

### 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. SAR version 1 posted on May 15, 2007.
2. SAR version 1 comment period closed on June 13, 2007.
3. SAR version 2 posted on August 7, 2007.
4. SAR version 2 comment period closed on September 7, 2007.
5. SAR approved by SC on November 1, 2007.
6. First posting of revised standards on October 7, 2008.
7. Second posting of revised standards on April 7, 2009.

#### Proposed Action Plan and Description of Current Draft:

The SDT began meeting in January 2008 following the approval of the SAR by the SC. The schedule shows completion of the project in 4Q09. The current draft is the second posting of the revised standards. As part of the proposed revisions, TOP-004-2, TOP-005-1, TOP-006-1, TOP-007-0, and TOP-008-0, and PER-001-0 will be retired. The requirements in those standards have been eliminated or moved to other standards within this project. Some changes made in this project are dependent on corresponding changes to Project 2006-06, Reliability Coordination, being approved.

#### Future Development Plan:

Anticipated Actions	Anticipated Date
1. Post for ballot.	September 2009
2. Post for re-ballot.	November 2009
3. Submit to BOT.	December 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.*

**There are no new or revised definitions proposed in this standard revision.**

## A. Introduction

1. **Title:** Coordination of Transmission Operations
2. **Number:** TOP-001-2
3. **Purpose:** To ensure coordination between and among reliability entities for the reliability of the Bulk Electric System (BES).
4. **Applicability**
  - 4.1. Balancing Authorities
  - 4.2. Transmission Operators
  - 4.3. Generator Operators
  - 4.4. Distribution Providers
  - 4.5. Load-Serving Entities
5. **Effective Date:** All requirements become effective the first day of the first calendar quarter twenty-four months following applicable regulatory approval. In those jurisdictions where no regulatory approval is required, the requirements become effective the first day of the first calendar quarter twenty-four months following Board of Trustees adoption.

## B. Requirements

- R1.** Each Balancing Authority, Distribution Provider, Load-Serving Entity, and Generator Operator shall comply with each Reliability Directive issued by the Transmission Operator, unless the respective entity informs the Transmission Operator that such actions would violate safety, equipment, regulatory, or statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Operations Planning, Same-day Operations, Real-Time Operations]*
- R2.** Each Transmission Operator shall inform its Reliability Coordinator and other Transmission Operators known or expected to be affected of actual Emergency and anticipated Emergency conditions. *[Violation Risk Factor: High] [Time Horizon: Same-day Operations, Real-Time Operations]*
- R3.** Each Transmission Operator shall render emergency assistance to other Transmission Operators, as requested and available, provided that the requesting entity has implemented its comparable emergency procedures unless such actions would violate safety, equipment, regulatory, or statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Real-Time Operations]*
- R4.** Each Transmission Operator and Generator Operator shall coordinate its respective operations known or expected by the Transmission Operator to have a reliability impact on other reliability entities with those entities unless conditions do not permit such coordination. Such operations include, but are not limited to, relay or equipment failures and changes in generation, Transmission, Load, or operating conditions. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-day Operations, Real-Time Operations]*

- R5.** Each Transmission Operator shall operate within each identified Interconnection Reliability Operating Limit (IROL) and its associated IROL  $T_v$ . [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]
- R6.** Each Transmission Operator shall inform its Reliability Coordinator of all System Operating Limits (SOLs) which, while not IROLs, support its local area reliability. [*Violation Risk Factor: Medium*] [*Time Horizon: Real-Time Operations*]
- R7.** Each Transmission Operator shall inform its Reliability Coordinator of actions being taken to return the system to within limits when an IROL, or SOL as identified in Requirement R6, has been exceeded. [*Violation Risk Factor: Medium*] [*Time Horizon: Real-Time Operations*]
- R8.** Each Transmission Operator shall act or direct others to act, to mitigate the magnitude and duration of exceeding an IROL within the IROL's  $T_v$ . [*Violation Risk Factor: High*] [*Time Horizon: Real-time Operations*]

**C. Measures**

- M1.** Each Balancing Authority, Distribution Provider, Load-Serving Entity, and Generator Operator shall each make available upon request, in accordance with Requirement R1, evidence that it either: (a) complied with each Reliability Directive issued by the Transmission Operator or, (b) informed the Transmission Operator that such actions would violate safety, equipment, regulatory, or statutory requirements. Such evidence could include, but is not limited to, dated operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence in electronic or hard copy format.
- M2.** Each Transmission Operator shall make available upon request, evidence that it has informed its Reliability Coordinator and affected Transmission Operators of actual Emergency and anticipated Emergency conditions in accordance with Requirement R2. Such evidence could include, but is not limited to, dated operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence in electronic or hard copy format.
- M3.** Each Transmission Operator shall make available upon request, evidence that requested and available emergency assistance was rendered to other Transmission Operators in accordance with Requirement R3 unless such actions would violate safety, equipment, regulatory, or statutory requirements. Such evidence could include, but is not limited to, dated operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence in electronic or hard copy format.
- M4.** Each Transmission Operator and Generator Operator shall each make available upon request, evidence that operations were coordinated among impacted reliability entities in accordance with Requirement R4 unless conditions do not permit such coordination. Such evidence could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence.
- M5.** Each Transmission Operator shall make available evidence for any occasion in which it has operated outside an identified Interconnection Reliability Operating Limit (IROL)

and its associated IROL  $T_v$  as specified in Requirement R5. Such evidence could include but is not limited to dated computer logs or reports in electronic or hard copy format specifying the date, time, duration, and details of the excursion outside of the identified IROL and applicable IROL  $T_v$ .

- M6.** Each Transmission Operator shall make available evidence that it has informed its Reliability Coordinator of all SOLs which, while not IROLs, support its local area reliability in accordance with Requirement R6. Such evidence could include but is not limited to dated operator logs, voice recordings or transcripts of voice recordings, or dated computer printouts.
- M7.** Each Transmission Operator shall make available evidence that it has informed its Reliability Coordinator of actions being taken to return the system to within limits when an IROL, or SOL as identified in Requirement R6, has been exceeded in accordance with Requirement R7. Such evidence could include but is not limited to dated operator logs, voice recordings or transcripts of voice recordings, or dated computer printouts.
- M8.** Each Transmission Operator shall make available evidence of when it acted or directed others to mitigate the magnitude and duration of exceeding an IROL within the IROL's  $T_v$  in accordance with Requirement R8. Such evidence could include but is not limited to dated operator logs, voice recordings or transcripts of voice recordings, or dated computer printouts.

## **D. Compliance**

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

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

Regional Entity

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

Not applicable.

#### **1.3. Compliance Monitoring and Enforcement Processes**

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

#### **1.4. Data Retention**

Each Balancing Authority, Transmission Operator, Distribution Provider, Load-Serving Entity, and Generator Operator shall each keep data or evidence to show compliance for each applicable Requirement R1 through R4 and R6 through R8 and Measure M1 through M4 and M6 through M8 for the current calendar year and one previous calendar year unless directed by its Compliance Enforcement

Authority to retain specific evidence for a longer period of time as part of an investigation.

Each Transmission Operator shall retain evidence for three calendar years of any occasion in which it has operated outside an identified IROL and its associated IROL T<sub>v</sub> as specified in Requirement R5 and Measurement M5.

If a Balancing Authority, Transmission Operator, Distribution Provider, Load-Serving Entity, or Generator 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.

**1.5. Additional Compliance Information**

None.

2. Violation Severity Levels

	Lower	Moderate	High	Severe
<b>R1</b>	N/A	N/A	N/A	The responsible entity did not comply with a Reliability Directive issued by the Transmission Operator, and the respective entity did not inform the Transmission Operator that such action would violate safety, equipment, regulatory, or statutory requirements.
<b>R2</b>	The Transmission Operator did not inform one other Transmission Operator of an actual Emergency or anticipated Emergency conditions.	The Transmission Operator did not inform two other Transmission Operators of an actual Emergency or anticipated Emergency conditions.	The Transmission Operator did not inform three other Transmission Operators of an actual Emergency or anticipated Emergency conditions.	The Transmission Operator did not inform its Reliability Coordinator of an actual Emergency or an anticipated Emergency condition.  OR The Transmission Operator did not inform four or more other Transmission Operators of an actual Emergency or anticipated Emergency conditions.
<b>R3</b>	N/A	N/A	N/A	The Transmission Operator did not render emergency assistance to other Transmission Operators, as requested and available, when the requesting entity had implemented its comparable emergency procedures and such actions would not have violated safety, equipment, regulatory, or statutory requirements.
<b>R4</b>	The responsible entity did not coordinate its respective operations known or expected by the Transmission Operator to impact other reliability entities with 5% or less of the affected reliability entities when conditions did permit such	The responsible entity did not coordinate its respective operations known or expected by the Transmission Operator to impact other reliability entities with more than 5% or less than or equal to 10% of the affected reliability entities when	The responsible entity did not coordinate its respective operations known or expected by the Transmission Operator to impact other reliability entities with more than 10% or less than or equal to 15% of the affected reliability entities when	The responsible entity did not coordinate its respective operations known or expected by the Transmission Operator to impact other reliability entities with more than 15% of the affected entities when conditions did permit such coordination.

**Standard TOP-001-2 — Coordination of Transmission Operations**

	Lower	Moderate	High	Severe
	coordination.	conditions did permit such coordination.	conditions did permit such coordination.	
<b>R5</b>	N/A	N/A	N/A	The Transmission Operator did not operate within an identified Interconnection Reliability Operating Limit (IROL) and the associated IROL $T_v$ for any single occasion.
<b>R6</b>	The Transmission Operator did not inform its Reliability Coordinator of one SOL which, while not an IROL, supports its local area reliability.	The Transmission Operator did not inform its Reliability Coordinator of two SOLs which, while not IROLs, supports its local area reliability.	The Transmission Operator did not inform its Reliability Coordinator of three SOLs which, while not IROLs, supports its local area reliability.	The Transmission Operator did not inform its Reliability Coordinator of four or more SOLs which, while not IROLs, supports its local area reliability.
<b>R7</b>	The Transmission Operator did not make available evidence that it had informed its Reliability Coordinator of actions being taken to return the system to within limits when one SOL (that supports its local area reliability) has been exceeded.	The Transmission Operator did not make available evidence that it had informed its Reliability Coordinator of actions being taken to return the system to within limits when two SOLs (that support its local area reliability) have been exceeded.	The Transmission Operator did not make available evidence that it had informed its Reliability Coordinator of actions being taken to return the system to within limits when three SOLs (that support its local area reliability) have been exceeded.	The Transmission Operator did not make available evidence that it had informed its Reliability Coordinator of actions being taken to return the system to within limits when an IROL has been exceeded  OR  The Transmission Operator did not make available evidence that it had informed its Reliability Coordinator of actions being taken to return the system to within limits when four or more SOLs (that support its local area reliability) have been exceeded..
<b>R8</b>	N/A	N/A	N/A	The Transmission Operator did not make available evidence of its actions or when it directed others to act, to mitigate the magnitude and duration of exceeding an IROL within the IROL's $T_v$ .



### E. Regional Variances

None identified.

### Version History

<b>Version</b>	<b>Date</b>	<b>Action</b>	<b>Change Tracking</b>
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
2	TBD	Revisions pursuant to Project 2007-03	Revised