Commenters suggested that “reallocation” be footnoted to reference NAESB’s business practices.
- Commenters proposed the definition of “Market Flow” be modified to replace the phrase “Market Flow Calculation Methodology” with more explicit language.
- Commenters expressed concerns with how the concepts of “interconnection wide” and/or “regional” standards were being addressed. In response, the SDT modified the approach to the standards and eliminated IRO-006-5 R1. IRO-006-EI-1 will continue to be treated as an Eastern Interconnection standard, and therefore apply to all Reliability Coordinators within the Eastern Interconnection. In order to comply with NERC’s published numbering convention, the standard will be renamed as IRO-006-EAST-01.
- Commenters pointed out that TLR-0 was undefined. The level was added to the appendix.

On January 22, 2008, NERC staff met with FERC staff briefly to answer questions regarding the use of the Interchange Distribution Calculator and the TLR process. During these discussions, FERC staff suggested that as written, NERC standards related to TLR did not make clear that when experiencing an actual Interconnection Reliability Operating Limit (IROL) violation, the first responsibility of a Reliability Coordinator is to mitigate the IROL violation, then address the equity provisions of TLR. In other words, FERC staff opined that saying that a Reliability Coordinator was not to use TLR as the “sole remedy” to mitigate an IROL violation did not support the recommendation in the Blackout Report. FERC staff suggested that in order to support the recommendation in the Blackout Report, the standards should be clear that a Reliability Coordinator must initiate actions that can mitigate the IROL violation first, and then may follow with initiation or continuing management of the TLR process as appropriate. NERC staff brought the details of this conversation back to the TLR Drafting Team. The TLR Drafting Team discussed these comments, and made changes to IRO-006-EAST-1 R1 in response.

In this “Consideration of Comments” document stakeholder comments have been organized so that it is easier to see the responses associated with each question. All comments received can be viewed in their original format at:

<http://www.nerc.com/filez/standards/Reliability-Coordination-Transmission-Loading-Relief.html>

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures:
<http://www.nerc.com/standards/newstandardsprocess.html>.

Index to Questions, Comments, and Responses

1. The drafting team has proposed to remove the NERC definition of Reallocation from the Glossary, as it is already defined in NAESB Business Practices. Do you believe this removal to be appropriate?..... 8

2. The drafting team has proposed a new definition for inclusion in the NERC glossary. Do you agree with the proposed definitions in the standard?11

3. The drafting team has moved or eliminated three of the requirements originally in IRO-006-4. Do you believe these modifications are appropriate?13

4. The SDT has proposed removing the Regional Differences for MISO, PJM, and SPP, as the language within IRO-006-EI-1 incorporates the concept of Market Flow. Do you agree that these Regional Differences can be removed? 15

5. The drafting team has converted Attachment 1 to a separate standard that is posted with this comment form (IRO-006-EI-1). Do you believe this is appropriate?16

6. The drafting team has proposed that Attachment 1 be treated as a standard for the Eastern Interconnection (IRO-006-EI-1). Alternatively, the standard may be treated as a continent-wide standard (IRO-017) that is applicable only to entities in the Eastern Interconnection. Do you prefer one approach over the other? 18

7. The drafting team has identified a concern related to compliance with IRO-006-EI-1 and the availability of the IDC or similar technology. To address this, the SDT is considering adding language to IRO-006-5. Do you believe this or similar language is appropriate and necessary?20

8. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?23

9. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the proposed standards.24

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

| Commenter | | Organization | Industry Segment | | | | | | | | | | | | |
|-------------------|-------------------------|---|------------------|-----------|---|---|---|---|---|---|---|----|--|--|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | |
| 1. | Guy Zito | NPCC | | | | | | | | | | | | | ✓ |
| Additional Member | Additional Organization | Region | Segment | Selection | | | | | | | | | | | |
| 1. | Ralph Rufrano | New York Power Authority | NPCC | 5 | | | | | | | | | | | |
| 2. | Roger Champagne | Hydro-Quebec TransEnergie | NPCC | 2 | | | | | | | | | | | |
| 3. | Rick White | Northeast Utilities | NPCC | 1 | | | | | | | | | | | |
| 4. | Greg Campoli | New York Independent System Operator | NPCC | 2 | | | | | | | | | | | |
| 5. | Mike Garton | Dominion Resources Services, Inc. | NPCC | 5 | | | | | | | | | | | |
| 6. | Chris De Graffenried | Consolidated Edison Co. of New York, Inc. | NPCC | 1 | | | | | | | | | | | |
| 7. | Don Nelson | Massachusetts Dept. of Public Utilities | NPCC | 9 | | | | | | | | | | | |
| 8. | Kurtis Chong | Independent Electricity System Operator | NPCC | 2 | | | | | | | | | | | |
| 9. | Brian Gooder | Ontario Power Generation Incorporated | NPCC | 5 | | | | | | | | | | | |
| 10. | David Kiguel | Hydro One Networks Inc. | NPCC | 1 | | | | | | | | | | | |
| 11. | Kathleen Goodman | ISO - New England | NPCC | 2 | | | | | | | | | | | |
| 12. | Brian Evans-Mongeon | Utility Services, LLC | NPCC | 6 | | | | | | | | | | | |
| 13. | Mike Gildea | Constellation Energy | NPCC | 6 | | | | | | | | | | | |
| 14. | Lee Pedowicz | NPCC | NPCC | 10 | | | | | | | | | | | |

Consideration of Comments on 1st Draft of IRO-006-5 and IRO-006-EI-1 — Project 2006-08

| | Commenter | Organization | Industry Segment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|------------------|-----------|---|---|---|---|---|---|---|----|--|-------------------|-------------------------|--------|---------|-----------|---------------------|---|------|---|--|---------------------|---------------------------------------|------|---|--|--------------------|-----------------------|------|---|--|---------------|---------------------------------|------|---|--|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. | Jason Marshall | Midwest ISO Standards Stakeholders Collaborators | | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Additional Member | Additional Organization | Region | Segment | Selection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Jim Cyrulewski | JDRJC Associates | RFC | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Kirit Shah | Ameren | SERC | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. | Denise Koehn | Bonneville Power Administration | ✓ | | ✓ | | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Additional Member | Additional Organization | Region | Segment | Selection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Thomas Westbrook | Transmission Operational Analysis & Support | WECC | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Wesley Hutchison | Transmission Pre-Schedule & Real Time | WECC | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Timothy Loepker | Transmission Dispatch | WECC | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Joel Jenck | Power - Scheduling Coordination | WECC | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. | Roman Carter | Southern Company Transmission | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 2. Raymond Vice | Southern Transmission | SERC | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. JT Wood | Southern Transmission | SERC | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Marc Butts | Southern Transmission | SERC | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. | Sam Ciccone | FirstEnergy | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 1. Dave Folk | FE | RFC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Doug Hohlbaugh | FE | RFC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. | Charles Yeung | IRC Standards Review Committee | | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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Consideration of Comments on 1st Draft of IRO-006-5 and IRO-006-EI-1 — Project 2006-08

| Commenter | | Organization | | Industry Segment | | | | | | | | | | | | | | | | |
|--------------------------|--|--------------------------------|-------|--------------------------|---------|---|---|---|---|---|---|---|----|--|--|--|--|--|--|---|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | | | | | |
| 1. | Patrick Brown | PJM | RFC | 2 | | | | | | | | | | | | | | | | |
| 2. | Jim Castle | New York ISO | NPCC | 2 | | | | | | | | | | | | | | | | |
| 3. | Matt Goldberg | ISONE | NPCC | 2 | | | | | | | | | | | | | | | | |
| 4. | Lourdes Estrada-Saliner | CAISO | WECC | 2 | | | | | | | | | | | | | | | | |
| 5. | Anita Lee | AESO | WECC | 2 | | | | | | | | | | | | | | | | |
| 6. | Steve Myers | ERCOT | ERCOT | 2 | | | | | | | | | | | | | | | | |
| 7. | Bill Phillips | Midwest ISO | RFC | 2 | | | | | | | | | | | | | | | | |
| 8. | Dan Rochester | IESO | NPCC | 2 | | | | | | | | | | | | | | | | |
| 7. | Dan Rochester | IESO | | | | ✓ | | | | | | | | | | | | | | |
| 8. | Thad Ness | American Electric Power (AEP) | | | ✓ | | ✓ | | ✓ | ✓ | | | | | | | | | | |
| 9. | Kathleen Goodman | ISO New England Inc | | | | ✓ | | | | | | | | | | | | | | |
| 10. | Patrick Brown | PJM Interconnection | | | | | | | | | | | | | | | | | | |
| 11. | Paul Humberson, David Lemmons, Steve Rueckert, Donald Pape | WACM, Excel, WECC | | | ✓ | | | | | | | | | | | | | | | ✓ |
| 12. | Jason Shaver | American Transmission Company | | | ✓ | | | | | | | | | | | | | | | |
| 13. | Michael Brytowski | MRO | | | | | | | | | | | | | | | | | | ✓ |
| Additional Member | | Additional Organization | | Segment Selection | | | | | | | | | | | | | | | | |
| 1. | Neal Balu | WPS | | | 3,4,5,6 | | | | | | | | | | | | | | | |
| 2. | Terry Bilke | MISO | | | 2 | | | | | | | | | | | | | | | |
| 3. | Carol Gerou | MP | | | 1,3,5,6 | | | | | | | | | | | | | | | |
| 4. | Jim Haigh | WAPA | | | 1,6 | | | | | | | | | | | | | | | |
| 5. | Charles Lawrence | ATC | | | 1 | | | | | | | | | | | | | | | |
| 6. | Ken Goldsmith | ALTW | | | 4 | | | | | | | | | | | | | | | |
| 7. | Pam Sordet | XEL | | | 1,3,5,6 | | | | | | | | | | | | | | | |
| 8. | Dave Rudolph | BEPC | | | 1,3,5,6 | | | | | | | | | | | | | | | |

Consideration of Comments on 1st Draft of IRO-006-5 and IRO-006-EI-1 — Project 2006-08

| Commenter | | | Organization | | | Industry Segment | | | | | | | | | | | | | | |
|-----------|----------------|-----|--------------|--|---------|------------------|---|---|---|---|---|---|---|---|----|--|--|--|--|--|
| | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | | | |
| 9. | Eric Ruskamp | LES | | | 1,3,5,6 | | | | | | | | | | | | | | | |
| 10. | Joseph Knight | GRE | | | 1,3,5,6 | | | | | | | | | | | | | | | |
| 11. | Joe DePoorte | MGE | | | 3,4,5,6 | | | | | | | | | | | | | | | |
| 12. | Larry Brusseau | MRO | | | 10 | | | | | | | | | | | | | | | |

1. The drafting team has proposed to remove the NERC definition of Reallocation from the Glossary, as it is already defined in NAESB Business Practices. Do you believe this removal to be appropriate?

Summary Consideration: The majority of commenters support the elimination of this definition. This term is no longer used in any requirement. It is only used in Appendix A, which is intended to provide the Reliability Coordinator (RC) with a summary of system conditions, not require any specific action. In Appendix A, it is not capitalized to identify “reallocation” as a defined term. However, it has been footnoted to indicate that more information can be found within NAESB’s business practices.

| Organization | Question #1 Yes or No | Question #1 Comment |
|--|--------------------------|---|
| NPCC | No | NPCC participating members are not in agreement. A term used in a NERC standard should not be defined in a NAESB document. A joint NERC/NAESB glossary should be developed defining all terms in all standards. Until such time, the term must remain in the NERC glossary. |
| <p>Response: The majority of commenters support the elimination of this definition. This term is no longer used in any requirement. It is only used in Appendix A, which is intended to provide the RC with a summary of system conditions, not require any specific action. In Appendix A, it is not identified as a defined term. However, it has been footnoted to indicate that more information can be found within NAESB’s business practices.</p> <p>NERC and NAESB have discussed the possibility of creating a single joint glossary, but at this time, various logistical and regulatory constraints would make such a proposition difficult.</p> | | |
| ISO New England Inc | No | A term used in a NERC standard should not be defined in a NAESB document. A joint NERC/NAESB glossary should be developed defining all terms in all standards. |
| <p>Response: The majority of commenters support the elimination of this definition. This term is no longer used in any requirement. It is only used in Appendix A, which is intended to provide the RC with a summary of system conditions, not require any specific action. In Appendix A, it is not identified as a defined term. However, it has been footnoted to indicate that more information can be found within NAESB’s business practices.</p> <p>NERC and NAESB have discussed the possibility of creating a single joint glossary, but at this time, various logistical and regulatory constraints would make such a proposition difficult.</p> | | |
| American Transmission Company | No | ATC Operations prefers to see all definitions in one location, rather than searching multiple documents. |
| <p>Response: NERC and NAESB have discussed the possibility of creating a single joint glossary, but at this time, various logistical and</p> | | |

Consideration of Comments on 1st Draft of IRO-006-5 and IRO-006-EI-1 — Project 2006-08

| Organization | Question #1 Yes or No | Question #1 Comment |
|---|--------------------------|---|
| regulatory constraints would make such a proposition difficult. | | |
| Midwest ISO Standards Stakeholders Collaborators | Yes | It is not clear how definitions in NAESB Business Practice apply to NERC standards. Do they apply because they are approved by FERC? To the extent this definition applies, we agree with it. |
| Response: NAESB definitions do not apply to NERC standards, and vice versa. The drafting team is proposing to eliminate the definition because the term is no longer used in any requirement. It is only used in Appendix A, which is intended to provide the RC with a summary of system conditions, not require any specific action. In Appendix A, it is not identified as a defined term. However, it has been footnoted to indicate that more information can be found within NAESB's business practices. | | |
| IRC Standards Review Committee | Yes | It is not clear how definitions in NAESB Business Practice apply to NERC standards. Do they apply because they are approved by FERC? To the extent this definition applies, we agree with it. |
| Response: NAESB definitions do not apply to NERC standards, and vice versa. The drafting team is proposing to eliminate the definition because the term is no longer used in any requirement. It is only used in Appendix A, which is intended to provide the RC with a summary of system conditions, not require any specific action. In Appendix A, it is not identified as a defined term. However, it has been footnoted to indicate that more information can be found within NAESB's business practices. | | |
| IESO | Yes | We agree that reallocation is a business practice and hence its definition is better placed in the NAESB Business Practices. Furthermore, to avoid inconsistencies terms should only be defined in one document. However, we recommend that a footnote is added in the NERC standards to refer to the appropriate NAESB documents for the definition of reallocation. In terms of the impact that such a change could eventually have on reliability, we recommend that NERC and NAESB develop the necessary controls such that, whenever implemented, reallocation provides the appropriate amount of transmission loading relief. |
| Response: The use of the term has been footnoted. NERC and NAESB will continue to coordinate their actions to ensure the missions of both organizations continue to be met. | | |
| Bonneville Power Administration | Yes | |
| Southern Company Transmission | Yes | |

Consideration of Comments on 1st Draft of IRO-006-5 and IRO-006-EI-1 — Project 2006-08

| Organization | Question #1 Yes or No | Question #1 Comment |
|---|--------------------------|---------------------|
| FirstEnergy | Yes | |
| PJM Interconnection | Yes | |
| MRO NERS Standards Review Subcommittee | Yes | |

2. The drafting team has proposed a new definition for inclusion in the NERC glossary:

Market Flow: *the amount of energy flowing across a specified facility or set of facilities due to the operation of a market that has implemented a "Market Flow Calculation" methodology.*

Do you agree with the proposed definitions in the standard?

Summary Consideration: While most commenters supported the definition, some requested more detail. The SDT has revised the definition to replace the phrase "Market Flow Calculation Methodology" with more explicit language as shown below: .

Market Flow: *the total amount of generation-to-load impact of energy flowing across a specified facility or set of facilities due to a market dispatch the operation of a market that has implemented a "Market Flow Calculation" methodology.*

| Organization | Yes or No | Question #2 Comment |
|--|-----------|---|
| FirstEnergy | Yes | While we agree the definition is needed, it relies on the term "Market Flow Calculation" which is not a NERC Glossary Term and should also be defined in this standard. |
| Response: The SDT has revised the definition to replace the phrase "Market Flow Calculation Methodology" with more explicit language. | | |
| IESO | Yes | While we agree that a market flow definition should be listed in the NERC glossary, we are concerned about the clarity of this definition. We think that the SDT should provide a market flow definition that is unequivocal and that does not allow entities to reclassify the components that constitute a market flow in manner that diminishes their obligation to provide transmission loading relief. |
| Response: The obligation for those markets that calculate Market Flow to provide Transmission Loading Relief is covered by requirements within the standard, and does not need to be restated in this definition. | | |
| MRO NERS Standards Review Subcommittee | Yes | ** what is 'Market Flow Methodology'? |
| Response: The SDT has revised the definition to replace the phrase "Market Flow Calculation Methodology" with more explicit language. | | |
| NPCC | Yes | |

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| Organization | Yes or No | Question #2 Comment |
|--|-----------|---------------------|
| Midwest ISO Standards Stakeholders Collaborators | Yes | |
| Bonneville Power Administration | Yes | |
| Southern Company Transmission | Yes | |
| IRC Standards Review Committee | Yes | |
| AEP | Yes | |
| ISO New England Inc | Yes | |
| PJM Interconnection | Yes | |
| American Transmission Company | Yes | |

3. The drafting team has moved or eliminated three of the requirements originally in IRO-006-4:
- The drafting team eliminated IRO-006-4 R2, which stated “The Reliability Coordinator shall only use local transmission loading relief or congestion management procedures to which the Transmission Operator experiencing the potential or actual SOL or IROL violation is a party.”
 - The drafting team moved IRO-006-4 R3, which stated “Each Reliability Coordinator with a relief obligation from an Interconnection-wide procedure shall follow the curtailments as directed by the Interconnection-wide procedure. A Reliability Coordinator desiring to use a local procedure as a substitute for curtailments as directed by the Interconnection-wide procedure shall obtain prior approval of the local procedure from the ERO.” These concepts were incorporated into the new IRO-006-EI-1.
 - The drafting team eliminated IRO-006-4 R5, which stated “During the implementation of relief procedures, and up to the point that emergency action is necessary, Reliability Coordinators and Balancing Authorities shall comply with applicable Interchange scheduling standards.” This language was redundant with the INT standards themselves.

Do you believe these modifications are appropriate?

Summary Consideration: Most commenters believe the changes to be appropriate. One entity expressed concern about how the concept of regional standards was being addressed. In response, the SDT modified the approach to the standards and eliminated IRO-006-5 R1. IRO-006-EI-1 will continue to be treated as an Eastern Interconnection standard, and therefore apply to all Reliability Coordinators within the Eastern Interconnection. In order to comply with NERC’s published numbering convention, the standard will be renamed as IRO-006-EAST-01.

| Organization | Question #3 Yes or No | Question #3 Comment |
|---------------------|--------------------------|--|
| ISO New England Inc | No | Although the ability for NERC to develop interconnection-wide standards is clearly adopted in the Rules of Procedure and Standards Development Procedure, we believe that NERC/ERO Standards should be either continent-wide or regional. Developing interconnection-wide standards adds complexity to the stakeholders and the compliance programs, and will result in a greater number of standards. In addition, the proposed numbering for IRO-006-EI-1 is an inconsistent standard numbering convention, and will create difficulties with compliance based software applications. Also, With the deletion of R3 and the wording of the new IRO-006-5 R1, it is unclear how/if all entities within an Interconnection are required to respond to a request for relief under an Interconnection Wide procedure. The confusion arises from the fact that R1 states the 'RC that USES an Interconnection-wide congestion management procedure shall use the procedure for its Interconnection'. If, for example, an RC in the Eastern Interconnect does not USE an Interconnection Wide congestion management process, that RC would not be required to follow the request for curtailment under the Interconnection Wide procedure. |

Consideration of Comments on 1st Draft of IRO-006-5 and IRO-006-EI-1 — Project 2006-08

| Organization | Question #3 Yes or No | Question #3 Comment |
|---|--------------------------|---------------------|
| <p>Response: The SDT has modified the approach to the standards and eliminated IRO-006-5 R1. IRO-006-EI-1 will continue to be treated as an Eastern Interconnection standard, and therefore apply to all RCs within the Eastern Interconnection. In order to comply with NERC's published numbering convention, the standard will be renamed as IRO-006-EAST-01.</p> | | |
| NPCC | Yes | |
| Midwest ISO Standards Stakeholders Collaborators | Yes | |
| Bonneville Power Administration | Yes | |
| Southern Company Transmission | Yes | |
| FirstEnergy | Yes | |
| IRC Standards Review Committee | Yes | |
| IESO | Yes | |
| AEP | Yes | |
| PJM Interconnection | Yes | |
| WACM, Excel, WECC | Yes | |
| American Transmission Company | Yes | |
| MRO NERS Standards Review Subcommittee | Yes | |

Consideration of Comments on 1st Draft of IRO-006-5 and IRO-006-EI-1 — Project 2006-08

4. The SDT has proposed removing the Regional Differences for MISO, PJM, and SPP, as the language within IRO-006-EI-1 incorporates the concept of Market Flow. Do you agree that these Regional Differences can be removed?

Summary Consideration: None of the respondents disagreed with the removal of these Regional Differences.

| Organization | Question #4 Yes or No | Question #4 Comment |
|--|--------------------------|---------------------|
| Midwest ISO Standards Stakeholders Collaborators | Yes | |
| Southern Company Transmission | Yes | |
| FirstEnergy | Yes | |
| IRC Standards Review Committee | Yes | |
| IESO | Yes | |
| AEP | Yes | |
| PJM Interconnection | Yes | |
| MRO NERS Standards Review Subcommittee | Yes | |

5. The drafting team has converted Attachment 1 to a separate standard that is posted with this comment form (IRO-006-EI-1). Do you believe this is appropriate?

Summary Consideration: Two entities opposed the creation of an Interconnection Wide standard, although both agreed that NERC’s Rules of Procedures allow for such standards to be developed. IRO-006-EI-1 will continue to be treated as an Eastern Interconnection standard, and therefore apply to all RCs within the Eastern Interconnection. In order to comply with NERC’s published numbering convention, the standard will be renamed as IRO-006-EAST -01.

| Organization | Question #5 Yes or No | Question #5 Comment |
|---|--------------------------|---|
| NPCC | No | See response to question 6. |
| Response: Please see our response in Question 6. | | |
| ISO New England Inc | No | Although the ability for NERC to develop interconnection-wide standards is clearly adopted in the Rules of Procedure and Standards Development Procedure, we believe that NERC/ERO Standards should be either continent-wide or regional. Developing interconnection-wide standards adds complexity to the stakeholders and the compliance programs, and will result in a greater number of standards. In addition, the proposed numbering for IRO-006-EI-1 is an inconsistent standard numbering convention, and will create difficulties with compliance based software applications. |
| Response: The SDT does not agree that standards should only be regional or continent-wide, and as indicated by the commenter, NERC’s Rules of Procedure allow the development of such standards. IRO-006-EI-1 will continue to be treated as an Eastern Interconnection standard, and therefore apply to all RCs within the Eastern interconnection. In order to comply with NERC’s published numbering convention, the standard will be renamed as IRO-006-EAST-01. | | |
| Midwest ISO Standards Stakeholders Collaborators | Yes | In general, we do not support standards that are in essence procedures. However, we do believe the drafting team has pared down the true reliability requirements out of attachment one. Given this paring down of attachment one and the importance of the TLR procedure, we can support this standard. |
| Response: Thank you for your supportive comment. | | |
| IRC Standards Review Committee | Yes | In general, the IRC SRC does not support standards that are in essence procedures. However, we do believe the drafting team has pared down the true reliability requirements out of attachment one. Given this paring down of attachment one and the importance of the TLR procedure, the IRC SRC can support this standard. |

| Organization | Question #5 Yes or No | Question #5 Comment |
|---|--------------------------|---------------------|
| Response: Thank you for your supportive comment. | | |
| Southern Company Transmission | Yes | |
| FirstEnergy | Yes | |
| IESO | Yes | |
| AEP | Yes | |
| PJM Interconnection | Yes | |
| WACM, Excel, WECC | Yes | |
| MRO NERS Standards Review Subcommittee | Yes | |

Consideration of Comments on 1st Draft of IRO-006-5 and IRO-006-EI-1 — Project 2006-08

6. The drafting team has proposed that Attachment 1 be treated as a standard for the Eastern Interconnection (IRO-006-EI-1). Alternatively, the standard may be treated as a continent-wide standard (IRO-017) that is applicable only to entities in the Eastern Interconnection. Do you prefer one approach over the other?

Summary Consideration: Seven of the thirteen respondents supported the EI naming convention, while four of the thirteen preferred the alternate approach. In order to comply with NERC’s published numbering convention, the standard will be renamed as IRO-006-EAST-01. 13 responses.

| Organization | IRO-006-EI-1 | IRO-017-1 | Question #6 Comment |
|---|--------------|-----------|---|
| WACM, Excel, WECC | | | No preference as to IRO-006-EI-1 or IRO-017, but agree treatment identifying it is the Eastern Interconnection process and not a continent-wide process is correct. |
| Response: Thank you for your supportive comment. | | | |
| NPCC | | X | Although the ability for NERC to develop interconnection-wide standards is clearly adopted in the Rules of Procedure and Standards Development Procedure, NPCC participating members believe that NERC/ERO Standards should be either continent-wide or regional. Developing interconnection-wide standards adds complexity and potential confusion to the stakeholders and the compliance programs, and will result in a greater number of standards. In addition, the proposed numbering for IRO-006-EI-1 is an inconsistent standard numbering convention, and will create difficulties with compliance based software applications. |
| Response: The SDT does not agree that standards should only be regional or continent-wide, and as indicated by the commenter, NERC’s rules of procedure allow the development of such standards. IRO-006-EI-1 will continue to be treated as an Eastern Interconnection standard, and therefore apply to all RCs within the Eastern interconnection. In order to comply with NERC’s published numbering convention, the standard will be renamed as IRO-006-EAST-01. | | | |
| ISO New England Inc | | X | Although the ability for NERC to develop interconnection-wide standards is clearly adopted in the Rules of Procedure and Standards Development Procedure, we believe that NERC/ERO Standards should be either continent-wide or regional. Developing interconnection-wide standards adds complexity to the stakeholders and the compliance programs, and will result in a greater number of standards. In addition, the proposed numbering for IRO-006-EI-1 is an inconsistent standard numbering convention, and will create difficulties with compliance based software applications. |
| Response: In order to comply with NERC’s published numbering convention, the standard will be renamed as IRO-006-EAST-01. | | | |

Consideration of Comments on 1st Draft of IRO-006-5 and IRO-006-EI-1 — Project 2006-08

| Organization | IRO-006-EI-1 | IRO-017-1 | Question #6 Comment |
|--|--------------|-----------|--|
| MRO NERS Standards Review Subcommittee | | X | The MRO believes that naming the standard IRO-017-1 stays consistent with the NERC standard naming convention and does not add another element to the standards naming. |
| Response: In order to comply with NERC's published numbering convention, the standard will be renamed as IRO-006-EAST-01. | | | |
| American Transmission Company | | X | |
| FirstEnergy | X | | It may be better to easily identify the Eastern Interconnection requirements with the "EI" designation since WECC made their numbering system unique (WECC-IRO-STD-006-0). |
| Response: In order to comply with NERC's published numbering convention, the standard will be renamed as IRO-006-EAST-01. | | | |
| AEP | X | | AEP supports the use of IRO-006-EI-1, but is not strongly opposed to the use of IRO-017-1. |
| Response: Thank you for your supportive comment. | | | |
| Midwest ISO Standards Stakeholders Collaborators | X | | |
| Southern Company Transmission | X | | |
| IRC Standards Review Committee | X | | |
| IESO | X | | |
| PJM Interconnection | X | | |

7. The drafting team has identified a concern related to compliance with IRO-006-EI-1 and the availability of the IDC or similar technology. To address this, the SDT is considering adding the following language to the IRO-006-5:

R1. A Reliability Coordinator desiring to utilize an Interconnection-wide congestion management procedure shall utilize the appropriate procedure below based on the region in which they oversee reliability, provided the necessary tools to support the procedure are available and in working order:

Do you believe this or similar language is appropriate and necessary?

Summary Consideration: Following further discussion, the SDT believes that the current draft standard as written allows for sufficient flexibility to ensure that Internet outages, software problems, or hardware failures will not result in situations in which the NERC requirements cannot be met.

| Organization | Question #7 Yes or No | Question #7 Comment |
|---|--------------------------|--|
| Midwest ISO Standards Stakeholders Collaborators | No | This language is not appropriate. Because an RC can't rely on the use of TLR to mitigate an IROL, the RC must always have alternative methods to available to mitigate IROLs. Thus, the availability of the IDC is not truly relevant to reliability. |
| Response: Following further discussion, the SDT believes that the current draft standard as written allows for sufficient flexibility to ensure that Internet outages, software problems, or hardware failures will not result in situations in which the NERC requirements cannot be met. The proposed language has not been added. | | |
| FirstEnergy | No | If the "necessary tools to support the procedure are" not in service or available, then the procedure and/or standard should be retired at the same time that the tools are no longer available. Therefore this requirement is unnecessary and inappropriate for a reliability standard. |
| Response: Following further discussion, the SDT believes that the current draft standard as written allows for sufficient flexibility to ensure that Internet outages, software problems, or hardware failures will not result in situations in which the NERC requirements cannot be met. The proposed language has not been added. | | |
| IRC Standards Review Committee | No | All NERC standards implicitly require that the hardware and software associated with effecting a response to the respective requirement's is operational. There is no need to even include the provision about the availability of the support tools. |
| Response: Following further discussion, the SDT believes that the current draft standard as written allows for sufficient flexibility to ensure that | | |

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| Organization | Question #7 Yes or No | Question #7 Comment |
|---|--------------------------|---|
| Internet outages, software problems, or hardware failures will not result in situations in which the NERC requirements cannot be met. The proposed language has not been added. | | |
| IESO | No | We disagree with the wording and suggest the latter part of the sentence be deleted (i.e. ", provided the necessary tools to support the procedure are available and in working order"). We believe that a Reliability Coordinator that chooses to utilize an Interconnection-wide congestion management procedure should make sure that it has the necessary tools to support the procedure and they are available and in working order. Furthermore, tools unavailability should not preclude the implementation of an interconnection-wide congestion management procedure. Besides TLR, system operators can access other mechanisms to mitigate IROL violations, such as reconfiguration, redispatch, load shedding etc. |
| Response: Following further discussion, the SDT believes that the current draft standard as written allows for sufficient flexibility to ensure that Internet outages, software problems, or hardware failures will not result in situations in which the NERC requirements cannot be met. The proposed language has not been added. | | |
| ISO New England Inc | No | The last sentence "provided the necessary tools to support the procedure are available and in working order" is not needed. |
| Response: Following further discussion, the SDT believes that the current draft standard as written allows for sufficient flexibility to ensure that Internet outages, software problems, or hardware failures will not result in situations in which the NERC requirements cannot be met. The proposed language has not been added. | | |
| PJM Interconnection | No | The availability of a software tool should not dictate whether or not the RC takes action to alleviate a reliability issue. If the IDC tools are not available, or not properly functioning in real-time, the RC should not be absolved from the responsibility to initiate a good faith effort to comply with the spirit of the TLR procedures. The RC should not be considered non-compliant if the software is not functioning and, despite a good faith effort, the RC could not achieve full compliance. |
| Response: Following further discussion, the SDT believes that the current draft standard as written allows for sufficient flexibility to ensure that Internet outages, software problems, or hardware failures will not result in situations in which the NERC requirements cannot be met. The proposed language has not been added. | | |
| American Transmission Company | No | |
| NPCC | Yes | Remove the wording "provided the necessary tools to support the procedure are available and in |

Consideration of Comments on 1st Draft of IRO-006-5 and IRO-006-EI-1 — Project 2006-08

| Organization | Question #7 Yes or No | Question #7 Comment |
|--|--------------------------|--|
| | | working order:" The RC must have the tools to support the procedure. |
| <p>Response: Following further discussion, the SDT believes that the current draft standard as written allows for sufficient flexibility to ensure that Internet outages, software problems, or hardware failures will not result in situations in which the NERC requirements cannot be met. The proposed language has not been added.</p> | | |
| AEP | Yes | - Our "yes" depends upon what this statement means... We answer "yes" - if you mean that the RC cannot provide an Interconnection-wide congestion management procedure without the using the IDC or similar technology. We answer "no" - if you mean you don't |
| <p>Response: Following further discussion, the SDT believes that the current draft standard as written allows for sufficient flexibility to ensure that Internet outages, software problems, or hardware failures will not result in situations in which the NERC requirements cannot be met. The proposed language has not been added.</p> | | |
| MRO NERS Standards Review Subcommittee | Yes | |
| Southern Company Transmission | Yes | |

8. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Summary Consideration: No entities commented that they were aware of any conflicts.

| Organization | Question #8 Yes or No | Question #8 Comment |
|--|--------------------------|---------------------|
| NPCC | No | |
| Midwest ISO Standards Stakeholders Collaborators | No | |
| Bonneville Power Administration | No | |
| Southern Company Transmission | No | |
| FirstEnergy | No | |
| IRC Standards Review Committee | No | |
| IESO | No | |
| AEP | | |
| ISO New England Inc | No | |
| PJM Interconnection | No | |
| WACM, Excel, WECC | | |
| American Transmission Company | No | |
| MRO NERS Standards Review Subcommittee | No | |

9. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the proposed standards.

Summary Consideration: Some entities expressed concern with the phrasing of IRO-006-EI (EAST) R1. The SDT has chosen not to modify IRO-006-EI R1, as it is consistent with language currently within IRO-006-4.

One entity suggested that IRO-006-EI (EAST) R1 might be redundant with IRO-005 R17. The SDT explained that IRO-005 R17 applies to all actions, and leaves it up to the RC to determine if the actions being taken are sufficient or not. IRO-006-EI (EAST) R1 specifically applies to TLR, and prohibits the use of TLR as the sole tool to mitigate an IROL violation.

One entity expressed confusion regarding the difference between IRO-006-EI (EAST) R4.2 and R4.3. The SDT explained that R4.2 is intended to address situations where an entity wishes to use an alternate procedure on an ongoing basis, NOT one that is necessarily occurring in real-time. The standard communicates this through the use of the phrase “pre-approved.” If a real-time alternative was developed, it would fall as described under R4.3.

One entity expressed concern that IRO-006-EI (EAST) R4 might create a situation where an RC was forced to violate a standard. The SDT explained that R4.3.2 implies that the initiating RC will respond to alternate actions proposed by the responding RC. Absent a response or a concurrence, the responding RC has met its obligation, even if it does not implement any of the actions in R4.

One entity pointed out that TLR-0 was undefined. The level was added to the appendix.

Some entities expressed general concerns with the relevance of the standards to WECC, and a specific concern with a reference in IRO-006-5 R1. The SDT has elected to modify the standard to eliminate IRO-006-5 R1, which we believe will address the commenters’ concerns. IRO-006-5 R2 has been modified to include Transmission Operators and Balancing Authorities, which the SDT believes will further support the WECC practices. The SDT also pointed out that IRO-006-EI (EAST) is intended to apply only to the Eastern Interconnection.

| Organization | Question #9 Comment |
|---|---|
| Bonneville Power Administration | These revisions are quite specific to the methods and procedures of the Eastern Interconnection. Things are done a little differently in the West, therefore choosing not to comment on those specific questions. |
| Response: The SDT agrees. IRO-006-EI (EAST) is intended only to apply within the Eastern Interconnection. IRO-006-5 has been modified to address differences in implementation between the various Interconnections. | |
| FirstEnergy | IRO-006-EI-1 R1 should be revised to state, "When responding to an IROL violation, each Reliability Coordinator shall implement other actions, including reconfiguration, redispatch, use of demand-side |

| Organization | Question #9 Comment |
|--------------|--|
| | <p>management, or load shedding in conjunction with the initiation of the Eastern Interconnection TLR procedure." In the standards the assumption should be that the operator is responding to actual situations unless stated otherwise. The reliability standards represent the minimum requirements therefore the term "but not limited to" is redundant and unnecessary.</p> <p>Response: The SDT has chosen not to modify IRO-006-EI R1, as it is consistent with language currently within IRO-006-4.</p> <p>IRO-006-EI-1 R2.2 should be revised to state, "A plan of action, based on the TLR level chosen." If the RC is in a TLR, they should be leading the activities and not merely proposing actions.</p> <p>Response: The SDT believes that language as written is appropriate.</p> <p>In IRO-006-EI-1 R3 the phrase "a proposal for actions to take" should be replaced with the phrase "a plan of action." In IRO-006-EI-1 R3 the phrase "proposed actions to take" should be replaced with the phrase "action plan."</p> <p>Response: The SDT believes that language as written is appropriate.</p> <p>In IRO-006-EI-1 R3.2 and R3.3 the phrase "proposed actions" should be replaced with the phrase "action plan."</p> <p>Response: The SDT believes that language as written is appropriate.</p> <p>In IRO-006-EI-1 R3.2, R3.3, R3.3.1, R3.3.2, R3.3.3, and R3.3.4 the term "proposed" should be replaced with the phrase "planned."</p> <p>Response: The SDT believes that language as written is appropriate.</p> <p>IRO-006-EI-1 R4.2 - We suggest removing R4.2. We do not agree that the ERO should have a role in a reliability standard requirement. This requirement should be removed because it does not place responsibilities (and for that matter cannot since they are not a user, operator or owner of the BES) on the ERO to act in sufficient time to approve an alternate mitigation procedure. Any delay on the part of the ERO could adversely impact the reliability of the BES. Also, even if the ERO was appropriate in the standard, R4.2 is not necessary since R4.3 already covers alternate actions that can be taken in lieu of R4.1.</p> |

| Organization | Question #9 Comment |
|---|--|
| | <p>Response: R4.2 is intended to address situations where an entity wishes to use an alternate procedure on an ongoing basis, NOT one that is necessarily occurring in real-time. The standard communicates this through the use of the phrase "pre-approved." If a real-time alternative was developed, it would fall as described under R4.3.</p> |
| <p>Response: Please see in-line responses.</p> | |
| PJM Interconnection | <p>R1. The first sentence should be reworded to say what actions should be taken instead of what should not be done. Current wording; R1. The Reliability Coordinator shall not use the Eastern Interconnection TLR procedure alone to mitigate an actual IROL violation. Recommended word change to make it a proactive requirement; R1. When responding to an actual IROL violation, each Reliability Coordinator shall implement supplementary mitigation actions prior to or in conjunction with the initiation of this TLR procedure. Such actions include, but are not limited to, the following: reconfiguration, redispatch, use of demand-side management, load shedding.</p> <p>Response: The SDT has chosen not to modify IRO-006-EI R1, as it is consistent with language currently within IRO-006-4.</p> <p>Two additional comments regarding R1: This requirement is similar to the Requirement R17 in IRO-005. The SDT should consider revising R1 of this standard or R17 of IRO-005 to address the need in one standard instead of splitting it into two separate requirements.</p> <p>Response: IRO-005 R17 applies to all actions, and leaves it up to the RC to determine if the actions being taken are sufficient or not. IRO-006-EI (EAST) R1 specifically applies to TLR, and prohibits the use of TLR as the sole tool to mitigate an IROL violation.</p> <p>Also the SDT needs to develop language that requires the mitigation actions external to the TLR procedures be bonafide mitigation attempts.</p> <p>Response: The SDT is uncertain what is being requested.</p> <p>R 4.3.2. The SDT should discuss the appropriateness of the "and" conditions throughout R 4.3. R 4.3.2 should be strengthened to accommodate alternatives to the TLR procedure. For example, if an action contained in the TLR procedure would have an adverse consequence on the network but, for whatever reason, concurrence from the RC calling the TLR isn't obtained, the only options available to the RC requesting an alternative are 1) to be non-compliant or 2) implement a change that has a negative impact on system reliability.</p> |

| Organization | Question #9 Comment |
|---|---|
| | <p>Response: R4.3.2 implies that the initiating RC will respond to alternate actions proposed by the responding RC. Absent a response or a concurrence, the responding RC has met its obligation, even if it does not implement any of the actions in R4.</p> <p>Appendix A- The standard references TLR level 0, which is not included in the appendix.</p> <p>Response: The SDT has modified the appendix to address this issue.</p> |
| <p>Response: Please see in-line responses.</p> | |
| <p>WACM, Excel, WECC</p> | <p>WECC believes that bullet 2 of R1 should reference the WECC Qualified Path Unscheduled Flow Relief Plan and not the WECC interim Tier 1 regional reliability standard. RCs in the West do not receive requests for curtailment. The WECC Qualified Path Unscheduled Flow Relief Procedures identifies entities receiving the schedule as the entity that must implement curtailments. We question whether RCs can actually curtail or reload transactions (normally a TOP function in the west). WECC RCs do not do this. We believe that RC's in the East are typically BA operators also. WECC's are not. We believe that the language in the current standard reflects an Eastern Interconnection bias towards transmission loading relief and would need to be modified to recognize the different process in the West before it could become a continent-wide standard.</p> |
| <p>Response: The SDT has elected to modify the standard to eliminate IRO-006-5 R1, which we believe will address the commenters' concerns. IRO-006-5 R2 has been modified to include Transmission operators and Balancing Authorities, which the SDT believes will further support the WECC practices. Note that IRO-006-EI (EAST) is intended to apply only to the Eastern Interconnection.</p> | |

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. SC authorized the SAR and assembled a drafting team on December 5, 2006.
2. The revisions to IRO-006 to transfer business practice content to NAESB were approved as IRO-006-4 by the Board of Trustees on October 23, 2007.
3. The SDT has developed a first draft for industry consideration and posted it for comments from October 30, 2008 to December 1, 2008.
4. The SDT has developed this second draft for industry consideration.

Description of Current Draft:

This is the second draft of the proposed standard posted for stakeholder comments.

Future Development Plan:

| Anticipated Actions | Anticipated Date |
|--|-------------------------|
| 1. Respond to Comments (Draft 2). | June 26, 2009 |
| 2. Posting for 30-day Pre-Ballot Review. | June 26, 2009 |
| 3. Initial Ballot. | July 27, 2009 |
| 4. Respond to comments. | September 10, 2009 |
| 5. Recirculation ballot. | September 10, 2009 |
| 6. Board adoption. | October 2009 |

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

A. Introduction

1. **Title:** Reliability Coordination — Transmission Loading Relief (TLR)
2. **Number:** IRO-006-5
3. **Purpose:** To provide Interconnection-wide transmission loading relief procedures that can be used to prevent or manage potential or actual SOL and IROL violations to maintain reliability of the bulk electric system.
4. **Applicability:**
 - 4.1. Reliability Coordinator.
 - 4.2. [Balancing Authority](#).
 - 4.3. [Transmission Operator](#).
5. **Proposed Effective Date:** First day of the first calendar quarter ~~that after~~[following](#) the date this standard [and IRO-006-EAST-1 are both](#) ~~is~~-approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter after the date this standard [and IRO-006-EAST-1 are both](#) ~~is~~ approved by the NERC Board of Trustees.

B. Requirements

~~Each Reliability Coordinator that uses an Interconnection-wide congestion management procedure shall use the procedure for its Interconnection identified below: [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]~~

~~The Interconnection-wide Transmission Loading Relief (TLR) procedure for use in the Eastern Interconnection provided in IRO-006-5-EI.~~

~~The Interconnection-wide transmission loading relief procedure for use in the Western Interconnection is WECC IRO-STD-006-0 provided at:
ftp://www.nerc.com/pub/sys/all_updl/standards/rrs/IRO-STD-006-0-17Jan07.pdf.~~

~~The Interconnection-wide transmission loading relief procedure for use in ERCOT is provided as Section 7 of the ERCOT Protocols, posted at:
<http://www.ercot.com/mktrules/protocols/current.html>~~

- R1. Each Reliability Coordinator, [Balancing Authority](#), or [Transmission Operator](#) that receives a request pursuant to an Interconnection-wide transmission loading relief procedure (~~listed in R1~~ such as [Eastern Interconnection TLR](#), [WECC Unscheduled Flow Mitigation](#), or congestion management procedures from the ERCOT Protocols) ~~above~~ from any [Reliability Coordinator](#), [Balancing Authority](#), or [Transmission Operator](#) ~~Reliability Coordinator~~ in another Interconnection ([or Balancing Authority or Transmission Operator, as appropriate for the neighboring Interconnection](#)) to curtail or reload an Interchange Transaction that crosses an Interconnection boundary shall comply with the request, [unless it provides a reliability reason that implementing it cannot comply with the request will not adversely affect reliability within the bounds of reliable operation.](#) ; [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]

C. Measures

MI. Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall provide evidence (such as logs, voice recordings, Tag histories, and studies) that, when a request to curtail or reload an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure was made from another Reliability Coordinator, Balancing Authority, or Transmission Operator, it complied with the request or provided an identified reliability reason that it could not comply with the request.

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity.

1.2. Compliance Monitoring Period and Reset Time Frame

Not applicable.

1.3. Data Retention

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

- The Reliability Coordinator, Balancing Authority, and Transmission Operator shall maintain evidence to show compliance with R1 for the most recent ~~three~~ eighteen~~twelve~~ calendar ~~years~~-months plus the current ~~year~~month.
- If a Reliability Coordinator, Balancing Authority, or Transmission Operator is found non-compliant, it shall keep information related to the non-compliance until found compliant.

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

1.4. Compliance Monitoring and Enforcement Processes:

The following processes may be used:

- Compliance Audits
- Self-Certifications
- Spot Checking
- Compliance Violation Investigations
- Self-Reporting
- Complaints

1.5. Additional Compliance Information

None.

Violation Severity Levels

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|----------|---|
| R1 | | | | <p><u>The applicable entity received a request to curtail or reload an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority, or Transmission Operator, but the entity recipient neither 1.) complied with the request, nor 2.) provided a reliability reason that it could not prevented their compliance comply with the request.</u></p> |

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. SC authorized the SAR and assembled a drafting team on December 5, 2006.
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Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Reallocation: ~~The total or partial curtailment of Transactions during TLR Level 3a or 5a to allow Transactions using higher priority to be implemented.~~ (To be retired.)

Market Flow: the total amount of generation-to-load impact ~~energy~~ flowing across a specified facility or set of facilities due to a market dispatch. ~~the operation of a market that has implemented a “Market Flow Calculation” methodology.~~

A. Introduction

1. **Title:** Transmission Loading Relief Procedure for the Eastern Interconnection
2. **Number:** IRO-006-~~E~~EAST-1
3. **Purpose:** To provide an Interconnection-wide transmission loading relief procedure (TLR) for the Eastern Interconnection that can be used to prevent and/or mitigate potential or actual System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) ~~violations~~ exceedances to maintain reliability of the ~~bulk-Bulk electric-Electric system~~System (BES).
4. **Applicability:**
 - 4.1. Reliability Coordinators in the Eastern Interconnection.
5. **Effective Date:** First day of the first calendar quarter ~~that~~ after the date this standard and IRO-006-5 are both ~~is~~ approved by applicable regulatory authorities, ~~;~~ or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter after the date this standard and IRO-006-5 are both ~~is~~ approved by the NERC Board of Trustees.

B. Requirements

- R1. The Reliability Coordinator shall not use the Eastern Interconnection TLR procedure alone to mitigate an ~~actual-IROL violation~~exceedance. When acting or directing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T_v responding to an actual IROL violation, each Reliability Coordinator shall ~~implement~~ initiate other more effective actions prior to or in conjunction with the initiation ~~or continuing management~~ of this TLR procedure (or continuing management of this procedure if already initiated), including, but not limited to, the following: reconfiguration, redispatch, use of demand-side management, and load shedding. ~~- [Violation Risk Factor: Medium/High] [Time Horizon: Real-time Operations]~~
- R2. When initiating the Eastern Interconnection TLR procedure to prevent or mitigate an SOL or IROL ~~violation~~exceedance, and at least every clock hour after initiation, up to and including the hour when the TLR level has been identified as TLR Level 0, the Reliability Coordinator shall identify: *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*
 - R2.1. The TLR level in accordance with the criteria in Appendix A, and
 - R2.2. A ~~proposal for~~list of actions to take, based on the TLR level chosen.
- R3. Upon the identification of the TLR level and a ~~proposal for~~list of actions to take based on the TLR level chosen, the Reliability Coordinator initiating this TLR procedure shall: *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*
 - R3.1. Notify all Reliability Coordinators in the Eastern Interconnection of the identified TLR level
 - R3.2. Communicate the ~~proposed~~list of actions to take to:
 - R3.2.1. All Reliability Coordinators in the Eastern Interconnection, and

R3.2.2. Those Reliability Coordinators in other Interconnections responsible for curtailing or reloading Interchange Transactions crossing Interconnection boundaries identified in the ~~proposed~~ list of actions.

R3.3. Request that the following entities implement the ~~proposed~~ actions identified in Requirement R2.2: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]

~~**R3.3.1.**~~ Each Reliability Coordinator associated with a Sink Balancing Authority in the Eastern Interconnection for which Interchange Transactions are ~~proposed for to be~~ curtailed ~~ment~~ or reloaded ing

R3.3.1.

R3.3.2. Each Reliability Coordinators associated with a Balancing Authority in the Eastern Interconnection for which Network Integration Transmission Service or Native Load is ~~proposed for to be~~ curtailed ~~ment~~ or reloaded ing

~~**R3.3.3.**~~ Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which ~~proposed its to provide~~ Market Flow is to be ~~curtailed~~ ~~ment~~ or reloaded ing.

R3.3.3.

R3.3.4. Each Reliability Coordinators associated with a Balancing Authority in the Eastern Interconnection operating a DC-tie for an Interchange Transaction sinking outside the Eastern Interconnection and crossing an interconnection boundary with an Interchange Transaction to be ~~proposed for~~ curtailed ~~ment~~ or reloaded ing.

R4. Each Reliability Coordinator in the Eastern Interconnection that ~~responds to~~ receives a request as described in Requirement R3.3, shall comply with the request by taking one or more of the following three sets of actions: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]

~~R4.1.1)~~ Implement the communicated actions requested by the issuing Reliability Coordinator as follows:

- Direct its Balancing Authorities to implement the Interchange Transaction schedule change requests.
- Direct its Balancing Authorities to provide the Network Integrated Transmission Service and Native Load schedule changes for which the Balancing Authorities are responsible.
- Direct its Balancing Authorities to provide the Market Flow schedule changes for which the Balancing Authorities are responsible.

~~R4.2.2)~~ Implement a procedure pre-approved by the ERO for use by the responding Reliability Coordinator in lieu of implementing some or all of the requested actions in the first set under Requirement R4~~R4.1~~, provided that its implementation is expected to prevent or mitigate the SOL or IROL ~~violation~~ exceedance with the same or greater effect than the actions not implemented in ~~R4.1~~ the first set of actions under Requirement R4.

R4.3.3) Implement alternate actions to those in R4.1 or R4.2 the first two sets of actions under Requirement R4 provided that:

R4.3.1. Analysis shows that some or all of the actions in R4.1 the first set of actions under Requirement R4 or R4.2 the second set of actions under Requirement R4 will result in a reliability concern or will be ineffective, and

•

• The alternate actions have been agreed to by the initiating Reliability Coordinator, and

•

P4.3.3. • Analysis shows that the alternate actions will not adversely affect reliability.

- R5.** Each Reliability Coordinator that responds to a TLR event shall acknowledge to the initiating Reliability Coordinator the actions it will take pursuant to Requirement R4 as soon as possible but not more than ~~within thirty ten~~ minutes ~~of~~ after receiving the request. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]

C. Measures

- M1.** Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that when acting or directing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T_v experiencing an actual IROL, the Eastern Interconnection TLR procedure was not the sole remedy used to mitigate the violation, the Eastern Interconnection TLR procedure was not used alone to mitigate an IROL exceedance, and other more effective actions ~~actions other than TLR were initiated to mitigate the violation prior to or in conjunction with the initiation or continuing management of the TLR procedure. (R1):~~
- M2.** Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that at the time it initiated the Eastern Interconnection TLR procedure, and at least every clock hour after initiation, up to and including the hour when the TLR level was identified as TLR Level 0, the Reliability Coordinator identified both the TLR Level in accordance with Appendix A and a list of ~~proposal for~~ actions to take based on the TLR level chosen. (R2):
- M3.** Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that once it identified a TLR level and a ~~proposal for~~ proposal for a list of proposed actions to take, it:
- 1.) ~~communicated the TLR Level to n~~ Notified all Reliability Coordinators in the Eastern i ~~nterconnection of the TLR Level,~~
 - 2.) ~~e~~ Communicated the list of proposed actions to all Reliability Coordinators in the Eastern I ~~nterconnection and those Reliability Coordinators in other~~ Interconnections responsible for curtailing or reloading Interchange

Transactions crossing Interconnection boundaries identified in the list of ~~proposed~~ actions, and

3.) ~~Requested the Reliability Coordinators identified in the Requirement to implement the ~~proposed~~ actions. (R3);~~

M4. Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that upon receipt of a request to implement proposed actions as described in Requirement R3, the Reliability Coordinator did one or more of the following:

1.) ~~Implemented the requested actions,~~

2.) ~~Implemented an alternative procedure that had been pre-approved by the ERO in lieu of some or all of the actions requested with equal or greater effect than the request actions not being implemented,~~

3.) ~~Implemented alternate actions, ~~provided that~~ based on analysis which showed that some or all of the actions in 1 or 2 would have resulted in a reliability concern or would have been ineffective, the alternate actions were agreed to by the initiating Reliability Coordinator, and analysis showed that the alternate actions would not adversely affect reliability. (R4);~~

M5. Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that within ten ~~thirty~~ minutes of receiving a request to implement actions pursuant to the implementation of the Eastern Interconnection TLR procedure, it acknowledged to the initiating Reliability Coordinator the actions it ~~took~~ will take in response to their request. (R5)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity.

1.2. Compliance Monitoring Period and Reset Time Frame

Not applicable.

1.3. Data Retention

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

- The Reliability Coordinator shall maintain evidence to show compliance with Requirements R1, R2, R3, R4, and R5 for the past 12 months plus the current month ~~most recent three calendar years plus the current year.~~
- If a Reliability Coordinator, ~~Balancing Authority, or Transmission Operator~~ is found non-compliant, it shall keep information related to the non-compliance until found compliant.

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

1.4. Compliance Monitoring and Enforcement Processes:

The following processes may be used:

- Compliance Audits
- Self-Certifications
- Spot Checking
- Compliance Violation Investigations
- Self-Reporting
- Complaints

1.5. Additional Compliance Information

None.

1.3. Violation Severity Levels

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|----------|--|
| R1 | | | | <p><u>The Reliability Coordinator used the Eastern Interconnection TLR procedure alone to mitigate an IROL exceedance.</u></p> <p style="text-align: center;"><u>OR</u></p> <p><u>When acting or directing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T_v, the Reliability Coordinator did not initiate other more effective actions prior to or in conjunction with the initiation of this TLR procedure (or continuing management of this procedure if already initiated).The Reliability Coordinator experienced an actual IROL violation and did not initiate actions other than TLR to mitigate the violation prior to the initiation or continuing management of the TLR procedure utilized the Eastern Interconnection TLR procedure as the sole remedy to mitigate the violation.</u></p> |

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|--|---|---|---|
| R2 | <p><u>The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level in accordance with Appendix A and/or a list of actions to take based on the TLR level chosen for one clock hour during the period from initiation up to the hour when the TLR level was identified as TLR Level 0.</u></p> | <p><u>The Reliability Coordinator initiating the Eastern interconnection TLR procedure missed identifying the TLR Level in accordance with Appendix A and/or a list of actions to take based on the TLR level chosen for two clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0.</u></p> | <p><u>The Reliability Coordinator initiating the Eastern interconnection TLR procedure missed identifying the TLR Level in accordance with Appendix A and/or a list of actions to take based on the TLR level chosen for three clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0.</u></p> | <p><u>The Reliability Coordinator initiating the Eastern interconnection TLR procedure missed identifying the TLR Level in accordance with Appendix A and/or a list of actions to take based on the TLR level chosen for four or more clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0.</u> The Reliability Coordinator initiating the Eastern interconnection TLR procedure did not, at the time of initiation and at least every clock hour after initiation, up to and including the hour when the TLR level was identified as TLR Level 0, identify the TLR Level in accordance with Appendix A and identify a proposal for actions to take based on the TLR level chosen.</p> |
| R3 | <p><u>The initiating Reliability Coordinator did not communicate the TLR level notify to one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level (R3.1)</u></p> | <p><u>Not applicable.</u></p> | <p><u>The initiating Reliability Coordinator did not communicate the list of actions to one or more of the required Reliability Coordinators, which are defined as all Eastern Interconnection Reliability Coordinators and any Reliability Coordinators in other</u></p> | <p>The initiating Reliability Coordinator did not communicate the proposed actions to one or more of the required Reliability Coordinators, which are defined as all Eastern Interconnection Reliability Coordinators and any Reliability Coordinators in other</p> |

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|--|---|
| R4 | | | <p><u>Interconnections responsible for curtailing or reloading Interchange Transactions crossing Interconnection boundaries identified in the list of actions. (R3.2)</u></p> <p><u>OR</u></p> <p><u>The initiating Reliability Coordinator requested some, but not all, of the Reliability Coordinators identified in R3.3 to implement the identified proposed actions.</u></p> | <p>Interconnections responsible for curtailing or reloading Interchange Transactions crossing Interconnection boundaries identified in the proposed actions.</p> <p>OR</p> <p><u>The initiating Reliability Coordinator did not request requested nthat one or more of the Reliability Coordinators identified in R3.3 to implement the identified proposed actions.</u></p> <p><u>The responding Reliability Coordinator did not take one or more of the following actions:</u></p> <ol style="list-style-type: none"> <u>1.) Implemented the requested actions.</u> <u>2.) Implemented an alternative procedure that had been pre-approved by the ERO in lieu of some or all of the actions requested with equal or greater effect than the requested actions not being implemented.</u> <u>3.) Implemented alternate actions , provided that based on analysis which showed that some or all of the actions in 1 or</u> |

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|--|---|---|--|
| R5 | <p>The responding Reliability Coordinator communicated its actions taken to the initiating Reliability Coordinator, but did so more than thirtyten minutes but not more than fifteen minutes after receiving the request. (but not more than forty minutes after receiving the request).</p> | <p>The responding Reliability Coordinator communicated its actions taken to the initiating Reliability Coordinator, but did so more than fifteen forty minutes but not more than twenty minutes after receiving the request. (but not more than fifty minutes after receiving the request).</p> | <p>The responding Reliability Coordinator communicated its actions taken to the initiating Reliability Coordinator, but did so more than fiftytwenty minutes but not more than twenty five minutes after receiving the request. (but not more than one hour after receiving the request).</p> | <p>2 would have resulted in a reliability concern or would have been ineffective, and that the alternate actions would not adversely affect reliability and were agreed to by the initiating Reliability Coordinator, and analysis showed that the alternate actions would not adversely affect reliability.</p> <p>The responding Reliability Coordinator communicated its actions to the initiating Reliability Coordinator, but did so more than twenty five one hour minutes after receiving the request.</p> <p style="text-align: center;"><u>OR</u></p> <p>The responding Reliability Coordinator did not communicate its actions to the initiating Reliability Coordinator.</p> <p style="text-align: center;"><u>OR</u></p> <p>The responding Reliability Coordinator communicated its actions to the initiating Reliability Coordinator in time, but the actions communicated did not match those implemented failed to acknowledge all of the actions requested.</p> |

E. Regional Differences

None.

F. Associated Documents

G. Revision History

| Version | Date | Action | Tracking |
|---------|------|--|----------|
| 1 | | Creation of new standard, incorporating concepts from IRO-006-4 Attachment; elimination of Regional Differences, as the standard allows the use of Market Flow | New |

Appendix A

The following criteria are intended to assist the Reliability Coordinator in determining what level of TLR to call. However, the Reliability Coordinator has the discretion to choose any of these levels regardless of the criteria listed below, provided the Reliability Coordinator has reliability reasons to take such action.

| Level | System Condition |
|--------|--|
| TLR-1 | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to approach or exceed its SOL or IROL within 8 hours. |
| TLR-2 | <ul style="list-style-type: none"> • At least one Transmission Facility is approaching or is at its SOL or IROL. <ul style="list-style-type: none"> ○ Analysis shows that holding new and increasing non-firm transactions and energy flows for the next hour can prevent exceeding this SOL or IROL. |
| TLR-3a | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL within the next hour. <ul style="list-style-type: none"> ○ Analysis shows that full or partial curtailment or reallocation¹ of non-firm transactions and energy flows can prevent exceeding this SOL and IROL. |
| TLR-3b | <ul style="list-style-type: none"> • At least one Transmission Facility is exceeding its SOL or IROL, or • At least one Transmission Facility is expected to exceed its SOL or IROL within the current hour. <ul style="list-style-type: none"> ○ Analysis shows that full or partial curtailment or reallocation² of non-firm transactions and energy flows can prevent exceeding this SOL or IROLs. |
| TLR-4 | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL. <ul style="list-style-type: none"> • Analysis shows that full curtailment of non-firm transactions and energy flows, or reconfiguration of the transmission system can prevent exceeding this SOL or IROL. |
| TLR-5a | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL when the next-hour's transactions start. • Analysis shows that either of the following sets of actions can prevent exceeding the SOL or IROL: <ul style="list-style-type: none"> ○ Full curtailment non-firm transactions and energy flows, or ○ Reconfiguration of the transmission system, and full or partial curtailment or reallocation³ of firm transactions and energy flows. |

¹ [“Reallocation” is a term defined within the NAESB TLR standards.](#)

² [“Reallocation” is a term defined within the NAESB TLR standards.](#)

³ [“Reallocation” is a term defined within the NAESB TLR standards.](#)

| | |
|--------------|---|
| TLR-5b | <ul style="list-style-type: none">• At least one Transmission Facility is exceeding its SOL or IROL, or• At least one Transmission Facility is expected to exceed its SOL or IROL within the current hour.• Analysis shows that either of the following sets of actions can prevent exceeding the SOL or IROL:<ul style="list-style-type: none">○ Full curtailment of non-firm transactions and energy flows, or○ Reconfiguration of the transmission system, and full or partial curtailment or reallocation of firm transactions and energy flows. |
| <u>TLR-0</u> | <ul style="list-style-type: none">• <u>No transmission facilities are expected to approach or exceed their SOL or IROL within 8 hours, and the ICM procedure may be terminated</u> |

E. Regional ~~Differences~~Variances

None.

F. Associated Documents

G. Version History

| Version | Date | Action | Change Tracking |
|---------|----------------------------------|---|-----------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | August 8, 2005 | Revised Attachment 1 | Revision |
| 3 | February 26, 2007 | Revised Purpose and Attachment 1 related to NERC NAESB split of the TLR procedure | Revision |
| 4 | October 23, 2007 | Completed NERC/NAESB split | Revision |
| 5 | | Removed Attachment 1 and made into a new standard, eliminated unnecessary requirements. | Revision |
| | | | |

[Implementation Plan for Standard IRO-006-5 \(Reliability Coordination — Transmission Loading Relief \(TLR\)\) and IRO-006-EAST-1 \(Loading Relief Procedure for the Eastern Interconnection\)](#)

Summary

The NERC TLR Drafting Team has developed IRO-006-5 and IRO-006-~~E~~EAST-1 as iterative and incremental improvements to IRO-006-4. This is one of three phases of Project 2006-08. The first phase, the split of the IRO-006-3 and its associated Attachment 1 into NERC and NAESB standards, was completed and approved by the NERC Board of Trustees on October 23, 2007, and filed with regulatory authorities on December 21, 2008. The second phase, which is intended to address any needed modifications to the standards based on the PJM/~~M~~MISO/SPP waivers, is currently undergoing Field Testing. This implementation plan addressed the third phase, which is intended to improve the quality of the standards.

The Drafting Team has made significant revisions to the previous IRO-006-4 and Attachment 1:

1. Converted Attachment 1 into a standard solely for the Eastern Interconnection.
2. Transferred requirements from IRO-006-~~4~~ that were primarily focused on Eastern Interconnection practices to the Eastern Interconnection TLR standard.
3. Clarified the roles of entities when responding to curtailment requests from other Interconnections.
4. Removed the requirement that entities comply with the INT standards, as it was redundant.
5. Restructured the Eastern Interconnection TLR standard (previously Attachment 1) to be clearer and specify reliability requirements.
6. Removed the requirement in IRO-006-5 that specified the appropriate methods to utilize within each Interconnection, instead relying on regional standards for the three Interconnections to capture this information.
7. Expanded the applicability of IRO-006-5 to include the Transmission Operator and the Balancing Authority.

Prerequisite Approvals

There are no other reliability standards or Standard Authorization Requests (SARs), approved, that must be implemented before this standard can be implemented.

Modified Standards

IRO-006-4, and associated Attachment 1, should be retired when IRO-006-5 and IRO-~~006-E~~006-EAST-1 become effective.

The definition of “Reallocation” should be removed from the Glossary when IRO-006-5 and IRO-~~006-E~~006-EAST-1 become effective.

The Regional Differences within IRO-006-4 should be retired when IRO-006-5 and IRO-~~006-E~~006-EAST-1 become effective.

Implementation Plan for Standard IRO-006-5 (Reliability Coordination — Transmission Loading Relief (TLR)) and IRO-006-EAST-1 (Loading Relief Procedure for the Eastern Interconnection) ~~Standard IRO-006-4 — Reliability Coordination — Transmission Loading Relief~~

Compliance with Standards

Once the standards become effective, the responsible entities identified in the applicability section of the standards must comply with the requirements. These ~~include~~include the following:

•~~Reliability Coordinators~~

| <u>Proposed Standard</u> | <u>Transmission Operator</u> | <u>Balancing Authority</u> | <u>Reliability Coordinator</u> |
|--------------------------|------------------------------|----------------------------|--------------------------------|
| <u>IRO-006-5</u> | ■ | ■ | ■ |
| <u>IRO-006-EAST-1</u> | | | ■ |

Proposed Effective Date

The standards will become effective on the first day of the first calendar quarter ~~that~~ after the date the standards are both approved by applicable regulatory authorities, ~~;~~ or in those jurisdictions where regulatory approval is not required, the standards becomes effective on the first day of the first calendar quarter after the date the standards are both approved by the NERC Board of Trustees.

Consideration of Comments on Second Draft of IRO-006-5 — Reliability Coordination — Transmission Loading Relief and IRO-006-EAST-1 — TLR Procedure for the Eastern Interconnection (Project 2006-08)

The Transmission Loading Relief Standard Drafting Team (TLR SDT) thanks all commenters who submitted comments on the second draft of IRO-006-5 — Reliability Coordination — Transmission Loading Relief and IRO-006-EAST-1 — TLR Procedure for the Eastern Interconnection. These standards were posted for a 45-day public comment period from February 19, 2009 through April 6, 2009. Stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 17 sets of comments, including comments from 60 different people from 40 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

Most comments received on the standards were favorable. Some entities questioned whether NERC was allowed to create an Interconnection-wide standard; the SDT believes that NERC is able to take this approach.

The majority of respondents supported the changes to the applicability of IRO-006-5, but some entities suggested that including the Transmission Operator as a responding entity did not make sense. The SDT concurred and removed the Transmission Operator as an applicable entity. Some entities suggested that the Interchange Authority should be included; the team disagreed, believing that any role for the Interchange Authority should be addressed in the INT standards.

Several entities questioned whether reloading should be included in the standard. The team removed the concept of mandatory reloading, as this is not the way reloading works in reality.

Several entities expressed concern with the VSLs for the standards. The SDT has attempted to clarify the VSLs in the latest draft. All comments received can be reviewed at the following site:

<http://www.nerc.com/filez/standards/Reliability-Coordination-Transmission-Loading-Relief.html>

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

Index to Questions, Comments, and Responses

1. The drafting team has removed the requirement from IRO-006-5 that indicated which methods were used in each of the Interconnections, instead relying on regional standards (with IRO-006-EAST-1 serving as an Interconnection-wide standard) for the three Interconnections to capture this information. Do you believe this to be appropriate? 7

2. The drafting team has expanded the applicability of IRO-006-5 to include the Transmission Operator and the Balancing Authority. Do you believe this to be appropriate?11

3. The drafting team has included measures and data retention period for IRO-006-5. Do you agree with these measures and the data retention period?14

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5. The drafting team has included Violation Severity Levels for IRO-006-5. Do you agree with these Violation Severity Levels?20

6. The drafting team has included Violation Severity Levels for IRO-006-EAST-1. Do you agree with these Violation Severity Levels?24

7. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the proposed standards.....31

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

| | | Commenter | Organization | Industry Segment | | | | | | | | | | |
|----|-------|--------------------------|--|------------------|---|---|--------------------------|---|---|---|---|---|----|---|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 1. | Group | Jason Marshall | Midwest ISO Standards Collaborators | | X | | | | | | | | | |
| | | Additional Member | Additional Organization | Region | | | Segment Selection | | | | | | | |
| | 1. | Jim Cyrulewski | JDRJC Associates | RFC | | | 8 | | | | | | | |
| 2. | Group | Michael Brytowski | MRO NERC Standards Review Subcommittee | | | | | | | | | | | X |
| | | Additional Member | Additional Organization | Region | | | Segment Selection | | | | | | | |
| | 1. | Carol Gerou | MP | MRO | | | 1, 3, 5, 6 | | | | | | | |
| | 2. | Neal Balu | WPS | MRO | | | 3, 4, 5, 6 | | | | | | | |
| | 3. | Terry Bilke | MISO | MRO | | | 2 | | | | | | | |
| | 4. | Joe DePoorter | MGE | MRO | | | 3, 4, 5, 6 | | | | | | | |
| | 5. | Ken Goldsmith | ALTW | MRO | | | 4 | | | | | | | |
| | 6. | Jim Haigh | WAPA | MRO | | | 1, 6 | | | | | | | |
| | 7. | Terry Harbour | MEC | MRO | | | 1, 3, 5, 6 | | | | | | | |

Consideration of Comments on Second Draft of IRO-006-5 and IRO-006-EAST-1 — Project 2006-08

| | Commenter | Organization | Industry Segment | | | | | | | | | |
|----|--------------------------|--|---------------------------------------|--------------------------|---|-----|---|---|---|---|---|------------|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | 8. Joseph Knight | GRE | | | | MRO | | | | | | 1, 3, 5, 6 |
| | 9. Scott Nickels | RPU | | | | MRO | | | | | | 3, 4, 5, 6 |
| | 10. Dave Rudolph | BEPC | | | | MRO | | | | | | 3, 5, 6, 1 |
| | 11. Eric Ruskamp | LES | | | | MRO | | | | | | 1, 3, 5, 6 |
| | 12. Pam Sordet | XCEL | | | | MRO | | | | | | 1, 3, 5, 6 |
| 3. | Group | Michael Gammon | Kansas City Power & Light (KCPL) | X | | X | | X | X | | | |
| | Additional Member | Additional Organization | Region | Segment Selection | | | | | | | | |
| | 1. Jim Useldinger | Kansas City Power & Light | SPP | 1, 3, 5, 6 | | | | | | | | |
| | 2. Denney Fales | Kansas City Power & Light | SPP | 1, 3, 5, 6 | | | | | | | | |
| | 3. Tom Saitta | Kansas City Power & Light | SPP | 1, 3, 5, 6 | | | | | | | | |
| 4. | Group | Marc Butts | Southern Company Transmission | X | | | | | | | | |
| | Additional Member | Additional Organization | Region | Segment Selection | | | | | | | | |
| | 1. Hugh Francis | Southern Company Services, Inc. | SERC | 1 | | | | | | | | |
| | 2. J. T. Wood | Southern Company Services, Inc. | SERC | 1 | | | | | | | | |
| | 3. Chris Wilson | Southern Company Services, Inc. | SERC | 1 | | | | | | | | |
| 5. | Group | Denise Koehn | Bonneville Power Administration (BPA) | X | | X | | X | X | | | |
| | Additional Member | Additional Organization | Region | Segment Selection | | | | | | | | |
| | 1. Thomas Westbrook | Tx Pre-Schedule & Real Time Scheduling | WECC | 1 | | | | | | | | |
| | 2. Angie Lumbert | Tx Operational Analysis & Support | WECC | 1 | | | | | | | | |
| | 3. Wes Hutchison | Tx Operational Analysis & Support | WECC | 1 | | | | | | | | |
| 6. | Group | Sam Ciccone | FirstEnergy | X | | X | X | X | X | | | |
| | Additional Member | Additional Organization | Region | Segment Selection | | | | | | | | |
| | 1. Dave Folk | FE | RFC | 1, 3, 4, 5, 6 | | | | | | | | |
| | 2. Doug Hohlbaugh | FE | RFC | 1, 3, 4, 5, 6 | | | | | | | | |

Consideration of Comments on Second Draft of IRO-006-5 and IRO-006-EAST-1 — Project 2006-08

| | | Commenter | Organization | Industry Segment | | | | | | | | | | | |
|----|-------|--------------------------|---|------------------|---|---|---|---------------|---|---|---|---|----|--|--------------------------|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| 7. | Group | Guy Zito | Northeast Power Coordinating Council (NPCC) | | | | | | | | | | | | X |
| | | Additional Member | Additional Organization | | | | | Region | | | | | | | Segment Selection |
| | | 1. Ralph Rufrano | New York Power Authority | | | | | NPCC | | | | | | | 5 |
| | | 2. Al Adamson | New York State Reliability Council | | | | | NPCC | | | | | | | 10 |
| | | 3. Greg Campoli | New York Independent System Operator | | | | | NPCC | | | | | | | 2 |
| | | 4. Roger Champagne | Hydro-Quebec TransEnergie | | | | | NPCC | | | | | | | 2 |
| | | 5. Kurtis Chong | Independent Electricity System Operator | | | | | NPCC | | | | | | | 2 |
| | | 6. Sylvain Clermont | Hydro-Quebec TransEnergie | | | | | NPCC | | | | | | | 1 |
| | | 7. Manuel Couto | National Grid | | | | | NPCC | | | | | | | 1 |
| | | 8. Chris de Graffenried | Consolidated Edison Co. of New York, Inc. | | | | | NPCC | | | | | | | 1 |
| | | 9. Gerry Dunbar | Northeast Power Coordinating Council | | | | | NPCC | | | | | | | 10 |
| | | 10. Brian Evans-Mongeon | Utility Services | | | | | NPCC | | | | | | | 6 |
| | | 11. Mike Garton | Dominion Resources Services, Inc. | | | | | NPCC | | | | | | | 5 |
| | | 12. Mike Gildea | Constellation Energy | | | | | NPCC | | | | | | | 6 |
| | | 13. Brian Gooder | Ontario Power Generation Incorporated | | | | | NPCC | | | | | | | 5 |
| | | 14. Kathleen Goodman | ISO - New England | | | | | NPCC | | | | | | | 2 |
| | | 15. David Kiguel | Hydro One Networks Inc. | | | | | NPCC | | | | | | | 1 |
| | | 16. Randy MacDonald | New Brunswick System Operator | | | | | NPCC | | | | | | | 2 |
| | | 17. Bruce Metruck | | | | | | NPCC | | | | | | | 6 |
| | | 18. Don Nelson | | | | | | NPCC | | | | | | | 9 |
| | | 19. Chris Orzel | | | | | | NPCC | | | | | | | 5 |
| | | 20. Lee Pedowicz | | | | | | NPCC | | | | | | | 10 |
| | | 21. Robert Pellegrini | | | | | | NPCC | | | | | | | 1 |
| | | 22. Michael Schiavone | | | | | | NPCC | | | | | | | 1 |
| | | 23. Rick White | | | | | | NPCC | | | | | | | 1 |

Consideration of Comments on Second Draft of IRO-006-5 and IRO-006-EAST-1 — Project 2006-08

| | Commenter | Organization | Industry Segment | | | | | | | | | | | |
|-----|----------------|-------------------------|--|---|---|---|---|---|---|---|---|----|--|--|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| | 24. Peter Yost | | NPCC | | | | | | | 3 | | | | |
| 8. | Individual | Jason Shaver | American Transmission Company (ATC) | X | | | | | | | | | | |
| 9. | Individual | Dan Rochester | Independent Electricity System Operator (IESO) | | X | | | | | | | | | |
| 10. | Individual | Greg Rowland | Duke Energy Corporation | X | | X | | X | X | | | | | |
| 11. | Individual | Howard Rulf | We Energies | | | X | X | X | | | | | | |
| 12. | Individual | James H. Sorrels, Jr. | American Electric Power | X | | X | | X | X | | | | | |
| 13. | Individual | Jack Cashin/Barry Green | Electric Power Supply Association (EPSA) | | | | | X | X | | | | | |
| 14. | Individual | Patrick Brown | PJM Interconnection | | X | | | | | | | | | |
| 15. | Individual | Jeff Hackman | Ameren | X | | | | | | | | | | |
| 16. | Individual | Edward Davis | Entergy Services, Inc. | X | | X | | X | X | | | | | |
| 17. | Individual | Sandra Shaffer | PacifiCorp | X | | X | | X | X | | | | | |
| 18. | | Ben Li | ISO/RTO Council | | | | | | | | | | | |

1. The drafting team has removed the requirement from IRO-006-5 that indicated which methods were used in each of the Interconnections, instead relying on regional standards (with IRO-006-EAST-1 serving as an Interconnection-wide standard) for the three Interconnections to capture this information. Do you believe this to be appropriate?

Summary Consideration: The majority of comments agreed that this was appropriate. Those who objected questioned whether NERC was allowed to create an Interconnection-wide standard. The SDT believes that NERC is able to take this approach. Regarding whether or not WECC and ERCOT were being held to the same standard as the Eastern Interconnection, the team believes this is not an area of valid concern – and if it was, due to the technical deference afforded to WECC and ERCOT, the ERO would likely not be the proper forum to address it.

| Organization | Yes or No | Question 1 Comment |
|---|-----------|--|
| Midwest ISO Standards Collaborators | Yes | While we generally agree with this approach, it is actually somewhat confusing. IRO-006-EAST-1 is not a regional standard but a inter-connection wide standard and is thus posted with the IRO-006-5. This causes one to question why the other regional standards aren't posted but that is because they are truly regional standards and handled by WECC and ERCOT since their Interconnections are the same as the region. We question if an interconnection wide standard for the Eastern Interconnection is in fact supported by the NERC Rules of Procedure. Given the decoupling of the ERCOT and WECC region standards from this Interconnection wide standard effort, we fear that the Eastern Interconnection could be held to a higher standard than the WECC and ERCOT. What precautions is the drafting team taking to prevent this from happening? |
| <p>Response: The EAct requires that NERC give a “rebuttable presumption” of technical validity to the WECC and ERCOT approaches. Accordingly, the venue to address concerns with the WECC or ERCOT approaches is not within the Continent-wide NERC community – it is either within the WECC or ERCOT processes, or at the FERC.</p> <p>NERC’s Rules of Procedure do not prohibit the creation of Interconnection-wide standards. In previous postings, the drafting team questioned whether there was a preference for a continent-wide standard with interconnection-wide applicability or if there should be an interconnection-wide standard. Slightly more than 50% indicated they preferred the interconnection-wide standard, while approximately</p> | | |

| Organization | Yes or No | Question 1 Comment |
|---|-----------|---|
| | | <p>30% preferred the continent-wide standard with interconnection-wide applicability.</p> <p>Additionally, as both WECC and ERCOT are single RC areas, they do not necessarily need the kind of RC to RC coordination described in IRO-006-EAST. The Eastern Interconnection, with its multiple RCs, does have a need for coordination between RCs. Accordingly, the standard has requirements for RC to RC coordination that are not needed in WECC or ERCOT, which may indeed be a higher standard – but not one that would be applicable in those areas.</p> |
| <p>MRO NERC Standards Review Subcommittee</p> | <p>No</p> | <p>While we generally agree with this approach, it is actually somewhat confusing. IRO-006-EAST-1 is not a regional standard but a inter-connection wide standard and is thus posted with the IRO-006-5. This causes one to question why the other regional standards aren't posted but that is because they are truly regional standards and handled by WECC and ERCOT since their Interconnections are the same as the region. We question if an interconnection wide standard for the Eastern Interconnection is in fact supported by the NERC Rules of Procedure. Given the decoupling of the ERCOT and WECC region standards from this Interconnection wide standard effort, we fear that the Eastern Interconnection could be held to a higher standard than the WECC and ERCOT. What precautions is the drafting team taking to prevent this from happening?</p> |
| | | <p>Response: The EAct requires that NERC give a “rebuttable presumption” of technical validity to the WECC and ERCOT approaches. Accordingly, the venue to address concerns with the WECC or ERCOT approaches is not within the Continent-wide NERC community – it is either within the WECC or ERCOT processes, or at the FERC.</p> <p>NERC’s Rules of Procedure do not prohibit the creation of Interconnection-wide standards. In previous postings, the drafting team questioned whether there was a preference for a continent-wide standard with interconnection-wide applicability or if there should be an interconnection-wide standard. Slightly more than 50% indicated they preferred the interconnection-wide standard, while approximately 30% preferred the continent-wide standard with interconnection-wide applicability.</p> <p>Additionally, as both WECC and ERCOT are single RC areas, they do not necessarily need the kind of RC to RC coordination described in IRO-006-EAST. The Eastern Interconnection, with its multiple RCs, does have a need for coordination between RCs. Accordingly, the standard has requirements for RC to RC coordination that are not needed in WECC or ERCOT, which may indeed be a higher standard –</p> |

| Organization | Yes or No | Question 1 Comment |
|--|------------|--|
| but not one that would be applicable in those areas. | | |
| ISO/RTO Council | Yes and No | While we generally agree with this approach, it is actually somewhat confusing. IRO-006-EAST-1 is not a regional standard but a inter-connection wide standard and is thus posted with the IRO-006-5. This causes one to question why the other regional standards aren't posted but that is because they are truly regional standards and handled by WECC and ERCOT since their Interconnections are the same as the region. We question if an interconnection wide standard for the Eastern Interconnection is in fact supported by the NERC Rules of Procedure. |
| <p>Response: The EAct requires that NERC give a “rebuttable presumption” of technical validity to the WECC and ERCOT approaches. Accordingly, the venue to address concerns with the WECC or ERCOT approaches is not within the Continent-wide NERC community – it is either within the WECC or ERCOT processes, or at the FERC.</p> <p>NERC’s Rules of Procedure do not prohibit the creation of Interconnection-wide standards. In previous postings, the drafting team questioned whether there was a preference for a continent-wide standard with interconnection-wide applicability or if there should be an interconnection-wide standard. Slightly more than 50% indicated they preferred the interconnection-wide standard, while approximately 30% preferred the continent-wide standard with interconnection-wide applicability.</p> | | |
| FirstEnergy | Yes | We agree. We would also suggest requirement R1 of IRO-006-5 be revised to be a "directive" rather than a "request". If an entity must comply with the request then it should come in the form of an RC directive; even if it is a directive from one RC to another RC. |
| <p>Response: The SDT believes this is not a true “directive” – it is simply RC to RC coordination.</p> | | |
| KCPL | Yes | |
| Southern Company Transmission | Yes | N/A |
| BPA | Yes | |

| Organization | Yes or No | Question 1 Comment |
|-------------------------------|-----------|--------------------|
| NPCC | Yes | |
| American Transmission Company | Yes | |
| IESO | Yes | |
| Duke Energy Corporation | Yes | |
| We Energies | Yes | |
| American Electric Power | Yes | |
| EPSA | Yes | |
| PJM Interconnection | Yes | |
| Ameren | Yes | |
| PacifiCorp | Yes | |

2. The drafting team has expanded the applicability of IRO-006-5 to include the Transmission Operator and the Balancing Authority. Do you believe this to be appropriate?

Summary Consideration: The majority of comments supported the addition. However, some entities suggested that including the Transmission Operator as a responding entity did not make sense. The SDT concurred and removed the Transmission Operator as an applicable entity.

Some entities suggested that the Interchange Authority should be included; the team disagreed, believing that any role for the Interchange Authority should be addressed in the INT standards.

Some entities suggested there was a potential for conflict between entities in different Interconnections. The SDT does not agree that the potential for conflict exists.

| Organization | Yes or No | Question 2 Comment |
|--|-----------|---|
| Midwest ISO Standards Collaborators | No | We agree with the drafting team inclusion of the BA. It is not clear to us why the Transmission Operator is included. What role does the Transmission Operator play in curtailing an Interchange Transaction. This may be confusing the TOP with TSP or IA. |
| Response: The drafting team agrees, and has removed the Transmission Operator from the applicability of the standard. Note that Transmission Operators are still referenced in R1 as entities that may send requests to Reliability Coordinators and Balancing Authorities. | | |
| MRO NERC Standards Review Subcommittee | No | We agree with the drafting team inclusion of the BA. It is not clear to us why the Transmission Operator is included. What role does the Transmission Operator play in curtailing an Interchange Transaction. This may be confusing the TOP with TSP or IA. |
| Response: The drafting team agrees, and has removed the Transmission Operator from the applicability of the standard. Note that Transmission Operators are still referenced in R1 as entities that may send requests to Reliability Coordinators and Balancing Authorities. | | |
| American Transmission Company | No | We agree with the inclusion of the BA but do not agree with the inclusion of the TOP. ATC does not believe that the TOP plays a role in this standard and that maybe the team is confusing the TOP with the TSP or IA. |

| Organization | Yes or No | Question 2 Comment |
|---|-----------|---|
| | | What responsibility does the Transmission Operator have in curtailing an Interchange Transaction? |
| <p>Response: The drafting team agrees, and has removed the Transmission Operator from the applicability of the standard. Note that Transmission Operators are still referenced in R1 as entities that may send requests to Reliability Coordinators and Balancing Authorities.</p> | | |
| ISO/RTO Council | No | We agree with the drafting team inclusion of the BA. It is not clear to us why the Transmission Operator is included. What role does the Transmission Operator play in curtailing an Interchange Transaction. This may be confusing the TOP with TSP or IA. |
| <p>Response: The drafting team agrees, and has removed the Transmission Operator from the applicability of the standard. Note that Transmission Operators are still referenced in R1 as entities that may send requests to Reliability Coordinators and Balancing Authorities.</p> | | |
| FirstEnergy | No | We understand per the SDT response to comments ("IRO-006-5 R2 has been modified to include Transmission Operators and Balancing Authorities, which the SDT believes will further support the WECC practices") that the TOP and BA were added to the applicability to reflect WECC practices. Although we believe a continent-wide standard should capture all best practices, it should not cause issues with any other region or interconnection. In the East interconnection entities are ultimately bound by the RC directives since they have the highest level of authority. The requirement takes WECC into account but could cause compliance issues to a TOP or BA in the Eastern interconnection if it did not follow through on a request from a neighboring TOP or BA because they were already bound by a request from an RC. The phrase "as appropriate for the neighboring Interconnection" is also ambiguous and could add to conflict and varying interpretations. The wording needs clarity and we suggest that the TOP/BA applicability only be included in WECC's TLR standard IRO-006-WECC-1 if it is only appropriate in the Western Interconnection. Also, this applicability may conflict with IRO-001-1 which requires "R1. Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries." Therefore all segments of any interconnection have a Reliability Coordinator to coordinate emergency operations and issue directives to the BAs and TOPs. |
| <p>Response: The ambiguous language has been removed. However, we believe there should not be any conflict, as the requirement includes a provision to not implement the request if the applicable entity "provides a reliability reason that it cannot comply with the request." This reason could include a statement that the local RC was forbidding the requested action. Note the requirement only applies to requests to curtail Interchange transactions that cross an Interconnection Boundary, and the request must be made as part of an Interconnection-wide congestion management</p> | | |

| Organization | Yes or No | Question 2 Comment |
|---|-----------|--|
| <p>procedure. Given these limitations, we do not believe there to be a potential for conflict.</p> | | |
| Southern Company Transmission | Yes | The Drafting Team might also consider including Interchange Authorities. Please see our comments at Question #7. |
| <p>Response: The drafting team believes that the Interchange Authority function provides coordination of interchange transaction changes (which may occur as a result of this standard), but it is not directly involved. To the extent requirements are needed to define tasks for the Interchange Authority related to Interchange, they will most likely be addressed in the INT standards.</p> | | |
| KCPL | Yes | |
| BPA | Yes | |
| NPCC | Yes | |
| IESO | Yes | |
| Duke Energy Corporation | Yes | |
| We Energies | Yes | |
| American Electric Power | Yes | |
| EPSA | Yes | |
| PJM Interconnection | Yes | |
| Ameren | Yes | |
| PacifiCorp | Yes | |

3. The drafting team has included measures and data retention period for IRO-006-5. Do you agree with these measures and the data retention period?

Summary Consideration: The majority of comments supported the language. Several entities questioned whether reloading should be included in the standard. The team removed the concept of mandatory reloading, as this is not the way reloading works in reality. The team also explained R1 in more detail, and removed some ambiguous language in the requirement.

| Organization | Yes or No | Question 3 Comment |
|--|-----------|---|
| Southern Company Transmission | No | There is no need to require compliance with reload requests when the reloads are due to the the level of the TLR being reduced (ie. level 3 to level 1). The reload is due to the fact that the flowgate can take more flow than is currently allowed. Reloads are a commercial issue and not a reliability issue. They also conflict with current business practices such as off hour ramping for non-reliability reasons.Reloads is referenced in IRO-006-5 at:Requirement R1Measure M1VSL for R1and in IRO-006-EAST-1 at:Requirement R3.2.2Requirement R3.3.1Requirement R3.3.2Requirement R3.3.3Requirement R3.3.4Measure M3 (2)VSL for R3It is our opinion that reloading, and the references to it, should be removed from the two standards. |
| Response: The drafting team concurs, and has removed “reloading” from the proposed IRO-006-5 and IRO-006-EAST-1. | | |
| FirstEnergy | No | Per our previous comments regarding the TOP/BA applicability, including them in this standard and along with measures could cause a double jeopardy violation for the same infraction. |
| Response: As discussed in response to the previous comment, the SDT does not believe that there is any potential for double jeopardy. | | |
| NPCC | No | Please explain the intent of the words "as appropriate" in R1. This suggests that Balancing Authorities (BAs) and Transmission Operators (TOPs) (in addition to Reliability Coordinators) in another Interconnection, are also authorized to make requests to curtail or reload a transaction pursuant to an Interconnection-wide transmission loading relief procedure. Are they authorized "by default", or is it expected that BAs and TOPs |

| Organization | Yes or No | Question 3 Comment |
|--|-----------|--|
| | | will receive their authorization based on an agreement between the neighboring Reliability Coordinators? In brief, what is the expected protocol for making these requests and how is it to be set up? |
| <p>Response: The ambiguous “as appropriate” language has been removed. However, in general, it is possible that Transmission Operators and Balancing Authorities may initiate curtailment of Interchange Transactions based on interconnection-wide congestion management activities. The intent of this requirement is to make it clear that should such requests be received in a different Interconnection than that from which the request originated, the BA or RC is required to either honor the request or explain why they cannot honor the request.</p> | | |
| IESO | No | Please explain the intent of the words "as appropriate" in R1. This suggests that Balancing Authorities (BAs) and Transmission Operators (TOPs) (in addition to Reliability Coordinators) in another Interconnection, are also authorized to make requests to curtail or reload a transaction pursuant to an Interconnection-wide transmission loading relief procedure. Are they authorized "by default", or is it expected that BAs and TOPs will receive their authorization based on an agreement between the neighbouring Reliability Coordinators? In brief, what is the expected protocol for making these requests and how is it to be set up? |
| <p>Response: The ambiguous “as appropriate” language has been removed. However, in general, it is possible that Transmission Operators and Balancing Authorities may initiate curtailment of Interchange Transactions based on interconnection-wide congestion management activities. The intent of this requirement is to make it clear that should such requests be received in a different Interconnection than that from which the request originated, the BA or RC is required to either honor the request or explain why they cannot honor the request.</p> | | |
| We Energies | No | R1 states that the requesting RC, BA, or TOP are in another interconnection. M1 needs to also state that. Also "reload" needs to be removed (see question #7). |
| <p>Response: The SDT has modified the standard to remove “reload,” and modified M1 to include the reference to “another interconnection” as suggested.</p> | | |
| Midwest ISO Standards Collaborators | Yes | |
| MRO NERC Standards Review Subcommittee | Yes | |

| Organization | Yes or No | Question 3 Comment |
|-------------------------------|-----------|--------------------|
| KCPL | Yes | |
| BPA | Yes | |
| American Transmission Company | Yes | |
| Duke Energy Corporation | Yes | |
| American Electric Power | Yes | |
| PJM Interconnection | Yes | |
| Ameren | Yes | |
| PacifiCorp | Yes | |
| ISO/RTO Council | Yes | |

4. The drafting team has included measures and data retention period for IRO-006-EAST-1. Do you agree with these measures and the data retention period?

Summary Consideration: The majority of comments supported the measures and data retention. The team made minor edits based on suggestions received.

| Organization | Yes or No | Question 4 Comment |
|--|-----------|---|
| Duke Energy Corporation | No | <p>Measure M1 and the associated Requirement R1 and VSL all include the descriptive phrase "more effective" when describing actions other than a TLR to be taken to mitigate an IROL exceedance. This phrase introduces uncertainty and unnecessary compliance risk and should be deleted since the actions to be taken are spelled out in the Requirement (i.e. reconfiguration, redispatch, use of DSM and load shedding). Compliance should not depend upon an after-the-fact determination of how effective the actions turned out to be. Additionally, the way Requirement R1 is written, it could be interpreted to mean that all of the listed actions must be taken, as a minimum. R1 should state that actions to be taken "could include", but are not limited to reconfiguration, etc.</p> |
| <p>Response: The drafting team has modified the language of R1 and M1 to address your concerns.</p> | | |
| PJM Interconnection | No | <p>The combination of requirements in this standard make sense, particularly as they pertain to IROLs and the need to plan, implement and communicate all steps needed to mitigate the IROL exceedance as quickly as possible. The issue is that the wording in requirements 1 through 4 may setup either an explicit (intended by the SDT) or implicit (not intended, but open to interpretation by auditors) logging and reporting requirement to log all actions "to be taken", i.e., the plan for each and every SOL (IROLs may make sense) as well as each and every hour until the TLR is set as a TLR 0. Non-compliance could be as benign as failing to log all of the action steps "to be taken" for a particular hour of a TLR level 1 for any SOL that has been in effect during the entire peak period. The excessive reporting/data retention requirements will not provide commensurate improvement in system reliability. R2. When initiating the Eastern Interconnection TLR procedure to prevent or mitigate an SOL or IROL exceedance, and at least every clock hour after initiation, up to and including the hour when the TLR level has been identified as TLR Level 0, the Reliability Coordinator shall identify: R2.1. The TLR level in accordance with the criteria in Appendix A, and R2.2. A list of actions to take, based on the</p> |

| Organization | Yes or No | Question 4 Comment |
|--|-----------|--|
| | | TLR level chosen.PJM suggests that the wording be changed to reflect that all actions taken be logged, but remove any implicit or explicit reference to the requirement to log all actions "to be taken", i.e., the plan for each and every SOL (IROLs may make sense) as wells as each and every hour until the TLR is set as a TLR 0. |
| Response: The drafting team has modified the standard to use the phrase “congestion management actions to be implemented” | | |
| Southern Company Transmission | No | Please see response to Question #3. |
| Response: Please see question 3 for response. | | |
| American Transmission Company | No | Please see our comment to question 2 |
| Response: Please see question 2 for response. | | |
| NPCC | Yes | 1. While we generally agree with the measures and data retention period, we do have a concern with the phrase "prior to or in conjunction with" in R1. We interpret the intent here to be that the Reliability Coordinator would, in response to an IROL exceedance, initiate local control procedures first, followed by the TLR procedure, or at least the two procedures would be carried out at the same time. The phrase in question leaves open the possibility that the TLR procedure may be initiated first with other control actions coming later, an ambiguity we believe should be cleared up at this stage if this is not the intent. We therefore suggest the following alternative phrasing "either prior to or simultaneously with". M1 would therefore have to be changed. 2. In M3, there is a typo in line 2. The word "for" should be removed. |
| Response: The drafting team has modified R1, M1, and M3 as suggested. | | |
| IESO | Yes | 1. While we generally agree with the measures and data retention period, we do have a concern with the phrase "prior to or in conjunction with" in R1. We interpret the intent here to be that the Reliability Coordinator would, in response to an IROL exceedance, initiate local control procedures first, followed by the TLR procedure, or at least the two procedures would be carried out at the same time. The phrase in question leaves open the possibility that the TLR procedure may be initiated first with other control actions coming |

| Organization | Yes or No | Question 4 Comment |
|--|-----------|--|
| | | later, an ambiguity we believe should be cleared up at this stage if this is not the intent. We therefore suggest the following alternative phrasing "either prior to or simultaneously with". M1 would therefore have to be changed. 2. In M3, there is a typo in line 2. The word "for" should be removed. |
| Response: The drafting team has modified R1, M1, and M3 as suggested. | | |
| Midwest ISO Standards Collaborators | Yes | |
| MRO NERC Standards Review Subcommittee | Yes | |
| KCPL | Yes | |
| FirstEnergy | Yes | |
| We Energies | Yes | |
| American Electric Power | Yes | |
| EPSA | Yes | |
| Ameren | Yes | |
| ISO/RTO Council | Yes | |
| PacifiCorp | | None |

5. The drafting team has included Violation Severity Levels for IRO-006-5. Do you agree with these Violation Severity Levels?

Summary Consideration: Slightly more than half of the comments supported the IRO-006-5 VSLs. The team removed references to reloading from the standards, as discussed previously. Some entities objected to the use of a “binary” VSL; the team explained the use of VSLs and its rationale for selecting this particular approach.

| Organization | Yes or No | Question 5 Comment |
|---|-----------|--|
| Midwest ISO Standards Collaborators | No | <p>The Commission established in their June 19, 2008 order conditional approving VSLs that they prefer VSLs to have as many levels as possible defined in paragraph 27. For IRO-006-5 R1, we believe that it is possible and preferable to assign two VSLs rather than one by splitting the response to reloads from the response for curtailments. When you further consider that reloading is not a reliability issue but an equity issue (that is a market participant wants their transaction to flow for as long as possible to increase their revenue and the Transmission Provider does as likewise to avoid crediting the Transmission Reservation usage charges for the curtailments), the Lower VSL level should be used for it. Thus, we propose the following VSLs for IRO-006-5 R1: Lower: The applicable entity received a request to reload an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority or Transmission Operator, but the entity neither complied with the request nor provided a reliability reason it could not comply with the request. Severe: The applicable entity received a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority or Transmission Operator, but the entity neither complied with the request nor provided a reliability reason it could not comply with the request.</p> |
| <p>Response: The drafting team has eliminated reloading from the standard.</p> | | |
| MRO NERC Standards Review Subcommittee | No | <p>The Commission established in their June 19, 2008 order conditional approving VSLs that they prefer VSLs to have as many levels as possible defined in paragraph 27. For IRO-006-5 R1, we believe that it is possible and preferable to assign two VSLs rather than one by splitting the response to reloads from the response for curtailments. When you further consider that reloading is not a reliability issue but an equity issue (that is a</p> |

| Organization | Yes or No | Question 5 Comment |
|---|-----------|--|
| | | <p>market participant wants their transaction to flow for as long as possible to increase their revenue and the Transmission Provider does as likewise to avoid crediting the Transmission Reservation usage charges for the curtailments), the Lower VSL level should be used for it. Thus, we propose the following VSLs for IRO-006-5 R1:Lower: The applicable entity received a request to reload an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority or Transmission Operator, but the entity neither complied with the request nor provided a reliability reason it could not comply with the request.Severe: The applicable entity received a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority or Transmission Operator, but the entity neither complied with the request nor provided a reliability reason it could not comply with the request.</p> |
| <p>Response: The drafting team has eliminated reloading from the standard.</p> | | |
| ISO/RTO Council | No | <p>The Commission established in their June 19, 2008 order conditional approving VSLs that they prefer VSLs to have as many levels as possible defined in paragraph 27. For IRO-006-5 R1, we believe that it is possible and preferable to assign two VSLs rather than one by splitting the response to reloads from the response for curtailments. When you further consider that reloading is not a reliability issue but an equity issue (that is a market participant wants their transaction to flow for as long as possible to increase their revenue and the Transmission Provider does as likewise to avoid crediting the Transmission Reservation usage charges for the curtailments), the Lower VSL level should be used for it. Thus, we propose the following VSLs for IRO-006-5 R1:</p> <p>Lower: The applicable entity received a request to reload an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority or Transmission Operator, but the entity neither complied with the request nor provided a reliability reason it could not comply with the request.</p> <p>Severe: The applicable entity received a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority or Transmission Operator, but the entity neither complied with the request nor provided a reliability reason it could not comply with the request.</p> |

| Organization | Yes or No | Question 5 Comment |
|--|-----------|--|
| <p>Response: The drafting team has eliminated reloading from the standard.</p> | | |
| Southern Company Transmission | No | We again take exception to reloads being included in the standard. Is there an instance/example of when a reload that was not performed caused a reliability problem on a flowgate currently under TLR? |
| <p>Response: The drafting team has eliminated reloading from the standard.</p> | | |
| FirstEnergy | No | If the communication is truly a request that is not honored, then the VSL should be a lower not a severe. If it is a directive that is not followed as we have suggested in the response to question 1 then a severe is appropriate. |
| <p>Response: VSLs do not describe the risk of a violation, but the extent to which a violation occurred. In this case, either the request was honored (or not honored but explained), or it was not. As such, there is only 0% compliance or 100% compliance. In the case of 0% compliance, the SDT is treating this as a complete failure to meet the requirement; hence, the use of the Severe VSL.</p> <p>Note that this is not a directive - it is intended to be communication of a desired outcome, followed by either concurrence or negotiation of a compromise outcome.</p> | | |
| American Transmission Company | No | The standard requires a response to a request, not a directive. This distinction implies that the request is less onerous than a directive and should, therefore, have a lower severity level. In addition, the reload of an Interchange Transaction is not a reliability issue but a market issue and should have a lower severity level. |
| <p>Response: VSLs do not describe the risk of a violation, but the extent to which a violation occurred. In this case, either the request was honored (or not honored but explained), or it was not. As such, there is only 0% compliance or 100% compliance. In the case of 0% compliance, the SDT is treating this as a complete failure to meet the requirement; hence, the use of the Severe VSL.</p> <p>Note that this is not a directive - it is intended to be communication of a desired outcome, followed by either concurrence or negotiation of a compromise outcome.</p> <p>The drafting team has eliminated reloading from the standard.</p> | | |
| We Energies | No | Same comment as #3, remove reload. Requesting RC, BA, or TOP is in another interconnection. |
| <p>Response: The drafting team has eliminated reloading from the standard.</p> | | |

| Organization | Yes or No | Question 5 Comment |
|--|-----------|--------------------|
| The standard has been clarified to indicate that the requestor must be from another Interconnection. | | |
| BPA | Yes | |
| KCPL | Yes | |
| NPCC | Yes | |
| IESO | Yes | |
| Duke Energy Corporation | Yes | |
| American Electric Power | Yes | |
| PJM Interconnection | Yes | |
| Ameren | Yes | |
| PacifiCorp | Yes | |

6. The drafting team has included Violation Severity Levels for IRO-006-EAST-1. Do you agree with these Violation Severity Levels?

Summary Consideration: Only a small number of comments supported the VSLs for IRO-006-EAST-1. Some entities had concerns with the use of the phrase “some, but not all.” The SDT explained the use of this term. Some entities suggested the need for consistency between the requirements and the VSLs; the drafting team made changes to address this shortcoming. One entity suggested removing the concept of timeliness from R5; the team disagreed with the suggestion.

| Organization | Yes or No | Question 6 Comment |
|-------------------------------------|-----------|---|
| Midwest ISO Standards Collaborators | No | <p>Please split the tables into rows. It is difficult to detect where the VSLs for one requirement end and another requirement begin. We believe part of the High VSL is ambiguous thus violates the Commission's guideline 2 (specifically part b) established in their June 19, 2008 order on VSLs. Specifically, how many is some? Use of the term some will result in inconsistent enforcement. Additionally, we note that it is not clear what VSL applies when all of the sub-requirements 3.1-3.3 are violated. To ensure various combinations of the violations of the sub-requirements are covered in all the VSLs and to make the VSLs consistent with the direction the VSL drafting team is applying to VSLs, we suggest the following VSLs:</p> <p>Lower: The initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level. (R3.1)</p> <p>Moderate: The initiating Reliability Coordinator did not communicate the list of actions to one or more of the required Reliability Coordinators, which are defined as all Eastern Interconnection Reliability Coordinators and any Reliability Coordinators in other Interconnections responsible for curtailing or reloading Interchange Transactions crossing Interconnection boundaries identified in the list of actions. (R3.2)</p> <p>OR</p> <p>The initiating Reliability Coordinator did not request one or more of the Reliability Coordinators identified in R3.3 to implement the identified actions.</p> <p>High: The initiating Reliability Coordinator violated two of the sub-requirements R3.1, R3.2, and R3.3 as</p> |

| Organization | Yes or No | Question 6 Comment |
|---|-----------|---|
| | | <p>described in the Lower or Moderate VSLs.</p> <p>Severe: The initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level. (R3.1)</p> <p>AND</p> <p>The initiating Reliability Coordinator did not communicate the list of actions to one or more of the required Reliability Coordinators, which are defined as all Eastern Interconnection Reliability Coordinators and any Reliability Coordinators in other Interconnections responsible for curtailing or reloading Interchange Transactions crossing Interconnection boundaries identified in the list of actions. (R3.2)</p> <p>AND</p> <p>The initiating Reliability Coordinator did not request one or more of the Reliability Coordinators identified in R3.3 to implement the identified actions.</p> |
| <p>Response: The table has been modified so the row delineations will display correctly.</p> <p>The drafting team believes the VSLs are clear as written. Note that the use of the phrase “some” would be ambiguous if other options were provided and intended to imply a relative scale (e.g., few, some, many, etc...). However, the definition of “some” is generally defined as being a part of a set of unspecified size. In this case, the VSL is graded based on ALL actions being taken, SOME actions being taken, or NO actions being taken. SOME, therefore, indicates that at least one action was taken (therefore the entity has met more than 0% of their obligation), but not all actions were taken (so the entity did not meet 100% of their obligation). We believe that this use, in this context, is appropriate.</p> | | |
| <p>MRO NERC Standards Review Subcommittee</p> | <p>No</p> | <p>Please split the tables into rows. It is difficult to detect where the VSLs for one requirement end and another requirement begin. We believe part of the High VSL is ambiguous thus violates the Commission's guideline 2 (specifically part b) established in their June 19, 2008 order on VSLs. Specifically, how many is some? Use of the term some will result in inconsistent enforcement. Additionally, we note that it is not clear what VSL applies when all of the sub-requirements 3.1-3.3 are violated. To ensure various combinations of the violations of the sub-requirements are covered in all the VSLs and to make the VSLs consistent with the direction the VSL drafting team is applying to VSLs, we suggest the following VSLs:</p> <p>Lower: The initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level. (R3.1)</p> <p>Moderate: The initiating Reliability Coordinator did not communicate the list of actions to one or more of the</p> |

| Organization | Yes or No | Question 6 Comment |
|---|-----------|---|
| | | <p>required Reliability Coordinators, which are defined as all Eastern Interconnection Reliability Coordinators and any Reliability Coordinators in other Interconnections responsible for curtailing or reloading Interchange Transactions crossing Interconnection boundaries identified in the list of actions. (R3.2)</p> <p>OR</p> <p>The initiating Reliability Coordinator did not request one or more of the Reliability Coordinators identified in R3.3 to implement the identified actions.</p> <p>High: The initiating Reliability Coordinator violated two of the sub-requirements R3.1, R3.2, and R3.3 as described in the Lower or Moderate VSLs.</p> <p>Severe: The initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level. (R3.1) ANDThe initiating Reliability Coordinator did not communicate the list of actions to one or more of the required Reliability Coordinators, which are defined as all Eastern Interconnection Reliability Coordinators and any Reliability Coordinators in other Interconnections responsible for curtailing or reloading Interchange Transactions crossing Interconnection boundaries identified in the list of actions. (R3.2) AND The initiating Reliability Coordinator did not request one or more of the Reliability Coordinators identified in R3.3 to implement the identified actions.</p> |
| <p>Response: The table has been modified so the row delineations will display correctly.</p> <p>The drafting team believes the VSLs are clear as written. Note that the use of the phrase “some” would be ambiguous if other options were provided and intended to imply a relative scale (e.g., few, some, many, etc...). However, the definition of “some” is generally defined as being a part of a set of unspecified size. In this case, the VSL is graded based on ALL actions being taken, SOME actions being taken, or NO actions being taken. SOME, therefore, indicates that at least one action was taken (therefore the entity has met more than 0% of their obligation), but not all actions were taken (so the entity did not meet 100% of their obligation). We believe that this use, in this context, is appropriate.</p> | | |
| ISO/RTO Council | No | <p>Please split the tables into rows. It is difficult to detect where the VSLs for one requirement end and another requirement begin.</p> <p>We believe part of the High VSL is ambiguous thus violates the Commission's guideline 2 (specifically part b) established in their June 19, 2008 order on VSLs. Specifically, how many is some? Use of the term some will result in inconsistent enforcement. Additionally, we note that it is not clear what VSL applies when all of the sub-</p> |

| Organization | Yes or No | Question 6 Comment |
|--|-----------|--|
| | | <p>requirements 3.1-3.3 are violated. To ensure various combinations of the violations of the sub-requirements are covered in all the VSLs and to make the VSLs consistent with the direction the VSL drafting team is applying to VSLs, we suggest the following VSLs:</p> <p>Lower: The initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level. (R3.1)</p> <p>Moderate: The initiating Reliability Coordinator did not communicate the list of actions to one or more of the required Reliability Coordinators, which are defined as all Eastern Interconnection Reliability Coordinators and any Reliability Coordinators in other Interconnections responsible for curtailing or reloading Interchange Transactions crossing Interconnection boundaries identified in the list of actions. (R3.2)</p> <p>OR</p> <p>The initiating Reliability Coordinator did not request one or more of the Reliability Coordinators identified in R3.3 to implement the identified actions.</p> <p>High: The initiating Reliability Coordinator violated two of the sub-requirements R3.1, R3.2, and R3.3 as described in the Lower or Moderate VSLs.</p> <p>Severe: The initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level. (R3.1)</p> <p>AND</p> <p>The initiating Reliability Coordinator did not communicate the list of actions to one or more of the required Reliability Coordinators, which are defined as all Eastern Interconnection Reliability Coordinators and any Reliability Coordinators in other Interconnections responsible for curtailing or reloading Interchange Transactions crossing Interconnection boundaries identified in the list of actions. (R3.2)</p> <p>AND</p> <p>The initiating Reliability Coordinator did not request one or more of the Reliability Coordinators identified in R3.3 to implement the identified actions.</p> |
| <p>Response: The drafting team believes that the language as written is appropriate.</p> <p>Note that the use of the phrase “some” would be ambiguous if other options were provided and intended to imply a relative scale (e.g., few, some,</p> | | |

| Organization | Yes or No | Question 6 Comment |
|--|-----------|--|
| <p>many, etc...). However, the definition of “some” is generally defined as being a part of a set of unspecified size. In this case, the VSL is graded based on ALL actions being taken, SOME actions being taken, or NO actions being taken. SOME, therefore, indicates that at least one action was taken (therefore the entity is has met more than 0% of their obligation), but not all actions were taken (so the entity did not meet 100% of their obligation). We believe that this use, in this context, is appropriate.</p> | | |
| KCPL | No | <p>The term "more effective actions" in the VSL for R1 is too subjective and not auditably supportable. Obviously, the determination of what is "more effective actions" is debatable and can be the cause of controversy in an audit. Recommend either removal or quantifying actions that could be considered "more effective" in Requirement R1, measure M1, and the VSL for R1.</p> |
| <p>Response: The drafting team has removed the phrase “more effective” from the requirement.</p> | | |
| Southern Company Transmission | No | <p>Please see response to Question #5 Also, the Severe VSL Requirement R5 suggests that an RC's response time of 25 minutes plus one is just as harmful as not responding at all. Has any consideration been given to removing the time component of this VSL?</p> |
| <p>Response: Please see question 5 for response.</p> <p>The time component of the VSL was included to ensure relief is provided on a timely basis. If that time exceeds 25 minutes, we believe the RC may be unable to seek alternate relief suggestions in a time frame sufficient to avoid mitigate the problem effectively. Therefore, the late provision of this information has little reliability value, and does not meet the intent of the requirement.</p> | | |
| NPCC | No | <p>See our response to Q#4 re. R1.R5 states that the RC must acknowledge to the initiating RC the actions "it will take" within ten minutes, whereas the Lower, Moderate and High VSLs refer to "its [the RC's] actions taken" and the Severe VSL refers to "its actions". These discrepancies in what is to be communicated in our view need to be addressed. We suggest modifying the VSLs by replacing the text in quotes with "the actions it will take" or "the actions it intended to take".</p> |
| <p>Response: Please see response to question 4.</p> <p>The language regarding “it will take” has been modified in the VSLs to be consistent with the requirement.</p> | | |

| Organization | Yes or No | Question 6 Comment |
|--|-----------|---|
| IESO | No | See our response to Q#4 re. R1.R5 states that the RC must acknowledge to the initiating RC the actions "it will take" within ten minutes, whereas the Lower, Moderate and High VSLs refer to "its [the RC's] actions taken" and the Severe VSL refers to "its actions". These discrepancies in what is to be communicated in our view need to be addressed. We suggest modifying the VSLs by replacing the text in quotes with "the actions it will take" or "the actions it intended to take". |
| <p>Response: Please see response to question 4.</p> <p>The language regarding "it will take" has been modified in the VSLs to be consistent with the requirement.</p> | | |
| Duke Energy Corporation | No | The VSL for Requirement R1 should have the phrase "more effective" deleted as pointed out in our Comment #4 above. The VSL for Requirement R3 should be revised to place R3.1, R3.2 and R3.3 all under the SEVERE VSL heading. Failure to comply with any of these sub-requirements would result in an overall failure to meet Requirement R3. |
| <p>Response: The drafting team has removed the phrase "more effective" from R1 and its VSLs.</p> <p>However, the drafting team disagrees with the suggestion that any failure to comply with 3.1, 3.2, or 3.3 should be seen as a severe violation. A failure to implement 3.1 results in a lack of communication, but the remaining actions are the more important actions. If 3.2 is missed, then there is a more detailed lack of communication and coordination regarding what will be happening, but it does not eliminate the action that provides the relief. However, failing 3.3 results in some or all of the requested relief not being provided; hence its High and Severe VSL.</p> | | |
| We Energies | Yes | |
| American Electric Power | Yes | |
| FirstEnergy | Yes | |
| PJM Interconnection | Yes | |
| Ameren | Yes | |

| Organization | Yes or No | Question 6 Comment |
|--------------|-----------|--------------------|
| PacifiCorp | | None |

7. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the proposed standards.

Summary Consideration: The majority of commenters did not have significant comments. Changes made in response were minor and did not change the intent of the standard.
 Some commenters expressed concern regarding the guidelines for establishing the appropriate TLR Level. The SDT made clarifying changes to the standard to make it clear that these are not requirements.

| Organization | Question 7 Comment |
|--|---|
| Midwest ISO Standards Collaborators | IRO-001-1 R8 requires TOPs and BAs to follow RC directives. We are concerned that these standards may be creating potential for double jeopardy because IRO-001-1 R8 already obligates BAs and TOPs to issue curtailments. Does the drafting team believe that issuing a TLR and associated curtailment requirements by the RC not represent an RC directive? We believe the industry may not have a consistent opinion on this position and that some entities could be found in violation of a requirement in these standards and IRO-001-1 R8. We support the drafting team's position regarding use of the TLR in conjunction with other tools to mitigate an IROL that has been exceeded. We believe the Commission is misapplying the conclusions of the Blackout Report. |
| Response: By virtue of the fact that an RC or BA can respond in the negative if they have a reliability reason to do so, we believe these are not directives. | |
| MRO NERC Standards Review Subcommittee | We support the drafting team's position regarding use of the TLR in conjunction with other tools to mitigate an IROL that has been exceeded. We believe the Commission is misapplying the conclusions of the Blackout Report. |
| Response: The drafting team appreciates your supportive comments. | |
| KCPL | No additional comments. |
| Southern Company Transmission | Interchange Authorities are not included in the standard. TLR curtailments are often denied by the Interchange Authorities, sometimes in the same reliability region that the TLR has been issued, because the TLR was issued after the time limits programmed into their tagging program. In these cases the relief would not be provided and not due to the inaction of anyone |

| Organization | Question 7 Comment |
|--------------|---|
| | <p>mentioned in this standard.</p> <p>Response: Interchange Authorities do not approve or deny transaction modifications; they collect approvals from the Balancing Authorities and the Transmission Service Providers.</p> <p>Additional comments pertain to the proposed IRO-006-EAST-1 standard and the inclusion of Appendix A. It is our recommendation that Appendix A and the reference to it in Requirement R2.1 be deleted from the standard. The language of Appendix A is, in our opinion, overly prescriptive for the actions a Reliability Coordinator is to take with respect to Transmission Loading Relief. Several of the specific concerns we note as problematic in the content of Appendix A:</p> <p>1) The preamble of Appendix A states its purpose is ... intended to assist the Reliability Coordinator in determining what level of TLR to call and offers that... the Reliability Coordinator has the discretion to choose any of these levels regardless of the criteria listed below While the flavor of the preamble suggests no mandatory nature of the listed criteria, Requirement R2.1 does. Picking up from the end of Requirement R2 ... the Reliability Coordinator shall identify: [R2.1] The TLR level in accordance with the criteria in Appendix A, andIn addition to the deletion of Appendix A, we recommend changing the language of Requirement R2.1 to read: R2.1 The TLR level to be implemented, and.In the event the TLR SDT retains Appendix A –</p> <p>Response: The criteria have been specified as guidelines, as indicated in the introduction to the appendix. The goal of the appendix is to provide information and required nomenclature, but not mandatory criteria. Accordingly, the SDT does not believe that the requirement is in conflict with the preamble of the standard.</p> <p>2) To our knowledge, TLR Level 6 remains an option for utilization by Reliability Coordinators and is referenced in the NAESB WEQ-008 business practice standard. TLR Level 6 is not included in Appendix A.</p> <p>Response: The drafting team has returned TLR 6 back to the list.</p> <p>3) Under TLR Level 1, an eight hour lead time to issue a TLR Level 1 appears to be too long. Three to four hours seems more reasonable.</p> <p>Response: As stated above, these criteria are suggested guidelines. As listed in the introduction, an RC “has the discretion to choose any of these levels regardless of the guidelines listed below.”</p> <p>4) Under TLR Level 5a in the first bullet point, the language ?... when the next-hours transactions start should be changed to...</p> |

| Organization | Question 7 Comment |
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| | <p>within the next hour.</p> <p>In the second bullet point the language offers an either / or prescription when TLR Level 5 (a or b) curtailments of Non-Firm and Firm transactions, market flows and>NNL (in Firm) are sequential in nature non-firm and then firm. We recommend changing the language in the second bullet point to read, Analysis shows the following sequential sets of actions can prevent exceeding the SOL or IROL: The connector or between the two sub-bullet points could then be changed to and (then).</p> <p>Response: The drafting team has modified the standard to state “within” the next hour, and replaced the “or” language with “and.”</p> <p>5) The same argument we make in (4) applies to the third bullet point in the TLR Level 5b section of the Appendix. To further illustrate our point, this bullet point offers that Analysis shows that either of the following sets of actions can prevent exceeding the SOL or IROL: with an or connector between the two sub-bullets. This suggests the Reliability Coordinator can choose the second sub-bullet while leaving the provisions of the first sub-bullet in play; i.e., choose to reconfigure the transmission system and curtail Firm while leaving Non-Firm in play.</p> <p>Response: The drafting team has modified the standard to replace the “or” language with “and.”</p> <p>6) The original intent of TLR 0 was to simply conclude a TLR event. The criteria shown for TLR 0 in Appendix A significantly adds to the purpose of TLR 0. It causes a Reliability Coordinator to remain in a TLR event until certainty of not approaching, or exceeding, a SOL or IROL eight hours into the future is determined.</p> <p>Response: As stated above, these criteria are suggested guidelines. As listed in the introduction, an RC “has the discretion to choose any of these levels regardless of the guidelines listed below.”</p> <p>In conclusion, we would like to add that we very much appreciate the work of the Transmission Loading Relief Standard Drafting Team to improve the overall quality of the IRO-006 standards and thank the members of the drafting for their commitment of time and effort in bringing Phase III of their work to fruition. Furthermore, we would like to say that we appreciate the opportunity to comment on this second draft of the proposed versions of the IRO-006 standards.</p> |
| | <p>Response: Please see in-line responses.</p> |
| BPA | BPA is in support of standard as written. |

| Organization | Question 7 Comment |
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| | <p>Response: The drafting team appreciates your supportive comments.</p> |
| <p>FirstEnergy</p> | <p>1. In the following phrase from the Draft 2 proposed Market Flow definition: "the total amount of generation-to-load impact flowing across a specified facility or set of facilities due to a market dispatch", the term "impact" is vague and does not improve clarity over the terms "energy" or "power" from the original draft of the definition.</p> <p>Response: The definition has been clarified as shown below.</p> <p>Market Flow: the total amount of energy flowing across a specified Facility or set of Facilities due to a market dispatch of internal generation to serve internal load.</p> <p>2. Since IRO-006-5 requires compliance with interconnection-specific TLR procedures per requirement R1, it would be helpful if IRO-006-5 Sec. F. "Associated Documents" provided links to IRO-006-EAST-1, IRO-006-WECC-1, and the congestion management procedures from the ERCOT Protocols.</p> <p>Response: As these suggested documents are actual standards, there is no need to link to them. The SDT does not believe it is necessary to link to the ERCOT protocols, as they are already easily available from the ERCOT website.</p> |
| | <p>Response: Please see in-line responses.</p> |
| <p>NPCC</p> | <p>1. We have a further concern with R1 of IRO-005-EAST-1 that it may result in "premature" load shedding on occasions. For example, in situations where the only "more effective action" that can be taken is load shedding (say because other actions had been used previously to mitigate other exceedances), the RC would be obliged to shed load before being able to (again) initiate the TLR procedure. Shedding load should be a measure of last resort but yet this would have to be done before initiating the TLR procedure since this procedure cannot be used alone to mitigate the exceedance. Can such situations be accounted for</p> <p>Response: The SDT has eliminated the "more effective" language from the standard. However, note that R1 does not require an entity to shed load before or after initiating a TLR. The decision to shed load rests with the extent to which an entity can meet requirement R4 of IRO-009 to be under their IROL within their T_v</p> <p>2. The purpose statement of IRO-006-5 refers to "potential or actual SOL and IROL violations?", whereas the purpose statement of IRO-006-EAST-1 refers to "potential or actual SOL and IROL exceedances". We believe this is an inconsistency and should be</p> |

| Organization | Question 7 Comment |
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| | <p>addressed by changing "violations" to "exceedances".</p> <p>Response: The SDT modified the IRO-006-5 purpose to use the word “exceedances.”</p> |
| <p>Response: Please see in-line responses.</p> | |
| <p>IESO</p> | <p>1. We have a further concern with R1 of IRO-005-EAST-1 that it may result in "premature" load shedding on occasions. For example, in situations where the only "more effective action" that can be taken is load shedding (say because other actions had been used previously to mitigate other exceedances), the RC would be obliged to shed load before being able to (again) initiate the TLR procedure. Shedding load should be a measure of last resort but yet this would have to be done before initiating the TLR procedure since this procedure cannot be used alone to mitigate the exceedance. Can such situations be catered for</p> <p>Response: The SDT has eliminated the “more effective” language from the standard. However, note that R1 does not require an entity to shed load before or after initiating a TLR. The decision to shed load rests with the extent to which an entity can meet requirement R4 of IRO-009 to be under their IROL within their T_v</p> <p>2. The purpose statement of IRO-006-5 refers to "potential or actual SOL and IROL violations", whereas the purpose statement of IRO-006-EAST-1 refers to "potential or actual SOL and IROL exceedances". We believe this is an inconsistency and should be addressed by changing "violations" to "exceedances".</p> <p>Response: The SDT modified the IRO-006-5 purpose to use the word “exceedances.”</p> |
| <p>Response: Please see in-line responses.</p> | |
| <p>Duke Energy Corporation</p> | <p>The Purpose statement of IRO-006-5 should be revised to more clearly state that the purpose of this standard is to require RC, BA, or TO action on TLRs that seek curtailment or reloading of Interchange Transactions that cross Interconnection boundaries, unless there is a reliability reason not to comply. As currently written, the Purpose statement only includes Interconnection-wide TLRs.</p> |
| <p>Response: This standard is intended to address only curtailments related to Interconnection-wide actions and the obligation to agree to curtailment requests unless a reliability reason prevents that agreement. The requirement that interchange transactions and their associated modification, including curtailment, must be agreed to and implemented by all balancing authorities is addressed in the INT family of standards.</p> | |
| <p>We Energies</p> | <p>IRO-006-5 Purpose: The Purpose may be too broad since the one requirement, R1, only applies to interchange crossing an</p> |

| Organization | Question 7 Comment |
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| | <p>interconnection boundary.</p> <p>IRO-006-5 R1: As written, R1 REQUIRES a BA to reload an interchange transaction. A BA must always balance resources and demand, even during a TLR. When a TLR is issued that cuts or limits a transaction, the affected BAs still have to comply with the Balancing standards. One has to reduce generation, the other has to acquire other resources to supply its demand. Both have to control ACE. There will generally be no reliability reason requiring a transaction to be reloaded. Requiring a transaction to be reloaded may cause the ACE of one BA to go low because it does not have the generation to support it, and the other BAs ACE to go high because it is receiving MW but does not have load that requires it. Transactions should be allowed to be reloaded at the discretion of the parties involved, but should not be required to be reloaded.</p> |
| <p>Response: The SDT has updated the purpose statement to better reflect the goals of the standard.</p> <p>The SDT has eliminated “reloading” from the standards.</p> | |
| <p>American Electric Power</p> | <p>IRO-006-EAST-1: Market Flow: the total amount of generation-to-load impact of energy flowing across a specified facility or set of facilities due to a market dispatch. the operation of a market that has implemented a Market Flow Calculation methodology. We recommend using resource-to-load impact, rather than of generation-to-load impact.</p> <p>Response: The SDT believes that the use of the phrase “resource” is unnecessary in this definition. If a resource is not a generation resource, then it will not create energy to serve load. While the term “resource” may be appropriate for describing things such as reserves, the use of the term in this context is not appropriate.</p> <p>R1 mentions including, but not limited to, the following: reconfiguration, redispatch, use of demand-side management, and load shedding, yet R4 does not reference redispatch or generation, when this action, or directive, directly impacts a BAs ability to balance resources to load or demand. A TOP or RC may be giving a directive for redispatch of generation for reliability purposes, but there should also be mention of directing a BA to also implement redispatch requests, as it directly impacts balancing efforts.</p> <p>Response: The SDT believes that the last two bullets incorporate the concepts of redispatch. Note that independent of the procedure, an RC may direct redispatch as an independent action. Regardless of whether or not a redispatch directive is received by a Balancing Authority, that entity is still subject to the BAL standards and their associated measures that require balancing.</p> |
| <p>Response: Please see in-line responses.</p> | |

| Organization | Question 7 Comment |
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| EPSA | <p>Although EPSA members have no specific suggestions for changes to the proposed standards we have two general concerns with the direction of the standard. R1 of the standard requires the use of other methodologies (such as redispatch, reconfiguration, DSM and load shedding) to eliminate exceedances prior to or in conjunction with TLRs during an IROL exceedance. While we recognize the need for such actions under these circumstances, we encourage the use of the early steps of the TLR procedures with the parallel NAESB standards for dealing with equity issues, to the maximum extent possible, to mitigate situations before the exceedances occur. In addition, we recognize the need for Reliability Coordinators to have the authority to take whatever actions are necessary when an IROL exceedance occurs.</p> <p>Response: The SDT will forward this suggestion to NAESB.</p> <p>R4(2) contemplates that under certain circumstances when a TLR has been invoked, that an RC receiving a request for action will have a pre-approved (by the ERO) alternative to implementing the actions requested. Where such a plan has been approved by the ERO as meeting the reliability obligations of that RC, there should be a stakeholder process, such as NAESB's, to deal with the equity implications of the alternative plan.</p> <p>Response: The SDT is unaware of any NAESB process for reviewing equity implication of alternative congestion management approaches. We believe this is typically addressed with the FERC through tariffs. However, the SDT has considered this item further, and believe it is more appropriate to be addressed through a variance. As such, the language is being eliminated from the standard.</p> <p>EPSA is also aware that NERC is evaluating potential changes to the IDC that will facilitate alternative approaches in the implementation of TLRs, from an equity point of view. If a determination is made to proceed with IDC changes, we encourage NAESB to initiate expeditiously a review of its TLR Business Practice Standards to insure that the IDC changes are designed to also facilitate any contemplated enhancements to NAESB's standards.</p> <p>Response: NERC fully intends to coordinate with NAESB on this issue as it develops further.</p> |
| <p>Response: Please see in-line responses.</p> | |
| Entergy Services, Inc. | <p>We have the following suggestions:</p> <ol style="list-style-type: none"> 1) IRO-006-5 has "Proposed Effective Date" and IRO-006-EAST-1 has "Effective Date". They both should be the same. 2) IRO-006-5 "Proposed Effective Date" has the requirement that "...calendar quarter following...", while IRO-006-EAST-1 |

| Organization | Question 7 Comment |
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| | <p>"Effective Date" has the requirement that "...calendar quarter after..." Both requirements should be "following', or "after".</p> <p>3) Remove the word "for" in the second line of IRO-006-EAST-1, M3.</p> <p>4) IRO-006-5 has "Regional Variances" while IRO-006-EAST-1 has "Regional Differences". It seems they both should be the same, either "variances" or "differences".</p> <p>5) The term "reallocation" should be footnoted in TLR-5b of Appendix A of IRO-006-EAST-1. The footnoting of that term should be the same as the footnoting in TLR-5a.</p> |
| <p>Response: The SDT has incorporated the suggested changes.</p> | |
| <p>ISO/RTO Council</p> | <p>We support the drafting team's position regarding use of the TLR in conjunction with other tools to mitigate an IROL that has been exceeded. We believe the Commission is misapplying the conclusions of the Blackout Report.</p> |
| <p>Response: The drafting team thanks you for your supportive comment.</p> | |

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. SC authorized the SAR and assembled a drafting team on December 5, 2006.
2. The revisions to IRO-006 to transfer business practice content to NAESB were approved as IRO-006-4 by the Board of Trustees on October 23, 2007.
3. The SDT developed a first draft for industry consideration and posted it for comments from October 30, 2008 to December 1, 2008.
4. The SDT developed a second draft for industry consideration and posted it for comments from February 19, 2009 to April 6, 2009.
5. The SDT has developed this third draft for industry consideration.

Description of Current Draft:

This is the third draft of the proposed standard posted for stakeholder comments.

Future Development Plan:

| Anticipated Actions | Anticipated Date |
|--|-------------------------|
| 1. Posting for Comment (Draft 3). | July 13 |
| 2. Respond to Comments (Draft 3). | October 8, 2009 |
| 3. Posting for 30-day Pre-Ballot Review. | October 8, 2009 |
| 4. Initial Ballot. | November 7, 2009 |
| 5. Respond to comments. | December 22, 2009 |
| 6. Recirculation ballot. | December 22, 2009 |
| 7. Board adoption. | January 2010 |

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

A. Introduction

1. **Title:** Reliability Coordination — Transmission Loading Relief (TLR)
2. **Number:** IRO-006-5
3. **Purpose:** To ensure coordinated action between Interconnections when implementing~~provide~~ Interconnection-wide transmission loading relief procedures ~~that can be used~~ to prevent or manage potential or actual SOL and IROL ~~violations exceedances~~ to maintain reliability of the bulk electric system.
4. **Applicability:**
 - 4.1. Reliability Coordinator.
 - ~~4.2. Balancing Authority.~~
 - ~~4.3.4.2. Transmission Operator.~~
5. **Proposed Effective Date:** First day of the first calendar quarter following the date this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter after the date this standard is approved by the NERC Board of Trustees.

B. Requirements

- R1. Each Reliability Coordinator ~~or and~~; Balancing Authority, ~~or Transmission Operator~~ that receives a request pursuant to an Interconnection-wide transmission loading relief procedure (such as Eastern Interconnection TLR, WECC Unscheduled Flow Mitigation, or congestion management procedures from the ERCOT Protocols) from any Reliability Coordinator, Balancing Authority, or Transmission Operator in another Interconnection ~~(or Balancing Authority or Transmission Operator, as appropriate for the neighboring Interconnection)~~ to curtail ~~or reload~~ an Interchange Transaction that crosses an Interconnection boundary shall comply with the request, unless it provides a reliability reason that it cannot comply with the request. [*Violation Risk Factor: MediumHigh*] [*Time Horizon: Real-time Operations*]

C. Measures

- M1. Each Reliability Coordinator, ~~and~~ Balancing Authority, ~~and Transmission Operator~~ shall provide evidence (such as logs, voice recordings, Tag histories, and studies) that, when a request to curtail ~~or reload~~ an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure was made from another Reliability Coordinator, Balancing Authority, Balancing Authority, or Transmission Operator in that other Interconnection, it complied with the request or provided an identified reliability reason that it could not comply with the request.

D. Compliance

1. **Compliance Monitoring Process**

1.1. Compliance Enforcement Authority

Regional Entity.

1.2. Compliance Monitoring Period and Reset Time Frame

Not applicable.

1.3. Data Retention

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

- The Reliability Coordinator, ~~and~~ Balancing Authority, ~~and Transmission Operator~~ shall each maintain evidence to show compliance with Requirement R1 for the most recent twelve calendar months plus the current month.
- If a Reliability Coordinator, ~~or~~ Balancing Authority, ~~or Transmission Operator~~ is found non-compliant, it shall keep information related to the non-compliance until found compliant.

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

1.4. Compliance Monitoring and Enforcement Processes:

The following processes may be used:

- Compliance Audits
- Self-Certifications
- Spot Checking
- Compliance Violation Investigations
- Self-Reporting
- Complaints

1.5. Additional Compliance Information

None.

Violation Severity Levels

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|----------|--|
| R1 | | | | <p>The applicable-responsible entity received a request to curtail or reload-an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority, or Transmission Operator, but the entity neither complied with the request, nor provided a reliability reason that it could not comply with the request.</p> |

E. ~~Regional~~ Variances

None.

F. Associated Documents

G. Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|---|-----------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | August 8, 2005 | Revised Attachment 1 | Revision |
| 3 | February 26, 2007 | Revised Purpose and Attachment 1 related to NERC NAESB split of the TLR procedure | Revision |
| 4 | | Completed NERC/NAESB split | Revision |
| 5 | | Removed Attachment 1 and made into a new standard, eliminated unnecessary requirements. | Revision |
| | | | |

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~~**Reallocation:** The total or partial curtailment of Transactions during TLR Level 3a or 5a to allow Transactions using higher priority to be implemented.~~ (To be retired.)

Market Flow: the total amount of ~~generation to load impact energy~~ flowing across a specified ~~f~~Facility or set of ~~F~~facilities due to a market dispatch of internal generation to serve internal load.

A. Introduction

1. **Title:** Transmission Loading Relief Procedure for the Eastern Interconnection
2. **Number:** IRO-006-EAST-1
3. **Purpose:** To provide an ~~Interconnection~~interconnection-wide transmission loading relief procedure (TLR) for the Eastern Interconnection that can be used to prevent and/or mitigate potential or actual System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) exceedances to maintain reliability of the Bulk Electric System (BES).
4. **Applicability:**
 - 4.1. Initiating Reliability Coordinators in the Eastern Interconnection.
 - 4.2. Responding Reliability Coordinators.
5. **Proposed Effective Date:** First day of the first calendar quarter ~~that after~~following the date this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter after the date this standard is approved by the NERC Board of Trustees.

B. Requirements

- R1.** ~~The Reliability Coordinator shall not use the Eastern Interconnection TLR procedure alone to mitigate an IROL exceedance.~~ When acting or directing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's ~~T_v~~T_v, each Reliability Coordinator shall initiate, prior to or concurrently with the initiation of the Eastern Interconnection ~~this~~ TLR procedure (or continuing management of this procedure if already initiated), one or more of the following actions: [Violation Risk Factor: High] [Time Horizon: Real-time Operations] ~~other more effective actions~~
- Inter-area redispatch
 - Intra-area redispatch of generation
 - Reconfiguration of the transmission system
 - Voluntary load reductions (e.g., Demand-side Management)
 - Involuntary load reductions ~~prior to or in conjunction with the initiation of this TLR procedure (or continuing management of this procedure if already initiated), including, but not limited to, the following: reconfiguration, redispatch, use of demand-side management, and load shedding. [Violation Risk Factor: High] [Time Horizon: Real-time Operations]~~
- R2.** When initiating the Eastern Interconnection TLR procedure to prevent or mitigate a SOL or IROL exceedance, and at least every clock hour after initiation, up to and including the hour when the TLR level has been identified as TLR Level 0, the Reliability Coordinator shall identify: [Violation Risk Factor: ~~Medium~~Medium] [Time Horizon: Real-time Operations]
- 2.1. The TLR level (TLR levels are listed in Appendix A) ~~in accordance with the criteria in Appendix A,~~ and
 - 2.2. A list of action~~congestion management actions~~ to take~~be implemented,~~ based on the TLR level chosen.

- R3.** Upon the identification of the TLR level and a ~~proposal for~~ list of action congestion management actions to ~~take~~ be implemented based on the TLR level chosen, the Reliability Coordinator initiating this TLR procedure shall: [*Violation Risk Factor: ~~Medium~~ Medium*] [*Time Horizon: Real-time Operations*]
- 3.1.** Notify all Reliability Coordinators in the Eastern Interconnection of the identified TLR level
- ~~2.2.~~ Communicate the list of congestion management actions to be implemented ~~actions to take to 1.)~~ ÷
- ~~2.3.~~ All Reliability Coordinators in the Eastern Interconnection, and 2.)
- 3.2.** ~~F~~ Those Reliability Coordinators in other Interconnections responsible for curtailing ~~or reloading~~ Interchange Transactions crossing Interconnection boundaries identified in the list of action congestion management actions.
- ~~2.5.~~ Request that ~~the following entities implement the~~ action congestion management actions identified in Requirement R2, Part R2.2 be implemented by 1.) ÷
- ~~2.6.0.~~ Each Reliability Coordinator associated with a Sink Balancing Authority ~~in the Eastern Interconnection~~ for which Interchange Transactions are to be curtailed, 2.) or reloaded
- ~~2.7.0.~~ Each Reliability Coordinators associated with a Balancing Authority in the Eastern Interconnection for which Network Integration Transmission Service or Native Load is to be curtailed, and 3.) or reloaded
- 3.3.** Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which its Market Flow is to be curtailed, or reloaded.
- ~~3.0.0.~~ Each Reliability Coordinators associated with a Balancing Authority in the Eastern Interconnection operating a DC tie for an Interchange Transaction sinking outside the Eastern Interconnection and crossing an interconnection boundary with an Interchange Transaction to be curtailed or reloaded.
- R4.** Each Reliability Coordinator ~~in the Eastern Interconnection~~ that receives a request as described in Requirement R3, Part R3.3. shall comply with the request by taking one or ~~more~~ both of the following ~~three sets of~~ actions: [*Violation Risk Factor: ~~Medium~~ High*] [*Time Horizon: Real-time Operations*]
- Implement the communicated action congestion management actions requested by the issuing Reliability Coordinator as follows:
 - Direct its Balancing Authorities to implement the Interchange Transaction schedule change requests.
 - Direct its Balancing Authorities to provide the Network Integrated Transmission Service and Native Load schedule changes for which the Balancing Authorities are responsible.
 - ~~Direct its Balancing Authorities to provide the Market Flow schedule changes for which the Balancing Authorities are responsible.~~
 -
 - ~~Implement a procedure pre-approved by the ERO for use by the responding Reliability Coordinator in lieu of implementing some or all of the requested flow reduction~~

~~actions in the first set under Requirement 4, provided that its implementation is expected to achieve the same or greater effect than the flow reduction actions requested in the first set under Requirement R4.~~ Implement alternate action congestion management actions to those ~~in the first two sets of actions under Requirement R4~~ communicated in Requirement R3, provided that:

- Analysis shows that some or all of the action congestion management actions ~~in the first two sets of actions under~~ communicated in Requirement R3, Part 3.3 Requirement R4 or the second set of flow reduction actions under Requirement R4 will result in a reliability concern or will be ineffective, and
- The alternate action congestion management actions have been agreed to by the initiating Reliability Coordinator, and
- Analysis shows that the alternate action congestion management actions will not adversely affect reliability.

R5. Each Reliability Coordinator that responds to a TLR event shall acknowledge to the initiating Reliability Coordinator the action congestion management actions it will take pursuant to Requirement R4 as soon as possible but not more than ten minutes of receiving the request. [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]

C. Measures

M1. Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that when acting or directing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T_v, the ~~Eastern Interconnection TLR procedure was not used alone to mitigate an IROL exceedance, and other more effective actions were initiated prior to or in conjunction with the initiation or continuing management of the TLR procedure~~ Reliability Coordinator initiated one or more of the actions listed in Requirement R1 prior to or concurrently with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated) (R1).

M2. Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that at the time it initiated the Eastern Interconnection TLR procedure, and at least every clock hour after initiation, up to and including the hour when the TLR level was identified as TLR Level 0, the Reliability Coordinator identified both the TLR Level ~~in accordance with Appendix A~~ and a list of ~~flow reduction action~~ congestion management actions to ~~take be implemented~~ based on the TLR level chosen (R2).

M3. Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that ~~once after~~ it identified a TLR level and ~~for~~ a list of ~~flow reduction action~~ congestion management actions to take, it 1.) notified all Reliability Coordinators in the Eastern Interconnection of the TLR Level, 2.) communicated the list of actions to all Reliability Coordinators in the Eastern Interconnection and those Reliability Coordinators in other Interconnections responsible for curtailing ~~or reloading~~ Interchange Transactions crossing Interconnection boundaries identified in the list of ~~flow reduction action~~ congestion management actions, and 3.) requested the Reliability Coordinators identified in Requirement R3, Part R3.2 the Requirement to implement the ~~flow reduction action~~ congestion management actions identified in Requirement R2, Part R2.2 (R3).

- M4.** Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that upon receipt of a request ~~to implement proposed actions~~ as described in [Requirement R3](#), the Reliability Coordinator ~~complied with the request by taking~~ ~~did~~ one or ~~more~~ both of the following: 1.) implemented the ~~communicated flow reduction action~~ congestion management actions requested by the issuing Reliability Coordinator ~~requested actions~~, 2.) ~~implemented a n alternative procedure that had been pre-approved by the ERO for use by the responding Reliability Coordinator that would achieve the same or greater effect than in lieu of some or all of the flow reduction actions requested with equal or greater effect than the request actions not being implemented, or~~ 3.) implemented alternate ~~flow reduction action~~ congestion management actions based on analysis which showed that some or all of the ~~flow reduction action~~ congestion management actions ~~in 1 or 2 w~~ communicated in Requirement R3 would have resulted in a reliability concern or would have been ineffective, the alternate ~~flow reduction action~~ congestion management actions were agreed to by the initiating Reliability Coordinator, and analysis showed that the alternate ~~flow reduction action~~ congestion management actions would not adversely affect reliability (R4).
- M5.** Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that within ten minutes of receiving a request to implement ~~flow reduction action~~ congestion management actions pursuant to the implementation of the Eastern Interconnection TLR procedure, it acknowledged to the initiating Reliability Coordinator the ~~flow reduction action~~ congestion management actions it ~~will~~ was going to take in response to their request.

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity.

1.2. Compliance Monitoring Period and Reset Time Frame

Not applicable.

1.3. Data Retention

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

- The Reliability Coordinator shall maintain evidence to show compliance with R1, R2, R3, R4, and R5 for the past 12 months plus the current month.
- If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.

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

1.4. Compliance Monitoring and Enforcement Processes:

~~+~~The following processes may be used:

- Compliance Audits
- Self-Certifications
- Spot Checking
- Compliance Violation Investigations
- Self-Reporting
- Complaints

1.5. Additional Compliance Information

None.

3. Violation Severity Levels

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|--|--|--|--|
| R1 | | | | <p>The Reliability Coordinator used the Eastern Interconnection TLR procedure alone to mitigate an IROL exceedance.</p> <p style="text-align: center;">OR</p> <p>When acting or directing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL’s T_v, the Reliability Coordinator did not initiate <u>one or more of the actions listed under R1</u> other more effective actions prior to or in conjunction with the initiation of this <u>the Eastern Interconnection</u> TLR procedure (or continuing management of this procedure if already initiated).</p> |
| R2 | <p>The Reliability Coordinator initiating the Eastern interconnection <u>Interconnection</u> TLR procedure missed identifying the TLR Level in accordance with Appendix A and/or a list of flow reduction</p> | <p>The Reliability Coordinator initiating the Eastern interconnection <u>Interconnection</u> TLR procedure missed identifying the TLR Level in accordance with Appendix A and/or a list of flow reduction</p> | <p>The Reliability Coordinator initiating the Eastern interconnection <u>Interconnection</u> TLR procedure missed identifying the TLR Level in accordance with Appendix A and/or a list of flow reduction</p> | <p>The Reliability Coordinator initiating the Eastern interconnection <u>Interconnection</u> TLR procedure missed identifying the TLR Level in accordance with Appendix A and/or a list of flow reduction</p> |

Standard IRO-006-EAST-1 — TLR Procedure for the Eastern Interconnection

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|--|---|--|--|
| | <p>action congestion management actions to take based on the TLR level chosen for one clock hour during the period from initiation up to the hour when the TLR level was identified as TLR Level 0.</p> | <p>action congestion management actions to take based on the TLR level chosen for two clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0,</p> | <p>action congestion management actions to take based on the TLR level chosen for three clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0.</p> | <p>action congestion management actions to take based on the TLR level chosen for four or more clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0.</p> |
| R3 | <p>The initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level (R3.1).</p> | <p>Not applicable N/A</p> | <p>The initiating Reliability Coordinator did not communicate the list of flow reduction congestion management actions to one or more of the required Reliability Coordinators listed in Requirement R3, Part R3.2.1 and R3.2.2, which are defined as all Eastern Interconnection Reliability Coordinators and any Reliability Coordinators in other Interconnections responsible for curtailing or reloading Interchange Transactions crossing Interconnection boundaries identified in the list of actions. (R3.2)</p> <p>OR</p> | <p>The initiating Reliability Coordinator requested none of the Reliability Coordinators identified in Requirement R3, Part R3.3 to implement the identified flow reduction actions.</p> |

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|--|--|
| | | | <p>The initiating Reliability Coordinator requested some, but not all, of the Reliability Coordinators identified in Requirement R3, Part R3.3 to implement the identified flow reduction action congestion management actions.</p> | |
| R4 | | | | <p>The responding Reliability Coordinator did not take one or more both of the following actions:</p> <p>1.) Implemented the requested flow reduction action congestion management actions.</p> <p>2.) Implemented an alternative procedure that had been pre-approved by the ERO for use by the responding Reliability Coordinator that would achieve the same in lieu of some or all of the actions requested with equal or greater effect than the requested flow reduction actions requested not being implemented 2.) Implemented alternate congestion management actions based on analysis which showed that some or all of the actions</p> |

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|--|--|--|--|
| | | | | <p><u>communicated in Requirement R3, Part 3.3</u> in 1 or 2 would have resulted in a reliability concern or would have been ineffective, and that the alternate <u>flow reduction action congestion management actions</u> would not adversely affect reliability and were agreed to by the initiating Reliability Coordinator <u>and analysis showed that the alternate flow reduction action congestion management actions</u> would not adversely affect reliability,.</p> |
| R5 | <p>The responding Reliability Coordinator communicated its <u>intended flow reduction congestion management actions</u> actions <u>taken</u> to the initiating Reliability Coordinator, but did so more than ten minutes but not more than <u>less than or equal to fifteen</u> 15 minutes after receiving the request.</p> | <p>The responding Reliability Coordinator communicated its <u>intended flow reduction action congestion management actions</u> taken to the initiating Reliability Coordinator, but did so more than fifteen <u>15</u> minutes but not more than <u>less than or equal to twenty</u> 20 minutes after receiving the request.</p> | <p>The responding Reliability Coordinator communicated its <u>intended flow reduction action congestion management actions</u> taken to the initiating Reliability Coordinator, but did so more than twenty <u>20</u> minutes but not more than <u>less than or equal to twenty five</u> 25 minutes after receiving the request.</p> | <p>The responding Reliability Coordinator communicated its <u>intended flow reduction action congestion management actions</u> to the initiating Reliability Coordinator, but did so more than twenty five <u>25</u> minutes after receiving the request.</p> <p>OR</p> <p>The responding Reliability Coordinator did not communicate its <u>intended action congestion management</u></p> |

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|----------|--|
| | | | | actions to the initiating Reliability Coordinator. |

E. ~~Regional Differences~~ Variations

None.

F. Associated Documents

G. Revision History

| Version | Date | Action | Tracking |
|---------|------|--|----------|
| 1 | | Creation of new standard, incorporating concepts from IRO-006-4 Attachment; elimination of Regional Differences, as the standard allows the use of Market Flow | New |

Appendix A

The following ~~criteria~~ guidelines are intended to assist the Reliability Coordinator in determining what level of TLR to call. However, the Reliability Coordinator has the discretion to choose any of these levels regardless of the ~~criteria~~ guidelines listed below, provided the Reliability Coordinator has reliability reasons to take such action.

| Level | Guidelines for System Condition |
|--------|--|
| TLR-1 | <ul style="list-style-type: none"> At least one Transmission Facility is expected to approach or exceed its SOL or IROL within 8 hours. |
| TLR-2 | <ul style="list-style-type: none"> At least one Transmission Facility is approaching or is at its SOL or IROL. <ul style="list-style-type: none"> Analysis shows that holding new and increasing non-firm <u>Interchange T</u> transactions and energy flows for the next hour can prevent exceeding this SOL or IROL. |
| TLR-3a | <ul style="list-style-type: none"> At least one Transmission Facility is expected to exceed its SOL or IROL within the next hour. <ul style="list-style-type: none"> Analysis shows that full or partial curtailment or reallocation¹ of non-firm <u>Interchange T</u> transactions and energy flows can prevent exceeding this SOL and IROL. |
| TLR-3b | <ul style="list-style-type: none"> At least one Transmission Facility is exceeding its SOL or IROL, or At least one Transmission Facility is expected to exceed its SOL or IROL within the current hour. <ul style="list-style-type: none"> Analysis shows that full or partial curtailment or reallocation² of non-firm + <u>Interchange T</u> transactions and energy flows can prevent exceeding this SOL or IROLs. |
| TLR-4 | <ul style="list-style-type: none"> 1) • At least one Transmission Facility is expected to exceed its SOL or IROL. <ul style="list-style-type: none"> o Analysis shows that full curtailment of non-firm transactions <u>Interchange Transactions</u> and energy flows, or reconfiguration of the transmission system can prevent exceeding this SOL or IROL. |
| TLR-5a | <ul style="list-style-type: none"> At least one Transmission Facility is expected to exceed its SOL or IROL when within the next hour's transactions start. <ul style="list-style-type: none"> o Analysis shows that either of the following sets of actions can prevent exceeding the SOL or IROL: <ul style="list-style-type: none"> o Full curtailment non-firm <u>Interchange T</u> transactions and energy flows, and or R Reconfiguration of the transmission system, if possible, and, and f |

¹ “Reallocation” is a term defined within the NAESB TLR standards.

² “Reallocation” is a term defined within the NAESB TLR standards.

³ “Reallocation” is a term defined within the NAESB TLR standards.

| | |
|--------------|--|
| | <ul style="list-style-type: none"> • <u>Full or partial curtailment or reallocation³ of firm transactions <u>Interchange Transactions</u> and energy flows.</u> |
| TLR-5b | <ul style="list-style-type: none"> • At least one Transmission Facility is exceeding its SOL or IROL, or • At least one Transmission Facility is expected to exceed its SOL or IROL within the current hour. <p><u>Analysis shows that either of the following sets of actions can prevent exceeding the SOL or IROL:</u></p> <ul style="list-style-type: none"> • <u>Full curtailment of non-firm transactions <u>Interchange Transactions</u> and energy flows, or and</u> <ul style="list-style-type: none"> ▪ Reconfiguration of the transmission system, <u>if possible, and</u> ▪ <u>and fFull or partial curtailment or reallocation⁴ of firm transactions <u>Interchange Transactions</u> and energy flows.</u> |
| <u>TLR-6</u> | <ul style="list-style-type: none"> • <u>At least one Transmission Facility is exceeding its SOL or IROL, or</u> • <u>At least one Transmission Facility is expected to exceed its SOL or IROL upon the removal from service of a generating unit or another transmission facility.</u> |
| TLR-0 | <ul style="list-style-type: none"> • No transmission facilities are expected to approach or exceed their SOL or IROL within 8 hours, and the ICM procedure may be terminated |

⁴ “Reallocation” is a term defined within the NAESB TLR standards.

Standards:

[IRO-006-5 — Reliability Coordination — Transmission Loading Relief \(TLR\)](#)

[IRO-006-EAST-1 — Transmission Loading Relief Procedure for the Eastern Interconnection](#)

Summary

The NERC TLR Drafting Team has developed IRO-006-5 and IRO-006-EI-1 as iterative and incremental improvements to IRO-006-4. This is one of three phases of Project 2006-08. The first phase, the split of the IRO-006-3 and its associated Attachment 1 into NERC and NAESB standards, was completed and approved by the NERC Board of Trustees on October 23, 2007, and filed with regulatory authorities on December 21, 2008. The second phase, which is intended to address any needed modifications to the standards based on the PJM/MISP/SPP waivers, is currently undergoing Field Testing. This implementation plan addressed the third phase, which is intended to improve the quality of the standards.

The Drafting Team has made significant revisions to the previous IRO-006-4 and Attachment 1:

1. Converted Attachment 1 into a standard solely for the Eastern Interconnection.
2. Transferred requirements from IRO-006 that were primarily focused on Eastern Interconnection practices to the Eastern Interconnection TLR standard.
3. Clarified the roles of entities when responding to curtailment requests from other Interconnections.
4. Removed the requirement that entities comply with the INT standards, as it was redundant.
5. Restructured the Eastern Interconnection TLR standard (previously Attachment 1) to be clearer and specify reliability requirements.
6. Removed the requirement in IRO-006-5 that specified the appropriate methods to utilize within each Interconnection, instead relying on regional standards for the three Interconnections to capture this information.
7. Expanded the applicability of IRO-006-5 to include the ~~Transmission Operator and the~~ Balancing Authority.

Prerequisite Approvals

There are no other reliability standards or Standard Authorization Requests (SARs), approved, that must be implemented before this standard can be implemented.

Modified Standards

IRO-006-4, and associated Attachment 1, should be retired when IRO-006-5 and IRO-006-EI-1 become effective.

The definition of “Reallocation” should be removed from the Glossary when IRO-006-5 and IRO-006-~~EAST~~EAST-1 become effective.

The Regional Differences within IRO-006-4 should be retired when IRO-006-5 and IRO-006-E~~AST~~AST-1 become effective.

Compliance with Standards

Once the standards become effective, the responsible entities identified in the applicability section of the standards must comply with the requirements. These include:

- Reliability Coordinators
- [Balancing Authorities](#)

Proposed Effective Date

The standards will become effective on the first day of the first calendar quarter that after the date the standards are approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standards becomes effective on the first day of the first calendar quarter after the date the standards are approved by the NERC Board of Trustees.

Consideration of Comments for the Third Draft of Standard IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

The Transmission Loading Relief Standard Drafting Team thanks all commenters who submitted comments on the third draft of standard IRO-006-5 and IRO-006-EAST-1 (Project 2006-08). The standards were posted for a 30-day public comment period from July 13, 2009 through August 13, 2009. Stakeholders were asked to provide feedback on the draft standards and associated implementation plan through a special electronic comment form. There were 15 sets of comments, including comments from more than 70 different people from over 50 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

<http://www.nerc.com/filez/standards/Reliability-Coordination-Transmission-Loading-Relief.html>

In general, the majority of comments received were supportive of the changes proposed by the drafting team.

Based on stakeholder comments, the SDT made the following changes:

The SDT combined Requirements R4 and R5, and established the time for the Reliability Coordinator to take action as 15 minutes.

The SDT clarified in IRO-006-5, Requirement R1 that an entity must comply with a request to curtail an Interchange Transaction "unless it provides *to the requestor* a reliability reason that it cannot comply with the request."

The drafting team has deleted Appendix A of IRO-006-EAST-1 and instead incorporated the table from the Appendix into Requirement R2. The system conditions were relabeled as examples, a footnote was added to explain the role of the table, and a sentence was added that states "TLR levels are neither required nor expected to be issued in numerical order of level."

The SDT clarified that a Reliability Coordinator's experience may be used to determine if requested TLR actions are appropriate, and made this clear by replacing "analysis" with "assessment" in IRO-006-EAST-1 Requirement R4.

Additionally, the SDT reviewed the use of the verb "direct" in the previous version of the standard. Following discussion regarding the steps of TLR and what is expected to happen in each of those steps, it was determined that the RC is not issuing directives when implementing TLR. The issuance of TLR and the associated instructions to take action are made unilaterally by the Reliability Coordinator(s). Balancing Authorities are expected to review the requests for action and verify that they can be implemented reliably. To the extent they cannot be implemented reliably, Balancing Authorities are expected to work with their Reliability Coordinator in determining the best course of action. For Interchange Transactions, this Balancing Authority discretion is discussed in INT-005-3 R1.1 and INT-006-3 R1.1. For NITS, Native Load, and Market Flow, it is addressed implicitly in IRO-005-3 R6 and TOP-002-2a R4. Accordingly, rather than use the verb "direct," the team has modified the standard to use the verb "instruct."

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

Index to Questions, Comments, and Responses

| | | |
|----|---|----|
| 1. | The drafting team has modified the purpose of IRO-006-5 to read:..... | 8 |
| 2. | The drafting team modified Requirement R1 of IRO-006-5 such that it no longer applies to the Transmission Operator. While requests may still be issued by Reliability Coordinators (as is done in the Eastern Interconnection) or Transmission Operators (as the SDT believes is currently done in the West) or Balancing Authorities (which may be done at some point in the future), the SDT believes that the appropriate entities to respond to those requests are either Balancing Authorities or Reliability Coordinators. Additionally, the SDT has removed ambiguous language from the requirement. Do you agree with these modifications?..... | 11 |
| 3. | The drafting team has updated the definition of "Market Flow" to read: | 14 |
| 4. | The drafting team has updated Requirement R1 of IRO-006-EAST-1 to clarify if TLR is used in response to an actual IROL exceedance, it must be used "prior to or concurrently with" one or more of five other specific listed mitigation actions. Do you agree with this change?..... | 16 |
| 5. | The drafting team has modified R2 and Appendix A of IRO-006-EAST-1 to make it clear that the criteria specified for TLR levels are guidelines only, not requirements. Do you believe these modifications make it clear that an RC should not be found in violation of R2 if they invoke TLR at a level different than that which the guidelines might recommend?..... | 18 |
| 6. | The drafting team has eliminated the IRO-006-EAST-1 requirement originally included in R3 to notify the Eastern Interconnection DC Tie Operator of curtailment requests, as the team believes it is no longer needed and is already implicitly addressed in BAL-001. Do you agree this requirement is no longer needed?..... | 21 |
| 7. | The drafting team has eliminated the IRO-006-EAST-1 requirement originally included in R4 that allowed for the use of procedures "pre-approved by the ERO...in lieu of implementing some or all of the requested flow reduction actions." The drafting team believes that the process for Variances has replaced the pre-approval of the ERO, and no special process currently exists for acquiring pre-approval save the Variance process. Do you agree that this allowance is no longer needed? | 24 |
| 8. | The drafting team has eliminated the concept of "reloading" from IRO-006-EAST-1. Reliability Coordinators do not direct reloads; they allow them to occur if the operating conditions permit and transmission customers so desire. Accordingly, the team does not believe any requirement to issue reloads is needed. Do you agree that requiring reloads is not needed in the Reliability Standard?..... | 29 |
| 9. | Please provide any other comments (that you have not already provided in response to the questions above) that you have on the proposed standards. | 31 |

Consideration of Comments on Project 2006-08 Transmission Loading Relief

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

| | | Commenter | Organization | Industry Segment | | | | | | | | | | | |
|-------------------|------------------------|---|--------------------------------------|------------------|----|-------------------|---|---|---|---|---|---|----|--|---|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| 1. | Group | Guy Zito | Northeast Power Coordinating Council | | | | | | | | | | | | X |
| Additional Member | | Additional Organization | | Region | | Segment Selection | | | | | | | | | |
| 1. | Ralph Rufrano | New York Power Authority | | NPCC | 5 | | | | | | | | | | |
| 2. | Alan Adamson | New York State Reliability Council | | NPCC | 10 | | | | | | | | | | |
| 3. | Gregory Campoli | New York Independent System Operator | | NPCC | 2 | | | | | | | | | | |
| 4. | Peter Yost | Consolidated Edison Co. of New York, Inc. | | NPCC | 3 | | | | | | | | | | |
| 5. | Kurtis Chong | Independent Electricity System Operator | | NPCC | 2 | | | | | | | | | | |
| 6. | Sylvain Clermont | Hydro-Quebec TransEnergie | | NPCC | 1 | | | | | | | | | | |
| 7. | Manuel Couto | National Grid | | NPCC | 1 | | | | | | | | | | |
| 8. | Chris de Graffenried | Consolidated Edison Co. of New York, Inc. | | NPCC | 1 | | | | | | | | | | |
| 9. | Brian D. Evans-Mongeon | Utility Services | | NPCC | 8 | | | | | | | | | | |
| 10. | Mike Garton | Dominion Resources Services, Inc. | | NPCC | 5 | | | | | | | | | | |
| 11. | Brian L. Gooder | Ontario Power Generation Incorporated | | NPCC | 5 | | | | | | | | | | |
| 12. | Kathleen Goodman | ISO - New England | | NPCC | 2 | | | | | | | | | | |
| 13. | David Kiguel | Hydro One Networks Inc. | | NPCC | 1 | | | | | | | | | | |

Consideration of Comments on Project 2006-08 Transmission Loading Relief

| | Commenter | Organization | Industry Segment | | | | | | | | | | | | | | | | | |
|---|--------------------------------------|----------------------------------|--|------------|---|---|---|---|---|---|---|----|--|--|--|--|--|--|--|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | | | | | | |
| 14. Michael R. Lombardi | Northeast Utilities | NPCC | 1 | | | | | | | | | | | | | | | | | |
| 15. Randy MacDonald | New Brunswick System Operator | NPCC | 2 | | | | | | | | | | | | | | | | | |
| 16. Greg Mason | Dynegy Generation | NPCC | 5 | | | | | | | | | | | | | | | | | |
| 17. Bruce Metruck | New York Power Authority | NPCC | 6 | | | | | | | | | | | | | | | | | |
| 18. Chris Orzel | FPL Energy/NextEra Energy | NPCC | 5 | | | | | | | | | | | | | | | | | |
| 19. Robert Pellegrini | The United Illuminating Company | NPCC | 1 | | | | | | | | | | | | | | | | | |
| 20. Michael Schiavone | National Grid | NPCC | 1 | | | | | | | | | | | | | | | | | |
| 21. Gerry Dunbar | Northeast Power Coordinating Council | NPCC | 10 | | | | | | | | | | | | | | | | | |
| 22. Lee Pedowicz | Northeast Power Coordinating Council | NPCC | 10 | | | | | | | | | | | | | | | | | |
| 2. | Group | Denise Koehn | Bonneville Power Administration | X | | X | | X | X | | | | | | | | | | | |
| Additional Member Additional Organization Region Segment Selection | | | | | | | | | | | | | | | | | | | | |
| 1. | Chuck Westbrook | Tx Pre-Schedule & Real Time | WECC | 1 | | | | | | | | | | | | | | | | |
| 3. | Group | Carol Gerou | MRO NERC Standards Review Subcommittee | | | | | | | | | | | | | | | | | X |
| Additional Member Additional Organization Region Segment Selection | | | | | | | | | | | | | | | | | | | | |
| 1. | Joe DePoorter | Madison Gas & Electric | MRO | 3, 4, 5, 6 | | | | | | | | | | | | | | | | |
| 2. | Neal Balu | Wisconsin Public Service | MRO | 3, 4, 5, 6 | | | | | | | | | | | | | | | | |
| 3. | Terry Bilke | Midwest ISO | MRO | 2 | | | | | | | | | | | | | | | | |
| 4. | Ken Goldsmith | Alliant Energy | MRO | 4 | | | | | | | | | | | | | | | | |
| 5. | Jim Haigh | WAPA | MRO | 1, 6 | | | | | | | | | | | | | | | | |
| 6. | Terry Harbour | MidAmerican Energy Company | MRO | 3, 5, 6, 1 | | | | | | | | | | | | | | | | |
| 7. | Joe Knight | Great River Energy | MRO | 1, 3, 5, 6 | | | | | | | | | | | | | | | | |
| 8. | Alice Murdock | Xcel Energy | MRO | 1, 3, 5, 6 | | | | | | | | | | | | | | | | |
| 9. | Scott Nickels | Rochester Public Utilities | MRO | 4 | | | | | | | | | | | | | | | | |
| 10. | Dave Rudolph | Basin Electric Power Cooperative | MRO | 1, 3, 5, 6 | | | | | | | | | | | | | | | | |
| 11. | Eric Ruskamp | Lincoln Electric System | MRO | 1, 3, 5, 6 | | | | | | | | | | | | | | | | |
| 4. | Group | Jason L. Marshall | Midwest ISO Standards Collaborators | | X | | | | | | | | | | | | | | | |

Consideration of Comments on Project 2006-08 Transmission Loading Relief

| | Commenter | Organization | Industry Segment | | | | | | | | | |
|---|------------------|-----------------------|--------------------------------|------------|---|---|---|---|---|---|---|----|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Additional Member Additional Organization Region Segment Selection | | | | | | | | | | | | |
| 1. | Jim Cyrulewski | JDRJC Associates | RFC | 8 | | | | | | | | |
| 2. | Jianmei Chai | Consumers Energy | RFC | 3, 4, 5 | | | | | | | | |
| 5. | Group | Sam Ciccone | FirstEnergy | | X | | X | X | X | X | | |
| Additional Member Additional Organization Region Segment Selection | | | | | | | | | | | | |
| 1. | Dave Folk | FirstEnergy | RFC | | | | | | | | | |
| 2. | Doug Hohlbaugh | FirstEnergy | RFC | | | | | | | | | |
| 6. | Group | Jim Case | SERC OC Standards Review Group | | X | | X | | | | | |
| Additional Member Additional Organization Region Segment Selection | | | | | | | | | | | | |
| 1. | Gary Hutson | SMEPA | SERC | 1, 3, 5 | | | | | | | | |
| 2. | Steve Fritz | ACES Power Marketing | SERC | 6 | | | | | | | | |
| 3. | Gerry Beckerle | Ameren | SERC | 1, 3 | | | | | | | | |
| 4. | Eugene Warnecke | Ameren | SERC | 1, 3 | | | | | | | | |
| 5. | Joel Wise | TVA | SERC | 1, 3, 5, 9 | | | | | | | | |
| 6. | Chad Randall | E. ON US | SERC | 1, 3, 5 | | | | | | | | |
| 7. | Brad Young | E. ON US | SERC | 1, 3, 5 | | | | | | | | |
| 8. | Fred Krebs | Calpine | SERC | 5 | | | | | | | | |
| 9. | Hugh Francis | Southern | SERC | 1, 3, 5 | | | | | | | | |
| 10. | Alan Jones | Alcoa | SERC | 1, 5 | | | | | | | | |
| 11. | Timmy LeJeune | Louisiana. Generating | SERC | 1, 3, 5 | | | | | | | | |
| 12. | Don Reichenbach | Duke | SERC | 1, 3, 5 | | | | | | | | |
| 13. | Greg Stone | Duke | SERC | 1, 3, 5 | | | | | | | | |
| 14. | Jason Marshall | MISO | SERC | 2 | | | | | | | | |
| 15. | Randy Wilkerson | Progress Energy | SERC | 1, 3, 5 | | | | | | | | |
| 16. | Ray Phillips | AMEA | SERC | 3, 4 | | | | | | | | |
| 17. | Narinder Saini | Entergy | SERC | 1, 3 | | | | | | | | |
| 18. | Robert Thomasson | BREC | SERC | 1, 3, 5, 9 | | | | | | | | |

Consideration of Comments on Project 2006-08 Transmission Loading Relief

| | | Commenter | Organization | Industry Segment | | | | | | | | | | | | | | | |
|-----|----------------|-----------------------|---|------------------|---|---|---|---|---|---|---|---|----|--|--|--|--|--|--|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | | | | |
| 19. | Barbara Doland | SERC | SERC | 10 | | | | | | | | | | | | | | | |
| 20. | Wes Davis | SERC | SERC | 10 | | | | | | | | | | | | | | | |
| 21. | John Troha | SERC | SERC | 10 | | | | | | | | | | | | | | | |
| 7. | Individual | Sandra Shaffer | PacifiCorp | | X | | X | | X | X | | | | | | | | | |
| 8. | Individual | Hugh Francis | Southern Company | | X | | X | | X | | | | | | | | | | |
| 9. | Individual | Kasia Mihalchuk | Manitoba Hydro | | X | | X | | X | X | | | | | | | | | |
| 10. | Individual | Roger Champagne | Hydro-Québec TransEnergie (HQT) | | X | | | | | | | | | | | | | | |
| 11. | Individual | James H. Sorrels, Jr. | American Electric Power | | X | | X | | X | X | | | | | | | | | |
| 12. | Individual | Bill Harm | PJM | | | X | | | | | | | | | | | | | |
| 13. | Individual | Dan Rochester | Independent Electricity System Operator | | | X | | | | | | | | | | | | | |
| 14. | Individual | Greg Rowland | Duke Energy | | X | | X | | X | X | | | | | | | | | |
| 15. | Individual | Pat Harrington | BC Hydro | | | | X | | | | | | | | | | | | |

1. The drafting team has modified the purpose of IRO-006-5 to read:

To ensure coordinated action between Interconnections when implementing Interconnection-wide transmission loading relief procedures to prevent or manage potential or actual SOL and IROL exceedances to maintain reliability of the bulk electric system.

Do you agree with this modified purpose?

Summary Consideration: The majority of commenters were satisfied with the purpose. Some entities had concern with the use of the phrase “Interconnection-wide.” The purpose is using the phrase “Interconnection-wide” to address the scope of the congestion management effort. While the SDT recognizes that there may be impacts in other Interconnections, we believe those impacts are related to the transmission loading relief procedure only by virtue of Interchange; moving generation in one interconnection will not aid a transmission loading in another unless it impacts Interchange between the interconnections. Accordingly, the SDT believes this purpose correctly discusses the coordination needed between interconnections when one interconnection implements an interconnection-wide procedure and that procedure curtails schedules that cross the interconnection boundary.

| Organization | Yes or No | Question 1 Comment |
|--|-----------|---|
| Manitoba Hydro | No | For the most part agree but believe statement on interconnection wide is misleading. Suggest striking inter-connection wide from the purpose. |
| <p>Response: The purpose is using the phrase “Interconnection-wide” to address the scope of the congestion management effort. While the SDT recognizes that there may be impacts in other Interconnections, we believe those impacts are related to the transmission loading relief procedure only by virtue of Interchange; moving generation in one interconnection will not aid a transmission loading in another unless it impacts Interchange between the interconnections. Accordingly, the SDT believes this purpose correctly discusses the coordination needed between interconnections when one interconnection implements an interconnection-wide procedure and that procedure curtails schedules that cross the interconnection boundary.</p> | | |
| MRO NERC Standards Review Subcommittee | No | MRO NSRS largely agrees with the modified purpose statement but believes one additional modification is required. Interconnection-wide contradicts that coordination is needed among Interconnections. We suggest striking Interconnection-wide from the purpose. The purpose should then read: "To ensure coordinated action between Interconnections when implementing transmission loading relief procedures to prevent or manage potential or actual SOL and IROL exceedances to maintain reliability of the Bulk Electric System." |
| <p>Response: The purpose is using the phrase “Interconnection-wide” to address the scope of the congestion management effort. While the SDT</p> | | |

Consideration of Comments on Project 2006-08 Transmission Loading Relief

| Organization | Yes or No | Question 1 Comment |
|--|-----------|--|
| | | <p>recognizes that there may be impacts in other Interconnections, we believe those impacts are related to the transmission loading relief procedure only by virtue of Interchange; moving generation in one interconnection will not aid a transmission loading in another unless it impacts Interchange between the interconnections. Accordingly, the SDT believes this purpose correctly discusses the coordination needed between interconnections when one interconnection implements an interconnection-wide procedure and that procedure curtails schedules that cross the interconnection boundary.</p> |
| Midwest ISO Standards Collaborators | No | <p>We largely agree with modified purpose statement but believe one additional modification is required. Interconnection-wide contradicts that coordination is needed among Interconnections. We suggest striking Interconnection-wide from the purpose. The purpose should then read:"To ensure coordinated action between Interconnections when implementing transmission loading relief procedures to prevent or manage potential or actual SOL and IROL exceedances to maintain reliability of the bulk electric system."</p> |
| <p>Response: The purpose is using the phrase "Interconnection-wide" to address the scope of the congestion management effort. While the SDT recognizes that there may be impacts in other Interconnections, we believe those impacts are related to the transmission loading relief procedure only by virtue of Interchange; moving generation in one interconnection will not aid a transmission loading in another unless it impacts Interchange between the interconnections. Accordingly, the SDT believes this purpose correctly discusses the coordination needed between interconnections when one interconnection implements an interconnection-wide procedure and that procedure curtails schedules that cross the interconnection boundary.</p> | | |
| SERC OC Standards Review Group | No | <p>We suggest removing the words, "Interconnection-wide" and suggest alternative wording to enhance clarity: To ensure coordinated action when implementing transmission loading relief procedures between and among Interconnections to prevent or manage potential or actual SOL and IROL exceedances to maintain reliability of the bulk electric system.</p> |
| <p>Response: The purpose is using the phrase "Interconnection-wide" to address the scope of the congestion management effort. While the SDT recognizes that there may be impacts in other Interconnections, we believe those impacts are related to the transmission loading relief procedure only by virtue of Interchange; moving generation in one interconnection will not aid a transmission loading in another unless it impacts Interchange between the interconnections. Accordingly, the SDT believes this purpose correctly discusses the coordination needed between interconnections when one interconnection implements an interconnection-wide procedure and that procedure curtails schedules that cross the interconnection boundary.</p> | | |
| American Electric Power | Yes | |
| BC Hydro | Yes | |

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| Organization | Yes or No | Question 1 Comment |
|---|-----------|--------------------|
| | | |
| Bonneville Power Administration | Yes | |
| Duke Energy | Yes | |
| FirstEnergy | Yes | |
| Hydro-Québec TransEnergie (HQT) | Yes | |
| Independent Electricity System Operator | Yes | |
| Northeast Power Coordinating Council | Yes | |
| PacifiCorp | Yes | |
| PJM | Yes | |
| Southern Company | Yes | |

2. The drafting team modified Requirement R1 of IRO-006-5 such that it no longer applies to the Transmission Operator. While requests may still be issued by Reliability Coordinators (as is done in the Eastern Interconnection) or Transmission Operators (as the SDT believes is currently done in the West) or Balancing Authorities (which may be done at some point in the future), the SDT believes that the appropriate entities to respond to those requests are either Balancing Authorities or Reliability Coordinators. Additionally, the SDT has removed ambiguous language from the requirement. Do you agree with these modifications?

Summary Consideration: The majority of commenters agreed with the modifications.

Some commenters expressed a concern that it was not clear who was communicating to whom when giving a reliability reason for not complying with a request. The SDT clarified this language in the standard.

One commenter felt that there needed to be an obligation to act within a certain time frame imposed by the standard. The SDT combined R4 and R5 to provide this obligation, and established the time for the RC to take action as 15 minutes.

| Organization | Yes or No | Question 2 Comment |
|--|-----------|---|
| American Electric Power | No | AEP believes that there should be a corresponding relationship between the level of the TLR and the VSL, as the TLR level will provide the severity of action or non-action required. |
| <p>Response: The SDT disagrees that the TLR Level will have an impact on the Violation Severity Level. The VSL measures the extent to which an entity failed to meet the requirement.</p> | | |
| Southern Company | No | <p>It is our opinion that the Standard Drafting Team (SDT) has not fully developed Requirement R1 in that there is no explicit time period specified within IRO-006-5 for meeting this requirement. Because a thirty minute time period for compliance is prevalent in several approved standards (cited below), we feel Tv or a maximum limit of thirty minutes is appropriate for this standard. The modified language is included below.</p> <p>R1. Each Reliability Coordinator and Balancing Authority that receives a request pursuant to an Interconnection-wide transmission loading relief procedure (such as Eastern Interconnection TLR, WECC Unscheduled Flow Mitigation, or congestion management procedures from the ERCOT Protocols) from any Reliability Coordinator, Balancing Authority, or Transmission Operator in another Interconnection to curtail an Interchange Transaction that crosses an Interconnection boundary shall comply with the request within Tv but no longer than 30 minutes, unless it provides a reliability reason that it cannot comply with the request. [Violation Risk Factor: High] [Time Horizon: Real-time</p> |

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| Organization | Yes or No | Question 2 Comment |
|---|-----------|---|
| | | <p>Operations]</p> <p>The following standards included some mention of a 30 minute limit or Tv limit. IRO-001-1.1 (R3), IRO-009-1 (R4 & R5), TOP-004-2 (R4), TOP-007-0 (R2).</p> |
| <p>Response: The SDT has combined R4 and R5 and incorporated a 15-minute deadline for the RC to take action into R4 to address this issue. The 15 minute duration was chosen based on current practice, which allows for sufficient time to make adjustments to any Interchange Schedules being curtailed.</p> | | |
| MRO NERC Standards Review Subcommittee | No | <p>MRO NSRS agrees with the changes but notes an additional clarification is needed. R1 requires the RC and BA to comply with a curtailment request "unless it provides a reliability reason that it cannot comply with the request." The reader could infer that this reason must be provided to the issuing RC but the requirement does not explicitly state this. Further, the BA may provide the reason to its RC (assume this RC did not issue TLR) and rely on that RC to communicate it to the issuing RC.</p> |
| <p>Response: The SDT agrees and has modified the standard to state that an entity must comply "unless it provides to the requestor a reliability reason that it cannot comply with the request."</p> | | |
| Duke Energy | No | <p>The Standards Drafting Team needs to confirm that TOPs in the West may issue requests for loading relief before including the TOP in Requirement R1.</p> |
| <p>Response: The SDT has spoken with representatives from the West, and believes this is the manner in which WECC procedures are currently handled.</p> | | |
| Midwest ISO Standards Collaborators | Yes | <p>We agree with the changes but note an additional clarification is needed. R1 requires the RC and BA to comply with a curtailment request "unless it provides a reliability reason that it cannot comply with the request." The reader could infer that this reason must be provided to the issuing RC but the requirement does not explicitly state this. Further, the BA may provide the reason to its RC (assume this RC did not issue TLR) and rely on that RC to communicate it to the issuing RC.</p> |
| <p>Response: The SDT agrees and has modified the standard to state that an entity must comply "unless it provides to the requestor a reliability reason that it cannot comply with the request."</p> | | |
| Manitoba Hydro | Yes | <p>Agree with the changes but note an additional clarification is needed. R1 requires the RC and BA to comply with a curtailment request "unless it provides a reliability reason that it cannot comply with the request." It is still not clear who should be communicating. The reader could infer that this reason must be provided to the issuing RC but the requirement does not explicitly state this. Further, the</p> |

Consideration of Comments on Project 2006-08 Transmission Loading Relief

| Organization | Yes or No | Question 2 Comment |
|---|-----------|---|
| | | BA may provide the reason to its RC (assume this RC did not issue TLR) and rely on that RC to communicate it to the issuing RC. |
| <p>Response: The SDT agrees and has modified the standard to state that an entity must comply “unless it provides to the requestor a reliability reason that it cannot comply with the request.”</p> | | |
| BC Hydro | Yes | |
| Bonneville Power Administration | Yes | |
| FirstEnergy | Yes | |
| Hydro-Québec TransEnergie (HQT) | Yes | |
| Independent Electricity System Operator | Yes | |
| Northeast Power Coordinating Council | Yes | |
| PacifiCorp | Yes | |
| PJM | Yes | |
| SERC OC Standards Review Group | Yes | |

3. The drafting team has updated the definition of “Market Flow” to read:

Market Flow: the total amount of energy flowing across a specified facility or set of facilities due to a market dispatch of internal generation to serve internal load.

Do you agree with this definition?

Summary Consideration: The majority of commenters agreed with the definition. Minor changes were made as suggested by two of the commenters. The definition was changed as follows:

Market Flow: the total amount of power flowing across a specified Facility or set of Facilities due to a market dispatch of internal generation to serve internal load.

| Organization | Yes or No | Question 3 Comment |
|---|-----------|---|
| American Electric Power | No | FERC has been very clear regarding the need for DR to be considered as a resource. This definition is narrow and does not include the range of resources that are also subject to dispatch. |
| Response: The SDT believes that while Demand Response can provide congestion relief, it is not appropriate to be incorporated in this definition. Market Flow includes both supply and demand, and therefore already includes the impact of all DR programs within the calculation of market flow. | | |
| SERC OC Standards Review Group | No | The definition reproduced here is not the same as the definition in the redline version (the redline version has “facility” and “facilities” capitalized). The word “energy” should be replaced with the word “power” because energy denotes power flowing over a specified time. |
| Response: The SDT has adopted the proposed change. | | |
| Duke Energy | No | The definition would be more clear if the word “energy” was changed to “power” since requests for relief are megawatts and not megawatt-hours. |
| Response: The SDT has adopted the proposed change. | | |
| BC Hydro | No | The term “Market Flow” seems inappropriate. “Market Flow” suggests inter-area flow from one |

Consideration of Comments on Project 2006-08 Transmission Loading Relief

| Organization | Yes or No | Question 3 Comment |
|--|-----------|---|
| | | market, through one or more control areas to another market, but the definition seems to suggest the flow is within a control area to end-use customers in that control area. I suggest that you consider changing the term to "Intra-Market Flow". |
| <p>Response: The term "market flow" is already in use within three RTOs (PJM, MISO and SPP), and the SDT believes that attempting to modify it now could introduce unnecessary confusion.</p> | | |
| Bonneville Power Administration | Yes | |
| FirstEnergy | Yes | |
| Hydro-Québec TransEnergie (HQT) | Yes | |
| Independent Electricity System Operator | Yes | |
| Manitoba Hydro | Yes | |
| Midwest ISO Standards Collaborators | Yes | |
| MRO NERC Standards Review Subcommittee | Yes | |
| Northeast Power Coordinating Council | Yes | |
| PacifiCorp | Yes | |
| PJM | Yes | |
| Southern Company | Yes | |

4. The drafting team has updated Requirement R1 of IRO-006-EAST-1 to clarify if TLR is used in response to an actual IROL exceedance, it must be used “prior to or concurrently with” one or more of five other specific listed mitigation actions. Do you agree with this change?

Summary Consideration: The majority of commenters agreed with the change. Some entities suggested there may be other options besides those listed, and proposed that the language be less limiting, so as to allow other methods of congestion management to be considered. The SDT believes that the five actions listed are generic actions that can be implemented in multiple ways. As such, it does not believe the list is limiting.

| Organization | Yes or No | Question 4 Comment |
|---|-----------|--|
| SERC OC Standards Review Group | No | Confining the available mitigation actions to the set listed in this requirement may damage reliability by preventing creative responses to system challenges. |
| Response: The SDT believes that the five actions listed are generic actions that can be implemented in multiple ways. As such, it does not believe the list is limiting. | | |
| Duke Energy | No | We disagree with limiting actions to the five bulleted actions. Need to leave other options open. |
| Response: The SDT believes that the five actions listed are generic actions that can be implemented in multiple ways. As such, it does not believe the list is limiting. | | |
| American Electric Power | Yes | |
| BC Hydro | Yes | |
| Bonneville Power Administration | Yes | |
| FirstEnergy | Yes | |

Consideration of Comments on Project 2006-08 Transmission Loading Relief

| Organization | Yes or No | Question 4 Comment |
|--|-----------|--------------------|
| Hydro-Québec TransEnergie (HQT) | Yes | |
| Independent Electricity System Operator | Yes | |
| Manitoba Hydro | Yes | |
| Midwest ISO Standards Collaborators | Yes | |
| MRO NERC Standards Review Subcommittee | Yes | |
| Northeast Power Coordinating Council | Yes | |
| PacifiCorp | Yes | |
| PJM | Yes | |
| Southern Company | Yes | |

5. The drafting team has modified R2 and Appendix A of IRO-006-EAST-1 to make it clear that the criteria specified for TLR levels are guidelines only, not requirements. Do you believe these modifications make it clear that an RC should not be found in violation of R2 if they invoke TLR at a level different than that which the guidelines might recommend?

Summary Consideration: The majority of commenters agreed with the modifications, but several suggested that the Appendix be removed. The SDT has removed the Appendix and incorporated the critical elements into the standard.

Some commenters suggested that it should be made clear that TLR Levels are not required to be called in a specific order. The SDT added the following language to a footnote for the TLR Level descriptions: "TLR levels are neither required nor expected to be issued in numerical order of level."

| Organization | Yes or No | Question 5 Comment |
|---|-----------|---|
| American Electric Power | No | After the modifications, the remaining reporting obligations should be moved from Medium to Low VSL. Additionally, identifying the means of communications will be important to compliance. |
| <p>Response: The SDT believes that the VSLs are appropriate. If the commenter is instead referring to VRF, the SDT believes that using the TLR level communicates information to other entities regarding the severity of congestion, and therefore is appropriate to be in the "Medium" VRF category.</p> | | |
| Southern Company | No | Complying with one Reliability Standard should not allow someone to violate another Reliability Standard. IRO-001 states that "Reliability Coordinators must have the authority, plans, and agreements in place to immediately direct reliability entities within their Reliability Coordinator Areas to re-dispatch generation, reconfigure transmission, or reduce load to mitigate critical conditions to return the system to a reliable state."Regardless of the wording or intent, guidelines associated with standards become de facto standards during an audit event. Appendix A should be deleted from the standard and made a separate guideline document. |
| <p>Response: The SDT is unclear of the conflict with IRO-001 as implied by the commenter. The SDT has removed the Appendix and incorporated the critical elements into the standard.</p> | | |
| MRO NERC Standards Review Subcommittee | No | MRO NSRS believes a statement should be added that reads. "TLR levels are neither required nor expected to be issued in numerical order of level. For example, a TLR Level 3a could be issued |

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| Organization | Yes or No | Question 5 Comment |
|---|-----------|---|
| | | without issuing any prior TLR Level 1 or 2.” |
| Response: The SDT has added “TLR levels are neither required nor expected to be issued in numerical order of level.” | | |
| Midwest ISO Standards Collaborators | No | We believe a statement should be added that reads. “TLR levels are neither required nor expected to be issued in numerical order of level. For example, a TLR Level 3a could be issued without issuing any prior TLR Level 1 or 2.” |
| Response: The SDT has added “TLR levels are neither required nor expected to be issued in numerical order of level.” | | |
| SERC OC Standards Review Group | No | We think clarity would be served by adding the underlined phrase in Appendix A: However, the Reliability Coordinator has the discretion to choose any of these levels in any order desired regardless of the guidelines listed below. Also, it is troubling to note that this set of guidelines is included as an appendix to a regulatory requirement when other situations similar to this (see PER Standards) are reproduced in a standalone document. |
| Response: The SDT has added “TLR levels are neither required nor expected to be issued in numerical order of level.” The SDT has removed the Appendix and incorporated the critical elements into the standard. | | |
| FirstEnergy | Yes | We feel that this begs the question should guidelines even be a part of a standard. It sounds like the drafting team believes there is a strong possibility that an auditor might view these guidelines as requirements. If that is the case, there should be no room for error. These guidelines should be in a stand alone document referenced by the standard so that it is clear they are not requirements. |
| Response: The SDT has removed the Appendix and incorporated the critical elements into the standard. | | |
| BC Hydro | Yes | |
| Bonneville Power Administration | Yes | |
| Duke Energy | Yes | |

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| Organization | Yes or No | Question 5 Comment |
|--|-----------|--------------------|
| Hydro-Québec TransEnergie (HQT) | Yes | |
| Independent Electricity System Operator | Yes | |
| Manitoba Hydro | Yes | |
| Northeast Power Coordinating Council | Yes | |
| PJM | Yes | |

6. The drafting team has eliminated the IRO-006-EAST-1 requirement originally included in R3 to notify the Eastern Interconnection DC Tie Operator of curtailment requests, as the team believes it is no longer needed and is already implicitly addressed in BAL-001. Do you agree this requirement is no longer needed?

Summary Consideration: The majority of commenters agreed the requirement is no longer needed.

| Organization | Yes or No | Question 6 Comment |
|--|-----------|---|
| FirstEnergy | No | Although we agree with the removal of the requirement, we have issues with a reliability requirement that is deemed "implicit" as stated in the question. Requirements, if needed for reliability, must always be explicit. |
| <p>Response: The comment incorrectly referenced BAL-001. It should have instead referenced BAL-006-1, Requirement R4, which states "Adjacent Balancing Authority Areas shall operate to a common Net Interchange Schedule and Actual Net Interchange value and shall record these hourly quantities, with like values but opposite sign." The SDT believes this includes BA's separated by DC Ties, as well as any other adjacent BA.</p> | | |
| Southern Company | No | We feel that communication with the DC Tie Operator is already covered within the standards. We again note the absence of a time requirement for some aspects of TLR within Requirement 3. Our response to Question #2 is repeated below as it regards IRO-006-EAST-1 (R3): It is our opinion that the Standard Drafting Team (SDT) has not fully developed Requirement R3 in that there is no explicit time period specified within IRO-006-EAST-1 for meeting this requirement. While the SDT may be relying on other standards; such as IRO-001-1.1 (R3), IRO-009-1 (R4 & R5), TOP-004-2 (R4), TOP-007-0 (R2) or TOP-008-1 (R1) [Note that IRO-006-EAST-1 is not applicable to Transmission Operators in the case of the last three references], language should be included to mandate a compliance period. The language should be framed to be effective in the absence of a prevailing or superior standard so as not to create a "double jeopardy" non-compliance situation. Since the thirty minute time period for compliance is prevalent in the above references we feel 15 or a maximum limit of thirty minutes is appropriate for this standard. |
| <p>Response: The SDT has combined R4 and R5 and incorporated a 15-minute deadline into R4 to address this issue. The 15 minute duration was chosen based on current practice, which allows for sufficient time to make adjustments to any Interchange Schedules being curtailed.</p> | | |
| MRO NERC Standards Review Subcommittee | Yes | MRO NSRS agrees the requirement was never needed. RC and BA sources and sinks have always been required to be notified. The sink BA is required to notify all on the transmission path including DC tie operators. However, we don't believe BAL-001 implies that this is addressed. |

Consideration of Comments on Project 2006-08 Transmission Loading Relief

| Organization | Yes or No | Question 6 Comment |
|--|-----------|---|
| <p>Response: The comment incorrectly referenced BAL-001. It should have instead referenced BAL-006-1, Requirement R4, which states “Adjacent Balancing Authority Areas shall operate to a common Net Interchange Schedule and Actual Net Interchange value and shall record these hourly quantities, with like values but opposite sign.” The SDT believes this includes BA’s separated by DC Ties, as well as any other adjacent BA.</p> | | |
| Midwest ISO Standards Collaborators | Yes | We agree the requirement was never needed. RC and BA sources and sinks have always been required to be notified. The sink BA is required to notify all on the transmission path including DC tie operators. However, we don’t believe anything in BAL-001 implies that this is addressed. |
| <p>Response: The comment incorrectly referenced BAL-001. It should have instead referenced BAL-006-1, Requirement R4, which states “Adjacent Balancing Authority Areas shall operate to a common Net Interchange Schedule and Actual Net Interchange value and shall record these hourly quantities, with like values but opposite sign.” The SDT believes this includes BA’s separated by DC Ties, as well as any other adjacent BA.</p> | | |
| American Electric Power | Yes | |
| BC Hydro | Yes | |
| Bonneville Power Administration | Yes | |
| Duke Energy | Yes | |
| Hydro-Québec TransEnergie (HQT) | Yes | |
| Independent Electricity System Operator | Yes | |
| Manitoba Hydro | Yes | |
| Northeast Power | Yes | |

Consideration of Comments on Project 2006-08 Transmission Loading Relief

| Organization | Yes or No | Question 6 Comment |
|--------------------------------|-----------|--------------------|
| Coordinating Council | | |
| PJM | Yes | |
| SERC OC Standards Review Group | Yes | |

7. The drafting team has eliminated the IRO-006-EAST-1 requirement originally included in R4 that allowed for the use of procedures “pre-approved by the ERO...in lieu of implementing some or all of the requested flow reduction actions.” The drafting team believes that the process for Variances has replaced the pre-approval of the ERO, and no special process currently exists for acquiring pre-approval save the Variance process. Do you agree that this allowance is no longer needed?

Summary Consideration: The majority of commenters agreed the allowance is no longer needed. Some entities expressed concern with the use of the word “analysis.” The SDT agreed with those concerns and has replaced “analysis” with the word “assessment” in order to allow other sources, such as experience, to be considered in the bulleted list of actions in Requirement R4. For comparison, here are definitions of analysis and assessment:
 Analysis - the examination of something in detail in order to understand it better or draw conclusions from it
 Assessment - a judgment about something based on an understanding of the situation

| Organization | Yes or No | Question 7 Comment |
|--|-----------|--|
| SERC OC Standards Review Group | No | Requirement 4 has several fundamental issues as it is currently worded: No. 1 This change to the requirement seems to allow “on the fly substitution” for interconnection wide congestion management procedure proscriptions during an actual event. This change would damage coordination because other parties in the congestion management event would not necessarily know or understand what the changes were and why they were substituted for the officially recommended actions. This also would tend to dilute and diminish the ability of an adjacent Reliability Coordinator to maintain their wide-area situational awareness. No. 2 The variance process is essentially a regional variance process, while it is possible and likely that a substitute congestion management procedure may cross regional boundaries. No. 3 Approval by the ERO is an artifact (the ERO was called NERC in the previous versions of this standard and the actual approval was by the NERC OC) from the days of voluntary standards. Assuming that the variance process can’t be used, what would constitute approval by the ERO in the context of mandatory standards approved by FERC? No. 4 The use of the word “analysis” in the bullets under R4 seems to indicate a formalized process with a study document which we do not believe would be possible in real time. |
| <p>Response: 1.) The current IRO-006-4 Attachment 1 sections 1.5 and 1.6 allow for deviations from the directed actions in certain cases. The SDT believes</p> | | |

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| Organization | Yes or No | Question 7 Comment |
|--|-----------|--|
| <p>the new R4 is consistent with that which is currently allowed under the existing standards.</p> <p>2.) The SDT disagrees that the variance process is a “regional” process. NERC’s rules of procedure allow for both regional variances and entity variances, and entity variances may apply to more than just a single entity. In this case, the SDT would expect that the RC and the associated entities performing the substitute action would jointly seek an entity variance to allow the alternate procedure to be used in lieu of TLR response actions.</p> <p>3.) The SDT agrees that “approval by the ERO” is ambiguous. Accordingly, we have proposed to remove the language and instead use the Variance process, which will ensure that the alternate process receives appropriate attention prior to its being allowed as a substitute.</p> <p>4.) The SDT agrees with your concerns regarding the use of the word “analysis,” and has replaced it with the word “assessment” in order to allow other sources, such as experience, to be considered.</p> | | |
| Duke Energy | No | We believe that alternate congestion management actions should be pre-approved by the ERO, as provided in Requirement R3 of IRO-006-4.1 |
| <p>Response: The SDT believes that “approval by the ERO” is ambiguous. Accordingly, we have proposed to remove the language and instead use the Variance process, which will ensure that the alternate process receives appropriate attention prior to its being allowed as a substitute.</p> | | |
| Midwest ISO Standards Collaborators | Yes | <p>We agree with the removal. However, we do not believe a variance is necessary in all cases. Fortunately, the drafting team has left R4 flexible enough that the RC can take other action. However, we believe additional modification is necessary to improve this flexibility and reduce compliance burden. We believe that bullets under the implementing an alternate reliability action need to be modified. Analysis is one way to demonstrate that the congestion management actions will be ineffective or result in a reliability concern or adversely affect reliability. However, it is not the only way and this could imply that the RC now has to have a documented study defending their actions. The RCs operational experience and judgment is likely enough reason to take an alternate action. We suggest that the drafting modify these bullets to make clear that the bottom line is the result needs to be equally effective and as long as actual results demonstrate this, no analysis is necessary.</p> |
| <p>Response: The SDT agrees with your concerns regarding the use of the word “analysis,” and has replaced it with the word “assessment” in order to allow other sources, such as experience, to be considered.</p> | | |
| MRO NERC Standards Review Subcommittee | Yes | <p>MRO NSRS agrees with the removal. However, we do not believe a variance is necessary in all cases. Fortunately, the drafting team has left R4 flexible enough that the RC can take other action. However, we believe additional modification is necessary to improve this flexibility and reduce the compliance burden. We believe that bullets under the implementing an alternate reliability action</p> |

Consideration of Comments on Project 2006-08 Transmission Loading Relief

| Organization | Yes or No | Question 7 Comment |
|---|-----------|--|
| | | <p>need to be modified. Analysis is one way to demonstrate that the congestion management actions will be ineffective or result in a reliability concern or adversely affect reliability. However, it is not the only way and this could imply that the RC now has to have a documented study defending their actions. The RCs operational experience and judgment is likely enough reason to take an alternate action. We suggest that these bullets be modified to make clear that the bottom line is the result needs to be equally effective and as long as actual results demonstrate this, no analysis is necessary.</p> |
| <p>Response: The SDT agrees with your concerns regarding the use of the word “analysis,” and has replaced it with the word “assessment” in order to allow other sources, such as experience, to be considered.</p> | | |
| American Electric Power | Yes | |
| BC Hydro | Yes | |
| Bonneville Power Administration | Yes | |
| FirstEnergy | Yes | |
| Hydro-Québec TransEnergie (HQT) | Yes | |
| Independent Electricity System Operator | Yes | |
| Manitoba Hydro | Yes | |
| Northeast Power Coordinating Council | Yes | |
| PJM | Yes | |

Consideration of Comments on Project 2006-08 Transmission Loading Relief

| Organization | Yes or No | Question 7 Comment |
|------------------|-----------|--------------------|
| Southern Company | Yes | |

8. The drafting team has eliminated the concept of “reloading” from IRO-006-EAST-1. Reliability Coordinators do not direct reloads; they allow them to occur if the operating conditions permit and transmission customers so desire. Accordingly, the team does not believe any requirement to issue reloads is needed. Do you agree that requiring reloads is not needed in the Reliability Standard?

Summary Consideration: The majority of commenters agreed requiring reloads is not needed in the Reliability Standards.

| Organization | Yes or No | Question 8 Comment |
|--|-----------|--|
| American Electric Power | No | Reloads need to be evaluated before resuming energy flow to avoid compromising the reliability of the BES. |
| Response: The SDT agrees that reloads should be evaluated before resuming energy flow. However, the SDT believes this is addressed already in INT-006-2 R1. | | |
| MRO NERC Standards Review Subcommittee | Yes | MRO NSRS agrees that Reloads are not a reliability issue and therefore do not belong in the reliability standards. |
| Response: The SDT thanks you for your supportive comment. | | |
| Midwest ISO Standards Collaborators | Yes | We agree that Reloads are not a reliability issue and therefore do not belong in the reliability standards. |
| Response: The SDT thanks you for your supportive comment. | | |
| BC Hydro | Yes | |
| Bonneville Power Administration | Yes | |
| Duke Energy | Yes | |
| FirstEnergy | Yes | |
| Hydro-Québec TransEnergie (HQT) | Yes | |

Consideration of Comments on Project 2006-08 Transmission Loading Relief

| Organization | Yes or No | Question 8 Comment |
|---|-----------|--------------------|
| Independent Electricity System Operator | Yes | |
| Manitoba Hydro | Yes | |
| Northeast Power Coordinating Council | Yes | |
| PJM | Yes | |
| SERC OC Standards Review Group | Yes | |
| Southern Company | Yes | |

9. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the proposed standards.

Summary Consideration:

The majority of comments were not significant. Some resulted in minor language changes for clarity or consistency.

One commenter expressed concerns regarding business practices. The SDT referred that entity to the NAESB and FERC forums.

Some entities expressed concern with not having enough time allowed in IRO-006-EAST-1 R5. The SDT combined R4 and R5 and gave entities 15 minutes, rather than 10, to comply.

| Organization | Question 9 Comment |
|---|---|
| FirstEnergy | 1. In IRO-006-EAST-1, we do not understand the reason why the Applicability section must state the "Initiating" RC and "Responding" RC. The Requirements are already explicit enough and the applicability should simply state "Reliability Coordinator". 2. In IRO-006-5, we do not understand why the VRF was increased from "Medium" to "High". We believe it should remain "Medium". |
| <p>Response:</p> <p>1. The SDT believes it is important to make it clear that only Eastern Interconnection RCs are subject to the requirements that apply to initiating RCs, but all RCs (including those in other Interconnections) are subject to the requirements for responding RCs.</p> <p>2. The VRF was raised to be consistent with previous FERC actions and directives related to this standard.</p> | |
| Duke Energy | 1. IRO-006-EAST-1 Requirement R2.2 is unclear regarding what constitutes the "list of congestion management actions". Suggest the following alternate wording: A list of congestion management actions to be implemented, which are calculated by the TLR procedure based upon the TLR level chosen. 2. The Standards Drafting Team needs to make sure that all these revisions are coordinated with the NAESB procedures. 3. The red-lined version of IRO-006-EAST-1 is hard to read because Requirements R3 and R4 formatting is mangled. |
| <p>Response:</p> <p>1. The SDT had attempted to draft this standard in a more generic fashion such that if the TLR process changes over time, it is less likely that the standard will need to be modified to accommodate the changes.</p> | |

Consideration of Comments on Project 2006-08 Transmission Loading Relief

| Organization | Question 9 Comment |
|--------------|--|
| | <p>2. NERC and NAESB are currently coordinating closely on the TLR standards, and meeting as a joint standards drafting team on a regular basis.</p> <p>3. The SDT will work with NERC staff to review the redline.</p> |
| BC Hydro | <p>Additional Comments:</p> <ol style="list-style-type: none"> 1. In R4, the term “Network Integrated Transmission Service” should be changed to “Network Integration Transmission Service” (see Appendix B of FERC Order 890 B (2008-Jun-23 version of the FERC pro-forma Open-Access Transmission Tariff, OATT): http://www.ferc.gov/whats-new/comm-meet/2008/061908/E-1.pdf 2. In R1, the term “Tv” should be defined in the standard because it does not appear in the NERC Glossary (http://www.nerc.com/files/Glossary_12Feb08.pdf; or http://www.nerc.com/files/Glossary_2009April20.pdf). 3. Appendix A should make the priority order for curtailments clearer and make reference to Section 13.6 of the FERC OATT, particularly the following excerpt, However, the Transmission Provider reserves the right to Curtail, in whole or in part, any Firm Transmission Service provided under the Tariff when, in the Transmission Provider’s sole discretion, an emergency or other unforeseen condition impairs or degrades the reliability of its Transmission System. This would help to avoid costly and time-consuming legal proceedings like the one involving FERC and Northern States Power that resulted in the 1999 Mar 14 ruling by the US Court of Appeal (see: http://caselaw.lp.findlaw.com/data2/circs/8th/983000p.pdf). 4. Appendix A should clearly state that curtailment of Firm Network Load and Firm Native Load (these terms should be defined by pointing to FERCs OATT) should only take place after all relevant Non Firm and Firm inter-market transfers have been curtailed. The following excerpt from the ruling referenced above provides the rationale: Thus, NSP argues, when there exists a power constraint, by providing curtailment to its native/retail consumers on a pro rata basis with wholesale users, NSP will be forced to provide interruptible service to its native/retail consumers. When such power outages occur, a pro rata curtailment will detrimentally affect native/retail consumers who have no other alternatives available to obtain electrical service. NSP urges that when wholesale (point-to-point) customers are curtailed in electrical transmission, the wholesale customer has alternative sources from which to obtain continuous electrical supply, through either the purchase of electricity from another provider, or via their own power generation facilities. 5. Appendix A: Consider having three columns, (1) “Level”, (2) “Guidelines for System Conditions” and (3) “Additional Actions to be Initiated”. As it is now the definition of the TLR level and the actions to take at that level are in the same column. The last column, by including only the actions additional to what would be taken at the “earlier” TLR levels, would highlight the priority order of the actions. The additional actions to be taken at TLR level 6 should be “curtailment of Network Load and Native Load on a pro-rata basis” to make the link to FERC OATT Section 13.6. 6. General: All NERC and NAESB standards relating to Transmission Loading Relief should make reference to the FERC OATT (particularly Section 13.6, “Curtailment of Firm Transmission Service”). The priority order for curtailments should be clearly articulated using the same language used in the FERC OATT (eg, Non-Firm Point-to-Point, Network Integration Transmission Service, NITS, Network Load, Native Load, etc). Since NERC is acting as the FERC ERO, there needs to be |

| Organization | Question 9 Comment |
|--|--|
| | <p>clearer links between the OATT and the NERC and NAESB standards.</p> <p>7. General: A link to the relevant NAESB web page should be provided in the footnotes that all read, "Reallocation is a term defined within the NAESB TLR standards" I find the NAESB website (http://www.naesb.org/default.htm) difficult to navigate and couldn't find a glossary, but only many documents related to meeting agendas of the Glossary committee. The NAESB TLR Group page (http://www.naesb.org/weq/weq_tlr.asp) doesn't appear to have any documents newer than 2005 Jun 28.</p> |
| <p>Response:</p> <ol style="list-style-type: none"> 1. The SDT has modified the language as suggested. 2. The term is defined in the glossary under "IROL T_v" 3. The SDT believes these business rules are currently addressed in NAESB standards and FERC Orders, and suggests that the commenter work through those organizations to effect changes if such changes are desired. 4. The SDT believes these business rules are currently addressed in NAESB standards and FERC Orders, and suggests that the commenter work through those organizations to effect changes if such changes are desired. 5. The attachment is not specifying the actions to take, but rather serves as a guideline to determine the appropriate level of TLR. In this particular case, the guidance is based on what actions could be expected to mitigate the scenario. 6. The reliability standard does not make reference to curtailment priority. Curtailment priorities are stipulated in NAESB's business practices and FERC Orders. 7. To access specific NAESB standards, please contact NAESB (www.naesb.org) for details. | |
| <p>MRO NERC Standards Review Subcommittee</p> | <p>MRO NSRS is concerned that reliability reason is the only reason allowed for not complying with R1 in IRO-006-5. Unfortunately, the IDC allows an RC to issue a TLR that requires curtailments in the past and MISO has actually received requests for curtailments with effective times that are in the past. R1 could be modified to allow other reasons for not complying with the request such as this or another requirement could be written that requires a reasonable lead time on issuing TLRs and expected time of implementation of cuts.</p> <p>Response: The NERC IDCWG has been investigating this issue and has made some changes to the IDC that may help address this problem.</p> <p>Since this standard is for the Eastern Interconnection only, MRO NSRS asks the SDT to write the Measurements to consider presentation of IDC logs and screens as satisfactory evidence. Specifically, we ask the drafting team to modify M2 and M3 IRO-006-EAST-1 to clarify that providing the TLR history from the IDC will satisfy the evidence requirements. Since no RC ever issues a TLR without the IDC, MRO NSRS asks the SDT to write the requirements with consideration of</p> |

| Organization | Question 9 Comment |
|--------------|--|
| | <p>the use of the IDC. For example, R3 should be clarified that the IDC can be relied upon to communicate the notifications. The RC should not be required to demonstrate that the notifications went out as appropriate or essentially that the IDC worked as design.</p> <p>Response: In previous postings, commenters have agreed that the standard should not reference any specific tool. The IDC is the name of the NERC tool that is currently used to manage the TLR process and is a way, but not necessarily the only way, to show compliance.</p> <p>MRO NSRS suggests the wording for the third sub-bullet under the first bullet of IRO-006-EAST-1 R4 be changed from:”provide the Market Flow schedule changes”to:”achieve the Market Flow relief obligations”. The term “provide” could be misinterpreted.</p> <p>Response: The SDT has replaced the word “provide” with “implement” to address your concerns.</p> <p>In IRO-006-EAST-1 R5, the words “as soon as possible but not more than” are problematic from a compliance perspective. How do you prove you did it as soon as possible? If you could have done it 5 seconds sooner, this could be construed as a violation unnecessarily. The MRO NSRS suggests changing this phrase to “within”.</p> <p>Response: The “as soon as possible” language is intended to communicate a sense of urgency, which is appropriate. The language is not included in the measures and is not included in the VSLs.</p> <p>With regard to IRO-006-EAST-1 R5, there needs to be a documented exemption for tool performance issues. Often there is a 3 minute latency for receiving TLR curtailments from the time they are issued. This leaves only 7 minutes for the RC to review, determine impacts, communicate internally and with the initiating RC, if necessary, to make alternate arrangements, and acknowledge the curtailments.</p> <p>Response: The SDT has eliminated R5 and incorporated a 15-minute deadline into R4 to address this issue.</p> <p>Similarly, it should be stated that initiating discussions with the initiating RC regarding the curtailments counts as acknowledgement.</p> <p>Response: The SDT has eliminated R5 and incorporated a 15-minute deadline into R4 to address this issue.</p> <p>R5 needs to be further modified to allow 15 minutes rather than 10 for acknowledgement.</p> |

| Organization | Question 9 Comment |
|--|--|
| | Response: The SDT has eliminated R5 and incorporated a 15-minute deadline into R4 to address this issue. |
| Response: Please see in-line responses. | |
| Northeast Power Coordinating Council | NPCC appreciates the work of the Drafting Team, and has no additional comments. |
| Response: The SDT thanks you for your supportive comment. | |
| Independent Electricity System Operator | The drafting team has adequately addressed our comments on the previous draft. Thank you. |
| Response: The SDT thanks you for your supportive comment. | |
| SERC OC Standards Review Group | <p>The language in IRO-006-East-1 is too detailed in the “how to” for managing SOL and IROL events. This level of detail is more properly contained in a procedural document. Mandatory enforceable standards should describe “what” is required and at a higher level than described in this current document.</p> <p>Response: The SDT does not believe that this standard describes the “how” for managing SOL and IROL events; there are other standards that address managing SOL and IROL events. TLR is only one of the measures that can be used to manage congestion. The SDT generally agrees that standards should stipulate the “what,” but there are certain procedures which, if they must be performed in a specific fashion to ensure reliability, should be stipulated as reliability standards.</p> <p>We suggest that the second bullet of R4 in IRO-006-1 should be rewritten to begin as follows: “With the agreement of the initiating Reliability Coordinator, implement alternate congestion management actions to those communicated in Requirement R3, provided that:” If the drafting team agrees with this change the second sub-bullet of the second bullet may be deleted as it may now be redundant.</p> <p>Response: The SDT agrees that this change could be made, but does not feel that it adds any significant benefit or clarity.</p> <p>The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.</p> |

| Organization | Question 9 Comment |
|---|---|
| <p>Response: Please see in-line responses.</p> | |
| <p>Midwest ISO Standards Collaborators</p> | <p>We are concerned that reliability reason is the only reason allowed for not complying with R1 in IRO-006-5. Unfortunately, the IDC allows an RC to issue a TLR that requires curtailments in the past and we have actually received requests for curtailments with effective times that are in the past. R1 could be modified to allow other reasons for not complying with the request such as this or another requirement could be written that requires a reasonable lead time on issuing TLRs and expected time of implementation of cuts.</p> <p>Response: The NERC IDCWG has been investigating this issue and has made some changes to the IDC that may help address this problem.</p> <p>Since this standard is for the Eastern Interconnection only, we ask the SDT to write the Measurements to consider presentation of IDC logs and screens as satisfactory evidence. Specifically, we ask the drafting team to modify M2 and M3 IRO-006-EAST-1 to clarify that providing the TLR history from the IDC will satisfy the evidence requirements. Since no RC ever issues a TLR without the IDC, we ask the SDT to write the requirements with consideration of the use of the IDC. For example, R3 should be clarified that the IDC can be relied upon to communicate the notifications. The RC should not be required to demonstrate that the notifications went out as appropriate or essentially that the IDC worked as design.</p> <p>Response: In previous postings, commenters have agreed that the standard should not reference any specific tool. The IDC is the name of the NERC tool that is currently used to manage the TLR process and is a way, but not necessarily the only way, to show compliance.</p> <p>We suggest the wording for the third sub-bullet under the first bullet of IRO-006-EAST-1 R4 be changed from:”provide the Market Flow schedule changes”to:”achieve the Market Flow relief obligations”. Provide could be misinterpreted.</p> <p>Response: The SDT has replaced the word “provide” with “implement” to address your concerns.</p> <p>In IRO-006-EAST-1 R5, the words “as soon as possible but not more than” are problematic from a compliance perspective. How do you prove you did it as soon as possible? If you could have done it 5 seconds sooner, this could be construed as a violation unnecessarily. We suggest changing this phrase to “within”.</p> <p>Response: The “as soon as possible” language is intended to communicate a sense of urgency, which is appropriate. The language is not included in the measures or the VSLs.</p> |

| Organization | Question 9 Comment |
|---|--|
| | <p>With regard to IRO-006-EAST-1 R5, there needs to be a documented exemption for tool performance issues. Often there is a 3 minute latency for receiving TLR curtailments from the time they are issued. This leaves only 7 minutes for the RC to review, determine impacts, communicate internally and with the initiating RC, if necessary, to make alternate arrangements, and acknowledge the curtailments.</p> <p>Response: The SDT has eliminated R5 and incorporated a 15-minute deadline into R4 to address this issue.</p> <p>Similarly, it should be stated that initiating discussions with the initiating RC regarding the curtailments counts as acknowledgement.</p> <p>Response: The SDT has eliminated R5 and incorporated a 15-minute deadline into R4 to address this issue.</p> <p>R5 needs to be further modified to allow 15 minutes rather than 10 for acknowledgement.</p> <p>Response: The SDT has eliminated R5 and incorporated a 15-minute deadline into R4 to address this issue.</p> |
| <p>Response: Please see in-line responses.</p> | |

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. SC authorized the SAR and assembled a drafting team on December 5, 2006.
2. The revisions to IRO-006 to transfer business practice content to NAESB were approved as IRO-006-4 by the Board of Trustees on October 23, 2007.
3. The SDT developed a first draft for industry consideration and posted it for comments from October 30, 2008 to December 1, 2008.
4. The SDT developed a second draft for industry consideration and posted it for comments from October 30, 2008 to December 1, 2008.
5. The SDT developed a third draft for industry consideration and posted it for comments from July 13, 2009 to August 13, 2009.
6. The SDT has developed this fourth draft for industry consideration.

Description of Current Draft:

This is the fourth draft of the proposed standard posted for stakeholder comments.

Future Development Plan:

| Anticipated Actions | Anticipated Date |
|---------------------------------------|-------------------------|
| Posting for Comment (Draft 4). | October 30, 2009 |
| Respond to Comments (Draft 4). | January 8, 2010 |
| Posting for 30-day Pre-Ballot Review. | January 8, 2010 |
| Initial Ballot. | February 7, 2010 |
| Respond to comments. | March 31, 2010 |
| Recirculation ballot. | March 31, 2010 |
| Board adoption. | May 2010 |

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

A. Introduction

1. **Title:** Reliability Coordination — Transmission Loading Relief (TLR)
2. **Number:** IRO-006-5
3. **Purpose:** To ensure coordinated action between Interconnections when implementing Interconnection-wide transmission loading relief procedures to prevent or manage potential or actual SOL and IROL exceedances to maintain reliability of the bulk electric system.
4. **Applicability:**
 - 4.1. Reliability Coordinator.
 - 4.2. Balancing Authority.
5. **Proposed Effective Date:** First day of the first calendar quarter following the date this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter after the date this standard is approved by the NERC Board of Trustees.

B. Requirements

- R1. Each Reliability Coordinator or Balancing Authority that receives a request pursuant to an Interconnection-wide transmission loading relief procedure (such as Eastern Interconnection TLR, WECC Unscheduled Flow Mitigation, or congestion management procedures from the ERCOT Protocols) from any Reliability Coordinator, Balancing Authority, or Transmission Operator in another Interconnection to curtail an Interchange Transaction that crosses an Interconnection boundary shall comply with the request, unless it provides a reliability reason [to the requester](#) that it cannot comply with the request. [*Violation Risk Factor: High*]
[*Time Horizon: Real-time Operations*]

C. Measures

- M1. Each Reliability Coordinator and Balancing Authority shall provide evidence (such as logs, voice recordings, Tag histories, and studies) that, when a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure was made from another Reliability Coordinator, Balancing Authority, or Transmission Operator in that other Interconnection, it complied with the request or provided an identified reliability reason that it could not comply with the request.

D. Compliance

8. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity.

1.2. Compliance Monitoring Period and Reset Time Frame

Not applicable.

1.3. Data Retention

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

- The Reliability Coordinator and Balancing Authority shall maintain evidence to show compliance with R1 for the most recent twelve calendar months plus the current month.
- If a Reliability Coordinator or Balancing Authority is found non-compliant, it shall keep information related to the non-compliance until found compliant.

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

1.4. Compliance Monitoring and Enforcement Processes:

The following processes may be used:

- Compliance Audits
- Self-Certifications
- Spot Checking
- Compliance Violation Investigations
- Self-Reporting
- Complaints

1.5. Additional Compliance Information

None.

Violation Severity Levels

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|----------|---|
| R1 | | | | <p>The responsible entity received a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority, or Transmission Operator, but the entity neither complied with the request, nor provided a reliability reason that it could not comply with the request.</p> |

E. [Regional](#) Variances

None.

F. Associated Documents

G. Version History

| Version | Date | Action | Change Tracking |
|---------|----------------------------------|--|-----------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | August 8, 2005 | Revised Attachment 1 | Revision |
| 3 | February 26, 2007 | Revised Purpose and Attachment 1 related to NERC NAESB split of the TLR procedure | Revision |
| 4 | October 23, 2007 | Completed NERC/NAESB split | Revision |
| 5 | | Removed Attachment 1 and made into a new standard, eliminated unnecessary requirements and variances . | Revision |
| | | | |

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

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| Board adoption. | May 2010 |

Definitions of Terms Used in Standard

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~~**Reallocation:** The total or partial curtailment of Transactions during TLR Level 3a or 5a to allow Transactions using higher priority to be implemented.~~ (To be retired.)

Market Flow: the total amount of [power](#) flowing across a specified Facility or set of Facilities due to a market dispatch of internal generation to serve internal load.

A. Introduction

1. **Title: Transmission Loading Relief Procedure for the Eastern Interconnection**
2. **Number:** IRO-006-EAST-1
3. **Purpose:** To provide an Interconnection-wide transmission loading relief procedure (TLR) for the Eastern Interconnection that can be used to prevent and/or mitigate potential or actual System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) exceedances to maintain reliability of the Bulk Electric System (BES).
4. **Applicability:**
 - 4.1. Initiating Reliability Coordinators in the Eastern Interconnection.
 - 4.2. Responding Reliability Coordinators
5. **Proposed Effective Date:** First day of the first calendar quarter following the date this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter after the date this standard is approved by the NERC Board of Trustees.

B. Requirements

- R1. When acting or ~~directing~~ instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T_v , each Reliability Coordinator shall initiate, prior to or concurrently with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated), one or more of the following actions: [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]
 - Inter-area redispatch
 - Intra-area redispatch of generation
 - Reconfiguration of the transmission system
 - Voluntary load reductions (e.g., Demand-side Management)
 - Involuntary load reductions
- R2. When initiating the Eastern Interconnection TLR procedure to prevent or mitigate an SOL or IROL exceedance, and at least every clock hour after initiation up to and including the hour when the TLR level has been identified as TLR Level 0, the Reliability Coordinator shall identify: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]
 - 2.1. The TLR level (~~TLR levels are listed in Appendix A~~) as listed below in Table 1, and
 - 2.2. A list of congestion management actions to be implemented based on the TLR level chosen.

| <u>TABLE 1 – TLR LEVELS¹</u> | |
|---|---|
| <u>Level</u> | <u>Examples of Possible System Conditions</u> |
| TLR-1 | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to approach or exceed its SOL or IROL within 8 hours. |
| TLR-2 | <ul style="list-style-type: none"> • At least one Transmission Facility is approaching or is at its SOL or IROL. <ul style="list-style-type: none"> ○ Analysis shows that holding new and increasing non-firm Interchange Transactions and energy flows for the next hour can prevent exceeding this SOL or IROL. |
| TLR-3a | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL within the next hour. <ul style="list-style-type: none"> ○ Analysis shows that full or partial curtailment or reallocation² of non-firm Interchange Transactions and energy flows can prevent exceeding this SOL and IROL. |
| TLR-3b | <ul style="list-style-type: none"> • At least one Transmission Facility is exceeding its SOL or IROL, or • At least one Transmission Facility is expected to exceed its SOL or IROL within the current hour. <ul style="list-style-type: none"> ○ Analysis shows that full or partial curtailment or reallocation³ of non-firm Interchange Transactions and energy flows can prevent exceeding this SOL or IROLs. |
| TLR-4 | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL. <ul style="list-style-type: none"> ○ Analysis shows that full curtailment of non-firm Interchange Transactions and energy flows, or reconfiguration of the transmission system can prevent exceeding this SOL or IROL. |
| TLR-5a | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL within the next hour. <ul style="list-style-type: none"> ○ Analysis shows that the following actions can prevent exceeding the SOL or IROL: <ul style="list-style-type: none"> • Full curtailment non-firm Interchange Transactions and energy flows, and • Reconfiguration of the transmission system, if possible, and • Full or partial curtailment or reallocation⁴ of firm Interchange Transactions and energy flows. |
| TLR-5b | <ul style="list-style-type: none"> • At least one Transmission Facility is exceeding its SOL or IROL, or • At least one Transmission Facility is expected to exceed its SOL or IROL within the current hour. <ul style="list-style-type: none"> ○ Analysis shows that the following actions can prevent exceeding the SOL or IROL: <ul style="list-style-type: none"> ▪ Full curtailment of non-firm Interchange Transactions and energy flows, and ▪ Reconfiguration of the transmission system, if possible, and ▪ Full or partial curtailment or reallocation⁵ of firm Interchange Transactions and energy flows. |
| TLR-6 | <ul style="list-style-type: none"> • At least one Transmission Facility is exceeding its SOL or IROL, or • At least one Transmission Facility is expected to exceed its SOL or IROL upon the removal from service of a generating unit or another transmission facility. |
| TLR-0 | <ul style="list-style-type: none"> • No transmission facilities are expected to approach or exceed their SOL or IROL within 8 hours, and the ICM procedure may be terminated |

R3. Upon the identification of the TLR level and a list of congestion management actions to be implemented based on the TLR level chosen, the Reliability Coordinator initiating this TLR procedure shall: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]

3.1. Notify all Reliability Coordinators in the Eastern Interconnection of the identified TLR level

¹ The listed system conditions examples are intended to assist the Reliability Coordinator in determining what level of TLR to call. The Reliability Coordinator has the discretion to choose any of these levels regardless of the examples listed, provided the Reliability Coordinator has reliability reasons to take such action. TLR levels are neither required nor expected to be issued in numerical order of level.

^{2,3,4,5} “Reallocation” is a term defined within the NAESB TLR standards.

- 3.2. Communicate the list of congestion management actions to be implemented to
- 1.) ~~all~~ All Reliability Coordinators in the Eastern Interconnection, and
 - 2.) ~~those~~ Those Reliability Coordinators in other Interconnections responsible for curtailing Interchange Transactions crossing Interconnection boundaries identified in the list of congestion management actions.
- 3.3. Request that the congestion management actions identified in Requirement R2, Part 2.2 be implemented by
- 1.) ~~e~~ Each Reliability Coordinator associated with a Sink Balancing Authority for which Interchange Transactions are to be curtailed,
 - 2.) Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which Network Integration Transmission Service or Native Load is to be curtailed, and
 - 3.) Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which its Market Flow is to be curtailed
- R4. Each Reliability Coordinator that receives a request as described in Requirement R3, Part 3.3. shall within 15 minutes of receiving the request comply with the request by taking one or both of the following actions: [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]
- Implement the communicated congestion management actions requested by the issuing Reliability Coordinator as follows:
 - ~~Instruct~~ Direct its Balancing Authorities to implement the Interchange Transaction schedule change requests.
 - ~~Direct~~ Instruct its Balancing Authorities to ~~provide~~ implement the Network Integration ~~ed~~ Transmission Service and Native Load schedule changes for which the Balancing Authorities are responsible.
 - ~~Direct~~ Instruct its Balancing Authorities to ~~provide~~ implement the Market Flow schedule changes for which the Balancing Authorities are responsible.
 - Instruct ~~i~~ Implementation of alternate congestion management actions to those communicated in R3, provided that:
 - ~~Assessment~~ analysis shows ~~determines~~ that some or all of the congestion management actions communicated in Requirement R3, Part 3.3 will result in a reliability concern or will be ineffective, and
 - The alternate congestion management actions have been agreed to by the initiating Reliability Coordinator, and
 - ~~Analysis~~ Assessment shows that the alternate congestion management actions will not adversely affect reliability.

~~Each Reliability Coordinator that responds to a TLR event shall acknowledge to the initiating Reliability Coordinator the actions it will take pursuant to Requirement R4 as soon as possible but not more than ten minutes of receiving the request. [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]~~

C. Measures

- M1.** Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that when acting or ~~directing~~ instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's Tv, the Coordinator initiated one or more of the actions listed in R1 prior to or concurrently with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated)(R1).
- M2.** Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that at the time it initiated the Eastern Interconnection TLR procedure, and at least every clock hour after initiation up to and including the hour when the TLR level was identified as TLR Level 0, the Reliability Coordinator identified both the TLR Level and a list of congestion management actions to be implemented based on the TLR level chosen (R2).
- M3.** Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that after it identified a TLR level and a list of congestion management actions to take, it 1.) notified all Reliability Coordinators in the Eastern Interconnection of the TLR Level, 2.) communicated the list of actions to all Reliability Coordinators in the Eastern Interconnection and those Reliability Coordinators in other Interconnections responsible for curtailing Interchange Transactions crossing Interconnection boundaries identified in the list of congestion management actions, and 3.) requested the Reliability Coordinators identified in Requirement R3, Part 3.2 to implement the congestion management actions identified in Requirement R2, Part 2.2 (R3).
- M4.** Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that within fifteen minutes of the~~upon~~ receipt of a request as described in R3, the Reliability Coordinator complied with the request by taking one or both of the following: 1.) implemented the communicated congestion management actions requested by the issuing Reliability Coordinator, or 2.) implemented alternate congestion management actions based on ~~assessment~~ analysis which showed that some or all of the congestion management actions communicated in R3 would have resulted in a reliability concern or would have been ineffective, the alternate congestion management actions were agreed to by the initiating Reliability Coordinator, and ~~assessment~~ analysis showed that the alternate congestion management actions would not adversely affect reliability (R4).
- ~~**M5.** Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that within ten minutes of receiving a request to implement flow reduction actions pursuant to the implementation of the Eastern Interconnection TLR procedure, it acknowledged to the initiating Reliability Coordinator the flow reduction actions it will take in response to their request.~~

D. Compliance

1. Compliance Monitoring Process

- 1.1.** Compliance Enforcement Authority
Regional Entity.
- 1.2.** Compliance Monitoring Period and Reset Time Frame
Not applicable.
- 1.3.** Data Retention

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

- The Reliability Coordinator shall maintain evidence to show compliance with R1, R2, R3, ~~R4~~, and ~~R5~~-R4 for the past 12 months plus the current month.
- If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant.

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

1.4. Compliance Monitoring and Enforcement Processes:

1. The following processes may be used:

- Compliance Audits
- Self-Certifications
- Spot Checking
- Compliance Violation Investigations
- Self-Reporting
- Complaints

1.5. Additional Compliance Information

None.

3. Violation Severity Levels

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|--|---|---|---|
| R1 | | | | When acting or directing -instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T _v , the Reliability Coordinator did not initiate one or more of the actions listed under R1 prior to or in conjunction with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated). |
| R2 | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take based on the TLR level chosen for one clock hour during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take based on the TLR level chosen for two clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0, | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take based on the TLR level chosen for three clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take based on the TLR level chosen for four or more clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. |
| R3 | The initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level (3.1). | N/A | The initiating Reliability Coordinator did not communicate the list of congestion management actions to one or more of the Reliability Coordinators listed in Requirement R3, Part 3.2. OR | The initiating Reliability Coordinator requested none of the Reliability Coordinators identified in Requirement R3, Part 3.3 to implement the identified congestion management actions. |

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|---|--|--|--|
| | | | <p>The initiating Reliability Coordinator requested some, but not all, of the Reliability Coordinators identified in Requirement R3, Part 3.3 to implement the identified congestion management actions.</p> | |
| R4 | | | | <p>The responding Reliability Coordinator did not take one or both of the following actions <u>within 15 minutes of receiving a request</u>:</p> <ol style="list-style-type: none"> 1.) Implemented the requested congestion management actions. 2.) Implemented alternate congestion management actions based on analysis <u>assessment</u> which showed that some or all of the actions communicated in Requirement R3, Part 3.3 -would have resulted in a reliability concern or would have been ineffective, and that the alternate congestion management actions were agreed to by the initiating Reliability Coordinator and analysis <u>assessment</u> showed <u>determined</u> that the alternate congestion management actions would not adversely affect reliability. |
| R5 | <p>The responding Reliability Coordinator communicated its <u>flow reduction</u> actions taken to the initiating Reliability Coordinator, but did so more than ten minutes but not more than <u>less than or equal to fifteen 15</u> minutes after receiving the</p> | <p>The responding Reliability Coordinator communicated its <u>flow reduction</u> actions taken to the initiating Reliability Coordinator, but did so more than fifteen <u>15</u> minutes but not more than <u>less than or equal to twenty 20</u> minutes after receiving</p> | <p>The responding Reliability Coordinator communicated its <u>flow reduction</u> actions taken to the initiating Reliability Coordinator, but did so more than twenty <u>20</u> minutes but not more than <u>less than or equal to twenty five 25</u> minutes after</p> | <p>The responding Reliability Coordinator communicated its <u>flow reduction</u> actions to the initiating Reliability Coordinator, but did so more than twenty five <u>25</u> minutes after receiving the request.</p> |

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|---------------------|-------------------------|-----------------------------------|--|
| | request. | the request. | receiving the request. | <p>OR</p> <p>The responding Reliability Coordinator did not communicate its actions to the initiating Reliability Coordinator.</p> |

E. Regional Variances

None.

F. Associated Documents

G. Revision History

| Version | Date | Action | Tracking |
|----------------|-------------|--|-----------------|
| 1 | | Creation of new standard, incorporating concepts from IRO-006-4 Attachment; elimination of Regional Differences, as the standard allows the use of Market Flow | New |

Appendix A

The following criteria guidelines are intended to assist the Reliability Coordinator in determining what level of TLR to call. However, the Reliability Coordinator has the discretion to choose any of these levels regardless of the criteria guidelines listed below, provided the Reliability Coordinator has reliability reasons to take such action. TLR levels are neither required nor expected to be issued in numerical order of level.

| Level | Guidelines for System Conditions |
|--------|---|
| TLR-1 | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to approach or exceed its SOL or IROL within 8 hours. |
| TLR-2 | <ul style="list-style-type: none"> • At least one Transmission Facility is approaching or is at its SOL or IROL. <ul style="list-style-type: none"> ○ Analysis shows that holding new and increasing non-firm <u>Interchange Transactions</u> and energy flows for the next hour can prevent exceeding this SOL or IROL. |
| TLR-3a | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL within the next hour. <ul style="list-style-type: none"> ○ Analysis shows that full or partial curtailment or reallocation³ of non-firm <u>Interchange Transactions</u> and energy flows can prevent exceeding this SOL and IROL. |
| TLR-3b | <ul style="list-style-type: none"> • At least one Transmission Facility is exceeding its SOL or IROL, or • At least one Transmission Facility is expected to exceed its SOL or IROL within the current hour. <ul style="list-style-type: none"> ○ Analysis shows that full or partial curtailment or reallocation⁴ of non-firm <u>Interchange Transactions</u> and energy flows can prevent exceeding this SOL or IROLs. |
| TLR-4 | <ul style="list-style-type: none"> 1) At least one Transmission Facility is expected to exceed its SOL or IROL. <ul style="list-style-type: none"> ○ Analysis shows that full curtailment of non-firm transactions <u>Interchange Transactions</u> and energy flows, or reconfiguration of the transmission system can prevent exceeding this SOL or IROL. |
| TLR-5a | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL when <u>within</u> the next hour's transactions start. <ul style="list-style-type: none"> ○ Analysis shows that either of the following sets of actions can prevent exceeding the SOL or IROL: <ul style="list-style-type: none"> • Full curtailment non-firm <u>Interchange Transactions</u> and energy flows, <u>and/or</u> • <u>Reconfiguration of the transmission system, if</u> |

³ "Reallocation" is a term defined within the NAESB TLR standards.

⁴ "Reallocation" is a term defined within the NAESB TLR standards.

| | |
|-------------------|--|
| | <p>possible, and, and f</p> <ul style="list-style-type: none"> • Full or partial curtailment or reallocation⁵ of firm transactions <u>Interchange Transactions and energy flows.</u> |
| TLR-5b | <ul style="list-style-type: none"> • At least one Transmission Facility is exceeding its SOL or IROL, or • At least one Transmission Facility is expected to exceed its SOL or IROL within the current hour: <ul style="list-style-type: none"> ◦ Analysis shows that either of the following sets of actions can prevent exceeding the SOL or IROL: <ul style="list-style-type: none"> ▪ Full curtailment of non firm transactions <u>Interchange Transactions and energy flows, or and</u> Reconfiguration of the transmission system, <u>if possible, and</u> ▪ and fFull or partial curtailment or reallocation⁶ of firm transactions <u>Interchange Transactions and energy flows.</u> |
| TLR-6 | <p>At least one Transmission Facility is exceeding its SOL or IROL, or</p> <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL upon the removal from service of a generating unit or another <u>transmission facility.</u> |
| TLR-0 | <ul style="list-style-type: none"> • No transmission facilities are expected to approach or exceed their SOL or IROL within 8 hours, and the ICM procedure may be terminated |

⁵ “Reallocation” is a term defined within the NAESB TLR standards.

⁶ [“Reallocation” is a term defined within the NAESB TLR standards.](#)

Implementation Plan for Standard IRO-006-5 (Reliability Coordination — Transmission Loading Relief (TLR)) and IRO-006-EI-1 (Loading Relief Procedure for the Eastern Interconnection)

Standards:

IRO-006-5 — Reliability Coordination — Transmission Loading Relief (TLR)

IRO-006-EAST-1 — Transmission Loading Relief Procedure for the Eastern Interconnection

Summary

The NERC TLR Drafting Team has developed IRO-006-5 and IRO-006-EI-1 as iterative and incremental improvements to IRO-006-4. This is one of three phases of Project 2006-08. The first phase, the split of the IRO-006-3 and its associated Attachment 1 into NERC and NAESB standards, was completed and approved by the NERC Board of Trustees on October 23, 2007, and filed with regulatory authorities on December 21, 2008. The second phase, which is intended to address any needed modifications to the standards based on the PJM/MISP/SPP waivers, is currently undergoing Field Testing. This implementation plan addressed the third phase, which is intended to improve the quality of the standards. The Drafting Team has made significant revisions to the previous IRO-006-4 and Attachment 1:

1. Converted Attachment 1 into a standard solely for the Eastern Interconnection.
2. Transferred requirements from IRO-006 that were primarily focused on Eastern Interconnection practices to the Eastern Interconnection TLR standard.
3. Clarified the roles of entities when responding to curtailment requests from other Interconnections.
4. Removed the requirement that entities comply with the INT standards, as it was redundant.
5. Restructured the Eastern Interconnection TLR standard (previously Attachment 1) to be clearer and specify reliability requirements.
6. Removed the requirement in IRO-006-5 that specified the appropriate methods to utilize within each Interconnection, instead relying on regional standards for the three Interconnections to capture this information.
7. Expanded the applicability of IRO-006-5 to include the Balancing Authority.

Prerequisite Approvals

There are no other reliability standards or Standard Authorization Requests (SARs), approved [or in progress](#), that must be implemented before this standard can be implemented.

Modified Definitions

[The definition of “Reallocation” should be removed from the Glossary when IRO-006-5 and IRO-006-EI-1 become effective.](#)

Modified Standards

IRO-006-4, and associated Attachment 1, should be retired when IRO-006-5 and IRO-006-EI-1 become effective.

~~The definition of “Reallocation” should be removed from the Glossary when IRO-006-5 and IRO-006-EI-1 become effective.~~

The Regional Differences within IRO-006-4 should be retired when IRO-006-5 and IRO-006-EI-1 become effective.

Compliance with Standards

Once the standards become effective, the responsible entities identified in the applicability section of the standards must comply with the requirements. These include:

~~Standard IRO-006-4 — Reliability Coordination — Transmission Loading Relief~~
Implementation Plan for IRO-006-5 and IRO-006-EI-1

- Reliability Coordinators
- Balancing Authorities

Proposed Effective Date

The standards will become effective on the first day of the first calendar quarter ~~that~~ after the date the standards are approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standards becomes effective on the first day of the first calendar quarter after the date the standards are approved by the NERC Board of Trustees.

Consideration of Comments on IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

The Transmission Loading Relief Standard Drafting Team thanks all commenters who submitted comments on the current drafts of IRO-006-5 and IRO-006-EAST-1. These standards were posted for a 30-day public comment period from October 27, 2009 through November 30, 2009. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 15 sets of comments, including comments from 70 different people from over 40 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

Several minor changes were made to the standards based on suggestions received during the comment period:

- Several entities suggested that it be clear that Reliability Coordinators must initiate, not complete, the actions requested within 15 minutes. IRO-006-EAST-1 R4 was modified to make it clear that the actions must be initiated, not completed.
- Several entities expressed concern that the TLR levels listed in IRO-006-EAST-1 still seemed to imply an obligation to adhere to the criteria as provided in the examples. In response, the SDT has removed the examples into a separate reference document that will be posted with the standard.
- Several entities suggested that there was no need to explicitly identify “responding Reliability Coordinators” in the Applicability section of IRO-006-EAST-1. Upon further reflection, the SDT agreed, and modified the applicability accordingly.
- One entity expressed concern that IRO-006-5 R1 allowed entities to simply supply a reliability reason without clearly indicating that the reason must be justified. The SDT added the word “valid” to make this clear.
- One entity identified a typographical error where Measure 1 of IRO-006-5 was missing a word. The error was corrected.
- One entity suggested improvements to the definition of Market Flow to make it clear that market flow was caused by generation internal to a market serving load internal to that same market. The definition was changed.
- Several commenters objected to the requirement to update a TLR-1 on an hourly basis. However, the requirement to re-issue TLR Level 1 every hour is already required in IRO-006-4, Attachment 1, section 1.4.4. This standard does not change this obligation.
- Some commenters suggested that the standard, by not explicitly allowing for them, could restrict the use of proxy Flowgates. The SDT clarified that this is not the intent.
- Some commenters suggested that the standard not limit the actions that can be performed concurrently with TLR as specified in IRO-0-06-EAST R1. The SDT believes that if a new method to mitigate congestion is developed other than the five actions listed, it can be included in the standard following industry review of its effectiveness in achieving the mitigation objective.
- Some entities questioned if IDC logs were acceptable evidence to show compliance with the standard. The SDT pointed out that all four of the measures clearly indicate that Logs are an acceptable form of evidence. Additionally, the measure allows for the provision of “other information.”

All comments are shown as submitted at the following site:

<http://www.nerc.com/filez/standards/Reliability-Coordination-Transmission-Loading-Relief.html>

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures:
<http://www.nerc.com/standards/newstandardsprocess.html>.

Index to Questions, Comments, and Responses

1. The drafting team has combined IRO-006-EAST-1 R4 and R5 into a single requirement with a 15-minute target to respond to curtailment request. R5, which originally required the Responding RC to respond back to the initiating RC with a summary of actions that would be taken, was determined to be superfluous, as the first bullet would be communicated automatically through schedule changes, while the second bullet requires RC contact and approval already. If no, please explain your answer. 8
2. The drafting team has deleted Appendix A of IRO-006-EAST-1 and instead incorporated the table from the Appendix into requirement R2. The system conditions were relabeled as examples, a footnote was added to explain the role of the table, and a sentence was added that states ""TLR levels are neither required nor expected to be issued in numerical order of level." The Drafting Team's intent with this change is to make it clear that entities must use one of the 9 levels, but that it is left solely to the discretion of the RC to determine what level is needed. 13
3. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the proposed standards..... 18

Consideration of Comments on IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

| | | Commenter | Organization | Industry Segment | | | | | | | | | | |
|-----|-----------------------|---------------------------------------|--------------------------------------|------------------|---|---------------|--------------------------|---|---|---|---|---|----|--|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 1. | Group | Jim Case | SERC OC Standards Review Group | X | | X | | | | | | | | |
| | | Additional Member | Additional Organization | | | Region | Segment Selection | | | | | | | |
| 1. | J. T. Wood | Southern Company | | | | SERC | 1, 3, 5 | | | | | | | |
| 2. | Stephen Mizelle | Southern Company | | | | SERC | 1, 3, 5 | | | | | | | |
| 3. | Shaun Anders | City of Springfield, IL (CWLP) | | | | SERC | 1, 3, 5, 9 | | | | | | | |
| 4. | Jason Marshall | MISO | | | | SERC | 2 | | | | | | | |
| 5. | Tim Hattaway | PowerSouth | | | | SERC | 1, 3, 5, 9 | | | | | | | |
| 6. | Melinda Montgomery | Entergy | | | | SERC | 1, 3 | | | | | | | |
| 7. | Sam Holeman | Duke | | | | SERC | 1, 3, 5 | | | | | | | |
| 8. | Robert Thomasson, Jr. | Big Rivers Electric Cooperative | | | | SERC | 1, 3, 5, 9 | | | | | | | |
| 9. | John Neagle | Associated Electric Cooperative, Inc. | | | | SERC | 1, 3, 5 | | | | | | | |
| 10. | Mike Bryson | PJM | | | | SERC | 2 | | | | | | | |
| 11. | John Troha | SERC Reliability corporation | | | | SERC | 10 | | | | | | | |
| 2. | Group | Bonneville Power Administration | BPA Transmission Reliability Program | X | | X | | X | X | | | | | |
| | | Additional Member | Additional Organization | | | Region | Segment Selection | | | | | | | |

Consideration of Comments on IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

| | Commenter | Organization | Industry Segment | | | | | | | | | |
|---|------------------------|---|--|--------|---|-------------------|---|---|---|---|---|----|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1. Chuck Westbrook Transmission Pre-Schedule & Real Time WECC 1 | | | | | | | | | | | | |
| 3. | Group | Guy Zito | Northeast Power Coordinating Council | | | | | | | | | X |
| Please complete the following information. | | | | | | | | | | | | |
| Additional Member | | Additional Organization | | Region | | Segment Selection | | | | | | |
| 1. | Ralph Rufrano | New York Power Authority | | NPCC | | 5 | | | | | | |
| 2. | Alan Adamson | New York State Reliability Council, LLC | | NPCC | | 10 | | | | | | |
| 3. | Gregory Campoli | New York Independent System Operator | | NPCC | | 2 | | | | | | |
| 4. | Roger Champagne | Hydro-Quebec TransEnergie | | NPCC | | 2 | | | | | | |
| 5. | Kurtis Chong | Independent Electricity System Operator | | NPCC | | 2 | | | | | | |
| 6. | Sylvain Clermont | Hydro-Quebec TransEnergie | | NPCC | | 1 | | | | | | |
| 7. | Chris de Graffenried | Consolidated Edison Co. of New York, Inc. | | NPCC | | 1 | | | | | | |
| 8. | Brian D. Evans-Mongeon | Utility Services | | NPCC | | 8 | | | | | | |
| 9. | Mike Garton | Dominion Resources Services, Inc. | | NPCC | | 5 | | | | | | |
| 10. | Kathleen Goodman | ISO - New England | | NPCC | | 2 | | | | | | |
| 11. | David Kiguel | Hydro One Networks Inc. | | NPCC | | 1 | | | | | | |
| 12. | Michael R. Lombardi | Northeast Utilities | | NPCC | | 1 | | | | | | |
| 13. | Randy MacDonald | New Brunswick System Operator | | NPCC | | 2 | | | | | | |
| 14. | Greg Mason | Dynegy Generation | | NPCC | | 5 | | | | | | |
| 15. | Bruce Metruck | New York Power Authority | | NPCC | | 6 | | | | | | |
| 16. | Chris Orzel | FPL Energy/NextEra Energy | | NPCC | | 5 | | | | | | |
| 17. | Robert Pellegrini | The United Illuminating Company | | NPCC | | 1 | | | | | | |
| 18. | Saurabh Saksena | National Grid | | NPCC | | 1 | | | | | | |
| 19. | Michael Schiavone | National Grid | | NPCC | | 1 | | | | | | |
| 20. | Peter Yost | Consolidated Edison Co. of New York, Inc. | | NPCC | | 3 | | | | | | |
| 21. | Lee Pedowicz | Northeast Power Coordinating Council | | NPCC | | 10 | | | | | | |
| 22. | Gerry Dunbar | Northeast Power Coordinating Council | | NPCC | | 10 | | | | | | |
| 4. | Group | Carol Gerou | MRO NERC Standards Review Subcommittee | | | | | | | | | X |

Consideration of Comments on IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

| | Commenter | Organization | Industry Segment | | | | | | | | | | | |
|--------------------------|----------------|-----------------------------------|--|---------------|---|------|---|--------------------------|---|---|---------------|----|--|--|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Additional Member | | Additional Organization | | Region | | | | Segment Selection | | | | | | |
| 1. | Chuck Lawrence | American Transmission Company | | | | MRO | | | | | 1 | | | |
| 2. | Tom Webb | WPS Corporation | | | | MRO | | | | | 3, 4, 5, 6 | | | |
| 3. | Terry Bilke | Midwest ISO Inc. | | | | MRO | | | | | 2 | | | |
| 4. | Jodi Jenson | Western Area Power Administration | | | | MRO | | | | | 1, 6 | | | |
| 5. | Ken Goldsmith | Alliant Energy | | | | MRO | | | | | 4 | | | |
| 6. | Alice Murdock | Xcel Energy | | | | MRO | | | | | 1, 3, 5, 6 | | | |
| 7. | Dave Rudolph | Basin Electric Power Cooperative | | | | MRO | | | | | 1, 3, 5, 6 | | | |
| 8. | Eric Ruskamp | Lincoln Electric System | | | | MRO | | | | | 1, 3, 5, 6 | | | |
| 9. | Joseph Knight | Great River Energy | | | | MRO | | | | | 1, 3, 5, 6 | | | |
| 10. | Joe DePoorter | Madison Gas & Electric | | | | MRO | | | | | 3, 4, 5, 6 | | | |
| 11. | Scott Nickels | Rochester Public Utilities | | | | MRO | | | | | 4 | | | |
| 12. | Terry Harbour | MidAmerican Energy Company | | | | MRO | | | | | 3, 5, 6, 1 | | | |
| 5. | Group | Jason L. Marshall | Midwest ISO Stakeholders Standards Collaboration Group | | X | | | | | | | | | |
| Additional Member | | Additional Organization | | Region | | | | Segment Selection | | | | | | |
| 1. | Jim Cyrulewski | JDRJC Associates, LLC | | | | RFC | | | | | 8 | | | |
| 2. | Kirit Shah | Ameren | | | | SERC | | | | | 1 | | | |
| 3. | Doug Hohlbaugh | First Energy | | | | RFC | | | | | 1, 3, 4, 5, 6 | | | |
| 4. | Dave Folk | First Energy | | | | RFC | | | | | 1, 3, 4, 5, 6 | | | |
| 5. | Sam Ciccone | First Energy | | | | RFC | | | | | 1, 3, 4, 5, 6 | | | |
| 6. | Joe O'Brien | NIPSCO | | | | RFC | | | | | 1 | | | |
| 7. | Joe Knight | Great River Energy | | | | MRO | | | | | 1, 3, 5, 6 | | | |
| 8. | Joy Stover | Consumers Energy | | | | RFC | | | | | 3, 4, 5 | | | |
| 6. | Group | James T Wood | Southern Company Transmission | X | | X | | | | | | | | |
| Additional Member | | Additional Organization | | Region | | | | Segment Selection | | | | | | |
| 1. | John Troha | SERC | | | | SERC | | | | | | | | |

Consideration of Comments on IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

| | | Commenter | Organization | Industry Segment | | | | | | | | | | |
|-----|------------|--------------------------|--|------------------|---|---|---|---|--------------------------|---|---|---|----|--|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 7. | Individual | Kasia Mihalchuk | Manitoba Hydro | X | | X | | X | X | | | | | |
| 8. | Individual | James Starling | South Carolina Electric and Gas | X | | X | | X | X | | | | | |
| 9. | Individual | James H. Sorrels, Jr. | American Electric Power | X | | X | | X | X | | | | | |
| 10. | Individual | Edward J Davis | Entergy Services | X | | X | | X | X | | | | | |
| 11. | Individual | Dan Rochester | Independent Electricity System Operator | | X | | | | | | | | | |
| 12. | Individual | Martin Bauer | US Bureau of Reclamation | | | | | X | | | | | | |
| 13. | Individual | Jason Shaver | American Transmission Company | X | | | | | | | | | | |
| 14. | Individual | Greg Rowland | Duke Energy | X | | X | | X | X | | | | | |
| 15. | Individual | Joylyn Stover | Consumers Energy | | | X | X | X | | | | | | |
| 16. | Group | Ben Li | ISO RTO Council Standards Review Committee | | X | | | | | | | | | |
| | | Additional Member | Additional Organization | Region | | | | | Segment Selection | | | | | |
| | | 1. Charles Yeung | Southwest Power Pool | SPP | | | | | 2 | | | | | |

1. The drafting team has combined IRO-006-EAST-1 R4 and R5 into a single requirement with a 15-minute target to respond to curtailment request. R5, which originally required the Responding RC to respond back to the initiating RC with a summary of actions that would be taken, was determined to be superfluous, as the first bullet would be communicated automatically through schedule changes, while the second bullet requires RC contact and approval already.

Do you agree with this change? If no, please explain your answer.

Summary Consideration: Several entities suggested that it be clear that Reliability Coordinators must ‘initiate’, not ‘complete’, the actions requested within 15 minutes. IRO-006-EAST-1 R4 was modified to make it clear that the actions must be initiated, not completed.

| Organization | Yes or No | Question 1 Comment |
|---|-----------|---|
| American Electric Power | | While this question refers to a “15-minute target,” the language of the requirement states “. . . shall within 15 minutes of receiving the request comply with the request . . .” It is important that this difference between a mandatory 15 minute requirement and a target response of 15 minutes be resolved. The standard is unclear as to whether this phrase is requiring that the RC will have initiated one of the actions within 15 minutes or if it is requiring that these actions be completed within 15 minutes. If alternative congestion management actions (such as reconfiguration or load shedding) are employed, it may not always be possible to be completed within 15 minutes. It is important to recognize in the standard that the RC can only direct or instruct that an action be taken, not perform the action. It is the BA, subject to potential penalties for non-compliance, is the entity that will take the action to relieve the congestion. |
| Response: The standard has been modified to make it clear that the actions must be initiated, not completed. | | |
| MRO NERC Standards Review Subcommittee | No | The MRO NSRS largely agrees with the change but some additional modification is needed. We are concerned that a compliance auditor could interpret the first bullet under R4 to require the RC not only to instruct actions to be taken within 15 minutes but also that the actions must be completed within 15 minutes. We believe the bullet should be changed to: “Communicate congestion management actions requested by the issuing Reliability Coordinator as follows”. The language in the associated measure would then require modification as well. |
| Response: The standard has been modified to make it clear that the actions must be initiated, not completed. | | |
| Consumers Energy | No | We agree with Midwest ISO comments: "We largely agree with the change but some additional modification is needed. We are concerned that a compliance auditor could interpret the first bullet under R4 to require the |

Consideration of Comments on IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

| Organization | Yes or No | Question 1 Comment |
|---|-----------|--|
| | | RC not only to instruct actions to be taken within 15 minutes but also that the actions must be completed within 15 minutes. We believe the bullet should be changed to: "Communicate congestion management actions requested by the issuing Reliability Coordinator as follows". The language in the associated measure would then require modification as well." |
| Response: The standard has been modified to make it clear that the actions must be initiated, not completed. | | |
| Southern Company Transmission | No | We are supporting comments submitted by SERC: While we do not disagree with the changes, there is an inadvertent change in meaning caused by this combination; therefore, the first bullet in R4 should be rephrased as follows: delete "Implement the communicated" and begin with, "Communicate congestion management actions" It is obviously impossible to complete the re-dispatch of generation within 15 minutes of notification for all curtailed schedules. |
| Response: The standard has been modified to make it clear that the actions must be initiated, not completed. | | |
| Midwest ISO Stakeholders Standards Collaboration Group | No | We largely agree with the change but some additional modification is needed. We are concerned that a compliance auditor could interpret the first bullet under R4 to require the RC not only to instruct actions to be taken within 15 minutes but also that the actions must be completed within 15 minutes. We believe the bullet should be changed to: "Communicate congestion management actions requested by the issuing Reliability Coordinator as follows". The language in the associated measure would then require modification as well. |
| Response: The standard has been modified to make it clear that the actions must be initiated, not completed. | | |
| Entergy Services | No | While we do not disagree with the changes, there is an inadvertent change in meaning caused by this combination; therefore, the first bullet in R4 should be rephrased as follows: delete "Implement the communicated" and begin with, "Communicate congestion management actions" It is obviously impossible to complete the re-dispatch of generation within 15 minutes of notification for all curtailed schedules. |
| Response: The standard has been modified to make it clear that the actions must be initiated, not completed. | | |
| SERC OC Standards Review Group | No | While we do not disagree with the changes, there is an inadvertent change in meaning caused by this combination; therefore, the first bullet in R4 should be rephrased as follows: delete "Implement the communicated" and begin with, "Communicate congestion management actions" It is obviously impossible to complete the re-dispatch of generation within 15 minutes of notification for all curtailed schedules. |

Consideration of Comments on IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

| Organization | Yes or No | Question 1 Comment |
|--|-----------|--|
| <p>Response: The standard has been modified to make it clear that the actions must be initiated, not completed.</p> | | |
| American Transmission Company | Yes | |
| Bonneville Power Administration | Yes | |
| Duke Energy | Yes | |
| Independent Electricity System Operator | Yes | |
| Manitoba Hydro | Yes | |
| Northeast Power Coordinating Council | Yes | |
| South Carolina Electric and Gas | Yes | |
| US Bureau of Reclamation | Yes | |
| ISO RTO Council Standards Review Committee | No | <p>A. Requiring a 15 minute acknowledgement may not be a bad thing for TLR's involving facilities with IROLs. They could be flagged in the IDC as such; drawing attention to the criticality of the TLR. TLR's only associated with SOL should be exempt from the 15 minute acknowledgement requirement.</p> <p>Response: Transmission Operators routinely request TLRs to manage SOLs, and an SOL exceedence, while not as critical as an IROL exceedence, should still be responded to in a timely manner.</p> <p>A Reliability Coordinator issuing a TLR 5 could spend 10 minutes making sure the information is right, excluding tags, excluding generation, and talking it over with the Transmission Operator before ever acknowledging another RC's TLR.</p> <p>Response: The SDT believes that this is acceptable, and does not see any conflict or problem identified in this statement.</p> <p>If the IDC is running slow, will the RC be held accountable, or will NERC (OATI), who provides the tool, be held responsible?</p> |

| Organization | Yes or No | Question 1 Comment |
|--------------|-----------|---|
| | | <p>As stated in the proposed Joint NERC/NAESB System Operator’s Transmission Loading Relief (TLR) Reference Manual § 5.1.5, “The Reliability Coordinator shall simultaneously notify all parties affected by the invocation of a local congestion management procedure or the Interconnection-wide TLR procedure, using the notification method as specified by NERC (e.g. – the Reliability Coordinator Information System or successor).” The RCIS is currently a NERC Tool.</p> <p>Response: The SDT believes that as written, the standard applies regardless of whether entities are using RCIS or not. If the tool is broken, then the RC should be taking other actions to accomplish the tasks described in the standard.</p> <p>B. The Violation Severity Level (Severe VSL) for this requirement is too high. This would require the Reliability Coordinator to be more concerned about the time frame of acknowledgement to a TLR than the concern of congestion in their footprint.</p> <p>A TLR-1 should have the lowest VSL and no penalties. A TLR 3b or 5b should probably have a higher VSL than a 3a or 5a TLR. The “b” TLR addresses immediate, real-time issues, whereas the “a” TLR is associated with anticipated events next hour. Also, firm curtailments in a TLR-5 should have a higher VSL than a TLR-4, or lower. A TLR-6 should have the most severe VSL since it has been associated with emergencies in the past.</p> <p>Response: While this approach may have some merit for consideration if we redesign our compliance elements in the future, this does not align with our current definitions of “VRF” and “VSL.” VSLs only measure the level to which the requirement is violated, not the risk associated with the requirement. To the extent we wish to apply different VRFs to each TLR level, we would need to redraft the standard to have separate requirements for each TLR level.</p> <p>The RC should not be held accountable at a severe level for not acknowledging a TLR when that simple acknowledgement does not guarantee the relief will be achieved. The BA has the primary role for achieving the relief, and if they do not acknowledge the curtailment then the curtailment is denied. Therefore, even if the RC acknowledges the TLR in the 15 minute time frame the BA still could miss the curtailment and not provide the relief. The penalty does not match the real time actions and consequences.</p> <p>Response: The RC, while not actually moving the generation, nonetheless has a critical responsibility to communicate the need for the movement of generation to achieve the relief requested. If the RC does not perform this task, the relief request will definitely NOT be communicated. As such, the VRF is appropriate.</p> <p>C. In proposed IRO-006-5, the Standard is applicable to a Balancing Authority for an Interconnection-wide TLR Procedure, and the BA is held accountable for curtailments at a severe level, but this is not the case in proposed IRO-006-East-1. Why?</p> <p>Response: IRO-006-5 applies to those entities that receive a request pursuant to an interconnection-wide</p> |

Consideration of Comments on IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

| Organization | Yes or No | Question 1 Comment |
|---|-----------|---|
| | | <p>TLR procedure to curtail an Interchange Transaction that crosses an Interconnection boundary. As such, the BA is held accountable for curtailments at a severe VRF. In IRO-006-East-1, the BA is instructed to implement the curtailment but is not assigned a requirement to communicate and request the curtailments. The RCs that receive the requests from the initiating RCs are held responsible for such communications.</p> <p>Another example of lack of consistency can be seen in INT-005-2, which provides for a Lower VSL when a BA initiates curtailment.</p> <p>INT-005-2 R1.1. When a Balancing Authority or Reliability Coordinator initiates a Curtailment to Confirmed or Implemented Interchange for reliability, the Interchange Authority shall distribute the Arranged Interchange information for reliability assessment only to the Source Balancing Authority and the Sink Balancing Authority. Violation Severity Levels, Lower VSL</p> <p>Response: The INT standards are currently in the process of being rewritten. As such, they are not used as a basis for writing this standard.</p> |
| <p>Response: Please see in-line responses.</p> | | |

2. The drafting team has deleted Appendix A of IRO-006-EAST-1 and instead incorporated the table from the Appendix into requirement R2. The system conditions were relabeled as examples, a footnote was added to explain the role of the table, and a sentence was added that states “TLR levels are neither required nor expected to be issued in numerical order of level.” The Drafting Team’s intent with this change is to make it clear that entities must use one of the 9 levels, but that it is left solely to the discretion of the RC to determine what level is needed.

Do you believe this has been made clear? If no, please explain your answer.

Summary Consideration: Several entities expressed concern that the TLR levels still seemed to imply an obligation to adhere to the criteria as provided in the examples. In response, the SDT has removed the examples into a separate reference document that will be posted with the standard.

| Organization | Yes or No | Question 2 Comment |
|--|-----------|--|
| MRO NERC Standards Review Subcommittee | No | The MRO NSRS agrees the modifications improve the clarity but we feel additional changes need to be made. We are concerned that the footnote may prevent the use of proxy flowgates. We suggest that the footnote should strike “provided the Reliability Coordinator has reliability reasons to take such action” clause at the end of the second sentence. It is not needed and presumes the certification process does not work. By definition an RC that has been certified by NERC can and will only take action for reliability reasons. |
| <p>Response: The language does not prevent use of proxy flowgates. Taking action on one facility to effect change on another facility is still an action taken for reliability reasons. While the SDT agrees an RC should only be taking actions for reliability reasons, we do not believe the definition alluded to ensures such motivations. Certification only verifies that entities have the “capability” to meet specific performance – certification does not “guarantee” that entities will perform in certain ways.</p> | | |
| Duke Energy | No | The table has been modified during the move from the Appendix into Requirement R2. The revised table descriptions of TLR levels are not as clear as they were previously. Even though they are relabeled as "examples", we think the more descriptive language from the Appendix should be included here. |
| <p>Response: The information in the table has not been changed since the last posting. If this information is being compared to IRO-006-4, then the SDT removed some of that language intentionally, to make it clear the standard does not direct specific actions to be taken under specific conditions. Note that the table has now been moved into a separate reference document.</p> | | |
| Entergy Services | No | Tragically, by incorporating the TLR Levels as a Table in R2, the error from the last posting has been compounded. A simple table that states the set of TLR Levels and the general description of those levels is all that is needed. The “Examples of Possible System Conditions” smack of procedures and are very much a |

Consideration of Comments on IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

| Organization | Yes or No | Question 2 Comment |
|--|-----------|--|
| | | <p>“How” as opposed to the “What” that should be the hallmark of a good reliability standard. This will lead to mandatory compliance with the “Examples”. Suggested alternative table:TLR Level Reliability Coordinator Action1 Notify Reliability Coordinators of potential System Operating Limit (SOL) or Interconnection Reliability Limit (IROL) exceedences.2 Hold Transfers at present level.3a Reallocation of Transmission Service by curtailing Interchange Transactions using Non-firm Point-to-Point Transmission Service to allow Interchange Transactions using higher priority Transmission Service.3b Curtail Interchange Transactions using Non-firm Point-to-Point Transmission Service. 4 Reconfigure transmission system to allow Transactions using Firm Point-to-Point Transmission Service to continue.5a Reallocation of Transmission Service by curtailing Interchange Transactions using Firm Point- to-Point Transmission Service on a pro rata basis to allow additional Interchange Transactions using Firm Point-to-Point.5b Curtail Interchange Transactions using Firm Point-to-Point Transmission Service. 6 Emergency Procedures0 TLR Concluded</p> <p>Delete footnote No.1. The following statement should be added to R2 directly, “The Reliability Coordinator has the discretion to choose any of these levels.” Compliance is not measured on footnotes.</p> |
| <p>Response: Based on this comment and others, the SDT has removed the examples into a separate reference document that will be posted with the standard.</p> | | |
| SERC OC Standards Review Group | No | <p>Tragically, by incorporating the TLR Levels as a Table in R2, the error from the last posting has been compounded. A simple table that states the set of TLR Levels and the general description of those levels is all that is needed. The “Examples of Possible System Conditions” smack of procedures and are very much a “How” as opposed to the “What” that should be the hallmark of a good reliability standard. This will lead to mandatory compliance with the “Examples”. Suggested alternative table:TLR Level Reliability Coordinator Action1 Notify Reliability Coordinators of potential System Operating Limit (SOL) or Interconnection Reliability Limit (IROL) exceedences.2 Hold Transfers at present level.3a Reallocation of Transmission Service by curtailing Interchange Transactions using Non-firm Point-to-Point Transmission Service to allow Interchange Transactions using higher priority Transmission Service.3b Curtail Interchange Transactions using Non-firm Point-to-Point Transmission Service. 4 Reconfigure transmission system to allow Transactions using Firm Point-to-Point Transmission Service to continue.5a Reallocation of Transmission Service by curtailing Interchange Transactions using Firm Point-to-Point Transmission Service on a pro rata basis to allow additional Interchange Transactions using Firm Point-to-Point.5b Curtail Interchange Transactions using Firm Point-to-Point Transmission Service. 6 Emergency Procedures0 TLR Concluded</p> <p>Delete footnote No.1. The following statement should be added to R2 directly, “The Reliability Coordinator has the discretion to choose any of these levels.” Compliance is not measured on footnotes.</p> |
| <p>Response: Based on this comment and others, the SDT has removed the examples into a separate reference document that will be posted with the standard.</p> | | |

Consideration of Comments on IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

| Organization | Yes or No | Question 2 Comment |
|--|-----------|---|
| Midwest ISO Stakeholders Standards Collaboration Group | No | We agree the modifications improve the clarity but we feel additional changes need to be made. We are concerned that the footnote may prevent the use of proxy flowgates. We suggest that the footnote should strike “provided the Reliability Coordinator has reliability reasons to take such action” clause at the end of the second sentence. It is not needed and presumes the certification process does not work. By definition an RC that has been certified by NERC can and will only take action for reliability reasons. |
| <p>Response: The language does not prevent use of proxy flowgates. Taking action on one facility to effect change on another facility is still an action taken for a reliability reasons. While the SDT agrees an RC should only be taking actions for reliability reasons, we do not believe the definition alluded to ensures such motivations. Certification only verifies that entities have the “capability” to meet specific performance – certification does not “guarantee” that entities will perform in certain ways.</p> | | |
| Consumers Energy | No | We agree with Midwest ISO's comments: "We agree the modifications improve the clarity but we feel additional changes need to be made. We are concerned that the footnote may prevent the use of proxy flowgates. We suggest that the footnote should strike “provided the Reliability Coordinator has reliability reasons to take such action” clause at the end of the second sentence. It is not needed and presumes the certification process does not work. By definition an RC that has been certified by NERC can and will only take action for reliability reasons." |
| <p>Response: The language does not prevent use of proxy flowgates. Taking action on one facility to effect change on another facility is still an action taken for a reliability reasons. While the SDT agrees an RC should only be taking actions for reliability reasons, we do not believe the definition alluded to ensures such motivations. Certification only verifies that entities have the “capability” to meet specific performance – certification does not “guarantee” that entities will perform in certain ways.</p> | | |
| Southern Company Transmission | No | We are supporting comments submitted by SERC: Tragically, by incorporating the TLR Levels as a Table in R2, the error from the last posting has been compounded. A simple table that states the set of TLR Levels and the general description of those levels is all that is needed. The “Examples of Possible System Conditions” smack of procedures and are very much a “How” as opposed to the “What” that should be the hallmark of a good reliability standard. This will lead to mandatory compliance with the “Examples”. Suggested alternative table: TLR Level Reliability Coordinator Action1 Notify Reliability Coordinators of potential System Operating Limit (SOL) or Interconnection Reliability Limit (IROL) exceedences.2 Hold Transfers at present level.3a Reallocation of Transmission Service by curtailing Interchange Transactions using Non-firm Point-to-Point Transmission Service to allow Interchange Transactions using higher priority Transmission Service.3b Curtail Interchange Transactions using Non-firm Point-to-Point Transmission Service. 4 Reconfigure transmission system to allow Transactions using Firm Point-to-Point Transmission Service to continue.5a Reallocation of Transmission Service by curtailing Interchange Transactions using Firm Point- to-Point Transmission Service on a pro rata basis to allow additional Interchange Transactions |

Consideration of Comments on IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

| Organization | Yes or No | Question 2 Comment |
|---|-----------|--|
| | | using Firm Point-to-Point.5b Curtail Interchange Transactions using Firm Point-to-Point Transmission Service. 6 Emergency Procedures0 TLR Concluded Delete footnote No.1. The following statement should be added to R2 directly, "The Reliability Coordinator has the discretion to choose any of these levels." Compliance is not measured on footnotes. |
| Response: Based on this comment and others, the SDT has removed the examples into a separate reference document that will be posted with the standard. | | |
| American Transmission Company | Yes | |
| Bonneville Power Administration | Yes | |
| Independent Electricity System Operator | Yes | |
| Manitoba Hydro | Yes | |
| Northeast Power Coordinating Council | Yes | |
| South Carolina Electric and Gas | Yes | |
| US Bureau of Reclamation | Yes | |
| American Electric Power | Yes | It would be clearer to use the language of the footnote in the requirement as follows:R2. When initiating the Eastern Interconnection TLR procedure to prevent or mitigate an SOL or IROL exceedance, and at least every clock hour after initiation up to and including the hour when the TLR level has been identified as TLR Level 0, the Reliability Coordinator shall identify: [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations] 2.1. The TLR level as listed below in Table 1. 2.1. 1. The listed system conditions shown in this table are intended to be alternatives for the Reliability Coordinator in determining what level of TLR to call. The Reliability Coordinator has the discretion to choose any of these levels regardless of the examples listed, provided the Reliability Coordinator has reliability reasons to take such action. TLR levels are neither required nor expected to be issued in numerical order of level. 2.2. A list of congestion management actions to be implemented based on the TLR level chosen. Please note that the text "conditions shown in this table" and "to be alternatives for" in 2.1.1. of this suggested requirement represent a change in the footnote |

Consideration of Comments on IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

| Organization | Yes or No | Question 2 Comment |
|--|-----------|--|
| | | text. |
| <p>Response: Based on this comment and others, the SDT has removed the examples into a separate reference document that will be posted with the standard.</p> | | |
| ISO RTO Council Standards Review Committee | No | What is the significance of the 8 hour qualifier for TLR-1 and TLR-0? Why 8 hours? Why include a time requirement? |
| <p>Response: Based on this comment and others, the SDT has removed the examples into a separate reference document that will be posted with the standard.</p> | | |

3. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the proposed standards.

Summary Consideration: Several entities suggested that there was no need to explicitly identify “responding Reliability Coordinators” in the Applicability section of IRO-006-EAST-1. Upon further reflection, the SDT agreed, and modified the applicability accordingly.

One entity expressed concern that IRO-006-5 R1 allowed entities to simply supply a reliability reason without clearly indicating that the reason must be justified. The SDT added the word “valid” to make this clear.

One entity identified a typographical error where Measure 1 of IRO-006-5 was missing a word. The error was corrected.

One entity suggested improvements to the definition of market flow to make it clear that market flow was caused by generation internal to a market serving load internal to that same market. The definition was changed.

| Organization | Question 3 Comment |
|--|---|
| MRO NERC Standards Review Subcommittee | <p>A. The MRO NSRS believes that the Applicability Section for IRO-006-EAST-1 needs additional clarity. We suggest the following modification.</p> <p>4. Applicability</p> <p>4.1 Reliability Coordinator (RC)</p> <p>The purpose statement already identifies that this standard is limited to only those RC in the Eastern Interconnection so repeating that in the applicability is unnecessary.</p> <p>Response: The SDT believes it is critical that the applicability of the standard be clearly documented in the applicability section of the standard.</p> <p>In addition, 4.2 “Responding Reliability Coordinators” can also be deleted because the Applicability section in IRO-006-5 already covers their responsibility. Examples: (Statement) An RC in the Eastern Interconnection has to follow both IRO-006-5 and IRO-006-EAST-1 and all other RCs have to comply with IRO-006-5. (Example 1) If a RC in the Eastern Interconnection (EI) makes a request to an RC not in the Eastern Interconnection, that non EI RC still has to address the request based on R1 in IRO-006-5. (Example 2) If a non EI RC makes a request to a EI RC, the EI RC has to address the request based on R1 in IRO-006-5. What these examples are demonstrating is that the Applicability Section in IRO-006-EAST-1 only has to identify Reliability Coordinators because any request made to a Reliability Coordinator in a different interconnection has to be addressed because of IRO-006-5.</p> <p>Response: The SDT concurs with your suggestion, and has changed the standard accordingly.</p> <p>B. The MRO NSRS is concerned that R2 requires a TLR level 1 to be reissued every hour. Currently, it is not</p> |

| Organization | Question 3 Comment |
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| | <p>industry practice to re-issue a TLR level 1 every hour because it does not impact E-Tags. Only those levels 2 and higher should require re-issuing every hour.</p> <p>Response: The requirement to re-issue TLR Level 1 every hour is already required in IRO-006-4, Attachment 1, section 1.4.4. This standard does not change this obligation.</p> <p>C. The MRO NSRS continues to be concerned that the measures do not reference the IDC logs in any way as sufficient basis for demonstrating compliance. In response to our last comment on this issue, the SDT responded that industry comments agreed in a previous posting that the standards should not reference any industry specific tool. First, we can find no such record posted on the NERC web site supporting such a statement. Please identify specifically which posting and where in the posting this information is contained. Secondly, assuming that the record does exist, we question what the industry thought they were agreeing to. We believe the industry probably thought they were agreeing that the requirements should not mention the IDC which we agree with. However, including lists of IDC logs in the evidence list in the measures supports clarity in compliance which is a NERC stated goal and does not contradict what industry likely thought they were agreeing to. If the SDT does not include IDC logs in the evidence lists, then please confirm our following understanding so that there is a record of what the drafting teams intentions were that will be filed with FERC. Is it the intent of the drafting team that IDC logs mentioned in the following example would demonstrate compliance with the requirements? Consider an example where the issuing RC issues a TLR 3A (R2.1), the IDC determines curtailments through its algorithm (R2.2), the IDC communicates to all RCs (R3.1, R3.2, and R3.3), receiving RCs (including the issuing RC) acknowledge the curtailments (assuming no reliability issues), whereupon the IDC communicates tag curtailments, NNL, and market flow relief to affected BAs (R4). Are the IDC and e-tagging records clearly sufficient evidence to prove compliance with the associated requirements in parentheses above? The measures currently are not clear. We are trying to avoid a situation where the RC could not rely on the IDC for evidence and would have to make and document phone calls to every RC and every impacted BA. This would be too burdensome an outcome and would distract the System Operators from their true job ensuring and maintaining reliability.</p> <p>Response: All four of the measures clearly indicate that Logs are an acceptable form of evidence. We do not believe it is necessary to specify the kinds of logs provided. Additionally, the measure allows for the provision of “other information.”</p> |
| <p>Response: Please see in-line responses.</p> | |
| <p>American Transmission Company</p> | <p>ATC believes that the Applicability Section for IRO-006-EAST-1 needs additional clarity. We suggest the following modification.</p> <p>4. Applicability</p> <p>4.1 Reliability Coordinator (RC)</p> |

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| | <p>The purpose statement already identifies that this standard is limited to only those RC in the Eastern Interconnection so repeating that in the applicability is unnecessary.</p> <p>Response: The SDT believes it is critical that the applicability of the standard be clearly documented in the applicability section of the standard.</p> <p>In addition, 4.2 “Responding Reliability Coordinators” can also be deleted because the Applicability section in IRO-006-5 already covers their responsibility. Examples: (Statement) An RC in the Eastern Interconnection has to follow both IRO-006-5 and IRO-006-EAST-1 and all other RCs have to comply with IRO-006-5. (Example 1) If a RC in the Eastern Interconnection (EI) makes a request to an RC not in the Eastern Interconnection, that non EI RC still has to address the request based on R1 in IRO-006-5. (Example 2) If a non EI RC makes a request to a EI RC, the EI RC has to address the request based on R1 in IRO-006-5. What these examples are demonstrating is that the Applicability Section in IRO-006-EAST-1 only has to identify Reliability Coordinators because any request made to a Reliability Coordinator in a different interconnection has to be addressed because of IRO-006-5.</p> <p>Response: The SDT concurs with your suggestion, and has changed the standard accordingly.</p> |
| <p>Response: Please see in-line responses.</p> | |
| <p>Entergy Services</p> | <p>Regarding R1 of IRO-006-EAST-1: Confining the available mitigation actions to the set listed in this requirement may damage reliability by preventing creative responses to system challenges. We believe that it is not possible at this time to forecast what may be available in the near future in the way of mitigation methods or techniques. Confining Requirement R1 of IRO-006-EAST-1 to a list of five currently available techniques seems like it ensures obsolescence. A sixth bullet could be added to correct this error: “Other equally effective mitigation actions”.</p> <p>Response: The standard does not prevent any RC from implementing other actions <i>in addition to</i> the five listed here, since the requirement does not prohibit other actions. However entities wishing to use an alternative method <i>instead of</i> the five listed may not do so. The SDT believes that if a new method to mitigate congestion is developed other than these five concepts, it can be included in the standard following industry review of its effectiveness in achieving the mitigation objective</p> <p>R2, as written, requires a TLR Level 1 to be re-issued every hour; however, current industry practice is that a TLR Level 1 is not reissued every hour. Even your table appears to indicate that a TLR level 1 only has to be re-issued every 8 hours. Please modify R2 to exclude TLR Level 1 from being re-issued every hour.</p> <p>Response: The requirement to re-issue TLR Level 1 every hour is already required in IRO-006-4, Attachment 1, section 1.4.4. This standard does not change this obligation.</p> <p>All measures should specifically refer to the Interchange Distribution Calculator (IDC) logs and congestion management reports, along with E-tagging logs.</p> |

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| | <p>Response: All four of the measures clearly indicate that Logs are an acceptable form of evidence. We do not believe it is necessary to specify the kinds of logs provided. Additionally, the measure allows for the provision of “other information.”</p> <p>Entergy also would like to clarify R1 with the following changes in underline and strikeout: R1. Each Reliability Coordinator or Balancing Authority that receives a request pursuant to an Interconnection-wide transmission loading relief procedure (such as Eastern Interconnection TLR, WECC Unscheduled Flow Mitigation, or congestion management procedures from the ERCOT Protocols) from any Reliability Coordinator, Balancing Authority, or Transmission Operator in another Interconnection to curtail an Interchange Transaction that crosses an Interconnection boundary shall comply with the request, unless it provides a reliability reason to the Reliability Coordinator or Balancing Authority receiving the request and such request should not be implemented. .requestor that it cannot comply with the request.</p> <p>Response: The SDT does not believe the proposed changes achieve any better clarity.</p> |
| <p>Response: Please see in-line responses.</p> | |
| <p>SERC OC Standards Review Group</p> | <p>Regarding R1 of IRO-006-EAST-1: Confining the available mitigation actions to the set listed in this requirement may damage reliability by preventing creative responses to system challenges. We believe that it is not possible at this time to forecast what may be available in the near future in the way of mitigation methods or techniques. Confining Requirement R1 of IRO-006-EAST-1 to a list of five currently available techniques seems like it ensures obsolescence. A sixth bullet could be added to correct this error: “Other equally effective mitigation actions”.</p> <p>Response: The standard does not prevent any RC from implementing other actions <i>in addition to</i> the five listed here, since the requirement does not prohibit other actions. However entities wishing to use an alternative method <i>instead of</i> the five listed may not do so. The SDT believes that if a new method to mitigate congestion is developed other than these five concepts, it can be included in the standard following industry review of its effectiveness in achieving the mitigation objective.</p> <p>R2, as written, requires a TLR Level 1 to be re-issued every hour; however, current industry practice is that a TLR Level 1 is not reissued every hour. Even your table appears to indicate that a TLR level 1 only has to be re-issued every 8 hours. Please modify R2 to exclude TLR Level 1 from being re-issued every hour.</p> <p>Response: The requirement to re-issue TLR Level 1 every hour is already required in IRO-006-4, Attachment 1, section 1.4.4. This standard does not change this obligation.</p> <p>All measures should specifically refer to the Interchange Distribution Calculator (IDC) logs and congestion management reports, along with E-tagging logs.</p> <p>Response: All four of the measures clearly indicate that Logs are an acceptable form of evidence. We do not believe</p> |

Consideration of Comments on IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

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| | <p>it is necessary to specify the kinds of logs provided. Additionally, the measure allows for the provision of “other information.”</p> <p>”The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.”</p> |
| <p>Response: Please see in-line responses.</p> | |
| <p>Independent Electricity System Operator</p> | <p>Requirement R4 requires that the RC receiving a request to implement congestion management actions shall either (a) implement them or (b) instruct implementation of alternate congestion management actions which must be agreed to by the initiating RC. Our concern is what would happen if the initiating RC does not agree? Would the RC receiving the request be expected to follow congestion management actions that in their eyes will cause a reliability concern or be ineffective, because another RC doesn’t see it, or recognize it at that point in time? If not, how could this disagreement be resolved within the 15-minute window?</p> |
| <p>Response: The standard does not provide a resolution process to always result in an agreed set of actions. IRO-016-1, Requirement R1 addresses the issue of resolving operating disagreements between Reliability Coordinators.</p> <p>However, this lies outside of the scope of the standard.</p> | |
| <p>US Bureau of Reclamation</p> | <p>The VSL for R1, the text “but the entity neither complied with the request, nor provided a reliability reason that it could not comply with the request....” can easily apply to a documentation issue rather than the more serious case when the failure to comply was not appropriate as determined by the event analysis. If failure to comply was justified, then the severity level is too high.</p> |
| <p>Response: The word “valid” has been added to the standard to indicate that the failure must be justified.</p> | |
| <p>American Electric Power</p> | <p>To the extent that the TLR process is viewed as a reliability function rather than a business process, it would be appropriate to maintain the definition of “Reallocation” in the NERC glossary. If necessary to the term’s use in this standard, the NERC definition could be up revised to read the same as the NAESB definition for “Reallocation.”</p> |
| <p>Response: The SDT believes that reallocation is a business function that identifies one set of transactions for curtailment and/or reloading, rather than another set of transactions. As such, this is a business selection, not a reliability requirement, and it is covered by NAESB business practices.</p> | |
| <p>Consumers Energy</p> | <p>We agree with Midwest ISO's comments: "We are concerned that R2 requires a TLR level 1 to be reissued every hour. Currently, it is not industry practice to re-issue a TLR level 1 every hour because it does not impact E-Tags.</p> |

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| | <p>Only those levels 2 and higher should require re-issuing every hour.</p> <p>Response: The requirement to re-issue TLR Level 1 every hour is already required in IRO-006-4, Attachment 1, section 1.4.4. This standard does not change this obligation.</p> <p>We continue to be concerned that the measures do not reference the IDC logs in any way as sufficient basis for demonstrating compliance. In response to our last comment on this issue, the SDT responded that industry comments agreed in previous posting that the standards should not reference any industry specific tool. First, we can find no such record posted on the NERC web site supporting such a statement. Please identify specifically which posting and where in the posting this information is contained. Secondly, assuming that the record does exist, we question what the industry thought they were agreeing to. We believe the industry probably thought they were agreeing that the requirements should not mention the IDC which we agree with. However, including lists of IDC logs in the evidence list in the measures supports clarity in compliance which is a NERC stated goal and does not contradict what industry likely thought they were agreeing to. If the SDT does not include IDC logs in the evidence lists, then please confirm our following understand so that there is a record of what the drafting teams intentions were that will be filed with FERC. Is it the intent of the drafting team that IDC logs mentioned in the following example would demonstrate compliance with the requirements? Consider an example where the issuing RC issues a TLR 3A (R2.1), the IDC determines curtailments through its algorithm (R2.2), the IDC communicates to all RCs (R3.1, R3.2, and R3.3), receiving RCs (including the issuing RC) acknowledge the curtailments (assuming no reliability issues), whereupon the IDC communicates tag curtailments, NNL, and market flow relief to affected BAs (R4). Are the IDC and e-tagging records clearly sufficient evidence to prove compliance with the associated requirements in parentheses above? The measures currently are not clear. We are trying to avoid a situation where the RC could not rely on the IDC for evidence and would have to make and document phone calls to every RC and every impacted BA. This would be too burdensome an outcome and would distract the system operators from their true job ensuring and maintaining reliability."</p> <p>Response: All four of the measures clearly indicate that Logs are an acceptable form of evidence. We do not believe it is necessary to specify the kinds of logs provided. Additionally, the measure allows for the provision of "other information."</p> |
| | <p>Response: Please see in-line responses.</p> |
| <p>Midwest ISO Stakeholders Standards Collaboration Group</p> | <p>We are concerned that R2 requires a TLR level 1 to be reissued every hour. Currently, it is not industry practice to re-issue a TLR level 1 every hour because it does not impact E-Tags. Only those levels 2 and higher should require re-issuing every hour.</p> <p>Response: The requirement to re-issue TLR Level 1 every hour is already required in IRO-006-4, Attachment 1, section 1.4.4. This standard does not change this obligation.</p> |

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| | <p>We continue to be concerned that the measures do not reference the IDC logs in any way as sufficient basis for demonstrating compliance. In response to our last comment on this issue, the SDT responded that industry comments agreed in a previous posting that the standards should not reference any industry specific tool. First, we can find no such record posted on the NERC web site supporting such a statement. Please identify specifically which posting and where in the posting this information is contained. Secondly, assuming that the record does exist, we question what the industry thought they were agreeing to. We believe the industry probably thought they were agreeing that the requirements should not mention the IDC which we agree with. However, including lists of IDC logs in the evidence list in the measures supports clarity in compliance which is a NERC stated goal and does not contradict what industry likely thought they were agreeing to. If the SDT does not include IDC logs in the evidence lists, then please confirm our following understanding so that there is a record of what the drafting teams intentions were that will be filed with FERC. Is it the intent of the drafting team that IDC logs mentioned in the following example would demonstrate compliance with the requirements? Consider an example where the issuing RC issues a TLR 3A (R2.1), the IDC determines curtailments through its algorithm(R2.2), the IDC communicates to all RCs (R3.1, R3.2, and R3.3), receiving RCs (including the issuing RC) acknowledge the curtailments (assuming no reliability issues), whereupon the IDC communicates tag curtailments, NNL, and market flow relief to affected BAs (R4). Are the IDC and e-tagging records clearly sufficient evidence to prove compliance with the associated requirements in parentheses above? The measures currently are not clear. We are trying to avoid a situation where the RC could not rely on the IDC for evidence and would have to make and document phone calls to every RC and every impacted BA. This would be too burdensome an outcome and would distract the system operators from their true job ensuring and maintaining reliability.</p> <p>Response: All four of the measures clearly indicate that Logs are an acceptable form of evidence. We do not believe it is necessary to specify the kinds of logs provided. Additionally, the measure allows for the provision of "other information."</p> |
| <p>Response: Please see in-line responses.</p> | |
| <p>Southern Company Transmission</p> | <p>We are supporting comments submitted by SERC: Regarding R1 of IRO-006-EAST-1: Confining the available mitigation actions to the set listed in this requirement may damage reliability by preventing creative responses to system challenges. We believe that it is not possible at this time to forecast what may be available in the near future in the way of mitigation methods or techniques. Confining Requirement R1 of IRO-006-EAST-1 to a list of five currently available techniques seems like it ensures obsolescence. A sixth bullet could be added to correct this error: "Other equally effective mitigation actions".</p> <p>Response: The standard does not prevent any RC from implementing other actions <i>in addition to</i> the five listed here, since the requirement does not prohibit other actions. However entities wishing to use an alternative method <i>instead of</i> the five listed may not do so. The SDT believes that if a new method to mitigate congestion is developed other than these five concepts, it can be included in the standard following industry review of its effectiveness in achieving</p> |

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| | <p>the mitigation objective.</p> <p>R2, as written, requires a TLR Level 1 to be re-issued every hour; however, current industry practice is that a TLR Level 1 is not reissued every hour. Even your table appears to indicate that a TLR level 1 only has to be re-issued every 8 hours. Please modify R2 to exclude TLR Level 1 from being re-issued every hour.</p> <p>Response: The requirement to re-issue TLR Level 1 every hour is already required in IRO-006-4, Attachment 1, section 1.4.4. This standard does not change this obligation.</p> <p>All measures should specifically refer to the Interchange Distribution Calculator (IDC) logs and congestion management reports, along with E-tagging logs.</p> <p>Response: All four of the measures clearly indicate that Logs are an acceptable form of evidence. We do not believe it is necessary to specify the kinds of logs provided. Additionally, the measure allows for the provision of “other information.”</p> |
| <p>Response: Please see in-line responses.</p> | |
| <p>ISO RTO Council Standards Review Committee</p> | <p>(1) IRO-006-East-1 R1 is redundant to IRO-009-1 R4. When actual system conditions show that there is an instance of exceeding an IROL in its Reliability Coordinator Area, the Reliability Coordinator shall, without delay, act or direct others to act to mitigate the magnitude and duration of the instance of exceeding that IROL within the IROL’s Tv. IRO-006-East-1 R2 will list congestion management actions and TLR Level when the RC is initiating a TLR for SOL and IROLs. IRO-009-1 tells the RC how to act on an IROL.</p> <p>Response: IRO-009-1 R4 refers to actual IROL exceedances, while IRO-006-East-1 R1 is not intended to be the sole remedy used to respond to an actual IRO exceedance. IRO-006-East-1 R1 can also be used to relieve transmission constraints under conditions other than IROL exceedances.</p> <p>(2) In IRO-006-East-1, insert “Reliability” between “the” and “Coordinator” in the third line just after IROL’s Tv. (See M1.)</p> <p>M1. Each Reliability Coordinator shall provide evidence (such as logs, voice recordings, or other information) that when acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL’s Tv, the Reliability Coordinator initiated one or more of the actions listed in R1 prior to or concurrently with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated) (R1).</p> <p>Response: Thank you for this suggestion. The error has been fixed.</p> <p>(3) As written, IRO-006-East-1 R2 would require the RC, upon initiation of a TLR, to re-issue the TLR each hour until it is identified as TLR Level 0. There is no need to re-issue a TLR level 1 each clock hour, as this is a notification</p> |

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| | <p>step and no action is required.</p> <p>A level TLR-2 and above need to be re-issued hourly to prevent or mitigate exceedances of SOLs and IROLs.</p> <p>Response: The requirement to re-issue TLR Level 1 every hour is already required in IRO-006-4, Attachment 1, section 1.4.4. This standard does not change this obligation.</p> <p>(4) Regarding IRO-006-East-1 R2.2, what is the intent behind “A list of congestion management actions?” Does the Reliability Coordinator who issues a TLR 5 need to list all generating units that are moved to provide NNL, or market flow? Will the RC need to list generating units that are moved to provide market relief?</p> <p>The RC should only have to provide the list required in R2.2 for facilities with an IROL. Facilities with only an SOL should be exempt from this requirement. Otherwise, this effort is burdensome and distracts the RC from his other duties and responsibilities.</p> <p>Response: The intent of the requirement is that it be consistent with the items identified in Part 3.3 (in other words, Interchange transactions and then relief obligations for NITS, Native Load, and Market flow, as appropriate).</p> <p>(5) Regarding IRO-006-East-1 M2, the VSL Level should increase as the TLR level increases. A TLR-1 should have the very lowest VSL associated with it and no penalties. A “b” TLR should probably have a higher VSL than an “a” TLR. The “b” TLR addresses immediate, real-time issues, whereas the “a” TLR is associated with anticipated events next hour. Also, firm curtailments in a TLR-5 should have a higher VSL than a TLR-4 or lower. A TLR-6 should have the most severe VSL since it has been associated with emergencies in the past.</p> <p>Response: While this approach may have some merit for consideration if we redesign our compliance elements in the future, this does not align with our current definitions of “VRF” and “VSL.” VSLs only measure the level to which the requirement is violated, not the risk associated with the requirement. To the extent we wish to apply different VRFs to each TLR level, we would need to redraft the standard to have separate requirements for each TLR level.</p> <p>(6) Regarding the VSLs associated with IRO-006-East-1 R3.1, specifically, what if the initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level (3.1)?</p> <p>This is all done automatically by the IDC and RCIS. How can the RC be held responsible for the program? How would a RC know if the other RCs in the Eastern Interconnection were notified?</p> <p>Response: The IDC Tool shows acknowledgement. If the IDC tool is not used, then the RC would be expected to verbally notify the other RCs.</p> <p>In FERC Order 693, paragraph 952, the Commission addresses Reliability Coordination – Transmission Loading Relief (IRO-006-3).</p> <p>“IRO-006-3 ensures that a reliability coordinator has a coordinated method to alleviate loadings on the transmission system if it becomes congested to avoid limit violations. IRO-006-3 establishes a detailed Transmission Loading</p> |

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| | <p>Relief (TLR) process for use in the Eastern Interconnection to alleviate loadings on the system by curtailing or changing transactions based on their priorities and according to different levels of TLR procedures. The proposed Reliability Standard includes a regional difference for reporting market flow information to the Interchange Distribution Calculator rather than tagged transaction information for the MISO and PJM areas.” It also includes by reference the equivalent Interconnection-wide congestion management methods used in the WECC and ERCOT regions.</p> <p>Further, the proposed Joint NERC/NAESB System Operator’s Transmission Loading Relief (TLR) Reference Manual includes the following:</p> <p>5.1.4. Notification of TLR Procedure Implementation</p> <p>The Reliability Coordinator initiating the use of the TLR Procedure shall notify other Reliability Coordinators and Balancing Authorities and Transmission Operators, and must post the initiation and progress of the TLR event on the appropriate NERC web page(s).</p> <p>5.1.4.1. Notifying Other Reliability Coordinators</p> <p>The Reliability Coordinator initiating the TLR Procedure shall inform all other Reliability Coordinators via the Reliability Coordinator Information System (RCIS) that the TLR Procedure has been implemented.</p> <p>Regarding the aforementioned language from the Reference Manual, the following comment was made by MISO and MRO during the comment period for Draft 3 of TLR Standard IRO—006-5 and IRO-006-East-1:</p> <p>“Since this standard is for the Eastern Interconnection only, we ask the SDT to write the Measurements to consider presentation of IDC logs and screens as satisfactory evidence. Specifically, we ask the drafting team to modify M2 and M3 IRO-006-EAST-1 to clarify that providing the TLR history from the IDC will satisfy the evidence requirements. Since no RC ever issues a TLR without the IDC, we ask the SDT to write the requirements with consideration of the use of the IDC. For example, R3 should be clarified that the IDC can be relied upon to communicate the notifications. The RC should not be required to demonstrate that the notifications went out as appropriate or essentially that the IDC worked as designed [sic].”</p> <p>The SDT responded as follows: “In previous postings, commenter’s have agreed that the standard should not reference any specific tool. The IDC is the name of the NERC tool that is currently used to manage the TLR process and is a way, but not necessarily the only way, to show compliance.”</p> <p>The NERC tools allow the RC to choose a TLR Level and identify the TLR level. In the Eastern Interconnection, the IDC and RCIS are the current processes to effectuate the needed TLR. Language could be added that includes any successor tool(s).</p> <p>Response: The SDT does not see any new information here explaining why the tool needs to be referenced – only that the tool is used. All Measures include “other information”. Information retrieved from the IDC and RCIS can be</p> |

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| | <p>used as satisfactory evidence.</p> <p>(7) IRO-006-East-1 R3.2 reads as follows: Communicate the list of congestion management actions to be implemented to</p> <ol style="list-style-type: none"> 1.) All Reliability Coordinators in the Eastern Interconnection, and 2.) Those Reliability Coordinators in other Interconnections responsible for curtailing Interchange Transactions crossing Interconnection boundaries identified in the list of congestion management actions. <p>Number 2 is redundant to IRO-006-5 R1</p> <p>Response: The SDT does not believe this to be redundant. Part 3.2 require that entities be sent the list. IRO-006-5 R1 requires that entities take action upon receipt of the list.</p> <p>(8) The “High VSL” for IRO-006-East-1R 3 reads, in part, as follows: “The initiating Reliability Coordinator did not communicate the list of congestion management actions to one or more of the Reliability Coordinators listed in Requirement R3, Part 3.2.”</p> <p>This again is too burdensome on the RCs, and at most should only be applied to facilities with identified IROLs.</p> <p>Response: Transmission Operators routinely request TLRs to manage SOLs, and an SOL exceedance, while not as critical as an IROL exceedance, should still be responded to in a timely manner.</p> <p>(9) Definitions of Terms Used in Standard The definition of “Market Flow” should be changed as follows: Market Flow: the total amount of power flowing across a specified Facility or set of Facilities due to a market dispatch of internal generation internal to the market to serve internal load internal to the market.</p> <p>Response: Thank you for your suggestion. The SDT has modified the definition per your suggestion.</p> <p>(10) Additional Compliance Information IRO-006-4.1...1.4.2 TLR Reports, This is a requirement of the IDC for the RC to fill out for TLR 2 and above. Why has this been removed for additional compliance? Will the Regional Entity not allow TLR Reports as evidence?</p> <p>Response: The “other information” allows the use of TLR reports. The previous Additional Compliance Information made it a requirement to fill out a TLR report. Unless this is a reliability requirement, we do not believe adding it to the compliance information will add value to the evidence that needs to be provided since this information is already covered.</p> <p>IRO-006-5 R1 the Balancing Authority is Applicability to the standard for Interconnection-wide TLR Procedure and</p> |

Consideration of Comments on IRO-006-5 and IRO-006-EAST-1 (Project 2006-08)

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| | <p>held accountable for curtailments at a severe level, but not in IRO-006-East, Why? But in INT-005-2 VSL level Low for the BA on curtailment?</p> <p>Response: IRO-006-5 applies to those entities that receive a request pursuant to an interconnection-wide TLR procedure to curtail an Interchange Transaction that crosses an Interconnection boundary. As such, the BA is held accountable for curtailments at a severe VRF. In IRO-006-East-1, the BA is instructed to implement the curtailment but is not assigned a requirement to communicate and request the curtailments. The RCs that receive the requests from the initiating RCs are held responsible for such communications.</p> |
| <p>Response: Please see in-line responses.</p> | |

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. SC authorized the SAR and assembled a drafting team on December 5, 2006.
2. The revisions to IRO-006 to transfer business practice content to NAESB were approved as IRO-006-4 by the Board of Trustees on October 23, 2007.
3. The SDT developed a first draft for industry consideration and posted it for comments from October 30, 2008 to December 1, 2008.
4. The SDT developed a second draft for industry consideration and posted it for comments from February 19, 2009 to April 6, 2009.
5. The SDT developed a third draft for industry consideration and posted it for comments from July 13, 2009 to August 13, 2009.
6. The SDT developed a fourth draft for industry consideration and posted it for comments from October 27, 2009 to November 30, 2009.
7. The SDT has developed this fifth and final draft for industry consideration.

Proposed Action Plan and Description of Current Draft:

This is the fifth and final draft of the proposed standard. It is being posted for 30-day Pre-Ballot Review.

Future Development Plan:

| Anticipated Actions | Anticipated Date |
|---------------------------------------|-------------------------|
| Posting for 30-day Pre-Ballot Review. | May 2010 |
| Initial Ballot. | June 2010 |
| Respond to comments. | July 2010 |
| Recirculation ballot. | July 2010 |
| Board adoption. | August 4, 2010 |

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

A. Introduction

1. **Title:** Reliability Coordination — Transmission Loading Relief (TLR)
2. **Number:** IRO-006-5
3. **Purpose:** To ensure coordinated action between Interconnections when implementing Interconnection-wide transmission loading relief procedures to prevent or manage potential or actual SOL and IROL exceedances to maintain reliability of the bulk electric system.
4. **Applicability:**
 - 4.1. Reliability Coordinator.
 - 4.2. Balancing Authority.
5. **Proposed Effective Date:** First day of the first calendar quarter following the date this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter after the date this standard is approved by the NERC Board of Trustees.

B. Requirements

- R1. Each Reliability Coordinator ~~or~~ and Balancing Authority that receives a request pursuant to an Interconnection-wide transmission loading relief procedure (such as Eastern Interconnection TLR, WECC Unscheduled Flow Mitigation, or congestion management procedures from the ERCOT Protocols) from any Reliability Coordinator, Balancing Authority, or Transmission Operator in another Interconnection to curtail an Interchange Transaction that crosses an Interconnection boundary shall comply with the request, unless it provides a valid reliability reason to the requestor that it cannot comply with the request. [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]

C. Measures

M1. Each Reliability Coordinator and Balancing Authority shall provide evidence (such as dated logs, voice recordings, Tag histories, and studies, in electronic or hard copy format) that, when a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure was made from another Reliability Coordinator, Balancing Authority, or Transmission Operator in that other Interconnection, it complied with the request or provided an valid identified reliability reason that it could not comply with the request (R1).

D. Compliance

1. **Compliance Monitoring Process**
 - 1.1. **Compliance Enforcement Authority**

Regional Entity.
 - ~~1.2. Compliance Monitoring Period and Reset Time Frame~~

~~Not applicable.~~

1.2. Compliance Monitoring and Enforcement Processes:

The following processes may be used:

- Compliance Audits
- Self-Certifications
- Spot Checking
- Compliance Violation Investigations
- Self-Reporting
- Complaints

1.3. Data Retention

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

- The Reliability Coordinator and Balancing Authority shall maintain evidence to show compliance with R1 for the most recent twelve calendar months plus the current month.
- If a Reliability Coordinator or Balancing Authority is found non-compliant, it shall keep information related to the non-compliance until found compliant or for the duration specified above, whichever is longer.

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

~~1.4. Compliance Monitoring and Enforcement Processes:~~

~~The following processes may be used:~~

- ~~- Compliance Audits~~
- ~~- Self Certifications~~
- ~~- Spot Checking~~
- ~~- Compliance Violation Investigations~~
- ~~- Self Reporting~~
- ~~- Complaints~~

1.5.1.4. Additional Compliance Information

None.

Violation Severity Levels

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|----------|--|
| R1 | | | | <p>The responsible entity received a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority, or Transmission Operator, but the entity neither complied with the request, nor provided a valid reliability reason that why it could not comply with the request.</p> |

E. Variances

None.

F. Associated Documents

Version History

| Version | Date | Action | Change Tracking |
|----------------|-------------------|---|------------------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | August 8, 2005 | Revised Attachment 1 | Revision |
| 3 | February 26, 2007 | Revised Purpose and Attachment 1 related to NERC NAESB split of the TLR procedure | Revision |
| 4 | October 23, 2007 | Completed NERC/NAESB split | Revision |
| 5 | | Removed Attachment 1 and made into a new standard, eliminated unnecessary requirements. | Revision |

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. SC authorized the SAR and assembled a drafting team on December 5, 2006.
2. The revisions to IRO-006 to transfer business practice content to NAESB were approved as IRO-006-4 by the Board of Trustees on October 23, 2007.
3. The SDT developed a first draft for industry consideration and posted it for comments from October 30, 2008 to December 1, 2008.
4. The SDT developed a second draft for industry consideration and posted it for comments from February 19, 2009 to April 6, 2009.
5. The SDT developed a third draft for industry consideration and posted it for comments from July 13, 2009 to August 13, 2009.
6. The SDT developed a fourth draft for industry consideration and posted it for comments from October 27, 2009 to November 30, 2009.
7. The SDT has developed this fifth and final draft for industry consideration.

Proposed Action Plan and Description of Current Draft:

This is the fifth and final draft of the proposed standard. It is being posted for 30-day Pre-Ballot Review.

Future Development Plan:

| Anticipated Actions | Anticipated Date |
|---------------------------------------|-------------------------|
| Posting for 30-day Pre-Ballot Review. | May 2010 |
| Initial Ballot. | June 2010 |
| Respond to comments. | July 2010 |
| Recirculation ballot. | July 2010 |
| Board adoption. | August 4, 2010 |

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Reallocation: ~~The total or partial curtailment of Transactions during TLR Level 3a or 5a to allow Transactions using higher priority to be implemented.~~ (To be retired.)

Market Flow: the total amount of power flowing across a specified Facility or set of Facilities due to a market dispatch of ~~internal~~ generation internal to the market to serve Load internal to the market ~~load~~.

A. Introduction

1. **Title: Transmission Loading Relief Procedure for the Eastern Interconnection**
2. **Number:** IRO-006-EAST-1
3. **Purpose:** To provide an Interconnection-wide transmission loading relief procedure (TLR) for the Eastern Interconnection that can be used to prevent and/or mitigate potential or actual System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) exceedances to maintain reliability of the Bulk Electric System (BES).
4. **Applicability:**
 - ~~4.1. Initiating~~ Reliability Coordinators in the Eastern Interconnection.
 - ~~4.2.4.1. Responding Reliability Coordinators~~
5. **Proposed Effective Date:** First day of the first calendar quarter following the date this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter after the date this standard is approved by the NERC Board of Trustees.

B. Requirements

- R1. When acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T_V , each Reliability Coordinator shall initiate, prior to or concurrently with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated), one or more of the following actions: [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]
 - Inter-area redispatch
 - Intra-area redispatch of generation
 - Reconfiguration of the transmission system
 - Voluntary load reductions (e.g., Demand-side Management)
 - Involuntary load reductions
- R2. In order to ensure operating entities are provided with information needed to maintain an awareness of changes to the Transmission System, ~~When~~ initiating the Eastern Interconnection TLR procedure to prevent or mitigate an SOL or IROL exceedance, and at least every clock hour after initiation up to and including the hour when the TLR level has been identified as TLR Level 0, the Reliability Coordinator shall identify: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]
 - 2.1. A list of congestion management actions to be implemented, and The TLR level as listed below in Table 1, and
 - 2.2. ~~A list of congestion management actions to be implemented based on the TLR level chosen.~~ One of the following TLR levels: TLR-1, TLR-2, TLR-3A, TLR-3B, TLR-4, TLR-5A, TLR-5B, TLR-6, TLR-0

| TABLE 1—TLR LEVELS ¹ | |
|---------------------------------|---|
| Level | Examples of Possible System Conditions |
| TLR-1 | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to approach or exceed its SOL or IROL within 8 hours. |
| TLR-2 | <ul style="list-style-type: none"> • At least one Transmission Facility is approaching or is at its SOL or IROL. <ul style="list-style-type: none"> ◦ Analysis shows that holding new and increasing non-firm Interchange Transactions and energy flows for the next hour can prevent exceeding this SOL or IROL. |
| TLR-3a | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL within the next hour. <ul style="list-style-type: none"> ◦ Analysis shows that full or partial curtailment or reallocation² of non-firm Interchange Transactions and energy flows can prevent exceeding this SOL and IROL. |
| TLR-3b | <ul style="list-style-type: none"> • At least one Transmission Facility is exceeding its SOL or IROL, or • At least one Transmission Facility is expected to exceed its SOL or IROL within the current hour. <ul style="list-style-type: none"> ◦ Analysis shows that full or partial curtailment or reallocation³ of non-firm Interchange Transactions and energy flows can prevent exceeding this SOL or IROLs. |
| TLR-4 | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL. <ul style="list-style-type: none"> ◦ Analysis shows that full curtailment of non-firm Interchange Transactions and energy flows, or reconfiguration of the transmission system can prevent exceeding this SOL or IROL. |
| TLR-5a | <ul style="list-style-type: none"> • At least one Transmission Facility is expected to exceed its SOL or IROL within the next hour. <ul style="list-style-type: none"> ◦ Analysis shows that the following actions can prevent exceeding the SOL or IROL: <ul style="list-style-type: none"> • Full curtailment non-firm Interchange Transactions and energy flows, and • Reconfiguration of the transmission system, if possible, and • Full or partial curtailment or reallocation⁴ of firm Interchange Transactions and energy flows. |
| TLR-5b | <ul style="list-style-type: none"> • At least one Transmission Facility is exceeding its SOL or IROL, or • At least one Transmission Facility is expected to exceed its SOL or IROL within the current hour. <ul style="list-style-type: none"> ◦ Analysis shows that the following actions can prevent exceeding the SOL or IROL: <ul style="list-style-type: none"> • Full curtailment of non-firm Interchange Transactions and energy flows, and • Reconfiguration of the transmission system, if possible, and • Full or partial curtailment or reallocation⁵ of firm Interchange Transactions and energy flows. |
| TLR-6 | <ul style="list-style-type: none"> • At least one Transmission Facility is exceeding its SOL or IROL, or • At least one Transmission Facility is expected to exceed its SOL or IROL upon the removal from service of a generating unit or another transmission facility. |
| TLR-0 | <ul style="list-style-type: none"> • No transmission facilities are expected to approach or exceed their SOL or IROL within 8 hours, and the ICM procedure may be terminated |

R3. Upon the identification of the TLR level and a list of congestion management actions to be implemented based on the TLR level chosen, the Reliability Coordinator initiating this TLR procedure shall: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]

¹ The listed system conditions examples are intended to assist the Reliability Coordinator in determining what level of TLR to call. The Reliability Coordinator has the discretion to choose any of these levels regardless of the examples listed, provided the Reliability Coordinator has reliability reasons to take such action. TLR levels are neither required nor expected to be issued in numerical order of level.

^{2,3,4,5} “Reallocation” is a term defined within the NAESB TLR standards.

- 3.1. Notify all Reliability Coordinators in the Eastern Interconnection of the identified TLR level
 - 3.2. Communicate the list of congestion management actions to be implemented to 1.) all Reliability Coordinators in the Eastern Interconnection, and 2.) those Reliability Coordinators in other Interconnections responsible for curtailing Interchange Transactions crossing Interconnection boundaries identified in the list of congestion management actions.
 - 3.3. Request that the congestion management actions identified in Requirement R2, Part 2.2 be implemented by:
 - 1.) Each Reliability Coordinator associated with a Sink Balancing Authority for which Interchange Transactions are to be curtailed,
 - 2.) Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which Network Integration Transmission Service or Native Load is to be curtailed, and
 - 3.) Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which its Market Flow is to be curtailed.
- R4.** Each Reliability Coordinator that receives a request as described in Requirement R3, Part 3.3. shall, within 15 minutes of receiving the request, implement the communicated congestion management actions requested by the issuing Reliability Coordinator as follows~~comply with the request by taking one or both of the following sets of actions:~~ [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]
- ~~● Implement the communicated congestion management actions requested by the issuing Reliability Coordinator as follows:~~
 - Instruct its Balancing Authorities to implement the Interchange Transaction schedule change requests.
 - Instruct its Balancing Authorities to implement the Network Integration Transmission Service and Native Load schedule changes for which the Balancing Authorities are responsible.
 - Instruct its Balancing Authorities to implement the Market Flow schedule changes for which the Balancing Authorities are responsible
 - If assessment determines that one or more of the congestion management actions communicated in Requirement R3, Part 3.3 will result in a reliability concern or will be ineffective, Instruct implementation~~Instruct implementation~~ the Reliability Coordinator may replace those specific actions with ~~of~~ alternate congestion management actions ~~to those communicated in R3~~, provided that:
 - ~~○ Assessment determines that some or all of the congestion management actions communicated in Requirement R3, Part 3.3 will result in a reliability concern or will be ineffective, and~~
 - The alternate congestion management actions have been agreed to by the initiating Reliability Coordinator, and
 - Assessment shows that the alternate congestion management actions will not adversely affect reliability.

C. **Measures**

- M1.** Each Reliability Coordinator shall provide evidence (such as [dated](#) logs, voice recordings, or other information [in electronic or hard-copy format](#)) that when acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T_v, the [Reliability](#) Coordinator initiated one or more of the actions listed in R1 prior to or concurrently with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated)(R1).
- M2.** Each Reliability Coordinator shall provide evidence (such as [dated](#) logs, voice recordings, or other information [in electronic or hard-copy format](#)) that at the time it initiated the Eastern Interconnection TLR procedure, and at least every clock hour after initiation up to and including the hour when the TLR level was identified as TLR Level 0, the Reliability Coordinator identified both the TLR Level and a list of congestion management actions to be implemented ~~based on the TLR level chosen~~ (R2).
- M3.** Each Reliability Coordinator shall provide evidence (such as [dated](#) logs, voice recordings, or other information [in electronic or hard-copy format](#)) that after it identified a TLR level and a list of congestion management actions to take, it 1.) notified all Reliability Coordinators in the Eastern Interconnection of the TLR Level, 2.) communicated the list of actions to all Reliability Coordinators in the Eastern Interconnection and those Reliability Coordinators in other Interconnections responsible for curtailing Interchange Transactions crossing Interconnection boundaries identified in the list of congestion management actions, and 3.) requested the Reliability Coordinators identified in Requirement R3 Part 3.2 to implement the congestion management actions identified in Requirement R2 Part 2.2 (R3).
- M4.** Each Reliability Coordinator shall provide evidence (such as [dated](#) logs, voice recordings, or other information [in electronic or hard-copy format](#)) that within fifteen minutes of the receipt of a request as described in R3, the Reliability Coordinator complied with the request by ~~either 1.) taking one or both of the following: 1.)~~ [implementing](#) the communicated congestion management actions requested by the issuing Reliability Coordinator, or 2.) [implementing some of the communicated congestion management actions requested by the issuing Reliability Coordinator, and replacing the remainder with implemented](#)-alternate congestion management actions ~~based on~~ [if](#) assessment ~~-which~~ showed that some or all of the congestion management actions communicated in R3 would have resulted in a reliability concern or would have been ineffective, the alternate congestion management actions were agreed to by the initiating Reliability Coordinator, and assessment showed that the alternate congestion management actions would not adversely affect reliability (R4).

D. **Compliance**

1. Compliance Monitoring Process

1.1. **Compliance Enforcement Authority**

Regional Entity.

~~1.2. Compliance Monitoring Period and Reset Time Frame~~

~~Not applicable.~~

1.2. Compliance Monitoring and Enforcement Processes:

The following processes may be used:

- Compliance Audits
- Self-Certifications
- Spot Checking
- Compliance Violation Investigations
- Self-Reporting
- Complaints

1.3. Data Retention

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

- The Reliability Coordinator shall maintain evidence to show compliance with R1, R2, R3, and R4 for the past 12 months plus the current month.
- If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant or for the duration specified above, whichever is longer.

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

~~1.4. Compliance Monitoring and Enforcement Processes:~~

~~1. The following processes may be used:~~

- ~~— Compliance Audits~~
- ~~— Self-Certifications~~
- ~~— Spot Checking~~
- ~~— Compliance Violation Investigations~~
- ~~— Self-Reporting~~
- ~~— Complaints~~

1.5.1.4. Additional Compliance Information

None.

3. Violation Severity Levels

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|---|--|--|--|
| R1 | | | | When acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T_v , the Reliability Coordinator did not initiate one or more of the actions listed under R1 prior to or in conjunction with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated). |
| R2 | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take based on the TLR level chosen for one clock hour during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take based on the TLR level chosen for two clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take based on the TLR level chosen for three clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take based on the TLR level chosen for four or more clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. |
| R3 | The initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level (3.1). | N/A | The initiating Reliability Coordinator did not communicate the list of congestion management actions to one or more of the Reliability Coordinators listed in Requirement R3, Part 3.2. | The initiating Reliability Coordinator requested none of the Reliability Coordinators identified in Requirement R3, Part 3.3 to implement the identified congestion management actions. |

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|--|---|
| | | | <p>OR</p> <p>The initiating Reliability Coordinator requested some, but not all, of the Reliability Coordinators identified in Requirement R3, Part 3.3 to implement the identified congestion management actions.</p> | |
| R4 | | | | <p>The responding Reliability Coordinator did not take one or both of the following actions within 15 minutes of receiving a request:</p> <p>1.) <u>1.)</u> implemented all the requested congestion management actions, or 2.) implement some of the requested congestion management actions and replace the remainder with <u>1.)</u> implemented alternate congestion management actions, <u>provided that:</u> based on assessment which showed that some or all of the actions communicated in Requirement R3 Part 3.3 <u>the actions replaced</u> would have resulted in a reliability concern or would have been ineffective, and that the alternate congestion management actions were agreed to by the initiating Reliability Coordinator, and</p> |

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|----------|--|
| | | | | assessment determined that the alternate congestion management actions would not adversely affect reliability. |

E. Variances

None.

F. Associated Documents

| [TLR Level Reference Document](#)

Revision History

| Version | Date | Action | Tracking |
|---------|------|--|----------|
| 1 | | Creation of new standard, incorporating concepts from IRO-006-4 Attachment; elimination of Regional Differences, as the standard allows the use of Market Flow | New |

Implementation Plan for Standard IRO-006-5 (Reliability Coordination — Transmission Loading Relief (TLR)) and IRO-006-EI-1 (Loading Relief Procedure for the Eastern Interconnection)

Prerequisite Approvals

There are no other reliability standards or Standard Authorization Requests (SARs), approved or in progress, that must be implemented before ~~this~~ [these](#) standards can be implemented.

Modified Definitions

The definition of “Reallocation” should be removed from the Glossary when IRO-006-5 and IRO-006-EI-1 become effective. [The drafting team has verified that the term, “Reallocation” is not used in any other approved standard.](#)

Modified Standards

IRO-006-4, and associated Attachment 1, should be retired when IRO-006-5 and IRO-006-EI-1 become effective.

The Regional Differences within IRO-006-4 should be retired when IRO-006-5 and IRO-006-EI-1 become effective.

Compliance with Standards

Once the standards become effective, the responsible entities identified in the applicability section of the standards must comply with the requirements. These include:

- Reliability Coordinators
- Balancing Authorities

Proposed Effective Date

The standards will become effective on the first day of the first calendar quarter after the date the standards are approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standards becomes effective on the first day of the first calendar quarter after the date the standards are approved by the NERC Board of Trustees.

Justification for VRFs and VSLs in IRO-006-5 and IRO-006-EAST-1

This document provides the justification for assignment of Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs), identifying how each proposed VRF and VSL meets NERC’s criteria and FERC’s Guidelines. NERC’s criteria for setting VRFs and VSLs; FERC’s five guidelines (G1–G5) for approving VRFs; and FERC’s four guidelines (G1-G4) for setting VSLs are provided at the end of this document.

| IRO-006-5 VRF and VSL Justifications | | |
|--------------------------------------|------------------------|--|
| R1 | Proposed VRF | High |
| | NERC VRF Discussion | An entity in another interconnection that does not curtail as requested will leave their interconnection unbalanced, which could contribute to BES instability. |
| | FERC VRF G1 Discussion | The requirement is related to the use of Transmission Loading Relief, but is not related to the appropriateness of using TLR. As such, the VRF is not required to be High. |
| | FERC VRF G2 Discussion | This standard does not utilize sub-requirements, but instead uses parts. Additionally, the standard has only one requirement. As such, G2 does not apply. |
| | FERC VRF G3 Discussion | This VRF is consistent with that of IRO-001 R8, which establishes the responsibility of entities to respond to the directives of Reliability Coordinators. |
| | FERC VRF G4 Discussion | An entity in another interconnection that does not curtail as requested will leave their interconnection unbalanced, which could contribute to BES instability. |
| | FERC VRF G5 Discussion | This requirement does not co-mingle reliability objectives. |
| | Proposed Lower VSL | N/A |
| | Proposed Moderate VSL | N/A |
| | Proposed High VSL | N/A |
| | Proposed Severe VSL | The responsible entity received a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority, or Transmission Operator, but the entity neither complied with the request, nor provided a valid reliability reason that it could not comply with the request. |
| | FERC VSL G1 Discussion | No longer applicable given significant changes in standard structure. |
| | FERC VSL G2 Discussion | The VSL is written as a pass/fail VSL, and it has been set at the “Severe” level, meeting guideline 2A. The VSL is written in clear and unambiguous language, meeting Guideline 2B. |
| | FERC VSL G3 Discussion | The VSL aligns with the language of the requirement, and does not add to nor take away from it. |

Justification for VRFs and VSLs in IRO-006-5 and IRO-006-EAST-1

| | | |
|--|--|--|
| | FERC VSL G4 Discussion | The VSL is based on a single violation of the requirement. |
| IRO-006-EAST-1 VSL and VRF Justifications | | |
| R1 | Proposed VRF | High |
| | NERC VRF Discussion | An entity that, when responding to an IROL, only implements the TLR procedure alone and does not take other action prior to or concurrently with the TLR procedure has placed the bulk electric system at an unacceptable risk of instability, separation, or cascading failures. |
| | FERC VRF G1 Discussion | The requirement is related to the use of Transmission Loading Relief, and is related to the appropriateness of using TLR. As such, the VRF is required to be High. |
| | FERC VRF G2 Discussion | This standard does not utilize sub-requirements, but instead uses parts. As such, G2 does not apply. However, the VRFs for this requirement are consistent with others in the standard with regard to relative risk. |
| | FERC VRF G3 Discussion | The requirement is consistent with IRO-009 R4. As this requirement addresses the manner in which entities respond to actual IROL exceedances, it is appropriate that this requirement share that same VRF of High. |
| | FERC VRF G4 Discussion | An entity that, when responding to an IROL, only implements the TLR procedure alone and does not take other action prior to or concurrently with the TLR procedure has placed the bulk electric system at an unacceptable risk of instability, separation, or cascading failures. |
| | FERC VRF G5 Discussion | This requirement does not co-mingle reliability objectives. |
| | Proposed Lower VSL | N/A |
| | Proposed Moderate VSL | N/A |
| | Proposed High VSL | N/A |
| | Proposed Severe VSL | When acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T_v , the Reliability Coordinator did not initiate one or more of the actions listed under R1 prior to or in conjunction with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated). |
| | FERC VSL G1 Discussion | No longer applicable given significant changes in standard structure. |
| | FERC VSL G2 Discussion | The VSL is written as a pass/fail VSL, and it has been set at the "Severe" level, meeting guideline 2A. The VSL is written in clear and unambiguous language, meeting Guideline 2B. |
| | FERC VSL G3 Discussion | The VSL aligns with the language of the requirement, and does not add to nor take away from it. |
| FERC VSL G4 Discussion | The VSL is based on a single violation of the requirement. | |

Justification for VRFs and VSLs in IRO-006-5 and IRO-006-EAST-1

| | | |
|---------------------|--|--|
| R2 | Proposed VRF | Medium |
| | NERC VRF Discussion | An entity that does not continually identify TLR level and actions to take on at least an hourly basis may have a negative effect on the reliability of the BES by reducing coordination, but that action alone is unlikely to lead to bulk electric system instability, separation, or cascading failures. |
| | FERC VRF G1 Discussion | The requirement is related to the use of Transmission Loading Relief, but is not related to the appropriateness of using TLR. As such, the VRF is not required to be High. |
| | FERC VRF G2 Discussion | This standard does not utilize sub-requirements, but instead uses parts. As such, G2 does not apply. However, the VRFs for this requirement are consistent with others in the standard with regard to relative risk. |
| | FERC VRF G3 Discussion | IRO-005-2 R7 indicates that the dissemination of information from the RC should be considered as having a "High" risk factor. However, IRO-005 R7 does not specify the type of information to be disseminated. Absent that specificity, it is unclear whether or not all information is of high risk, or if only some is of high risk. Since FERC VRF Guideline 5 requires that entities err toward the more conservative, it would appear that IRO-005 R7 assumes that at least one piece of information to disseminate is of a critical nature. However, when discussing the specifics, the SDT believes that the non-dissemination of the information required in IRO-006 R2 alone is unlikely to lead to bulk electric system instability, separation, or cascading failures. As such, the team believes the VRF is appropriate. Additionally, the Medium VRF is consistent with IRO-015 R1. |
| | FERC VRF G4 Discussion | An entity that does not continually identify TLR level and actions to take on at least an hourly basis may have a negative effect on the reliability of the BES by reducing coordination, but that action alone is unlikely to lead to bulk electric system instability, separation, or cascading failures. |
| | FERC VRF G5 Discussion | This requirement does not co-mingle reliability objectives. |
| | Proposed Lower VSL | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take based on the TLR level chosen for one clock hour during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. |
| | Proposed Moderate VSL | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take based on the TLR level chosen for two clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0 |
| | Proposed High VSL | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take based on the TLR level chosen for three clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. |
| Proposed Severe VSL | The Reliability Coordinator initiating the Eastern Interconnection TLR | |

Justification for VRFs and VSLs in IRO-006-5 and IRO-006-EAST-1

| | | |
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| | | procedure missed identifying the TLR Level and/or a list of congestion management actions to take based on the TLR level chosen for four or more clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. |
| | FERC VSL G1 Discussion | No longer applicable given significant changes in standard structure. |
| | FERC VSL G2 Discussion | The VSL is written as a graded VSL, meeting guideline 2A. The VSL is written in clear and unambiguous language, meeting Guideline 2B. |
| | FERC VSL G3 Discussion | The VSL aligns with the language of the requirement, and does not add to nor take away from it. |
| | FERC VSL G4 Discussion | The Requirement mandates continuous hourly identification of TLR level and actions, and the VSL is based on the continuity of those actions. The VSL is correctly based on multiple violations. |

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| R3 | Proposed VRF | Medium |
| | NERC VRF Discussion | An entity that does not notify entities or request the actions as described in the requirement may have a negative effect on the reliability of the BES by reducing coordination, but that action alone is unlikely to lead to bulk electric system instability, separation, or cascading failures. |
| | FERC VRF G1 Discussion | The requirement is related to the use of Transmission Loading Relief, but is not related to the appropriateness of using TLR. As such, the VRF is not required to be High. |
| | FERC VRF G2 Discussion | This standard does not utilize sub-requirements, but instead uses parts. As such, G2 does not apply. However, the VRFs for this requirement are consistent with others in the standard with regard to relative risk. |
| | FERC VRF G3 Discussion | IRO-005-2 R7 indicates that the dissemination of information from the RC should be considered as having a "High" risk factor. However, IRO-005 R7 does not specify the type of information to be disseminated. Absent that specificity, it is unclear whether or not all information is of high risk, or if only some is of high risk. Since FERC VRF Guideline 5 requires that entities err toward the more conservative, it would appear that IRO-005 R7 assumes that at least one piece of information to disseminate is of a critical nature. However, when discussing the specifics, the SDT believes that the failure to notify or make specific requests from the TLR procedure alone is unlikely to lead to bulk electric system instability, separation, or cascading failures. As such, the team believes the VRF is appropriate. |
| | FERC VRF G4 Discussion | An entity that does not notify entities or request the actions as described in the requirement may have a negative effect on the reliability of the BES by reducing coordination, but that action alone is unlikely to lead to bulk electric system instability, separation, or cascading failures. |
| | FERC VRF G5 Discussion | This requirement co-mingles reliability objectives, but does not reflect the lower risk level associated with the less important objective. |
| | Proposed Lower VSL | The initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR |

Justification for VRFs and VSLs in IRO-006-5 and IRO-006-EAST-1

| | | |
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| | | Level (3.1). |
| | Proposed Moderate VSL | N/A |
| | Proposed High VSL | <p>The initiating Reliability Coordinator did not communicate the list of congestion management actions to one or more of the Reliability Coordinators listed in Requirement R3 Part 3.2.</p> <p>OR</p> <p>The initiating Reliability Coordinator requested some, but not all, of the Reliability Coordinators identified in Requirement R3 Part 3.3 to implement the identified congestion management actions.</p> |
| | Proposed Severe VSL | The initiating Reliability Coordinator requested none of the Reliability Coordinators identified in Requirement R3 Part 3.3 to implement the identified congestion management actions. |
| | FERC VSL G1 Discussion | No longer applicable given significant changes in standard structure. |
| | FERC VSL G2 Discussion | The VSL is written as a graded VSL, meeting guideline 2A. The VSL is written in clear and unambiguous language, meeting Guideline 2B. |
| | FERC VSL G3 Discussion | The VSL aligns with the language of the requirement, and does not add to nor take away from it. |
| | FERC VSL G4 Discussion | The VSL is based on a single violation of the requirement. |

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| | Proposed VRF | High |
| | NERC VRF Discussion | An entity that, when responding to a request to take action as part of the TLR procedure, does not take such action (or alternative action as described in the requirement) could be causing or contributing to bulk electric system instability, separation, or a cascading sequence of failures |
| | FERC VRF G1 Discussion | The requirement is related to the use of Transmission Loading Relief, but is not related to the appropriateness of using TLR. As such, the VRF is not required to be High. |
| R4 | FERC VRF G2 Discussion | This standard does not utilize sub-requirements, but instead uses parts. As such, G2 does not apply. However, the VRFs for this requirement are consistent with others in the standard with regard to relative risk. |
| | FERC VRF G3 Discussion | This VRF is consistent with that of IRO-001 R8, which establishes the responsibility of entities to respond to the directives of Reliability Coordinators. |
| | FERC VRF G4 Discussion | An entity that, when responding to a request to take action as part of the TLR procedure, does not take such action (or alternative action as described in the requirement) could be causing or contributing to bulk electric system instability, separation, or a cascading sequence of failures |
| | FERC VRF G5 Discussion | This requirement does not co-mingle reliability objectives. |

Justification for VRFs and VSLs in IRO-006-5 and IRO-006-EAST-1

| | |
|------------------------|--|
| Proposed Lower VSL | N/A |
| Proposed Moderate VSL | N/A |
| Proposed High VSL | N/A |
| Proposed Severe VSL | The responding Reliability Coordinator did not initiate one or both of the following actions within 15 minutes of receiving a request: 1.) Implemented the requested congestion management actions. 2.) Implemented alternate congestion management actions based on assessment which showed that some or all of the actions communicated in Requirement R3 Part 3.3 would have resulted in a reliability concern or would have been ineffective, and that the alternate congestion management actions were agreed to by the initiating Reliability Coordinator and assessment determined that the alternate congestion management actions would not adversely affect reliability. |
| FERC VSL G1 Discussion | No longer applicable given significant changes in standard structure. |
| FERC VSL G2 Discussion | The VSL is written as a pass/fail VSL, and it has been set at the "Severe" level, meeting guideline 2A. The VSL is written in clear and unambiguous language, meeting Guideline 2B. |
| FERC VSL G3 Discussion | The VSL aligns with the language of the requirement, and does not add to nor take away from it. |
| FERC VSL G4 Discussion | The VSL is based on a single violation of the requirement. |

NERC's VRF Criteria:

High Risk Requirement

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

Medium Risk Requirement

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

Lower Risk Requirement

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

FERC's VRF Guidelines:

VRF G1 — Consistency with the Conclusions of the Final Blackout Report

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System. From footnote 15 of the May 18, 2007 Order, FERC's list of critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System includes:

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

VRF G2 — Consistency within a Reliability Standard

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

VRF G3 — Consistency among Reliability Standards

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

VRF G4 — Consistency with NERC’s Definition of the Violation Risk Factor Level

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

VRF G5 — Treatment of Requirements that Co-mingle More Than One Obligation

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

NERC’s Criteria for VSLs:

| Lower VSL | Moderate VSL | High VSL | Severe VSL |
|--|--|--|--|
| The performance or product measured almost meets the full intent of the requirement. | The performance or product measured meets the majority of the intent of the requirement. | The performance or product measured does not meet the majority of the intent of the requirement, but does meet some of the intent. | The performance or product measured does not substantively meet the intent of the requirement. |

FERC’s VSL Guidelines:

VSL G1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance (Compare the VSLs to any prior Levels of Non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when Levels of Non-compliance were used.)

VSL G2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties (A violation of a “binary” type requirement must be a “Severe” VSL. Avoid using ambiguous terms such as “minor” and “significant” to describe noncompliant performance.)

VSL G3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement (VSLs should not expand on what is required in the requirement.)

VSL G4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations (. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.)

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Ballot Results

| | |
|-------------------------------|---|
| Ballot Name: | Project 2006-08 - Reliability Coordination - Transmission Loading Relief_in |
| Ballot Period: | 6/23/2010 - 7/6/2010 |
| Ballot Type: | Initial |
| Total # Votes: | 215 |
| Total Ballot Pool: | 247 |
| Quorum: | 87.04 % The Quorum has been reached |
| Weighted Segment Vote: | 84.98 % |
| Ballot Results: | The standard will proceed to recirculation ballot. |

Summary of Ballot Results

| Segment | Ballot Pool | Segment Weight | Affirmative | | Negative | | Abstain # Votes | No Vote |
|------------------|-------------|----------------|-------------|--------------|-----------|--------------|-----------------|-----------|
| | | | # Votes | Fraction | # Votes | Fraction | | |
| 1 - Segment 1. | 69 | 1 | 43 | 0.878 | 6 | 0.122 | 12 | 8 |
| 2 - Segment 2. | 10 | 0.9 | 7 | 0.7 | 2 | 0.2 | 0 | 1 |
| 3 - Segment 3. | 56 | 1 | 32 | 0.842 | 6 | 0.158 | 9 | 9 |
| 4 - Segment 4. | 15 | 1 | 13 | 0.867 | 2 | 0.133 | 0 | 0 |
| 5 - Segment 5. | 43 | 1 | 24 | 0.828 | 5 | 0.172 | 9 | 5 |
| 6 - Segment 6. | 34 | 1 | 17 | 0.773 | 5 | 0.227 | 6 | 6 |
| 7 - Segment 7. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 - Segment 8. | 6 | 0.5 | 4 | 0.4 | 1 | 0.1 | 1 | 0 |
| 9 - Segment 9. | 6 | 0.5 | 5 | 0.5 | 0 | 0 | 0 | 1 |
| 10 - Segment 10. | 8 | 0.5 | 5 | 0.5 | 0 | 0 | 1 | 2 |
| Totals | 247 | 7.4 | 150 | 6.288 | 27 | 1.112 | 38 | 32 |

Individual Ballot Pool Results

| Segment | Organization | Member | Ballot | Comments |
|---------|---------------------------------|-----------------------|-------------|----------|
| 1 | Ameren Services | Kirit S. Shah | Affirmative | |
| 1 | American Electric Power | Paul B. Johnson | Affirmative | |
| 1 | Avista Corp. | Scott Kinney | Abstain | |
| 1 | BC Transmission Corporation | Gordon Rawlings | Abstain | |
| 1 | Beaches Energy Services | Joseph S. Stonecipher | Affirmative | |
| 1 | Bonneville Power Administration | Donald S. Watkins | Abstain | |
| 1 | Central Maine Power Company | Brian Conroy | Affirmative | |

| | | | | |
|---|---|------------------------------|-------------|----------------------|
| 1 | City of Vero Beach | Randall McCamish | Affirmative | |
| 1 | Cleco Power LLC | Danny McDaniel | Affirmative | |
| 1 | Consolidated Edison Co. of New York | Christopher L de Graffenried | Affirmative | |
| 1 | Dayton Power & Light Co. | Hertzel Shamash | Affirmative | |
| 1 | Dominion Virginia Power | John K Loftis | Abstain | |
| 1 | Duke Energy Carolina | Douglas E. Hills | Affirmative | View |
| 1 | East Kentucky Power Coop. | George S. Carruba | Affirmative | |
| 1 | Empire District Electric Co. | Ralph Frederick Meyer | Affirmative | |
| 1 | Entergy Corporation | George R. Bartlett | | |
| 1 | FirstEnergy Energy Delivery | Robert Martinko | Affirmative | |
| 1 | Florida Keys Electric Cooperative Assoc. | Dennis Minton | Negative | |
| 1 | Gainesville Regional Utilities | Luther E. Fair | Affirmative | |
| 1 | Georgia Transmission Corporation | Harold Taylor, II | Affirmative | |
| 1 | Great River Energy | Gordon Pietsch | Negative | |
| 1 | Hoosier Energy Rural Electric Cooperative, Inc. | Robert Solomon | | |
| 1 | Hydro One Networks, Inc. | Ajay Garg | | |
| 1 | ITC Transmission | Elizabeth Howell | Affirmative | |
| 1 | Kansas City Power & Light Co. | Michael Gammon | Affirmative | View |
| 1 | Keys Energy Services | Stan T. Rzad | Affirmative | |
| 1 | Lake Worth Utilities | Walt Gill | Affirmative | |
| 1 | Lakeland Electric | Larry E Watt | | |
| 1 | Lincoln Electric System | Doug Bantam | Abstain | |
| 1 | Manitoba Hydro | Michelle Rheault | Affirmative | |
| 1 | MEAG Power | Danny Dees | Affirmative | |
| 1 | MidAmerican Energy Co. | Terry Harbour | Negative | View |
| 1 | National Grid | Saurabh Saksena | Affirmative | |
| 1 | Nebraska Public Power District | Richard L. Koch | Abstain | |
| 1 | New York Power Authority | Arnold J. Schuff | Affirmative | |
| 1 | Northeast Utilities | David H. Boguslawski | Affirmative | |
| 1 | NorthWestern Energy | John Canavan | Abstain | |
| 1 | Ohio Valley Electric Corp. | Robert Matthey | Affirmative | |
| 1 | Oklahoma Gas and Electric Co. | Marvin E VanBebber | Affirmative | |
| 1 | Omaha Public Power District | Douglas G Peterchuck | Abstain | |
| 1 | Orlando Utilities Commission | Brad Chase | Affirmative | |
| 1 | Otter Tail Power Company | Lawrence R. Larson | Negative | View |
| 1 | Pacific Gas and Electric Company | Chifong L. Thomas | Affirmative | |
| 1 | PacifiCorp | Mark Sampson | Abstain | |
| 1 | Portland General Electric Co. | Frank F. Afranji | Abstain | |
| 1 | Potomac Electric Power Co. | Richard J Kafka | Affirmative | |
| 1 | PowerSouth Energy Cooperative | Larry D. Avery | Negative | |
| 1 | PPL Electric Utilities Corp. | Brenda L Truhe | Affirmative | |
| 1 | Progress Energy Carolinas | Sammy Roberts | Negative | |
| 1 | Public Service Company of New Mexico | Laurie Williams | | |
| 1 | Public Service Electric and Gas Co. | Kenneth D. Brown | Affirmative | |
| 1 | Sacramento Municipal Utility District | Tim Kelley | Affirmative | |
| 1 | Salt River Project | Robert Kondziolka | Abstain | |
| 1 | San Diego Gas & Electric | Linda Brown | Affirmative | |
| 1 | Santee Cooper | Terry L. Blackwell | Affirmative | |
| 1 | SCE&G | Henry Delk, Jr. | Affirmative | |
| 1 | Sierra Pacific Power Co. | Richard Salgo | Abstain | |
| 1 | Southern California Edison Co. | Dana Cabbell | Affirmative | |
| 1 | Southern Company Services, Inc. | Horace Stephen Williamson | Affirmative | |
| 1 | Southern Illinois Power Coop. | William G. Hutchison | Affirmative | |
| 1 | Southwest Transmission Cooperative, Inc. | James L. Jones | Affirmative | |
| 1 | Southwestern Power Administration | Gary W Cox | Affirmative | |
| 1 | Sunflower Electric Power Corporation | Noman Lee Williams | | |
| 1 | Tennessee Valley Authority | Larry Akens | | |
| 1 | Tri-State G & T Association Inc. | Keith V. Carman | Affirmative | |
| 1 | Tucson Electric Power Co. | John Tolo | | |
| 1 | United Illuminating Co. | Jonathan Appelbaum | Affirmative | |
| 1 | Westar Energy | Allen Klassen | Affirmative | |
| 1 | Western Area Power Administration | Brandy A Dunn | Affirmative | |
| 2 | Alberta Electric System Operator | Jason L. Murray | Affirmative | View |
| 2 | BC Transmission Corporation | Faramarz Amjadi | Affirmative | |
| 2 | California ISO | Timothy VanBlaricom | Affirmative | |
| 2 | Electric Reliability Council of Texas, Inc. | Chuck B Manning | Affirmative | View |

| | | | | |
|---|--|------------------------------|-------------|----------------------|
| 2 | Independent Electricity System Operator | Kim Warren | Affirmative | View |
| 2 | ISO New England, Inc. | Kathleen Goodman | Affirmative | |
| 2 | Midwest ISO, Inc. | Jason L Marshall | Negative | View |
| 2 | New Brunswick System Operator | Alden Briggs | Affirmative | |
| 2 | PJM Interconnection, L.L.C. | Tom Bowe | | |
| 2 | Southwest Power Pool | Charles H Yeung | Negative | View |
| 3 | Alabama Power Company | Richard J. Mandes | Affirmative | |
| 3 | Ameren Services | Mark Peters | Affirmative | |
| 3 | American Electric Power | Raj Rana | Affirmative | |
| 3 | Arizona Public Service Co. | Thomas R. Glock | | |
| 3 | Atlantic City Electric Company | James V. Petrella | Affirmative | |
| 3 | BC Hydro and Power Authority | Pat G. Harrington | Abstain | |
| 3 | Blue Ridge Power Agency | Duane S. Dahlquist | Affirmative | |
| 3 | Bonneville Power Administration | Rebecca Berdahl | Abstain | |
| 3 | Central Electric Cooperative, Inc. (Redmond, Oregon) | Dave Markham | | |
| 3 | City of Bartow, Florida | Matt Culverhouse | | |
| 3 | City of Clewiston | Lynne Mila | Affirmative | |
| 3 | City of Green Cove Springs | Gregg R Griffin | Abstain | |
| 3 | City of Leesburg | Phil Janik | Affirmative | |
| 3 | Cleco Utility Group | Bryan Y Harper | Affirmative | |
| 3 | Consolidated Edison Co. of New York | Peter T Yost | Affirmative | |
| 3 | Consumers Energy | David A. Lapinski | Negative | View |
| 3 | Cowlitz County PUD | Russell A Noble | Affirmative | |
| 3 | Delmarva Power & Light Co. | Michael R. Mayer | Affirmative | |
| 3 | Detroit Edison Company | Kent Kujala | | |
| 3 | Dominion Resources Services | Michael F Gildea | Abstain | |
| 3 | Duke Energy Carolina | Henry Ernst-Jr | Affirmative | |
| 3 | East Kentucky Power Coop. | Sally Witt | Affirmative | |
| 3 | FirstEnergy Solutions | Kevin Querry | Affirmative | View |
| 3 | Florida Municipal Power Agency | Joe McKinney | | |
| 3 | Florida Power Corporation | Lee Schuster | Negative | View |
| 3 | Gainesville Regional Utilities | Kenneth Simmons | Affirmative | |
| 3 | Georgia Power Company | Anthony L Wilson | Affirmative | |
| 3 | Georgia System Operations Corporation | R Scott S. Barfield-McGinnis | Affirmative | |
| 3 | Great River Energy | Sam Kokkinen | | |
| 3 | Gulf Power Company | Gwen S Frazier | Affirmative | |
| 3 | Hydro One Networks, Inc. | Michael D. Penstone | | |
| 3 | JEA | Garry Baker | | |
| 3 | Kansas City Power & Light Co. | Charles Locke | Negative | View |
| 3 | Kissimmee Utility Authority | Gregory David Woessner | Affirmative | |
| 3 | Lakeland Electric | Mace Hunter | Negative | |
| 3 | Lincoln Electric System | Bruce Merrill | Abstain | |
| 3 | Louisville Gas and Electric Co. | Charles A. Freibert | Negative | View |
| 3 | Manitoba Hydro | Greg C Parent | Affirmative | |
| 3 | MEAG Power | Steven Grego | Affirmative | |
| 3 | MidAmerican Energy Co. | Thomas C. Mielnik | Negative | View |
| 3 | Mississippi Power | Don Horsley | Affirmative | |
| 3 | Municipal Electric Authority of Georgia | Steven M. Jackson | Affirmative | |
| 3 | New York Power Authority | Marilyn Brown | Affirmative | |
| 3 | Niagara Mohawk (National Grid Company) | Michael Schiavone | Affirmative | |
| 3 | Northern Indiana Public Service Co. | William SeDoris | Affirmative | |
| 3 | Orlando Utilities Commission | Ballard Keith Mutters | Abstain | |
| 3 | PacifiCorp | John Apperson | Abstain | |
| 3 | Platte River Power Authority | Terry L Baker | Affirmative | |
| 3 | Public Service Electric and Gas Co. | Jeffrey Mueller | Affirmative | |
| 3 | Public Utility District No. 2 of Grant County | Greg Lange | | |
| 3 | Sacramento Municipal Utility District | James Leigh-Kendall | Affirmative | |
| 3 | Salt River Project | John T. Underhill | Abstain | |
| 3 | Santee Cooper | Zack Dusenbury | Affirmative | |
| 3 | Southern California Edison Co. | David Schiada | Affirmative | |
| 3 | Wisconsin Electric Power Marketing | James R. Keller | Abstain | |
| 3 | Xcel Energy, Inc. | Michael Ibold | Affirmative | |
| 4 | Alliant Energy Corp. Services, Inc. | Kenneth Goldsmith | Affirmative | |
| 4 | City of Clewiston | Kevin McCarthy | Affirmative | |
| 4 | City of New Smyrna Beach Utilities Commission | Timothy Beyrle | Affirmative | |

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|---|--|-----------------------|-------------|----------------------|
| 4 | Consumers Energy | David Frank Ronk | Negative | View |
| 4 | Detroit Edison Company | Daniel Herring | Affirmative | |
| 4 | Florida Municipal Power Agency | Frank Gaffney | Affirmative | |
| 4 | Fort Pierce Utilities Authority | Thomas W. Richards | Affirmative | |
| 4 | Georgia System Operations Corporation | Guy Andrews | Affirmative | |
| 4 | Madison Gas and Electric Co. | Joseph G. DePoorter | Negative | |
| 4 | Ohio Edison Company | Douglas Hohlbaugh | Affirmative | |
| 4 | Sacramento Municipal Utility District | Mike Ramirez | Affirmative | |
| 4 | Seminole Electric Cooperative, Inc. | Steven R Wallace | Affirmative | |
| 4 | South Mississippi Electric Power Association | Steve McElhaney | Affirmative | |
| 4 | Tacoma Public Utilities | Keith Morisette | Affirmative | |
| 4 | Wisconsin Energy Corp. | Anthony Jankowski | Affirmative | |
| 5 | AEP Service Corp. | Brock Ondayko | Affirmative | |
| 5 | Amerenue | Sam Dwyer | Affirmative | |
| 5 | Avista Corp. | Edward F. Groce | Abstain | |
| 5 | Bonneville Power Administration | Francis J. Halpin | Abstain | |
| 5 | City of Tallahassee | Alan Gale | Affirmative | |
| 5 | Conectiv Energy Supply, Inc. | Kara Dundas | | |
| 5 | Consolidated Edison Co. of New York | Wilket (Jack) Ng | Affirmative | |
| 5 | Consumers Energy | James B Lewis | Negative | View |
| 5 | Detroit Edison Company | Christy Wicke | Affirmative | |
| 5 | Dominion Resources, Inc. | Mike Garton | Abstain | |
| 5 | East Kentucky Power Coop. | Stephen Ricker | Affirmative | |
| 5 | Electric Power Supply Association | Jack R. Cashin | Affirmative | View |
| 5 | Entergy Corporation | Stanley M Jaskot | Affirmative | |
| 5 | FirstEnergy Solutions | Kenneth Dresner | Affirmative | |
| 5 | Florida Municipal Power Agency | David Schumann | Affirmative | |
| 5 | Great River Energy | Cynthia E Sulzer | | |
| 5 | Kissimmee Utility Authority | Mike Blough | Affirmative | |
| 5 | Lakeland Electric | Thomas J Trickey | Affirmative | |
| 5 | Lincoln Electric System | Dennis Florom | Abstain | |
| 5 | Louisville Gas and Electric Co. | Charlie Martin | Negative | View |
| 5 | Manitoba Hydro | Mark Aikens | Affirmative | |
| 5 | Nebraska Public Power District | Jon Sunneberg | Abstain | |
| 5 | New York Power Authority | Gerald Mannarino | Affirmative | |
| 5 | Northern Indiana Public Service Co. | Michael K Wilkerson | Affirmative | |
| 5 | Otter Tail Power Company | Ward Uggerud | Affirmative | |
| 5 | PacifiCorp | Sandra L. Shaffer | Abstain | |
| 5 | Portland General Electric Co. | Gary L Tingley | | |
| 5 | PowerSouth Energy Cooperative | Tim Hattaway | Affirmative | |
| 5 | PPL Generation LLC | Mark A. Heimbach | Affirmative | |
| 5 | Progress Energy Carolinas | Wayne Lewis | Negative | View |
| 5 | PSEG Power LLC | David Murray | Affirmative | |
| 5 | Sacramento Municipal Utility District | Bethany Wright | Affirmative | |
| 5 | Salt River Project | Glen Reeves | Abstain | |
| 5 | Seattle City Light | Michael J. Haynes | | |
| 5 | Seminole Electric Cooperative, Inc. | Brenda K. Atkins | Affirmative | |
| 5 | South Carolina Electric & Gas Co. | Richard Jones | Affirmative | |
| 5 | Tenaska, Inc. | Scott M. Helyer | Abstain | |
| 5 | Tennessee Valley Authority | George T. Ballew | Negative | View |
| 5 | U.S. Army Corps of Engineers Northwestern Division | Karl Bryan | Affirmative | |
| 5 | U.S. Bureau of Reclamation | Martin Bauer P.E. | Negative | View |
| 5 | Wisconsin Electric Power Co. | Linda Horn | Abstain | |
| 5 | Wisconsin Public Service Corp. | Leonard Rentmeester | | |
| 5 | Xcel Energy, Inc. | Liam Noailles | Affirmative | |
| 6 | AEP Marketing | Edward P. Cox | Affirmative | |
| 6 | Ameren Energy Marketing Co. | Jennifer Richardson | Affirmative | |
| 6 | Barry Green Consulting Inc. | Barry Green | Affirmative | View |
| 6 | Bonneville Power Administration | Brenda S. Anderson | Abstain | |
| 6 | Cleco Power LLC | Matthew D Cripps | Affirmative | |
| 6 | Consolidated Edison Co. of New York | Nickesha P Carrol | Affirmative | |
| 6 | Constellation Energy Commodities Group | Brenda Powell | | |
| 6 | Dominion Resources, Inc. | Louis S Slade | Abstain | |
| 6 | Entergy Services, Inc. | Terri F Benoit | Negative | |
| 6 | FirstEnergy Solutions | Mark S Travaglianti | Affirmative | |
| 6 | Florida Municipal Power Agency | Richard L. Montgomery | | |

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|----|--|------------------------------|-------------|----------------------|
| 6 | Florida Municipal Power Pool | Thomas E Washburn | Affirmative | |
| 6 | Florida Power & Light Co. | Silvia P Mitchell | | |
| 6 | Great River Energy | Donna Stephenson | | |
| 6 | Kansas City Power & Light Co. | Thomas Saitta | Negative | View |
| 6 | Lakeland Electric | Paul Shipps | Affirmative | |
| 6 | Lincoln Electric System | Eric Ruskamp | Abstain | |
| 6 | Louisville Gas and Electric Co. | Daryn Barker | Negative | View |
| 6 | Manitoba Hydro | Daniel Prowse | Affirmative | |
| 6 | New York Power Authority | Thomas Papadopoulos | Affirmative | |
| 6 | Northern Indiana Public Service Co. | Joseph O'Brien | Affirmative | |
| 6 | NRG Energy, Inc. | Alan R. Johnson | Affirmative | |
| 6 | Omaha Public Power District | David Ried | Negative | |
| 6 | Progress Energy | James Eckelkamp | | |
| 6 | PSEG Energy Resources & Trade LLC | James D. Hebson | Affirmative | |
| 6 | Public Utility District No. 1 of Chelan County | Hugh A. Owen | Abstain | |
| 6 | Salt River Project | Mike Hummel | Abstain | |
| 6 | Santee Cooper | Suzanne Ritter | Affirmative | |
| 6 | Seattle City Light | Dennis Sismaet | Abstain | |
| 6 | Seminole Electric Cooperative, Inc. | Trudy S. Novak | Affirmative | |
| 6 | South Carolina Electric & Gas Co. | Matt H Bullard | Affirmative | |
| 6 | Tennessee Valley Authority | Marjorie S. Parsons | Negative | View |
| 6 | Western Area Power Administration - UGP Marketing | John Stonebarger | Affirmative | |
| 6 | Xcel Energy, Inc. | David F. Lemmons | | |
| 8 | | Roger C Zaklukiewicz | Affirmative | |
| 8 | | James A Maenner | Affirmative | |
| 8 | JDRJC Associates | Jim D. Cyrulewski | Negative | View |
| 8 | Power Energy Group LLC | Peggy Abbadini | Affirmative | |
| 8 | Utility Services, Inc. | Brian Evans-Mongeon | Abstain | |
| 8 | Volkman Consulting, Inc. | Terry Volkman | Affirmative | |
| 9 | California Energy Commission | William Mitchell Chamberlain | Affirmative | |
| 9 | Commonwealth of Massachusetts Department of Public Utilities | Donald E. Nelson | Affirmative | |
| 9 | National Association of Regulatory Utility Commissioners | Diane J. Barney | Affirmative | |
| 9 | North Carolina Utilities Commission | Kimberly J. Jones | | |
| 9 | Oregon Public Utility Commission | Jerome Murray | Affirmative | |
| 9 | Utah Public Service Commission | Ric Campbell | Affirmative | |
| 10 | Electric Reliability Council of Texas, Inc. | Kent Saathoff | Affirmative | View |
| 10 | Florida Reliability Coordinating Council | Linda Campbell | Affirmative | |
| 10 | Midwest Reliability Organization | Dan R. Schoenecker | Abstain | |
| 10 | New York State Reliability Council | Alan Adamson | Affirmative | |
| 10 | Northeast Power Coordinating Council, Inc. | Guy V. Zito | Affirmative | |
| 10 | ReliabilityFirst Corporation | Jacque Smith | | |
| 10 | SERC Reliability Corporation | Carter B Edge | Affirmative | |
| 10 | Southwest Power Pool Regional Entity | Stacy Dochoda | | |

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Consideration of Comments on Initial Ballot — Project 2006-08 — Reliability Coordination — Transmission Loading Relief
Date of Initial Ballot: June 23, 2010 through July 6, 2010

Summary Consideration:

Entities suggested minor clarifications, corrections, and language changes that were accepted by the SDT.

- Some entities had concerns with the potential subjectivity of the requirement in IRO-006-5 Requirement R1 for a “valid” reason. The SDT agreed with their concerns, and eliminated the word “valid.”
- Several entities objected to the need to reissue TLR-1 each hour specified in IRO-006-EAST-1 Requirement R2. Upon further review of the current standard, as well as the current implementation of the Interchange Distribution Calculator (IDC), it was determined that such updates are not required for TLR-1. The phrase “with the exception of TLR-1, where an hourly update is not required” was added to the requirement.
- Some entities expressed concern that the list of TLR levels and conditions, which was moved into a supporting document, would be more appropriately included as an attachment or a requirement. Since the information does not actually represent any specific required action, the SDT believes it is more appropriate to maintain this information in a separate document. The SDT did add a footnote to assist entities in locating the information.

If you feel that the drafting team overlooked your comments, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herbert Schrayshuen, at 609-452-8060 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

| Voter | Entity | Segment | Vote | Comment |
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| Douglas E. Hils | Duke Energy Carolina | 1 | Affirmative | “For clarity, we recommend replacing the phrase “ICM procedure” with the phrase “Interconnection wide transmission loading relief procedure” in the Implementation Guideline TLR Levels Table.” |
| Response: Thank you. The change has been made. | | | | |

¹ The appeals process is in the Reliability Standards Development Procedure: http://www.nerc.com/files/RSDP_V6_1_12Mar07.pdf.

| Voter | Entity | Segment | Vote | Comment |
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| Kim Warren | Independent Electricity System Operator | 2 | Affirmative | <p>IRO-006-5, Requirement R1 We don't see the need for the word "valid" introduced in this 5th draft of IRO-006-5. It begs the question "Who will judge the validity of a reliability reason advanced by the RC or BA receiving the request, and not complying with it?" We don't believe the responsible entities would be "irresponsible" by offering "invalid" reasons. They will make a judgment at the moment the request is made, based on the information they have, studies they conduct and experience of their operators. The reliability reason they give should be complete enough (within the time and information constraints) to substantiate their decision. It is also open to speculation whether an auditor would come after the fact and assess whether or not the reasons advanced for a particular event in the past were valid. The requirement is for a "reason" which should be documented and which by definition should have some solid basis. One would not expect an entity to put forward a frivolous reason. We recommend removing "valid".</p> <p>Response: The SDT has eliminated to the use of the word "valid" as proposed.</p> <p>IRO-006-EAST-1, Requirement R2, Part 2.2 We believe there should be a URL or reference to the TLR Level Reference Document indicated in Section F of the standard. We propose inserting the following text immediately before the colon: "as defined in TLR Level Reference Document found at..."</p> <p>Response: Thank you. The SDT has clarified the reference in Section F, and added a footnote to Requirement R2, Part 2.2. However, we do not believe is appropriate to make direct reference to the document in R2, as this could be interpreted as incorporation of the reference into the requirement and then make the guideline mandatory and enforceable.</p> <p>IRO-006-EAST-1, Requirement R3, Part 3.3 We believe the reference should be to Requirement R2, Part 2.1 and not Part 2.2. The final line of M3 should also reflect this change.</p> <p>Response: Thank you. The correction has been made.</p> <p>IRO-006-EAST-1, Requirement R4 In R4 "communicated" is redundant and should be removed. The 4th bullet of R4 is an implied requirement to carry out an assessment and it is not clear that the RC is required to do this. For clarity we recommend making</p> |

| Voter | Entity | Segment | Vote | Comment |
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| | | | | <p>this requirement explicit. We propose the following alternative wording: Assess the congestion management actions communicated in Requirement R3, Part 3.3 to determine which if any will result in a reliability concern or will be ineffective and replace those specific actions with alternate congestion management actions, provided that:</p> <p>Response: Regarding the elimination of the redundant word "communicated," the word has been removed.</p> <p>Regarding the implied requirement to carry out an assessment: this standard does not require the assessment, but if the RC in its normal course of duties performs such an assessment and discovers a concern, the fourth bullet makes it clear that it may use that assessment as justification for alternate actions.</p> |
| <p>Response: Please see in-line responses.</p> | | | | |
| Kevin Query | FirstEnergy Solutions | 3 | Affirmative | No Comment |
| <p>Response: Thank you for your affirmative response.</p> | | | | |
| Michael Gammon | Kansas City Power & Light Co. | 1 | Affirmative | <p>Per IRO-EAST-1 R2, TLR 1 will have to be reissued every clock hour. Since there is no operational action required for TLR 1, this serves no reliability purpose and only provides the market with updates on the TLR 1 status. However because M2 does not distinguish whether the issuances were made for any particular TLR level, a reliability penalty can be applied for not reissuing a TLR1 for a market benefit. Although KCPL supports the changes to the IRO standards and understand benefits to the market of some of these changes, we see a disconnect from enforcing a requirement for a market benefit with a reliability sanction. In addition, transmission customers do not request hourly updates to TLR 1 status as may be the case in other regions where such information may be crucial. We believe the VSLs should be modified to reflect that only reissuance of TLR 2 and higher will be considered for compliance with IRO-EAST-1 R2.</p> |
| <p>Response: Upon further review of the current standard, as well as the current implementation of the IDC, it was determined that such updates are not required for TLR-1. The phrase "with the exception of TLR-1, where an hourly update is not required" was added to the requirement.</p> | | | | |
| Kent Saathoff | Electric Reliability Council of Texas, Inc. | 10 | Affirmative | <p>The addition of the word "valid" in regard to reliability reasons is not necessary and highly subject to individual and conflicting interpretations. It should be deleted.</p> |

| Voter | Entity | Segment | Vote | Comment |
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| Response: The SDT has eliminated to the use of the word "valid" as proposed. | | | | |
| Jason L. Murray | Alberta Electric System Operator | 2 | Affirmative | The term "valid reliability reason" does not clarify the standard, unless a list of valid reasons is developed. |
| Response: The SDT has eliminated to the use of the word "valid" as proposed. | | | | |
| Barry Green | Barry Green Consulting Inc. | 6 | Affirmative | The TLR process is of great concern to all Registered Entities. I, on behalf of the Electric Power Supply Association and its members am closely monitoring developments in the TLR process at FERC as well as changes to these standards, changes to the NAESB Business Practices and IDC changes being specified and implemented by the ORS and IDCWG. On-going coordination of the work in these various forums is critical. Although generally supportive of these standards, there is one question with respect to the deletion of Table 1 which provides "Examples of Possible System Conditions" previously contained in requirement R2.2 of IRO-006-EAST-1. I understand that the Table is now proposed to be included with the Implementation Guideline for RCs in the Eastern Interconnection. However, this information is to be used by RCs to identify (requirement R2.2) the appropriate TLR level and to notify (requirement R3.1) all RCs in the Eastern Interconnection of the identified level. And furthermore, this information will impact many registered entities conducting business in areas where TLRs have been called. Therefore I believe that it would be more appropriate that the Table either be part of the standard or an appendix to it. Doing so would insure that all registered entities impacted by TLRs would have ready access to this information. I recognize the need for flexibility for RCs to use discretion in selecting the appropriate TLR level based on the circumstances they are facing which may not precisely match any pre-identified criteria. However, the examples contained in the Table are still a useful reference for all, not just the RCs. |
| Response: The SDT does not believe that including the examples in a supporting document will preclude them from use by entities other than RCs. Not including this information in the standard or as an appendix clearly draws the line between what is required and what is not, and calling specific TLR levels based on specific conditions is not part of the requirement. The SDT will ask the SC for authorization to post the reference document with a link to the associated standard so that the information will be easy to locate. | | | | |
| Jack R. Cashin | Electric Power Supply Association | 5 | Affirmative | The Transmission Loading Relief (TLR) process is of great concern to the Electric Power Supply Association's (EPSA) members. EPSA is closely monitoring developments in the TLR process at the Federal Energy Regulatory Commission (FERC) as well as changes to these standards, changes in the NAESB Business Practices associated with |

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| | | | | TLR, and Interchange Distribution Calculator (IDC) changes being specified and implemented by the Operating Reliability Subcommittee (ORS) and IDC Working Group. Successfully changing the TLR process requires on-going coordination of the work in these various forums. Although EPSA is generally supportive of these standards, the one question that EPSA raises is with respect to the deletion of Table 1 which provides "Examples of Possible System Conditions" in requirement R2.2 of IRO-006-EAST-1. We understand that the Table is now proposed to be included with the Implementation Guideline for Reliability Coordinators (RCs) in the Eastern Interconnection. However, this information is to be used by RCs to identify (requirement R2.2) the appropriate TLR level and to notify (requirement R3.1) all RCs in the Eastern Interconnection of the identified level. Therefore we believe that it would be more appropriate that the Table either be part of the standard or an appendix to it. Doing so would also insure that other registered entities impacted by TLRs would have ready access to this information. We recognize the need for flexibility for RCs to use discretion in selecting the appropriate TLR level based on the circumstances they are facing which may not precisely match any pre-identified criteria. However, the examples contained in the Table are still a needed reference. |
| <p>Response: The SDT does not believe that including the examples in a supporting document will preclude them from use by entities other than RCs. Not including this information in the standard or as an appendix clearly draws the line between what is required and what is not, and calling specific TLR levels based on specific conditions is not part of the requirement. The SDT will ask the SC for authorization to post the reference document with a link to the associated standard so that the information will be easy to locate.</p> | | | | |
| Chuck B Manning | Electric Reliability Council of Texas, Inc. | 2 | Affirmative | The word "valid" is unnecessary |
| <p>Response: The SDT has eliminated to the use of the word "valid" as proposed.</p> | | | | |
| Terry Harbour | MidAmerican Energy Co. | 1 | Negative | Changes to IRO-006-East-1 now require TLR to be posted each hour. This unnecessarily increases compliance documentation without a corresponding system reliability benefit. |
| <p>Response: Upon further review of the current standard, as well as the current implementation of the IDC, it was determined that such updates are not required for TLR-1. The phrase "with the exception of TLR-1, where an hourly update is not required" was added to the requirement.</p> | | | | |
| Thomas C. Mielnik | MidAmerican Energy Co. | 3 | Negative | Changes would require TLR to be posted each hour. This unnecessarily increases documentation without a corresponding system reliability benefit. |
| <p>Response: Upon further review of the current standard, as well as the current implementation of the IDC, it was determined that such updates are not required for TLR-1. The phrase "with the exception of TLR-1, where an hourly update is not required" was added to the requirement.</p> | | | | |

| Voter | Entity | Segment | Vote | Comment |
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| David A. Lapinski | Consumers Energy | 3 | Negative | Consumers energy supports the comments of the Midwest ISO |
| Response: Please see responses to the Midwest ISO. | | | | |
| James B Lewis | Consumers Energy | 5 | Negative | Consumers Energy supports the comments of the Midwest ISO. |
| Response: Please see responses to the Midwest ISO. | | | | |
| Jim D. Cyrulewski | JDRJC Associates | 8 | Negative | For IRO-006 East Requirement R2 needs to be clarified on TLR 1 updates, R3.1 - R3.3 need to have IDC added, R4 and R3.3 seem inconsistent. |
| <p>Response: Upon further review of the current standard, as well as the current implementation of the IDC, it was determined that such updates are not required for TLR-1. The phrase "with the exception of TLR-1, where an hourly update is not required" was added to the requirement.</p> <p>Regarding R3, Parts 3.1 through 3.3, while the IDC may be used to comply with this standard, it is not the only way that entities can comply with the standard. The SDT has intentionally drafted the standard to be implementation neutral.</p> <p>Requirement R3, Part 3.3 addresses the initiating Reliability Coordinator asking the responding Reliability Coordinator(s) to take action. R4 addresses the Responding Coordinator(s) asking their Balancing Authorities to take action (or themselves taking alternate action if conditions so require). Note that Requirement R3, Part 3.3 incorrectly referenced Requirement R2, Part 2.2 – this has been corrected to reference Requirement R2, Part 2.1.</p> | | | | |
| David Frank Ronk | Consumers Energy | 4 | Negative | <p>I concur with the comments provided by the Midwest ISO where they said: We vote negative for the following reasons.</p> <p>1. We are concerned that unavailability or failure of the IDC could render an RC non-compliant with several requirements. Because the IDC is an efficient and effective tool for managing TLRs, RCs typically rely on the IDC to issue the "notification" (IRO-006-EAST-1 R3.1), "list of communication of actions" (IRO-006-EAST-1 R3.2) and "request for congestion management actions" (IRO-006-EAST-1 R3.3). Issuing and managing TLRs would be challenging without the IDC.</p> <p>Response: While the IDC may be used to comply with this standard, it is not the only way that entities can comply with the standard. The SDT has intentionally drafted the standard to be implementation neutral.</p> <p>2. As a result of the RCs reliance on the IDC for TLR management, we are further concerned about the retention of evidence from the IDC. IDC users can gather historical information from the IDC for any TLR that has been issued. However, it is</p> |

| Voter | Entity | Segment | Vote | Comment |
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| | | | | <p>not clear if an RC must duplicate the information contained in the IDC within their own databases to satisfy compliance auditors. What happens if the an RC relies on the evidence retention in the IDC and the IDC experiences a database failure. Would a compliance auditor be satisfied that the information is not available? Would the RC be held accountable for not being able to present the evidence?</p> <p>Response: This is not a deficiency in the standard, but a question between the responsible entity and any other entities with which they work to perform their duties. The SDT recommends that RCs discuss this internally and with any of their related vendors or partners.</p> <p>3. We are concerned that M4 in IRO-006-EAST-1 is not completely consistent with IRO-006-EAST-1 R4. While R4 allows the receiving RC to completely substitute alternative congestion management actions, M4 appears to inadvertently require some implementation of the original congestion management actions. The problem with the the measurement is the specific language after number 2. The clause "implementing some of the communicated congestion management actions requested by the issuing Reliability Coordinator, and replacing the remainder with" is problematic because we don't believe complete substitution of the original congestion management actions meets the definition of "some". In other words, we believe that none is not included in the definition of some.</p> <p>Response: Thank you. The SDT has added "none" to the measure to address this concern.</p> <p>4. We believe that IRO-006-EAST-1 R2 will render TLR level 1 ineffective and cause RCs to stop using it. R2 incorporates explicitly the need to re-issue TLR level 1 each hour. While previous versions of the standard referenced Attachment 1 which included a guideline to re-issue TLR level 1 each hour, there was no requirement to actually re-issue TLR level 1 every hour because the attachment was not and is not a requirement.</p> <p>Response: Upon further review of the current standard, as well as the current implementation of the IDC, it was determined that such updates are not required for TLR-1. The phrase "with the exception of TLR-1, where an hourly update is not required" was added to the requirement.</p> |

| Voter | Entity | Segment | Vote | Comment |
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| Response: Please see in-line responses. | | | | |
| Lawrence R. Larson | Otter Tail Power Company | 1 | Negative | Measure 4 should allow replacing all, not only some, of the original congestion management actions within the constraints of requirement 4. The standard needs to be clearer. |
| Response: Thank you. The word "none" has been added to the measure to address this concern. | | | | |
| Charles H Yeung | Southwest Power Pool | 2 | Negative | Per IRO-EAST-1 R2, TLR 1 will have to be reissued every clock hour. Since there is no operational action required for TLR 1, this serves no reliability purpose and its intent is only to provide the market with updates on the TLR 1 status. However because M2 does not distinguish whether the issuances were made for any particular TLR level, a reliability penalty can be applied for not reissuing a TLR1 for a market benefit. Although SPP supports the changes to the IRO standards and understand benefits to the market of these changes, we see a disconnect from enforcing a requirement for a market benefit through a reliability sanction. In addition, SPP's experience has been our transmission customers do not request hourly updates to TLR 1 status as may be the case in other regions where such information may be crucial. We believe the VSLs should be modified to reflect that only reissuance of TLR 2 and higher will be considered for compliance with IRO-EAST-1 R2. |
| Response: Upon further review of the current standard, as well as the current implementation of the IDC, it was determined that such updates are not required for TLR-1. The phrase "with the exception of TLR-1, where an hourly update is not required" was added to the requirement. The way the VSLs for R2 have been revised, it is clear that failure to provide an hourly update for TLR-1 is not a violation. | | | | |
| Charles Locke | Kansas City Power & Light Co. | 3 | Negative | Per IRO-EAST-1 R2, TLR 1 will have to be reissued every clock hour. Since there is no operational action required for TLR 1, this serves no reliability purpose and only provides the market with updates on the TLR 1 status. However because M2 does not distinguish whether the issuances were made for any particular TLR level, a reliability penalty can be applied for not reissuing a TLR1 for a market benefit. Although KCPL supports the changes to the IRO standards and understand benefits to the market of some of these changes, we see a disconnect from enforcing a requirement for a market benefit with a reliability sanction. In addition, transmission customers do not request hourly updates to TLR 1 status as may be the case in other regions where such information may be crucial. We believe the VSLs should be modified to reflect that only reissuance of TLR 2 and higher will be considered for compliance with IRO-EAST-1 R2. |
| Response: Upon further review of the current standard, as well as the current implementation of the IDC, it was determined that such updates are not required for TLR-1. The phrase "with the exception of TLR-1, where an hourly update is not required" was added to the requirement. The way the VSLs for R2 have been | | | | |

| Voter | Entity | Segment | Vote | Comment |
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| revised, it is clear that failure to provide an hourly update for TLR-1 is not a violation. | | | | |
| George T. Ballew | Tennessee Valley Authority | 5 | Negative | Per IRO-EAST-1 R2, TLR 1 will have to be reissued every clock hour. Since there is no operational action required for TLR 1, this serves no reliability purpose and only provides the market with updates on the TLR 1 status. However because M2 does not distinguish whether the issuances were made for any particular TLR level, a reliability penalty can be applied for not reissuing a TLR1 for a market benefit. Although TVA SPP supports the changes to the IRO standards and understand benefits to the market of some of these changes, we see a disconnect from enforcing a requirement for a market benefit with a reliability sanction. In addition, SPP's experience has been our transmission customers do not request hourly updates to TLR 1 status as may be the case in other regions where such information may be crucial. We believe the VSLs should be modified to reflect that only reissuance of TLR 2 and higher will be considered for compliance with IRO-EAST-1 R2. |
| Response: Upon further review of the current standard, as well as the current implementation of the IDC, it was determined that such updates are not required for TLR-1. The phrase "with the exception of TLR-1, where an hourly update is not required" was added to the requirement. The way the VSLs for R2 have been revised, it is clear that failure to provide an hourly update for TLR-1 is not a violation. | | | | |
| Thomas Saitta | Kansas City Power & Light Co. | 6 | Negative | Per IRO-EAST-1 R2, TLR 1 will have to be reissued every clock hour. Since there is no operational action required for TLR 1, this serves no reliability purpose and only provides the market with updates on the TLR 1 status. However because M2 does not distinguish whether the issuances were made for any particular TLR level, a reliability penalty can be applied for not reissuing a TLR1 for a market benefit. Although KCPL supports the changes to the IRO standards and understand benefits to the market of some of these changes, we see a disconnect from enforcing a requirement for a market benefit with a reliability sanction. In addition, transmission customers do not request hourly updates to TLR 1 status as may be the case in other regions where such information may be crucial. We believe the VSLs should be modified to reflect that only reissuance of TLR 2 and higher will be considered for compliance with IRO-EAST-1 R2. |
| Response: Upon further review of the current standard, as well as the current implementation of the IDC, it was determined that such updates are not required for TLR-1. The phrase "with the exception of TLR-1, where an hourly update is not required" was added to the requirement. The way the VSLs for R2 have been revised, it is clear that failure to provide an hourly update for TLR-1 is not a violation. | | | | |

| Voter | Entity | Segment | Vote | Comment |
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| Lee Schuster | Florida Power Corporation | 3 | Negative | <p>Progress is voting Negative on IRO-006-EAST-1 and proposes the following changes to IRO-006-EAST-1 to clarify and improve the standard, and to possibly correct an error.</p> <p>1) In the first bullet item of R1, add the words "of generation" so the bullet reads: "Inter-area redispatch of generation." This bullet item will then be consistent with the second bullet item. Response: Thank you. The suggested change has been made.</p> <p>2) In the last bullet item of R1, the use of the word "Involuntary" is not clear. All "load reductions" by their nature are involuntary, even DSM. A better word would be "Controlled". Response: Thank you. The suggested change has been made.</p> <p>3) NERC is proposing to revise R2 so that R2.1 will be a list of congestion management actions, and R2.2 will be a list of TLR levels. However, it appears that R3.3 would now also need to be revised. Should R3.3 refer to "Part 2.1" and not "Part 2.2"? Response: Thank you. A correction has been made to address this concern.</p> |
| Response: Please see in-line responses. | | | | |
| Wayne Lewis | Progress Energy Carolinas | 5 | Negative | <p>Progress is voting Negative on IRO-006-EAST-1 and proposes the following changes to IRO-006-EAST-1 to clarify and improve the standard, and to possibly correct an error.</p> <p>1) In the first bullet item of R1, add the words "of generation" so the bullet reads: "Inter-area redispatch of generation." This bullet item will then be consistent with the second bullet item. Response: Thank you. The suggested change has been made.</p> <p>2) In the last bullet item of R1, the use of the word "Involuntary" is not clear. All "load</p> |

| Voter | Entity | Segment | Vote | Comment |
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| | | | | <p>reductions" by their nature are involuntary, even DSM. A better word would be "Controlled".</p> <p>Response: Thank you. The suggested change has been made.</p> <p>3) NERC is proposing to revise R2 so that R2.1 will be a list of congestion management actions, and R2.2 will be a list of TLR levels. However, it appears that R3.3 would now also need to be revised. Should R3.3 refer to "Part 2.1" and not "Part 2.2"?</p> <p>Response: Thank you. A correction has been made to address this concern.</p> |
| <p>Response: Please see in-line responses.</p> | | | | |
| Charlie Martin | Louisville Gas and Electric Co. | 5 | Negative | <p>Proposed Comments on Project 2006-08 for Negative Vote Revised standard IRO-006 standard allows a responsible entity to provide "valid" reliability reasons when not complying with a TLR directive. The standard needs to identify those reasons that NERC believes are valid as well as the data required to support each reason. The standard should also identify the party responsible for determining whether the reason given for not complying with a TLR order is valid. E.ON U.S. suggests that the Regional Entity make that determination only after NERC and/or the Commission provide what each believes to be appropriate reasons to ignore a TLR order.</p> |
| <p>Response: The SDT believes that, given the diversity of conditions and configurations that may be seen during real-time operations, trying to identify a list of potential reasons for not complying would be extremely challenging. Like all other elements associated with verifying that compliance with the standard occurred, reasons will be evaluated by the Compliance Enforcement Authority. Note that due to concerns expressed by other commenters, the SDT has removed the word "valid" from the requirement.</p> | | | | |
| Charles A. Freibert | Louisville Gas and Electric Co. | 3 | Negative | <p>Revised standard IRO-006 standard allows a responsible entity to provide "valid" reliability reasons when not complying with a TLR directive. The standard needs to identify those reasons that NERC believes are valid as well as the data required to support each reason. The standard should also identify the party responsible for determining whether the reason given for not complying with a TLR order is valid. E.ON U.S. suggests that the Regional Entity make that determination only after NERC and/or the Commission provide what each believes to be appropriate reasons to ignore a TLR order.</p> |

| Voter | Entity | Segment | Vote | Comment |
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| <p>Response: The SDT believes that, given the diversity of conditions and configurations that may be seen during real-time operations, trying to identify a list of potential reasons for not complying would be extremely challenging. Like all other elements associated with verifying that compliance with the standard occurred, reasons will be evaluated by the Compliance Enforcement Authority. Note that due to concerns expressed by other commenters, the SDT has removed the word "valid" from the requirement.</p> | | | | |
| Daryn Barker | Louisville Gas and Electric Co. | 6 | Negative | <p>Revised standard IRO-006 standard allows a responsible entity to provide "valid" reliability reasons when not complying with a TLR directive. The standard needs to identify those reasons that NERC believes are valid as well as the data required to support each reason. The standard should also identify the party responsible for determining whether the reason given for not complying with a TLR order is valid. E.ON U.S. suggests that the Regional Entity make that determination only after NERC and/or the Commission provide what each believes to be appropriate reasons to ignore a TLR order.</p> |
| <p>Response: The SDT believes that, given the diversity of conditions and configurations that may be seen during real-time operations, trying to identify a list of potential reasons for not complying would be extremely challenging. Like all other elements associated with verifying that compliance with the standard occurred, reasons will be evaluated by the Compliance Enforcement Authority. Note that due to concerns expressed by other commenters, the SDT has removed the word "valid" from the requirement.</p> | | | | |
| Marjorie S. Parsons | Tennessee Valley Authority | 6 | Negative | <p>The proposed requirements for TLR 1 do not provide any added benefit to reliability and create an increased burden on the real time System operators.</p> |
| <p>Response: Upon further review of the current standard, as well as the current implementation of the IDC, it was determined that such updates are not required for TLR-1. The phrase "with the exception of TLR-1, where an hourly update is not required" was added to the requirement.</p> | | | | |
| Martin Bauer P.E. | U.S. Bureau of Reclamation | 5 | Negative | <p>The Standard indicated that if a RC or BA did not comply with request from RC, BA, or TOP of another interconnection, it must provide a "valid" reason. No indication is given concerning who determines validity or how validity is determined. The draft standard was modified to change the language concerning the reason of not acting on a request from "a" reliability reason to any "a valid" reliability reason. Without the clarification, the standard would not be enforceable as it pertains to requests for curtailment that were not acted on. Furthermore, the insertion of the term "valid" implies that an RC or BA would not be acting in the true interests of BES reliability by providing "invalid" reliability reasons for not providing loading relief.</p> |
| <p>Response: The SDT has eliminated to the use of the word "valid" as proposed.</p> | | | | |
| Jason L Marshall | Midwest ISO, Inc. | 2 | Negative | <p>We vote negative for the following reasons.</p> <ol style="list-style-type: none"> 1. As a result of the Reliability Coordinators' reliance on the IDC for TLR management, |

| Voter | Entity | Segment | Vote | Comment |
|-------|--------|---------|------|--|
| | | | | <p>we are concerned about the retention of evidence from the IDC. IDC users can gather historical information from the IDC for any TLR that has been issued. However, it is not clear if an RC must duplicate the information contained in the IDC within their own databases to satisfy compliance auditors. What happens if an RC relies on the evidence retention in the IDC and the IDC experiences a database failure? Would a compliance auditor be satisfied that the information is not available? Would the RC be held accountable for not being able to present the evidence?</p> <p>Response: While the IDC may be used to comply with this standard, it is not the only way that entities can comply with the standard. The SDT has intentionally drafted the standard to be implementation neutral.</p> <p>2. We are concerned that M4 in IRO-006-EAST-1 is not completely consistent with IRO-006-EAST-1 R4. While R4 allows the receiving RC to completely substitute alternative congestion management actions, M4 appears to inadvertently require some implementation of the original congestion management actions. The problem with the measurement is the specific language after number 2. The clause "implementing some of the communicated congestion management actions requested by the issuing Reliability Coordinator, and replacing the remainder with" is problematic because we don't believe complete substitution of the original congestion management actions meets the definition of "some". In other words, we believe that "none" is not included in the definition of "some".</p> <p>Response: Thank you. The word "none" has been added to the measure to address this concern.</p> <p>3. We believe that IRO-006-EAST-1 R2 will render TLR level 1 ineffective and cause RCs to stop using it. R2 incorporates explicitly the need to re-issue TLR level 1 each hour. While previous versions of the standard referenced Attachment 1 which included a guideline to re-issue TLR level 1 each hour, there was no requirement to actually re-issue TLR level 1 every hour because the attachment was not and is not a requirement.</p> <p>Response: Upon further review of the current standard, as well as the current implementation of the IDC, it was determined that such updates are not required for TLR-1. The phrase "with the exception of TLR-1, where an hourly update is not required" was added to the requirement.</p> |

| Voter | Entity | Segment | Vote | Comment |
|--|--------|---------|------|---------|
| Response: Please see in-line responses. | | | | |

| Non-binding Poll Name: | Project 2006-08 - Reliability Coordination - Transmission Loading Relief - Non-binding Poll for VRFs and VSLs | | | |
|--------------------------------|---|------------------------------|-------------|----------|
| Poll Period: | 6/23/2010 - 7/6/2010 | | | |
| Total # Opinions: | 198 | | | |
| Total Ballot Pool: | 247 | | | |
| Summary Results: | 80% of those who registered to participate provided an opinion; 86% of those who provided an opinion indicated support for the VRFs and VSLs that were proposed | | | |
| Individual Ballot Pool Results | | | | |
| Segment | Organization | Member | Opinion | Comments |
| 1 | Ameren Services | Kirit S. Shah | Abstain | |
| 1 | American Electric Power | Paul B. Johnson | Affirmative | |
| 1 | Avista Corp. | Scott Kinney | Abstain | |
| 1 | BC Transmission Corporation | Gordon Rawlings | Abstain | |
| 1 | Beaches Energy Services | Joseph S. Stonecipher | Affirmative | |
| 1 | Bonneville Power Administration | Donald S. Watkins | Abstain | |
| 1 | Central Maine Power Company | Brian Conroy | Affirmative | |
| 1 | City of Vero Beach | Randall McCamish | Affirmative | |
| 1 | Cleco Power LLC | Danny McDaniel | Affirmative | |
| 1 | Consolidated Edison Co. of New York | Christopher L de Graffenried | Abstain | |
| 1 | Dayton Power & Light Co. | Hertzel Shamash | Affirmative | |
| 1 | Dominion Virginia Power | John K Loftis | Abstain | |
| 1 | Duke Energy Carolina | Douglas E. Hils | Affirmative | |
| 1 | East Kentucky Power Coop. | George S. Carruba | Abstain | |
| 1 | Empire District Electric Co. | Ralph Frederick Meyer | Affirmative | |
| 1 | Entergy Corporation | George R. Bartlett | | |
| 1 | FirstEnergy Energy Delivery | Robert Martinko | Affirmative | |
| 1 | Florida Keys Electric Cooperative Assoc. | Dennis Minton | Negative | |
| 1 | Gainesville Regional Utilities | Luther E. Fair | Affirmative | |
| 1 | Georgia Transmission Corporation | Harold Taylor, II | Affirmative | |
| 1 | Great River Energy | Gordon Pietsch | Negative | |
| 1 | Hoosier Energy Rural Electric Cooperative, Inc. | Robert Solomon | | |
| 1 | Hydro One Networks, Inc. | Ajay Garg | | |
| 1 | ITC Transmission | Elizabeth Howell | Affirmative | |
| 1 | Kansas City Power & Light Co. | Michael Gammon | Negative | View |
| 1 | Keys Energy Services | Stan T. Rzad | Affirmative | |
| 1 | Lake Worth Utilities | Walt Gill | Affirmative | |
| 1 | Lakeland Electric | Larry E Watt | | |
| 1 | Lincoln Electric System | Doug Bantam | Abstain | |
| 1 | Manitoba Hydro | Michelle Rheault | Affirmative | |
| 1 | MEAG Power | Danny Dees | Affirmative | |
| 1 | MidAmerican Energy Co. | Terry Harbour | Abstain | |

| | | | | |
|---|---|---------------------------|-------------|----------------------|
| 1 | National Grid | Saurabh Saksena | Affirmative | |
| 1 | Nebraska Public Power District | Richard L. Koch | Abstain | |
| 1 | New York Power Authority | Arnold J. Schuff | Affirmative | |
| 1 | Northeast Utilities | David H. Boguslawski | Affirmative | |
| 1 | NorthWestern Energy | John Canavan | Abstain | |
| 1 | Ohio Valley Electric Corp. | Robert Matthey | Negative | |
| 1 | Oklahoma Gas and Electric Co. | Marvin E VanBebber | Affirmative | |
| 1 | Omaha Public Power District | Douglas G Peterchuck | Abstain | |
| 1 | Orlando Utilities Commission | Brad Chase | Affirmative | |
| 1 | Otter Tail Power Company | Lawrence R. Larson | Affirmative | |
| 1 | Pacific Gas and Electric Company | Chifong L. Thomas | Affirmative | |
| 1 | PacifiCorp | Mark Sampson | Abstain | |
| 1 | Portland General Electric Co. | Frank F. Afranji | | |
| 1 | Potomac Electric Power Co. | Richard J Kafka | Affirmative | |
| 1 | PowerSouth Energy Cooperative | Larry D. Avery | Negative | |
| 1 | PPL Electric Utilities Corp. | Brenda L Truhe | Affirmative | |
| 1 | Progress Energy Carolinas | Sammy Roberts | | |
| 1 | Public Service Company of New Mexico | Laurie Williams | | |
| 1 | Public Service Electric and Gas Co. | Kenneth D. Brown | Abstain | |
| 1 | Sacramento Municipal Utility District | Tim Kelley | Abstain | |
| 1 | Salt River Project | Robert Kondziolka | Abstain | |
| 1 | San Diego Gas & Electric | Linda Brown | Affirmative | |
| 1 | Santee Cooper | Terry L. Blackwell | Affirmative | |
| 1 | SCE&G | Henry Delk, Jr. | Affirmative | |
| 1 | Sierra Pacific Power Co. | Richard Salgo | | |
| 1 | Southern California Edison Co. | Dana Cabbell | Affirmative | |
| 1 | Southern Company Services, Inc. | Horace Stephen Williamson | Affirmative | |
| 1 | Southern Illinois Power Coop. | William G. Hutchison | Affirmative | |
| 1 | Southwest Transmission Cooperative, Inc. | James L. Jones | Affirmative | |
| 1 | Southwestern Power Administration | Gary W Cox | Affirmative | |
| 1 | Sunflower Electric Power Corporation | Noman Lee Williams | | |
| 1 | Tennessee Valley Authority | Larry Akens | | |
| 1 | Tri-State G & T Association Inc. | Keith V. Carman | Affirmative | |
| 1 | Tucson Electric Power Co. | John Tolo | | |
| 1 | United Illuminating Co. | Jonathan Appelbaum | Affirmative | |
| 1 | Westar Energy | Allen Klassen | Affirmative | |
| 1 | Western Area Power Administration | Brandy A Dunn | Affirmative | |
| 2 | Alberta Electric System Operator | Jason L. Murray | Abstain | |
| 2 | BC Transmission Corporation | Faramarz Amjadi | Affirmative | |
| 2 | California ISO | Timothy VanBlaricom | Abstain | |
| 2 | Electric Reliability Council of Texas, Inc. | Chuck B Manning | Affirmative | |
| 2 | Independent Electricity System Operator | Kim Warren | Affirmative | |
| 2 | ISO New England, Inc. | Kathleen Goodman | Abstain | |
| 2 | Midwest ISO, Inc. | Jason L Marshall | Negative | View |
| 2 | New Brunswick System Operator | Alden Briggs | Affirmative | |

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|---|--|------------------------------|-------------|----------------------|
| 2 | PJM Interconnection, L.L.C. | Tom Bowe | | |
| 2 | Southwest Power Pool | Charles H Yeung | Negative | View |
| 3 | Alabama Power Company | Richard J. Mandes | Affirmative | |
| 3 | Ameren Services | Mark Peters | Abstain | |
| 3 | American Electric Power | Raj Rana | Affirmative | View |
| 3 | Arizona Public Service Co. | Thomas R. Glock | | |
| 3 | Atlantic City Electric Company | James V. Petrella | Affirmative | |
| 3 | BC Hydro and Power Authority | Pat G. Harrington | Abstain | |
| 3 | Blue Ridge Power Agency | Duane S. Dahlquist | Affirmative | |
| 3 | Bonneville Power Administration | Rebecca Berdahl | Abstain | |
| 3 | Central Electric Cooperative, Inc. (Redmond, Oregon) | Dave Markham | | |
| 3 | City of Bartow, Florida | Matt Culverhouse | | |
| 3 | City of Clewiston | Lynne Mila | Affirmative | |
| 3 | City of Green Cove Springs | Gregg R Griffin | Abstain | |
| 3 | City of Leesburg | Phil Janik | Affirmative | |
| 3 | Cleco Utility Group | Bryan Y Harper | Affirmative | |
| 3 | Consolidated Edison Co. of New York | Peter T Yost | Abstain | |
| 3 | Consumers Energy | David A. Lapinski | Abstain | |
| 3 | Cowlitz County PUD | Russell A Noble | Affirmative | |
| 3 | Delmarva Power & Light Co. | Michael R. Mayer | Affirmative | |
| 3 | Detroit Edison Company | Kent Kujala | | |
| 3 | Dominion Resources Services | Michael F Gildea | Abstain | |
| 3 | Duke Energy Carolina | Henry Ernst-Jr | Affirmative | |
| 3 | East Kentucky Power Coop. | Sally Witt | Affirmative | |
| 3 | FirstEnergy Solutions | Kevin Querry | Affirmative | View |
| 3 | Florida Municipal Power Agency | Joe McKinney | | |
| 3 | Florida Power Corporation | Lee Schuster | Affirmative | |
| 3 | Gainesville Regional Utilities | Kenneth Simmons | Affirmative | |
| 3 | Georgia Power Company | Anthony L Wilson | Affirmative | |
| 3 | Georgia System Operations Corporation | R Scott S. Barfield-McGinnis | Affirmative | |
| 3 | Great River Energy | Sam Kokkinen | | |
| 3 | Gulf Power Company | Gwen S Frazier | Affirmative | |
| 3 | Hydro One Networks, Inc. | Michael D. Penstone | | |
| 3 | JEA | Garry Baker | | |
| 3 | Kansas City Power & Light Co. | Charles Locke | Negative | View |
| 3 | Kissimmee Utility Authority | Gregory David Woessner | Abstain | |
| 3 | Lakeland Electric | Mace Hunter | Affirmative | |
| 3 | Lincoln Electric System | Bruce Merrill | Abstain | |
| 3 | Louisville Gas and Electric Co. | Charles A. Freibert | | |
| 3 | Manitoba Hydro | Greg C Parent | Affirmative | |
| 3 | MEAG Power | Steven Grego | Affirmative | |
| 3 | MidAmerican Energy Co. | Thomas C. Mielnik | | |
| 3 | Mississippi Power | Don Horsley | Affirmative | |
| 3 | Municipal Electric Authority of Georgia | Steven M. Jackson | Affirmative | |
| 3 | New York Power Authority | Marilyn Brown | Negative | |
| 3 | Niagara Mohawk (National Grid | Michael Schiavone | Affirmative | |

| | Company) | | | |
|---|---|-----------------------|-------------|----------------------|
| 3 | Northern Indiana Public Service Co. | William SeDoris | Affirmative | |
| 3 | Orlando Utilities Commission | Ballard Keith Mutters | Abstain | |
| 3 | PacifiCorp | John Apperson | Abstain | |
| 3 | Platte River Power Authority | Terry L Baker | Affirmative | |
| 3 | Public Service Electric and Gas Co. | Jeffrey Mueller | Abstain | |
| 3 | Public Utility District No. 2 of Grant County | Greg Lange | | |
| 3 | Sacramento Municipal Utility District | James Leigh-Kendall | Abstain | |
| 3 | Salt River Project | John T. Underhill | Abstain | |
| 3 | Santee Cooper | Zack Dusenbury | Affirmative | |
| 3 | Southern California Edison Co. | David Schiada | Affirmative | |
| 3 | Wisconsin Electric Power Marketing | James R. Keller | | |
| 3 | Xcel Energy, Inc. | Michael Ibold | Abstain | |
| 4 | Alliant Energy Corp. Services, Inc. | Kenneth Goldsmith | Affirmative | |
| 4 | City of Clewiston | Kevin McCarthy | Affirmative | |
| 4 | City of New Smyrna Beach Utilities Commission | Timothy Beyrle | Affirmative | |
| 4 | Consumers Energy | David Frank Ronk | Abstain | |
| 4 | Detroit Edison Company | Daniel Herring | | |
| 4 | Florida Municipal Power Agency | Frank Gaffney | Affirmative | |
| 4 | Fort Pierce Utilities Authority | Thomas W. Richards | | |
| 4 | Georgia System Operations Corporation | Guy Andrews | Affirmative | |
| 4 | Madison Gas and Electric Co. | Joseph G. DePoorter | Abstain | |
| 4 | Ohio Edison Company | Douglas Hohlbaugh | Affirmative | |
| 4 | Sacramento Municipal Utility District | Mike Ramirez | Abstain | |
| 4 | Seminole Electric Cooperative, Inc. | Steven R Wallace | Abstain | |
| 4 | South Mississippi Electric Power Association | Steve McElhaney | Affirmative | |
| 4 | Tacoma Public Utilities | Keith Morisette | Abstain | |
| 4 | Wisconsin Energy Corp. | Anthony Jankowski | Affirmative | |
| 5 | AEP Service Corp. | Brock Ondayko | Affirmative | |
| 5 | Amerenue | Sam Dwyer | Abstain | |
| 5 | Avista Corp. | Edward F. Groce | Abstain | |
| 5 | Bonneville Power Administration | Francis J. Halpin | Abstain | |
| 5 | City of Tallahassee | Alan Gale | Abstain | |
| 5 | Conectiv Energy Supply, Inc. | Kara Dundas | | |
| 5 | Consolidated Edison Co. of New York | Wilket (Jack) Ng | Abstain | |
| 5 | Consumers Energy | James B Lewis | Negative | View |
| 5 | Detroit Edison Company | Christy Wicke | | |
| 5 | Dominion Resources, Inc. | Mike Garton | Abstain | |
| 5 | East Kentucky Power Coop. | Stephen Ricker | Abstain | |
| 5 | Electric Power Supply Association | Jack R. Cashin | | |
| 5 | Entergy Corporation | Stanley M Jaskot | Affirmative | |
| 5 | FirstEnergy Solutions | Kenneth Dresner | | |
| 5 | Florida Municipal Power Agency | David Schumann | Affirmative | |
| 5 | Great River Energy | Cynthia E Sulzer | | |
| 5 | Kissimmee Utility Authority | Mike Blough | Abstain | |

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|---|---|-----------------------|-------------|----------------------|
| 5 | Lakeland Electric | Thomas J Trickey | Affirmative | |
| 5 | Lincoln Electric System | Dennis Florom | Abstain | |
| 5 | Louisville Gas and Electric Co. | Charlie Martin | Negative | View |
| 5 | Manitoba Hydro | Mark Aikens | Affirmative | |
| 5 | Nebraska Public Power District | Jon Sunneberg | Abstain | |
| 5 | New York Power Authority | Gerald Mannarino | Affirmative | |
| 5 | Northern Indiana Public Service Co. | Michael K Wilkerson | Affirmative | |
| 5 | Otter Tail Power Company | Ward Uggerud | Affirmative | |
| 5 | PacifiCorp | Sandra L. Shaffer | Negative | |
| 5 | Portland General Electric Co. | Gary L Tingley | | |
| 5 | PowerSouth Energy Cooperative | Tim Hattaway | | |
| 5 | PPL Generation LLC | Mark A. Heimbach | Abstain | |
| 5 | Progress Energy Carolinas | Wayne Lewis | | |
| 5 | PSEG Power LLC | David Murray | Abstain | |
| 5 | Sacramento Municipal Utility District | Bethany Wright | Abstain | |
| 5 | Salt River Project | Glen Reeves | Abstain | |
| 5 | Seattle City Light | Michael J. Haynes | | |
| 5 | Seminole Electric Cooperative, Inc. | Brenda K. Atkins | | |
| 5 | South Carolina Electric & Gas Co. | Richard Jones | Affirmative | |
| 5 | Tenaska, Inc. | Scott M. Helyer | Abstain | |
| 5 | Tennessee Valley Authority | George T. Ballew | Negative | View |
| 5 | U.S. Army Corps of Engineers Northwestern Division | Karl Bryan | Affirmative | |
| 5 | U.S. Bureau of Reclamation | Martin Bauer P.E. | Negative | View |
| 5 | Wisconsin Electric Power Co. | Linda Horn | | |
| 5 | Wisconsin Public Service Corp. | Leonard Rentmeester | | |
| 5 | Xcel Energy, Inc. | Liam Noailles | Affirmative | |
| 6 | AEP Marketing | Edward P. Cox | Affirmative | View |
| 6 | Ameren Energy Marketing Co. | Jennifer Richardson | Abstain | |
| 6 | Barry Green Consulting Inc. | Barry Green | Abstain | |
| 6 | Bonneville Power Administration | Brenda S. Anderson | Abstain | |
| 6 | Cleco Power LLC | Matthew D Cripps | Affirmative | |
| 6 | Consolidated Edison Co. of New York | Nickesha P Carrol | Abstain | |
| 6 | Constellation Energy Commodities Group | Brenda Powell | | |
| 6 | Dominion Resources, Inc. | Louis S Slade | Abstain | |
| 6 | Entergy Services, Inc. | Terri F Benoit | Negative | |
| 6 | FirstEnergy Solutions | Mark S Travaglianti | Affirmative | |
| 6 | Florida Municipal Power Agency | Richard L. Montgomery | | |
| 6 | Florida Municipal Power Pool | Thomas E Washburn | Affirmative | |
| 6 | Florida Power & Light Co. | Silvia P Mitchell | | |
| 6 | Great River Energy | Donna Stephenson | | |
| 6 | Kansas City Power & Light Co. | Thomas Saitta | Negative | View |
| 6 | Lakeland Electric | Paul Shipps | Affirmative | |
| 6 | Lincoln Electric System | Eric Ruskamp | Abstain | |
| 6 | Louisville Gas and Electric Co. | Daryn Barker | | |
| 6 | Manitoba Hydro | Daniel Prowse | Affirmative | |
| 6 | New York Power Authority | Thomas Papadopoulos | Affirmative | |
| 6 | Northern Indiana Public Service Co. | Joseph O'Brien | Affirmative | |

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|----|--|------------------------------|-------------|----------------------|
| 6 | NRG Energy, Inc. | Alan R. Johnson | Abstain | |
| 6 | Omaha Public Power District | David Ried | Negative | |
| 6 | Progress Energy | James Eckelkamp | | |
| 6 | PSEG Energy Resources & Trade LLC | James D. Hebson | Abstain | |
| 6 | Public Utility District No. 1 of Chelan County | Hugh A. Owen | Abstain | |
| 6 | Salt River Project | Mike Hummel | Abstain | |
| 6 | Santee Cooper | Suzanne Ritter | Affirmative | |
| 6 | Seattle City Light | Dennis Sismaet | Abstain | |
| 6 | Seminole Electric Cooperative, Inc. | Trudy S. Novak | | |
| 6 | South Carolina Electric & Gas Co. | Matt H Bullard | Abstain | |
| 6 | Tennessee Valley Authority | Marjorie S. Parsons | Negative | View |
| 6 | Western Area Power Administration - UGP Marketing | John Stonebarger | Affirmative | |
| 6 | Xcel Energy, Inc. | David F. Lemmons | | |
| 8 | | Roger C Zaklukiewicz | Affirmative | |
| 8 | | James A Maenner | Affirmative | |
| 8 | JDRJC Associates | Jim D. Cyrulewski | Affirmative | |
| 8 | Power Energy Group LLC | Peggy Abbadini | Abstain | |
| 8 | Utility Services, Inc. | Brian Evans-Mongeon | Abstain | |
| 8 | Volkman Consulting, Inc. | Terry Volkman | Affirmative | |
| 9 | California Energy Commission | William Mitchell Chamberlain | Affirmative | |
| 9 | Commonwealth of Massachusetts Department of Public Utilities | Donald E. Nelson | Affirmative | |
| 9 | National Association of Regulatory Utility Commissioners | Diane J. Barney | Affirmative | |
| 9 | North Carolina Utilities Commission | Kimberly J. Jones | | |
| 9 | Oregon Public Utility Commission | Jerome Murray | Abstain | |
| 9 | Utah Public Service Commission | Ric Campbell | Affirmative | |
| 10 | Electric Reliability Council of Texas, Inc. | Kent Saathoff | Affirmative | |
| 10 | Florida Reliability Coordinating Council | Linda Campbell | Affirmative | |
| 10 | Midwest Reliability Organization | Dan R. Schoenecker | Abstain | |
| 10 | New York State Reliability Council | Alan Adamson | Affirmative | |
| 10 | Northeast Power Coordinating Council, Inc. | Guy V. Zito | Affirmative | |
| 10 | ReliabilityFirst Corporation | Jacque Smith | | |
| 10 | SERC Reliability Corporation | Carter B Edge | Abstain | |
| 10 | Southwest Power Pool Regional Entity | Stacy Dochoda | | |

**Consideration of Comments on Initial Ballot — Project 2006-08 — Reliability Coordination — Transmission Loading Relief
— Non-binding Poll for VRFs and VSLs**

Date of Initial Ballot: June 23, 2010 – July 6, 2010

Summary Consideration:

One entity suggested that the VSLs should be modified to have “pass/fail” requirements with VSLs other than “Severe.” To do so would be a violation of FERC’s VSL Guidelines (Guideline 2).

Some entities objected to the use of the word “valid” in the standards and the VSLs. The word has been removed.

Some entities objected to the obligation to reissue a TLR-1 every hour. The standard was modified to remove this obligation.

Two entities suggested that a violation of IRO-005-5 R1 should not have a “high” VRF, as they believe that the risk associated with being imbalanced across Interconnections is not significant enough to warrant the “high” designation. The team believes that the majority of the industry agrees with the drafting team that such risk does exist and is significant enough to qualify for assignment of a “high” VRF. An entity in another interconnection that does not curtail as requested will leave its interconnection unbalanced, which could contribute to BES instability, one of the key criteria for establishing a High VRF. Further, projects in the future may expand scheduling capabilities between Interconnections, making that risk even greater than it is today.

If you feel that the drafting team overlooked your comments, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herbert Schrayshuen, at 609-452-8060 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

| Voter | Entity | Segment | Vote | Comment |
|--|-------------------------|---------|-------------|---|
| Raj Rana | American Electric Power | 3 | Affirmative | AEP does not have a problem with the minor change to the VSL related to the change to the requirement. However, AEP does not agree with respect to a "pass/fail" VSL automatically be assigned to the "Severe" level. This is arbitrary assignment and it can be debated that any of the other VSL levels would be appropriate, preferably starting at the lower level. |
| Response: A Pass/Fail requirement has been established as requiring the assignment of a VSL of “Severe” as part of FERC VSL Guideline 2. At this point, VSLs must comply with the established FERC guidelines, including Guideline 2. | | | | |
| Edward P. Cox | AEP Marketing | 6 | Affirmative | AEP does not have a problem with the minor change to the VSL related to the change to the requirement. However, AEP does not agree with respect to a "pass/fail" VSL automatically be assigned to the "Severe" level. This is arbitrary assignment and it can be debated that any of the VSL levels would be appropriate. |

¹ The appeals process is in the Reliability Standards Development Procedure: http://www.nerc.com/files/RSDP_V6_1_12Mar07.pdf.

| Voter | Entity | Segment | Vote | Comment |
|--|-------------------------------|---------|-------------|---|
| Response: A Pass/Fail requirement has been established as requiring the assignment of a VSL of "Severe" as part of FERC VSL Guideline 2. At this point, VSLs must comply with the established FERC guidelines, including Guideline 2. | | | | |
| Kevin Query | FirstEnergy Solutions | 3 | Affirmative | No Comment |
| Martin Bauer P.E. | U.S. Bureau of Reclamation | 5 | Negative | For the reasons cited concerning the term "valid". In addition, the VSL's do not appear to be based on reliability impact. The VSL's should have a basis for impact on reliability and as such it would be expected to have moderate to lower levels if severity. |
| Response: The team has eliminated the word "valid" from the standard. Note that VSLs are not based on "impact to reliability;" the Violation Risk Factor serves this function. | | | | |
| Michael Gammon | Kansas City Power & Light Co. | 1 | Negative | Per IRO-EAST-1 R2, TLR 1 will have to be reissued every clock hour. Since there is no operational action required for TLR 1, this serves no reliability purpose and only provides the market with updates on the TLR 1 status. However because M2 does not distinguish whether the issuances were made for any particular TLR level, a reliability penalty can be applied for not reissuing a TLR1 for a market benefit. Although KCPL supports the changes to the IRO standards and understand benefits to the market of some of these changes, we see a disconnect from enforcing a requirement for a market benefit with a reliability sanction. In addition, transmission customers do not request hourly updates to TLR 1 status as may be the case in other regions where such information may be crucial. We believe the VSLs should be modified to reflect that only reissuance of TLR 2 and higher will be considered for compliance with IRO-EAST-1 R2. |
| Response: The standard has been modified as suggested. | | | | |
| Charles H Yeung | Southwest Power Pool | 2 | Negative | Per IRO-EAST-1 R2, TLR 1 will have to be reissued every clock hour. Since there is no operational action required for TLR 1, this serves no reliability purpose and its intent is only to provide the market with updates on the TLR 1 status. However because M2 does not distinguish whether the issuances were made for any particular TLR level, a reliability penalty can be applied for not reissuing a TLR1 for a market benefit. Although SPP supports the changes to the IRO standards and understand benefits to the market of these changes, we see a disconnect from enforcing a requirement for a market benefit through a reliability sanction. In addition, SPP's experience has been our transmission customers do not request hourly updates to TLR 1 status as may be the case in other regions where such information may be crucial. We believe the VSLs should be modified to reflect that only reissuance of TLR 2 and higher will be considered for compliance with IRO-EAST-1 R2. |
| Response: The standard has been modified as suggested. | | | | |

| Voter | Entity | Segment | Vote | Comment |
|---|-------------------------------|---------|----------|--|
| Charles Locke | Kansas City Power & Light Co. | 3 | Negative | Per IRO-EAST-1 R2, TLR 1 will have to be reissued every clock hour. Since there is no operational action required for TLR 1, this serves no reliability purpose and only provides the market with updates on the TLR 1 status. However because M2 does not distinguish whether the issuances were made for any particular TLR level, a reliability penalty can be applied for not reissuing a TLR1 for a market benefit. Although KCPL supports the changes to the IRO standards and understand benefits to the market of some of these changes, we see a disconnect from enforcing a requirement for a market benefit with a reliability sanction. In addition, transmission customers do not request hourly updates to TLR 1 status as may be the case in other regions where such information may be crucial. We believe the VSLs should be modified to reflect that only reissuance of TLR 2 and higher will be considered for compliance with IRO-EAST-1 R2. |
| Response: The standard has been modified as suggested. | | | | |
| George T. Ballew | Tennessee Valley Authority | 5 | Negative | Per IRO-EAST-1 R2, TLR 1 will have to be reissued every clock hour. Since there is no operational action required for TLR 1, this serves no reliability purpose and only provides the market with updates on the TLR 1 status. However because M2 does not distinguish whether the issuances were made for any particular TLR level, a reliability penalty can be applied for not reissuing a TLR1 for a market benefit. Although TVA SPP supports the changes to the IRO standards and understand benefits to the market of some of these changes, we see a disconnect from enforcing a requirement for a market benefit with a reliability sanction. In addition, SPP's experience has been our transmission customers do not request hourly updates to TLR 1 status as may be the case in other regions where such information may be crucial. We believe the VSLs should be modified to reflect that only reissuance of TLR 2 and higher will be considered for compliance with IRO-EAST-1 R2. |
| Response: The standard has been modified as suggested. | | | | |
| Thomas Saitta | Kansas City Power & Light Co. | 6 | Negative | Per IRO-EAST-1 R2, TLR 1 will have to be reissued every clock hour. Since there is no operational action required for TLR 1, this serves no reliability purpose and only provides the market with updates on the TLR 1 status. However because M2 does not distinguish whether the issuances were made for any particular TLR level, a reliability penalty can be applied for not reissuing a TLR1 for a market benefit. Although KCPL supports the changes to the IRO standards and understand benefits to the market of some of these changes, we see a disconnect from enforcing a requirement for a market benefit with a reliability sanction. In addition, transmission customers do not request hourly updates to TLR 1 status as may be the case in other regions where such information may be crucial. We believe the VSLs should be modified to reflect that only reissuance of TLR 2 and higher will be considered for compliance with IRO-EAST-1 R2. |

| Voter | Entity | Segment | Vote | Comment |
|--|---------------------------------|---------|----------|---|
| Response: The standard has been modified as suggested. | | | | |
| Charlie Martin | Louisville Gas and Electric Co. | 5 | Negative | Proposed Comments on Project 2006-08 for Negative Vote Revised standard IRO-006 standard allows a responsible entity to provide "valid" reliability reasons when not complying with a TLR directive. The standard needs to identify those reasons that NERC believes are valid as well as the data required to support each reason. The standard should also identify the party responsible for determining whether the reason given for not complying with a TLR order is valid. E.ON U.S. suggests that the Regional Entity make that determination only after NERC and/or the Commission provide what each believes to be appropriate reasons to ignore a TLR order. |
| Response: The team has eliminated the word "valid" from the standard. | | | | |
| James B Lewis | Consumers Energy | 5 | Negative | See the Midwest ISO comments. |
| Response: Please see Midwest ISO responses. | | | | |
| Marjorie S. Parsons | Tennessee Valley Authority | 6 | Negative | The proposed requirements for TLR 1 do not provide any added benefit to reliability and create an increased burden on the real time System operators. |
| Response: The standard has been modified to remove the requirement to reissue TLR 1 every hour. | | | | |
| Jason L Marshall | Midwest ISO, Inc. | 2 | Negative | We disagree with a High VRF for IRO-006-5 R1. It does not consider the physical capabilities of interchange between Interconnections. We do not believe scheduling capabilities between Interconnections are large enough for a significant volume of schedules to occur. Thus, curtailment of the schedules may have some minor impact on frequency but it is not large enough to cause directly BES instability solely from a violation of this requirement. |
| Response: Only 2 comments were received indicating concern with this VRF. The team believes that the majority of commenters agree with the drafting team that such risk does exist and warrants the "high" VRF assignment. An entity in another interconnection that does not curtail as requested will leave its Interconnection unbalanced, which could contribute to BES instability, one of the key criteria in establishing a High VRF. Further, projects in the future may expand scheduling capabilities between Interconnections, making that risk even greater than it is today. | | | | |

Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

1. SC authorized the SAR and assembled a drafting team on December 5, 2006.
2. The revisions to IRO-006 to transfer business practice content to NAESB were approved as IRO-006-4 by the Board of Trustees on October 23, 2007.
3. The SDT developed a first draft for industry consideration and posted it for comments from October 30, 2008 to December 1, 2008.
4. The SDT developed a second draft for industry consideration and posted it for comments from October 30, 2008 to December 1, 2008.
5. The SDT developed a third draft for industry consideration and posted it for comments from July 13, 2009 to August 13, 2009.
6. The SDT developed a fourth draft for industry consideration and posted it for comments from October 27, 2009 to November 30, 2009.
7. The SDT developed a fifth draft for industry consideration and posted it for initial ballot from June 23, 2010 to July 6, 2010.
8. The SDT has developed this sixth and final draft for industry consideration.

Proposed Action Plan and Description of Current Draft:

This is the sixth and final draft of the proposed standard. It is being posted for Recirculation Ballot.

Future Development Plan:

| Anticipated Actions | Anticipated Date |
|-----------------------|------------------|
| Respond to comments. | August 11, 2010 |
| Recirculation ballot. | August 20, 2010 |
| Board adoption. | November 3, 2010 |

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

A. Introduction

1. **Title:** Reliability Coordination — Transmission Loading Relief (TLR)
2. **Number:** IRO-006-5
3. **Purpose:** To ensure coordinated action between Interconnections when implementing Interconnection-wide transmission loading relief procedures to prevent or manage potential or actual SOL and IROL exceedances to maintain reliability of the bulk electric system.
4. **Applicability:**
 - 4.1. Reliability Coordinator.
 - 4.2. Balancing Authority.
5. **Proposed Effective Date:** First day of the first calendar quarter following the date this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter after the date this standard is approved by the NERC Board of Trustees.

B. Requirements

- R1. Each Reliability Coordinator and Balancing Authority that receives a request pursuant to an Interconnection-wide transmission loading relief procedure (such as Eastern Interconnection TLR, WECC Unscheduled Flow Mitigation, or congestion management procedures from the ERCOT Protocols) from any Reliability Coordinator, Balancing Authority, or Transmission Operator in another Interconnection to curtail an Interchange Transaction that crosses an Interconnection boundary shall comply with the request, unless it provides a ~~valid~~ reliability reason to the requestor ~~that~~why it cannot comply with the request. [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]

C. Measures

- M1. Each Reliability Coordinator and Balancing Authority shall provide evidence (such as dated logs, voice recordings, Tag histories, and studies, in electronic or hard copy format) that, when a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure was made from another Reliability Coordinator, Balancing Authority, or Transmission Operator in that other Interconnection, it complied with the request or provided a ~~valid~~ reliability reason ~~that~~why it could not comply with the request (R1).

D. Compliance

1. **Compliance Monitoring Process**
 - 1.1. **Compliance Enforcement Authority**

Regional Entity.

1.2. Compliance Monitoring and Enforcement Processes:

The following processes may be used:

- Compliance Audits
- Self-Certifications
- Spot Checking
- Compliance Violation Investigations
- Self-Reporting
- Complaints

1.3. Data Retention

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

- The Reliability Coordinator and Balancing Authority shall maintain evidence to show compliance with R1 for the most recent twelve calendar months plus the current month.
- If a Reliability Coordinator or Balancing Authority is found non-compliant, it shall keep information related to the non-compliance until found compliant or for the duration specified above, whichever is longer.

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

1.4. Additional Compliance Information

None.

Violation Severity Levels

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|----------|---|
| R1 | | | | <p>The responsible entity received a request to curtail an Interchange Transaction crossing an Interconnection boundary pursuant to an Interconnection-wide transmission loading relief procedure from a Reliability Coordinator, Balancing Authority, or Transmission Operator, but the entity neither complied with the request, nor provided a valid reliability reason why it could not comply with the request.</p> |

E. Variances

None.

F. Associated Documents

None.

G. Version History

| Version | Date | Action | Change Tracking |
|---------|-------------------|---|-----------------|
| 0 | April 1, 2005 | Effective Date | New |
| 0 | August 8, 2005 | Removed “Proposed” from Effective Date | Errata |
| 1 | August 8, 2005 | Revised Attachment 1 | Revision |
| 3 | February 26, 2007 | Revised Purpose and Attachment 1 related to NERC NAESB split of the TLR procedure | Revision |
| 4 | October 23, 2007 | Completed NERC/NAESB split | Revision |
| 5 | <u>TBD</u> | Removed Attachment 1 and made into a new standard, eliminated unnecessary requirements. | Revision |
| | | | |

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This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

~~**Reallocation:** The total or partial curtailment of Transactions during TLR Level 3a or 5a to allow Transactions using higher priority to be implemented. (To be retired.)~~

Market Flow: the total amount of power flowing across a specified Facility or set of Facilities due to a market dispatch of generation internal to the market to serve Load internal to the market.

A. Introduction

1. **Title: Transmission Loading Relief Procedure for the Eastern Interconnection**
2. **Number:** IRO-006-EAST-1
3. **Purpose:** To provide an Interconnection-wide transmission loading relief procedure (TLR) for the Eastern Interconnection that can be used to prevent and/or mitigate potential or actual System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) exceedances to maintain reliability of the Bulk Electric System (BES).
4. **Applicability:**
 - 4.1. Reliability Coordinators in the Eastern Interconnection.
5. **Proposed Effective Date:** First day of the first calendar quarter following the date this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the first calendar quarter after the date this standard is approved by the NERC Board of Trustees.

B. Requirements

R1. When acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T_V , each Reliability Coordinator shall initiate, prior to or concurrently with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated), one or more of the following actions: [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]

- Inter-area redispatch of generation
- Intra-area redispatch of generation
- Reconfiguration of the transmission system
- Voluntary load reductions (e.g., Demand-side Management)
- Involuntary Controlled load reductions (e.g., load shedding)

R2. ~~In order to~~To ensure operating entities are provided with information needed to maintain an awareness of changes to the Transmission System, when initiating the Eastern Interconnection TLR procedure to prevent or mitigate an SOL or IROL exceedance, and at least every clock hour (with the exception of TLR-1, where an hourly update is not required) after initiation up to and including the hour when the TLR level has been identified as TLR Level 0, the Reliability Coordinator shall identify: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]

2.1. A list of congestion management actions to be implemented, and

2.2. One of the following TLR levels: TLR-1, TLR-2, TLR-3A, TLR-3B, TLR-4, TLR-5A, TLR-5B, TLR-6, TLR-0¹

¹ For more information on TLR levels, please see “Implementation Guideline for Reliability Coordinators: Eastern Interconnection TLR Levels Reference Document.”

- R3.** Upon the identification of the TLR level and a list of congestion management actions to be implemented, the Reliability Coordinator initiating this TLR procedure shall: [*Violation Risk Factor: Medium*] [*Time Horizon: Real-time Operations*]
- 3.1.** Notify all Reliability Coordinators in the Eastern Interconnection of the identified TLR level
 - 3.2.** Communicate the list of congestion management actions to be implemented to 1.) all Reliability Coordinators in the Eastern Interconnection, and 2.) those Reliability Coordinators in other Interconnections responsible for curtailing Interchange Transactions crossing Interconnection boundaries identified in the list of congestion management actions.
 - 3.3.** Request that the congestion management actions identified in Requirement R2, Part 2.~~2~~1 be implemented by:
 - 1.) Each Reliability Coordinator associated with a Sink Balancing Authority for which Interchange Transactions are to be curtailed,
 - 2.) Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which Network Integration Transmission Service or Native Load is to be curtailed, and
 - 3.) Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which its Market Flow is to be curtailed.
- R4.** Each Reliability Coordinator that receives a request as described in Requirement R3, Part 3.3. shall, within 15 minutes of receiving the request, implement the ~~communicated~~ congestion management actions requested by the issuing Reliability Coordinator as follows: [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]
- Instruct its Balancing Authorities to implement the Interchange Transaction schedule change requests.
 - Instruct its Balancing Authorities to implement the Network Integration Transmission Service and Native Load schedule changes for which the Balancing Authorities are responsible.
 - Instruct its Balancing Authorities to implement the Market Flow schedule changes for which the Balancing Authorities are responsible.
 - If an assessment ~~determines~~shows that one or more of the congestion management actions communicated in Requirement R3, Part 3.3 will result in a reliability concern or will be ineffective, the Reliability Coordinator may replace those specific actions with alternate congestion management actions, provided that:
 - The alternate congestion management actions have been agreed to by the initiating Reliability Coordinator, and
 - ~~The Assessment~~assessment shows that the alternate congestion management actions will not adversely affect reliability.

C. Measures

- M1.** Each Reliability Coordinator shall provide evidence (such as dated logs, voice recordings, or other information in electronic or hard-copy format) that when acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL's T_v , the Reliability Coordinator initiated one or more of the actions listed in R1 prior to or concurrently with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated)(R1).
- M2.** Each Reliability Coordinator shall provide evidence (such as dated logs, voice recordings, or other information in electronic or hard-copy format) that at the time it initiated the Eastern Interconnection TLR procedure, and at least every clock hour after initiation up to and including the hour when the TLR level was identified as TLR Level 0, the Reliability Coordinator identified both the TLR Level and a list of congestion management actions to be implemented (R2).
- M3.** Each Reliability Coordinator shall provide evidence (such as dated logs, voice recordings, or other information in electronic or hard-copy format) that after it identified a TLR level and a list of congestion management actions to take, it 1.) notified all Reliability Coordinators in the Eastern Interconnection of the TLR Level, 2.) communicated the list of actions to all Reliability Coordinators in the Eastern Interconnection and those Reliability Coordinators in other Interconnections responsible for curtailing Interchange Transactions crossing Interconnection boundaries identified in the list of congestion management actions, and 3.) requested the Reliability Coordinators identified in Requirement R3 Part 3.2 to implement the congestion management actions identified in Requirement R2 Part 2.21 (R3).
- M4.** Each Reliability Coordinator shall provide evidence (such as dated logs, voice recordings, or other information in electronic or hard-copy format) that within fifteen minutes of the receipt of a request as described in R3, the Reliability Coordinator complied with the request by either 1.) implementing the communicated congestion management actions requested by the issuing Reliability Coordinator, or 2.) implementing **none or** some of the communicated congestion management actions requested by the issuing Reliability Coordinator, and replacing the remainder with alternate congestion management actions if assessment showed that some or all of the congestion management actions communicated in R3 would have resulted in a reliability concern or would have been ineffective, the alternate congestion management actions were agreed to by the initiating Reliability Coordinator, and assessment showed that the alternate congestion management actions would not adversely affect reliability (R4).

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity.

1.2. Compliance Monitoring and Enforcement Processes:

The following processes may be used:

- Compliance Audits
- Self-Certifications

- Spot Checking
- Compliance Violation Investigations
- Self-Reporting
- Complaints

1.3. Data Retention

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

- The Reliability Coordinator shall maintain evidence to show compliance with R1, R2, R3, and R4 for the past 12 months plus the current month.
- If a Reliability Coordinator is found non-compliant, it shall keep information related to the non-compliance until found compliant or for the duration specified above, whichever is longer.

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

1.4. Additional Compliance Information

None.

3. Violation Severity Levels

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|---|--|--|---|
| R1 | | | | When acting or instructing others to act to mitigate the magnitude and duration of the instance of exceeding an IROL within that IROL’s T _v , the Reliability Coordinator did not initiate one or more of the actions listed under R1 prior to or in conjunction with the initiation of the Eastern Interconnection TLR procedure (or continuing management of this procedure if already initiated). |
| R2 | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take <u>as specified by the requirement</u> for one clock hour during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take <u>as specified by the requirement</u> for two clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take <u>as specified by the requirement</u> for three clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. | The Reliability Coordinator initiating the Eastern Interconnection TLR procedure missed identifying the TLR Level and/or a list of congestion management actions to take <u>as specified by the requirement</u> for four or more clock hours during the period from initiation up to the hour when the TLR level was identified as TLR Level 0. |

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|---|--------------|---|---|
| R3 | The initiating Reliability Coordinator did not notify one or more Reliability Coordinators in the Eastern Interconnection of the TLR Level (3.1). | N/A | <p>The initiating Reliability Coordinator did not communicate the list of congestion management actions to one or more of the Reliability Coordinators listed in Requirement R3, Part 3.2.</p> <p>OR</p> <p>The initiating Reliability Coordinator requested some, but not all, of the Reliability Coordinators identified in Requirement R3, Part 3.3 to implement the identified congestion management actions.</p> | The initiating Reliability Coordinator requested none of the Reliability Coordinators identified in Requirement R3, Part 3.3 to implement the identified congestion management actions. |
| R4 | | | | The responding Reliability Coordinator did not, within 15 minutes of receiving a request, either 1.) implement all the requested congestion management actions, or 2.) implement <u>none or</u> some of the requested congestion management actions and replace the remainder with alternate congestion |

| R # | Lower VSL | Moderate VSL | High VSL | Severe VSL |
|-----|-----------|--------------|----------|---|
| | | | | <p>management actions, provided that: assessment showed that the actions replaced would have resulted in a reliability concern or would have been ineffective, the alternate congestion management actions were agreed to by the initiating Reliability Coordinator, and assessment determined that the alternate congestion management actions would not adversely affect reliability.</p> |

E. Variances

None.

F. Associated Documents

~~TLR Level~~ Implementation Guideline for Reliability Coordinators:
Eastern Interconnection TLR Levels Reference Document

G. Revision History

| Version | Date | Action | Tracking |
|---------|------|--|----------|
| 1 | | Creation of new standard, incorporating concepts from IRO-006-4 Attachment; elimination of Regional Differences, as the standard allows the use of Market Flow | New |

Implementation Plan for Standard IRO-006-5 (Reliability Coordination — Transmission Loading Relief (TLR)) and IRO-006-EI-1 (Loading Relief Procedure for the Eastern Interconnection)

Prerequisite Approvals

There are no other reliability standards or Standard Authorization Requests (SARs), approved or in progress, that must be implemented before these standards can be implemented.

Modified Definitions

The definition of “Reallocation” should be removed from the Glossary when IRO-006-5 and IRO-006-EI-1 become effective. The drafting team has verified that the term, “Reallocation” is not used in any other approved standard.

Modified Standards

IRO-006-4, and associated Attachment 1, should be retired when IRO-006-5 and IRO-006-EI-1 become effective.

The Regional Differences within IRO-006-4 should be retired when IRO-006-5 and IRO-006-EI-1 become effective.

Compliance with Standards

Once the standards become effective, the responsible entities identified in the applicability section of the standards must comply with the requirements. These include:

- Reliability Coordinators
- Balancing Authorities

Proposed Effective Date

The standards will become effective on the first day of the first calendar quarter after the date the standards are approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standards becomes effective on the first day of the first calendar quarter after the date the standards are approved by the NERC Board of Trustees.

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- Registered Ballot Body
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Ballot Results

| | |
|-------------------------------|--|
| Ballot Name: | Project 2006-08 - Reliability Coordination - Transmission Loading Relief _rc |
| Ballot Period: | 8/20/2010 - 8/30/2010 |
| Ballot Type: | recirculation |
| Total # Votes: | 218 |
| Total Ballot Pool: | 247 |
| Quorum: | 88.26 % The Quorum has been reached |
| Weighted Segment Vote: | 93.93 % |
| Ballot Results: | The Standard has Passed |

Summary of Ballot Results

| Segment | Ballot Pool | Segment Weight | Affirmative | | Negative | | Abstain # Votes | No Vote |
|------------------|-------------|----------------|-------------|--------------|-----------|--------------|-----------------|-----------|
| | | | # Votes | Fraction | # Votes | Fraction | | |
| 1 - Segment 1. | 69 | 1 | 48 | 0.941 | 3 | 0.059 | 11 | 7 |
| 2 - Segment 2. | 10 | 0.9 | 8 | 0.8 | 1 | 0.1 | 0 | 1 |
| 3 - Segment 3. | 56 | 1 | 36 | 0.9 | 4 | 0.1 | 7 | 9 |
| 4 - Segment 4. | 15 | 1 | 14 | 0.933 | 1 | 0.067 | 0 | 0 |
| 5 - Segment 5. | 43 | 1 | 28 | 0.966 | 1 | 0.034 | 9 | 5 |
| 6 - Segment 6. | 34 | 1 | 22 | 0.917 | 2 | 0.083 | 6 | 4 |
| 7 - Segment 7. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 - Segment 8. | 6 | 0.5 | 5 | 0.5 | 0 | 0 | 1 | 0 |
| 9 - Segment 9. | 6 | 0.4 | 4 | 0.4 | 0 | 0 | 1 | 1 |
| 10 - Segment 10. | 8 | 0.5 | 5 | 0.5 | 0 | 0 | 1 | 2 |
| Totals | 247 | 7.3 | 170 | 6.857 | 12 | 0.443 | 36 | 29 |

Individual Ballot Pool Results

| Segment | Organization | Member | Ballot | Comments |
|---------|---------------------------------|-----------------------|-------------|----------|
| 1 | Ameren Services | Kirit S. Shah | Affirmative | |
| 1 | American Electric Power | Paul B. Johnson | Affirmative | |
| 1 | Avista Corp. | Scott Kinney | Abstain | |
| 1 | BC Transmission Corporation | Gordon Rawlings | Affirmative | |
| 1 | Beaches Energy Services | Joseph S. Stonecipher | Affirmative | |
| 1 | Bonneville Power Administration | Donald S. Watkins | Abstain | |
| 1 | Central Maine Power Company | Brian Conroy | Affirmative | |

| | | | | |
|---|---|------------------------------|-------------|----------------------|
| 1 | City of Vero Beach | Randall McCamish | Affirmative | |
| 1 | Cleco Power LLC | Danny McDaniel | Affirmative | |
| 1 | Consolidated Edison Co. of New York | Christopher L de Graffenried | Affirmative | |
| 1 | Dayton Power & Light Co. | Hertzel Shamash | Affirmative | |
| 1 | Dominion Virginia Power | John K Loftis | Abstain | |
| 1 | Duke Energy Carolina | Douglas E. Hills | Affirmative | View |
| 1 | East Kentucky Power Coop. | George S. Carruba | Affirmative | |
| 1 | Empire District Electric Co. | Ralph Frederick Meyer | Affirmative | |
| 1 | Entergy Corporation | George R. Bartlett | | |
| 1 | FirstEnergy Energy Delivery | Robert Martinko | Affirmative | |
| 1 | Florida Keys Electric Cooperative Assoc. | Dennis Minton | Affirmative | |
| 1 | Gainesville Regional Utilities | Luther E. Fair | Affirmative | |
| 1 | Georgia Transmission Corporation | Harold Taylor, II | Affirmative | |
| 1 | Great River Energy | Gordon Pietsch | Negative | |
| 1 | Hoosier Energy Rural Electric Cooperative, Inc. | Robert Solomon | | |
| 1 | Hydro One Networks, Inc. | Ajay Garg | | |
| 1 | ITC Transmission | Elizabeth Howell | Affirmative | |
| 1 | Kansas City Power & Light Co. | Michael Gammon | Negative | View |
| 1 | Keys Energy Services | Stan T. Rzad | Affirmative | |
| 1 | Lake Worth Utilities | Walt Gill | Affirmative | |
| 1 | Lakeland Electric | Larry E Watt | | |
| 1 | Lincoln Electric System | Doug Bantam | Abstain | |
| 1 | Manitoba Hydro | Michelle Rheault | Affirmative | |
| 1 | MEAG Power | Danny Dees | Affirmative | |
| 1 | MidAmerican Energy Co. | Terry Harbour | Affirmative | |
| 1 | National Grid | Saurabh Saksena | Affirmative | |
| 1 | Nebraska Public Power District | Richard L. Koch | Abstain | |
| 1 | New York Power Authority | Arnold J. Schuff | Affirmative | |
| 1 | Northeast Utilities | David H. Boguslawski | Affirmative | |
| 1 | NorthWestern Energy | John Canavan | Abstain | |
| 1 | Ohio Valley Electric Corp. | Robert Matthey | Affirmative | |
| 1 | Oklahoma Gas and Electric Co. | Marvin E VanBebber | Affirmative | |
| 1 | Omaha Public Power District | Douglas G Peterchuck | Abstain | |
| 1 | Orlando Utilities Commission | Brad Chase | Affirmative | |
| 1 | Otter Tail Power Company | Lawrence R. Larson | Affirmative | |
| 1 | Pacific Gas and Electric Company | Chifong L. Thomas | Affirmative | |
| 1 | PacifiCorp | Mark Sampson | Abstain | |
| 1 | Portland General Electric Co. | Frank F. Afranji | Abstain | |
| 1 | Potomac Electric Power Co. | Richard J Kafka | Affirmative | |
| 1 | PowerSouth Energy Cooperative | Larry D. Avery | Negative | |
| 1 | PPL Electric Utilities Corp. | Brenda L Truhe | Affirmative | |
| 1 | Progress Energy Carolinas | Sammy Roberts | Affirmative | |
| 1 | Public Service Company of New Mexico | Laurie Williams | | |
| 1 | Public Service Electric and Gas Co. | Kenneth D. Brown | Affirmative | |
| 1 | Sacramento Municipal Utility District | Tim Kelley | Affirmative | |
| 1 | Salt River Project | Robert Kondziolka | Abstain | |
| 1 | San Diego Gas & Electric | Linda Brown | Affirmative | |
| 1 | Santee Cooper | Terry L. Blackwell | Affirmative | |
| 1 | SCE&G | Henry Delk, Jr. | Affirmative | |
| 1 | Sierra Pacific Power Co. | Richard Salgo | Abstain | |
| 1 | Southern California Edison Co. | Dana Cabbell | Affirmative | |
| 1 | Southern Company Services, Inc. | Horace Stephen Williamson | Affirmative | |
| 1 | Southern Illinois Power Coop. | William G. Hutchison | Affirmative | |
| 1 | Southwest Transmission Cooperative, Inc. | James L. Jones | Affirmative | |
| 1 | Southwestern Power Administration | Gary W Cox | Affirmative | |
| 1 | Sunflower Electric Power Corporation | Noman Lee Williams | | |
| 1 | Tennessee Valley Authority | Larry Akens | Affirmative | |
| 1 | Tri-State G & T Association, Inc. | Keith V. Carman | Affirmative | |
| 1 | Tucson Electric Power Co. | John Tolo | | |
| 1 | United Illuminating Co. | Jonathan Appelbaum | Affirmative | |
| 1 | Westar Energy | Allen Klassen | Affirmative | |
| 1 | Western Area Power Administration | Brandy A Dunn | Affirmative | |
| 2 | Alberta Electric System Operator | Jason L. Murray | Affirmative | View |
| 2 | BC Transmission Corporation | Faramarz Amjadi | Affirmative | |
| 2 | California ISO | Timothy VanBlaricom | Affirmative | |
| 2 | Electric Reliability Council of Texas, Inc. | Chuck B Manning | Affirmative | |

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|---|--|------------------------------|-------------|----------------------|
| 2 | Independent Electricity System Operator | Kim Warren | Affirmative | View |
| 2 | ISO New England, Inc. | Kathleen Goodman | Affirmative | |
| 2 | Midwest ISO, Inc. | Jason L Marshall | Affirmative | View |
| 2 | New Brunswick System Operator | Alden Briggs | Affirmative | |
| 2 | PJM Interconnection, L.L.C. | Tom Bowe | | |
| 2 | Southwest Power Pool | Charles H Yeung | Negative | View |
| 3 | Alabama Power Company | Richard J. Mandes | Affirmative | |
| 3 | Ameren Services | Mark Peters | Affirmative | |
| 3 | American Electric Power | Raj Rana | Affirmative | |
| 3 | Arizona Public Service Co. | Thomas R. Glock | | |
| 3 | Atlantic City Electric Company | James V. Petrella | Affirmative | |
| 3 | BC Hydro and Power Authority | Pat G. Harrington | Affirmative | |
| 3 | Blue Ridge Power Agency | Duane S. Dahlquist | Affirmative | |
| 3 | Bonneville Power Administration | Rebecca Berdahl | Abstain | |
| 3 | Central Electric Cooperative, Inc. (Redmond, Oregon) | Dave Markham | | |
| 3 | City of Bartow, Florida | Matt Culverhouse | | |
| 3 | City of Clewiston | Lynne Mila | Affirmative | |
| 3 | City of Green Cove Springs | Gregg R Griffin | Abstain | |
| 3 | City of Leesburg | Phil Janik | Affirmative | |
| 3 | Cleco Utility Group | Bryan Y Harper | Affirmative | |
| 3 | Consolidated Edison Co. of New York | Peter T Yost | Affirmative | |
| 3 | Consumers Energy | David A. Lapinski | Negative | View |
| 3 | Cowlitz County PUD | Russell A Noble | Affirmative | |
| 3 | Delmarva Power & Light Co. | Michael R. Mayer | Affirmative | |
| 3 | Detroit Edison Company | Kent Kujala | | |
| 3 | Dominion Resources Services | Michael F Gildea | Abstain | |
| 3 | Duke Energy Carolina | Henry Ernst-Jr | Affirmative | |
| 3 | East Kentucky Power Coop. | Sally Witt | Affirmative | |
| 3 | FirstEnergy Solutions | Kevin Querry | Affirmative | View |
| 3 | Florida Municipal Power Agency | Joe McKinney | | |
| 3 | Florida Power Corporation | Lee Schuster | Affirmative | |
| 3 | Gainesville Regional Utilities | Kenneth Simmons | Affirmative | |
| 3 | Georgia Power Company | Anthony L Wilson | Affirmative | |
| 3 | Georgia System Operations Corporation | R Scott S. Barfield-McGinnis | Affirmative | |
| 3 | Great River Energy | Sam Kokkinen | | |
| 3 | Gulf Power Company | Gwen S Frazier | Affirmative | |
| 3 | Hydro One Networks, Inc. | Michael D. Penstone | | |
| 3 | JEA | Garry Baker | | |
| 3 | Kansas City Power & Light Co. | Charles Locke | Negative | View |
| 3 | Kissimmee Utility Authority | Gregory David Woessner | Affirmative | |
| 3 | Lakeland Electric | Mace Hunter | Negative | |
| 3 | Lincoln Electric System | Bruce Merrill | Abstain | |
| 3 | Louisville Gas and Electric Co. | Charles A. Freibert | Affirmative | |
| 3 | Manitoba Hydro | Greg C Parent | Affirmative | |
| 3 | MEAG Power | Steven Grego | Affirmative | |
| 3 | MidAmerican Energy Co. | Thomas C. Mielnik | Negative | View |
| 3 | Mississippi Power | Don Horsley | Affirmative | |
| 3 | Municipal Electric Authority of Georgia | Steven M. Jackson | Affirmative | |
| 3 | New York Power Authority | Marilyn Brown | Affirmative | |
| 3 | Niagara Mohawk (National Grid Company) | Michael Schiavone | Affirmative | |
| 3 | Northern Indiana Public Service Co. | William SeDoris | Affirmative | |
| 3 | Orlando Utilities Commission | Ballard Keith Mutters | Affirmative | |
| 3 | PacifiCorp | John Apperson | Abstain | |
| 3 | Platte River Power Authority | Terry L Baker | Affirmative | |
| 3 | Public Service Electric and Gas Co. | Jeffrey Mueller | Affirmative | |
| 3 | Public Utility District No. 2 of Grant County | Greg Lange | | |
| 3 | Sacramento Municipal Utility District | James Leigh-Kendall | Affirmative | |
| 3 | Salt River Project | John T. Underhill | Abstain | |
| 3 | Santee Cooper | Zack Dusenbury | Affirmative | |
| 3 | Southern California Edison Co. | David Schiada | Affirmative | |
| 3 | Wisconsin Electric Power Marketing | James R. Keller | Abstain | |
| 3 | Xcel Energy, Inc. | Michael Ibold | Affirmative | |
| 4 | Alliant Energy Corp. Services, Inc. | Kenneth Goldsmith | Affirmative | |
| 4 | City of Clewiston | Kevin McCarthy | Affirmative | |
| 4 | City of New Smyrna Beach Utilities Commission | Timothy Beyrle | Affirmative | |

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|---|--|-----------------------|-------------|----------------------|
| 4 | Consumers Energy | David Frank Ronk | Negative | View |
| 4 | Detroit Edison Company | Daniel Herring | Affirmative | |
| 4 | Florida Municipal Power Agency | Frank Gaffney | Affirmative | |
| 4 | Fort Pierce Utilities Authority | Thomas W. Richards | Affirmative | |
| 4 | Georgia System Operations Corporation | Guy Andrews | Affirmative | |
| 4 | Madison Gas and Electric Co. | Joseph G. DePoorter | Affirmative | |
| 4 | Ohio Edison Company | Douglas Hohlbaugh | Affirmative | |
| 4 | Sacramento Municipal Utility District | Mike Ramirez | Affirmative | |
| 4 | Seminole Electric Cooperative, Inc. | Steven R Wallace | Affirmative | |
| 4 | South Mississippi Electric Power Association | Steve McElhane | Affirmative | |
| 4 | Tacoma Public Utilities | Keith Morisette | Affirmative | |
| 4 | Wisconsin Energy Corp. | Anthony Jankowski | Affirmative | |
| 5 | AEP Service Corp. | Brock Ondayko | Affirmative | |
| 5 | Amerenue | Sam Dwyer | Affirmative | |
| 5 | Avista Corp. | Edward F. Groce | Abstain | |
| 5 | Bonneville Power Administration | Francis J. Halpin | Abstain | |
| 5 | City of Tallahassee | Alan Gale | Affirmative | |
| 5 | Conectiv Energy Supply, Inc. | Kara Dundas | | |
| 5 | Consolidated Edison Co. of New York | Wilket (Jack) Ng | Affirmative | |
| 5 | Consumers Energy | James B Lewis | Negative | View |
| 5 | Detroit Edison Company | Christy Wicke | Affirmative | |
| 5 | Dominion Resources, Inc. | Mike Garton | Abstain | |
| 5 | East Kentucky Power Coop. | Stephen Ricker | Affirmative | |
| 5 | Electric Power Supply Association | Jack R. Cashin | Affirmative | View |
| 5 | Entergy Corporation | Stanley M Jaskot | Affirmative | |
| 5 | FirstEnergy Solutions | Kenneth Dresner | Affirmative | |
| 5 | Florida Municipal Power Agency | David Schumann | Affirmative | |
| 5 | Great River Energy | Cynthia E Sulzer | | |
| 5 | Kissimmee Utility Authority | Mike Blough | Affirmative | |
| 5 | Lakeland Electric | Thomas J Trickey | Affirmative | |
| 5 | Lincoln Electric System | Dennis Florom | Abstain | |
| 5 | Louisville Gas and Electric Co. | Charlie Martin | Affirmative | |
| 5 | Manitoba Hydro | Mark Aikens | Affirmative | |
| 5 | Nebraska Public Power District | Jon Sunneberg | Abstain | |
| 5 | New York Power Authority | Gerald Mannarino | Affirmative | |
| 5 | Northern Indiana Public Service Co. | Michael K Wilkerson | Affirmative | |
| 5 | Otter Tail Power Company | Ward Uggerud | Affirmative | |
| 5 | PacifiCorp | Sandra L. Shaffer | Abstain | |
| 5 | Portland General Electric Co. | Gary L Tingley | | |
| 5 | PowerSouth Energy Cooperative | Tim Hattaway | Affirmative | |
| 5 | PPL Generation LLC | Mark A Heimbach | Affirmative | |
| 5 | Progress Energy Carolinas | Wayne Lewis | Affirmative | View |
| 5 | PSEG Power LLC | David Murray | Affirmative | |
| 5 | Sacramento Municipal Utility District | Bethany Wright | Affirmative | |
| 5 | Salt River Project | Glen Reeves | Abstain | |
| 5 | Seattle City Light | Michael J. Haynes | | |
| 5 | Seminole Electric Cooperative, Inc. | Brenda K. Atkins | Affirmative | |
| 5 | South Carolina Electric & Gas Co. | Richard Jones | Affirmative | |
| 5 | Tenaska, Inc. | Scott M. Helyer | Abstain | |
| 5 | Tennessee Valley Authority | George T. Ballew | Affirmative | |
| 5 | U.S. Army Corps of Engineers Northwestern Division | Karl Bryan | Affirmative | |
| 5 | U.S. Bureau of Reclamation | Martin Bauer P.E. | Affirmative | View |
| 5 | Wisconsin Electric Power Co. | Linda Horn | Abstain | |
| 5 | Wisconsin Public Service Corp. | Leonard Rentmeester | | |
| 5 | Xcel Energy, Inc. | Liam Noailles | Affirmative | |
| 6 | AEP Marketing | Edward P. Cox | Affirmative | |
| 6 | Ameren Energy Marketing Co. | Jennifer Richardson | Affirmative | |
| 6 | Barry Green Consulting Inc. | Barry Green | Affirmative | View |
| 6 | Bonneville Power Administration | Brenda S. Anderson | Abstain | |
| 6 | Cleco Power LLC | Matthew D Cripps | Affirmative | |
| 6 | Consolidated Edison Co. of New York | Nickesha P Carrol | Affirmative | |
| 6 | Constellation Energy Commodities Group | Brenda Powell | Affirmative | |
| 6 | Dominion Resources, Inc. | Louis S Slade | Abstain | |
| 6 | Entergy Services, Inc. | Terri F Benoit | Negative | |
| 6 | FirstEnergy Solutions | Mark S Travaglianti | Affirmative | |
| 6 | Florida Municipal Power Agency | Richard L. Montgomery | | |

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|----|--|------------------------------|-------------|----------------------|
| 6 | Florida Municipal Power Pool | Thomas E Washburn | Affirmative | |
| 6 | Florida Power & Light Co. | Silvia P Mitchell | | |
| 6 | Great River Energy | Donna Stephenson | | |
| 6 | Kansas City Power & Light Co. | Thomas Saitta | Negative | View |
| 6 | Lakeland Electric | Paul Shipps | Affirmative | |
| 6 | Lincoln Electric System | Eric Ruskamp | Abstain | |
| 6 | Louisville Gas and Electric Co. | Daryn Barker | Affirmative | |
| 6 | Manitoba Hydro | Daniel Prowse | Affirmative | |
| 6 | New York Power Authority | Thomas Papadopoulos | Affirmative | |
| 6 | Northern Indiana Public Service Co. | Joseph O'Brien | Affirmative | |
| 6 | NRG Energy, Inc. | Alan R. Johnson | Affirmative | |
| 6 | Omaha Public Power District | David Ried | Affirmative | |
| 6 | Progress Energy | James Eckelkamp | Affirmative | |
| 6 | PSEG Energy Resources & Trade LLC | James D. Hebson | Affirmative | |
| 6 | Public Utility District No. 1 of Chelan County | Hugh A. Owen | Abstain | |
| 6 | Salt River Project | Mike Hummel | Abstain | |
| 6 | Santee Cooper | Suzanne Ritter | Affirmative | |
| 6 | Seattle City Light | Dennis Sismaet | Abstain | |
| 6 | Seminole Electric Cooperative, Inc. | Trudy S. Novak | Affirmative | |
| 6 | South Carolina Electric & Gas Co. | Matt H Bullard | Affirmative | |
| 6 | Tennessee Valley Authority | Marjorie S. Parsons | Affirmative | |
| 6 | Western Area Power Administration - UGP Marketing | John Stonebarger | Affirmative | |
| 6 | Xcel Energy, Inc. | David F. Lemmons | | |
| 8 | | Roger C Zaklukiewicz | Affirmative | |
| 8 | | James A Maenner | Affirmative | |
| 8 | JDRJC Associates | Jim D. Cyrulewski | Affirmative | |
| 8 | Power Energy Group LLC | Peggy Abbadini | Affirmative | |
| 8 | Utility Services, Inc. | Brian Evans-Mongeon | Abstain | |
| 8 | Volkman Consulting, Inc. | Terry Volkman | Affirmative | |
| 9 | California Energy Commission | William Mitchell Chamberlain | Affirmative | |
| 9 | Commonwealth of Massachusetts Department of Public Utilities | Donald E. Nelson | Affirmative | |
| 9 | National Association of Regulatory Utility Commissioners | Diane J. Barney | Affirmative | |
| 9 | North Carolina Utilities Commission | Kimberly J. Jones | | |
| 9 | Oregon Public Utility Commission | Jerome Murray | Abstain | |
| 9 | Utah Public Service Commission | Ric Campbell | Affirmative | |
| 10 | Electric Reliability Council of Texas, Inc. | Kent Saathoff | Affirmative | View |
| 10 | Florida Reliability Coordinating Council | Linda Campbell | Affirmative | |
| 10 | Midwest Reliability Organization | Dan R. Schoenecker | Abstain | |
| 10 | New York State Reliability Council | Alan Adamson | Affirmative | |
| 10 | Northeast Power Coordinating Council, Inc. | Guy V. Zito | Affirmative | |
| 10 | ReliabilityFirst Corporation | Jacque Smith | | |
| 10 | SERC Reliability Corporation | Carter B Edge | Affirmative | |
| 10 | Southwest Power Pool Regional Entity | Stacy Dochoda | | |

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