NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Agenda
Board of Trustees

October 23, 2023 | 10:30 a.m.-11:00 a.m. Eastern
Virtual Meeting

Attendee Webinar Link: Join Meeting *(Register and join via the link)*
Password: BoardOct2323-A (26273629 from phones and video systems)
Audio Only: +1-415-655-0002 US Toll | Access Code: 2302 517 7726

Call to Order

NERC Antitrust Compliance Guidelines

Introduction and Chair's Remarks

Agenda Items

1. **Project 2021-07 Extreme Cold Weather Grid Operations, Preparedness, and Coordination*- Adopt**
2. **Other Matters and Adjournment**

*Background materials included.

Project 2021-07 Extreme Cold Weather Grid Operations, Preparedness, and Coordination

Action

Adopt the following standards documents and authorize staff to file with applicable regulatory authorities:

- Reliability Standard - EOP-011-4 – Emergency Operations

  [EOP-011-4 Standard] [Redline to last approved]

- Reliability Standard – TOP-002-5 – Operations Planning

  [TOP-002-5 Standard] [Redline to last approved]

- Implementation Plan

  [Implementation Plan]

- Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs)

  [VRF/VSL Justification]

- Retirements

  EOP-011-3 Emergency Preparedness and Operations

  TOP-002-4 Operations Planning

Background

From February 8 - 20, 2021, extreme cold weather and precipitation affected the south central United States. Large numbers of generating units experienced outages, derates, or failures to start, resulting in energy and transmission emergencies (referred to as “the Event"). The total Event firm load shed was the largest controlled firm load shed event in U.S. history and was the third largest in quantity of outaged megawatts (MW) of load after the August 2003 northeast blackout and the August 1996 west coast blackout.

In response to the Event, a joint inquiry team (the Team) was put together consisting of individuals from the Federal Energy Regulatory Commission (FERC or the Commission), the North American Electric Reliability Corporation (NERC), Regional Entities Midwest Reliability Organization (MRO), Northeast Power Coordinating Council (NPCC), ReliabilityFirst Corporation (RF), SERC Corporation (SERC), Texas Reliability Entity (Texas RE) and Western Electricity Coordinating Council (WECC), as well as the Department of Energy and the National Oceanic and Atmospheric Administration (NOAA). The Team wrote 10 recommendations for NERC Reliability Standards revisions with two proposed timeframes. Additionally, the NERC Board of Trustees issued a resolution in November 2021 for the development of standards under this project to be completed in accordance with the staged timelines recommended by the Team. The project was split into two phases to address these recommendations on the schedule laid out by FERC and the NERC Board of Trustees.

The Board approved Reliability Standards EOP-011-3 and EOP-012-1, representing the conclusion of phase 1 work, in October 2022. FERC approved the phase 1 Reliability Standards on February

16, 2023. In its order, FERC directed further changes to Reliability Standard EOP-012-1 and its associated implementation plan, and directed that these changes be submitted within one year of the order.

Proposed Reliability Standards EOP-011-4 and TOP-002-4 represent the conclusion of phase 2 work.

A new phase, phase 3, has been initiated to address the directives for modifications to Reliability Standard EOP-012-1 contained in FERC's February 16, 2023 order.

Summary

Proposed Standard EOP-011-4 contains enhanced requirements for Transmission Operator and Balancing Authority Operating Plan(s) to mitigate emergencies in their areas. Consistent with Key Recommendations 1h and 1i of the Joint Inquiry Report, EOP-011-4 would require each Transmission Operator and Balancing Authority to include provisions in its Operating Plan(s) for mitigating emergencies that account for the critical natural gas infrastructure loads that fuel a significant portion of Bulk-Power System generation. The proposed Reliability Standard revises current requirements for Transmission Operator Operating Plans to mitigate emergencies so that Transmission Operators will be required to identify and prioritize critical natural gas infrastructure loads in manual and automatic load shedding (particularly underfrequency and undervoltage load shedding) (Requirement R1). The proposed Reliability Standard also creates a new requirement for each Transmission Operator to identify relevant entities that are required to assist with load shedding as part of its Operating Plan(s) to mitigate emergencies (Requirement R7), and it creates a new requirement for those identified entities to develop and implement a load shedding plan that accounts for reliability considerations including the identification and prioritization of critical natural gas infrastructure loads (Requirement R8). The proposed Reliability Standard also requires Balancing Authorities to exclude critical natural gas infrastructure loads from their demand response programs in extreme cold weather periods (Requirement R2).

Proposed Reliability Standard TOP-002-5 contains a new requirement, Requirement R8, which would require each Balancing Authority to develop an extreme cold weather Operating Process for its area, addressing preparations for and operations during extreme cold weather periods. This Operating Process must have, at a minimum, a methodology for identifying the extreme cold weather periods in which it will apply, appropriate to the area; a methodology to determine an adequate reserve margin during the period, considering generating unit operating limitations; and a methodology for developing a five-day hourly forecast that considers weather, demand, resource commitment, and capacity and energy reserve requirements. This new requirement addresses the need for greater specificity about the relative roles of generators and the Balancing Authority in preparing for reliable cold weather operations, consistent with the reliability considerations underlying Key Recommendation 1g.

Standards Development Process

The initial 45-day formal comment and ballot was from February 28 – April 13, 2023. Draft Reliability Standards EOP-011-4 and TOP-002-5 were balloted separately. The EOP-011-4 ballot received 45.64 percent approval and 88.69 percent quorum. The TOP-002-5 standard received 44.59 percent approval and 88.65 percent quorum. The implementation plan received 44.62 percent approval and 88.61 percent quorum.

The standard drafting team made additional changes to both standards and the implementation plan based on comments received.

On August 23, 2023, the Standards Committee approved a waiver under Section 16.0 of the Standard Processes Manual authorizing additional formal comment and ballot period (s) reduced from 45 days to as little as 20 days, with ballot conducted during the last 10 days of the comment period and final ballot reduced from 10 days to five calendar days.

A 20-day formal comment and second ballot for EOP-011-4 and TOP-002-5 was conducted August 25 – September 12, 2023. The second draft EOP-011-4 standard received 73.40 percent approval and 89.68 percent quorum. The second draft TOP-002-5 standard received 82.42 percent approval and 89.29 percent quorum. The implementation plan received 79.97 percent approval and 88.53 percent quorum.

The standard drafting team reviewed comments received and made minor clarifying changes for final ballot. The 8-day final ballot was conducted from September 29 – October 6. The EOP-011-4 ballot received 73.29 percent approval and 92.17 percent quorum. The TOP-002-5 standard received 79.56 percent approval and 91.79 percent quorum. The implementation plan received 80.69 percent approval and 91.07 percent quorum.

Minority Issues

Several Balancing Authority commenters expressed concern that the five-day hourly forecast requirement for Balancing Authority cold weather Operating Processes in proposed Reliability Standard TOP-002-5 Requirement R8 was too burdensome and not likely to provide a reliability benefit in light of weather forecast uncertainties and generation scheduling practices; these commenters favored a three-day hourly forecast requirement instead. The standard drafting team considered the comments and determined that the five-day requirement was appropriate and would benefit reliability by providing sufficient visibility for projected reserve margin requirements.

Pertinent FERC Directives

None

Cost Effectiveness

The standard drafting team sought stakeholder input on the cost effectiveness of the proposed standards during the formal comment periods. A handful of comments were concerned that these new standards will place an additional burden on entities already operating effectively in cold weather areas. The standard drafting team believes its proposed language provides flexibility to applicable entities to meet the requirements in a cost-effective manner.

Additional Information

A link to the project history and files is included here for reference:
[Project 2021-07 Extreme Cold Weather Grid Operations, Preparedness, and Coordination]