

## Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

### Description of Current Draft

This is the first draft of the proposed standard for a formal 45-day comment period.

Completed Actions	Date
Standards Committee approved Standards Authorization Request (SAR)	July 22, 2020
SAR posted for comment	February 19 – March 19, 2020
SAR posted for comment	April 22 – May 21, 2020
45-day initial formal comment period with ballot	January 27 – March 12, 2021
25-day formal comment period with ballot	April 2 – 27, 2021
10-day final ballot	May 2021

Anticipated Actions	Date
NERC Board (Board) adoption	June 2021

## A. Introduction

1. **Title:** Emergency Preparedness and Operations
2. **Number:** EOP-011-2
3. **Purpose:** To address the effects of operating emergencies by ensuring each Transmission Operator, Balancing Authority, and Generator Owner has developed plan(s) to mitigate operating Emergencies and that those plans are implemented and coordinated within the Reliability Coordinator Area as specified within the requirements.
4. **Applicability:**
  - 4.1. **Functional Entities:**
    - 4.1.1 Balancing Authority
    - 4.1.2 Reliability Coordinator
    - 4.1.3 Transmission Operator
    - 3.1.4 Generator Owner
    - 3.1.5 Generator Operator
  - 4.2. **Facilities**
    - 4.2.1 For the purpose of this standard, the term “generating unit” means all Bulk Electric System generators.
5. **Effective Date:** See Implementation Plan for Project 2019-06.

## B. Requirements and Measures

- R1. Each Transmission Operator shall develop, maintain, and implement one or more Reliability Coordinator-reviewed Operating Plan(s) to mitigate operating Emergencies in its Transmission Operator Area. The Operating Plan(s) shall include the following, as applicable: *[Violation Risk Factor: High] [Time Horizon: Real-Time Operations, Operations Planning, Long-term Planning]*
  - 1.1. Roles and responsibilities for activating the Operating Plan(s);
  - 1.2. Processes to prepare for and mitigate Emergencies including:
    - 1.2.1. Notification to its Reliability Coordinator, to include current and projected conditions, when experiencing an operating Emergency;
    - 1.2.2. Cancellation or recall of Transmission and generation outages;
    - 1.2.3. Transmission system reconfiguration;
    - 1.2.4. Redispatch of generation request;
    - 1.2.5. Provisions for operator-controlled manual Load shedding that minimizes the overlap with automatic Load shedding and are capable of being implemented in a timeframe adequate for mitigating the Emergency; and

**1.2.6.** Provisions to determine reliability impacts of:

**1.2.6.1.** cold weather conditions; and

**1.2.6.2.** extreme weather conditions.

**M1.** Each Transmission Operator will have a dated Operating Plan(s) developed in accordance with Requirement R1 and reviewed by its Reliability Coordinator; evidence such as a review or revision history to indicate that the Operating Plan(s) has been maintained; and will have as evidence, such as operator logs or other operating documentation, voice recordings or other communication documentation to show that its Operating Plan(s) was implemented for times when an Emergency has occurred, in accordance with Requirement R1.

**R2.** Each Balancing Authority shall develop, maintain, and implement one or more Reliability Coordinator-reviewed Operating Plan(s) to mitigate Capacity Emergencies and Energy Emergencies within its Balancing Authority Area. The Operating Plan(s) shall include the following, as applicable: *[Violation Risk Factor: High] [Time Horizon: Real-Time Operations, Operations Planning, Long-term Planning]*

**2.1.** Roles and responsibilities for activating the Operating Plan(s);

**2.2.** Processes to prepare for and mitigate Emergencies including:

**2.2.1.** Notification to its Reliability Coordinator, to include current and projected conditions when experiencing a Capacity Emergency or Energy Emergency;

**2.2.2.** Requesting an Energy Emergency Alert, per Attachment 1;

**2.2.3.** Managing generating resources in its Balancing Authority Area to address:

**2.2.3.1.** capability and availability;

**2.2.3.2.** fuel supply and inventory concerns;

**2.2.3.3.** fuel switching capabilities; and

**2.2.3.4.** environmental constraints.

**2.2.4.** Public appeals for voluntary Load reductions;

**2.2.5.** Requests to government agencies to implement their programs to achieve necessary energy reductions;

**2.2.6.** Reduction of internal utility energy use;

**2.2.7.** Use of Interruptible Load, curtailable Load and demand response;

**2.2.8.** Provisions for operator-controlled manual Load shedding that minimizes the overlap with automatic Load shedding and are capable of being implemented in a timeframe adequate for mitigating the Emergency; and

**2.2.9.** Provisions to determine reliability impacts of:

- 2.2.9.1. cold weather conditions; and
      - 2.2.9.2. extreme weather conditions.
- M2. Each Balancing Authority will have a dated Operating Plan(s) developed in accordance with Requirement R2 and reviewed by its Reliability Coordinator; evidence such as a review or revision history to indicate that the Operating Plan(s) has been maintained; and will have as evidence, such as operator logs or other operating documentation, voice recordings, or other communication documentation to show that its Operating Plan(s) was implemented for times when an Emergency has occurred, in accordance with Requirement R2.
- R3. The Reliability Coordinator shall review the Operating Plan(s) to mitigate operating Emergencies submitted by a Transmission Operator or a Balancing Authority regarding any reliability risks that are identified between Operating Plans. *[Violation Risk Factor: High] [Time Horizon: Operations Planning]*
  - 3.1. Within 30 calendar days of receipt, the Reliability Coordinator shall:
    - 3.1.1. Review each submitted Operating Plan(s) on the basis of compatibility and inter-dependency with other Balancing Authorities' and Transmission Operators' Operating Plans;
    - 3.1.2. Review each submitted Operating Plan(s) for coordination to avoid risk to Wide Area reliability; and
    - 3.1.3. Notify each Balancing Authority and Transmission Operator of the results of its review, specifying any time frame for resubmittal of its Operating Plan(s) if revisions are identified.
- M3. The Reliability Coordinator will have documentation, such as dated e-mails or other correspondences that it reviewed Transmission Operator and Balancing Authority Operating Plans within 30 calendar days of submittal in accordance with Requirement R3.
- R4. Each Transmission Operator and Balancing Authority shall address any reliability risks identified by its Reliability Coordinator pursuant to Requirement R3 and resubmit its Operating Plan(s) to its Reliability Coordinator within a time period specified by its Reliability Coordinator. *[Violation Risk Factor: High] [Time Horizon: Operation Planning]*
- M4. The Transmission Operator and Balancing Authority will have documentation, such as dated emails or other correspondence, with an Operating Plan(s) version history showing that it responded and updated the Operating Plan(s) within the timeframe identified by its Reliability Coordinator in accordance with Requirement R4.
- R5. Each Reliability Coordinator that receives an Emergency notification from a Transmission Operator or Balancing Authority within its Reliability Coordinator Area shall notify, within 30 minutes from the time of receiving notification, other Balancing Authorities and Transmission Operators in its Reliability Coordinator Area, and

neighboring Reliability Coordinators. *[Violation Risk Factor: High] [Time Horizon: Real-Time Operations]*

- M5.** Each Reliability Coordinator that receives an Emergency notification from a Balancing Authority or Transmission Operator within its Reliability Coordinator Area will have, and provide upon request, evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent evidence that will be used to determine if the Reliability Coordinator communicated, in accordance with Requirement R5, with other Balancing Authorities and Transmission Operators in its Reliability Coordinator Area, and neighboring Reliability Coordinators .
- R6.** Each Reliability Coordinator that has a Balancing Authority experiencing a potential or actual Energy Emergency within its Reliability Coordinator Area shall declare an Energy Emergency Alert, as detailed in Attachment 1. *[Violation Risk Factor: High] [Time Horizon: Real-Time Operations]*
- M6.** Each Reliability Coordinator, with a Balancing Authority experiencing a potential or actual Energy Emergency within its Reliability Coordinator Area, will have, and provide upon request, evidence that could include, but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent evidence that it declared an Energy Emergency Alert, as detailed in Attachment 1, in accordance with Requirement R6.
- R7.** Each Generator Owner shall implement and maintain one or more cold weather preparedness plan(s) for its generating units. The cold weather preparedness plan(s) shall include the following, at a minimum: *[Violation Risk Factor: High] [Time Horizon: Operations Planning and Real-Time Operations]*
  - 7.1.** Generating unit(s) freeze protection measures based on geographical location and plant configuration;
  - 7.2.** Annual inspection and maintenance of generating unit(s) freeze protection measures;
  - 7.3.** Generating unit(s) cold weather data, to include:
    - 7.3.1.** Generating unit(s) operating limitations in cold weather to include:
      - 7.3.1.1.** capability and availability;
      - 7.3.1.2.** fuel supply and inventory concerns;
      - 7.3.1.3.** fuel switching capabilities; and
      - 7.3.1.4.** environmental constraints.
    - 7.3.2.** Generating unit(s) minimum:
      - 7.3.2.1.** design temperature; or
      - 7.3.2.2.** historical operating temperature; or

**7.3.1.3.** current cold weather performance temperature determined by an engineering analysis.

- M7.** Each Generator Owner will have evidence documenting that its cold weather preparedness plan(s) was implemented and maintained in accordance with Requirement R7.
- R8.** Each Generator Owner in conjunction with its Generator Operator shall identify the entity responsible for providing the generating unit-specific training, and that identified entity shall provide the training to its maintenance or operations personnel responsible for implementing cold weather preparedness plan(s) developed pursuant to Requirement R7. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning, Operations Planning]*
- M8.** Each Generator Operator or Generator Owner will have documented evidence that the applicable personnel completed training of the Generator Owner's cold weather preparedness plan(s). This evidence may include, but is not limited to, documents such as personnel training records, training materials, date of training, agendas or learning objectives, attendance at pre-work briefings, review of work order tasks, tailboards, attendance logs for classroom training, and completion records for computer-based training in fulfillment of Requirement R8.

## C. Compliance

### 1. Compliance Monitoring Process

#### 1.1. Compliance Enforcement Authority

“Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity, or any entity as otherwise designated by an Applicable Governmental Authority, in their respective roles of monitoring and/or enforcing compliance with the mandatory and enforceable Reliability Standards in their respective jurisdictions.

#### 1.2. Evidence Retention

The following evidence retention period(s) identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full-time period since the last audit.

The applicable entity 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 Transmission Operator shall retain the current Operating Plan(s), evidence of review or revision history plus each version issued since the last audit and evidence of compliance since the last audit for Requirements R1 and R4 and Measures M1 and M4.
- The Balancing Authority shall retain the current Operating Plan(s), evidence of review or revision history plus each version issued since the last audit and evidence of compliance since the last audit for Requirements R2 and R4, and Measures M2 and M4.
- The Reliability Coordinator shall maintain evidence of compliance since the last audit for Requirements R3, R5, and R6 and Measures M3, M5, and M6.
- The Generator Owner shall retain the cold weather preparedness plan(s), evidence of review or revision history plus each version issued since the last audit and evidence of compliance since the last audit for Requirement R7 and Measure M7.

- 1.3. The Generator Owner or Generator Operator shall keep data or evidence to show compliance for three years or since its last compliance audit, whichever timeframe is greater, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation, for Requirement R8 and Measure M8. **Compliance Monitoring and Enforcement Program:**

As defined in the NERC Rules of Procedure; “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated Reliability Standard.

### Violation Severity Levels

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Real-time Operations, Operations Planning, Long-term Planning	High	N/A	The Transmission Operator developed a Reliability Coordinator-reviewed Operating Plan(s) to mitigate operating Emergencies in its Transmission Operator Area but failed to maintain it.	The Transmission Operator developed an Operating Plan(s) to mitigate operating Emergencies in its Transmission Operator Area but failed to have it reviewed by its Reliability Coordinator.	The Transmission Operator failed to develop an Operating Plan(s) to mitigate operating Emergencies in its Transmission Operator Area.  OR The Transmission Operator developed a Reliability Coordinator-reviewed Operating Plan(s) to mitigate operating Emergencies in its Transmission Operator Area but failed to implement it.
R2	Real-time Operations, Operations	High	N/A	The Balancing Authority developed a Reliability Coordinator-	The Balancing Authority developed an Operating Plan(s) to mitigate operating	The Balancing Authority failed to develop an



R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
	Planning, Long-term Planning			reviewed Operating Plan(s) to mitigate operating Emergencies within its Balancing Authority Area but failed to maintain it.	Emergencies within its Balancing Authority Area but failed to have it reviewed by its Reliability Coordinator.	Operating Plan(s) to mitigate operating Emergencies within its Balancing Authority Area.  OR The Balancing Authority developed a Reliability Coordinator-reviewed Operating Plan(s) to mitigate operating Emergencies within its Balancing Authority Area but failed to implement it.
<b>R3</b>	Operations Planning	High	N/A	N/A	The Reliability Coordinator identified a reliability risk but failed to notify the Balancing Authority or Transmission	The Reliability Coordinator identified a reliability risk but failed to notify the Balancing Authority or Transmission Operator.

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
					Operator within 30 calendar days.	
R4	Operations Planning	High	N/A	N/A	The Transmission Operator or Balancing Authority failed to update and resubmit its Operating Plan(s) to its Reliability Coordinator within the timeframe specified by its Reliability Coordinator.	The Transmission Operator or Balancing Authority failed to update and resubmit its Operating Plan(s) to its Reliability Coordinator.
R5	Real-time Operations	High	N/A	N/A	The Reliability Coordinator that received an Emergency notification from a Transmission Operator or Balancing Authority did not notify neighboring Reliability Coordinators, Balancing Authorities	The Reliability Coordinator that received an Emergency notification from a Transmission Operator or Balancing Authority failed to notify neighboring Reliability Coordinators, Balancing Authorities

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
					and Transmission Operators but failed to notify within 30 minutes from the time of receiving notification.	and Transmission Operators.
R6	Real-time Operations	High	N/A	N/A	N/A	The Reliability Coordinator that had a Balancing Authority experiencing a potential or actual Energy Emergency within its Reliability Coordinator Area failed to declare an Energy Emergency Alert.
R7	Operations Planning and Real-time Operations	High	The Generator Owner implemented a cold weather preparedness plan(s) but failed to maintain it.	The Generator Owner’s cold weather preparedness plan failed to include one of the applicable requirement Parts within Requirement R7.	The Generator Owner had and maintained a cold weather preparedness plan(s) but failed to fully implement it. OR	The Generator Owner does not have a cold weather preparedness plan. OR The Generator Owner has a cold

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
					The Generator Owner’s cold weather preparedness plan failed to include two of the applicable requirement Parts within Requirement R7.	weather preparedness plan, but failed to include any of the applicable requirement Parts within Requirement R7.
<b>R8</b>	Operations Planning and Real-time Operations	Medium	<p>The Generator Owner or Generator Operator failed to provide generating unit-specific training as described in Requirement R8 to the greater of:</p> <ul style="list-style-type: none"> <li>• one applicable personnel at a single generating unit; or</li> <li>• 5% or less of its total applicable personnel.</li> </ul>	<p>The Generator Owner or Generator Operator failed to provide generating unit-specific training as described in Requirement R8 to the greater of:</p> <ul style="list-style-type: none"> <li>• two applicable personnel at a single generating unit; or</li> <li>• more than 5% or less than or equal to 10% of its total applicable personnel.</li> </ul>	<p>The Generator Owner or Generator Operator failed to provide generating unit-specific training as described in Requirement R8 to the greater of:</p> <ul style="list-style-type: none"> <li>• three applicable personnel at a single generating unit; or</li> <li>• more than 10% or less than or equal to 15% of its total applicable personnel.</li> </ul>	<p>The Generator Owner or Generator Operator failed to provide generating unit-specific training as described in Requirement R8 to the greater of:</p> <ul style="list-style-type: none"> <li>• four applicable personnel at a single generating unit; or</li> <li>• more than 15% of its total applicable personnel.</li> </ul>

## D. Regional Variances

None.

## E. Interpretations

None.

## F. Associated Documents

None.

## Version History

Version	Date	Action	Change Tracking
1	November 13, 2014	Adopted by Board of Trustees	Merged EOP-001-2.1b, EOP-002-3.1 and EOP-003-2.
1	November 19, 2015	FERC approved EOP-011-1. Docket Nos. RM15-7-000, RM15-12-000, and RM15-13-000. Order No. 818	
2	TBD	Adopted by the Board of Trustees	Revised under Project 2019-06

## **Attachment 1-EOP-011-2 Energy Emergency Alerts**

### **Introduction**

This Attachment provides the process and descriptions of the levels used by the Reliability Coordinator in which it communicates the condition of a Balancing Authority which is experiencing an Energy Emergency.

#### **A. General Responsibilities**

- 1. Initiation by Reliability Coordinator.** An Energy Emergency Alert (EEA) may be initiated only by a Reliability Coordinator at 1) the Reliability Coordinator's own request, or 2) upon the request of an energy deficient Balancing Authority.
- 2. Notification.** A Reliability Coordinator who declares an EEA shall notify all Balancing Authorities and Transmission Operators in its Reliability Coordinator Area. The Reliability Coordinator shall also notify all neighboring Reliability Coordinators.

#### **B. EEA Levels**

##### **Introduction**

To ensure that all Reliability Coordinators clearly understand potential and actual Energy Emergencies in the Interconnection, NERC has established three levels of EEAs. The Reliability Coordinators will use these terms when communicating Energy Emergencies to each other. An EEA is an Emergency procedure, not a daily operating practice, and is not intended as an alternative to compliance with NERC Reliability Standards.

The Reliability Coordinator may declare whatever alert level is necessary, and need not proceed through the alerts sequentially.

##### **1. EEA 1 — All available generation resources in use.**

###### **Circumstances:**

- The Balancing Authority is experiencing conditions where all available generation resources are committed to meet firm Load, firm transactions, and reserve commitments, and is concerned about sustaining its required Contingency Reserves.
- Non-firm wholesale energy sales (other than those that are recallable to meet reserve requirements) have been curtailed.

##### **2. EEA 2 — Load management procedures in effect.**

###### **Circumstances:**

- The Balancing Authority is no longer able to provide its expected energy requirements and is an energy deficient Balancing Authority.
- An energy deficient Balancing Authority has implemented its Operating Plan(s) to mitigate Emergencies.

- An energy deficient Balancing Authority is still able to maintain minimum Contingency Reserve requirements.

During EEA 2, Reliability Coordinators and energy deficient Balancing Authorities have the following responsibilities:

**2.1 Notifying other Balancing Authorities and market participants.** The energy deficient Balancing Authority shall communicate its needs to other Balancing Authorities and market participants. Upon request from the energy deficient Balancing Authority, the respective Reliability Coordinator shall post the declaration of the alert level, along with the name of the energy deficient Balancing Authority on the RCIS website.

**2.2 Declaration period.** The energy deficient Balancing Authority shall update its Reliability Coordinator of the situation at a minimum of every hour until the EEA 2 is terminated. The Reliability Coordinator shall update the energy deficiency information posted on the RCIS website as changes occur and pass this information on to the neighboring Reliability Coordinators, Balancing Authorities and Transmission Operators.

**2.3 Sharing information on resource availability.** Other Reliability Coordinators of Balancing Authorities with available resources shall coordinate, as appropriate, with the Reliability Coordinator that has an energy deficient Balancing Authority.

**2.4 Evaluating and mitigating Transmission limitations.** The Reliability Coordinator shall review Transmission outages and work with the Transmission Operator(s) to see if it's possible to return to service any Transmission Elements that may relieve the loading on System Operating Limits (SOLs) or Interconnection Reliability Operating Limits (IROLs).

**2.5 Requesting Balancing Authority actions.** Before requesting an EEA 3, the energy deficient Balancing Authority must make use of all available resources; this includes, but is not limited to:

**2.5.1 All available generation units are on line.** All generation capable of being on line in the time frame of the Emergency is on line.

**2.5.2 Demand-Side Management.** Activate Demand-Side Management within provisions of any applicable agreements.

**3. EEA 3 — Firm Load interruption is imminent or in progress.**

**Circumstances:**

- The energy deficient Balancing Authority is unable to meet minimum Contingency Reserve requirements.

During EEA 3, Reliability Coordinators and Balancing Authorities have the following responsibilities:

**3.1 Continue actions from EEA 2.** The Reliability Coordinators and the energy deficient Balancing Authority shall continue to take all actions initiated during EEA 2.

**3.2 Declaration Period.** The energy deficient Balancing Authority shall update its Reliability Coordinator of the situation at a minimum of every hour until the EEA 3 is terminated. The Reliability Coordinator shall update the energy deficiency information posted on the RCIS website as changes occur and pass this information on to the neighboring Reliability Coordinators, Balancing Authorities, and Transmission Operators.

**3.3 Reevaluating and revising SOLs and IROLs.** The Reliability Coordinator shall evaluate the risks of revising SOLs and IROLs for the possibility of delivery of energy to the energy deficient Balancing Authority. Reevaluation of SOLs and IROLs shall be coordinated with other Reliability Coordinators and only with the agreement of the Transmission Operator whose Transmission Owner (TO) equipment would be affected. SOLs and IROLs shall only be revised as long as an EEA 3 condition exists, or as allowed by the Transmission Owner whose equipment is at risk. The following are minimum requirements that must be met before SOLs or IROLs are revised:

**3.3.1 Energy deficient Balancing Authority obligations.** The energy deficient Balancing Authority, upon notification from its Reliability Coordinator of the situation, it will immediately take whatever actions are necessary to mitigate any undue risk to the Interconnection. These actions may include Load shedding.

**3.4 Returning to pre-Emergency conditions.** Whenever energy is made available to an energy deficient Balancing Authority such that the Systems can be returned to its pre-Emergency SOLs or IROLs condition, the energy deficient Balancing Authority shall request the Reliability Coordinator to downgrade the alert level.

**3.4.1 Notification of other parties.** Upon notification from the energy deficient Balancing Authority that an alert has been downgraded, the Reliability Coordinator shall notify the neighboring Reliability Coordinators (via the RCIS), Balancing Authorities and Transmission Operators that its Systems can be returned to its normal limits.

**Alert 0 - Termination.** When the energy deficient Balancing Authority is able to meet its Load and Operating Reserve requirements, it shall request its Reliability Coordinator to terminate the EEA.

**3.4.2 Notification.** The Reliability Coordinator shall notify all other Reliability Coordinators via the RCIS of the termination. The Reliability Coordinator shall also notify the neighboring Balancing Authorities and Transmission Operators.