

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Description of Current Draft

This version of Reliability Standard IRO-006-EAST is posted for a 45-day concurrent comment and ballot period to address the recommendations of the Project 2012-09 Interconnected Reliability Operations Five-Year Review Team. That review resulted in a recommended drafting effort, which is being conducted by the Project 2015-06 Interconnection Reliability Operations and Coordination standard drafting team.

Completed Actions	Date
Standards Committee approved Standard Authorization Request (SAR) for posting	March 11, 2015
SAR posted for comment	March 16 – April 15, 2015

Anticipated Actions	Anticipated Dates
45-day formal or informal comment period with ballot	May – July 2015
Final ballot	July 2015
NERC Board (Board) adoption	November 2015

New or Modified Term(s) Used in NERC Reliability Standards

This section includes all new or modified terms used in the proposed standard that will be included in the *Glossary of Terms Used in NERC Reliability Standards* upon applicable regulatory approval. Terms used in the proposed standard that are already defined and are not being modified can be found in the *Glossary of Terms Used in NERC Reliability Standards*. The new or revised terms listed below will be presented for approval with the proposed standard. Upon Board adoption, this section will be removed.

Term(s): None.

Standard IRO-006-EAST-~~4~~2 — TLR Procedure for the Eastern Interconnection

The rationale boxes will be moved to the Supplemental Material Section of the standard after the standard is adopted by the NERC Board of Trustees.

A. Introduction

1. **Title: Transmission Loading Relief Procedure for the Eastern Interconnection**
2. **Number:** IRO-006-EAST-~~4~~2
3. **Purpose:** To ensure coordinated action between Reliability Coordinators within the Eastern provide an-Interconnection-wide when implementing transmission loading relief procedures (TLR) for the Eastern Interconnection ~~that can be used~~ to prevent ~~and/or~~ mitigate-manage 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:** See the Implementation Plan for IRO-006-EAST-2.~~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

Rationale for recommendation to retire Requirement R1: The standard drafting team (IRO SDT) agrees with the FYRT's assertion that IRO-006-EAST-1 Requirement R1 is redundant with IRO-008-1, Requirement R3, and IRO-009-1, Requirement R4, and that the requirements in IRO-008-1 and IRO-009-1 are results based and specify a reliability objective to be achieved. The IRO SDT further agrees with the FYRT's conclusion that IRO-006-EAST-1 Requirement R1 simply provides a list of actions to be taken without any parameters for their use.

~~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, 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)~~

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- ~~Controlled load reductions (e.g., load shedding)~~
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Rationale for revisions to new Requirement R1 (previously Requirement R2): The IRO SDT provided edits to improve clarity and to incorporate and simplify the sub-requirements into the main requirement.

R12. ~~Each Reliability Coordinator that initiates~~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, ~~shall~~ identify the TLR level and the congestion management actions to be implemented, and shall update this information 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 0.¹, ~~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~~
~~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

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

¹ For more information on TLR levels, please see “Implementation Guideline for Reliability Coordinators: Eastern Interconnection TLR Levels Reference Document.”
Approved by the Board of Trustees on November 4, 2010

Rationale for recommendation to retire Requirement R3: The IRO SDT agrees with the FYRT's determination that the intent of Requirement R3 is not to define a curtailment process when the IDC is compromised or unavailable. In the event of an IDC failure, TLR action would be very limited resulting in manual curtailments and other manual actions to preserve the reliability of the Bulk Electric System. The IRO SDT further agrees with the FYRT's assertion that Requirement R3 contains actions that are automatically generated via the IDC tool and sent to proper entities upon issuance of the TLR. This requirement should be removed from the standard, as it meets Paragraph 81 Criterion B1 – Administrative.

- ~~**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.~~

Rationale for Revisions to new Requirement R2 (previously Requirement R4): The IRO SDT provided edits to improve clarity and to incorporate and simplify some of the bullets into the main requirement, and modified the remaining bullet to be a requirement instead of a passive statement.

- R42.** Each Reliability Coordinator with a Sink Balancing Authority that must implement congestion management actions pursuant to the Eastern

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~~Interconnection TLR procedure that receives a request as described in Requirement R3, Part 3.3. shall instruct the Sink Balancing Authority to implement the congestion management actions, within 15 minutes of receiving the request, implement the congestion management actions requested by from the issuing Reliability Coordinator, subject to the following exception: 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.~~
- Should 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 with a Sink Balancing Authority shall coordinate alternate congestion management actions with the issuing Reliability Coordinator ~~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.~~

Measures

~~C. 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).~~

M21. 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 in accordance with Requirement R1(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).~~

M42. Each Reliability Coordinator with a Sink Balancing Authority that must implement congestion management actions pursuant to the Eastern Interconnection TLR procedure 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-) instructing the Sink Balancing Authority to implement the congestion management actions~~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 requested 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 in accordance with Requirement R2(R4).

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority:

“Compliance Enforcement Authority” means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with mandatory and enforceable Reliability Standards in their respective jurisdictions.

1.2. Evidence Retention:

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

The applicable entity 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.

For Requirement R1 and Requirement R2, the Reliability Coordinator shall maintain evidence to show compliance with Requirement R1 and Requirement R2 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.

1.3. Compliance Monitoring and Enforcement Program

As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated Reliability Standard.

1.4. Additional Compliance Information

None.

~~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				<p>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).</p>

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<p><u>R21</u></p>	<p>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.</p>	<p>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.</p>	<p>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.</p>	<p>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.</p>
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R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R42				<p>The responding Reliability Coordinator did not, within 15 minutes of receiving a request, either 1-) <u>instruct the Sink Balancing Authority to</u> implement all the requested congestion management actions, or 2-) implement none or some of the requested congestion management actions and replace the remainder with <u>coordinate</u> alternate</p>

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
				<p><u>congestion</u> management actions <u>with the issuing Reliability Coordinator</u>, 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~~ Version 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
<u>1</u>		<u>Adopted by NERC Board of Trustees</u>	<u>November 4, 2010</u>
<u>2</u>			<u>Revised to address the recommendations of the Project 2012-09 Interconnected Reliability Operations Five-Year Review Team.</u>
1	April 21, 2011	FERC Order issued approving IRO-006-EAST-1 (approval effective June 27, 2011)	

Standard Attachments

Implementation Guideline for Reliability Coordinators: Eastern Interconnection TLR Levels

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.

Table 1: Eastern Interconnection TLR Levels

<u>Level</u>	<u>Examples of Possible System Conditions</u>
<u>TLR-1</u>	<ul style="list-style-type: none"> • <u>At least one Transmission Facility is expected to approach or exceed its SOL or IROL within 8 hours.</u>
<u>TLR-2</u>	<ul style="list-style-type: none"> • <u>At least one Transmission Facility is approaching or is at its SOL or IROL.</u> <ul style="list-style-type: none"> ○ <u>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.</u>
<u>TLR-3a</u>	<ul style="list-style-type: none"> • <u>At least one Transmission Facility is expected to exceed its SOL or IROL within the next hour.</u> <ul style="list-style-type: none"> ○ <u>Analysis shows that full or partial curtailment or reallocation² of non- firm Interchange Transactions and energy flows can prevent exceeding this SOL and IROL.</u>
<u>TLR-3b</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 within the current hour.</u> <ul style="list-style-type: none"> ○ <u>Analysis shows that full or partial curtailment or reallocation² of non- firm Interchange Transactions and energy flows can prevent exceeding this SOL or IROLs.</u>
<u>TLR-4</u>	<ul style="list-style-type: none"> • <u>At least one Transmission Facility is expected to exceed its SOL or IROL.</u> <ul style="list-style-type: none"> ○ <u>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.</u>
<u>TLR-5a</u>	<ul style="list-style-type: none"> • <u>At least one Transmission Facility is expected to exceed its SOL or IROL within the next hour.</u> <ul style="list-style-type: none"> ○ <u>Analysis shows that the following actions can prevent exceeding the SOL or IROL:</u> <ul style="list-style-type: none"> ▪ <u>Full curtailment non-firm Interchange Transactions and energy flows, and</u> ▪ <u>Reconfiguration of the transmission system, if possible, and</u> ▪ <u>Full or partial curtailment or reallocation² of firm Interchange Transactions and energy flows.</u>

² "Reallocation" is a term defined within the NAESB TLR standards.

<u>Level</u>	<u>Examples of Possible System Conditions</u>
<u>TLR-5b</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 within the current hour.</u> <ul style="list-style-type: none"> ◦ <u>Analysis shows that the following actions can prevent exceeding the SOL or IROL:</u> <ul style="list-style-type: none"> ▪ <u>Full curtailment of non-firm Interchange Transactions and energy flows, and</u> ▪ <u>Reconfiguration of the transmission system, if possible; and</u> ▪ <u>Full or partial curtailment or reallocation² of firm Interchange Transactions 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>
<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 Interconnection-wide transmission loading relief procedure may be terminated</u>

*** FOR INFORMATIONAL PURPOSES ONLY ***

Enforcement Dates: Standard IRO-006-EAST-1 — Transmission Loading Relief Procedure for the Eastern Interconnection

United States

Standard	Requirement	Enforcement Date	Inactive Date
IRO-006-EAST-1	All	07/01/2011	