

Project 2015-06 – Interconnection Reliability Operations and Coordination

Mapping Document | Updated May 2015

This mapping document shows the translation of Requirements in the following currently-enforceable standards to revised standards developed in Project 2015-06:

- IRO-006-EAST-1 — Transmission Loading Relief Procedure for the Eastern Interconnection
- IRO-009-1 — Reliability Coordinator Actions to Operate Within IROLs - Responsibilities and Authorities

Standard IRO-006-EAST-1 — Transmission Loading Relief Procedure for the Eastern Interconnection	
Requirement in Approved Standard	Proposed Language in New Standard or Comment
<p>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:</p> <ul style="list-style-type: none"> • 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) 	<p>Standard IRO-006-EAST-2 — Transmission Loading Relief Procedure for the Eastern Interconnection</p> <p>Rationale for recommendation to retire Requirement R1: <i>The IRO 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 Five Year Review Team’s (FYRT) conclusion that IRO-006-EAST-1 Requirement R1 simply provides a list of actions to be taken without any parameters for their use.</i></p>
<p>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</p>	<p>Standard IRO-006-EAST-2 — Transmission Loading Relief Procedure for the Eastern Interconnection</p> <p>R1. Each Reliability Coordinator that initiates 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 (except TLR-1) after initiation up to and including the hour when the TLR level has been identified as TLR Level 0.¹</p>

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

Requirement in Approved Standard	Proposed Language in New Standard or Comment
<p>identified as TLR Level 0, the Reliability Coordinator shall identify:</p> <ul style="list-style-type: none"> 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 	<hr/> <p>¹ For more information on TLR levels, please see “Implementation Guideline for Reliability Coordinators: Eastern Interconnection TLR Levels Reference Document.”</p> <p><i>Rationale for revisions to new Requirement R1 (previously Requirement R2):</i> The IRO SDT provided edits to improve clarity and to incorporate and simplify the sub-requirements into the main requirement.</p>
<p>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:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 1.) Each Reliability Coordinator associated with a Sink Balancing Authority for which Interchange Transactions are to be curtailed, 	<p>Standard IRO-006-EAST-2 — Transmission Loading Relief Procedure for the Eastern Interconnection</p> <p><i>Rationale for recommendation to retire Requirement R3:</i> The IRO SDT agrees with the FYRT’s determination that the intent of Requirement R3 is not to define a curtailment process when the Interchange Distribution Calculator (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.¹</p>

¹ Paragraph 81 Criteria available at: http://www.nerc.com/pa/Stand/Project%20200812%20Coordinate%20Interchange%20Standards%20DL/Paragraph_81_Criteria.pdf.

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

Requirement in Approved Standard	Proposed Language in New Standard or Comment
<p>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</p> <p>3.) Each Reliability Coordinator associated with a Balancing Authority in the Eastern Interconnection for which its Market Flow is to be curtailed.</p>	
<p>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:</p> <ul style="list-style-type: none"> • 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: 	<p align="center">Standard IRO-006-EAST-2 — Transmission Loading Relief Procedure for the Eastern Interconnection</p> <p>R2. Each Reliability Coordinator with a Sink Balancing Authority that must implement congestion management actions pursuant to the Eastern Interconnection TLR procedure shall instruct the Sink Balancing Authority to implement the congestion management actions within 15 minutes of receiving the request from the issuing Reliability Coordinator, subject to the following exception:</p> <ul style="list-style-type: none"> • Should an assessment determine that one or more of the congestion management actions communicated 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. <p><i>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.</i></p>

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

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<ul style="list-style-type: none">• 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.	

Standard IRO-009-1 — Reliability Coordinator Actions to Operate Within IROLs - Responsibilities and Authorities

Requirement in Approved Standard	Proposed Language in New Standard or Comment
<p>R1. For each IROL (in its Reliability Coordinator Area) that the Reliability Coordinator identifies one or more days prior to the current day, the Reliability Coordinator shall have one or more Operating Processes, Procedures, or Plans that identify actions it shall take or actions it shall direct others to take (up to and including load shedding) that can be implemented in time to prevent exceeding those IROLs.</p>	<p>Standard IRO-009-2 — Reliability Coordinator Actions to Operate Within IROLs - Responsibilities and Authorities</p> <p>R1. For each IROL (in its Reliability Coordinator Area) that the Reliability Coordinator identifies one or more days prior to the current day, the Reliability Coordinator shall have one or more Operating Processes, Procedures, or Plans that identify actions the Reliability Coordinator shall take or actions the Reliability Coordinator shall direct others to take (up to and including load shedding):</p> <p>1.1 That can be implemented in time to prevent the identified IROL exceedance.</p> <p>1.2 To mitigate the magnitude and duration of an IROL exceedance such that the IROL is relieved within the IROL’s Tv.</p>
<p>R2. For each IROL (in its Reliability Coordinator Area) that the Reliability Coordinator identifies one or more days prior to the current day, the Reliability Coordinator shall have one or more Operating Processes, Procedures, or Plans that identify actions it shall take or actions it shall direct others to take (up to and including load shedding) to mitigate the magnitude and duration of exceeding that IROL such that the IROL is relieved within the IROL’s Tv.</p>	<p>Standard IRO-009-2 — Reliability Coordinator Actions to Operate Within IROLs - Responsibilities and Authorities</p> <p>Rationale for revisions to this Requirement (previously Requirement R2): <i>The IRO SDT revised this requirement by combining IRO-009-1 Requirements R1 and R2 to form one requirement, Requirement R1, with two subparts to make the requirements more concise, as both requirements contained similar language.</i></p>
<p>R3. When an assessment of actual or expected system conditions predicts that an IROL in its Reliability Coordinator Area will be exceeded, the Reliability Coordinator shall implement one or more Operating Processes, Procedures or Plans (not limited to the Operating Processes, Procedures, or Plans developed for Requirements R1) to prevent exceeding that IROL.</p>	<p>Standard IRO-009-2 — Reliability Coordinator Actions to Operate Within IROLs - Responsibilities and Authorities</p> <p>R2. Each Reliability Coordinator shall initiate one or more Operating Processes, Procedures, or Plans (not limited to the Operating Processes, Procedures, or Plans developed for Requirement R1) that are intended to prevent an IROL exceedance, as identified in the Reliability Coordinator’s Real-time monitoring or Real-time Assessment.</p> <p>Rationale for revisions to new Requirement R2 (previously Requirement R3): <i>The IRO SDT revised the language of this requirement to improve clarity as well as consistency with similar</i></p>

Standard IRO-009-1 — Reliability Coordinator Actions to Operate Within IROLs - Responsibilities and Authorities

Requirement in Approved Standard	Proposed Language in New Standard or Comment
	<p><i>NERC Board of Trustees (Board) approved standards, such as, TOP standard revisions (TOP-001-3 R14); "IROL exceedance," "Real Time monitoring," and "Real Time Assessments."</i></p>
<p>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.</p>	<p>Standard IRO-009-2 — Reliability Coordinator Actions to Operate Within IROLs - Responsibilities and Authorities</p> <p>R3. Each Reliability Coordinator shall act or direct others to act so that the magnitude and duration of an IROL exceedance is mitigated within the IROL's Tv, as identified in the Reliability Coordinator's Real-time monitoring or Real-time Assessment.</p> <p>Rationale for Revisions to Requirement R3 (previously Requirement R4): <i>The IRO SDT removed the term "without delay" from the requirement upon determining that the point of time at which the requirement is triggered is inherent in the requirement itself. The IRO SDT also revised the language of this requirement to improve clarity as well as consistency with similar Board approved standards, such as, TOP standard revisions (TOP-001-3 R14); "IROL exceedance," "Real Time monitoring," and "Real Time Assessments."</i></p>
<p>R5. If unanimity cannot be reached on the value for an IROL or its Tv, each Reliability Coordinator that monitors that Facility (or group of Facilities) shall, without delay, use the most conservative of the values (the value with the least impact on reliability) under consideration.</p>	<p>Standard IRO-009-2 — Reliability Coordinator Actions to Operate Within IROLs - Responsibilities and Authorities</p> <p>R4. Each Reliability Coordinator shall operate to the most limiting IROL and Tv in instances where there is a difference in an IROL or its Tv between Reliability Coordinators that are responsible for that Facility (or group of Facilities).</p> <p>Rationale for revisions to Requirement R4 (previously Requirement R5): <i>The IRO SDT revised the language of this requirement for clarity as well as consistency with similar Board approved standards, such as TOP standard revisions (TOP-001-3 R18). The IRO SDT retained clarifying language to limit applicability to appropriate affected RCs.</i></p>