

Agenda

Board of Trustees Meeting

April 4, 2025 | 10:30 – 11:30 a.m. Eastern
Virtual Meeting

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Introduction and Chair's Remarks

[NERC Antitrust Compliance Guidelines](#)

Agenda Items

1. Project 2024-03 Revisions to EOP -012 – 2 Extreme Cold Weather Preparedness and Operations –
Approve
2. Closing Remarks and Adjournment

*Background materials included.

Project 2024-03 Revisions to EOP-012-2 – Extreme Cold Weather Preparedness and Operations.

Action

Find, based on the recommendation of NERC Management, that the proposed Reliability Standard EOP-012-3, as modified considering the comments received, is just reasonable, not unduly discriminatory or preferential, and in the public interest.

Approve the following standards documents and authorize staff to file with applicable regulatory authorities, with a request that they be made effective:

- Reliability Standard – EOP-012-3 – Extreme Cold Weather Preparedness and Operations
[\[EOP-012-3 Standard\]](#) [\[Redline to last approved\]](#) [\[Redline to last posted\]](#)
- Revised Defined Term for Inclusion in the *Glossary of Terms used in NERC Reliability Standards*
See EOP-012-3 Reliability Standard
- Implementation Plan
[\[EOP-012-3 Implementation Plan\]](#) [\[Redline to last posted\]](#)
- Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs)
[\[VRF/VSL Justification\]](#)
- Retirement
[EOP-012-2 – Extreme Cold Weather Preparedness and Operations\]](#)

Background

NERC developed the original version of the generator cold weather preparedness Reliability Standard, Reliability Standard EOP-012-1, in 2022 under Project 2021-07 Extreme Cold Weather Grid Operations, Preparedness, and Coordination. The purpose of this project was to address standards-related recommendations from the joint Federal Energy Regulatory Commission (FERC or Commission)/NERC/Regional Entity staff review of operations during the February 2021 Winter Storm Uri event¹.

NERC developed Reliability Standard EOP-012-2 in 2023-2024 to address Commission directives from the February 2023 Order approving Reliability Standards EOP-012-1 and EOP-011-3.² In the February 2023 Order, the Commission directed that NERC revise EOP-012-1 to clarify the applicability of the standard's requirements for generator cold weather preparedness, further define the circumstances under which a Generator Owner may declare that constraints preclude them from implementing one or more corrective actions to address freezing issues, and to

¹ See [The February 2021 Cold Weather Outages in Texas and the South Central United States | FERC, NERC and Regional Entity Staff Report](#).

² *N. Am. Elec. Reliability Corp.*, 182 ¶ 61,094 (2023) ("February 2023 Order").

shorten the implementation timeline so cold weather reliability risks would be addressed more quickly. NERC filed the revised standard and associated documents in February 2024.

On June 27, 2024, FERC issued an Order approving Reliability Standard EOP-012-2.³ While finding Reliability Standard EOP-012-2 represented an improvement over the prior version and addressed many of its concerns, FERC found the standard required further improvement to address certain concerns remaining from its February 2023 Order. FERC therefore directed NERC to revise the standard in five areas and to submit a revised standard within nine (9) months of the date of the Order, or by March 27, 2025.

Specifically, FERC directed NERC as follows:

- **Paragraph 47:** Address ambiguities regarding the term Generator Cold Weather Constraint and criteria.
- **Paragraph 54:** Address concerns regarding the need for a timely review and evaluation of declared Generator Cold Weather Constraints by NERC.
- **Paragraph 68:** Address concerns that existing EOP-012-2 Requirement R7 allows too much time for entities to implement corrective actions for existing or new equipment or freeze protection measures for those generating units that experience a Generator Cold Weather Reliability Event.
- **Paragraph 70:** Address the finding that any extensions of a Corrective Action Plan implementation deadline beyond the maximum implementation timeframe provided by the standard be pre-approved by NERC (*related: paragraph 3*, relating to notifications of operating limitations applying during the period of the extension).
- **Paragraph 72:** Address the finding that generators that are first commercially operational on or 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.
- **Paragraph 76:** Address concerns that EOP-012-2 Requirement R7 has ambiguities in the Implementation Plan timelines that apply to certain Generator Owners.
- **Paragraph 94:** Address the concern that Generator Cold Weather Constraint declarations should be reviewed more frequently than once every five years to ensure the constraint remains valid.

After several months of expedited standards development proceedings that failed to produce a consensus standard responsive to the June 2024 Order directives, the Board of Trustees (Board) took action at its January 10, 2025 meeting to initiate the special standard development rule described in Section 321.5 of the NERC Rules of Procedure. Under this rule, the Board directed the Standards Committee to work with stakeholders and NERC staff to prepare a draft standard responsive to the June 2024 Order directives, to post that standard for a 45-day public comment period, and to present the standard and the record of development to the Board for its consideration.

³ *N. Am. Elec. Reliability Corp.*, 187 FERC ¶ 61, 204 (2024) (“June 2024 Order”).

On March 20, 2025, NERC filed a request with the Commission seeking an extension of time to file a responsive standard as late as April 14, 2025, citing the standard development proceedings and the need to give due consideration to all comments received later in the development process.

Summary

In this proceeding under Section 321.5, NERC Management is asking the Board to make a specific finding that proposed Reliability Standard EOP-012-3, as presented with certain modifications from the prior posted version, is just reasonable, not unduly discriminatory, and in the public interest in determining appropriate next steps.

Consistent with the directives of the FERC June 2024 Order, Reliability Standard EOP-012-3 would revise the currently effective standard as follows:

- Provide clear, objective, and sufficiently detailed criteria for determining the limited circumstances under which a Generator Owner could declare constraints that would preclude them implementing a specific corrective action to address freeze protection issues, referred to as Generator Cold Weather Constraints, with certain constraints being considered “known” constraints and subject to validation, and others being subject to - case-by-case approval depending on the facts and circumstances (*revised definition of Generator Cold Weather Constraint; new Attachment 1*);
- Require each Generator Owner declaring a Generator Cold Weather Constraint to submit the declaration to its Compliance Enforcement Authority for review in a timely manner (*Requirement R8*);⁴
- Require that Generator Owners review their validated Generator Cold Weather Constraints at least once every 36 calendar months for continued validity, instead of at least once every five calendar years, to ensure that new technologies are considered and circumstances preventing implementation are reevaluated on a regular basis (*Requirement R9*);
- Provide shorter deadlines for Generator Owners to implement Corrective Action Plans developed in response to Generator Cold Weather Reliability Events, so that known freezing issues are addressed more quickly (*Requirement R6*);
- Require that any extension of a Corrective Action Plan implementation deadline beyond the maximum implementation timeframe provided by the standard be pre-approved by the Compliance Enforcement Authority (*Requirements R6, R7*);
- Reinforce that Generator Owners must update their generating unit cold weather operating limitations while any Corrective Action Plan is pending completion (*Requirement R7*);
- Require Generator Owners with new Bulk Electric System generating units entering commercial operation on or after October 1, 2027 to have the required cold weather capability upon entering commercial operation, unless a Generator Cold Weather Constraint would apply (*Requirement R2*); and

⁴ As discussed herein, the EOP-012-3 Generator Cold Weather CAP Extension and Constraint Process would ensure that these submissions are reviewed by the Compliance Enforcement Authority in a timely manner.

- Clarify requirements for Corrective Action Plan timeline applicability, as identified by the Commission in the June 2024 Order (*Requirements R6, R7*).

Consistent with the discussions at the January 10, 2025 Board meeting, NERC proposes a compliance abeyance period for proposed EOP-012-3 Requirement R1 Part 1.1 to address concerns raised during standards development regarding the calculation of the Extreme Cold Weather Temperature. This provision would provide a two year period during which the Compliance Enforcement Authority would not pursue formal actions against those failing to comply Requirement R1 Part 1.1 with respect to the calculation of the Extreme Cold Weather Temperature or any related noncompliance, provided they were acting in good faith to comply with the standard in accordance with the implementation plan. See Section C. Compliance, Compliance Monitoring Process 1.4. Compliance Abeyance Period.

Standards Development Process

The Standards Committee initiated Project 2024-03 Revisions to EOP-012-2 on July 17, 2024. At that meeting, the Standards Committee also approved procedural waivers under the Standard Processes Manual to reduce the time provided for comment periods and ballots given the short FERC deadline for completion.⁵

The drafting team met approximately 22 times from August 22, 2024 through January 9, 2025 to modify the EOP-012-2 standard and associated documents based on the FERC June 2024 Order directives (including three in-person meetings and a technical conference). The initial 20-day formal comment and ballot was conducted from October 17 – November 5, 2024. The initial EOP-012-3 draft received an approval of 42.29% and 90.98% quorum. The Implementation Plan received an approval of 45.86% and 91.25% quorum. The drafting team made additional changes to the standard based on comments received. The additional draft received an approval of 44.54% and 88.93% quorum, and the Implementation Plan received a 59.7% approval and 89.58% quorum.

Due to a combination of factors, including the lack of meaningful consensus improvement across two successive ballots, the Board took action at its January 10, 2025 meeting to initiate the special standard development rule described in Section 321.5 of the NERC Rules of Procedure. NERC staff worked with a small group of volunteers from the Standards Committee to address the Board’s resolutions and prepare a third draft of the proposed EOP-012-3 standard. Members from the Project 2024-03 drafting team participated to provide background and context for their recommendations. The group met from January 13 – January 21, 2025. Using as a starting point the final recommendations of the original EOP-012-3 drafting team, the group discussed the following additional changes:

- Clarifications to known Generator Cold Weather Constraints that would require validation, but not case-by-case approval;
- Structural and original equipment manufacturer limitations;
- Shorter deadlines to implement corrective actions;

⁵ Under the approved waiver, the time period for the informal standard authorization request comment period was reduced from 30 days to as few as 15 days; informal comment period and initial ballot reduced from 45 days to as little as 20 days, with a 5 day ballot and concurrent poll of the Violation Risk Factors and Violation Severity Levels; additional formal comment period and ballot periods reduced from 30 days to as little as 15 days, with 5 day ballots; and the final ballot reduced from 10 days to as little as 5 days.

- Clarification on processes when experiencing Generator Cold Weather Reliability Event; and
- Providing additional clarification in the Technical Rationale document.

Consistent with the Board’s resolution, the third draft of proposed EOP-012-3 was posted for a 45-day comment period from January 27, 2025 to March 12, 2025, with no accompanying ballot. During the comment period, NERC received 43 sets of responses, including comments from approximately 108 different people from approximately 77 companies representing 7 of the industry segments.

NERC staff worked with the Standards Committee volunteers to develop recommended revisions to address the comments received during the public comment period. NERC Management recommends the Board approve the draft EOP-012-3 standard with the recommended revisions summarized below.

Consideration of Comments: Rule 321 Public Comment Period

The following is a brief summary of the comments received during the Rule 321 public comment period and how they were, or were not, addressed in the final draft EOP-012-3 that is presented for the Board’s approval. The [Consideration of Comments](#) provides the original comments along with a detailed response to each commenter explaining how their comment was considered. The Consideration of Comments for the two prior postings are available on the project page.

Comments regarding the Definition of Generator Cold Weather Constraint and the List of Constraints included in new Attachment 1

Background: Draft EOP-012-3 would revise the definition of Generator Cold Weather Constraint to remove reference to “costs” and other terms the FERC June 2024 Order found ambiguous, and create a new Attachment 1 to list the constraints that, if present and confirmed, would be considered valid (“known”) constraints, and the constraints that, depending on the facts and circumstances and subject to pre-approval, could be considered constraints (“case-by-case” constraints).

Comments included the following suggestions:

- Further revise the definition of Generator Cold Weather Constraint to better reflect the intent of the revised standard;
- Include a cost/benefit analysis to determine whether generators should be required to implement the required freeze protection measures;
- Add more or all of the “case-by-case” constraints to the “known” constraints list for which validation, rather than pre-approval, is required;
- Further elaborate on how the ERO Enterprise will review economic constraints; and
- Extend the sunset date for the generator wind turbine tower “known” constraint past 2029/2031 to 2035 or later, based on expected timelines for development, testing, and deployment of new technologies.

Response: The proposed definition of Generator Cold Weather Constraint is revised to clarify the scope of freeze protection measures that may be precluded by a constraint. To help ensure that economic constraints are being declared only when warranted, the final draft of EOP-012-3 adds

a requirement for Generator Owners to submit an attestation signed by an officer of the company when declaring these constraints, along with its supporting analysis.

Other suggestions for changes were declined. No references to “cost/benefit” were added, as the June 2024 Order specifically directed NERC to remove all references to “cost”, “reasonable cost”, and “unreasonable cost”. No further changes were made to the organization of possible constraints, as it is believed that further scrutiny of the facts and circumstances would be required for each of the “case-by-case” constraints; based on the EOP-012 proceedings conducted to date. No further changes are made to the wind turbine tower “known” constraint, so as to avoid unintentionally disincentivizing the prompt development of technologies that would address known issues with wind turbine towers.

Comments Regarding the Proposed Revision to Requirement R1 Part 1.1

Background: Previous drafts of proposed EOP-012-3 added language intended to clarify that the Generator Owner has flexibility to address gaps in available data weather sets for calculating the Extreme Cold Weather Temperature. This language was intended to address comments indicating potential compliance concerns when using imperfect data sets.

Comments included the following suggestion:

- Remove the added language so that a separate standards development project could address the issue.

Response: No change to the proposed language was made in the final draft of EOP-012-3 as it substantially addresses the originally identified compliance concern. The ERO Enterprise will use a compliance abeyance period to gather information on this calculation that might inform future standards revisions and help ensure that any calculation issues that are identified in the abeyance period are identified and addressed sooner than they might be if they were discovered during the normal course of compliance monitoring activities.

Comments on Compliance Enforcement Authority (CEA) process for reviewing declared Generator Cold Weather Constraints and Corrective Action Plan extension requests

Background: NERC developed the draft EOP-012-3 Generator Cold Weather CAP Extension and Constraint Process to provide information on how NERC will ensure the timely review of Corrective Action Plan extension requests and declared Generator Cold Weather Constraints consistent with the June 2024 Order. The process is not part of the proposed EOP-012-3 standard but has been posted along with the draft EOP-012-3 standard for informational purposes.

Comments included the following concerns:

- Concerns about timeliness of reviews under the process;
- Concerns about impacts on other compliance obligations if requests are denied;
- Concerns that the ERO Enterprise does not have sufficient resources or expertise to review declared constraints; and
- Concerns regarding the need to ensure consistency in determinations across the ERO Enterprise.

Comments also included the following suggestions:

- The ERO Enterprise establish expectations regarding the documents and information that would be required to be submitted;
- Embed the review process in the standard, instead of retaining as a separate document that is maintained through the Compliance Monitoring and Enforcement Program;
- Approve extension requests if not responded to by the CEA within a set period; and
- Require the Reliability and Security Technical Committee (RSTC) complete each extension review instead of the CEA.

Response: NERC revised the draft EOP-012-3 Generator Cold Weather Corrective Action Plan (CAP) Extension and Constraint Process and will be working to provide additional guidance and transparency to industry on the types of requests that are being approved and the types of documentation that will aid the ERO Enterprise in making these determinations in a timely manner.

Other suggestions were declined. Suggestions to include the process in the EOP-012-3 standard were declined, as Compliance Monitoring and Enforcement Program (CMEP) processes are maintained independently outside of Reliability Standards that establish obligations for users, owners, and operators of the Bulk-Power System.

Suggestions to add an automatic pre-approval clause were declined as inconsistent with the June 2024 Order directing NERC to review and validate all declared constraints. A suggestion to have the RSTC complete the review was declined, as it is outside the scope of the RSTC as a technical forum to perform CMEP responsibilities that are the responsibility of the ERO Enterprise.

Concerns about Corrective Action Plan Development/Implementation Timelines for Generator Cold Weather Reliability Events (Requirement R6)

Background: Consistent with the June 2024 Order, the draft EOP-012-3 standard proposed an expedited timeframe for the completion of Corrective Action Plans developed to address Generator Cold Weather Reliability Events. Consistent with FERC guidance in the June 2024 Order, NERC developed a requirement for Generator Owners to implement corrective actions on the unit experiencing the event by the start of the next winter season.

Comments included the following suggestions:

- NERC create a uniform deadline for Corrective Action Plan completion (e.g. 12 months), instead of specifying completion prior to the next winter season;
- Add clarification as to what might constitute an “early season” event for Corrective Action Plan timeline purposes; and
- Consolidate the timelines for Corrective Action Plan development and completion for affected units, which are the same (i.e. prior to the start of the next winter season).

Response: The final draft EOP-012-3 standard is revised to clarify what constitutes an early season event for Corrective Action Plan timeline purposes. Consistent with the recommendation in the June 2024 Order, the final draft EOP-012-3 retains the deadline to implement corrective actions on a generating unit experiencing a Generator Cold Weather Reliability Event prior to the next winter season. This requirement would help ensure those units do not remain vulnerable to known freezing issues for a significant part (or even all) the following winter season. The

suggestion to consolidate timelines was declined, as it is clearer to maintain separate provisions addressing the development and completion of Corrective Action Plans, even if the dates are the same.

Requirement R2 Addressing Requirements for New Generating Units (Oct. 1, 2027 and later)

Background: To address the FERC directive in the June 2024 Order, earlier drafts of EOP-012-3 proposed to remove the option to develop a Corrective Action Plan for most new generating units entering commercial operation on or after October 1, 2027. Given the differences across standard versions, industry participants indicated support for NERC preserving a limited opportunity for certain generators who completed design of their units prior to EOP-012-1 approval but who would not enter commercial operation before October 1, 2027 to implement a Corrective Action Plan over the course of winter 2027-2028.

Comments included the following concerns:

- The inclusion of certain U.S.-specific dates in the standard might conflict with the dates in effect in Canadian provinces;
- The dates that were used for proposed Requirement R2 would apply to the various generators and options described in Parts 2.1 and 2.2, and could unintentionally leave compliance gaps for other new generators;
- The Corrective Action Plan option was too short-lived to be of any practical use for those generators that might seek to use it; and
- As written, entities may construe the various dates to require retroactive performance under the standard.

Response: After review of the comments, it was determined that the issue sought to be addressed through Requirement R2 in prior drafts of EOP-012-3 was fundamentally an implementation issue, and as such, it would be best addressed in the implementation plan rather than in the standard itself. In the final draft EOP-012-3, Requirement R2 is revised and streamlined consistent with the June 2024 Order, and the limited phased-in compliance provision for certain new generators is included in the revised implementation plan.

Requirements R8 and R9 Addressing the Declaration of Generator Cold Weather Constraints and Submission to the CEA for Review, and Requirements for Periodic Re-review of Validated Constraints

Background: To address the June 2024 Order, proposed EOP-012-3 includes requirements for the timely submission of declared Generator Cold Weather Constraints to the Compliance Enforcement Authority. It also shortens the timeframe required for periodic reviews of validated constraints to 36 calendar months from five calendar years, which was thought to be a reasonable balance between the need to stay abreast of new technologies and the general pace of technological development.

Comments included the following suggestions:

- Clarify how the various requirements for Corrective Action Plans and Generator Cold Weather Constraint submissions would apply, particularly where repeat issues occur;
- Clarify or edit the processes required when an entity determines if its constraint is no longer valid or needs amendment;

- Revise the standard to require an entity to initiate an off-cycle review of their declared constraint following receipt by a regulatory authority that a material fact underlying their constraint has changed, such as the development of a new freeze protection technology that might obviate the need for the constraint; and
- Require Generator Owners to report the results of their periodic constraint reviews to the Compliance Enforcement Authority.

Response: The final draft EOP-012-3 revises Requirement R8 to clarify the required performance when multiple issues occur due to known causes and the possible solutions are addressed by validated constraints. Other comments seeking clarifications are addressed in the full consideration of comments.

The suggestion to add language regarding off-cycle reviews following a regulatory notification was declined, as it was not thought to be workable for all contexts in which Generator Owners may declare constraints under the standard. However, NERC staff appreciates the suggestion and will consider if the Alerts process or another option in NERC's reliability toolkit may be appropriate for keeping Generator Owners apprised of new developments that may impact their declared constraints and warrant an off-cycle review.

Minority Issues

In addition to the specific issues summarized above, NERC received minority comments indicating continued concern with aspects of the standard that were addressed in prior EOP-012 development and approval proceedings, including consistency with the Market Interface Principles and requiring Generator Owners to implement freeze protection measures that may not be justified from the Generator Owner's cost/benefit analysis.

Pertinent FERC Directives

This project addresses the following directives from the June 2024 Order, including paragraphs 47, 54, 68, 70 (related: paragraph 3), 72, 76, and 94.

Cost Effectiveness

The drafting team sought stakeholder input on the cost effectiveness of the proposed standards during the formal comment periods. Consistent with comments received during prior comment periods for prior versions of the EOP-012 standard, several commenters stated that implementing the required freeze protection measures could be very costly for Generator Owners. Proposed EOP-012-3 balanced these interests in a manner that is consistent with and responsive to the concerns underlying the FERC directives in the June 2024 Order as well as the findings and recommendations of the Winter Storm Uri report that prompted the development of the EOP-012 standard in the first instance. Proposed EOP-012-3 seeks to balance concerns about the need for reliability oversight of the EOP-012-3 standard while minimizing administrative reporting burdens to the extent practicable.

Additional Information

A link to the project history and files is included here for reference:

[\[Project 2024-03 Revisions to EOP-012-2\]](#)

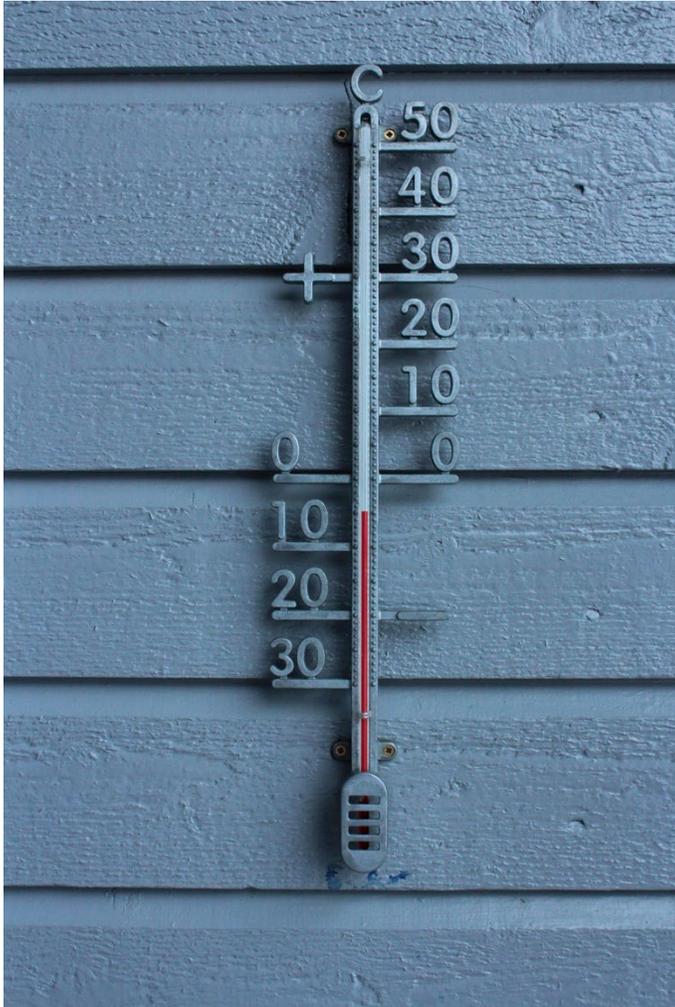
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Standards Actions

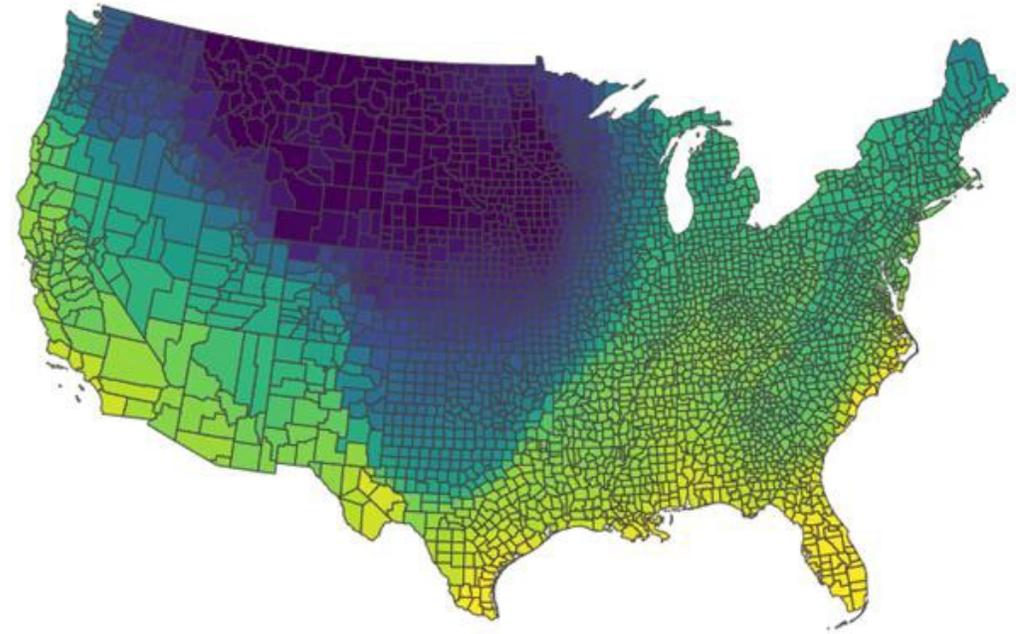
Project 2024-03 Revisions to EOP-012-2 – Extreme Cold Weather
Preparedness and Operations

Soo Jin Kim, Vice President, Engineering, Standards, and PRISM
Board of Trustees Meeting
April 4, 2025



- Reliability Benefits
 - Clarifies the Generator Cold Weather Constraint
 - Enhances requirements for corrective action plans (CAP) and timelines
 - Requires CAP extension be pre-approved by the Compliance Enforcement Authority
 - Requires cold weather capability for new units as of COD

- Revisions from ROP 321 Posting Comments:
 - Revised Generator Cold Weather Constraint definition
 - Clarification on early season CAPs
 - Attestation added in “Case-by-case” constraints
 - EOP-012-3 Generator Cold Weather CAP Extension and Constraint Process revisions
 - Implementation Plan updated
 - Compliance abeyance for ECWT



- Action
 - Approve
 - Reliability Standard – EOP-012-3 – Extreme Cold Weather Preparedness and Operations





Questions and Answers