Standard Authorization Request (SAR)

Complete and submit this form, with attachment(s) to the NERC Help Desk. Upon entering the Captcha, please type in your contact information, and attach the SAR to your ticket. Once submitted, you will receive a confirmation number which you can use to track your request.

The North American Electric Reliability Corporation (NERC) welcomes suggestions to improve the reliability of the bulk power system through improved Reliability Standards.

Requested information			
SAR Title:	Revisions to EOP-012-2		
Date Submitted:	July 1, 2024 (Revised August 27,2024)		
SAR Requester			
Name:	Soo Jin Kim, Vice President of Engineering and Standards (Revised by the 2024-03 Drafting Team)		
Organization:	NERC		
Telephone:		Email:	Soo.jin.kim@nerc.net

SAR Type (Check as many as apply)	
☐ New Standard ☒ Revision to Existing Standard ☒ Add, Modify or Retire a Glossary Term ☐ Withdraw/retire an Existing Standard	☐ Imminent Action/ Confidential Issue (SPM Section 10) ☐ Variance development or revision ☐ Other (Please specify)

Justification for this proposed standard development project (Check all that apply to help NERC prioritize development)	
☒ Regulatory Initiation ☐ Emerging Risk (Reliability Issues Steering Committee) Identified ☐ Reliability Standard Development Plan	☐ NERC Standing Committee Identified ☐ Enhanced Periodic Review Initiated ☐ Industry Stakeholder Identified

What is the risk to the Bulk Electric System (What Bulk Electric System (BES) reliability benefit does the proposed project provide?):

Multiple winter storm events since 2011 have demonstrated the risk to the Bulk Power System when generators fail to prepare adequately for extreme cold weather conditions. The EOP-012 Reliability Standard provides a comprehensive framework of requirements for generator cold weather preparedness to ensure that more generators are available during extreme cold weather conditions and not forced offline due to foreseeable freezing issues. FERC, however, has identified several ambiguities and other reliability issues which could reduce the effectiveness of this standard. FERC directed NERC to revise EOP-012-2 and associated definitions to address these issues by March 2025.

Purpose or Goal (What are the reliability gap(s) or risk(s) to the Bulk Electric System being addressed, and how does this proposed project provide the reliability-related benefit described above?):

The purpose of this project is to address the directives identified by FERC in its June 27, 2024 order approving Reliability Standard EOP-012-2 and directing further modifications. *N. Am. Elec. Reliability Corp.*, 187 FERC ¶ 61,204 (2024). In that order, FERC found that further improvements needed to be

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made to address ambiguous language and address other reliability gaps/implementation issues in the standard and related definitions to fully address issues first raised in the Commission's February 2023 Order approving EOP-012-1. *See 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). FERC directed that NERC submit the modifications within 9 months of the date of the order, or by March 27, 2025.
Project Scope (Define the parameters of the proposed project):
~~The scope of this project will be to revise the EOP-012-2 standard and its associated *Glossary* definitions to address the directives for further modifications identified by FERC in its June 2024 Order approving EOP-012-2.~~ The drafting team is charged with addressing the standards modification directives from the June 2024 FERC order approving EOP-012-2. The FERC Order directives are provided in the Detailed Description section below. The drafting team should propose standards modifications responding to the FERC directives, either as directed by FERC or in an equally effective and efficient manner as supported by the drafting team. In addition, ~~T~~the drafting team will have flexibility to address the directives in the manner it deems best, which may include revising existing requirements or ~~and~~ *Glossary* definitions or drafting new ones. The drafting team will also have flexibility to make minor clarifying modifications, in addition to the FERC directives, to EOP-012-2 or the supporting documentation as the team sees appropriate. Issues related to compliance monitoring approaches will be addressed by NERC Staff. The drafting team should coordinate with NERC Staff when developing standards modifications to leverage existing NERC processes and tools to the extent feasible. Although it is not believed to be necessary to address the directives, to the extent a drafting team determines creating a new standard or revising another existing standard would provide the optimal approach for addressing one or more of these directives, the drafting team should have the flexibility to pursue that approach. Summarizing the June 2024 FERC Order, the drafting team's scope is: • To address concerns related to the ambiguity of the Generator Cold Weather Constraint term and criteria (P 47); • To address concerns regarding the need for a timely review and evaluation of declared Generator Cold Weather Constraints by NERC (P 54); • To address concerns that existing EOP-012-2 Requirement R7 allows too long 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 (P 68); • To 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 (P 70);

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- To 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 (P 72);

- To address concerns that EOP-012-2 Requirement R7 has ambiguities in the implementation plan timelines that apply to certain generator owners (P 76); and,
- To 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 (P 94).

~~The drafting team will be charged with addressing the standards modification directives from the June 2024 order, which include:~~

~~*Directives to Revise the Definition of Generator Cold Weather Constraint and Clarify Requirements for Declared Constraints*~~

~~P 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, created by NERC's Standard Drafting Team and 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~~

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~~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.~~

~~P 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 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.~~

~~*Revisions to Corrective Action Plan Requirements*~~
~~P 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 larger and more complicated implementations, NERC could incorporate a staggered 48-month corrective action plan implementation deadline.~~

~~P 70: [W]e 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…~~

~~P 72: We…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.~~

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~~P 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. Specifically, we agree with the concerns raised by the ISO/RTO Council that 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.~~

~~*Periodic Review of Generator Cold Weather Constraint Declarations*~~
~~P 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.~~

Detailed Description (Describe the proposed deliverable(s) with sufficient detail for a drafting team to execute the project. If you propose a new or substantially revised Reliability Standard or definition, provide: (1) a technical justification[1] of developing a new or revised Reliability Standard or definition, which includes a discussion of the risk and impact to reliability-of the BES, and (2) a technical foundation document (*e.g.,* research paper) to guide development of the Standard or definition):

The drafting team is charged with addressing the standards modification directives from the June 2024 order and making other minor clarifying revisions as it deems appropriate and supported by stakeholder consensus. It is noted that the FERC Order includes tasks outside the purview of the drafting team.

[1] The NERC Rules of Procedure require a technical justification for new or substantially revised Reliability Standards. Please attach pertinent information to this form before submittal to NERC.

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Those portions of the order that will not be addressed by the drafting team are italicized below for clarity.

Directives to Revise the Definition of Generator Cold Weather Constraint and Clarify Requirements for Declared Constraints

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Cost Impact Assessment, if known (Provide a paragraph describing the potential cost impacts associated with the proposed project):
Cost impacts are unknown at this time.
Please describe any unique characteristics of the BES facilities that may be impacted by this proposed standard development project (*e.g.*, Dispersed Generation Resources):
BES generating facilities
To assist the NERC Standards Committee in appointing a drafting team with the appropriate members, please indicate to which Functional Entities the proposed standard(s) should apply (*e.g.*, Transmission Operator, Reliability Coordinator, etc. See the NERC Rules of Procedure Appendix 5A:
The Generator Owner and Generator Operator are the applicable entities; however, the standard drafting team should also include other Functional Entities that ensure the reliability of the Bulk-Power

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System during extreme cold weather conditions (e.g., Balancing Authority, Reliability Coordinator, Transmission Operator).
Do you know of any consensus building activities[2] in connection with this SAR? If so, please provide any recommendations or findings resulting from the consensus building activity.
None
Are there any related standards or SARs that should be assessed for impact as a result of this proposed project? If so, which standard(s) or project number(s)?
None
Are there alternatives (e.g., guidelines, white paper, alerts, etc.) that have been considered or could meet the objectives? If so, please list the alternatives with the benefits of using them.
FERC directed that NERC revise the EOP-012 standard; other alternatives would not meet the objectives of this project.

Reliability Principles	
Does this proposed standard development project support at least one of the following Reliability Principles (Reliability Principles)? Please check all those that apply.	
☒	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
☒	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☒	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
☐	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
☐	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.
☒	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☐	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
☐	8. Bulk power systems shall be protected from malicious physical or cyber attacks.

Market Interface Principles	
Does the proposed standard development project comply with all of the following Market Interface Principles?	Enter (yes/no)
1. A reliability standard shall not give any market participant an unfair competitive advantage.	Yes

[2] Consensus building activities are occasionally conducted by NERC and/or project review teams. They typically are conducted to obtain industry inputs prior to proposing any standard development project to revise, or develop a standard or definition.

Market Interface Principles	
2. A reliability standard shall neither mandate nor prohibit any specific market structure.	Yes
3. A reliability standard shall not preclude market solutions to achieving compliance with that standard.	YeEs
4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards.	Yes

Identified Existing or Potential Regional or Interconnection Variances	
Region(s)/ Interconnection	Explanation
e.g., NPCC	

For Use by NERC Only

SAR Status Tracking (Check off as appropriate).	
☐ Draft SAR reviewed by NERC Staff ☐ Draft SAR presented to SC for acceptance ☐ DRAFT SAR approved for posting by the SC	☐ Final SAR endorsed by the SC ☐ SAR assigned a Standards Project by NERC ☐ SAR denied or proposed as Guidance document
Risk Tracking.	
☐ Grid Transformation ☒ Resilience/Extreme Events ☐ Security Risks	☐ Energy Policy ☐ Critical Infrastructure Interdependencies

Version History

Version	Date	Owner	Change Tracking
1	June 3, 2013		Revised
1	August 29, 2014	Standards Information Staff	Updated template
2	January 18, 2017	Standards Information Staff	Revised
2	June 28, 2017	Standards Information Staff	Updated template
3	February 22, 2019	Standards Information Staff	Added instructions to submit via Help Desk
4	February 25, 2020	Standards Information Staff	Updated template footer

5	August 14, 2023	Standards Development Staff	Updated template as part of Standards Process Stakeholder Engagement Group
6	June 4, 2023	Standards Information Staff	Updated link to the NERC Reliability Principles