



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

April 18, 2011

**VIA ELECTRONIC FILING**

Ms. Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, D.C. 20426

**Re: *Mandatory Reliability Standards for Interconnection Reliability Operating Limits, Docket No. RM10-15-000***

Dear Ms. Bose:

The North American Electric Reliability Corporation (“NERC”) hereby submits this Request for Clarification of Order No. 748 Regarding Mandatory Reliability Standards for Interconnection Reliability Operating Limits.<sup>1</sup> NERC is concurrently filing a request for clarification of Order No. 749 Regarding System Restoration Reliability Standards<sup>2</sup> because the same issue regarding the effective version and effective date of the EOP-001 standard was raised in both Order Nos. 748 and 749.

Please contact the undersigned if you have any questions.

*/s/ Holly A. Hawkins*  
Holly A. Hawkins  
Attorney for North American Electric  
Reliability Corporation

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<sup>1</sup> *Mandatory Reliability Standards for Interconnection Reliability Operating Limits*, 134 FERC ¶ 61,213 (March 17, 2011) (Order No. 748).

<sup>2</sup> *System Restoration Reliability Standards*, 134 FERC ¶ 61,215 (March 17, 2011) (Order No. 749).

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**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

**Mandatory Reliability Standards for                    )           Docket No. RM10-15-000**  
**Interconnection Reliability Operating Limits        )**

**REQUEST OF THE  
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION  
FOR CLARIFICATION OF ORDER No. 748 REGARDING MANDATORY  
RELIABILITY STANDARDS FOR INTERCONNECTION RELIABILITY  
OPERATING LIMITS**

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April 18, 2011

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## **I. INTRODUCTION**

Pursuant to Rule 212<sup>1</sup> of the Federal Energy Regulatory Commission’s (“FERC” or the “Commission”) Rules of Practice and Procedure, 18 C.F.R. §§ 385.212, the North American Electric Reliability Corporation (“NERC”) requests clarification of the Commission’s March 17, 2011 Order No. 748 (“Order No. 748”).<sup>2</sup> The Commission’s Order No. 748 approved three new Interconnection Reliability Operations and Coordination Reliability Standards (IRO-008-1, IRO-009-1, and IRO-101-1a), and seven revised Reliability Standards related to Emergency Preparedness and Operations, Interconnection Reliability Operations and Coordination, and Transmission Operations (EOP-001-1, IRO-002-2, IRO-004-2, IRO-005-3, TOP-003-1, TOP-005-2, and TOP-006-2).

By this filing, NERC requests clarification with respect to three key elements of Order No. 748.

## **II. NOTICES AND COMMUNICATIONS**

Notices and communications with respect to this filing may be addressed to the following:

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\*Persons to be included on FERC’s service list are indicated with an asterisk. NERC requests waiver of FERC’s rules and regulations to permit the inclusion of more than two people on the service list.

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<sup>1</sup> See, 18 CFR § 385.212 (2008).

<sup>2</sup> *Mandatory Reliability Standards for Interconnection Reliability Operating Limits*, 134 FERC ¶ 61,213 (March 17, 2011) (Order No. 748).

### **III. STATEMENT OF ISSUES FOR CLARIFICATION**

Pursuant to 18 C.F.R. § 385.212, NERC seeks clarification on three issues in Order No.

748:

- 1) FERC approved the IRO-004-2 Reliability Standard in Paragraphs 1, 7, 21, and 74 of the order. The changes from IRO-004-1 to IRO-004-2 are minor, conforming changes necessary with the approval of the new IRO-008-1, IRO-009-1, and IRO-010-1a Reliability Standards. However, the effective date provision in the IRO-004-2 standard is inconsistent with the implementation of the IRO-008-1, IRO-009-1, and IRO-010-1a standards. NERC is therefore seeking clarification on this issue.
- 2) NERC is seeking clarification regarding the Commission's approval of the EOP-001-1 standard in Paragraphs 1, 7, 21, and 74 of the order. NERC requested in its petition<sup>3</sup> that the Commission approve EOP-001-1 only if the concurrent filing (requesting approval of three Emergency Operation and Preparedness standards and a new definition of the term "Blackstart Resource"<sup>4</sup>) was not previously (or concurrently) approved by the Commission. However, if the requests detailed in the two petitions submitted to FERC on December 31, 2009 were approved, as they were on March 17, 2011, then NERC requested that the Commission approve EOP-001-2 rather than EOP-001-1. Because the Commission approved both the IROL Petition and the EOP Petition concurrently, NERC is requesting clarification that the EOP-001 Version 2 standard, rather than the EOP-001 Version 1 standard, be approved.
- 3) NERC is seeking clarification regarding the effective date of the EOP-001-2 Reliability Standard. In its petition, NERC requested EOP-001-1 to become effective "the first day of the first calendar quarter, three months after applicable regulatory approval." However, NERC requested that if EOP-001-2 were to be approved, it should be made effective "twenty-four months after the first day of the first calendar quarter following applicable regulatory approval." NERC therefore seeks clarification that the EOP-001-2 Reliability Standard and the effective date provision included in that standard be approved.

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<sup>3</sup> See, *Petition of the North American Electric Reliability Corporation for Approval of Proposed New and Revised Reliability Standards for Operating Within Interconnection Operating Limits*, FERC Docket Nos. RM06-16-000, RM10-15-000 (December 31, 2009) ("IROL Petition").

<sup>4</sup> See, *Petition of the North American Electric Reliability Corporation for Approval of Three Emergency Preparedness and Operations Reliability Standards and One New Glossary Term and for Retirement of Five Existing Reliability Standards and One Glossary Term*, FERC Docket Nos. RM06-16-000, RM10-16-000 (December 31, 2009) ("EOP Petition").

#### IV. DISCUSSION OF ISSUES ADDRESSED BY THE REQUEST FOR CLARIFICATION

The first issue NERC is seeking approval on is with respect to the IRO-004-2 standard approved by the Commission in Order No. 748. While the changes from the IRO-004-1 to the IRO-004-2 standard are minor, conforming changes necessary with the approval of the new IRO-008-1, IRO-009-1, and IRO-010-1a standards, the effective date provision in the IRO-004-2 standard is inconsistent with the implementation of the new IRO standards.

In NERC's petition, NERC proposed retiring six of the seven requirements in the IRO-004-1 standard, and designated the standard with the one remaining requirement as IRO-004-2.

The effective date language in the proposed IRO-004-2 standard states that:

**Effective Date:** In those jurisdictions where no regulatory approval is required, the standard shall be retired 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 be retired effective on the latter of either April 1, 2009 or the first day of the first calendar quarter, three months after applicable regulatory approval.

Therefore, the effective date language in the IRO-004-2 standard states that the entire standard should be retired, even though one requirement will remain in effect with the approval of the IRO-004-2 standard. Accordingly, NERC requests clarification from the Commission that the effective date language in the IRO-004-2 standard should be modified as follows:

**Effective Date:** In those jurisdictions where no regulatory approval is required, the standard shall be ~~come effective~~ ~~retired~~ 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 be ~~come~~ ~~retired~~ effective on the latter of either April 1, 2009 or the first day of the first calendar quarter, three months after applicable regulatory approval.

This modification will prevent confusion with implementation of the IRO-004-2 standard, because it provides a clear effective date consistent with the implementation of the new

IRO-008, IRO-009, and IRO-010-1a Reliability Standards. A clean and redline of the IRO-004-2 standard with the revised effective date language is included as **Attachment A** to this filing.

Second, NERC is requesting clarification regarding the Commission's approval of the EOP-001-1 Reliability Standard. In its petition, NERC requested that the Commission approve EOP-001-1 only if the concurrent EOP Petition is not previously (or concurrently) approved by the Commission. However, if the requests detailed in the two petitions submitted to FERC on December 31, 2009 are approved, as they were on March 17, 2011, then NERC requested that the Commission approve EOP-001-2 rather than EOP-001-1. The proposed EOP-001-2 standard is included as **Attachment B** to this filing.

NERC included the EOP-001-1 standard in the IROL petition, but only requested Commission approval of EOP-001-1 in the event that the Commission not approve the contemporaneously filed Emergency Preparedness and Operations Reliability Standards ("EOP standards") in the EOP Petition. However, because the Commission concurrently approved both of NERC's petitions containing the IROL standards and the EOP standards, the correct version of the standard that should have been approved is EOP-001-2 because EOP-001-2 includes conforming changes necessary for implementation of both the IROL and EOP standards. It is unclear from FERC's Orders on March 17, 2011 that this is the case. The Commission repeatedly states throughout Order No. 748 that EOP-001-1 is approved.<sup>5</sup> However, the Commission also notes in Footnote 15 of Order No. 748 that: "[i]n this Final Rule, the Commission is addressing Version 2 of EOP-001 contained in Exhibit B of the NERC Petition which reflects both the IRO and the EOP proposed changes."<sup>6</sup>

In the IROL Petition submitted to FERC on December 31, 2009, NERC stated:

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<sup>5</sup> See, Paragraphs 1, 7, 21, and 74 of Order No. 748.

<sup>6</sup> Order No. 748, Footnote 15, See also *System Restoration Reliability Standards*, 134 FERC ¶ 61,215 (March 17, 2011) (Order No. 749) at Footnote 13.

NERC recognizes that revised standard EOP-001 is included for approval in this filing as well as in the filing requesting approval of Emergency Preparedness and Operations Reliability Standards (“System Restoration and Blackstart Filing”) of December 31, 2009. The modifications proposed to the EOP-001 standard in this filing and in the System Restoration and Blackstart Filing include changes unique to each project. NERC cannot predict the outcome or sequence in which FERC will act on these filings. Therefore, NERC includes in Exhibit A a proposed Version 1 of EOP-001 that exclusively contains the changes directed by the IRO project in the event FERC acts on this filing before the System Restoration and Blackstart Filing or if the System Restoration and Blackstart Filing is remanded before the IRO filing is acted upon. In the event that FERC acts to approve the System Restoration and Blackstart Filing first, NERC also includes in Exhibit B Version 2 of EOP-001 that contains both the System Restoration and Blackstart team directed changes and those proposed in this IRO filing. Because EOP-001-0 is the currently-approved standard in effect, the changes proposed in this filing are applied against this Version 0. Should the System Restoration and Blackstart Filing be affirmatively acted upon first, NERC modifies its requests for FERC approval of EOP-001-2 as provided in Exhibit B.

Accordingly, for the reasons stated above, NERC requests FERC to clarify that EOP-001-2 is approved, and that Version 1 of EOP-001 included in the IROL Petition will not become effective.

The third issue requiring clarification involves the effective date for the EOP-001-2 standard. In its filings, NERC requested that EOP-001-1 become effective “the first day of the first calendar quarter, three months after applicable regulatory approval.” However, NERC requested that if EOP-001-2 were to be approved, it should be made effective “twenty-four months after the first day of the first calendar quarter following applicable regulatory approval.” The effective date language in the EOP-001-2 standard is necessary to coincide with the Commission’s approval of the effective date provisions in the EOP standards and the IROL standards. NERC therefore seeks clarification that Version 2 of the EOP-001 standard and its proposed effective date be made effective in accordance with FERC’s Order No. 748.

V. **CONCLUSION**

For the reasons set forth in this filing, NERC requests that FERC issue an Order granting the Request for Clarification as set forth above.

Respectfully submitted,

*/s/ Holly A. Hawkins*

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**CERTIFICATE OF SERVICE**

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 18th day of April, 2011.

*/s/ Holly A. Hawkins*  
Holly A. Hawkins  
*Attorney for North American Electric  
Reliability Corporation*

## **Exhibit A**

**Reliability Standard IRO-004-2 with the revised effective date language  
(clean and redline)**

## A. Introduction

1. **Title:** **Reliability Coordination — Operations Planning**
2. **Number:** IRO-004-2
3. **Purpose:** Each Reliability Coordinator must conduct next-day reliability analyses for its Reliability Coordinator Area to ensure the Bulk Electric System can be operated reliably in anticipated normal and Contingency conditions. System studies must be conducted to highlight potential interface and other operating limits, including overloaded transmission lines and transformers, voltage and stability limits, etc. Plans must be developed to alleviate System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) violations.
4. **Applicability**
  - 4.1. Balancing Authorities.
  - 4.2. Transmission Operators.
  - 4.3. Transmission Service Providers.
5. **Effective Date:** 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. Each Transmission Operator, Balancing Authority, and Transmission Service Provider shall comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events.

## C. Measures

- M1. None

## D. Compliance

### 1. Compliance Monitoring Process

Entities will be selected for an on-site audit at least every three years. For a selected 30-day period in the previous three calendar months prior to the on site audit, Reliability Coordinators will be asked to provide documentation showing that next-day reliability analyses were conducted each day to ensure the bulk power system could be operated in anticipated normal and Contingency conditions; and that they identified potential interface and other operating limits including overloaded transmission lines and transformers, voltage and stability limits, etc.

- 1.1. **Compliance Monitoring Responsibility**
- 1.2. **Compliance Monitoring Period and Reset Time Frame**
- 1.3. **Data Retention**
- 1.4. **Additional Compliance Information**

**2. Violation Severity Levels**

Requirement	Lower	Moderate	High	Severe
R1	The responsible entity failed to comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events on one (1) occasion during a calendar month.	The responsible entity failed to comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events on two (2) to three (3) occasions during a calendar month.	The responsible entity failed to comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events on four (4) to five (5) occasions during a calendar month.	The responsible entity failed to comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events on more than five (5) occasions during a calendar month.

**E. Regional Variances**

**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		Replaced Levels of Non-compliance with the February 28, 2008 BOT approved Violation Severity Levels Retired R1 through R6, and associated Measures, Data Retention, and VSLs	Revision

## A. Introduction

1. **Title:** **Reliability Coordination — Operations Planning**
2. **Number:** IRO-004-2
3. **Purpose:** Each Reliability Coordinator must conduct next-day reliability analyses for its Reliability Coordinator Area to ensure the Bulk Electric System can be operated reliably in anticipated normal and Contingency conditions. System studies must be conducted to highlight potential interface and other operating limits, including overloaded transmission lines and transformers, voltage and stability limits, etc. Plans must be developed to alleviate System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) violations.
4. **Applicability**
  - 4.1. Balancing Authorities.
  - 4.2. Transmission Operators.
  - 4.3. Transmission Service Providers.
5. **Effective Date:** In those jurisdictions where no regulatory approval is required, the standard shall ~~become retired~~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 retired~~ 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. Each Transmission Operator, Balancing Authority, and Transmission Service Provider shall comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events.

## C. Measures

- M1. None

## D. Compliance

1. **Compliance Monitoring Process**

Entities will be selected for an on-site audit at least every three years. For a selected 30-day period in the previous three calendar months prior to the on site audit, Reliability Coordinators will be asked to provide documentation showing that next-day reliability analyses were conducted each day to ensure the bulk power system could be operated in anticipated normal and Contingency conditions; and that they identified potential interface and other operating limits including overloaded transmission lines and transformers, voltage and stability limits, etc.

  - 1.1. **Compliance Monitoring Responsibility**
  - 1.2. **Compliance Monitoring Period and Reset Time Frame**
  - 1.3. **Data Retention**
  - 1.4. **Additional Compliance Information**

**2. Violation Severity Levels**

Requirement	Lower	Moderate	High	Severe
R1	The responsible entity failed to comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events on one (1) occasion during a calendar month.	The responsible entity failed to comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events on two (2) to three (3) occasions during a calendar month.	The responsible entity failed to comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events on four (4) to five (5) occasions during a calendar month.	The responsible entity failed to comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events on more than five (5) occasions during a calendar month.

**E. Regional Variances**

**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		Replaced Levels of Non-compliance with the February 28, 2008 BOT approved Violation Severity Levels Retired R1 through R6, and associated Measures, Data Retention, and VSLs	Revision



**Exhibit B**

**Proposed Reliability Standard EOP-001-2**

### A. Introduction

1. **Title:** **Emergency Operations Planning**
2. **Number:** EOP-001-2
3. **Purpose:** Each Transmission Operator and Balancing Authority needs to develop, maintain, and implement a set of plans to mitigate operating emergencies. These plans need to be coordinated with other Transmission Operators and Balancing Authorities, and the Reliability Coordinator.
4. **Applicability**
  - 4.1. Balancing Authorities.
  - 4.2. Transmission Operators.
5. **Proposed Effective Date:** Twenty-four months after the first day of the first calendar quarter following applicable regulatory approval. In those jurisdictions where no regulatory approval is required, all requirements go into effect twenty-four months after Board of Trustees adoption.

### B. Requirements

- R1. Balancing Authorities shall have operating agreements with adjacent Balancing Authorities that shall, at a minimum, contain provisions for emergency assistance, including provisions to obtain emergency assistance from remote Balancing Authorities.
- R2. Each Transmission Operator and Balancing Authority shall:
  - R2.1. Develop, maintain, and implement a set of plans to mitigate operating emergencies for insufficient generating capacity.
  - R2.2. Develop, maintain, and implement a set of plans to mitigate operating emergencies on the transmission system.
  - R2.3. Develop, maintain, and implement a set of plans for load shedding.
- R3. Each Transmission Operator and Balancing Authority shall have emergency plans that will enable it to mitigate operating emergencies. At a minimum, Transmission Operator and Balancing Authority emergency plans shall include:
  - R3.1. Communications protocols to be used during emergencies.
  - R3.2. A list of controlling actions to resolve the emergency. Load reduction, in sufficient quantity to resolve the emergency within NERC-established timelines, shall be one of the controlling actions.
  - R3.3. The tasks to be coordinated with and among adjacent Transmission Operators and Balancing Authorities.
  - R3.4. Staffing levels for the emergency.
- R4. Each Transmission Operator and Balancing Authority shall include the applicable elements in Attachment 1-EOP-001-0 when developing an emergency plan.
- R5. The Transmission Operator and Balancing Authority shall annually review and update each emergency plan. The Transmission Operator and Balancing Authority shall provide a copy of its updated emergency plans to its Reliability Coordinator and to neighboring Transmission Operators and Balancing Authorities.

- R6.** The Transmission Operator and Balancing Authority shall coordinate its emergency plans with other Transmission Operators and Balancing Authorities as appropriate. This coordination includes the following steps, as applicable:
- R6.1.** The Transmission Operator and Balancing Authority shall establish and maintain reliable communications between interconnected systems.
  - R6.2.** The Transmission Operator and Balancing Authority shall arrange new interchange agreements to provide for emergency capacity or energy transfers if existing agreements cannot be used.
  - R6.3.** The Transmission Operator and Balancing Authority shall coordinate transmission and generator maintenance schedules to maximize capacity or conserve the fuel in short supply. (This includes water for hydro generators.)
  - R6.4.** The Transmission Operator and Balancing Authority shall arrange deliveries of electrical energy or fuel from remote systems through normal operating channels.

### **C. Measures**

- M1.** The Transmission Operator and Balancing Authority shall have its emergency plans available for review by the Regional Reliability Organization at all times.
- M2.** The Transmission Operator and Balancing Authority shall have its two most recent annual self-assessments available for review by the Regional Reliability Organization at all times.

### **D. Compliance**

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

##### **1.1. Compliance Monitoring Responsibility**

Regional Reliability Organization.

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

The Regional Reliability Organization shall review and evaluate emergency plans every three years to ensure that the plans consider the applicable elements of Attachment 1-EOP-001-0.

The Regional Reliability Organization may elect to request self-certification of the Transmission Operator and Balancing Authority in years that the full review is not done.

Reset: one calendar year.

##### **1.3. Data Retention**

Current plan available at all times.

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

Not specified.

## Standard EOP-001-2 — Emergency Operations Planning

### 2. Violation Severity Levels:

Requirement	Lower	Moderate	High	Severe
R1	The Balancing Authority failed to demonstrate the existence of the necessary operating agreements for less than 25% of the adjacent BAs. Or less than 25% of those agreements do not contain provisions for emergency assistance.	The Balancing Authority failed to demonstrate the existence of the necessary operating agreements for 25% to 50% of the adjacent BAs.  Or 25 to 50% of those agreements do not contain provisions for emergency assistance.	The Balancing Authority failed to demonstrate the existence of the necessary operating agreements for 50% to 75% of the adjacent BAs.  Or 50% to 75% of those agreements do not contain provisions for emergency assistance.	The Balancing Authority failed to demonstrate the existence of the necessary operating agreements for 75% or more of the adjacent BAs.  Or more than 75% of those agreements do not contain provisions for emergency assistance.
R2	The Transmission Operator or Balancing Authority failed to comply with one (1) of the sub-components.	The Transmission Operator or Balancing Authority failed to comply with two (2) of the sub-components.	N/A	The Transmission Operator or Balancing Authority has failed to comply with three (3) of the sub-components.
R2.1	The Transmission Operator or Balancing Authority's emergency plans to mitigate insufficient generating capacity are missing minor details or minor program/procedural elements.	The Transmission Operator or Balancing Authority's has demonstrated the existence of emergency plans to mitigate insufficient generating capacity emergency plans but the plans are not maintained.	The Transmission Operator or Balancing Authority's emergency plans to mitigate insufficient generating capacity emergency plans are neither maintained nor implemented.	The Transmission Operator or Balancing Authority has failed to develop emergency mitigation plans for insufficient generating capacity.
R2.2	The Transmission Operator or Balancing Authority's plans to mitigate transmission system emergencies are missing minor details or minor program/procedural elements.	The Transmission Operator or Balancing Authority's has demonstrated the existence of transmission system emergency plans but are not maintained.	The Transmission Operator or Balancing Authority's transmission system emergency plans are neither maintained nor implemented.	The Transmission Operator or Balancing Authority has failed to develop, maintain, and implement operating emergency mitigation plans for emergencies on the transmission system.

**Standard EOP-001-2 — Emergency Operations Planning**

<b>Requirement</b>	<b>Lower</b>	<b>Moderate</b>	<b>High</b>	<b>Severe</b>
R2.3	The Transmission Operator or Balancing Authority's load shedding plans are missing minor details or minor program/procedural elements.	The Transmission Operator or Balancing Authority's has demonstrated the existence of load shedding plans but are not maintained.	The Transmission Operator or Balancing Authority's load shedding plans are partially compliant with the requirement but are neither maintained nor implemented.	The Transmission Operator or Balancing Authority has failed to develop, maintain, and implement load shedding plans.
R3	The Transmission Operator or Balancing Authority failed to comply with one (1) of the sub-components.	The Transmission Operator or Balancing Authority failed to comply with two (2) of the sub-components.	The Transmission Operator or Balancing Authority has failed to comply with three (3) of the sub-components.	The Transmission Operator or Balancing Authority has failed to comply with all four (4) of the sub-components.
R3.1	The Transmission Operator or Balancing Authority's communication protocols included in the emergency plan are missing minor program/procedural elements.	N/A	N/A	The Transmission Operator or Balancing Authority has failed to include communication protocols in its emergency plans to mitigate operating emergencies.
R3.2	The Transmission Operator or Balancing Authority's list of controlling actions has resulted in meeting the intent of the requirement but is missing minor program/procedural elements.	N/A	The Transmission Operator or Balancing Authority provided a list of controlling actions, however the actions fail to resolve the emergency within NERC-established timelines.	The Transmission Operator or Balancing Authority has failed to provide a list of controlling actions to resolve the emergency.

**Standard EOP-001-2 — Emergency Operations Planning**

<b>Requirement</b>	<b>Lower</b>	<b>Moderate</b>	<b>High</b>	<b>Severe</b>
R3.3	The Transmission Operator or Balancing Authority has demonstrated coordination with Transmission Operators and Balancing Authorities but is missing minor program/procedural elements.	N/A	N/A	The Transmission Operator or Balancing Authority has failed to demonstrate the tasks to be coordinated with adjacent Transmission Operator and Balancing Authorities as directed by the requirement.
R3.4	The Transmission Operator or Balancing Authority's emergency plan does not include staffing levels for the emergency	N/A	N/A	N/A
R4	The Transmission Operator and Balancing Authority's emergency plan has complied with 90% or more of the number of sub-components.	The Transmission Operator and Balancing Authority's emergency plan has complied with 70% to 90% of the number of sub-components.	The Transmission Operator and Balancing Authority's emergency plan has complied with between 50% to 70% of the number of sub-components.	The Transmission Operator and Balancing Authority's emergency plan has complied with 50% or less of the number of sub-components
R5	The Transmission Operator and Balancing Authority is missing minor program/procedural elements.	The Transmission Operator and Balancing Authority has failed to annually review one of it's emergency plans	The Transmission Operator and Balancing Authority has failed to annually review two of its emergency plans or communicate with one of it's neighboring Balancing Authorities.	The Transmission Operator and Balancing Authority has failed to annually review and/or communicate any emergency plans with its Reliability Coordinator, neighboring Transmission Operators or Balancing Authorities.
R6	The Transmission Operator and/or the Balancing Authority failed to comply with one (1) of the sub-components.	The Transmission Operator and/or the Balancing Authority failed to comply with two (2) of the sub-components.	The Transmission Operator and/or the Balancing Authority has failed to comply with three (3) of the sub-components.	The Transmission Operator and/or the Balancing Authority has failed to comply with four (4) or more of the sub-components.

**Standard EOP-001-2 — Emergency Operations Planning**

<b>Requirement</b>	<b>Lower</b>	<b>Moderate</b>	<b>High</b>	<b>Severe</b>
R6.1	The Transmission Operator or Balancing Authority has failed to establish and maintain reliable communication between interconnected systems.	N/A	N/A	N/A
R6.2	The Transmission Operator or Balancing Authority has failed to arrange new interchange agreements to provide for emergency capacity or energy transfers with required entities when existing agreements could not be used.	N/A	N/A	N/A
R6.3	The Transmission Operator or Balancing Authority has failed to coordinate transmission and generator maintenance schedules to maximize capacity or conserve fuel in short supply.	N/A	N/A	N/A
R6.4	The Transmission Operator or Balancing Authority has failed to arrange for deliveries of electrical energy or fuel from remote systems through normal operating channels.	N/A	N/A	N/A

**E. Regional Differences**

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	October 17, 2008	Deleted R2 Replaced Levels of Non-compliance with the February 28, 2008 BOT approved Violation Severity Levels Corrected typographical errors in BOT approved version of VSLs	Revised
2	To be determined	Removed R2.4 as redundant with EOP-005-2 Requirement R1 for the Transmission Operator; the Balancing Authority does not need a restoration plan.	
2	August 5, 2009	Approved by Board of Trustees	Revised



**Attachment 1-EOP-001-2**

**Elements for Consideration in Development of Emergency Plans**

1. Fuel supply and inventory — An adequate fuel supply and inventory plan that recognizes reasonable delays or problems in the delivery or production of fuel.
2. Fuel switching — Fuel switching plans for units for which fuel supply shortages may occur, e.g., gas and light oil.
3. Environmental constraints — Plans to seek removal of environmental constraints for generating units and plants.
4. System energy use — The reduction of the system's own energy use to a minimum.
5. Public appeals — Appeals to the public through all media for voluntary load reductions and energy conservation including educational messages on how to accomplish such load reduction and conservation.
6. Load management — Implementation of load management and voltage reductions, if appropriate.
7. Optimize fuel supply — The operation of all generating sources to optimize the availability.
8. Appeals to customers to use alternate fuels — In a fuel emergency, appeals to large industrial and commercial customers to reduce non-essential energy use and maximize the use of customer-owned generation that rely on fuels other than the one in short supply.
9. Interruptible and curtailable loads — Use of interruptible and curtailable customer load to reduce capacity requirements or to conserve the fuel in short supply.
10. Maximizing generator output and availability — The operation of all generating sources to maximize output and availability. This should include plans to winterize units and plants during extreme cold weather.
11. Notifying IPPs — Notification of cogeneration and independent power producers to maximize output and availability.
12. Requests of government — Requests to appropriate government agencies to implement programs to achieve necessary energy reductions.
13. Load curtailment — A mandatory load curtailment plan to use as a last resort. This plan should address the needs of critical loads essential to the health, safety, and welfare of the community. Address firm load curtailment.
14. Notification of government agencies — Notification of appropriate government agencies as the various steps of the emergency plan are implemented.
15. Notifications to operating entities — Notifications to other operating entities as steps in emergency plan are implemented.

## A. Introduction

1. **Title:** Emergency Operations Planning
2. **Number:** EOP-001-02
3. **Purpose:** Each Transmission Operator and Balancing Authority needs to develop, maintain, and implement a set of plans to mitigate operating emergencies. These plans need to be coordinated with other Transmission Operators and Balancing Authorities, and the Reliability Coordinator.
4. **Applicability**
  - 4.1. Balancing Authorities.
  - 4.2. Transmission Operators.
5. **Proposed Effective Date:** ~~April 1, 2005~~ Twenty-four months after the first day of the first calendar quarter following applicable regulatory approval. In those jurisdictions where no regulatory approval is required, all requirements go into effect twenty-four months after Board of Trustees adoption.

## B. Requirements

- R1. Balancing Authorities shall have operating agreements with adjacent Balancing Authorities that shall, at a minimum, contain provisions for emergency assistance, including provisions to obtain emergency assistance from remote Balancing Authorities.
- ~~R2. The Transmission Operator shall have an emergency load reduction plan for all identified IROLs. The plan shall include the details on how the Transmission Operator will implement load reduction in sufficient amount and time to mitigate the IROL violation before system separation or collapse would occur. The load reduction plan must be capable of being implemented within 30 minutes.~~
- R2. Each Transmission Operator and Balancing Authority shall:
  - R2.1. Develop, maintain, and implement a set of plans to mitigate operating emergencies for insufficient generating capacity.
  - R2.2. Develop, maintain, and implement a set of plans to mitigate operating emergencies on the transmission system.
  - R2.3. Develop, maintain, and implement a set of plans for load shedding.
- R3. Each Transmission Operator and Balancing Authority shall have emergency plans that will enable it to mitigate operating emergencies. At a minimum, Transmission Operator and Balancing Authority emergency plans shall include:
  - R3.1. Communications protocols to be used during emergencies.
  - R3.2. A list of controlling actions to resolve the emergency. Load reduction, in sufficient quantity to resolve the emergency within NERC-established timelines, shall be one of the controlling actions.
  - R3.3. The tasks to be coordinated with and among adjacent Transmission Operators and Balancing Authorities.
  - R3.4. Staffing levels for the emergency.
- R4. Each Transmission Operator and Balancing Authority shall include the applicable elements in Attachment 1-EOP-001-0 when developing an emergency plan.

- R5.** The Transmission Operator and Balancing Authority shall annually review and update each emergency plan. The Transmission Operator and Balancing Authority shall provide a copy of its updated emergency plans to its Reliability Coordinator and to neighboring Transmission Operators and Balancing Authorities.
- R6.** The Transmission Operator and Balancing Authority shall coordinate its emergency plans with other Transmission Operators and Balancing Authorities as appropriate. This coordination includes the following steps, as applicable:
  - R6.1.** The Transmission Operator and Balancing Authority shall establish and maintain reliable communications between interconnected systems.
  - R6.2.** The Transmission Operator and Balancing Authority shall arrange new interchange agreements to provide for emergency capacity or energy transfers if existing agreements cannot be used.
  - R6.3.** The Transmission Operator and Balancing Authority shall coordinate transmission and generator maintenance schedules to maximize capacity or conserve the fuel in short supply. (This includes water for hydro generators.)
  - R6.4.** The Transmission Operator and Balancing Authority shall arrange deliveries of electrical energy or fuel from remote systems through normal operating channels.

**C. Measures**

- M1.** The Transmission Operator and Balancing Authority shall have its emergency plans available for review by the Regional Reliability Organization at all times.
- M2.** The Transmission Operator and Balancing Authority shall have its two most recent annual self-assessments available for review by the Regional Reliability Organization at all times.

**D. Compliance**

**1. Compliance Monitoring Process**

**1.1. Compliance Monitoring Responsibility**

Regional Reliability Organization.

**1.2. Compliance Monitoring Period and Reset ~~Timeframes~~ Time Frame**

The Regional Reliability Organization shall review and evaluate emergency plans every three years to ensure that the plans consider the applicable elements of Attachment 1-EOP-001-0.

The Regional Reliability Organization may elect to request self-certification of the Transmission Operator and Balancing Authority in years that the full review is not done.

Reset: one calendar year.

**1.3. Data Retention**

Current plan available at all times.

**1.4. Additional Compliance Information**

Not specified.

Standard EOP-001-0-2 — Emergency Operations Planning

2. Violation Severity Levels:

<u>Requirement</u>	<u>Lower</u>	<u>Moderate</u>	<u>High</u>	<u>Severe</u>
<u>R1</u>	<u>The Balancing Authority failed to demonstrate the existence of the necessary operating agreements for less than 25% of the adjacent BAs. Or less than 25% of those agreements do not contain provisions for emergency assistance.</u>	<u>The Balancing Authority failed to demonstrate the existence of the necessary operating agreements for 25% to 50% of the adjacent BAs. Or 25 to 50% of those agreements do not contain provisions for emergency assistance.</u>	<u>The Balancing Authority failed to demonstrate the existence of the necessary operating agreements for 50% to 75% of the adjacent BAs. Or 50% to 75% of those agreements do not contain provisions for emergency assistance.</u>	<u>The Balancing Authority failed to demonstrate the existence of the necessary operating agreements for 75% or more of the adjacent BAs. Or more than 75% of those agreements do not contain provisions for emergency assistance.</u>
<u>R2</u>	<u>The Transmission Operator or Balancing Authority failed to comply with one (1) of the sub-components.</u>	<u>The Transmission Operator or Balancing Authority failed to comply with two (2) of the sub-components.</u>	<u>N/A</u>	<u>The Transmission Operator or Balancing Authority has failed to comply with three (3) of the sub-components.</u>
<u>R2.1</u>	<u>The Transmission Operator or Balancing Authority's emergency plans to mitigate insufficient generating capacity are missing minor details or minor program/procedural elements.</u>	<u>The Transmission Operator or Balancing Authority's has demonstrated the existence of emergency plans to mitigate insufficient generating capacity emergency plans but the plans are not maintained.</u>	<u>The Transmission Operator or Balancing Authority's emergency plans to mitigate insufficient generating capacity emergency plans are neither maintained nor implemented.</u>	<u>The Transmission Operator or Balancing Authority has failed to develop emergency mitigation plans for insufficient generating capacity.</u>
<u>R2.2</u>	<u>The Transmission Operator or Balancing Authority's plans to mitigate transmission system emergencies are missing minor details or minor program/procedural elements.</u>	<u>The Transmission Operator or Balancing Authority's has demonstrated the existence of transmission system emergency plans but are not maintained.</u>	<u>The Transmission Operator or Balancing Authority's transmission system emergency plans are neither maintained nor implemented.</u>	<u>The Transmission Operator or Balancing Authority has failed to develop, maintain, and implement operating emergency mitigation plans for emergencies on the transmission system.</u>

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Standard EOP-001-0-2 — Emergency Operations Planning

Requirement	Lower	Moderate	High	Severe
<u>R2.3</u>	<u>The Transmission Operator or Balancing Authority's load shedding plans are missing minor details or minor program/procedural elements.</u>	<u>The Transmission Operator or Balancing Authority's has demonstrated the existence of load shedding plans but are not maintained.</u>	<u>The Transmission Operator or Balancing Authority's load shedding plans are partially compliant with the requirement but are neither maintained nor implemented.</u>	<u>The Transmission Operator or Balancing Authority has failed to develop, maintain, and implement load shedding plans.</u>
R3	<u>The Transmission Operator or Balancing Authority failed to comply with one (1) of the sub-components.</u>	<u>The Transmission Operator or Balancing Authority failed to comply with two (2) of the sub-components.</u>	<u>The Transmission Operator or Balancing Authority has failed to comply with three (3) of the sub-components.</u>	<u>The Transmission Operator or Balancing Authority has failed to comply with all four (4) of the sub-components.</u>
R3.1	<u>The Transmission Operator or Balancing Authority's communication protocols included in the emergency plan are missing minor program/procedural elements.</u>	N/A	N/A	<u>The Transmission Operator or Balancing Authority has failed to include communication protocols in its emergency plans to mitigate operating emergencies.</u>
R3.2	<u>The Transmission Operator or Balancing Authority's list of controlling actions has resulted in meeting the intent of the requirement but is missing minor program/procedural elements.</u>	N/A	<u>The Transmission Operator or Balancing Authority provided a list of controlling actions, however the actions fail to resolve the emergency within NERC-established timelines.</u>	<u>The Transmission Operator or Balancing Authority has failed to provide a list of controlling actions to resolve the emergency.</u>

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Standard EOP-001-0-2 — Emergency Operations Planning

Requirement	Lower	Moderate	High	Severe
<u>R3.3</u>	<u>The Transmission Operator or Balancing Authority has demonstrated coordination with Transmission Operators and Balancing Authorities but is missing minor program/procedural elements.</u>	N/A	N/A	<u>The Transmission Operator or Balancing Authority has failed to demonstrate the tasks to be coordinated with adjacent Transmission Operator and Balancing Authorities as directed by the requirement.</u>
<u>R3.4</u>	<u>The Transmission Operator or Balancing Authority's emergency plan does not include staffing levels for the emergency</u>	N/A	N/A	N/A
<u>R4</u>	<u>The Transmission Operator and Balancing Authority's emergency plan has complied with 90% or more of the number of sub-components.</u>	<u>The Transmission Operator and Balancing Authority's emergency plan has complied with 70% to 90% of the number of sub-components.</u>	<u>The Transmission Operator and Balancing Authority's emergency plan has complied with between 50% to 70% of the number of sub-components.</u>	<u>The Transmission Operator and Balancing Authority's emergency plan has complied with 50% or less of the number of sub-components</u>
<u>R5</u>	<u>The Transmission Operator and Balancing Authority is missing minor program/procedural elements.</u>	<u>The Transmission Operator and Balancing Authority has failed to annually review one of it's emergency plans</u>	<u>The Transmission Operator and Balancing Authority has failed to annually review two of its emergency plans or communicate with one of it's neighboring Balancing Authorities.</u>	<u>The Transmission Operator and Balancing Authority has failed to annually review and/or communicate any emergency plans with its Reliability Coordinator, neighboring Transmission Operators or Balancing Authorities.</u>
<u>R6</u>	<u>The Transmission Operator and/or the Balancing Authority failed to comply with one (1) of the sub-components.</u>	<u>The Transmission Operator and/or the Balancing Authority failed to comply with two (2) of the sub-components.</u>	<u>The Transmission Operator and/or the Balancing Authority has failed to comply with three (3) of the sub-components.</u>	<u>The Transmission Operator and/or the Balancing Authority has failed to comply with four (4) or more of the sub-components.</u>

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Standard EOP-001-0-2 — Emergency Operations Planning

<u>Requirement</u>	<u>Lower</u>	<u>Moderate</u>	<u>High</u>	<u>Severe</u>
<u>R6.1</u>	<u>The Transmission Operator or Balancing Authority has failed to establish and maintain reliable communication between interconnected systems.</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>R6.2</u>	<u>The Transmission Operator or Balancing Authority has failed to arrange new interchange agreements to provide for emergency capacity or energy transfers with required entities when existing agreements could not be used.</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>R6.3</u>	<u>The Transmission Operator or Balancing Authority has failed to coordinate transmission and generator maintenance schedules to maximize capacity or conserve fuel in short supply.</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>R6.4</u>	<u>The Transmission Operator or Balancing Authority has failed to arrange for deliveries of electrical energy or fuel from remote systems through normal operating channels.</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

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**E. Regional Differences**

None identified.

**Version History**

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
<u>1</u>	<u>October 17, 2008</u>	<u>Deleted R2</u> <u>Replaced Levels of Non-compliance with the February 28, 2008 BOT approved Violation Severity Levels</u> <u>Corrected typographical errors in BOT approved version of VSLs</u>	<u>Revised</u>
<u>2</u>	<u>August 5, 2009</u>	<u>Removed R2.4 as redundant with EOP-005-2 Requirement R1 for the Transmission Operator; the Balancing Authority does not need a restoration plan.</u>	<u>Revised</u>
<u>2</u>	<u>August 8, 2009</u>	<u>Adopted by NERC Board of Trustees: August 5, 2009</u>	<u>Revised</u>

Adopted by NERC Board of Trustees: ~~February 8, 2005~~August 5, 2009  
~~Effective Date: April 1, 2005~~

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**Attachment 1-EOP-001-0**

**Elements for Consideration in Development of Emergency Plans**

1. Fuel supply and inventory — An adequate fuel supply and inventory plan that recognizes reasonable delays or problems in the delivery or production of fuel.
2. Fuel switching — Fuel switching plans for units for which fuel supply shortages may occur, e.g., gas and light oil.
3. Environmental constraints — Plans to seek removal of environmental constraints for generating units and plants.
4. System energy use — The reduction of the system’s own energy use to a minimum.
5. Public appeals — Appeals to the public through all media for voluntary load reductions and energy conservation including educational messages on how to accomplish such load reduction and conservation.
6. Load management — Implementation of load management and voltage reductions, if appropriate.
7. Optimize fuel supply — The operation of all generating sources to optimize the availability.
8. Appeals to customers to use alternate fuels — In a fuel emergency, appeals to large industrial and commercial customers to reduce non-essential energy use and maximize the use of customer-owned generation that rely on fuels other than the one in short supply.
9. Interruptible and curtailable loads — Use of interruptible and curtailable customer load to reduce capacity requirements or to conserve the fuel in short supply.
10. Maximizing generator output and availability — The operation of all generating sources to maximize output and availability. This should include plans to winterize units and plants during extreme cold weather.
11. Notifying IPPs — Notification of cogeneration and independent power producers to maximize output and availability.
12. Requests of government — Requests to appropriate government agencies to implement programs to achieve necessary energy reductions.
13. Load curtailment — A mandatory load curtailment plan to use as a last resort. This plan should address the needs of critical loads essential to the health, safety, and welfare of the community. Address firm load curtailment.
14. Notification of government agencies — Notification of appropriate government agencies as the various steps of the emergency plan are implemented.
15. Notifications to operating entities — Notifications to other operating entities as steps in emergency plan are implemented.

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