

### **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.
8. Second posting of revised standards on July 10, 2009 with comment period closed on August 9, 2009.
9. RC SDT coordinated with OPCP SDT and RTO SDT on definitions relating to directives and three part communication and Draft Version 3 of standards and response to comments August 9–November 20, 2009.
10. Third posting of revised standards on January 4, 2010 with comment period closed on February 18, 2010.
11. Fourth posting of revised standards on January 25, 2011 with comment period closed on March 7, 2011.
12. Initial ballot conducted February 25 through March 7, 2011.
13. Draft version 5 of the standard and response to comments March 7, 2011 – January 9, 2012.
14. Fifth posting of revised standards on January 9, 2012 with comment period closed on February 9, 2012.
15. Successive ballot conducted January 30 through February 9, 2011.
16. Draft version 6 of the standard and response to comments February 9, 2011 – June 5, 2012.
17. Sixth posting of revised standard on June 7, 2012 with comment period closed on July 6, 2012.
18. Successive ballot conducted June 27 through July 6, 2012.

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

The SDT began working on revisions to the standards in August 2007. The current posting contain revisions based on stakeholder comments on the initial ballot. The team is posting for a successive ballot.

**Future Development Plan:**

<b>Anticipated Actions</b>	<b>Anticipated Date</b>
1. Post standards for a successive ballot.	January-February 2012
2. Respond to comments on successive ballot.	March - April 2012
3. Standard posted for second successive ballot.	June 2012
4. Standard posted for recirculation ballot.	September 2012
5. Standard to be sent to BOT for approval.	November 2012
6. Standard filed with regulatory authorities.	January 2013

### **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.*

The RC SDT proposes the following new definitions:

**Interpersonal Communication:** Any medium that allows two or more individuals to interact, consult, or exchange information.

**Alternative Interpersonal Communication:** Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

## A. Introduction

### 1. Title: Communications

2. Number: COM-001-2

3. Purpose: To establish Interpersonal Communication capabilities necessary to maintain reliability.

### 4. Applicability:

4.1. Transmission Operator

4.2. Balancing Authority

4.3. Reliability Coordinator

4.4. Distribution Provider

4.5. Generator Operator

5. Effective Date: The first day of the second calendar quarter beyond the date that 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 beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

## B. Requirements

**R1.** Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities (unless the Reliability Coordinator experiences a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply):  
*[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*

1.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.

1.2. Each adjacent Reliability Coordinator within the same Interconnection.

**R2.** Each Reliability Coordinator shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*

2.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.

2.2. Each adjacent Reliability Coordinator within the same Interconnection.

**R3.** Each Transmission Operator shall have Interpersonal Communication capability with the following entities (unless the Transmission Operator experiences a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply):  
*[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*

3.1. Its Reliability Coordinator.

3.2. Each Balancing Authority within its Transmission Operator Area.

- 3.3. Each Distribution Provider within its Transmission Operator Area.
  - 3.4. Each Generator Operator within its Transmission Operator Area.
  - 3.5. Each adjacent Transmission Operator synchronously connected.
  - 3.6. Each adjacent Transmission Operator asynchronously connected.
- R4.** Each Transmission Operator shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 4.1. Its Reliability Coordinator.
  - 4.2. Each Balancing Authority within its Transmission Operator Area.
  - 4.3. Each adjacent Transmission Operator synchronously connected.
  - 4.4. Each adjacent Transmission Operator asynchronously connected.
- R5.** Each Balancing Authority shall have Interpersonal Communication capability with the following entities (unless the Balancing Authority experiences a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 5.1. Its Reliability Coordinator.
  - 5.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.
  - 5.3. Each Distribution Provider within its Balancing Authority Area.
  - 5.4. Each Generator Operator that operates Facilities within its Balancing Authority Area.
  - 5.5. Each adjacent Balancing Authority.
- R6.** Each Balancing Authority shall designate an Alternative Interpersonal Communication capability with the following entities: *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 6.1. Its Reliability Coordinator.
  - 6.2. Each Transmission Operator that operates Facilities within its Balancing Authority Area.
  - 6.3. Each adjacent Balancing Authority.
- R7.** Each Distribution Provider shall have Interpersonal Communication capability with the following entities (unless the Distribution Provider experiences a failure of its Interpersonal Communication capability in which case Requirement R11 shall apply): *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- 7.1. Its Balancing Authority.
  - 7.2. Its Transmission Operator.
- R8.** Each Generator Operator shall have Interpersonal Communication capability with the following entities (unless the Generator Operator experiences a failure of its

Interpersonal Communication capability in which case Requirement R11 shall apply):  
*[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*

**8.1.** Its Balancing Authority.

**8.2.** Its Transmission Operator.

**R9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communication capability at least once each calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communication capability within 2 hours. *[Violation Risk Factor: Medium][Time Horizon: Real-time Operations, Same-day Operations]*

**R10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5 within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*

**R11.** Each Distribution Provider and Generator Operator that experiences a failure of its Interpersonal Communication capability shall consult each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of its Interpersonal Communication capability. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*

### **C. Measures**

**M1.** Each Reliability Coordinator shall have and provide upon request evidence that it has Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R1.)

**M2.** Each Reliability Coordinator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with all Transmission Operators and Balancing Authorities within its Reliability Coordinator Area and with each adjacent Reliability Coordinator within the same Interconnection, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R2.)

- M3.** Each Transmission Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority, Distribution Provider, and Generator Operator within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously and synchronously connected, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communication. (R3.)
- M4.** Each Transmission Operator shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Balancing Authority within its Transmission Operator Area, and each adjacent Transmission Operator asynchronously and synchronously connected, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R4.)
- M5.** Each Balancing Authority shall have and provide upon request evidence that it has Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator and Generator Operator that operates Facilities within its Balancing Authority Area, each Distribution Provider within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R5.)
- M6.** Each Balancing Authority shall have and provide upon request evidence that it designated an Alternative Interpersonal Communication capability with its Reliability Coordinator, each Transmission Operator that operates Facilities within its Balancing Authority Area, and each adjacent Balancing Authority, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R6.)
- M7.** Each Distribution Provider shall have and provide upon request evidence that that it has Interpersonal Communication capability with its Transmission Operator and its Balancing Authority, which could include, but is not limited to:

- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R7.)
- M8.** Each Generator Operator shall have and provide upon request evidence that it has Interpersonal Communication capability with its Balancing Authority and its Transmission Operator, which could include, but is not limited to:
- physical assets, or
  - dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R8.)
- M9.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it tested, at least once each calendar month, its Alternative Interpersonal Communication capability designated in Requirements R2, R4, or R6. If the test was unsuccessful, the entity shall have and provide upon request evidence that it initiated action to repair or designated a replacement Alternative Interpersonal Communication capability within 2 hours. Evidence could include, but is not limited to dated and time-stamped: test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R9.)
- M10.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have and provide upon request evidence that it notified entities as identified in Requirements R1, R3, and R5 within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasted 30 minutes or longer. Evidence could include, but is not limited to dated and time-stamped: test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R10.)
- M11.** Each Distribution Provider and Generator Operator that experienced a failure of its Interpersonal Communication capability shall have and provide upon request evidence that it consulted with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine mutually agreeable action to restore the Interpersonal Communication capability. Evidence could include, but is not limited to dated: operator logs, voice recordings, transcripts of voice recordings, or electronic communications. (R11.)

## **D. Compliance**

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

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

The Regional Entity shall serve as the Compliance Enforcement Authority (CEA) unless the applicable entity is owned, operated, or controlled by the Regional Entity. In such cases, the ERO or a Regional Entity approved by FERC or other applicable governmental authority shall serve as the CEA.

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



Compliance Audit  
Self-Certification  
Spot Checking  
Compliance Investigation  
Self-Reporting  
Complaint

### **1.3. Data Retention**

The Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, and Generator Operator 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 retain evidence of Requirements R1, R2, R9, and R10, Measures M1, M2, M9, and M10 for the most recent twelve calendar months.
- The Transmission Operator shall retain evidence of Requirements R3, R4, R9, and R10, Measures M3, M4, M9, and M10 for the most recent twelve calendar months.
- The Balancing Authority shall retain evidence of Requirements R5, R6, R9, and R10, Measures M5, M6, M9, and M10 for the most recent twelve calendar months.
- The Distribution Provider shall retain evidence of Requirements R7 and R11, Measures M7 and M11 for the most recent twelve calendar months.
- The Generator Operator shall retain evidence of Requirements R8 and R11, Measures M8 and M11 for the most recent twelve calendar months.

If a Reliability Coordinator, Transmission Operator, Balancing Authority, Distribution Provider, or Generator Operator is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

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

### **1.4. Additional Compliance Information**

None.

**2. Violation Severity Levels**

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	N/A	N/A	The Reliability Coordinator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Reliability Coordinator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R1, Parts 1.1 or 1.2, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R2	N/A	N/A	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R2, Parts 2.1 or 2.2.	The Reliability Coordinator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R2, Parts 2.1 or 2.2.
R3	N/A	N/A	The Transmission Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Transmission Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R3, Parts 3.1, 3.2, 3.3, 3.4, 3.5, or 3.6, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R4	N/A	N/A	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.	The Transmission Operator failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R4, Parts 4.1, 4.2, 4.3, or 4.4.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
R5	N/A	N/A	The Balancing Authority failed to have Interpersonal Communication capability with one of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.	The Balancing Authority failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R5, Parts 5.1, 5.2, 5.3, 5.4, or 5.5, except when the Reliability Coordinator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R10.
R6	N/A	N/A	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with one of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.	The Balancing Authority failed to designate Alternative Interpersonal Communication capability with two or more of the entities listed in Requirement R6, Parts 6.1, 6.2, or 6.3.
R7	N/A	N/A	The Distribution Provider failed to have Interpersonal Communication capability with one of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Distribution Provider failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R7, Parts 7.1 or 7.2, except when the Distribution Provider experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R8</b>	N/A	N/A	The Generator Operator failed to have Interpersonal Communication capability with one of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.	The Generator Operator failed to have Interpersonal Communication capability with two or more of the entities listed in Requirement R8, Parts 8.1 or 8.2, except when a Generator Operator experienced a failure of its Interpersonal Communication capability in accordance with Requirement R11.
<b>R9</b>	The Reliability Coordinator, Transmission Operator, and Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 2 hours and less than or equal to 4 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, and Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 4 hours and less than or equal to 6 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, and Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 6 hours and less than or equal to 8 hours upon an unsuccessful test.	The Reliability Coordinator, Transmission Operator, and Balancing Authority failed to test the Alternative Interpersonal Communication capability once each calendar month.  OR The Reliability Coordinator, Transmission Operator, and Balancing Authority tested the Alternative Interpersonal Communication capability but failed to initiate action to repair or designate a replacement Alternative Interpersonal Communication in more than 8 hours upon an unsuccessful test.

R#	Lower VSL	Moderate VSL	High VSL	Severe VSL
<b>R10</b>	The Reliability Coordinator, Transmission Operator, and Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 60 minutes but less than or equal to 70 minutes.	The Reliability Coordinator, Transmission Operator, and Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 70 minutes but less than or equal to 80 minutes.	The Reliability Coordinator, Transmission Operator, and Balancing Authority failed to notify the entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 80 minutes but less than or equal to 90 minutes.	The Reliability Coordinator, Transmission Operator, and Balancing Authority failed to notify the identified entities identified in Requirements R1, R3, and R5 upon the detection of a failure of its Interpersonal Communication capability in more than 90 minutes.
<b>R11</b>	N/A	N/A	N/A	The Distribution Provider or Generator Operator that experienced a failure of its Interpersonal Communication capability failed to consult with each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of the Interpersonal Communication capability.

**E. Regional Differences**

None identified.

**F. Associated Documents****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
1	April 4, 2007	Regulatory Approval — Effective Date	New
1	April 6, 2007	Requirement 1, added the word “for” between “facilities” and “the exchange.”	Errata
2	TBD	Revised in accordance with SAR for Project 2006-06, Reliability Coordination (RC SDT). Replaced R1 with R1-R8; R2 replaced by R9; R3 included within new R1; R4 remains enforce pending Project 2007-02; R5 redundant with EOP-008-0, retiring R5 as redundant with EOP-008-0, R1; retiring R6, relates to ERO procedures; R10 & R11, new.	Revised