

176 FERC ¶ 61,119
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Richard Glick, Chairman;
Neil Chatterjee, James P. Danly,
Allison Clements, and Mark C. Christie.

North American Electric Reliability Corporation

Docket No. RD21-5-000

ORDER APPROVING COLD WEATHER RELIABILITY STANDARDS

(Issued August 24, 2021)

1. On June 17, 2021, the North American Electric Reliability Corporation (NERC), the Commission-certified Electric Reliability Organization (ERO), submitted a petition seeking approval of proposed Reliability Standards EOP-011-2 (Emergency Preparedness and Operations), IRO-010-4 (Reliability Coordinator Data Specification and Collection), and TOP-003-5 (Operational Reliability Data) (collectively, the Cold Weather Reliability Standards).¹ NERC requested that the Commission approve the proposed Cold Weather Reliability Standards on an expedited basis. As discussed in this order, we approve the Cold Weather Reliability Standards, their associated violation risk factors and violation severity levels, NERC's proposed implementation plan, and the retirement of the currently-effective Reliability Standards immediately prior to the effective date of the revised Reliability Standards.

I. Background

A. Section 215 and Mandatory Reliability Standards

2. Section 215 of the Federal Power Act (FPA) requires a Commission-certified ERO to develop mandatory and enforceable Reliability Standards, subject to Commission review and approval. Reliability Standards may be enforced by the ERO, subject to Commission oversight, or by the Commission independently.² Pursuant to section 215 of

¹ The proposed Reliability Standards are not attached to this order. The proposed Reliability Standards are available on the Commission's eLibrary document retrieval system in Docket No. RD21-5-000 and on the NERC website, www.nerc.com.

² 16 U.S.C. 824o(e).

the FPA, the Commission established a process to select and certify an ERO,³ and subsequently certified NERC.⁴

B. NERC Petition and Proposed Cold Weather Reliability Standards

3. On June 17, 2021, NERC filed its petition for approval of the Cold Weather Reliability Standards. NERC maintains that the proposed modifications to the Reliability Standards are consistent with Recommendation 1 of the 2018 Cold Weather Event Report,⁵ specifically, NERC states that the proposed Reliability Standards “require generators to implement plans to prepare for cold weather and require the exchange of certain generator cold weather operating parameters that would help enhance situational awareness in the operational planning and Real-time operations timeframes.”⁶

4. NERC proposes to revise currently effective Reliability Standard EOP-011-1 by adding two new requirements, Requirement R7 and Requirement R8, related to generator cold weather preparedness, including freeze protection and training. In addition, NERC proposes revising two requirement parts, Requirements R1.2.6 and R2.2.9, related to the consideration of the reliability impacts of cold weather conditions in transmission operator and balancing authority emergency operating plans.⁷ Further, NERC proposes to revise the currently-effective title of Reliability Standard EOP-011-1 from “Emergency Operations” to “Emergency Preparedness and Operations” in proposed Reliability Standard EOP-011-2 and to modify the purpose statement to reflect the addition of the

³ *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, 114 FERC ¶ 61,104, *order on reh’g*, Order No. 672-A, 114 FERC ¶ 61,328 (2006).

⁴ *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062, *order on reh’g and compliance*, 117 FERC ¶ 61,126 (2006), *aff’d sub nom. Alcoa, Inc. v. FERC*, 564 F.3d 1342 (D.C. Cir. 2009).

⁵ FERC and NERC Staff, *The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018*, at 89, (Jul. 2019), <https://www.ferc.gov/sites/default/files/2020-07/SouthCentralUnitedStatesColdWeatherBulkElectricSystemEventofJanuary17-2018.pdf>, (2018 Cold Weather Event Report).

⁶ NERC Petition at 13.

⁷ *Id.* at 14.

generator owner as an applicable entity responsible for compliance with the proposed Reliability Standard.⁸

5. NERC proposes to revise the data requirements in the currently-effective versions of the Reliability Standards in proposed Reliability Standards IRO-010-4 for reliability coordinators and TOP-003-5 for balancing authorities and transmission operators to include cold weather data developed by the generator owner under Reliability Standard EOP-011-2, Requirement R7.⁹ NERC also proposes to replace the term “Special Protection System” with “Remedial Action Scheme” throughout proposed Reliability Standards IRO-010-4 and TOP-003-5 to align the Reliability Standard language with the approved revised NERC Glossary definition of Remedial Action Scheme.¹⁰

6. NERC proposes an 18-month implementation plan for each of the Cold Weather Reliability Standards beginning on the first day of the first calendar quarter following the date of applicable regulatory approval. NERC explains that it considered the time necessary for generator owners to develop, implement, and train on their cold weather preparedness plans as well as the time for reliability coordinators, balancing authorities, and transmission operators to develop, issue, and receive data specifications with cold weather parameters.¹¹ NERC also requests retirement of the currently-effective Reliability Standards EOP-011-1, IRO-010-3, and TOP-003-4 immediately prior to the effective date of the revised Reliability Standards.

7. In addition to the proposed Reliability Standards, NERC also describes potential measures it may take to support reliability prior to the Cold Weather Reliability Standards’ mandatory and enforceable date. For example, NERC explains that it may perform outreach and training; use the NERC Alert System; issue compliance practice guides; or use its Winter Reliability Assessment. NERC commits to keeping Commission staff aware of its cold weather preparation efforts.¹²

⁸ *Id.*

⁹ *Id.* at 21-22.

¹⁰ *Id.* at 23 (citing *Revisions to Emergency Operations Reliability Standards; Revisions to Undervoltage Load Shedding Reliability Standards; Revisions to the Definition of “Remedial Action Scheme” and Related Reliability Standards*, Order No. 818, 153 FERC ¶ 61,228 (2015)) (approving the revised definition of Remedial Action Scheme).

¹¹ *Id.* at 23-24.

¹² *Id.* at 24-25.

8. Finally, NERC notes that the joint inquiry by the Commission, NERC, and Regional Entities staff on the causes of the February 2021 cold weather event in the Midwest and South Central states is currently underway.¹³ NERC states that, to the extent the inquiry leads to recommendations for further modifications of the Reliability Standards, it is “prepared to address those recommendations promptly through its standard development process.”¹⁴

II. Notice of Filing and Responsive Pleadings

9. Notice of NERC’s June 17, 2021 Petition was published in the *Federal Register*, 86 Fed. Reg. 37,750 (2021), with comments, protests, and motions to intervene due on or before July 29, 2021. The Edison Electric Institute filed a timely motion to intervene and the Electric Power Supply Association (EPSA) filed a timely motion to intervene and comments. PJM Interconnection, L.L.C. (PJM) and the Midcontinent Independent System Operator, Inc. (MISO) filed an out of time motion to intervene and comments.

III. Comments

10. EPSA expresses support for the proposed modifications to the Reliability Standards, noting that “it is imperative that preserving system reliability remain front of mind for policymakers and electric system stakeholders.”¹⁵ EPSA also highlights the comprehensive record supporting the need for modifications of the Reliability Standards to address recommendations from the 2018 Cold Weather Report.¹⁶

11. PJM and MISO state that they support NERC’s proposed Cold Weather Reliability Standards.¹⁷ PJM and MISO also recommend that the Commission encourage earlier implementation in certain regions at the “earliest date practicable within those regions.”¹⁸ PJM and MISO emphasize the need for comparability among entities’ weatherization plans and “encourages” the Commission to clarify “its expectations as to the

¹³ See *FERC, NERC to Open Joint Inquiry into 2021 Cold Weather Grid Operations*, News Release (Feb. 16, 2021), <https://www.ferc.gov/news-events/news/ferc-nerc-open-joint-inquiry-2021-cold-weather-grid-operations>.

¹⁴ NERC Petition at 25.

¹⁵ EPSA Comments at 3.

¹⁶ *Id.* at 4-5.

¹⁷ PJM MISO Joint Comments at 3.

¹⁸ *Id.* at 4.

comparability and documentation of the required plans.”¹⁹ Finally, PJM and MISO request the Commission clarify the need for annual and seasonal reporting requirements for generator owners to report plans to their Regional Entities for validation, which would provide such plans to reliability coordinators for informational purposes.

IV. Determination

A. Procedural Matters

12. Pursuant to Rule 214 of the Commission’s Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2020), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

13. Pursuant to Rule 214(d) of the Commission’s Rules of Practice and Procedure, 18 C.F.R. § 385.214(d), we grant PJM’s and MISO’s late-filed motion to intervene and comment given their interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay.

B. Substantive Matters

14. Pursuant to section 215(d)(2) of the FPA, we approve the Cold Weather Reliability Standards as just, reasonable, not unduly discriminatory or preferential and in the public interest. The Cold Weather Reliability Standards will help to address the reliability of the Bulk-Power System in the event of extreme cold weather.

15. While once described as “unusual,” multiple events over the last ten years have highlighted the potential for extreme cold weather to impact the reliability of the Bulk-Power System.²⁰ Extreme cold weather has led to generating units experiencing outages, de-rates, and failures to start. NERC and Commission reports have identified the lack of generator winterization and lack of accurate data about generator operating limitations for cold weather,²¹ which results in inaccurate operational planning analysis, as primary

¹⁹ *Id.* at 5.

²⁰ See e.g., FERC and NERC Staff, *Report on Outages and Curtailments During the Southwest Cold Weather Event of February 1-5, 2011: Causes and Recommendations* (Aug. 2011), <https://www.ferc.gov/sites/default/files/2020-04/08-16-11-report.pdf>; NERC, *Polar Vortex Review* (Sep. 2014) (2011 Report), https://www.nerc.com/pa/rrm/January%202014%20Polar%20Vortex%20Review/Polar_Vortex_Review_29_Sept_2014_Final.pdf; and the 2018 Cold Weather Event Report.

²¹ See, e.g., 2011 Report at 196 (noting that balancing authorities, reliability coordinators and generators often lacked adequate knowledge of plant temperature design limits, and thus did not realize the extent to which generation would be lost when

causes for such events. In response, the Cold Weather Reliability Standards improve situational awareness and enhance reliable operations by requiring generator owners to implement plans to prepare for cold weather and to provide certain generator cold weather operating parameters to the reliability coordinator, transmission operator, and balancing authority for use in their analyses and planning.

16. We agree with NERC that the proposed modifications to the Reliability Standards are consistent with Recommendation 1 of the 2018 Cold Weather Event Report.²² We also appreciate that NERC completed the modifications in a timely manner, and we find that the modifications address the need to winterize and ensure the accuracy of design specifications for generating units and the need for balancing authorities and reliability coordinators to be aware of, and plan for, generating units' limitations during extreme cold weather.²³

17. As described above, PJM and MISO emphasize the need for comparability among entities' weatherization plans and suggest that the Commission clarify its "expectations" on the matter. PJM and MISO also request that the Commission clarify the need for annual and seasonal reporting requirements for generator owners to report plans to their Regional Entities for validation, which would then provide such plans to reliability coordinators for informational purposes. PJM's and MISO's comments raise concerns regarding implementation of the proposed Reliability Standards, which are better directed to NERC and the Regional Entities. Accordingly, we deny the request for clarification.

18. Finally, we approve NERC's proposed implementation plan. The implementation plan provides that the Cold Weather Reliability Standards will become effective on the first day of the first calendar quarter that is 18 months after the issuance of this order.²⁴ This implementation plan is reasonable to accommodate entities that may need time to perform various engineering analysis; provide the required training; and develop the necessary capabilities to satisfy revised data specifications. Nevertheless, we strongly encourage entities that are capable of complying with the Cold Weather Reliability Standards earlier than the mandatory and enforceable date to do so. We also encourage

temperatures dropped); 2018 Cold Weather Event Report at 78 (noting that a failure to properly prepare or winterize generation facilities was the primary cause of both the 2011 Southwest and the 2018 South Central Cold Weather Events); and *Id.* at 89 (noting the need for reliability coordinators and balancing authorities to have sufficient information to identify units that may not be able to perform during an extreme weather event).

²² *Id.* at 86-87.

²³ *Id.* at 87.

²⁴ Specifically, the implementation date will be April 1, 2023.

NERC to pursue the measures it describes in its petition to support reliability during the upcoming winter season and any future winter season that elapses before the Cold Weather Reliability Standards are enforceable.²⁵

V. Information Collection Statement

19. In compliance with the requirements of the Paperwork Reduction Act of 1995, 44 U.S.C. § 3506(c)(2)(A), the Commission is soliciting public comment on revisions to the information collection FERC-725S, Mandatory Reliability Standards for the Bulk Power System; EOP Reliability Standards; FERC-725A, Mandatory Reliability Standards for the Bulk-Power System: TOP Reliability Standard; FERC-725Z, Mandatory Reliability Standards for the Bulk-Power System: IRO Reliability Standards, which will be submitted to the Office of Management and Budget (OMB) for a review of the information collection requirements. Comments on the collection of information are due within 60 days of the date this order is published in the *Federal Register*. Respondents subject to the filing requirements of this order will not be penalized for failing to respond to these collections of information unless the collections of information display a valid OMB control number.

20. The information collection requirements are subject to review by the OMB under section 3507(d) of the Paperwork Reduction Act of 1995.²⁶ OMB's regulations require approval of certain information collection requirements imposed by agency rules.²⁷ The Commission solicits comments on the Commission's need for this information, whether the information will have practical utility, the accuracy of the burden estimates, ways to enhance the quality, utility, and clarity of the information to be collected or retained, and any suggested methods for minimizing respondents' burden, including the use of automated information techniques.

21. The number of respondents below is based on an estimate of the NERC compliance registry for balancing authority, transmission operator, generator operator, generator owner, and reliability coordinator. The Commission based its paperwork burden estimates on the NERC compliance registry as of May 14, 2021. According to

²⁵ NERC Petition at 24 – 25 (“These measures may include winter weather readiness outreach and training, including site visits and webinars; the use of the NERC Alert System, such as to issue recommended actions to entities; and compliance practice guides. NERC may also use its Winter Reliability Assessment to help assess and document the industry's preparedness based on the input from the aforementioned activities and scenario analysis.”).

²⁶ 44 U.S.C. § 3507(d).

²⁷ 5 C.F.R. § 1320 (2020).

the registry, there are 98 balancing authorities, 168 transmission operators, 943 generator operators, 1,017 generator owners, and 11 reliability coordinators. The estimates are based on the change in burden from the current standards to the standards approved in this Order. The Commission based the burden estimates on staff experience, knowledge, and expertise.

22. The estimates are based combination on one-time (years 1 and 2) and ongoing execution (year 3) obligations to follow the revised Reliability Standards.

23. For Reliability Standard EOP-011-2, balancing authorities and transmission operators have a one-time cost preparing Operating Plans to mitigate operating Emergencies related to cold weather conditions and generator owners creating and implementing cold weather preparedness plans and providing associated training. Additionally, reliability coordinators will need to review Operating Plans of the balancing authorities and transmission operators. In year three and ongoing, the estimates are lower to reflect the Operating Plans and cold weather preparedness plans are in place and applicable entities are following those plans.

24. For Reliability Standard IRO-010-4, in years 1 and 2 the reliability coordinators must update documented specifications for data to include provisions for notification of bulk electric system (BES) generating units during local forecasted cold weather events. Years 3 and ongoing estimates reflect documented specifications are in place and entities being aware of their responsibilities.

25. For Reliability Standard TOP-003-5, in years 1 and 2 the transmission operator and balancing authorities must update documented specifications for data to include provisions for notification of BES generating units' operating limitations during local forecasted cold weather events. Years 3 and ongoing estimates reflect documented specifications are in place and entities being aware of their responsibilities.

26. Burden Estimates: The Commission estimates the changes in the annual public reporting burden and cost as indicated below:

Proposed Changes Due to Final Rule in Docket No. RD21-5-000					
Reliability Standard & Requirement	Type²⁸ and Number	Annual Average Number of Respons	Total Number of Responses (1)*(2)=(3)	Annual Average Number of Burden Cost (\$)	Total Burden Hours (3)*(4)=(5)

²⁸ TOP=Transmission Operator, BA=Balancing Authority, GO=Generator Owner, GOP=Generator Operator and RC=Reliability Coordinator.

	of Entity (1)	es Per Entity (2)		Hours per Response²⁹ (4)	
FERC-725S					
One Time Estimate - Years 1 and 2					
EOP-011-2	168 (TOP)	1	168	60 hrs. \$4,005.60	10,080 hrs. \$672,940.80
EOP-011-2	98 (BA)	1	98	60 hrs. \$4,005.6	5,880 hrs. \$392,548.80
EOP-011-2	1,017 (GO)	1	1,017	150 hrs. \$10,014	152,550 hrs. \$10,184,238.00
EOP-011-2	943 (GOP)	1	943	80 hrs. \$2,670.40	75,440 hrs. \$5,036,374.40
EOP-011-2	11 (RC)	1	11	40 hrs. \$2,670.40	440 hrs. \$29,374.40
Ongoing Estimate – Year 3 ongoing					
EOP-011-2	168 (TOP)	1	168	50 hrs. \$3,338.00	8,400 hrs. \$560,784.00
EOP-011-2	98 (BA)	1	98	50 hrs. \$3,338.00	4,900 hrs. \$327,124.00
EOP-011-2	1,017 (GO)	1	1,017	40 hrs. \$2,670.40	40,680 hrs. \$2,715,796.80
EOP-011-2	943 (GOP)	1	943	50 hrs. \$3,338.00	47,150 hrs. \$3,147,734.00
EOP-011-2	11 (RC)	1	11	20 hrs. \$1,335.20	220 hrs. \$14,687.20

²⁹ The hourly cost figures, for salary plus benefits, for the Reliability Standards are based on Bureau of Labor Statistics (BLS) information (at http://www.bls.gov/oes/current/naics2_22.htm), as of May 2020, 75% of the average of an Electrical Engineer (17-2071) - \$72.15, mechanical engineers (17-2141) - \$77.50. $\$72.15 + \$77.50/2 = 74.825 \times .75 = 56.118$ (\$56.12-rounded) (\$56.12/hour) and 25% of an Information and Record Clerks (43-4199) $\$42.57 \times .25\% = 10.6425$ (\$10.64 rounded) (\$10.64/hour), for a total $(\$56.12 + \$10.64 = \$66.76/\text{hour})$.

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Total for FERC- 725S(One time)	2,237		2,237		244,390 hrs. \$16,315,475.40
Total for FERC- 725S(Ongoing)	2,237		2,237		101,350 hrs. \$6,766,126.00
FERC-725Z					
One Time Estimate - Years 1 and 2					
IRO-010-4	11 (RC)	1	11	720 hrs. \$48,067.20	7,920 hrs. \$528,739.20
Ongoing Estimate – Year 3 ongoing					
IRO-010-4	11 (RC)	1	11	360 hrs. \$24,033.60	3,960 hrs. \$264,369.60
Total for FERC- 725Z(One time)	11		11		11,880 hrs. \$793,108.80
Total for FERC- 725Z(Ongoing)	11		11		3,960 hrs. \$264,369.60
FERC-725A					
One Time Estimate - Years 1 and 2					
TOP-003-5	168 (TOP)	1	168	80 hrs. \$5,340.80	13,440 hrs. \$897,254.40
TOP-003-5	98 (BA)	1	98	80 hrs. \$5,340.80	7,840 hrs. \$523,398.40
Ongoing Estimate – Year 3 ongoing					
TOP-003-5	168 (TOP)	1	168	40 hrs. \$2,670.40	6,720 hrs. \$448,627.20
TOP-003-5	98 (BA)	1	98	40 hrs. \$2,670.40	3,920 hrs. \$261,699.20
Total for FERC- 725A(Onetime)	266		266		21,280 hrs. \$1,420,652.80
Total for FERC- 725A(Ongoing)	266		266		10,640 hrs. \$710,326.40

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Titles: FERC-725S, Mandatory Reliability Standards for the Bulk Power System; EOP Reliability Standards; FERC-725A, Mandatory Reliability Standards for the Bulk-Power System: TOP Reliability Standard; FERC-725Z, Mandatory Reliability Standards for the Bulk-Power System: IRO Reliability Standards.

Action: Reductions to Existing Collections of Information FERC-725S, FERC-725A, and FERC-725Z.

OMB Control Nos: 1902-0270 (FERC-725S); 1902-0276 (FERC-725Z); and 1902-0244 (FERC-725A).

Respondents: Business or other for profit, and not for profit institutions.

Frequency of Responses: On occasion (and proposed for deletion).

Necessity of the Information: Reliability Standards EOP-011-2 (Emergency Preparedness and Operation), IRO-010-4 (Reliability Coordinator Data-Specification and Collection) and TOP-003-5 (Operation Reliability Data) are part of the implementation of the Congressional mandate of the Energy Policy Act of 2005 to develop mandatory and enforceable Reliability Standards to better ensure the reliability of the nation's Bulk Power system. Specifically, the revised standards ensure generating resources are prepared for local cold weather events and that entities will effectively communicate information needed for operating the Bulk Power System.

Internal review: The Commission has reviewed NERC's proposal and determined that its action is necessary to implement section 215 of the FPA.

27. Interested persons may obtain information on the reporting requirements by contacting the Federal Energy Regulatory Commission, Office of the Executive Director, 888 First Street, NE, Washington, DC 20426 [Attention: Ellen Brown, e-mail: DataClearance@ferc.gov, phone: (202) 502-8663].

28. All submissions must be formatted and filed in accordance with submission guidelines at: <http://www.ferc.gov>. For user assistance, contact FERC Online Support by e-mail at ferconlinesupport@ferc.gov, or by phone at (866) 208-3676 (toll-free).

29. Comments concerning the information collections and requirements approved and associated burden estimates, should be sent to the Commission in this docket and may also be sent to the Office of Management and Budget, Office of Information and Regulatory Affairs [Attention: Desk Officer for the Federal Energy Regulatory Commission]. OMB submissions must be formatted and filed in accordance with submission guidelines at www.reginfo.gov/public/do/PRAMain. Using the search function under the "Currently Under Review" field, select Federal Energy Regulatory Commission; click "submit," and select "comment" to the right of the subject collection.

30. Please refer to the appropriate OMB Control Number(s) 1902-0270 (FERC-725S); 1902-0276 (FERC-725Z); and 1902-0244 (FERC-725A) and Docket No. RD21-5-000 in your submission.

VI. Document Availability

31. In addition to publishing the full text of this document in the Federal Register, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the Internet through the Commission's Home Page (<http://www.ferc.gov>) and in the Commission's Public Reference Room during normal business hours (8:30 a.m. to 5:00 p.m. Eastern time) at 888 First Street, NE, Room 2A, Washington, DC 20426.

32. From the Commission's Home Page on the Internet, this information is available on eLibrary. The full text of this document is available on eLibrary in PDF and Microsoft Word format for viewing, printing, and/or downloading. To access this document in eLibrary, type the docket number excluding the last three digits of this document in the docket number field.

33. User assistance is available for eLibrary and the Commission's website during normal business hours from the Commission's Online Support at (202) 502-6652 (toll free at 1-866-208-3676) or email at ferconlinesupport@ferc.gov, or the Public Reference Room at (202) 502-8371, TTY (202) 502-8659. E-mail the Public Reference Room at public.referenceroom@ferc.gov.

The Commission orders:

The Commission, hereby, approves the Cold Weather Reliability Standards, associated violation risk factors and violation severity levels, implementation plan, and the retirement of the currently-effective Reliability Standards EOP-011-1, IRO-010-3, and TOP-003-4 immediately prior to the effective date of the revised Reliability Standards, as discussed in the body of this order.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

Document Content(s)

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