

187 FERC ¶ 61,204
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Willie L. Phillips, Chairman;
Allison Clements and Mark C. Christie.

North American Electric Reliability Corporation

Docket Nos. RD24-5-000
RD24-1-000

ORDER APPROVING EXTREME COLD WEATHER RELIABILITY STANDARD
EOP-012-2 AND DIRECTING MODIFICATION

(Issued June 27, 2024)

1. On February 16, 2024, the North American Electric Reliability Corporation (NERC), the Commission-certified Electric Reliability Organization (ERO), submitted a petition seeking approval of proposed Reliability Standard EOP-012-2 (Extreme Cold Weather Preparedness and Operations). As discussed in this order, we approve proposed Reliability Standard EOP-012-2, its associated violation risk factors and violation severity levels, NERC's proposed implementation plan, the newly defined terms Fixed Fuel Supply Component and Generator Cold Weather Constraint, the revised defined terms Generator Cold Weather Critical Component and Generator Cold Weather Reliability Event, and the retirement of Reliability Standard EOP-012-1 immediately prior to the effective date of proposed Reliability Standard EOP-012-2.¹ We also approve NERC's proposed implementation date for Reliability Standard EOP-011-4 and the proposed retirement of Reliability Standards EOP-011-2 and EOP-011-3 immediately prior to the effective date of proposed Reliability Standard EOP-012-2.²

2. It is essential to the reliable operation of the Bulk-Power System to "ensure enough generating units will be available during the next cold weather event."³ When extreme cold weather events such as Winter Storms Uri or Elliott occur, the Bulk-Power System cannot operate reliably without adequate generation. Proposed Reliability Standard EOP-012-2 improves upon the approved, but not yet effective, Reliability Standard EOP-012-1 by clarifying the requirements for generator cold weather

¹ 16 U.S.C. § 824o(d)(2).

² *Id.*

³ FERC, NERC, and Regional Entity Staff, *The February 2021 Cold Weather Outages in Texas and the South Central United States*, at 189 (Nov. 16, 2021), <https://www.ferc.gov/media/february-2021-cold-weather-outages-texas-and-south-central-united-states-ferc-nerc-and> (November 2021 Report).

preparedness and by making other improvements consistent with the Commission's directives in its February 2023 Order to help ensure that more generation is available during extreme cold weather.⁴ Accordingly, we find that proposed Reliability Standard EOP-012-2 is just, reasonable, not unduly discriminatory or preferential, and in the public interest.

3. Nevertheless, we find that proposed Reliability Standard EOP-012-2 requires improvement to address certain concerns, as discussed further below. Therefore, pursuant to section 215(d)(5) of the Federal Power Act (FPA),⁵ we direct NERC to:

(1) develop and submit modifications to proposed Reliability Standard EOP-012-2 to address concerns related to the ambiguity of the newly defined term Generator Cold Weather Constraint to ensure that the Generator Cold Weather Constraint declaration criteria included within the proposed Standard are objective and sufficiently detailed so that applicable entities understand what is required of them and to remove all references to "reasonable cost," "unreasonable cost," "cost," and "good business practices" and replace them with objective, unambiguous, and auditable terms;

(2) develop and submit modifications to proposed Reliability Standard EOP-012-2 for NERC to receive, review, evaluate, and confirm the validity of each Generator Cold Weather Constraint invoked by a generator owner, in a timely fashion, to ensure that such declaration cannot be used to avoid mandatory compliance with the proposed Reliability Standard or obligations in a corrective action plan;

(3) develop and submit modifications to proposed Reliability Standard EOP-012-2 to shorten and clarify the corrective action plan implementation timelines and deadlines in Requirement R7, as further directed below;

(4) develop and submit modifications to Requirement R7 of proposed Reliability Standard EOP-012-2 to ensure that any extension of a corrective action plan implementation deadline beyond the maximum implementation timeframe required by the Standard is pre-approved by NERC and to ensure that the generator owner informs relevant registered entities of operating limitations in extreme cold weather during the period of the extension; and

(5) develop and submit modifications to Requirement R8, part 8.1 of proposed Reliability Standard EOP-012-2 to implement more frequent reviews of Generator

⁴ See, e.g., *N. Am. Elec. Reliability Corp.*, 182 FERC ¶ 61,094, PP 3-11 (2023) (February 2023 Order); *reh'g denied*, 183 FERC ¶ 62,034, *order on reh'g*, 183 FERC ¶ 61,222 (2023).

⁵ 16 U.S.C. § 824o(d)(5).

Cold Weather Constraint declarations to verify that the constraint declaration remains valid.

4. The Commission has repeatedly expressed an urgency in completing cold weather Reliability Standards and having them implemented in a timely manner to address the risks presented by cold weather events on the reliability of the Bulk-Power System.⁶ Further, we note that NERC submitted the current filing in response to Commission directives to improve the cold weather Reliability Standards, and the five core directives to NERC in this order are not new issues, but rather targeted modifications necessary to fully address issues identified in the Commission's prior February 2023 Order. Accordingly, we direct NERC to make the above modifications and submit the revised Reliability Standard within nine months of the date of issuance of this order.⁷

I. Background

A. Section 215 and Mandatory Reliability Standards

5. Section 215 of the FPA provides that the Commission may certify an ERO, the purpose of which is to develop mandatory and enforceable Reliability Standards, subject to Commission review and approval.⁸ Reliability Standards may be enforced by the ERO, subject to Commission oversight, or by the Commission independently.⁹ Pursuant to section 215 of the FPA, the Commission established a process to select and certify an ERO,¹⁰ and subsequently certified NERC.¹¹

⁶ See e.g., *N. Am. Elec. Reliability Corp.*, 183 FERC ¶ 62,034 at P 10 (emphasizing that industry has been aware of and alerted to the need to prepare generating units for cold weather since at least 2011 and that in considering an appropriate implementation period for Reliability Standard EOP-012-1, NERC should consider how much time industry has already had to implement freeze protection measures).

⁷ 18 C.F.R. § 39.6(g) (2023).

⁸ 16 U.S.C. § 824o(c).

⁹ *Id.* § 824o(e).

¹⁰ *Rules Concerning Certification of the Elec. Reliability Org.; & Procs. for the Establishment, Approval, & Enforcement of Elec. Reliability Standards*, Order No. 672, 114 FERC ¶ 61,104, *order on reh'g*, Order No. 672-A, 114 FERC ¶ 61,328 (2006); see also 18 C.F.R. § 39.4(b) (2023).

¹¹ *N. Am. Elec. 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).

B. The February 2021 Cold Weather Reliability Event

6. On February 16, 2021, Commission, NERC, and Regional Entity staff initiated a joint inquiry into the circumstances surrounding a February 2021 cold weather reliability event then affecting Texas and the South-Central United States. In November 2021, Commission staff issued a report regarding the event, which found that the event was the largest controlled firm load shed event in U.S. history; over 4.5 million people lost power and at least 210 people lost their lives during the event.¹² The November 2021 Report made 28 recommendations including, *inter alia*, enhancements to the Reliability Standards to improve extreme cold weather operations, preparedness, and coordination.¹³

7. After the February 2021 cold weather reliability event, but before the November 2021 Report was issued, NERC filed a petition for approval of cold weather Reliability Standards addressing recommendations from a report regarding a 2018 cold weather event.¹⁴ In August 2021, the Commission approved NERC's modifications to 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).¹⁵ Reliability Standards IRO-010-4 and TOP-003-5 require that reliability coordinators, transmission operators, and balancing authorities develop, maintain, and share generator cold weather data.¹⁶ Reliability Standard EOP-011-2 requires generator owners to have generating unit cold weather preparedness plans.¹⁷

8. On October 28, 2022, NERC filed a petition seeking approval of Reliability Standards EOP-011-3 (Emergency Operations) and EOP-012-1 (Extreme Cold Weather Preparedness and Operations), their associated violation risk factors and violation severity levels, three newly-defined terms (Extreme Cold Weather Temperature, Generator Cold Weather Critical Component, and Generator Cold Weather Reliability Event), NERC's proposed implementation plan, and the retirement of Reliability

¹² See November 2021 Report at 9.

¹³ *Id.* at 184-212 (sub-recommendations 1a through 1j).

¹⁴ 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>.

¹⁵ See generally *N. Am. Elec. Reliability Corp.*, 176 FERC ¶ 61,119 (2021).

¹⁶ *Id.*

¹⁷ *Id.*

Standard EOP-011-2.¹⁸ On February 16, 2023, the Commission approved Reliability Standards EOP-011-3 and EOP-012-1, directed NERC to develop and submit modifications to Reliability Standard EOP-012-1 and to submit a plan on how NERC will collect and assess data surrounding the implementation of Reliability Standard EOP-012-1, and deferred the retirement of Reliability Standard EOP-011-2.¹⁹

9. On October 30, 2023, NERC filed a petition seeking approval of Reliability Standards EOP-011-4 (Emergency Operations) and TOP-002-5 (Operations Planning), their associated violation risk factors and violation severity levels, NERC's proposed implementation plan, and the retirement of Reliability Standards EOP-011-2 and TOP-002-4. On February 15, 2024, the Commission approved Reliability Standards EOP-011-3 and TOP-002-5 and again deferred the retirement of Reliability Standard EOP-011-2.²⁰

C. NERC's Petition and Proposed Reliability Standard EOP-012-2

10. On February 16, 2024, in response to the Commission's February 2023 Order, NERC filed a petition seeking approval of proposed Reliability Standard EOP-012-2,²¹ its associated violation risk factors and violation severity levels, two newly defined terms (Fixed Fuel Supply Component and Generator Cold Weather Constraint), two revised terms (Generator Cold Weather Critical Component and Generator Cold Weather Reliability Event), NERC's proposed implementation plan, and the retirement of currently approved Reliability Standard EOP-012-1.²² NERC explains that proposed Reliability Standard EOP-012-2 improves upon the approved, but not yet effective, generator cold weather preparation Reliability Standard EOP-012-1 and is consistent with the Commission's directives from the February 2023 Order.²³ NERC states that proposed Reliability Standard EOP-012-2 clarifies applicability of the Standard's requirements for generator cold weather preparedness, would further define the circumstances under which a generator owner may declare that constraints preclude it from implementing one or

¹⁸ NERC 2022 Petition at 1-2.

¹⁹ See February 2023 Order, 182 FERC ¶ 61,094 at PP 3-11.

²⁰ See *id.* PP 1-2.

²¹ The proposed Reliability Standard EOP-012-2 is not attached to this order. The proposed Reliability Standard is available on the Commission's eLibrary document retrieval system in Docket No. RD24-5-000 and on the NERC website, www.nerc.com.

²² NERC Petition at 1-4.

²³ *Id.* at 2.

more corrective actions to address freezing issues, and shortens the implementation timeline so that cold weather reliability risks would be addressed sooner.²⁴

11. NERC states that the purpose of proposed Reliability Standard EOP-012-2 is unchanged from that of approved Reliability Standard EOP-012-1, which is to ensure that each generator owner develops and implements plans to alleviate the reliability impacts of extreme cold weather on its generating units.²⁵ NERC also notes that proposed Reliability Standard EOP-012-2 completes NERC's two-part plan to address recommendations from the November 2021 Report by including revisions to address parts of Key Recommendations 1a, 1b, 1c, and 1d.²⁶ NERC states that the proposed Reliability Standard contains new and revised requirements to advance the reliability of the Bulk-Power System by requiring generator owners to (1) review their generator cold weather data periodically, (2) include any identified start up issues in their generator cold weather data provided to reliability entities, and (3) consider the impacts of freezing precipitation and wind speed in identifying generator cold weather data.²⁷

12. Proposed Reliability Standard EOP-012-2 has eight requirements, seven of which have been carried over and modified from approved Reliability Standard EOP-012-1 (Requirements R1-R7) and one of which is new (Requirement R8). Proposed Reliability Standard EOP-012-2 applies to generator owners and generator operators that own or operate bulk electric system generating units.²⁸

13. Proposed Reliability Standard EOP-012-2, Requirement R1 modifies the Requirements for each generator owner to calculate the Extreme Cold Weather Temperature for each of its applicable generating units and to re-calculate that temperature at least once every five calendar years.²⁹ Where a periodic re-calculation results in a lower Extreme Cold Weather Temperature for the generating unit, the generator owner must update its cold weather preparedness plan within six months and, if necessary, develop a corrective action plan to implement measures at the applicable unit to provide the capability to operate at that new, lower temperature. Proposed Reliability

²⁴ *Id.*

²⁵ *Id.* at 29.

²⁶ *See id.* at 25-26, 35, 49-50 (citing the November 2021 Report at 184-86).

²⁷ *Id.* at 23.

²⁸ NERC Petition at 22-23.

²⁹ Requirement R1 under proposed Reliability Standard EOP-012-2 modifies existing Requirement R3, Part 3.1 and Requirement R4 under currently approved but not yet effective Reliability Standard EOP-012-1.

Standard EOP-012-2, Requirement R1, Part 1.2, also maintains Requirement R3.1 to identify generating unit cold weather data, including operating limitations in cold weather and minimum operating temperatures, from approved Reliability Standard EOP-012-1, Requirement R3, Part 3.5.³⁰

14. Proposed Reliability Standard EOP-012-2, Requirements R2 and R3 clarify the cold weather operational capability requirements for new and existing bulk electric system generating units.³¹ Under proposed Reliability Standard EOP-012-2, Requirement R2, generator owners would be required to implement freeze protection measures at applicable bulk electric system generating units to provide the capability to operate at the Extreme Cold Weather Temperature with sustained, concurrent 20 mph wind speed for the unit.³² Specifically, Requirement R2 requires generating units with a commercial operation date on or after October 1, 2027, to be capable of operating at the unit's Extreme Cold Weather Temperature for a continuous 12-hour period or at the maximum operational duration for intermittent energy resources if less than 12 continuous hours. If a generating unit is unable to do either then it must develop a corrective action plan to add new or modify existing or previously planned freeze protection measures to provide the capability to operate at the unit's Extreme Cold Weather Temperature with a sustained, concurrent 20 mph wind speed.³³

15. Similar to Requirement R2, but without the wind and duration criteria, Requirement R3 requires either that existing generating units, (i.e., those in commercial operation prior to October 1, 2027) be capable of operating at the unit's Extreme Cold Weather Temperature or that the generator owner develops a corrective action plan to address the unit's inability to continuously operate successfully.³⁴ Requirements R2 and R3 exempt generating units that do not self-commit or are not required to operate at or below a temperature of 32 degrees Fahrenheit, including those that may be called upon to operate to assist in mitigating emergencies during periods at or below 32 degrees Fahrenheit.³⁵

³⁰ NERC Petition at 33-37.

³¹ Requirements R2 and R3 under proposed Reliability Standard EOP-012-2 were originally Requirements R1 and R2, respectively, under currently approved but not yet effective Reliability Standard EOP-012-1.

³² NERC Petition at 37.

³³ *Id.* at 38.

³⁴ *Id.* at 38-39.

³⁵ Proposed Reliability Standard EOP-012-2, Requirement R2, n.1 and Requirement R3, n.2; *see also* NERC Petition at 41-42.

16. Proposed Reliability Standard EOP-012-2, Requirement R4,³⁶ modifies the requirement for generator owners to implement and maintain cold weather preparedness plans.³⁷ Under Requirement R4, generator owners would include in their cold weather preparedness plans the information determined in accordance with proposed Reliability Standard EOP-012-2, Requirement R1. Requirement R4 also clarifies that the cold weather preparedness plans shall reflect the lowest calculated Extreme Cold Weather Temperature for the unit, even if subsequent re-calculations indicate warming temperatures.³⁸

17. Proposed Reliability Standard EOP-012-2, Requirement R5 is substantively unchanged from the prior version of the Standard. Requirement R5 states that generator owners must train their personnel annually on the unit's cold weather preparedness plans.³⁹

18. Proposed Reliability Standard EOP-012-2, Requirement R6 modifies the requirement that generator owners that self-commit or are required to operate at or below a temperature of 32 degrees Fahrenheit and experience an outage, failure to start, or derate due to freezing at or above their Extreme Cold Weather Temperature must develop a corrective action plan to address the identified causes. Requirement R6 exempts generating units that do not self-commit or are not required to operate at or below a temperature of 32 degrees Fahrenheit, including those that may be called upon to operate to assist in mitigating emergencies during periods at or below 32 degrees Fahrenheit.⁴⁰

19. Proposed Reliability Standard EOP-012-2, Requirement R7 modifies the requirement for implementing corrective action plans. Requirement R7 includes new implementation deadlines for implementing corrective action plans and clarifies the types of constraints that may preclude the implementation of one or more corrective actions.⁴¹ Specifically, Requirement R7 requires that for each corrective action plan developed

³⁶ Proposed Reliability Standard EOP-012-2, Requirement R4 was originally Requirement R3 in currently approved but not yet effective Reliability Standard EOP-012-1.

³⁷ NERC Petition at 45.

³⁸ *Id.* at 46 (citing proposed Reliability Standard EOP-012-2, Requirement R4, n.3, which states that generator owners shall include the lowest calculated Extreme Cold Weather Temperature for the unit, even where subsequent periodic re-calculations under Requirement R1, Part 1.1 cause an increase in the Extreme Cold Weather Temperature).

³⁹ *Id.* at 47.

⁴⁰ *Id.* at 48 (citing Proposed Reliability Standard EOP-012-2, Requirement R6, n.4).

pursuant to Requirements R1, R2, R3, or R6, generator owners shall include a timetable for implementing the corrective actions and complete the corrective actions in accordance with the timetables outlined in the proposed Standard.⁴² Under Requirement R7, generator owners are permitted to update the corrective action plan timetables, with justifications, if corrective actions change or the timetable exceeds the timelines in Requirement R7, Part 7.1. This requirement also states that the generator owner must document, in a declaration with justification, any Generator Cold Weather Constraint that precludes the generator owner from implementing the selected actions contained within the corrective action plan.⁴³

20. Proposed Reliability Standard EOP-012-2, Requirement R8 is a new requirement that would apply to generator owners that have declared a Generator Cold Weather Constraint under Requirement R7. Specifically, this requirement states that each generator owner that creates a Generator Cold Weather Constraint declaration shall review the Generator Cold Weather Constraint declaration at least every five calendar years or as needed when a change of status to the Generator Cold Weather Constraint occurs and update the operating limitations associated with capability and availability under Requirement R1, Part 1.2, if applicable.⁴⁴

21. NERC requests that the Commission approve the violation risk factors and violation severity levels for proposed Reliability Standard EOP-012-2.⁴⁵ Further, NERC proposes an effective date for Reliability Standard EOP-012-2 (with the exception of Requirement R3, which would become mandatory and enforceable 12-months following the proposed Standard's effective date) of October 1, 2024 or the first day of the first calendar quarter that is three months following regulatory approval, whichever is later.⁴⁶

⁴¹ *Id.* at 50.

⁴² *Id.* at 50-51 (noting that generator owners must list the actions that address *existing* equipment or freeze protection measures to be completed within 24 calendar months of completing development of the corrective action plan, list the actions that require *new* equipment or freeze protection measures, if any, to be completed within 48 calendar months of completing development of the corrective action plan, and list the updates to the cold weather preparedness plan requirement under Requirement R4 to identify the updates or additions to the Generator Cold Weather Critical Components and their freeze protection measures) (emphasis added).

⁴³ NERC Petition at 51-60.

⁴⁴ *Id.* at 62.

⁴⁵ *Id.* at 2-3.

⁴⁶ *Id.* at 66.

22. Finally, NERC requests that the Commission approve proposed Reliability Standard EOP-012-2 in an expedited manner. NERC explains that, among other things, expedited approval would provide regulatory certainty to entities seeking to comply with the proposed Reliability Standard ahead of the mandatory and enforceable date.⁴⁷

II. Notice of Filing and Responsive Pleadings

23. Notice of NERC's February 16, 2024, Petition was published in the *Federal Register*, 89 Fed. Reg. 14,479 (2024), with comments, protests, and motions to intervene due on or before March 21, 2024.

24. The Commission received one protest, one set of comments, and five sets of out of time answers. The Electric Power Supply Association (EPSA); the New England Power Generators Association, Inc. (NEPGA); Dominion Energy Services, Inc. (Dominion), Constellation Energy Generation, LLC (Constellation), and the Independent System Operators and Regional Transmission Organizations Council (the ISO/RTO Council) filed timely motions to intervene. The Transmission Access Policy Study Group (TAPS); Avangrid Renewables, LLC; and the Pennsylvania Public Utility Commission filed out of time motions to intervene. NEPGA filed timely comments. The ISO/RTO Council filed a timely protest. EPSA, TAPS, NERC, and the ISO/RTO Council filed motions for leave to answer along with answers.⁴⁸

25. Commenters and protesters raised concerns and requests for clarifications for proposed Reliability Standard EOP-012-2. The commenters range in their support for proposed Reliability Standard EOP-012-2 from requesting that the Commission approve the proposed Standard as filed⁴⁹ or approve the proposed Standard as filed with minor clarifications,⁵⁰ to requesting that the Commission remand the proposed Standard to NERC with directives.⁵¹ The comments on specific matters are summarized and addressed in the determinations below.

⁴⁷ *Id.* at 70-71.

⁴⁸ TAPS filed two answers.

⁴⁹ NERC Answer at 1-3; 29.

⁵⁰ See NEPGA Comments 1-5; EPSA Answer 1-5; TAPS Answer at 1-2.

⁵¹ See ISO/RTO Council Protest at 1-3.

III. Determination

A. Procedural Matters

26. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2023), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

27. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2023), prohibits an answer to a protest or answer unless otherwise ordered by the decisional authority. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d), we grant TAPS, Avangrid Renewables, LLC, and the Pennsylvania Public Utility Commission's motions for leave to file out of time motions to intervene given their interest in the proceeding and the absence of undue prejudice or delay.

B. Substantive Matters

28. Pursuant to section 215(d)(2) of the FPA, we approve proposed Reliability Standard EOP-012-2 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. Absent the reforms adopted in proposed Reliability Standard EOP-012-2, the unexpected failure of generating units during extreme cold weather conditions could negatively impact the reliability of the Bulk-Power System.

29. We find that proposed Reliability Standard EOP-012-2 represents an improvement over approved Reliability Standard EOP-012-1 as the proposed Standard enhances the reliable operation of the Bulk-Power System. Specifically, the proposed Reliability Standard will improve reliability by requiring generator owners to implement freeze protection measures, develop detailed cold weather preparedness plans, implement annual trainings, draft and implement corrective action plans to address freezing issues, and provide certain cold weather operating parameters to reliability coordinators, transmission operators, and balancing authorities for use in their analyses and planning. We believe that these measures will help address many of the issues identified as contributing to generating unit failures during extreme cold weather conditions, as noted in the November 2021 Report.⁵²

30. Nevertheless, while we find that NERC's petition is an improvement to the currently approved Reliability Standard, we also find that there are some elements of proposed Reliability Standard EOP-012-2 that are not fully responsive to the

⁵² See November 2021 Report at 184-210.

Commission's February 2023 Order.⁵³ Accordingly, as discussed further below, we direct NERC pursuant to section 215(d)(5) of the FPA to address these issues.

31. Although we find that the Reliability Standard needs additional improvement, we are not persuaded that there is sufficient cause to remand proposed Standard EOP-012-2, as requested by the ISO/RTO Council.⁵⁴ Proposed Reliability Standard EOP-012-2 represents an improvement over approved Reliability Standard EOP-012-1, and remanding the proposed Standard would allow currently approved Reliability Standard EOP-012-1 to go into effect on October 1, 2024, despite its ambiguities and other identified issues.⁵⁵

32. Below we address the following elements of proposed Reliability Standard EOP-012-2: (1) Generator Cold Weather Constraint declaration criteria; (2) the entity to receive, review, evaluate, and confirm for validity the Generator Cold Weather Constraint declarations; (3) the length of the corrective action plan implementation deadlines; (4) the corrective action plan implementation timelines for existing versus new generating units; (5) the generating unit freeze measure applicability exemptions within proposed Requirements R2, R3, and R6; (6) the winterization criteria for new versus existing generating units; (7) the annual inspections and maintenance of a generating unit's freeze protection measures; (8) the five-year review period for declared Generator Cold Weather Constraints; and (9) cost recovery mechanisms.

1. Generator Cold Weather Constraint Declaration Criteria

a. The Commission's Directive in the February 2023 Order

33. Under Reliability Standard EOP-012-1, a generator owner could explain in a declaration any "technical, commercial, or operational constraints" that preclude its ability to either implement freeze protection measures or implement corrective action plans. However, Reliability Standard EOP-012-1 does not define "technical, commercial,

⁵³ See NERC Petition at 27-28; see also February 2023 Order, 182 FERC ¶ 61,094 at PP 1, 3, 6, 9-10, 66, 77-79, 88.

⁵⁴ See ISO/RTO Council Protest at 4.

⁵⁵ See, e.g., *Mandatory Reliability Standards for the Bulk-Power Sys.*, Order No. 693, 118 FERC ¶ 61,218, at P 10; *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007) (noting that "[w]here a Reliability Standard requires significant improvement, but is otherwise enforceable, the Commission approves the Reliability Standard" and "directs the ERO to modify" such Standards to address identified issues or concerns); *Version 5 Critical Infrastructure Prot. Reliability Standards*, Order No. 791, 145 FERC ¶ 61,160, at PP 1-4 (2013); *order on clarification and reh'g*, Order No. 791-A, 146 FERC ¶ 61,188 (2014).

or operational constraints,” leaving those terms open to interpretation by each generator owner. In the February 2023 Order, the Commission approved Reliability Standard EOP-012-1 but expressed concern with the uncertainties, ambiguities, and vagueness of the Standard’s descriptions of constraints, noting that, without criteria to guide the generator owners or guardrails on what constitutes a legitimate constraint, generator owners may avoid the purpose of the Standard altogether or have declarations without auditable elements. Thus, the Commission directed NERC to address the ambiguity of generator owner-defined declarations by including auditable criteria to ensure that declarations cannot be used to avoid mandatory compliance with the Reliability Standard or obligations in a corrective action plan.⁵⁶

b. NERC’s Petition

34. In proposed Reliability Standard EOP-012-2, NERC proposes to replace the undefined “technical, commercial, or operational constraints” with the newly defined Glossary term “Generator Cold Weather Constraint.” The term explains that constraints are conditions precluding generator owners from implementing freeze protection measures based on one or more criteria. NERC states that:

Criteria used to determine a constraint includes practices, methods, or technologies which, given the exercise of reasonable judgment in light of the facts known at the time the decision to declare the constraint was made:

- Were not broadly implemented at generating units for comparable unit types in regions that experience similar winter climate conditions to provide reasonable assurance of efficacy;
- Could not have been expected to accomplish the desired result; or
- Could not have been implemented at a reasonable cost consistent with good business practices, reliability, or safety. A cost may be deemed “unreasonable” when implementation of selected freeze protection measure(s) are uneconomical to the extent that they would require prohibitively expensive modifications or significant expenditures on equipment with minimal remaining life.⁵⁷

⁵⁶ February 2023 Order, 182 FERC ¶ 61,094 at PP 6, 66.

⁵⁷ NERC Petition at 28.

35. During the development of proposed Reliability Standard EOP-012-2, NERC's Standard Drafting Team explained that using a reasonableness standard as a benchmark for evaluating constraint declarations is appropriate given the wide range of facts and circumstances that will be relevant under the definition.⁵⁸ The Standard Drafting Team added that the "reasonableness standard is typically an objective test that looks at the average decision maker's conduct under the particular facts and circumstances present if they exercised average care, skill, and judgement."⁵⁹ NERC's Standard Drafting Team considered adding specific criteria but was of the opinion that the proposed Reliability Standard must be adaptable as facts and circumstances change and new solutions are identified and become commercially available.⁶⁰ NERC's petition states that the language used in the Generator Cold Weather Constraint definition is modeled after the concept of "good utility practice" and is intended to convey that the proposed Reliability Standard "would not require the *best* solutions, which would result in more constraints being declared, but rather *acceptable* solutions."⁶¹ NERC states that the term "unreasonable costs" is intended to refer to cost-prohibitive modifications or significant expenditures that could lead to premature retirement of equipment.⁶²

c. Comments

36. The ISO/RTO Council argues that the discussion of freeze protection measures in the newly defined Generator Cold Weather Constraint term creates ambiguity that provides far too much discretion to the entities required to comply with proposed Reliability Standard EOP-012-2.⁶³ The ISO/RTO Council believes that the proposed Standard provides insufficient guidance concerning a generator owner's exercise of discretion to interpret whether freeze protection measures are available for its equipment when determining whether a basis exists to declare a constraint. As such, the ISO/RTO Council recommends that the Commission direct NERC to revise the constraint declaration language so that it is clear that freeze protection measures are intended to include practices, methods, or technologies that would reasonably be expected to result in

⁵⁸ *Id.*, Ex. F, at 50-51.

⁵⁹ *See id.*, Ex. F at 1,772.

⁶⁰ *See id.*

⁶¹ *See* NERC Petition at 57 (citing to the Commission's *pro forma* Open Access Transmission Tariff, section 1.15).

⁶² *Id.*

⁶³ ISO/RTO Council Protest at 13.

effective facility performance while operating at the Extreme Cold Weather Temperature.⁶⁴

37. NERC, in its answer, states that its Standard Drafting Team determined that proposed Reliability Standard EOP-012-2 should not require entities to implement technologies or solutions that had not been proven to be effective in similar climate conditions.⁶⁵ TAPS members, while initially expressing concern during the development of proposed Standard2, now believe that NERC guidance will help ensure consistent application of the Generator Cold Weather Constraint declaration criteria.⁶⁶ TAPS asserts that the new definition is auditable and greatly improves upon NERC's approach in approved Reliability Standard EOP-012-1.⁶⁷

38. The ISO/RTO Council also states that the inclusion of "reasonable cost" in the definition of what qualifies as a potential Generator Cold Weather Constraint is subjective, unclear, and un-auditable.⁶⁸ The ISO/RTO Council is concerned that this would allow generator owners to declare a constraint simply by asserting that implementing a given freeze protection measure would constitute a "prohibitively expensive modification[]" or a 'significant expenditure[]' and that the affected facility has a 'minimal remaining life.'⁶⁹ They state that this exception effectively injects NERC and the Regional Entities into the process of judging the reasonableness of costs and a particular generator owner's financial situation.⁷⁰ As such, the ISO/RTO Council recommends that the Commission direct NERC to remove the cost-based constraints from proposed Reliability Standard EOP-012-2.⁷¹ They state that the Commission faces a

⁶⁴ *Id.* at 15.

⁶⁵ NERC Answer at 14 (noting that the Commission is only required to find that the proposed Reliability Standard, as written, is just and reasonable rather than the "best" option and requesting that the Commission give due weight to the expertise of the Standard Drafting Team).

⁶⁶ TAPS Answer at 2-3.

⁶⁷ *Id.*

⁶⁸ ISO/RTO Council Protest at 6.

⁶⁹ *Id.* at 7 (quoting NERC's proposed definition of the Generator Cold Weather Constraint); *see also* NERC Petition, Ex. A, at 3.

⁷⁰ ISO/RTO Council Protest at 7.

⁷¹ *Id.* at 7-8, 12 (stating that cost should be addressed by the Commission through its obligation to ensure just and reasonable rates and by the appropriate state, local, and regulatory authorities rather than being "shoehorned" into a Reliability Standard).

policy choice of whether to adopt exceptions to compliance based on generator owners' assertions of excessive costs or whether to apply its FPA section 205 and 206 authority to provide avenues for generator owners to recover costs.⁷²

39. In contrast, TAPS argues that the definition of an economic constraint is quite narrow and does not permit a balancing of costs against benefits.⁷³ TAPS does not agree with the ISO/RTO Council that cost-based constraints should be removed from the Generator Cold Weather Constraint definition entirely since that would make the proposed Reliability Standard unreasonable and contrary to the requirements of FPA section 215(d)(2).⁷⁴ TAPS argues that such removal would mandate winterization at any cost, no matter how unjustifiable.⁷⁵

40. In its answer, NERC states that the proposed definition of Generator Cold Weather Constraint accounts for concerns that the requirements to operate in cold weather could “lead to fewer generators choosing to operate in cold weather due to prohibitive costs or technical inability to meet the operational capability requirements” of the proposed Reliability Standard.⁷⁶ NERC asserts that the ISO/RTO Council is not taking into account the reliability impacts that may occur if the cost of compliance is prohibitively high and generators choose not to operate.⁷⁷ On the auditability issue, NERC states that the proposed definition is auditable and that the ISO/RTO Council is conflating “auditability” and “flexibility.” They state that NERC and the Regional Entities “understand that they will be assessing the reasonableness of the process entities use to declare constraints” and will continue to monitor implementation of the proposed Reliability Standard closely.⁷⁸

⁷² ISO/RTO Council Answer at 4-8.

⁷³ TAPS Answer at 4; TAPS Second Answer at 3.

⁷⁴ TAPS Answer at 5 (citing to 16 U.S.C. § 824o(d)(2), which provides that “[t]he Commission may approve ... a proposed reliability standard ... if it determines that the standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest”).

⁷⁵ *Id.*

⁷⁶ NERC Answer at 8.

⁷⁷ *Id.* at 9.

⁷⁸ *Id.* at 10-11.

d. Commission Determination

41. Although NERC’s proposal to replace the existing “technical, commercial, and operational” constraints with the newly defined Generator Cold Weather Constraint term and associated criteria meets the Commission’s directive to develop criteria for constraint declarations, it does not meet the Commission’s directives to develop criteria that are objective, unambiguous, and auditable.⁷⁹ In Reliability Standard EOP-012-1, the use of “technical, commercial and operational constraints” was a stand-alone phrase, and did not include any definitions or further explanation of the conditions under which such declarations could be made, causing the ambiguity concerns raised in the February 2023 Order.⁸⁰ Moreover, Reliability Standard EOP-012-1 left it up to the *generator owner* to interpret what it meant to have a technical, commercial, or operational constraint. By adding some criteria for the constraint declarations, we find that NERC’s proposed Generator Cold Weather Constraint declaration criteria improves upon the status quo.

42. Nevertheless, we share the ISO/RTO Council’s concerns that the proposed Generator Cold Weather Constraint declaration criteria are also ambiguous, which may lead to inconsistent application and uncertainty. For example, the proposed definition does not provide sufficient guidance on how widely a freeze protection technology must be deployed before it will be considered a “generally implemented” technology. We agree with the ISO/RTO Council’s concern that this focus on general industry practice, without any way to ensure consistency in the application of that language, leaves the Commission without an objective standard that can be effectively audited.

43. In response to the ISO/RTO Council’s concern, NERC states that its Standard Drafting Team determined that proposed Reliability Standard EOP-012-2 should not require the implementation of unproven technologies.⁸¹ We agree. However, in its effort to provide flexibility, the proposed Reliability Standard falls short of the Commission’s directive to develop criteria that are objective, unambiguous, and auditable, as discussed further below.⁸² The Commission has previously expressed similar concerns regarding the vagueness and enforceability of a Reliability Standard’s language. For example, in Order No. 693 the Commission approved Reliability Standards while also expressing concern that the term “sabotage” was too ambiguous.⁸³ Similarly, in Order No. 791 (approving Version 5 of the Critical Infrastructure Protection Reliability Standards),

⁷⁹ February 2023 Order, 182 FERC ¶ 61,094 at PP 6, 66.

⁸⁰ *See id.* PP 6, 64-66.

⁸¹ NERC Answer at 13-14.

⁸² February 2023 Order, 182 FERC ¶ 61,094 at PP 6, 66.

⁸³ *See* Order No. 693, 118 FERC ¶ 61,218 at PP 1, 461.

the Commission raised concerns with vague language that required entities to “identify, assess, and correct” deficiencies.⁸⁴ The Commission determined that the ambiguities resulted in an “unacceptable amount of uncertainty” and directed NERC to remove the ambiguous language and develop appropriate modifications.⁸⁵ In both Order Nos. 693 and 791, the Commission approved NERC’s proposed Reliability Standards as an improvement to reliability, while directing NERC to submit modifications to the Reliability Standards addressing the Commission’s concern regarding the vagueness of particular language. We conclude that a similar approach is appropriate in the instant proceeding, given the improvements offered by proposed Reliability Standard EOP-012-2 in addressing Bulk-Power System reliability during extreme cold weather events.

44. We also find that the inclusion of the clause “reasonable cost consistent with good business practices” in the third criterion of the Generator Cold Weather Constraint definition does not meet the Commission’s directive to create criteria that are objective, unambiguous, and auditable.⁸⁶ In its answer, NERC explains that its Standard Drafting Team was concerned about the reliability impacts that may follow from a mandate to retrofit a generating unit at any cost when many generator owners have significant discretion regarding whether and when they will participate in the market. While we agree there may be a need to account for certain cases in which the cost of retrofitting may be unnecessarily burdensome, the mechanism in proposed Reliability Standard EOP-012-2 to address such cases provides a recipe for inconsistent outcomes. Although NERC argues that the use of “reasonable cost consistent with good business practices” is akin to the Commission’s use of “good utility practice,” we find such comparisons unavailing. Neither the proposed Reliability Standard itself nor the NERC Glossary of Terms defines what constitutes a “reasonable cost” or “good business practices.” Even if it did, NERC, as the ERO, is not well positioned to assess the reasonableness of a registered entity’s economic choices. Additionally, while “good utility practice” has been widely used in Commission-jurisdictional contracts and tariffs,⁸⁷ it has not been used in the FPA section 215 context.⁸⁸

45. The Commission has previously rejected similar attempts to include vaguely defined cost considerations in Reliability Standards. Specifically, in Order No. 706, the Commission directed NERC to remove references to reasonable business judgment in its

⁸⁴ See Order No. 791, 145 FERC ¶ 61,160 at PP 49-53, 67, 69.

⁸⁵ See *id.*; see also Order No. 693, 118 FERC ¶ 61,218 at PP 1, 461.

⁸⁶ February 2023 Order, 182 FERC ¶ 61,094 at PP 6, 66.

⁸⁷ See *e.g.*, *Midcontinent Indep. Sys. Operator, Inc.*, 165 FERC ¶ 61,016, P 49 (2018).

⁸⁸ 16 U.S.C. § 824o.

Reliability Standard.⁸⁹ The Commission largely based its finding on the fact that NERC's Glossary of Terms did not define the term "reasonable business judgment" and the Reliability Standard itself did not suggest how the term should be interpreted.⁹⁰

46. We acknowledge that there may be certain instances in which the cost of retrofitting may be unduly burdensome. To address such instances, NERC should clearly define such exceptions and present them for Commission review. For example, one approach could be for NERC to provide a limited set of clearly defined circumstances that could serve as constraints, such as an attestation⁹¹ from a generator owner or generator operator that: (1) the generating unit is scheduled to retire within the next two years; (2) implementing freeze protection measures in accordance with the Reliability Standard would cause the generating unit to retire within two years; or (3) they would cancel a newly scheduled generating unit that has not yet achieved commercial operation if required to comply with the freeze protection requirements of a Standard.⁹² Including discrete circumstances regarding what constitutes an acceptable economic constraint could provide clarity to generator owners considering constraint declarations and allow for an objective and straightforward evaluation of the constraint declaration criteria during compliance monitoring activities.

47. Accordingly, we direct NERC, pursuant to section 215(d)(5) of the FPA, to develop and submit to the Commission for approval modifications to proposed Reliability Standard EOP-012-2 that address concerns related to the ambiguity of the newly defined Generator Cold Weather Constraint term and criteria. Specifically, we direct NERC to ensure that the Generator Cold Weather Constraint declaration criteria included within the proposed Reliability Standard are objective *and* sufficiently detailed so that applicable entities understand what is required of them. One approach to satisfy this directive could be to incorporate into the proposed Reliability Standard a limited and discrete list of circumstances that would qualify as acceptable constraints. We note that NERC's technical rationale document,⁹³ created by NERC's Standard Drafting Team and

⁸⁹ See *Mandatory Reliability Standards for Critical Infrastructure Protection*, Order No. 706, 122 FERC ¶ 61,040, PP 137-38 (2008); *order on clarification*, 126 FERC ¶ 61,229; *order denying clarification*, 127 FERC ¶ 61,273 (2009).

⁹⁰ See *id.* P 109.

⁹¹ As noted below, NERC shall receive, review, evaluate, and confirm for validity any Generator Cold Weather Constraint declaration in a timely manner. *Infra* at P 54.

⁹² For this example, generator owners or generator operators should seek cost recovery through the available cost recovery mechanisms prior to making attestations about retirement.

⁹³ See NERC, *Drafting Team Reference Manual – Version 5*, at 8 (Jan. 2024),

included in NERC's filing, includes a list of technical constraints that could serve as a starting point for a list of circumstances that would qualify as acceptable constraints. To the extent that NERC continues to believe that the extent of industry adoption for winterization technologies should be a criterion for declaring a constraint, NERC should clearly explain in its filing how it will assess the extent of such adoption in a way that provides for consistent compliance and enforcement outcomes. Alternatively, NERC could establish a pre-approval process for all Generator Cold Weather Constraint declarations. While a clearly defined list may be preferable, a pre-approval process could be established to ensure entities' declared Generator Cold Weather Constraints are appropriate and can be supported and defended. Further, as part of the directive to develop and submit modifications to the Generator Cold Weather Constraint definition of proposed Reliability Standard EOP-012-2, we direct NERC, pursuant to section 215(d)(5) of the FPA, to remove the references to "cost," "reasonable cost," "unreasonable cost," and "good business practices" and replace them with criteria that are objective, unambiguous, and auditable. NERC may propose to develop modifications that address the Commission's concerns in an equally efficient and effective manner, however, NERC must explain how its proposal addresses the Commission's concerns.⁹⁴

2. Entity to Receive, Review, Evaluate, and Confirm for Validity the Generator Cold Weather Constraint Declarations

a. The Commission's Directive in the February 2023 Order

48. In the February 2023 Order, the Commission directed NERC to identify the entity that would receive and review the generator owners' constraint declarations pursuant to Reliability Standard EOP-012-1, Requirements R1 and R7, and to describe how that entity would confirm that the generator owners complied with the objective criteria.⁹⁵

b. NERC Petition

49. In response to the Commission's directive, NERC proposes new Requirement R8, Part 8.2. NERC proposes to require that any generating unit cold weather operating

https://www.nerc.com/pa/Stand/Resources/Documents/Drafting%20Team%20Reference%20Manual%20_clean_January%202024.pdf; *see also* NERC, *Technical Rationale for Reliability Standards FAQ*, at 1 (Mar. 2018), https://www.nerc.com/pa/Stand/TechnicalRationale/Technical%20Rationale%20FAQs_March2018.pdf.

⁹⁴ See Order No. 693, 118 FERC ¶ 61,218 at P 186.

⁹⁵ February 2023 Order, 182 FERC ¶ 61,094 at PP 6, 66.

limitations due to declared constraints be provided to the balancing authority, transmission operator, or reliability coordinator via data specifications to the generator owners through other Reliability Standard requirements.⁹⁶ In its petition, NERC states that its Standard Drafting Team determined that having the generator owner communicate the practical impacts of declaring a constraint to the entities that are responsible for grid planning and reliability would be the best way to address the reliability concerns contained in the Commission’s directive.⁹⁷

50. NERC explains that it and the Regional Entities would be responsible for assessing entity compliance with the Generator Cold Weather Constraint declaration provisions via an audit or other compliance monitoring method.⁹⁸ NERC also states that it and the Regional Entities are preparing a “strategy for performing robust compliance monitoring and enforcement of the currently effective and approved generator cold weather Reliability Standards.”⁹⁹ Further, NERC points to the annual data request and analysis that it asserts would allow the Commission to understand the efficacy of, and monitor the ongoing risk posed by, technical, commercial, or operational constraint provisions.¹⁰⁰

51. NERC states that it and the Regional Entities understand that they will be assessing the reasonableness of the process generator owners use to declare Generator Cold Weather Constraints.¹⁰¹ NERC notes that it will take steps to ensure that its reviews are “conducted in a consistent manner across the ERO Enterprise.”¹⁰²

⁹⁶ See NERC Petition at 63. The transmission operators and balancing authorities, in accordance with Reliability Standard TOP-003-5 (Operational Reliability Data), must obtain the generating unit(s) minimum design temperature, the historical operating temperature, or the current cold weather performance temperature determined by an engineering analysis. See Reliability Standard TOP-003-5, Requirement R1, Part 1.3.2. and Requirement R2, Parts 2.3.2.1, 2.3.2.2., and 2.3.2.3. Likewise, reliability coordinators must obtain this information per Reliability Standard IRO-010-4 (Reliability Coordinator Data Specification).

⁹⁷ See NERC Petition at 63 (citing February 2023 Order, 182 FERC ¶ 61,094 at P 66).

⁹⁸ *Id.* at 63-64.

⁹⁹ *Id.* at 69.

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at 10-11.

¹⁰² *Id.*

c. **Commission Determination**

52. We find that proposed Reliability Standard EOP-012-2 does not identify an entity to receive the Generator Cold Weather Constraint declarations, the entity responsible for timely review of the generator owners' constraint declarations, or the entity responsible for ensuring that the declarations meet the objective criteria of the proposed Standard. Although we agree with NERC that declared constraints can be provided to the balancing authority, transmission operator, or reliability coordinator via data specifications under existing Reliability Standards, this does not address the Commission's directive that an entity review and *confirm* that generator owners complied with the constraint criteria.

53. NERC states that a review of the Generator Cold Weather Constraint declarations will occur during compliance activities, and that it and the Regional Entities are developing a compliance monitoring strategy for the cold weather Reliability Standards.¹⁰³ We conclude, however, that NERC's proposal is not an equally efficient and effective means to address the Commission's directive and underlying concern. First, the NERC Rules of Procedure contain no obligation to periodically audit generator owners. Only a handful of generator owners are audited each year, and those audits do not assess all Reliability Standards and all requirements. Moreover, given the significant reliability risk evidenced by the failure of generating units during recent extreme winter weather events, we continue to believe that an enhanced level of oversight remains necessary to ensure that Generator Cold Weather Constraints are only declared when warranted. While generator owners' responses to NERC's annual data request regarding the Generator Cold Weather Constraint declarations are useful for a wide-area event analysis or in forecasting future trends,¹⁰⁴ NERC's annual data request will only provide a limited insight into the specific facts and circumstances around a Generator Cold Weather Constraint declaration. For example, while the annual data request is expected to indicate whether the generator owner has declared a constraint for a generating unit along with the associated rationale(s) for each declaration, it does not collect any supporting documentation necessary to justify the generator owners' declared constraints. As a result, we are not persuaded that NERC's annual data request constitutes an adequate substitute for an appropriate entity contemporaneously reviewing and *confirming* whether a generator owner has complied with the objective constraint criteria set out in proposed Reliability Standard EOP-012-2.¹⁰⁵

54. Accordingly, we again direct NERC, pursuant to section 215(d)(5) of the FPA, to modify proposed Reliability Standard so that NERC receives, reviews, evaluates, and

¹⁰³ See *id.* at 63-64.

¹⁰⁴ See generally *N. Am. Elec. Reliability Corp.*, Compliance Filing, Docket No. RD23-1-000 (Feb. 16, 2024).

¹⁰⁵ February 2023 Order, 182 FERC ¶ 61,094 at PP 6.

confirms for validity the Generator Cold Weather Constraint declarations in a timely manner. We also direct NERC to include in its compliance filing, a plan to timely review such declarations to verify compliance with proposed Reliability Standard EOP-012-2 and its successors or obligations in a corrective action plan and take corrective action where necessary. For example, modifying Standard to require the generator owners to provide declarations (or changes to the declarations) to NERC within 45 days. It is up to NERC whether it would like to delegate this task to the relevant Regional Entities. NERC may propose to develop modifications that address the Commission's concerns in an equally efficient and effective manner, however, NERC must explain how its proposal addresses the Commission's concerns.¹⁰⁶

3. The Length of Corrective Action Plan Implementation Deadlines

a. The Commission's Directives in the February 2023 Order

55. The Commission directed NERC to develop three modifications pertaining to the corrective action plan deadlines set forth in Reliability Standard EOP-012-1. First, the Commission directed NERC to shorten the 60-month timeframe for developing corrective action plans for existing units.¹⁰⁷ While the Commission gave NERC discretion to determine what the effective date should be shortened to, it also emphasized that "industry has been aware of and alerted to the need to prepare their generating units for cold weather since at least 2011" and that NERC should consider the "amount of time that industry has already had to implement freeze protection measures."¹⁰⁸ Second, the Commission directed NERC to revise Reliability Standard EOP-012-1 to include deadlines for completing the corrective actions in the plans.¹⁰⁹ Specifically, the Commission was concerned that the lack of a deadline or maximum duration for completing the corrective actions could allow identified issues to remain unresolved for an indefinite period.¹¹⁰ Third, the Commission directed NERC to modify the Reliability Standard EOP-012-1, Requirement R2, implementation plan for generating units with a commercial operation date prior to October 1, 2027 to require a staggered

¹⁰⁶ See Order No. 693, 118 FERC ¶ 61,218 at P 186.

¹⁰⁷ See February 2023 Order, 182 FERC ¶ 61,094 at PP 10, 24. Sixty months was determined based on approved Reliability Standard EOP-012-1 becoming effective 18 months after the effective date of applicable regulatory approvals combined with the 42-month compliance date for Reliability Standard EOP-012-1 Requirement R2.

¹⁰⁸ *Id.* P 10.

¹⁰⁹ *Id.* PP 9-10, 79, 88.

¹¹⁰ *Id.* PP 9-10, 77-79.

implementation of freeze protection measures for existing units in a generator owner's fleet with an effective date of less than 60 months from regulatory approval.¹¹¹

b. NERC's Petition

56. Proposed Reliability Standard EOP-012-2 requires generator owners to develop, within 12-months after the effective date of the Reliability Standard, a corrective action plan for their existing units to add new, or modify existing, freeze protection measures.¹¹²

57. NERC states that proposed Reliability Standard EOP-012-2 does not include the staggered timeline for the development of corrective action plans that are required for existing units.¹¹³ NERC shortened the timeline to *develop* the corrective action plan for all existing units to 12-months. According to NERC's proposal, the generator owners are then allowed an additional 24 months to *implement* the corrective actions to modify existing equipment or existing freeze protection measures (Requirement R7.1.1) and 48 months for implementing corrective actions requiring new equipment or new freeze protection measures (Requirement R7.1.2) listed in the developed corrective action plans under proposed Reliability Standard EOP-012-2.¹¹⁴

58. In its petition, NERC explains that it considered the Commission's directive to stagger implementation across a fleet of generating units, but determined that it would address reliability risks quicker by establishing a shorter period for full implementation of proposed Reliability Standard EOP-012-2 combined with "aggressive timeframes" for implementing corrective action plan measures.¹¹⁵ NERC also states that it is likely that some natural staggering would occur as entities seek to implement measures across a fleet of generating units. NERC's Standard Drafting Team determined that leaving entities with flexibility in meeting timetables for implementing corrective actions would be "appropriate in the interest of advancing cold weather reliability more quickly and more efficiently."¹¹⁶

59. NERC also added a provision permitting a generator owner to update a corrective action plan implementation timetable, with justification, if it exceeds the 24- and 48-month timeframes in Requirement R7 of the proposed Reliability Standard.

¹¹¹ *Id.* PP 10, 38.

¹¹² *See* NERC Petition at 38-39; *see also id.* at Ex. B at 3.

¹¹³ *See id.* at 67.

¹¹⁴ *Id.* at 50-51.

¹¹⁵ *Id.* at 67.

¹¹⁶ *Id.* at 68.

60. Proposed Reliability Standard EOP-012-2, Requirement R2 allows generator owners to have corrective action plans for new generating units that are similar to corrective actions plans allowed for existing generating units. NERC's petition states that "[t]his revision would drive ongoing reliability improvements, through Corrective Action Plans, if a new generator does not have sufficient freeze protection measures" at the time of commercial operation, in accordance with proposed Requirement R2.¹¹⁷

61. Proposed Reliability Standard EOP-012-2, Requirement R7 would require generator owners to "include timetables for implementing corrective actions that are within specified timeframes and to implement corrective actions in accordance with those timetables."¹¹⁸ The timetables would require the completion of corrective actions within 48 months of the development of corrective action plans for new equipment or freeze protection measures.¹¹⁹ Proposed Reliability Standard EOP-012-2, Requirement R2 also establishes a compliance date of October 1, 2027.¹²⁰

c. Comments

62. The ISO/RTO Council is concerned that even NERC's shorter 24-month period of implementation is still too long and "do[es] not appropriately reflect the urgency of winterizing generating units."¹²¹ According to the ISO/RTO Council, this is especially true for those generating units that experience a Generator Cold Weather Reliability Event versus the like units that are identified for corresponding corrective action plans, which may be at different geographic locations with different weather/climate patterns and will have different levels of risk of experiencing future freeze related issues. The ISO/RTO Council also believes that proposed Reliability Standard EOP-012-2 does not sufficiently incentivize generator owners to use best efforts to promptly implement all immediate and near-term winterization actions before the upcoming winter season.¹²² The ISO/RTO Council recommends that the Commission direct NERC to revise proposed Reliability Standard EOP-012-2 to include a requirement that each generator owner document its best efforts to promptly implement all immediate and near-term

¹¹⁷ *Id.* at 43 (giving the example of a new generating unit being too far along in its design process to meet the more stringent requirements of proposed Requirement R3 [R2] when it begins commercial operation on or soon after October 1, 2027).

¹¹⁸ NERC Petition at 51.

¹¹⁹ *Id.*

¹²⁰ *Id.* at 39-40.

¹²¹ ISO/RTO Council Protest at 19.

¹²² *Id.* at 25; *see also* ISO/RTO Council Answer at 9-10.

actions prior to the next upcoming winter season to winterize each generating unit to operate at its calculated Extreme Cold Weather Temperature.¹²³

63. NERC replied to the ISO/RTO Council's concern by stating that the Standard Drafting Team balanced the need for prompt implementation of freeze protection measures with "factors influencing the ability to implement those measures, particularly across a fleet of units."¹²⁴ In doing so, NERC notes that its Standard Drafting Team decided on an approach that would allow generator owners less time to implement protections with existing equipment or freeze protection measures and more time to implement protections requiring new equipment or freeze protection measures.¹²⁵

64. Additionally, the ISO/RTO Council objects to the extension provision, believing that NERC and the Regional Entities will only evaluate timeline exceedance for appropriateness and proper documentation after the fact, either as part of ongoing data collections or during compliance efforts.¹²⁶ The ISO/RTO Council recommends that the Commission direct NERC to revise Requirement R7, Part 7.3, to require generator owners to apply for and receive NERC or Regional Entity approval to extend corrective action plan implementation timeframes beyond the timeframes established by proposed Reliability Standard EOP-012-2.¹²⁷ In response, NERC disagrees and states that it "has identified no reliability need that would justify the administrative burdens of such a process in this case."¹²⁸

d. Commission Determination

65. The Commission directed NERC to shorten the 60-month deadline of Requirement R2 of approved Reliability Standard EOP-012-1 to develop corrective action plans for existing units.¹²⁹ By giving generator owners 12-months after the effective date of proposed Reliability Standard EOP-012-2 to develop corrective action plans to meet their Extreme Cold Weather Temperature to add new or modify existing freeze protection measures to their existing units, we find that NERC has met this directive through modified Requirements R3 and R7 of proposed Reliability Standard EOP-012-2.

¹²³ ISO/RTO Council Protest at 26; *see also* ISO/RTO Council Answer at 10.

¹²⁴ NERC Answer at 19-20.

¹²⁵ *Id.* at 20.

¹²⁶ ISO/RTO Council Protest at 20-22.

¹²⁷ *Id.* at 22.

¹²⁸ NERC Answer at 20-21.

¹²⁹ February 2023 Order, 182 FERC ¶ 61,094 at P 88.

66. Additionally, we are persuaded that NERC's proposed deadlines for implementing corrective action plans under Requirement R7 of proposed Reliability Standard EOP-012-2 meet the Commission's directive aimed at establishing corrective action plan implementation deadlines and will provide a significant level of risk reduction compared to the status quo. NERC met the Commission's directive by incorporating different corrective action plan completion timelines for existing and new generating units (24- and 48-months following corrective action plan development, as noted in Requirement R7 of the proposed Reliability Standard) which will result in staggered corrective action plan implementation in stages. We find that this equates to a staggered or phased approach.

67. Nevertheless, we are concerned that the length of NERC's proposed 24- and 48-month deadlines for implementing corrective actions after a generating unit's failure is too long¹³⁰ and do not meet the Commission's directive, which sought to substantially accelerate reliability risk mitigation. Specifically, under NERC's proposal, resources that are impacted by a Generator Cold Weather Reliability Event (e.g., freezing issue resulting in a forced outage or derate) are allowed approximately 30 or 54 months to mitigate the cause of the cold weather failure, depending on whether existing or new equipment or freeze protection measures are needed to remedy the freezing issue. Both Winter Storms Uri and Elliott demonstrated that unplanned cold weather-related generation outages jeopardize Bulk-Power System reliability. As was seen during those events, a generating unit forced outage or derate caused by a freezing issue is a known reliability risk. For those generating units that fail to operate during an extreme cold weather reliability event, their risks must be mitigated quicker than NERC proposes regardless of whether existing or new freeze protection measures are needed on the units that experience failure.

68. Accordingly, we direct NERC, pursuant to section 215(d)(5) of the FPA, to develop and submit modifications to Requirement R7 of proposed Reliability Standard EOP-012-2 to require shorter deadlines to implement corrective actions for existing or new equipment or the freeze protection measures for those generating units that experience a Generator Cold Weather Reliability Event. Based on compliance with Requirements R2 and R3, those generating units should have already had appropriate freeze protection measures implemented to be capable of operating at the generating units' respective Extreme Cold Weather Temperature. Therefore, we find that a shorter timeframe to implement corrective actions that address existing or new equipment or freeze protection measures is appropriate. For example, to satisfy this directive, NERC could require generator owners to implement corrective actions prior to the next winter season for generating units that experience a Cold Weather Reliability Event and to complete freeze protection measures on similar equipment on all of its fleet within 24 months of becoming aware of the freeze issue. For corrective action plans that involve

¹³⁰ Requirement R7 of proposed Reliability Standard EOP-012-2.

larger and more complicated implementations, NERC could incorporate a staggered 48-month corrective action plan implementation deadline.¹³¹

69. In addition, we agree with the ISO/RTO Council that without the appropriate oversight of generator owner's proposed updates to the corrective action plan implementation deadlines, the established maximum implementation deadlines in proposed Reliability Standard EOP-012-2, Requirement R7 have less meaning and allow a known reliability risk to remain on the Bulk-Power System for a longer time. In light of this reliability risk, we find that any updates to corrective action plan timeframes beyond the maximum implementation timeframes under Requirement R7 must be reviewed and approved by NERC.

70. Therefore, we direct NERC, pursuant to section 215(d)(5) of the FPA, to develop and submit modifications to Requirement R7 of proposed Reliability Standard EOP-012-2 to ensure that any extension of a corrective action plan implementation deadline beyond the maximum implementation timeframe required by the proposed Reliability Standard is pre-approved by NERC. This approach is consistent with prior Commission action in Order No. 851 where the Commission directed NERC to require pre-approval for extensions beyond the timelines required in the Reliability Standard.¹³² In Order No. 851, the Commission explained that although case-by-case extension determinations may be more uncertain or have associated burdens, the more compelling imperative is that automatic extensions have the potential for abuse by unduly delaying mitigation, and would lead to delayed visibility for NERC.¹³³

71. NERC asserts that, during the first three years that proposed Reliability Standard EOP-012-2 is mandatory and effective, generator owners that are well into their construction phase should have additional time (compared to a project at a lesser stage of

¹³¹ NERC may propose modifications that address the Commission's concerns in an equally efficient and effective manner; however, NERC must explain how its proposal addresses the Commission's concerns. See Order No. 693, 118 FERC ¶ 61,218 at P 186.

¹³² See, e.g., *Geomagnetic Disturbance Reliability Standard; Reliability Standard for Transmission Sys, Planned Performance for Geomagnetic Disturbance Events*, Order No. 851, 165 FERC ¶ 61,124, at P 54 (2018) (directing NERC to revise Reliability Standard TPL-007-2 (Transmission System Planned Performance for Geomagnetic Disturbance Events) to include a process through which corrective action plan extensions are considered on a case-by-case basis. NERC later revised Reliability Standard TPL-007-2, Requirement R7.4; *N. Am. Elec. Reliability Corp.*, Docket No. RD20-3-000, at 1 (Mar. 19, 2020) (a delegated order approving Reliability Standard TPL-007-4, which requires entities to seek approval from the ERO of any extensions of time for the completion of corrective action plan items).

¹³³ Order No. 851, 165 FERC ¶ 61,124 at P 55.

construction) to complete corrective action plans for elements already designed.¹³⁴ NERC explains that extra time is needed because NERC, in its technical rationale, states that “there needs to be allowances made for units that are in the development process, and for which the design phase may have already commenced.”¹³⁵ We are persuaded by NERC’s rationale that in this scenario the generator owner may need additional time. However, we are concerned that the proposed Reliability Standard, as currently written, does not make a clear demarcation between projects well into their construction phase and those at a lesser phase of construction; therefore, it could inadvertently be interpreted to allow a generator owner to have 48-months beyond its commercial operation date to implement Requirement R2 corrective action plans, even if the generator owner has *not yet* begun to construct its generating unit.

72. We thus find that generators that are commercially operational after October 1, 2027, should have freeze protection measures either designed into their generating systems, or, if a corrective action plan is needed, then it should be completed by the time that such generating units go into commercial operation. Accordingly, we direct NERC, pursuant to section 215(d)(5) of the FPA, to develop and submit modifications to Requirement R7 of proposed Reliability Standard EOP-012-2 to clarify that any Requirement R2 corrective action plans must be completed prior to the generating unit’s commercial operation date.

4. Corrective Action Plan Implementation Timeline Ambiguities

a. NERC Petition

73. Proposed Reliability Standard EOP-012-2, Requirement R7 states that a 24-month timeline applies to corrective actions that address *existing* equipment or freeze protection measures and a 48-month timeline applies to corrective actions that require *new* equipment or freeze protection measures.¹³⁶ NERC’s Standard Drafting Team stated that generator owners would be able to use “appropriate judgment” to determine the appropriate timeline for corrective action in accordance with Requirement R7 of proposed Reliability Standard EOP-012-2.¹³⁷

b. Comments

74. The ISO/RTO Council requests clarification on which corrective action implementation timeline applies to which corrective actions under Requirement R7 of

¹³⁴ NERC Petition, Ex. C, at 9.

¹³⁵ *Id.*

¹³⁶ *Id.*, Ex. A at 8 (emphasis added).

¹³⁷ *Id.*, Ex. F at 190.

proposed Reliability Standard EOP-012-2.¹³⁸ The ISO/RTO Council argues that some corrective actions might involve the application of new freeze protection measures on existing equipment or the extension of existing freeze protection measures to newly installed equipment, thereby implicating both timelines. Thus, it is unclear to them which timeline applies in such situations.¹³⁹ The ISO/RTO Council recommends that the Commission direct NERC to revise proposed Reliability Standard EOP-012-2 to apply the shorter of the two timelines to corrective actions that do not require the installation of new equipment.¹⁴⁰

75. The ISO/RTO Council states that while the use of professional judgment is a common method for navigating ambiguities, the fact that professional judgment exists is not a valid basis for approving an ambiguous Reliability Standard.¹⁴¹ In response, NERC states that the Commission should not direct NERC to clarify the periods allotted for the implementation of freeze protection measures because its strategy is consistent with Order No. 672.¹⁴²

c. Commission Determination

76. We believe that proposed Reliability Standard EOP-012-2, Requirement R7's corrective action plan implementation deadlines have remaining ambiguities that need to be addressed. As noted above, the Commission has previously expressed similar concerns regarding the vagueness and enforceability of Reliability Standards language.¹⁴³ Specifically, we agree with the concerns raised by the ISO/RTO Council that

¹³⁸ ISO/RTO Council Protest at 23.

¹³⁹ *Id.* at 22-23.

¹⁴⁰ *Id.*

¹⁴¹ *Id.* at 24.

¹⁴² NERC Answer at 5 (citing to discussion in Order No. 672 that requires the Commission, when determining whether a proposed Standard is just and reasonable, to consider the timetable for the implementation of new requirements, including the urgency of the need for implementation with the reasonableness of time for entities that must comply); Order No. 672, 114 FERC ¶ 61,104 at P 328.

¹⁴³ As further discussed above, in both Order No. 693 and Order No. 791, the Commission approved NERC's proposed Reliability Standards as an improvement to the reliable operation of the Bulk-Power System, while also directing NERC to submit modifications to the Reliability Standards to address the Commission's concern regarding the ambiguities contained in particular language. See Order No. 693, 118 FERC ¶ 61,218 at PP 1, 461; see also Order No. 791, 145 FERC ¶ 61,160 at PP 49-53, 67, 69.

Requirement R7 of proposed Reliability Standard EOP-012-2 does not provide clear direction as to the required corrective action plan implementation timeline that applies to certain generator owners. For example, it is unclear how the corrective action plan implementation timeline would apply if a generator owner had combinations of both existing and new equipment for freeze protection measures. Accordingly, we direct NERC, pursuant to section 215(d)(5) of the FPA, to develop and submit modifications to Requirement R7 of proposed Reliability Standard EOP-012-2 to address these ambiguities by expanding on Requirement R7.1.1 and 7.1.2 to make it clear which corrective action plan implementation deadline applies to which generator owner.

5. Proposed Reliability Standard EOP-012-2, Requirements R2, R3, and R6, Footnotes 1, 2, and 4

a. NERC's Petition

77. Proposed Reliability Standard EOP-012-2, Requirements R2, R3, and R6 contain new and identical footnotes 1, 2, and 4, respectively.¹⁴⁴ These footnotes indicate that generating units that do not self-commit or are not required to operate at or below a temperature of 32 degrees Fahrenheit but “may be called upon to operate in order to assist in the mitigation of [bulk electric system] Emergencies, Capacity Emergencies, or Energy Emergencies during periods at or below a temperature of 32 degrees Fahrenheit (zero degrees Celsius) are exempt” from Requirements R2, R3, and R6.¹⁴⁵

b. Comments

78. The ISO/RTO Council raises concerns regarding the limitations on applicability created by footnotes 1, 2, and 4 in Requirements R2, R3, and R6 of proposed Reliability Standard EOP-012-2.¹⁴⁶ The ISO/RTO Council believes that this exemption should be limited to truly seasonal generating units that will not be called upon to operate during freezing conditions, even during bulk electric system emergencies.¹⁴⁷ Thus, the ISO/RTO Council recommends that the Commission direct NERC to either remove the footnotes 1, 2, and 4 or revise Requirements R2, R3, and R6 by replacing the phrase “self-commits or is required to operate” with “that may be committed to operate.”¹⁴⁸

¹⁴⁴ See NERC Petition at 38-39, 48.

¹⁴⁵ *Id.*

¹⁴⁶ ISO/RTO Council Protest at 15-17.

¹⁴⁷ *Id.* at 16-17.

¹⁴⁸ *Id.* at 18 (stating that this would allow truly seasonal generating units that are ineligible to be committed to operate during freezing conditions to be exempt from Requirements R2, R3, and R6 of proposed Reliability Standard EOP-012-2).

79. In response, NERC states that “the appropriateness of this limited exemption is a settled matter.”¹⁴⁹ NERC notes that this exemption was included in Reliability Standard EOP-012-1 and the Commission already approved that Reliability Standard with this delineation.¹⁵⁰ NERC reiterates that the exemptions, as written, are intended to incentivize generating units that do not normally operate in freezing conditions to participate in mitigating a bulk electric system emergency.¹⁵¹

80. TAPS agrees with NERC and states that these exemptions are appropriate and that NERC’s applicability section modifications are in line with the Commission’s February 2023 Order.¹⁵² TAPS states that, under NERC’s proposed modifications to Reliability Standard EOP-012-2, the system operator should have already requested and received operational limitation data from each bulk electric system generating unit in its footprint; thus, there is no additional step for an ISO or RTO to take to identify which generating units can operate under particular conditions.¹⁵³

c. Commission Determination

81. While we appreciate the ISO/RTO Council’s concern, we agree with NERC and TAPS that the exemptions set forth in Requirements R2, R3, and R6, footnotes 1, 2, and 4, respectively, are appropriate and that NERC’s applicability section modifications are in line with the Commission’s February 2023 Order. We agree with NERC’s aim of exempting generating units that do not self-commit or are not required to operate at or below a temperature of 32 degrees Fahrenheit and are not persuaded that a directive is warranted at this time to further narrow this exemption. We expect that, as part of its compliance monitoring activities, NERC will continue to monitor the application of the exemption to ensure its application is consistent with the generating units’ actual obligations pursuant to relevant tariffs, contracts, regulations, or other binding requirements.

¹⁴⁹ NERC Answer at 16-17 (stating that the ISO/RTO Council’s concern is an “untimely attack on an issue that was previously decided by the Commission” when it approved EOP-012-1); *see also* February 2023 Order, 182 FERC ¶ 61,094 at P 60.

¹⁵⁰ NERC Answer at 16.

¹⁵¹ *Id.*

¹⁵² TAPS Answer at 9-12 (citing to the February 2023 Order, 182 FERC ¶ 61,094 at P 58).

¹⁵³ *Id.* at 11-12.

6. Different Winterization Criteria for New and Existing Generating Units

a. NERC's Petition

82. Proposed Reliability Standard EOP-012-2, Requirements R2 and R3 carry forward the cold weather operational capability requirements for new and existing bulk electric system units from approved Reliability Standard EOP-012-1, Requirements R1 and R2, respectively.¹⁵⁴ Proposed Requirement R2 applies to generating units that are in commercial operation on or after October 1, 2027, and requires them to implement freeze protection measures to protect Generator Cold Weather Critical Components that provide the capability to operate at the unit's Extreme Cold Weather Temperature with sustained concurrent 20 mph wind speed for a period of not less than 12 continuous hours or the maximum operational duration for intermittent energy resources if less than 12 continuous hours.¹⁵⁵ Proposed Requirement R3 applies to generating units that are in commercial operation prior to October 1, 2027, and requires them to implement freeze protection measures to protect Generator Cold Weather Critical Components that provide the capability to operate at the unit's Extreme Cold Weather Temperature.¹⁵⁶ During the drafting process, NERC's Standard Drafting Team responded to comments by stating that having separate requirements for new and existing units is appropriate given that some generating units would be difficult to retrofit and that existing units can provide reliable performance at temperatures above their Extreme Cold Weather Temperature.¹⁵⁷

b. Comments

83. The ISO/RTO Council objects to having different winterization criteria for new and existing generating units, noting that new units have to meet more stringent requirements. The ISO/RTO Council states that, while some older generating units may

¹⁵⁴ NERC Petition at 37.

¹⁵⁵ *Id.* at 38 (noting that if they are unable to do so, then the generator owner must develop a corrective action plan to add new or modify existing or previously planned freeze protection measures to provide the capability to operate at the unit's Extreme Cold Weather Temperature with sustained concurrent 20 mph wind speed for a period of not less than 12 continuous hours or the maximum operational duration for intermittent energy resources if less than 12 continuous hours).

¹⁵⁶ *Id.* at 39 (stating that if they are unable to do so, then the generator owner must develop a corrective action plan to add new or modify existing freeze protection measures to provide the capability to operate at the unit's Extreme Cold Weather Temperature).

¹⁵⁷ *Id.*, Ex. F at 103, 291.

not be able to perform at Requirement R2's more stringent standard, many generating units that enter commercial operation before October 1, 2027, should be able to do so.¹⁵⁸

84. The ISO/RTO Council believes that while some generating units would be difficult to retrofit in some cases, the Winter Storms Uri and Elliott Inquiry reports cautioned against setting a lower winterization standard for an entire category of generating units.¹⁵⁹ The ISO/RTO Council recommends that the Commission direct NERC to remove Requirement R3 and revise Requirement R2 to apply to all generating units, regardless of when they achieved commercial operation.¹⁶⁰

85. In its answer, NERC asserts that the ISO/RTO Council's argument on grandfathering provisions is an untimely attack on a Commission-approved issue.¹⁶¹

c. Commission's Determination

86. We agree with NERC that it is appropriate to have separate requirements for new and existing generating units within proposed Reliability Standard EOP-012-2, Requirements R2 and R3, respectively.¹⁶² NERC's Standard Drafting Team discussed applying the same requirements to existing units and new units but determined that these requirements would be difficult to retrofit and may not be justified "provided that existing units can prove reliable performance at temperatures above their" Extreme Cold Weather Temperature.¹⁶³ We also note that the Commission approved NERC's proposal to have different winterization criteria for new and existing generating units in the February 2023 Order and no concerns with having different winterization criteria were raised in that proceeding.¹⁶⁴ Nevertheless, we strongly encourage existing generating units that are capable of implementing the more detailed freeze protection measures and corrective actions in line with proposed Reliability Standard EOP-012-2, Requirement R2 to do so.

¹⁵⁸ ISO/RTO Council Protest at 26-27.

¹⁵⁹ *Id.* at 27-28.

¹⁶⁰ *Id.* at 28.

¹⁶¹ *See* NERC Answer at 23.

¹⁶² *See* NERC Petition, Ex. F at 450, 452.

¹⁶³ *Id.*

¹⁶⁴ *See* February 2023 Order, 182 FERC ¶ 61,094 at PP 1-2, 47.

7. **Annual Inspection and Maintenance of Generating Units Freeze Protection Measures**

a. **NERC's Petition**

87. Proposed Reliability Standard EOP-012-2, Requirement R4, Part 4.5 requires the annual inspection and maintenance of generating unit freeze protection measures.¹⁶⁵

b. **Comments**

88. The ISO/RTO Council expresses concern that without any reference to timing other than a requirement for “annual” inspections and maintenance, this provision will not result in timely preparations for upcoming cold weather operations.¹⁶⁶ The ISO/RTO Council recommends that the Commission direct NERC to revise proposed Reliability Standard EOP-012-2 to require inspections and maintenance of all generating units to occur on at least an annual basis and always within three months of the upcoming winter season.¹⁶⁷

89. NERC agrees that it is a good practice to inspect and maintain freeze protection measures before an upcoming winter season.¹⁶⁸ NERC disagrees, however, that the proposed Reliability Standard needs to require “in detail the timing of the required annual inspections for it to be a just and reasonable standard.” Moreover, NERC states, the Commission approved Reliability Standard EOP-012-1 without such specificity.¹⁶⁹

c. **Commission Determination**

90. We find that it is premature to address the ISO/RTO Council's recommendation that the Commission direct NERC to revise the proposed Reliability Standard to require inspections and maintenance of all generating units to occur on at least an annual basis and always within three months of the upcoming winter season.¹⁷⁰ We believe that requiring the annual inspection and maintenance of generating unit freeze protection

¹⁶⁵ See NERC Petition at 45; *see also* NERC Petition, Ex. A at 7.

¹⁶⁶ ISO/RTO Council Protest at 31; *see also* ISO/RTO Council Answer at 11.

¹⁶⁷ ISO/RTO Council Protest at 31-32; *see also* ISO/RTO Council Answer at 11.

¹⁶⁸ NERC Answer at 26.

¹⁶⁹ *Id.* (stating that it could consider the ISO/RTO Council's proposal at a later date if the implementation of proposed Reliability Standard EOP-012-2, Requirement R4 suggests that more specificity would advance reliability).

¹⁷⁰ ISO/RTO Council Protest at 31-32; *see also* ISO/RTO Council Answer at 11.

measures is adequate at this time. By requiring the annual inspection and maintenance of generator freeze protection measures, proposed Reliability Standard EOP-012-2 (and its predecessor, approved Reliability Standard EOP-012-1) represent a significant improvement upon the previously effective set of Reliability Standards, which did not include such requirements. Although we agree with both the ISO/RTO Council and NERC that it is a good practice to inspect and maintain freeze protection measures before an upcoming winter season, we are not persuaded that such additional specificity is necessary at this time. NERC has committed to monitoring the implementation of this new Standard and, in doing so, can determine whether there are outage patterns or other data that suggest the need for additional specificity.¹⁷¹

8. The Five-Year Review Period for Declared Generator Cold Weather Constraints

a. NERC's Petition

91. Proposed Reliability Standard EOP-012-2, Requirement R8.1 states that each generator owner that declares a Generator Cold Weather Constraint shall review the declaration at least every five calendar years or as needed when a change of status to the Generator Cold Weather Constraint occurs.¹⁷²

b. Comments

92. The ISO/RTO Council expresses concern that once a generator owner declares a Generator Cold Weather Constraint, proposed Reliability Standard EOP-012-2 only requires the generator owner to review that constraint every five years,¹⁷³ which lowers the bar for bulk electric system winterization and reliability by delaying the identification and adoption of new freeze protection technologies.¹⁷⁴ The ISO/RTO Council states that a five-year review period tips the scales in favor of slow installation and application of new technologies and “would result in years elapsing” between a new freeze protection technology becoming viable and a generator owner evaluating that technology as part of its routine review of a constraint.¹⁷⁵ As such, the ISO/RTO Council recommends that the

¹⁷¹ See, e.g., FERC, NERC, and Regional Entity Staff, *Inquiry into Bulk-Power System Operations During December 2022 Winter Storm Elliott*, at 132 (Oct. 2023), <https://www.ferc.gov/news-events/news/ferc-nerc-release-final-report-lessons-winter-storm-elliott> (October 2023 Report) (recommendation 1(b)).

¹⁷² NERC's Petition at 62.

¹⁷³ See ISO/RTO Council Protest at 29; see also NERC Petition, Ex. A at 9.

¹⁷⁴ ISO/RTO Council Protest at 29.

¹⁷⁵ *Id.* at 30.

Commission direct NERC to revise proposed Reliability Standard EOP-012-2 to require that constraint declaration reviews be performed annually instead of every five years.

93. NERC disagrees with the ISO/RTO Council's arguments and states that many commenters in the standard development process expressed concern that annual reviews would be "an administrative burden [with] no reliability benefit."¹⁷⁶ NERC also states that five-year reviews were selected because the technology and price of freeze protections are unlikely to change significantly over the course of a year.¹⁷⁷

a. Commission Determination

94. We agree with the ISO/RTO Council that the proposed five-year review period for the declared Generator Cold Weather Constraints in Requirement R8.1 could delay the identification and adoption of new freeze protection measures and does not represent the current pace of technological advancements. We acknowledge that a more frequent review does impose some additional administrative burden to the generator owner to review the technological advancements that hindered its ability to winterize; nonetheless, a lengthy period between a Generator Cold Weather Constraint declaration review by the generator owner offers little incentive to timely adopt new freeze protection technologies. Accordingly, we direct NERC, pursuant to section 215(d)(5) of the FPA, to develop and submit modifications to Requirement R8, Part 8.1 of proposed Reliability Standard EOP-012-2 to implement more frequent reviews of Generator Cold Weather Constraint declarations to verify that the declaration remains valid. NERC may propose to develop modifications that address the Commission's concerns in an equally efficient and effective manner, however, NERC must explain how its proposal addresses the Commission's concerns.¹⁷⁸

9. Cost Recovery Mechanisms

a. Comments

95. While NEPGA recognizes that the Commission found cost recovery to be outside the scope in connection with its February 2023 Order, it asks the Commission to recognize the near-term need for ISO-NE, generator owners, and other stakeholders to work together to ensure that cost recovery opportunities exit under the ISO-NE tariff.¹⁷⁹

¹⁷⁶ NERC Answer at 25 (referencing the development history of the proposed Standard and citing commenter concerns).

¹⁷⁷ *Id.*

¹⁷⁸ See Order No. 693, 118 FERC ¶ 61,218 at P 186.

¹⁷⁹ NEPGA Comments at 2 (citing February 2023 Order, 182 FERC ¶ 61,094 at P 83).

NEPGA argues that the ISO-NE tariff provisions do not appear to allow an existing capacity resource to reflect capital costs, such as those that may be incurred to modify or add freeze protection equipment.¹⁸⁰ EPSA's Answer supports NEPGA's comments about cost recovery and asks the Commission to assess all markets within its jurisdiction to determine whether there are sufficient vehicles for recovery of winterization costs.¹⁸¹

96. The ISO/RTO Council acknowledges that cost recovery is "critically important" but argues that costs should not be included as part of a Reliability Standard. Instead, the ISO/RTO Council contends that cost recovery should be addressed through a rate proceeding overseen by the Commission or another applicable regulatory authority (e.g., state or provincial).¹⁸² The ISO/RTO Council requests that the Commission "indicate its intention to allow for cost recovery" for the extreme cold weather Reliability Standards and direct its Office of Energy Market Regulation to survey those markets within its jurisdiction to determine whether there are sufficient vehicles for cost recovery of winterization measures.¹⁸³

97. NERC asserts that while it would support market-related actions that advance the goal of generator reliability, it has no opinion with respect to the specific cost recovery declaration and survey proposed by the ISO/RTO Council.¹⁸⁴ NERC states that it defers to the Commission's expertise on cost recovery.

b. Commission Determination

98. We find the question of whether existing market mechanisms provide an opportunity to recover the prudently incurred costs of compliance with the proposed Reliability Standard to be outside the scope of the instant proceeding, consistent with our finding in the February 2023 Order.¹⁸⁵ To the extent that there are concerns about whether existing rates or tariffs allow for the recovery of all prudently incurred costs necessary to comply with mandatory Reliability Standards as required by FPA section

¹⁸⁰ *Id.* (citing *Cogentrix Energy Power Mgmt., LLC v. FERC*, 24 F.4th 677, 683-4 (D.C. Cir. 2022) to express concern that costs incurred prior to the effective date of an associated rate recovery mechanism would be unrecoverable).

¹⁸¹ EPSA Answer at 3-5.

¹⁸² ISO/RTO Council Answer at 4-7.

¹⁸³ *Id.* at 4.

¹⁸⁴ NERC Answer at 12.

¹⁸⁵ See February 2023 Order, 182 FERC ¶ 61,094 at P 83.

219,¹⁸⁶ such questions are more appropriately addressed in proceedings pursuant to FPA sections 205 or 206.¹⁸⁷

IV. Information Collection Statement

99. The information collection requirements contained in this Order are subject to review by the Office of Management and Budget (OMB) under section 3507(d) of the Paperwork Reduction Act of 1995.¹⁸⁸ OMB's regulations require approval of certain information collection requirements imposed by agency rules.¹⁸⁹ Upon approval of a collection of information, OMB will assign an OMB control number and expiration date. 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 rule will not be penalized for failing to respond to these collections of information unless the collections of information display a valid OMB control number.

100. 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.

101. The EOP Standards are currently located in the FERC-725S (OMB Control No. 1902-0270) collection.¹⁹⁰ In Docket No. RD24-5-000, the Commission proposes to replace the current OMB approved Reliability Standard EOP-012-1 with proposed Reliability Standard EOP-012-2 (Table 1). Proposed Reliability Standard EOP-012-2 has eight requirements, seven of which have been carried over and modified from the already approved Reliability Standard EOP-012-1 (Requirements R1-R7) and one of which is new (Requirement R8).

102. The estimates in the tables below are based, in combination, on one-time (years 1 and 2) and ongoing execution (year 3) obligations to follow the revised Reliability Standard EOP-012-2.

¹⁸⁶ 16 U.S.C. § 824s(b)(4)(A).

¹⁸⁷ *Id.* § 824d; *see also id.* § 824e.

¹⁸⁸ 44 U.S.C. § 3507(d).

¹⁸⁹ 5 C.F.R. § 1320 (2023).

¹⁹⁰ The FERC-725S collection includes the EOP family of Reliability Standards: EOP-004-4, EOP 005-3, EOP-006-3, EOP-008-2, EOP-010-1, EOP-011-4, and EOP-012-2.

103. The number of respondents below are based on an estimate of the NERC compliance registry for generator owners and generator operators. Proposed Reliability Standard EOP-012-2 applies to generator owners and generator operators. The Commission based its paperwork burden estimates on the NERC compliance registry as of April 16, 2024. According to the registry for US unique entities, there are 1,210 generator owners. The estimates in the tables below are based on the change in burden from the Reliability Standards approved in this order.¹⁹¹ The Commission based the burden estimates in the tables below on staff experience, knowledge, and expertise.

Public Reporting Burden: The estimated costs and burden for the revisions in Docket No. RD24-5-000 are shown in the table below.

Table 1: Proposed Changes Due to Final Rule in Docket No. RD24-5-000 for EOP-012-2					
Reliability Standard & Requirement	Type and Number of Entity (1)	Number of Annual Responses Per Entity (2)	Total Number of Responses (1)*(2)=(3)	Average Number of Burden Hours per Response ¹⁹² (4)	Total Burden Hours (3)*(4)=(5)
FERC-725S					
One Time Estimate - Years 1 and 2 EOP-012-2					
EOP-012-2	1,210	1	1,210	5 hrs.	6,050 hrs.

¹⁹¹ The overall burden associated with Reliability Standard EOP-012 will be the sum of the burden (responses) from Reliability Standard EOP-012-1 (under RD23-1-000) and Reliability Standard EOP-012-2 (under RD24-5-000).

¹⁹² The estimated hourly cost (salary plus benefits) is a combination based on the Bureau of Labor Statistics (BLS), as of 2024, for seventy five percent of the average of an Electrical Engineer (17-2071) - \$79.31 and mechanical engineers (17-2141) - \$89.86. $(\$79.31 + \$89.86)/2 = 84.585 \times .75 = 63.439$ (**\$63.44**-rounded) (**\$63.44/hour**) and twenty-five percent of an Information and Record Clerk (43-4199) $\$44.74 \times .25\% = 11.185$ (**\$11.19** rounded) (**\$11.19/hour**), for a total $(\$63.44 + \$11.19 = \mathbf{\$74.63/hour})$.

	(GO)			\$373.15	\$451,511.5
Sub-Total for EOP-012-2 (one-time)			1,210	5 hrs. \$373.15	6,050 hrs. \$451,511.5
Ongoing Estimate – Year 3 ongoing EOP-012-2					
EOP-012-2	1,210 (GO)	1	1,210	2 hrs. ¹⁹³ \$ 149.26	2,420 hrs. \$ 180,604.6
Sub-Total for EOP-012-2 (ongoing)			1,210	2 hrs. \$ 149.26	2,420 hrs. \$ 180,604.6
Sub-Total of ongoing burden averaged over three years			404		807 hrs. \$60,226.41
Proposed Total Burden Estimate of EOP-012-2			1,614		6,857 hrs. \$511,737.91
Changes to FERC 725S by RD24-5-000					
FERC-725S Modification	Current Inventory (hours)	Current Inventory (responses)	Total Change Due to RD24-5-000		
Addition of EOP-012-2	-	-	+6,857 hrs. +1,614 responses		

Titles: FERC-725S, Mandatory Reliability Standards for the Bulk-Power System; EOP Reliability Standards.

¹⁹³ A fraction of generator owners would be required to perform the task on an ongoing basis, and the hours represent the whole body of generator owners.

Action: Revisions to Existing Collections of Information in FERC-725S.

OMB Control Nos: 1902-0270 (FERC-725S).

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

Frequency of Responses: Annually.

Necessity of the Information: Reliability Standard EOP-012-2 (Extreme Cold Weather Preparedness and Operations) is 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 Reliability Standard ensures that generating resources are prepared for local cold weather events and that entities will effectively communicate the information needed for operating the Bulk-Power System.

Internal review: The Commission has reviewed the revised Reliability Standards and made a determination that its action is necessary to implement section 215 of the FPA. The Commission has assured itself, by means of its internal review, that there is specific, objective support for the burden estimates associated with the information requirements.

- a. Description of the Revision to FERC-725S: The FERC-725S (OMB Control No. 1902-0270) is an existing information collection that contains the requirements for the EOP-012-1 Reliability Standard. As described in the Docket No. RD24-1-000 above, the Reliability Standard (EOP-012-1) is proposed to be retired and replaced by EOP-012-2.

104. 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: Jean Sonneman, email: DataClearance@ferc.gov, phone: (202) 502-6362].

105. Comments concerning the information collections and requirements approved for retirement in this order and the associated burden estimates, should be sent to the Commission (identified by Docket No. RD24-5-000), using the following methods: Electronic filing through <https://www.ferc.gov> is preferred. Electronic Filing should be filed in acceptable native applications and print-to-PDF, but not in scanned or picture format. For those unable to file electronically, comments may be filed by USPS mail or by hand (including courier) delivery: Mail via U.S. Postal Service Only: Addressed to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, N.E., Washington, DC 20426. Hand (including courier) delivery: Deliver to: Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, MD 20852.

V. Environmental Analysis

106. The Commission is required to prepare an Environmental Assessment or an Environmental Impact Statement for any action that may have a significant adverse effect on the human environment.¹⁹⁴ The Commission has categorically excluded certain actions from this requirement as not having a significant effect on the human environment. Included in the exclusion are rules that are clarifying, corrective, or procedural or that do not substantially change the effect of the regulations being amended.¹⁹⁵ The actions directed herein fall within this categorical exclusion in the Commission's regulations.

VI. Document Availability

107. 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>).

108. 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.

109. 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:

(A) Proposed Reliability Standard EOP-012-2, the associated violation risk factors and violation severity levels, the implementation plan, the newly defined terms Fixed Fuel Supply Component and Generator Cold Weather Constraint, the revised defined terms Generator Cold Weather Critical Component and Generator Cold Weather Reliability Event, and the retirement of Reliability Standard EOP-012-1 immediately prior to the effective date of proposed Reliability Standard EOP-012-2, are hereby approved, as discussed in the body of this order.

¹⁹⁴ *Reguls. Implementing the Nat'l Env't Pol'y Act*, Order No. 486, FERC Stats. & Regs. ¶ 30,783 (1987) (cross-referenced at 41 FERC ¶ 61,284).

¹⁹⁵ 18 C.F.R. § 380.4(a)(2)(ii) (2023).

(B) NERC's proposed implementation date for Reliability Standard EOP-011-4, as well as the proposed retirement of Reliability Standards EOP-011-2 and EOP-011-3 immediately prior to the effective date of proposed Reliability Standard EOP-012-2, are hereby approved, as discussed in the body of this order.

(C) NERC is hereby directed to develop and submit, within nine months of the date of issuance of this order, modifications to proposed Reliability Standard EOP-012-2 to address the Commission's concerns, including but not limited to, the Generator Cold Weather Constraint criteria definition, modifying the proposed Standard so that NERC reviews, receives, evaluates, and confirms for validity each generator owner's constraint declarations against the developed criteria, shortening and clarifying the corrective action plan implementation deadlines outlined in Requirement R7 of proposed Reliability Standard EOP-012-2, ensuring that the any extension of a corrective action plan implementation deadline beyond the maximum implementation timeframe required by the proposed Standard is pre-approved by NERC, and implementing a more frequent review of the Generator Cold Weather Constraint declarations in accordance with Requirement R8.1 of proposed Reliability Standard EOP-021-2, as discussed in the body of this order.

By the Commission. Commissioner Rosner is not participating.

(S E A L)

Debbie-Anne A. Reese,
Acting Secretary.