

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Industry Webinar

Project 2024-03: Revisions to EOP-012-2

October 24, 2024

RELIABILITY | ACCOUNTABILITY



- **Administrative Items**
- **Background**
- **FERC Order/Directives**
- **Consideration of FERC Directives (Mapping)**
- **Project Timeline**
- **EOP-012-3 Standard Revisions and Implementation Plan**
- **Attachment 1 & Calculating Extreme Cold Weather Temperature**
- **Generator Cold Weather CAP Extension and Constraint Process**
- **Next Steps**
- **Questions and Answers**

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Vince Stefanowicz	PJM
Venona Greaff	Occidental Chemical Corporation (OXY)
Jonathan Davidson	City Utilities of Springfield, MO
Pamela Frazier	Southern Power Company

- Reliability Standard EOP-012-3 is being revised to address seven FERC directives in the June 27, 2024 order approving EOP-011-4 and EOP-012-2 as published in the Standard Authorization Request (SAR).
- The standard drafting team has also made minor modifications to the standard as appropriate to clarify specific items.
- The drafting team is soliciting feedback from interested parties, particularly specific suggested language revisions that enhance the standard.
- For Generator Cold Weather Constraint definition purposes, the drafting team requests suggested language changes that will result in criteria that are objective, unambiguous, and auditable.

- Paragraph 47: Address concerns related to the ambiguity of the Generator Cold Weather Constraint term 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 timeline requirements for implementing corrective actions for Generator Cold Weather Reliability Events are too long.
- Paragraph 70: Require NERC pre-approval of Corrective Action Plan (CAP) timeline extensions beyond the maximum implementation timeframe.
- Paragraph 72: Address concerns regarding timeliness requirements for new facilities (commercially operable on or after October 1, 2027).
- Paragraph 76: Address concerns regarding timelines for CAP actions for existing and new freeze protection measures.
- Paragraph 94: Address the concern that Generator Cold Weather Constraint Declarations should be reviewed more frequently.

- Paragraph 47: Address concerns related to the ambiguity of the Generator Cold Weather Constraint term and criteria.
 - The DT modified the definition of **Generator Cold Weather Constraint**.
 - The DT developed Attachment 1, referenced in Requirement **R8**, to define the criteria by which a valid Generator Cold Weather Constraint may exist.
 - Pre-Approved Generator Cold Weather Constraints
 - Case-by-case Determinations of Generator Cold Weather Constraints
 - Attachment 1 is intended to provide significant clarity on the conditions or issues that may constitute a valid Generator Cold Weather Constraint.

- Paragraph 54: Address concerns regarding the need for a timely review and evaluation of declared Generator Cold Weather Constraints by NERC.
 - Requirement **R8** would now require the Generator Owner declaring a Generator Cold Weather Constraint in accordance with Attachment 1 to submit that constraint to its Compliance Enforcement Authority within 45 days of determining that a Generator Cold Weather Constraint is applicable (for new units, this time is within 15 days of entering commercial operation).
 - Attachment 1 contains a proposed list of pre-approved Generator Cold Weather Constraints as well as a list of situations, circumstances, and criteria that may constitute a Generator Cold Weather Constraint.
 - If the Generator Cold Weather Constraint is determined to be invalid by the CEA, the Generator Owner must update its Corrective Action Plan and implement according to the standard timelines.
 - As NERC and the Regional Entities are not users, owners, nor operators of the BPS, provisions for the timeliness of CEA review are not included in EOP-012-3.

- Paragraph 68: Address concerns that timeline requirements for implementing corrective actions for Generator Cold Weather Reliability Events are too long.
 - The DT revised Requirement **R6** to specify shorter implementation timeframes at generating units experiencing a Generator Cold Weather Reliability Event and removed references to this requirement under Requirement **R7**.
 - For GOs experiencing a Generator Cold Weather Reliability Event, CAPs must specify implementation of corrective actions at the affected unit by no later than December 1 of the year following the event. For events occurring early in the season (i.e., prior to December 1), corrective actions shall be implemented prior to December 1 of the year following the event.
 - Recognizing that similar units may be subject to similar issues, GOs must still perform a review of applicability to similar equipment at their other units. Revised Requirement **R7** would allow the entity to perform this review and implement any corrective measures within 24 calendar months of the Generator Cold Weather Reliability Event.
 - To the extent circumstances beyond the control of the Generator Owner prevent implementation within these timeframes, Requirement **R6** Part 6.2 provides a process by which the GO may seek an extension from the CEA.

- Paragraph 70: Require NERC pre-approval of Corrective Action Plan (CAP) timeline extensions beyond the maximum implementation timeframe.
 - The DT added new Requirement **R6**, Part 6.2, and Requirement **R7** Part 7.3 to require any Generator Owner seeking to extend a CAP implementation deadline beyond the maximum implementation timeframe required by the standard seeks pre-approval of the extension by the Compliance Enforcement Authority. This language is similar to that used in TPL-007.

Paragraph 3: part (4) requires NERC to “ensure that the generator owner informs relevant registered entities of operating limitations in extreme cold weather during the period of the extension”:

- Under EOP-012-3 Requirement **R6** Part 6.1.3, pertaining to units experiencing a Generator Cold Weather Reliability Event, the Generator Owner is required to identify operating limitations that would apply until execution of the Corrective Action Plan.
- Under EOP-012-3 Requirements **R2** and **R3**, a Corrective Action Plan would be required where the Generator Owner cannot meet the required operational capability for its unit.
- The TOP-003 and IRO-010 standards require the Transmission Operator, Balancing Authority, and Reliability Coordinator to maintain data specifications for their real-time and operational planning analyses that include provisions for notification of BES generating unit(s) status during local forecasted cold weather to include operating limitations based on capability and availability, among other factors. These standards require the Generator Owner to provide the requested data.

- Paragraph 72: Address concerns regarding timeliness requirements for new facilities (commercially operable on or after October 1, 2027).
 - The DT revised Requirement **R2** which pertains to units going into commercial operation after October 1, 2027 to separate requirements for units that are truly “new” and should have more robust capabilities designed in without a need for corrective actions, and units that may have already been significantly far along in the design phase and for whom full compliance at the time of entering commercial operation would represent a significant hardship. (More on slide 18)

- Paragraph 76: Address concerns regarding timeliness requirements for new facilities (commercially operable on or after October 1, 2027).
 - To address this directive, the drafting team clarified that remedying issues with existing freeze protection measures are to be completed within 24 months “regardless of any longer timelines in the Corrective Action Plan associated with new freeze protection measures” at the end of Requirement **R7** Part 7.1.1.
 - New freeze protection measures are to be completed within 48 months.

- Paragraph 94: Address the concern that Generator Cold Weather Constraint Declarations should be reviewed more frequently.
 - To address this directive, the drafting team revised Requirement **R8** to require review of all validated Generator Cold Weather Constraints at least once every 24 calendar months to ensure the constraint remains valid. Language requiring reviews “at least every five calendar years or as needed when a change of status” occurs was removed.

Process Steps	Dates	Notes
Drafting Team members seated	08/21/2024	Standards Committee (SC) August meeting
Standards Committee Executive Committee (SCEC) authorize revisions	09/05/2024	SCEC Special Call
SC approval of initial ballot	10/16/2024	SC October Meeting
Initial Ballot	10/17/24–11/05/24	20-day initial ballot and comment period per waiver approved at July SC meeting
First Additional Ballot	12/3/24–12/20/24	18-day additional ballot and comment period per waiver
Consideration of 321 Action	01/02/25–01/08/25	Based on additional ballot results, NERC staff will consider the comments received and if 321 action should be proposed to the NERC Board to meet the FERC deadline.
Second Additional Ballot	01/29/25–02/12/25	15-day additional ballot and comment period per waiver
Final Ballot	03/03/25–03/07/25	5-day final ballot per waiver
NERC Board Approval	TBD	Anticipated NERC Board approval in mid-March
FERC Order Filing Deadline	03/27/25	

- Revision of the definition of Generator Cold Weather Constraint.
 - Simplification of the definition, with additional description included in Attachment 1 of the Standard.
- **Generator Cold Weather Constraint** – Any condition that would preclude a Generator Owner from implementing freeze protection measures on one or more Generator Cold Weather Critical Components.

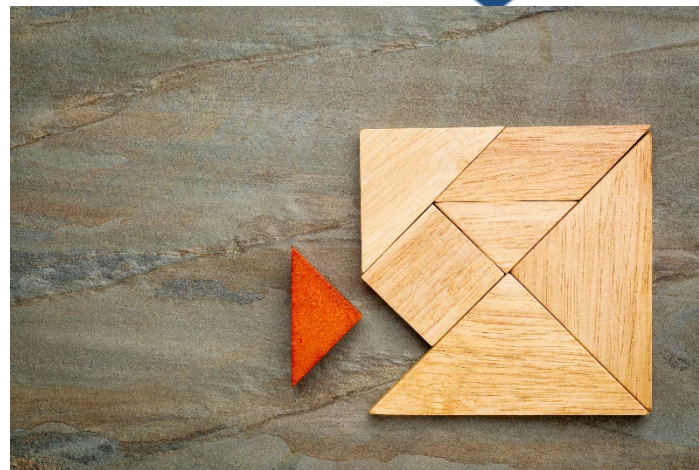
- Revision to Part 1.1.1 to require review and update of cold weather preparedness plan within 6 *calendar* months of a change in ECWT due to re-calculation.
- Revision to R4, Part 4.5 to require annual inspection and maintenance of freeze protection measures specifically on Generator Cold Weather Critical Components.

- Requirement R2 revised to satisfy FERC Order paragraph 72.
- Applies to units that begin commercial operation on or after October 1, 2027.
- Divides units into those which established design criteria before the effective date of EOP-012 and those after.
 - Units with earlier design criteria can create a Corrective Action Plan according to R7 or declare a Generator Cold Weather Constraint if they don't meet EOP-012 requirements
 - Units with later design criteria date must meet EOP-012 requirements or declare a Generator Cold Weather Constraint

- Brings Corrective Action Plan implementation requirements into R6 for Generator Cold Weather Reliability Events (GCWRE)
- Requires completion of Corrective Action Plan items before the following winter season if a GO experiences a GCWRE.
- Review of applicability to similar units in GO's fleet with correction within 24 months.
- CEA approval required for timeline extensions
- Generator Cold Weather Constraints governed per R8, if applicable.

- Defines Corrective Action Plan parameters for plans resulting from inability to meet ECWT and/or wind requirements in R1, R2, or R3.
- Retains the 24\48 month timelines for existing and new freeze protection measures from EOP-012-2.
- CEA approval required for timeline extensions
- Generator Cold Weather Constraints governed per R8, if applicable.

- All Generator Cold Weather Constraints to follow Attachment 1
- Submission to CEA with timelines
 - Within 45 days of determining or for R2 units no later than 15 days after commercial operation
- Review every 24 calendar months
- Update operating limitations
- Validity check and result



- **All Generator Cold Weather Constraints are submitted, reviewed, evaluated, and validity confirmed**
 - **Pre-Approved Generator Cold Weather Constraints**
 - Examples- structural limitations, de-icing/heating unavailable technologies for blades, blade replacement, heat applied to solar panels frozen precipitation, upstream heat applied to inlet air
 - **Case-by-case Determinations of Generator Cold Weather Constraints**
 - Examples- Application of freeze protection measures
 - Void of equipment warranty
 - Precluded by technical or physical limitation (structural re-design due to weight)
 - Outweighs other reliability benefits (retirement/cancel/MW or MVAR or summer by 3%)
 - Risk of noncompliance with other statutory, regulatory, or health and safety constructs
 - other

- **EOP-012-3 and Definitions**

- Where approval by an applicable governmental authority **is required**, the standard and associated definitions shall become effective on the later of: (1) October 1, 2025; or (2) the first day of the first calendar quarter that is three (3) months after the effective date
- Where approval by an applicable governmental authority **is not required see (2) above**

- **Retirement Date of EOP-012-2**

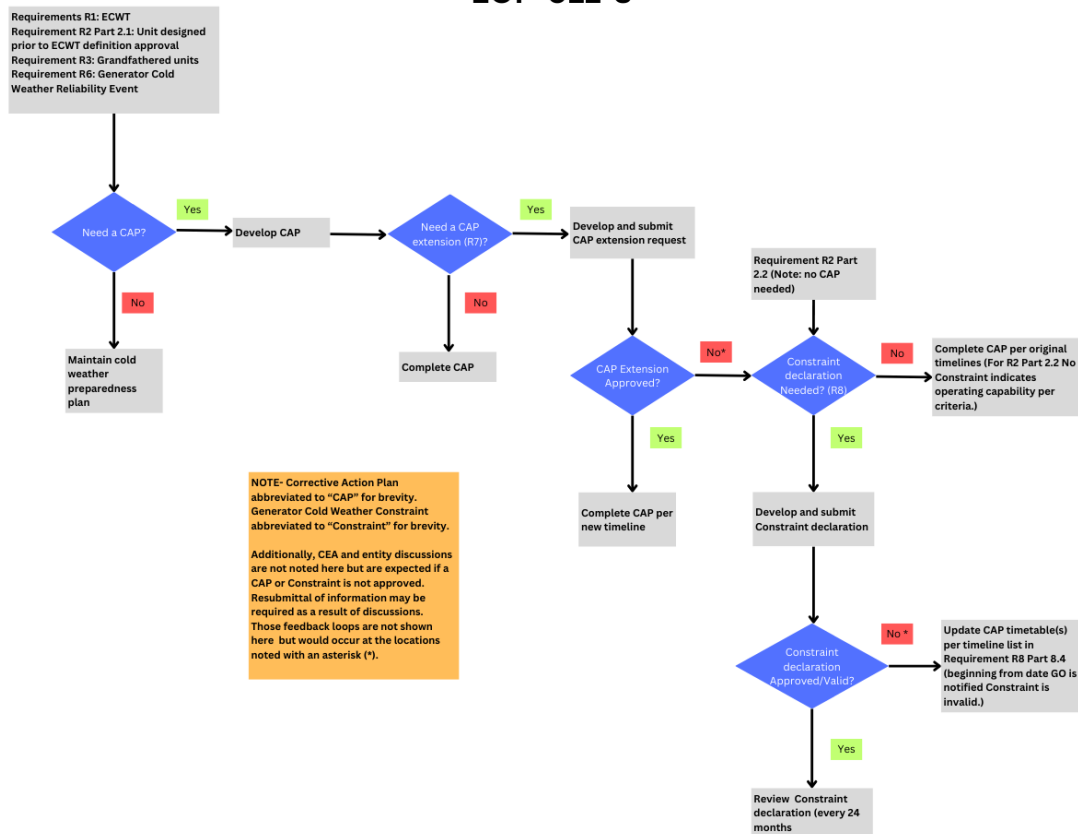
- Reliability Standard EOP-012-2 shall be retired immediately prior to the effective date of Reliability Standard EOP-012-3 in the particular jurisdiction in which the revised standard is becoming effective.

- Requirement **R1** by the effective date of **EOP-012-2**. Entities perform first periodic review by no more than 60 months after the effective date of **EOP-012-2**.
- Requirement **R2** no later than the commercial operations date for the applicable unit.
- Entities beginning commercial operation after the effective date of EOP-012-3 shall become compliant with Requirement **R3** no later than the commercial operations date for the applicable unit.
- **Requirement R4 and R5- October 1, 2024, training EOCY**
- Requirement **R6** within the timeframes listed if a Generator Cold Weather Reliability Event has occurred.
- Requirement **R7** within the timeframes listed if a Corrective Action Plan is required.

• **Generator Cold Weather Constraints**

- Review all Generator Cold Weather Constraints previously declared under Reliability Standard EOP-012-2 for compliance with Reliability Standard EOP-012-3 Attachment 1 by the **effective date**.
- Submit any previously declared Generator Cold Weather Constraints **no later than 45 days** following the effective date.
- Newly declared Generator Cold Weather Constraints submitted per the timelines specified in Requirement **R8**.

EOP-012-3



- **CAP Extension Request Review Process**

- Registered Entity Submittal (60 days prior)
- ERO Enterprise Review (15 days receipt/45 days to review)
- Registered Entity Notification (rationale provided)
- Reporting to NERC (quarterly by CEA)

- **Constraint Review Process**

- Registered Entity Submittal (as soon as, per R8—45/15 days, **per IP**)
- ERO Enterprise Review (15 days receipt/10 days pre-approved/45 days other)
- Registered Entity Notification (rationale provided/denial—CAP update)
- Reporting to NERC (quarterly by CEA)

- Process is not a voting item but the ERO Enterprise welcomes comments for consideration.

- **Determination of Location's Extreme Cold Weather Temperature**
 - NOAA/National Weather Service (NWS) examples
 - Data analysis using Excel
 - Gathering Data From Automated Surface Observing System (ASOS)
- **Missing Data**
 - Look for alternatives
 - Document approach

- Postings
 - The 20-day Initial Posting will close on November 5, 2024
 - A Technical Conference will be held on November 12, 2024
 - Future Meetings: November 13 – 15, 2024
 - The 1st Additional Posting will be posted from December 3 – 20, 2024
 - [Project Page 2024-03](#)
- Point of contact
 - Ben Wu, Senior Standards Developer
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Questions and Answers