

### 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. Draft SAR Version 1 posted January 15, 2007
2. Draft SAR Version 1 Comment Period ended February 14, 2007
3. Draft SAR Version 2 and comment responses on SAR version 1 posted March 19, 2007
4. Draft Version 2 SAR comment period ended April 17, 2007
5. SAR version 2 and comment responses for SAR version 2 accepted by SC and SDT appointed in June 2007.
6. First posting of revised standards on August 5, 2008 with comment period closed on September 16, 2008.
7. Draft Version 2 of standards and response to comments September 16, 2008 – May 26, 2009.

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

The SDT began working on revisions to the standards in August 2007. The current posting contains revisions based on stakeholder comments on the first draft. The team is seeking comments on the revised standards.

#### Future Development Plan:

Anticipated Actions	Anticipated Date
1. Second Posting of draft standards,	June-July 2009
2. Respond to comments on second posting	August 2009
3. Post Standards for pre-ballot period.	September 2009
4. Standards posted for initial and recirculation ballots.	October 2009
5. Standards sent to BOT for approval.	December 2009
6. Standards filed with regulatory authorities.	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.*

**Adverse Reliability Impact** – The impact of an event that results in **Bulk Electric System frequency-related** instability; ~~unplanned tripping of load or generation; or~~ uncontrolled separation or cascading outages ~~that affects a widespread area of the Interconnection.~~

## A. Introduction

1. **Title:** Coordination Among Reliability Coordinators
2. **Number:** IRO-014-2
3. **Purpose:** To ensure that each Reliability Coordinator's operations are coordinated such that they will not have an Adverse Reliability Impact on other Reliability Coordinator Areas and to preserve the reliability benefits of interconnected operations.
4. **Applicability:**
  - 4.1. Reliability Coordinators.
5. **Effective Date:** In those jurisdictions where regulatory approval is required, this standard shall become effective one year after applicable regulatory approval. In those jurisdictions where no regulatory approval is required, this standard shall become effective one year after Board of Trustees approval.

## B. Requirements

- R1. ~~Each~~ The Reliability Coordinator shall have Operating Procedures, Processes, or Plans for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall collectively address, ~~as a minimum,~~ the following: [*Violation Risk Factor: Medium*] [*Time Horizon: Same Day Operations and Operations Planning*]
  - R1.1.1.1. Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.
  - R1.2.1.2. Energy and capacity shortages.
  - R1.3.1.3. Planned or unplanned outage information.
  - R1.4.1.4. ~~Voltage~~ Control of voltage, including the coordination of reactive resources ~~for voltage control.~~
  - R1.5.1.5. Coordination of information exchange to support reliability assessments.
  - R1.6.1.6. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.
- R2. Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be: [*Violation Risk Factor: Lower*] [*Time Horizon: ~~Real-time Operations and~~ Operations Planning and Long-term Planning*]
  - R2.1.2.1. Agreed to by all the Reliability Coordinators required to take the indicated action(s).

~~R2.2.2.2.~~ Distributed to all Reliability Coordinators that are required to take the indicated action(s).

- R3. ~~The~~ Each Reliability Coordinator shall make notifications and exchange reliability-related information with impacted Reliability Coordinators using its predefined ~~shall follow its~~ Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations and Operations Planning]*
- R4. ~~The~~ Each Reliability Coordinator shall participate in agreed upon conference calls, at least weekly, and other communication forums with impacted Reliability Coordinators. *[Violation Risk Factor: Lower][Time Horizon: Real-time Operations]*
- ~~4.1. The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly.~~
- R5. ~~When an expected or actual reliability issue is detected, t~~ Each ~~he~~ Reliability Coordinator, upon identification of an Adverse Reliability Impact, shall ~~notify~~ confirm impacted Reliability Coordinators. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]* ~~the existence of the issue with the impacted Reliability Coordinators.~~
- ~~R6. In the event that the issue cannot be confirmed, Each impacted~~ each Reliability Coordinator shall operate as though the problem exists when the identified Adverse Reliability Impact cannot be agreed to by the impacted Reliability Coordinators. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- R7. The Reliability Coordinator with the identified Adverse Reliability Impact shall develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists. *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*
- ~~R8. Each impacted Reliability Coordinator shall implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when~~ When an expected or actual reliability issue exists and the ~~the~~ impacted Reliability Coordinators can not agree on a mitigation plan, ~~all impacted Reliability Coordinators shall implement the mitigation plan developed by the Reliability Coordinator who has the reliability issue.~~ *[Violation Risk Factor: Medium][Time Horizon: Operations Planning, Same Day Operations and Real-time Operations]*

### C. Measures

- M1. ~~The~~ Each Reliability Coordinator's ~~System Operators~~ shall have available ~~for Real-time use,~~ the latest approved documented version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions among impacted Reliability Coordinators. This documentation may include, but is not limited to, dated, current in force documentation with the specified elements.

~~1.1 These Operating Procedures, Processes, or Plans shall address:~~

~~1.1.1 Communications and notifications, including the mutually agreed to conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators.~~

~~1.1.2 Energy and capacity shortages.~~

~~1.1.3 Planned or unplanned outage information.~~

~~1.1.4 Control of Voltage control, including the coordination of reactive resources for voltage control.~~

~~1.1.5 Coordination of information exchange to support reliability assessments.~~

~~1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.~~

M2. ~~The~~ Each Reliability Coordinator shall have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were:

~~M2.12.1~~ Agreed to by all the Reliability Coordinators required to take the indicated action(s).

~~M2.22.2~~ Distributed to all Reliability Coordinators that are required to take the indicated action(s).

This evidence may include, but is not limited to dated document with confirmation of receipt or dated electronic communications with confirmation of receipt.

M3. ~~The~~ Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it made notifications and exchanged reliability-related information with impacted Reliability Coordinators using its predefined Operating Procedures, Processes, or Plans for conditions that may impact other Reliability Coordinator Areas or other means to accomplish the notifications and exchange of reliability-related information.

M4. ~~The~~ Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it participated in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators.

M5. ~~The~~ Each Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it ~~that, upon identification of an Adverse Reliability Impact, notified in cases when an expected or actual reliability issue was detected, it has confirmed the existence of the issue with the~~ impacted Reliability Coordinators.

- M6. ~~The~~Each Reliability Coordinator ~~In the event that the issue was not confirmed, each Reliability Coordinator~~ shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it operated as though the problem exists when the identified Adverse Reliability Impact was not agreed to by the impacted Reliability Coordinators.
- M7. The Reliability Coordinator with the identified Adverse Reliability Impact shall have evidence and provide evidence that it developed a mitigation plan when the impacted Reliability Coordinators could not agree that the problem exists. This evidence may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation.
- M8. Each impacted Reliability Coordinator shall have and provide evidence which may include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it implemented the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators can not agree on a mitigation plan. ~~The affected Reliability Coordinators shall have evidence that, in cases when an expected or actual reliability issue existed and the impacted Reliability Coordinators could not agree on a mitigation plan, they implemented the mitigation plan developed by the Reliability Coordinator who has the reliability issue.~~

## 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. Compliance Monitoring and Enforcement Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

#### 1.4. Data Retention

Each 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:

- Each Reliability Coordinator shall retain its current, in force document and any documents in force since the last compliance audit for Requirements R1, R2, and Measures M1, M2.
- Each Reliability Coordinator shall retain its most recent 12 months of evidence for Requirement R3, R4 and Measures M3, M4.
- Each Reliability Coordinator shall retain 3 calendar years plus current calendar year of evidence for Requirements R5 through R8 and Measures M5 through M8.
- 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.

2. Violation Severity Levels

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address one or two of the subrequirements.	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address three or four of the subrequirements.	The Reliability Coordinator has Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability but failed to address five of the subrequirements.	The Reliability Coordinator failed to have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with impacted Reliability Coordinators to support Interconnection reliability.
R2	N/A	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were distributed to all Reliability Coordinators that are required to take action.	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were <del>not</del> agreed to by all Reliability Coordinators that are required to take action.	The Reliability Coordinator failed to have evidence that the Operating Procedures, Processes, or Plans that require one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) were <del>not</del> agreed to by all Reliability Coordinators that are required to take action and were <del>not</del> distributed to all Reliability Coordinators that are required to take action.



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R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R3	N/A	N/A	The Reliability Coordinator failed to make notifications <u>OR</u> exchange reliability-related information with impacted Reliability Coordinators.	The Reliability Coordinator failed to make notifications <u>AND</u> exchange reliability-related information with impacted Reliability Coordinators.
R4	<del>N/A The Reliability Coordinator failed to participate in agreed upon (at least weekly) conference calls and other communication forums with impacted Reliability Coordinators.</del>	N/A	N/A	<u>The Reliability Coordinator failed to participate in an agreed upon (at least weekly) conference call or other communication forum with impacted Reliability Coordinators.</u> N/A
<u>R5</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to notify one, but not all, of the impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.</u>	<u>N/A</u>	<u>The Reliability Coordinator failed to notify any impacted Reliability Coordinators upon identification of an Adverse Reliability Impact.</u>
<del>R6</del> <u>5</u>	<del>The Reliability Coordinator that detected an expected or actual reliability issue contacted the other Reliability Coordinator(s) to confirm that there was a problem but could not confirm that the problem existed and failed to operate as though the problem existed.</del> N/A	N/A	N/A	<u>The Reliability Coordinator <del>f</del> failed to operate as though the problem existed when the identified Adverse Reliability Impact was not agreed to by the impacted Reliability Coordinators.</u> <del>that detected an expected or actual reliability issue failed to contact the other Reliability Coordinator(s) to confirm that there was a problem.</del>

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R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R76	<p><del>The Reliability Coordinator did not agree on a mitigation plan and implemented a plan other than the one developed by the Reliability Coordinator who had the reliability issue.</del>  <a href="#">N/A</a></p>	N/A	N/A	<p><a href="#">The Reliability Coordinator with the identified Adverse Reliability Impact failed to develop a mitigation plan when the impacted Reliability Coordinators can not agree that the problem exists.</a>  <del>The Reliability Coordinator did not agree on a mitigation plan and did not implement a mitigation plan.</del></p>
R8	<a href="#">N/A</a>	<a href="#">N/A</a>	<a href="#">N/A</a>	<p><a href="#">The impacted Reliability Coordinator failed to implement the mitigation plan developed by the Reliability Coordinator who has the identified Adverse Reliability Impact when the impacted Reliability Coordinators could not agree on a mitigation plan.</a></p>

**E. Regional Differences**

None identified.

**F. Associated Documents**

**Version History**

Version	Date	Action	Change Tracking
1	August 10, 2005	<ol style="list-style-type: none"> <li>1. Changed incorrect use of certain hyphens (-) to “en dash (–).”</li> <li>2. Hyphenated “30-day” when used as adjective.</li> <li>3. Changed standard header to be consistent with standard “Title.”</li> <li>4. Initial capped heading “Definitions of Terms Used in Standard.”</li> <li>5. Added “periods” to items where appropriate.</li> <li>6. Changed “Timeframe” to “Time Frame” in item D, 1.2.</li> <li>7. Lower cased all words that are not “defined” terms — drafting team, self-certification.</li> <li>8. Changed apostrophes to “smart” symbols.</li> <li>9. Added comma in all word strings “Procedures, Processes, or Plans,” etc.</li> <li>10. Added hyphens to “Reliability Coordinator-to-Reliability Coordinator” where used as adjective.</li> <li>11. Removed comma in item 2.1.2.</li> <li>12. Removed extra spaces between words where appropriate.</li> </ol>	January 20, 2006
1	February 7, 2006	Approved by BOT	Revised
1	April 4, 2007	Regulatory Approval — Effective Date	New
2	TBD	Revised per SAR for Project 2006-6, RCSDT	Revised