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.

Real-Time Data: Real-Time measured values, state estimator values derived from the measured values, or other calculated values derived from the measured values — may include directly monitored data, Inter-utility data exchange (e.g., Interconnection Control Area Communication Protocol or SCADA Data), and manually collected data.

Real-Time Monitoring: The act of scanning data and drawing conclusions about what the data indicates.

Self-Certification: A process by which an entity does a self-evaluation to determine if it is compliant with the specific requirements for a reliability standard.

> The IROL SDT deleted R1 and moved R2 into IRO-009.

A.Introduction

1.Title: Monitoring the Reliability Coordinator Wide Area

2.Number: IRO-007-1

3.Purpose: To prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by ensuring that the Bulk Electric System is continuously monitored.

4.Applicability

4.1.Reliability Coordinator

5.Proposed Effective Date: First day of first quarter, three months after regulatory approvals.

B.Requirements

R1.The Reliability Coordinator shall perform Real-Time Monitoring of system operating parameters within its Wide Area to determine if operating parameters are within their associated Interconnection Reliability Operating Limits (IROLs). *(Violation Risk Factor: Medium)* *(Mitigation Time Horizon: Real-time Operations)*

R2.If unanimity cannot be reached on the value for an IROL or its T_v, all Reliability Coordinators who monitor that Facility (or group of Facilities) shall, without delay, use the most conservative of the values under consideration. *(Violation Risk Factor: High) (Mitigation Time Horizon: Real-time Operations)*

C.Measures

M1.The Reliability Coordinator shall have Real-Time Data for system operating parameters within its Wide Area available in a form that its System Operators can compare to its IROLs as evidence of real-time monitoring.

M2.For an IROL or its T_v without agreement between Reliability Coordinators, the Reliability Coordinator shall have, and provide upon request, evidence that could include, but is not limited to, operating logs, voice recordings, transcripts of voice recordings, or other equivalent evidence to confirm that it used the most conservative of the values under consideration.

D.Compliance

1.Compliance Monitoring Process

1.1.Compliance Monitoring Responsibility

Electric Reliability Organization

1.2.Compliance Monitoring Period and Reset Time Frame

The Performance-Reset Period shall be 12 months from the last violation.

1.3.Data Retention

The Reliability Coordinator shall have evidence of compliance with M1 upon request.

The Reliability Coordinator shall keep evidence to show compliance with M2 for three calendar years

The Compliance Monitor shall keep audited data for three calendar years.

1.4.Additional Compliance Information

The Reliability Coordinator shall demonstrate compliance through Self-Certification submitted to its Compliance Monitor annually. The Compliance Monitor may also use scheduled on-site reviews every three years, investigations initiated in response to a complaint, or other methods as provided for in the Compliance Monitoring Enforcement Program, to assess performance.

The Reliability Coordinator shall demonstrate the following to its Compliance Monitor to inspect during a scheduled, on-site review or as part of an investigation upon complaint:

    1.4.1 Its System Operators actively monitoring and comparing Real-Time system operating parameters associated with IROLs.

2. Violation Severity Levels

    2.1. Lower: Not applicable.

    2.2. Moderate: Not applicable.

    2.3. High: Not applicable.

    2.4. Severe: A severe violation occurs if either of the following conditions are present:

        2.4.1 System operating parameters not monitored in Real-Time and compared against IROLs.

        2.4.2 There was a disagreement on the IROL or its T_v and the most conservative limit under consideration was not used.

E. Regional Differences

    None

F. Associated Documents

    None

Version History

Version	Date	Action	Change Tracking

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. SAC approves SAR for posting (March 10, 2002).

2. Drafting team posts draft SAR for comment (April 2–May 3, 2002) (August 20–September 29, 2002).

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Description of Current Draft:

This draft reflects conforming changes made to the standards based on comments submitted during the January 2–February 15, 2007 comment period. The drafting team delayed balloting pending the outcome of the FAC-010, FAC-011, and FAC-014 standards. During the waiting period, the drafting team modified the set of IROL standards to bring them into conformance with the latest guidelines for drafting standards. The IROL SDT is posting the revised set of IROL standards and a revised implementation plan for a 30-day comment period through April 25, 2008.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Post for 30-day pre-ballot period.	May 12 – June 10, 2008
2. Conduct initial ballot of standards.	June 11-20, 2008
3. Conduct recirculation ballot of standards.	June 30 – July 9, 2008
4. Submit to BOT for adoption.	July 29, 2008
5. File for regulatory approvals.	To be determined

Definitions of Terms Used in Standard

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Operational Planning Analysis: An analysis of the expected system conditions for the next day's operation and up to 12 months ahead. Expected system conditions include things such as load forecast(s), generation output levels, and known system constraints (transmission facility outages, generator outages, equipment limitations, etc.).

Real-Time Assessment: An examination of existing and expected system conditions, conducted by collecting and reviewing immediately available data.

A. Introduction

1.   Title: **Reliability Coordinator Operational Analyses and Real-time Assessments**

2.   Number: IRO-008-1

3.   Purpose: To prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by ensuring that the Bulk Electric System is assessed during the operations horizon.

4.   Applicability

4.1. Reliability Coordinator.

5.   Proposed Effective Date:

~~**5.**   The latter of either the first day of the first quarter, three months after regulatory approvals **or** coincident with the effective date for FAC-014-1.~~

In those jurisdictions where no regulatory approval is required, the standard shall become effective on the latter of either April 1, 2009 or the first day of the first calendar quarter, three months after BOT adoption.

In those jurisdictions where regulatory approval is required, the standard shall become effective on the latter of either April 1, 2009 or the first day of the first calendar quarter, three months after applicable regulatory approval.

B. Requirements

R1. ~~The~~ Each Reliability Coordinator shall perform an Operational Planning Analysis to assess whether the planned operations for the next day within its Wide Area, will exceed any of its Interconnection Reliability Operating Limits (IROLs) during anticipated normal and Contingency event conditions. *(Violation Risk Factor: Medium) (Time Horizon: Operations Planning)*

R2. ~~The~~ Each Reliability Coordinator shall perform a Real-Time Assessment~~s~~ at least every 30 minutes to determine if its Wide Area is exceeding any IROLs or is expected to exceed any IROLs. *(Violation Risk Factor: High) (Time Horizon: Real-time Operations)*

R3. When a Reliability Coordinator determines that the results of an ~~the results of the Reliability Coordinator's~~ Operational Planning ~~Analyses~~ Analysis or Real-Time Assessment~~s~~ indicate~~s~~ the need for specific operational actions to prevent or mitigate an ~~instances~~ of exceeding an IROL~~s~~, the Reliability Coordinator shall share its results with those entities that are expected to take those actions. *(Violation Risk Factor: Medium) (Time Horizon: Real-time Operations or Same Day Operations)*

C. Measures

M1. The Reliability Coordinator shall have, and provide upon request, the results of its ~~latest~~ Operational Planning ~~Analysis~~ Analyses.

M2. The Reliability Coordinator shall have, and provide upon request, evidence ~~that could include, but is not limited to computer output, operator logs, checklists, or other evidence~~ to show it conducted a Real-Time Assessment at least once every 30 minutes. This evidence could include, but is not limited to, dated computer log showing times the assessment was conducted, dated checklists, or other evidence.

~~**D.**~~ The Reliability Coordinator shall have and provide upon request, evidence ~~that could include, but is not limited to operating logs, voice recordings, transcripts of voice records, facsimiles, or other equivalent evidence that will be used~~ to confirm that it shared the results of its Operational Planning Analyses ~~and~~ or Real-Time Assessments with those entities expected to take actions based on that information. This evidence could include, but is not limited to, dated operator logs, dated voice recordings, dated transcripts of voice records, dated facsimiles, or other evidence.

M3.

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance ~~Monitoring Responsibility~~Enforcement Authority

For Reliability Coordinators that work for the Regional Entity, the ERO shall serve as the Compliance Enforcement Authority.

For Reliability Coordinators that do not work for the Regional Entity, the Regional Entity shall serve as the Compliance Enforcement Authority.

~~Electric Reliability Organization~~

1.2. Compliance Monitoring Period and Reset Time Frame

~~The Performance-Reset Period shall be 12 months from the last violation~~Not applicable.

1.3. Compliance Monitoring and Enforcement Processes

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

~~1.3.1.~~4. 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 Compliance ~~Monitor~~ Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

audited data for three calendar years.

6.The Reliability Coordinator shall keepretain its latest day-ahead Operational Planning Analysisevidence for Requirement R1, Measure M1 and Requirement R2, Measure M2 for a rolling 30 days.

The Reliability Coordinator shall keep evidence for M2 for the most recent two days.

The Reliability Coordinator shall keep evidence for Requirement R3, Measure M3 for a rolling three months.

one month.

1.4.1.5.   **Additional Compliance Information**

The Reliability Coordinator shall demonstrate compliance through Self-Certification submitted to its Compliance Monitor annually. The Compliance Monitor may also use scheduled on-site reviews once every three years, investigations initiated in response to a complaint, or other methods as provided for in the Compliance Monitoring Enforcement Program, to assess performance.

None.

> 2. **Violation Severity Levels**
>
> 2.1. ~~**Lower:** Not applicable.~~
>
> 2.2. ~~**Moderate:** Shared the results with some but not all of the entities that were required to take action (R3).~~
>
> 2.3. ~~**High:** Real-Time Assessments were conducted but not as frequently as required (R2).~~
>
> 2.4. ~~**Severe:** A severe violation exists if any of the following conditions are present:~~
>
> 2.4.1 ~~Did not perform an Operational Planning Analysis for the next day in accordance with R1.~~
>
> 2.4.2 ~~Did not perform any Real-time Assessments for any continuous eight-hour period (R2).~~
>
> 2.4.3 ~~Did not share the results of its analyses or assessments with any of the entities that were required to take action (R3).~~

Requirement	Lower	Moderate	High	Severe
R1	Performed an Operational Planning Analysis that covers all aspects of the requirement for all except one of 30 days. (R1)	Performed an Operational Planning Analysis that covers all aspects of the requirement for all except two of 30 days. (R1)	Performed an Operational Planning Analysis that covers all aspects of the requirement for all except three of 30 days. (R1)	Missed performing an Operational Planning Analysis that covers all aspects of the requirement for four or more of 30 days. (R1)
R2	A Real-time Assessment was not conducted for one 30-minute period within a 24-hour period (R2)	Real-time Assessments were not conducted for two 30-minute periods within a 24-hour period (R2)	Real-time Assessments were not conducted for three 30-minute periods within a 24-hour period (R2)	Real-time Assessments were not conducted for more than three 30-minute periods within a 24-hour period (R2)
R3		Shared the results with some but not all of the entities that were required to take action (R3)		Did not share the results of its analyses or assessments with any of the entities that were required to take action (R3).

E. Regional ~~Differences~~Variances

None

F. Associated Documents

None

Version History

Version	Date	Action	Change Tracking

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. SAC approves SAR for posting (March 10, 2002).

2. Drafting team posts draft SAR for comment (April 2–May 3, 2002) (August 20–September 29, 2002).

3. SAC approves development of standard (November 20, 2003).

4. JIC assigns development of standard to NERC (January 10, 2003).

5. Drafting team posts drafts for comment (February 18–April 2, 2003) (July 1–August 29, 2003).

6. Balloted December 18, 2003–January 6, 2004.

7. Drafting team posts drafts for comment (March 1–April 14, 2004).

8. Informational posting to allow the Determine Facility Ratings, System Operating Limits and Transfer Capabilities standards a chance to be finalized (November 2004 through October 2006).

9. Drafting team posts drafts and implementation plan for comment (January 2–February 15, 2007)

10. Drafting team posts drafts and implementation plan for pre-ballot review (March 15 – April 13, 2007

Description of Current Draft:

This draft reflects conforming changes made to the standards based on comments submitted during the January 2–February 15, 2007 comment period. The drafting team delayed balloting pending the outcome of the FAC-010, FAC-011, and FAC-014 standards. During the waiting period, the drafting team modified the set of IROL standards to bring them into conformance with the latest guidelines for drafting standards. The IROL SDT is posting the revised set of IROL standards and a revised implementation plan for a 30-day comment period through April 25, 2008.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Post for 30-day pre-ballot period.	May 12 – June 10, 2008
2. Conduct initial ballot of standards.	June 11-20, 2008
3. Conduct recirculation ballot of standards.	June 30 – July 9, 2008
4. Submit to BOT for adoption.	July 29, 2008
5. File for regulatory approvals.	To be determined

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.

~~**Occurrence Period:** The time period in which performance is measured and evaluated.~~

None ~~introduced in this standard.~~.

A. Introduction

1. **Title:** **Reliability Coordinator Actions to Operate Within IROLs**

2. **Number:** IRO-009-1

3. **Purpose:** To prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by ensuring prompt action to prevent or mitigate instances of exceeding Interconnection Reliability Operating Limits (IROLs).

4. **Applicability**

   4.1. Reliability Coordinator.

   4.2. The IROLs covered in this standard are limited to those associated with contingencies ~~that were~~ studied under FAC-011 and FAC-014.

5. **Proposed Effective Date:** ~~The latter of either the first day of the first quarter, six~~

   In those jurisdictions where no regulatory approval is required, the standard shall become effective on the latter of either April 1, 2009 or the first day of the first calendar quarter, three months after BOT adoption.

   In those jurisdictions where regulatory approval is required, the standard shall become effective on the latter of either April 1, 2009 or the first day of the first calendar quarter, three months after applicable regulatory approval.

B. Requirements

R1. For ~~each~~ all IROL~~s~~ ~~that is~~ identified one or more days prior to the current day~~in advance of Real-time~~, each 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. *(Violation Risk Factor: Medium) (Time Horizon: Operations Planning or Same Day Operations)*

R2. For each IROL that is identified one or more days prior to the current day~~in advance of Real-time~~, each 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 T_v. *(Violation Risk Factor: Medium) (Time Horizon: Operations Planning or Same Day Operations)*

R3. When an assessment of actual or expected system conditions predicts that an IROL will be exceeded, the Reliability Coordinator shall implement one or more Operating Processes, Procedures or Plans to prevent exceeding that IROL. *(Violation Risk Factor: High) (Time Horizon: Real-time Operations)*

R4. When actual system conditions show that there is an instance of exceeding an IROL, 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 T_v. *(Violation Risk Factor: High) (Time Horizon: Real-time Operations)*

R5. If unanimity cannot be reached on the value for an IROL or its T$_v$, each Reliability Coordinator that monitors that Facility (or group of Facilities) shall, without delay, use the most conservative of the values under consideration. *(Violation Risk Factor: High) (Time Horizon: Real-time Operations)*

C. Measures

M1. ~~The~~ Each Reliability Coordinator shall have, and provide upon request, evidence to confirm that it has Operating Processes, Procedures, or Plans to address both preventing and mitigating instances of exceeding IROLs in accordance with Requirement R1 and Requirement R2. This evidence shall include a list of any IROLs (and each associated T$_v$) identified in advance, along with one or more ~~documented~~ dated Operating Processes, Procedures, or Plans that that will be used.

M2. ~~The~~ Each Reliability Coordinator shall have, and provide upon request, evidence ~~that could include, but is not limited to, operating logs, voice recordings, transcripts of voice recordings, or other equivalent evidence that will be used~~ to confirm that it acted or directed others to act in accordance with Requirement R3 and Requirement R4. This evidence could include, but is not limited to, dated operating logs, dated voice recordings, dated transcripts of voice recordings, or other evidence.

M3. For a situation where Reliability Coordinators disagree on the value of an IROL or its T$_v$ the Reliability Coordinator shall have, and provide upon request, evidence to confirm that it used the most conservative of the values under consideration, without delay. Such evidence could include, but is not limited to, dated computer printouts, dated operator logs, dated voice recordings, dated transcripts of voice recordings, or other equivalent evidence. (R5)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance ~~Monitoring Responsibility~~ Enforcement Authority

~~Electric Reliability Organization~~ For Reliability Coordinators that work for the Regional Entity, the ERO shall serve as the Compliance Enforcement Authority.

For Reliability Coordinators that do not work for the Regional Entity, the Regional Entity shall serve as the Compliance Enforcement Authority.

1.2. Compliance Monitoring Period and Reset Time Frame

~~The Performance-Reset Period shall be 12 months from the last violation.~~ Not applicable.

1.3. Compliance Monitoring and Enforcement Processes

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.3.Exception Reporting

1.4. 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 keep IROL Violation Reports, operations logs, or other documentation for three calendar years. The Compliance Monitor shall keep audited data for three calendar years.

The Reliability Coordinator shall retain evidence of Requirement R1, Requirement R2, and Measure M1, for a rolling 12 months.

The Reliability Coordinator shall retain evidence of Requirement R3, Requirement R4, Requirement R5, Measure M2, and Measure M3 for a rolling 12 months.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records, and all IROL Violation Reports submitted since the last audit.

1.4.1.5.   Additional Compliance Information

Exception Reporting: The Reliability Coordinator shall demonstrate compliance through self-certification submitted to its Compliance Monitor annually and reporting by exception. If an IROL is exceeded for time greater than T_v, the Reliability Coordinator shall complete and submit to its Compliance Monitor within five days, an IROL Violation Report.

The Compliance Monitor may also use scheduled on-site reviews every three years, and investigations upon complaint, to assess performance.

The Reliability Coordinator 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:

1.4.1Operations logs or other documentation indicating the magnitude and duration of each instance of exceeding an IROL and the actions or directives issued for each of these instances.

1.4.2IROL Violation Reports.

For each instance of exceeding an IROL for time greater than IROL T_v, the Reliability Coordinator shall submit an IROL Violation Report to its Compliance Enforcement Authority within 30 days of the initiation of the event.

2.____**Violation Severity Levels**

1.5.**Low:**____Not applicable.

1.6.**Moderate**___Not applicable.

1.7.**High:**____Not applicable.

1.8.**Severe:**___There shall be a severe violation severity level if any of the following conditions exist:

1.8.1One or more IROLs identified in advance of real time do not have Operating Processes, Procedures, or Plans that identify actions to prevent or mitigate instances of exceeding those IROLs. (R1 and R2)

1.8.2An assessment of actual or expected system conditions predicted that an IROL would be exceeded, but no Operating Processes, Procedures or Plans were implemented to prevent exceeding that IROL. (R3)

1.8.3Actual system conditions showed that there was an instance of exceeding an IROL, and there was a delay of five[1] minutes or more before taking a control action or directing others to act to mitigate the magnitude and duration of the instance of exceeding that IROL (R4)

1.8.4Actual system conditions showed that there was an instance of exceeding an IROL, and that IROL was not resolved within the IROL's T_v. (R4)

Requirement	Lower	Moderate	High	Severe
R1				An IROL was identified one or more days in advance and the Reliability Coordinator does not have an Operating Process, Procedure, or Plan that identifies actions to prevent exceeding that IROL. (R1)
R2				An IROL identified one or more days in advance does not have an Operating

---

[1] The five minutes is not a 'grace period' before taking any action – the five minutes recognizes that the first actions taken may not result in an action that can be independently confirmed.

Requirement	Lower	Moderate	High	Severe
				Process, Procedure, or Plan that identifies actions to mitigate exceeding that IROL within the IROL's T_v . (R2)
R3			An assessment of actual or expected system conditions predicted that an IROL would be exceeded, but the Operating Processes, Procedures, or Plans that were implemented did not prevent exceeding the IROL. (R3)	An assessment of actual or expected system conditions predicted that an IROL would be exceeded, but no Operating Processes, Procedures, or Plans were implemented. (R3)
R4			Actual system conditions showed that there was an instance of exceeding an IROL, and there was a delay of five minutes or more before acting or directing others to act to mitigate the magnitude and duration of the instance of exceeding that IROL, however the IROL was mitigated within the IROL T_v (R4)	Actual system conditions showed that there was an instance of exceeding an IROL, and a delay before acting or directing others to act resulted in a failure to mitigate the magnitude and duration of the instance of exceeding that IROL within T_v (R4) **OR** Actual system conditions showed that there was an instance of exceeding an IROL, and that IROL was not resolved within the IROL's T_v. (R4)
R5	Not applicable.	Not applicable.	Not applicable.	There was a disagreement

Requirement	Lower	Moderate	High	Severe
				on the IROL or its T_v and the most conservative limit under consideration was not used. (R5)

E. Regional ~~Differences~~**Variances**

None

F. Associated Documents

IROL Violation Report

Version History

Version	Date	Action	Change Tracking

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None. *introduced in this standard.*

A. Introduction

1. Title: **Reliability Coordinator Data Specification and Collection**

2. Number: IRO-010-1

3. Purpose: To prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by ensuring the Reliability Coordinator has the data it needs to monitor and assess the operation of its Reliability Coordinator Area.

4. Applicability

4.1. Reliability Coordinator.

4.2. Balancing Authority.

4.3. Generator Owner.

4.4. Generator Operator.

4.5. Interchange Authority.

4.6. Load-Serving Entity.

4.7. Transmission Operator.

4.8. Transmission Owner.

5. Proposed Effective Date:

~~**5.** The latter of either the first day of the first quarter, three months after regulatory approvals **or** coincident with the effective date for FAC-014-1.~~

In those jurisdictions where no regulatory approval is required, the standard shall become effective on the latter of either April 1, 2009 or the first day of the first calendar quarter, three months after BOT adoption.

In those jurisdictions where regulatory approval is required, the standard shall become effective on the latter of either April 1, 2009 or the first day of the first calendar quarter, three months after applicable regulatory approval.

B. Requirements

R1. The Reliability Coordinator shall have a documented data specification for data and information to build and maintain models to support Real-Time Monitoring, Operational Planning Analyses, and Real-time Assessments. The specification shall include the following: *(Violation Risk Factor: Low) (Time Horizon: Operations Planning)*

R1.1. List of required data and information.

R1.2. Mutually agreeable format.

R1.3. Timeframe and periodicity for providing data and information (based on its hardware and software requirements, and the time needed to do its Operational Planning Analyses).

R1.4. Process for data provision when automated Real-Time system operating data is unavailable.

R2. The Reliability Coordinator shall distribute its data specification to entities that have Facilities monitored by the Reliability Coordinator and to entities that provide Facility status to the Reliability Coordinator. *(Violation Risk Factor: Low) (Time Horizon: Operations Planning)*

R3. Each Balancing Authority, Generator Owner, Generator Operator, Interchange Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator, and Transmission Owner shall provide data and information, as specified, to the Reliability Coordinator(s) with which it has a reliability relationship. The data and information is limited to data needed by the Reliability Coordinator to support Real-Time Monitoring, Operational Planning Analyses, and Real-Time Assessments. *(Violation Risk Factor: Medium) (Time Horizon: Operations Planning; Same-day Operations; Real-time Operations)*

C. Measures

M1. The Reliability Coordinator shall have, and provide upon request, a documented data specification that contains all elements identified in Requirement R1.

M2. The Reliability Coordinator shall have, and provide upon request, evidence that it distributed its data specification to entities that have Facilities monitored by the Reliability Coordinator and to entities that provide Facility status to the Reliability Coordinator. This evidence could include, but is not limited to, dated paper or electronic notice used to distribute its data specification showing recipient, and data or information requested or other equivalent evidence. (R2)

M3. The Balancing Authority, Generator Owner, Generator Operator, Load-Serving Entity, Reliability Coordinator, Transmission Operator and Transmission Owner shall each have, and provide upon request, evidence that could include but is not limited to, operator logs, voice recordings, computer printouts, SCADA data, or other equivalent evidence that will be used to confirm that it provided data and information, as specified in Requirement R3. This evidence could include, but is not limited to, dated operator logs, dated voice recordings, dated computer printouts, dated SCADA data, or other equivalent evidence.

D. Compliance

~~M4.~~1. Compliance Monitoring Process

~~M4.1~~1.1. Compliance ~~Monitoring Responsibility~~ Enforcement Authority

For Reliability Coordinators and other functional entities that work for the Regional Entity, the ERO shall serve as the Compliance Enforcement Authority.

For entities that do not work for the Regional Entity, the Regional Entity shall serve as the Compliance Enforcement Authority.

~~Electric Reliability Organization~~

1.2. Compliance Monitoring Period and Reset Time Frame

The Performance Reset Period shall be 12 months from the last violation.Not applicable.

1.3. Compliance Monitoring and Enforcement Processes

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

1.3.1.4. Data Retention

The Balancing Authority, Generator Owner, Generator Operator, Load-Serving Entity, Reliability Coordinator, Transmission Operator and Transmission Owner, 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 shall retain its current, in force data specification for Requirement R1, Measure M1. keep its most current data specification.

1.4.   The Reliability Coordinator shall keep evidence of its most recent distribution of its data specification and evidence to show the data supplied in response to that specification to show compliance with for Requirement R2, Measure M2 and Requirement R3 Measure M3.

——For data that is requested in advance of real-time, the Balancing Authority, Generator Owner, Generator Operator, Load-Serving Entity, Reliability Coordinator, Transmission Operator and Transmission Owner shall keep evidence used to show compliance with Requirement R3 Measure M3 for 3 months. the Reliability Coordinator's most recent data specification.

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

The Compliance Monitor shall keep audited data for three calendar years.

1.4.1.5. Additional Compliance Information

The Reliability Coordinator shall demonstrate compliance through Self-Certification submitted to its Compliance Monitor annually. The Compliance Monitor may also use scheduled on-site reviews every three years, and investigations initiated in response to a complaint, or other methods as provided for in the Compliance Monitoring Enforcement Program, to assess performance.

~~The Reliability Coordinator 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:~~

~~**5.2.1** Data specification(s).~~

~~**5.2.2** Proof of distribution of the data specification(s).~~

1.5.1 None.

1.2. **Violation Severity Levels** ~~for the Reliability Coordinator~~

 ~~**1.1.** **Lower:** There shall be a lower violation severity level if any of the following conditions exist:~~

  ~~**1.1.1** Distributed its data specification to greater than or equal to 95% but less than 100% of the entities that have Facilities monitored by the Reliability Coordinator and the entities that provide the Reliability Coordinator with Facility status. (R2)~~

  ~~**1.1.2** Provided greater than or equal to 95%- but less then 100% of the data and information to other Reliability Coordinators as specified. (R3)~~

 ~~**1.2.** **Moderate:** There shall be a moderate violation severity level of any of the following conditions exist:~~

  ~~**1.2.1** Distributed its data specification to greater than or equal to 85% but less than 95% of the entities that have Facilities monitored by the Reliability Coordinator and the entities that provide the Reliability Coordinator with Facility status. (R2)~~

  ~~**1.2.2** Provided greater than or equal to 85%, but less than 95% of the data and information to other Reliability Coordinators as specified. (R3)~~

 ~~**1.3.** **High:** There shall be a high violation severity level of any of the following conditions exist:~~

  ~~**1.3.1** Data specification incomplete (missing one of the following: list of required data, a mutually agreeable format, a timeframe for providing data, a data provision process to use when automated Real-Time system operating data is unavailable). (R1)~~

  ~~**1.3.2** Distributed its data specification to greater than or equal to 70%- but less then 85% of the entities that have Facilities monitored by the Reliability Coordinator and the entities that provide the Reliability Coordinator with Facility status. (R2)~~

  ~~**1.3.3** Provided greater than or equal to 70%- but less then 85% of the data and information to other Reliability Coordinators as specified. (R3)~~

 ~~**1.4.** **Severe:** There shall be a severe violation severity level of any of the following conditions exist:~~

  ~~**1.4.1** No data specification (R1)~~

  ~~**1.4.2** Data specification distributed to less than 70% of the entities that have Facilities monitored by the Reliability Coordinator and the entities that provide the Reliability Coordinator with Facility status. (R2)~~

  ~~**1.4.3** Provided less than 70% of the data and information to other Reliability Coordinators as specified. (R3)~~

~~**2.** **Violation Severity Levels for the Balancing Authority, Generator Owner, Generator Operator, Load-Serving Entity, Reliability Coordinator, Transmission Operator and Transmission Owner**~~

~~2.1. **Lower: Provided greater than or equal to 95%- but less then 100% of the data and information to the Reliability Coordinator as specified. (R3)**~~

~~2.2. **Moderate: Provided greater than or equal to 85%, but less than 95% of the data and information to the Reliability Coordinator as specified. (R3)**~~

~~2.3. **High: Provided greater than or equal to 70%, but less than 85% of the data and information to the Reliability Coordinator as specified. (R3)**~~

~~2.4. **Severe: Provided less than 70% of the data and information to the Reliability Coordinator as specified. (R3)**~~

Requirement	Lower	Moderate	High	Severe
R1	Data specification is complete with the following exception – no process for data provision when automated Real-Time system operating data is unavailable. (R1)	Data specification is complete with the following exception: Missing the mutually agreeable format (R1)	Data specification incomplete (missing either the list of required data, or the timeframe for providing data, (R1)	No data specification (R1)
R2	Distributed its data specification to greater than or equal to 95% but less than 100% of the entities that have Facilities monitored by the Reliability Coordinator and the entities that provide the Reliability Coordinator with Facility status.	Distributed its data specification to greater than or equal to 85% but less than 95% of the entities that have Facilities monitored by the Reliability Coordinator and the entities that provide the Reliability Coordinator with Facility status. (R2)	Distributed its data specification to greater than or equal to 75% - but less then 85% of the entities that have Facilities monitored by the Reliability Coordinator and the entities that provide the Reliability Coordinator with Facility status. (R2)	Data specification distributed to less than 75% of the entities that have Facilities monitored by the Reliability Coordinator and the entities that provide the Reliability Coordinator with Facility status. (R2)
R3	Provided greater than or equal to 95% but less then 100% of the data and information as specified. (R3)	Provided greater than or equal to 85% but less than 95% of the data and information as specified. (R3)	Provided greater than or equal to 75% but less then 85% of the data and information as specified. (R3)	Provided less than 75% of the data and information as specified. (R3)

E. Regional ~~Differences~~Variances

   None

F. Associated Documents

   None

Version History

Version	Date	Action	Change Tracking