NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Consideration of Comments

Project Name:	2024-03 Revisions to EOP-012-2 | Draft 2
Comment Period Start Date:	12/3/2024
Comment Period End Date:	12/20/2024
Associated Ballot(s):	2024-03 Revisions to EOP-012-2 | Draft 1 EOP-012-3 AB 2 ST 2024-03 Revisions to EOP-012-2 | Draft 1 Implementation Plan AB 2 OT

There were 66 sets of responses, including comments from approximately 171 different people from approximately 109 companies representing 10 of the Industry Segments as shown in the table on the following pages.

All comments submitted can be reviewed in their original format on the project page.

If you feel that your comment has been overlooked, let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, contact Director, Standards Development Jamie Calderon (via email) or at (404) 446-9647.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Questions

1. In paragraph 47 of the June 2024 Order, FERC directed NERC to revise EOP-012-2 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." FERC provided several examples of how NERC may meet directives in this paragraph and explained that NERC may address these concerns in an equally efficient and effective manner, provided NERC explains how it addresses FERC's concerns. The drafting team and industry recognize that every situation that creates a Generator Cold Weather Constraint cannot be listed within Attachment 1 and is the reason for Case-by-Case language provided.

Do you agree with the industry driven edits to Attachment 1? Please provide any additional comments to consider. If you do not agree, please provide your language change suggestions for the drafting team.

2. In paragraph 68 of the June 2024 Order, FERC directed NERC to modify Requirement R7 of 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. FERC provided an example for how to address this directive, such as to require shorter timeframes for those units that have experienced issues and allow longer timeframes to address similar potential issues across a fleet for those units that have not experienced issues.

The drafting team modified Requirement R6 based on industry feedback, while still maintaining the FERC directive. Do you agree that the modifications in Requirement R6 are responsive to the FERC Directives? If you do not agree, please provide your language change suggestions for the drafting team.

3. In paragraph 72 of the June 2024 Order, FERC directed NERC to develop and submit modifications to Requirement R7 of Reliability Standard EOP-012-2 to clarify that any Requirement R7 corrective action plans for new generation (i.e. commercially operational after October 1, 2027) must be completed prior to the generating unit's commercial operation date.

The drafting team provided updated language in Requirement R2 to address the issue of units in different stages of design and construction to support meeting this directive. June 29, 2023 was chosen as a date of demarcation, as that was the date the Extreme Cold Weather Temperature was settled upon, after the approval date of February 16, 2023. Do you agree that the industry driven edits to Requirement R2 are responsive to the FERC directives? If you do not agree, please provide your language change suggestions for the drafting team.

4. In paragraph 94 of the June 2024 Order, FERC directs NERC to develop and submit modifications to Requirement R8, Part 8.1 of Reliability Standard EOP-012-2 to implement more frequent reviews of Generator Cold Weather Constraint declarations (than every five years) to verify that the declaration remains valid.

Based on industry feedback, the drafting team created Requirement 9 to require review every 36 calendar months. Do you agree that the revision addresses this directive and provides an effective balance with administrative efforts to ensure Generator Cold Weather Constraints remain valid? If you do not agree, please provide your language change suggestions for the drafting team.

5. Please provide any additional comments for the standard drafting team to consider, if desired.

The Industry Segments are:

1 — Transmission Owners
2 — RTOs, ISOs
3 — Load-serving Entities
4 — Transmission-dependent Utilities
5 — Electric Generators
6 — Electricity Brokers, Aggregators, and Marketers
7 — Large Electricity End Users
8 — Small Electricity End Users
9 — Federal, State, Provincial Regulatory or other Government Entities
10 — Regional Reliability Organizations, Regional Entities

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
BC Hydro and Power Authority	Adrian Andreoiu	1	WECC	BC Hydro	Hootan Jarollahi	BC Hydro and Power Authority	3	WECC
					Helen Hamilton Harding	BC Hydro and Power Authority	5	WECC
					Adrian Andreoiu	BC Hydro and Power Authority	1	WECC
MRO	Anna Martinson	1,2,3,4,5,6	MRO	MRO Group	Shonda McCain	Omaha Public Power District (OPPD)	1,3,5,6	MRO
					Michael Brytowski	Great River Energy	1,3,5,6	MRO
					Jamison Cawley	Nebraska Public Power District	1,3,5	MRO
					Jay Sethi	Manitoba Hydro (MH)	1,3,5,6	MRO
					Husam Al-Hadidi	Manitoba Hydro (System Performance)	1,3,5,6	MRO
					Kimberly Bentley	Western Area Power Administration	1,6	MRO
					Jaimin Patal	Saskatchewan Power	1	MRO

	Corporation (SPC)		
George Brown	Pattern Operators LP	5	MRO
Larry Heckert	Alliant Energy (ALTE)	4	MRO
Terry Harbour	MidAmerican Energy Company (MEC)	1,3	MRO
Dane Rogers	Oklahoma Gas and Electric (OG&E)	1,3,5,6	MRO
Seth Shoemaker	Muscatine Power & Water	1,3,5,6	MRO
Michael Ayotte	ITC Holdings	1	MRO
Andrew Coffelt	Board of Public Utilities- Kansas (BPU)	1,3,5,6	MRO
Peter Brown	Invenergy	5,6	MRO
Angela Wheat	Southwestern Power Administration	1	MRO
Joshua Phillips	Southwest Power Pool	2	MRO
Patrick Tuttle	Oklahoma Municipal Power Authority	4,5	MRO

Santee Cooper	Carey Salisbury	5		Santee Cooper	Paul Camilletti	Santee Cooper	1,3,5,6	SERC
					Kevin Baker	Santee Cooper	1,3,5,6	SERC
					Dom Ciccollela	Santee Cooper	1,3,5,6	SERC
WEC Energy Group, Inc.	Christine Kane	3		WEC Energy Group	Christine Kane	WEC Energy Group, Inc.	3	RF
					Michelle Hribar	WEC Energy Group, Inc.	5	RF
					David Boeshaar	WEC Energy Group, Inc.	6	RF
					Candace Morakinyo	WEC Energy Group, Inc.	4	RF
Exelon	Daniel Gacek	1		Exelon	Daniel Gacek	Exelon	1	RF
					Kinte Whitehead	Exelon	3	RF
ACES Power Marketing	Jodirah Green	1,3,4,5,6	MRO,NPCC,RF,SERC,Texas RE,WECC	ACES Collaborators	Kevin Lyons	Central Iowa Power Cooperative	1	MRO
					James Shultz	Hoosier Energy Electric Cooperative	1	RF
					Kris Carper	Arizona Electric Power Cooperative, Inc.	1	WECC

					Jordan Mcclellan	Southern Illinois Power Cooperative	1	SERC
Entergy	Julie Hall	6		Entergy	Oliver Burke	Entergy - Entergy Services, Inc.	1	SERC
					Jamie Prater	Entergy	5	SERC
Electric Reliability Council of Texas, Inc.	Kennedy Meier	2		ISO/RTO Council Standards Review Committee (SRC)	Kennedy Meier	Electric Reliability Council of Texas, Inc.	2	Texas RE
					Joshua Phillips	Southwest Power Pool, Inc. (RTO)	2	MRO
					Helen Lainis	Independent Electricity System Operator	2	NPCC
					Kirsten Rowley	Midcontinent ISO, Inc.	2	RF
					Gregory Campoli	New York Independent System Operator	2	NPCC
					Thomas Foster	PJM Interconnection, L.L.C.	2	RF
					Darcy O'Connell	California ISO	2	WECC

					John Pearson	ISO New England, Inc.	2	NPCC
FirstEnergy - FirstEnergy Corporation	Mark Garza	4		FE Voter	Julie Severino	FirstEnergy - FirstEnergy Corporation	1	RF
					Aaron Ghodooshim	FirstEnergy - FirstEnergy Corporation	3	RF
					Robert Loy	FirstEnergy - FirstEnergy Solutions	5	RF
					Mark Garza	FirstEnergy-FirstEnergy	1,3,4,5,6	RF
					Stacey Sheehan	FirstEnergy - FirstEnergy Corporation	6	RF
Northern California Power Agency	Michael Whitney	3		NCPA	Scott Tomashefsky	Northern California Power Agency	4	WECC
					Marty Hostler	Northern California Power Agency	5,6	WECC
					Marty Hostler	Northern California Power Agency	5,6	WECC
DTE Energy - Detroit	Mohamad Elhusseini	5		DTE Energy	Mohamad Elhusseini	DTE Energy	5	RF

Edison Company					Patricia Ireland	DTE Energy	4	RF
					Marvin Johnson	DTE Energy - Detroit Edison Company	3	RF
Southern Company - Southern Company Services, Inc.	Pamela Hunter	1,3,5,6	SERC	Southern Company	Matt Carden	Southern Company - Southern Company Services, Inc.	1	SERC
					Joel Dembowski	Southern Company - Alabama Power Company	3	SERC
					Ron Carlsen	Southern Company - Southern Company Generation	6	SERC
					Leslie Burke	Southern Company - Southern Company Generation	5	SERC
Black Hills Corporation	Rachel Schuldt	6		Black Hills Corporation - All Segments	Travis Grablander	Black Hills Corporation	1	WECC
					Josh Combs	Black Hills Corporation	3	WECC

					Rachel Schuldt	Black Hills Corporation	6	WECC
					Carly Miller	Black Hills Corporation	5	WECC
					Sheila Suurmeier	Black Hills Corporation	5	WECC
Northeast Power Coordinating Council	Ruida Shu	1,2,3,4,5,6,7,8,9,10	NPCC	NPCC RSC	Gerry Dunbar	Northeast Power Coordinating Council	10	NPCC
					Deidre Altobell	Con Edison	1	NPCC
					Michele Tondalo	United Illuminating Co.	1	NPCC
					Stephanie Ullah-Mazzuca	Orange and Rockland	1	NPCC
					Michael Ridolfino	Central Hudson Gas & Electric Corp.	1	NPCC
					Randy Buswell	Vermont Electric Power Company	1	NPCC
					James Grant	NYISO	2	NPCC
					Dermot Smyth	Con Ed - Consolidated Edison Co. of New York	1	NPCC

David Burke	Orange and Rockland	3	NPCC
Salvatore Spagnolo	New York Power Authority	1	NPCC
Sean Bodkin	Dominion - Dominion Resources, Inc.	6	NPCC
Silvia Mitchell	NextEra Energy - Florida Power and Light Co.	1	NPCC
Sean Cavote	PSEG	4	NPCC
Jason Chandler	Con Edison	5	NPCC
Shivaz Chopra	New York Power Authority	6	NPCC
Vijay Puran	New York State Department of Public Service	6	NPCC
David Kiguel	Independent	7	NPCC
Joel Charlebois	AESI	7	NPCC
Joshua London	Eversource Energy	1	NPCC
Joel Charlebois	AESI	7	NPCC
John Hastings	National Grid	1	NPCC

					Erin Wilson	NB Power	1	NPCC
					James Grant	NYISO	2	NPCC
					Michael Couchesne	ISO-NE	2	NPCC
					Kurtis Chong	IESO	2	NPCC
					Michele Pagano	Con Edison	4	NPCC
					Bendong Sun	Bruce Power	4	NPCC
					Carvers Powers	Utility Services	5	NPCC
					Wes Yeomans	NYSRC	7	NPCC
					Emma Halilovic	Hydro One	1,3	NPCC
					Philip Nichols	National Grid	1	NPCC
					Emma Halilovic	Hydro One	1,3	NPCC
					Caver Powers	Utility Services	5	NPCC
Dominion - Dominion Resources, Inc.	Sean Bodkin	6		Dominion	Victoria Crider	Dominion Energy	3	NA - Not Applicable
					Sean Bodkin	Dominion Energy	6	NA - Not Applicable
					Steven Belle	Dominion Energy	1	NA - Not Applicable
					Barbara Marion	Dominion Energy	5	NA - Not Applicable

Western Electricity Coordinating Council	Steven Rueckert	10		WECC	Steve Rueckert	WECC	10	WECC
					Curtis Crews	WECC	10	WECC
Tim Kelley	Tim Kelley		WECC	SMUD and BANC	Nicole Looney	Sacramento Municipal Utility District	3	WECC
					Charles Norton	Sacramento Municipal Utility District	6	WECC
					Wei Shao	Sacramento Municipal Utility District	1	WECC
					Foung Mua	Sacramento Municipal Utility District	4	WECC
					Nicole Goi	Sacramento Municipal Utility District	5	WECC
					Kevin Smith	Balancing Authority of Northern California	1	WECC

1. In paragraph 47 of the June 2024 Order, FERC directed NERC to revise EOP-012-2 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." FERC provided several examples of how NERC may meet directives in this paragraph and explained that NERC may address these concerns in an equally efficient and effective manner, provided NERC explains how it addresses FERC's concerns. The drafting team and industry recognize that every situation that creates a Generator Cold Weather Constraint cannot be listed within Attachment 1 and is the reason for Case-by-Case language provided.

Do you agree with the industry driven edits to Attachment 1? Please provide any additional comments to consider. If you do not agree, please provide your language change suggestions for the drafting team.

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	
Answer	No
Document Name	
Comment	

1-Item #2 under case-by-case determinations is not clear regarding what is meant by manufacturer's design limitations and how the declaration is applied. Many critical components have minimum operating temperatures based on the manufacturer's design of a device. Does item #2 mean a GO does not have to use freeze protections if the critical component was manufactured to operate above the ECWT? Item #2 needs to be either clarified or removed.

Additionally, Duke Energy feels the pre-approved constraint section of Attachment 1 has two additional issues. The first issue is related to the restricted focus of the constraints listed - the constraints are focused on wind and solar. While valid, other technologies also have similar constraints. For example, exposed coal piles and coal handling equipment are often impacted by winter conditions and there few freeze protection options available. The second issue relates to the nature of some of these constraints. Some of the examples given are items that will never be resolved during the in-service life of the station. Other items listed will never have a viable option due to technical considerations. In these situations, stations are being forced by the standard to periodically review constraint declarations for items that will never be resolved. Duke Energy recommends that these types of constraints be categorized as constraints that are not only pre-approved but also do not require re-evaluation every three years. 2-Due to the broad nature and subjectiveness of Requirements 3c and 5e, these line items should be removed because it lacks specific details found elsewhere in Attachment 1.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Generating units are to be designed and able to operate to their ECWT. Entities need to provide best efforts to identify Generator Cold Weather Critical Components and apply freeze protection measures. Entities should provide freeze protection measures to any component that is needed for reliable operation. Please review the definition of Generator Cold Weather Critical Component and Fixed Fuel Supply Component. The FERC Order required more frequent review than previously proposed on Generator Cold Weather Constraints so that industry can determine if the Generator Cold Weather Constraint is valid or not and act accordingly.	
Richard Jackson - U.S. Bureau of Reclamation - 1	
Answer	No
Document Name	
Comment	
Reclamation agrees to the intent of Attachment 1, however recommends that a caveat be added at the beginning of Generator Cold Weather Constraints (both “known” and “case-by-case”) that the list is not all inclusive and can vary by industry, components and	

location. The attachment appears to not allow for any circumstances outside of what is being directed. Recommend a more generic approach to Attachment 1 than what is provided.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see bullet 10 of Attachment 1 "Case-by-Case" listing for Generator Cold Weather Constraints and the Technical Rationale statements ("Attachment 1 contains a non-comprehensive list of known Generator Cold Weather Constraints as well as a list of situations, circumstances, and criteria that may constitute a Generator Cold Weather Constraint.").	
Donald Lock - Talen Generation, LLC - 5	
Answer	No
Document Name	
Comment	
Talen supports the comments of the NAGF on this issue, and adds that the technologies and plant circumstances involved are so varied that the only comprehensible and consistent means of addressing the issue is likely to consist of issuing a detailed pre-approved list for all currently known potential GCWCs, as NERC has already started to do in Att. 1 of EOP-012-3, reducing CEA case-by-case determinations to a rarely used alternative for unforeseen circumstances.	
Likes 1	Berkshire Hathaway Energy - MidAmerican Energy Co., 3, Amato Joseph
Dislikes 0	
Response	
Thank you for your comments. Please see response to NAGF comments. The DT and Standards Committee included the examples of Generator Cold weather Constraints provided through experience and industry.	
Marty Hostler - Northern California Power Agency - 4	
Answer	No
Document Name	

Comment
NERC is not allowed to make a Reliability Standard that gives one entity a competitive advantage over another. We believe these modifications create an unfair completive advantage to some generating entities over others. Some entities are not required to do anything if their generators were originally designed to operate only above 32-degrees. But some entities were only designed to operate above 30-degrees, some only, above 20, some only above 0-degrees, etc. And, they will be required to spend time and dollars developing corrective action plans and complying with this potentially new standard. Additionally, some entities that have facilities that were originally designed to run below 32 will not need to upgrade their system while others may, or may not, be required to redesign their facilities. And/or add additional equipment in order to operate at temperatures for which they were not designed, built, of financed to operate at.

Likes 0	
Dislikes 0	

Response
Thank you for your comments. The Standard is written to help ensure reliable operations in extreme cold weather.

Michael Whitney - Northern California Power Agency - 3, Group Name NCPA	
Answer	No
Document Name	

Comment
See Marty Hostler comments.

Likes 0	
Dislikes 0	

Response

Thank you for your comments. Please see response to Marty Hostler comments.	
Mason Jones - Mason Jones On Behalf of: Michael Whitney, Northern California Power Agency, 4, 6, 3, 5; - Mason Jones	
Answer	No
Document Name	
Comment	
NERC is not allowed to make a Reliability Standard that gives one entity a competitive advantage over another. We believe these modifications create an unfair completive advantage to some generating entities over others. Some entities are not required to do anything if their generators were originally designed to operate only above 32-degrees. But some entities were only designed to operate above 30-degrees, some only, above 20, some only above 0-degrees, etc. And, they will be required to spend time and dollars developing corrective action plans and complying with this potentially new standard. Additionally, some entities that have facilities that were originally designed to run below 32 will not need to upgrade their system while others may, or may not, be required to redesign their facilities. And/or add additional equipment in order to operate at temperatures for which they were not designed, built, of financed to operate at.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The Standard is written to help ensure reliable operations in extreme cold weather.	
Jeremy Lawson - Northern California Power Agency - 3,4,5,6	
Answer	No
Document Name	
Comment	
See Marty Hostler comments.	

Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to Marty Hostler comments.	
David Vickers - David Vickers On Behalf of: Daniel Roethemeyer, Vistra Energy, 5; - David Vickers	
Answer	No
Document Name	
Comment	
Vistra supports comments made by Northern California Power Authority and NRG. With the added comment that even though NERC is working within FERC guidance it should be pressed upon FERC that GOs should be able to determine for themselves the validity of making constraint upgrades. Market forces for cold weather non performance are enough for GOs to make smart, impactful and necessary upgrades.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to those organizations comments. Making smart, impactful, and necessary upgrades should support prevention of further instances of non-performance.	
Becky Burden - Public Utility District No. 1 of Snohomish County - 5	
Answer	No
Document Name	
Comment	
Final paragraph of attachment 1 should be integrated into existing or made a new requirement as it reads like one.	
Likes 0	

Dislikes 0	
Response	
Thank you for your comments.	
Bob Cardle - Bob Cardle On Behalf of: Tyler Brun, Pacific Gas and Electric Company, 3, 1, 5; - Bob Cardle	
Answer	No
Document Name	
Comment	
PGAE supports the NAGF position regarding suggested revisions to Attachment 1 Known Constraints timeline.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to NAGF comments.	
Rachel Schuldt - Black Hills Corporation - 6, Group Name Black Hills Corporation - All Segments	
Answer	No
Document Name	
Comment	
Black Hills Corporation agrees with NAGF & EEI comments. As noted, there are no wind generator OEM developing a generator that can operate at a temperature below -22 degrees F (-30 degrees C). There are contracts that are already signed for sites that pan to be commissioned in 2027 and 2028; due to this per the first bullet under “Known Constraints in Attachment 1” is not reasonable. This was shared at the Technical Conference related to this standard and PRC-029 & as they shared OEMs need 5-7 years normally to bring a new product to market. Additionally, per EEI, the revised definition of Generator Cold Weather Constraints in Attachment 1”. Black Hills Corporation agrees with the EEI’s proposed edits.	
Likes 1	Berkshire Hathaway Energy - MidAmerican Energy Co., 3, Amato Joseph

Dislikes 0	
Response	
Thank you for your comments. Please see responses to NAGF and EEI comments. At the Technical Conference for EOP-012, OEMs also shared a “Texas” special inverter that had been designed, manufactured, and shipped in less than three years because of the need for reliable operations.	
Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group	
Answer	No
Document Name	
Comment	
WEC Energy Group support the comments of the MRO NSRF.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to MRO NSRF comments.	
Richard Vendetti - NextEra Energy - 5	
Answer	No
Document Name	
Comment	
NextEra supports the comments provided by EEI Below:	

Within Attachment 1 is the revised definition of Generator Cold Weather Constraint, which we do not fully support. To address our concerns, we offer the following edits in boldface (below) for DT consideration, which are intended to limit entity obligations to address those freeze protection measures that have been shown to be effective in areas with similar winter weather conditions. **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. **Viable f**reeze protection measures include practices, methods, or technologies **that have been successfully** implemented by the electric industry in areas that experience similar winter climate conditions and are not intended to be limited to optimum practices, methods, or technologies. EEI also suggests changes to the 4th bullet that addresses the "accumulation of frozen precipitation on solar panels." While EEI is supportive of this predefined limitation that recognizes the technical problems associated with ice and snow clearing on solar panels, we also believe the proposed language does not align with the other four (4) Generator Cold Weather Constraints. To address this concern, we suggest the following changes in boldface to bullet 4: Implementation of technologies for the **mitigation** of accumulated frozen precipitation on solar panels. Additionally: NextEra is concerned that Attachment 1 is not inclusive of battery technology as a potential cold weather constraint declaration.

Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to EEI comments.	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	No

Document Name	
Comment	
Minnesota Power agrees with NAGF that the rule needs to address OEM limitations for units in service after 2027 that can't operate below the current design temperature or extend the compliance date.	
Likes 1	Berkshire Hathaway Energy - MidAmerican Energy Co., 3, Amato Joseph
Dislikes 0	
Response	
Thank you for your comments. Please see responses to NAGF comments.	
Joseph Amato - Berkshire Hathaway Energy - MidAmerican Energy Co. - 3	
Answer	No
Document Name	
Comment	
MEC supports EEI and MRO NSRF comments as improvements to the drafted language, but the OEM issue identified by NAGF is the most significant and needs to be addressed. MEC would cast an affirmative ballot if NAGF comments for Q1, and EEI comments for Questions 2 and 3 are adopted by the SDT.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to those organization's comments.	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	No
Document Name	
Comment	

MRO NSRF Recommends the following modifications to the proposed Generator Cold Weather Constraint definition.

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. Viable freeze protection measures include practices, methods, or technologies that **have been successfully** implemented by the electric industry in areas that experience similar winter climate conditions and are not intended to be limited to optimum practices, methods, or technologies.

MRO NSRF would also suggest the following change to the 4th bullet of Known Generator Cold Weather Constraints to the following:

- Implementation of technologies for the purpose of mitigating the effects of accumulated frozen precipitation on solar panels.

Likes 0	
Dislikes 0	

Response

Thank you for your constructive comments. The verbiage provided ("viable" and "have been successfully") were not accepted by the DT. Concerns were raised regarding the need to allow innovation and improvements in freeze protection measures to occur while balancing the thought that new technologies are new until proven to work. New technologies are not required to be implemented as a result of a single GO testing the technology.

Dwanique Spiller - Berkshire Hathaway - NV Energy - 5

Answer	No
Document Name	

Comment

NV Energy Recommends the following modifications to the proposed Generator Cold Weather Constraint definition.

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. Viable freeze protection measures include practices, methods, or

technologies that have been successfully implemented by the electric industry in areas that experience similar winter climate conditions and are not intended to be limited to optimum practices, methods, or technologies. NV Energy would also suggest the following change to the 4th bullet of Known Generator Cold Weather Constraints to the following: • Implementation of technologies for the purpose of mitigating the effects of accumulated frozen precipitation on solar panels.	
Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comments. The verbiage provided ("viable" and "have been successfully") were not accepted by the DT. Concerns were raised regarding the need to allow innovation and improvements in freeze protection measures to occur while balancing the thought that new technologies are new until proven to work. New technologies are not required to be implemented as a result of a single GO testing the technology.	
Ruchi Shah - AES - AES Corporation - 5	
Answer	No
Document Name	
Comment	
While AES US Renewables agree with the changes made to the Generator Cold Weather Constraint definition, we suggest adding the following words in the definition to make it clearer: *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.* ***Viable f****reeze protection measures include practices, methods, or*	

*technologies **that have been successfully** implemented by the electric industry in areas that experience similar winter climate conditions and are not intended to be limited to optimum practices, methods, or technologies.*

We also have concerns about the changes made in Attachment 1, particularly with the first bullet under "Known Generator Cold Weather Constraints" (see below for reference). Currently, as written, it implies that wind turbine OEMs will have new wind turbine designs that will not have structural limitations after 10/1/2027 (this is assuming ability to operate below -30C which is the current limitation faced by all wind turbine OEMs that we work with). It also implies that Generator Owners/developers will be able to source new wind turbines capable of meeting ECWT below -30C for wind projects that are being developed currently with commercial operation date of 10/1/2027 and beyond. This criterion is not realistic as we are not aware of any wind turbine OEMs that are currently actively working on a new design capable in operating below the current design limitation of -30C. We request that the drafting team revert to the language that was proposed in Draft 1 without further changes.

Individual wind turbine towers manufactured prior to October 1, 2027 that have structural limitations established by Original Equipment Manufacturers (OEMs) based on a minimum temperature that is higher than the Extreme Cold Weather Temperature calculated per Requirement R1 for generating units that began commercial operation prior to October 1, 2027.

We do want to mention our support for the changes made to the second bullet under "Known Generator Cold Weather Constraints" concerning effectiveness of de-icing technologies for wind turbine blades.

Likes 0	
Dislikes 0	

Response

Thank you for your constructive comments. The verbiage provided ("viable" and "have been successfully") were not accepted by the DT. Concerns were raised regarding the need to allow innovation and improvements in freeze protection measures to occur while balancing the thought that new technologies are new until proven to work. New technologies are not required to be implemented as a result of a single GO testing the technology. The DT and Standards Committee reviewed the Generator Cold Weather Constraints and provided some updates. Technology changes when demands to improve the technology are present. GOs should be providing design requirements to OEMs that reflect the capability to operate at the ECWT.

Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples

Answer	No
Document Name	
Comment	
Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI), Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF), and the North American Generator Forum (NAGF) on question 1	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to those organization's comments.	
Robert Follini - Avista - Avista Corporation - 3	
Answer	No
Document Name	
Comment	
While Avista supports in part the approach that the Drafting Team has taken to address FERC Commission Directives contained in the June 27, 2024 FERC Order, Approving Extreme Cold Weather Reliability Standard EOP-012-2 And Directing Modifications, we do not support the proposed definition for Generator Cold Weather Constraint. The definition for Generator Cold Weather Constraints contained in the previous version provided the industry with useful criteria that has been lost in the revised version. And while we see value in the information provided in Attachment 1, that information could be contained in another technical document supporting this standard (i.e., Technical Rationale or Implementation Guidance), if the definition and criteria were revised to more closely align to the directives contained in the Order. To address our concerns, we offer the following edits (in boldface) to the Generator Cold Weather Constraints definition: **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 using the criteria below. Freeze protection measures are not intended to be limited to optimum practices, methods, or technologies, but are also intended to include acceptable practices, methods,	

or technologies generally implemented by the electric industry in areas that experience similar winter climate conditions. (*Strikethroughs have been omitted for clarity*)

Criteria used to determine a **Generator Cold Weather Constraint shall consider the following:**

{C}· **A determination through an engineering analysis that the freeze protection measures lack reasonable assurances of efficacy and there is no record that such protections have been effectively utilized on** generating units **of a** comparable types in regions that experience similar winter climate conditions;

{C}· **A determination through engineering analysis that there are no available freeze protection measures, commercially available, that have been proven to be effective at mitigating the effects of the Extreme Cold Weather Temperature identified in the region where the resource is installed**; or

{C}· **A determination through an engineering economic analysis has been made that determines that the implementation of freeze protection measures necessary to mitigate the effects of the Extreme Cold Weather Temperature, while feasible, would result in the early retirement of the resource.**

Likes 0	
Dislikes 0	

Response

Thank you for your comments. Note that industry feedback and the FERC Orders were considered in the changes proposed. “Engineering analysis” language was considered within the Standard language but industry comments regarding cost and time were provided that led the DT and Standards Committee to not consider the change. “Engineering economic analysis” directly opposes the FERC June Order language regarding inclusion of costs.

Scott Thompson - PNM Resources - Public Service Company of New Mexico - 1,3,5 - WECC

Answer	No
Document Name	

Comment

PNM agrees with the comments of EEI. EEI made suggestions to change the definition, please see EEI's comments.

Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF	
Answer	No
Document Name	
Comment	
The NAGF notes that currently, there are no wind generator OEMs in the process of developing a generator that can operate at a temperature below -22 degrees F (-30 degrees C). Contracts are already being signed for sites that plan to be in service in 2027 and likely 2028. The proposed date in the first bullet under Known Constraints in Attachment 1 is not reasonable based on this information. The SDT should discuss with the OEMs if they intend to develop the capability to operate at temperatures below this to meet the requirements for wind turbines. Or if the intent is for the Generator Owner of facilities is to turn them off when temperatures reach freezing to ensure they maintain compliance with this standard. If the SDT does not engage in the recommended conversations with the OEMs, the NAGF recommends that the date be shifted to at least 2032. Based on OEM feedback provided during both the Technical Conference related to this standard and PRC-029, OEMs need 5 to 7 years normally to bring a new product to market.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. At the Technical Conference for EOP-012, OEMs also shared a “Texas” special inverter that had been designed, manufactured, and shipped in less than three years because of the need for reliable operations. The DT invited the OEMs to a Technical Conference. Technology changes when demands to improve the technology are present. GOs should be providing design requirements to OEMs that reflect the capability to operate at the ECWT.	
Carey Salisbury - Santee Cooper - 5, Group Name Santee Cooper	
Answer	No

Document Name	
Comment	
The proposed Case-by-Case language in Attachment 1 states, “The following situations may constitute a Generator Cold Weather Constraint, depending on the facts and circumstances. Only upon approval by the CEA will these circumstances constitute valid Generator Cold Weather Constraint:..” This language does not provide objective and sufficiently detailed criteria for applicable entities to understand what is required of them. The standard should be revised to remove the requirement for CEA validation of constraints or should more clearly define objective criteria for approval or rejection of a constraint declaration.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Note the FERC Order required validation of Generator Cold Weather Constraints. The DT defers comments regarding approval/rejection criteria to NERC staff.	
Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	No
Document Name	
Comment	
The EOP-012-3 Generator Cold Weather CAP Extension and Constraint Process indicates “ The extension requests for a non-US Registered Entity should be implemented in a manner that is consistent with, or under the direction of, the applicable governmental authority or its agency in the non-US jurisdiction.” But the standard requirements R6,R7,R8 specify the CEA and footnote 11&12 were removed. In our province the CEA and the applicable government authority are different entities. Manitoba Hydro recommends footnote 11 and 12 are added back to the standard and that for non-US Registered Entities, this additional language/guidance be added to footnote 11 and 12: Prior to the implementation of any element of a Corrective Action Plan developed in accordance with this Requirement all applicable corporate, regulatory, provincial, and federal evaluations and approvals must be completed and obtained. The applicable timeline for implementation of a Corrective Action Plan shall be determined by the Registered Entities Generator Owner.	

Manitoba Hydro supports the MRO_NSRF comments. The status of the CEA or applicable governmental authority in the CAP process and Generator Cold Weather Constraint process is an area of concern. Cold weather operation is normal operation in Manitoba. CEA/governmental authority oversight will create additional administrative burdens without improving BES reliability in Manitoba.	
Likes 0	
Dislikes 0	
Response	
Please see responses to MRO NSRF comments.	
Nick Leathers - Nick Leathers On Behalf of: David Jendras Sr, Ameren - Ameren Services, 3, 6, 1; - Nick Leathers	
Answer	No
Document Name	
Comment	
Ameren supports EEI's and NAGF's comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to those organization’s comments.	
Mike Magruder - Avista - Avista Corporation - 1	
Answer	No
Document Name	
Comment	
See EEI's comments.	

Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Glen Farmer - Avista - Avista Corporation - 1,3,5	
Answer	No
Document Name	
Comment	
We support EEi's comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Kimberly Turco - Constellation - 6	
Answer	No
Document Name	
Comment	
CEG Supports the NAGF response to this question. Kimberly Turco on behalf of Constellation Segments 5 and 6	
Likes 0	
Dislikes 0	
Response	

Thank you for your comments. Please see responses to NAGF comments.	
Lindsay Wickizer - Berkshire Hathaway - PacifiCorp - 6	
Answer	No
Document Name	
Comment	
PacifiCorp supports EEI comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee (SRC)	
Answer	No
Document Name	2024-03_Unofficial_Comment_Form_EOP-012-3_120324_SRC_FINAL.docx
Comment	

Introductory comments.

The ISO/RTO Council (IRC) Standards Review Committee (SRC) (consisting, for purposes of these comments, of CAISO, ERCOT, IESO, ISO-NE, PJM, MISO, NYISO, and SPP) appreciates the work that has gone into the revisions to Attachment 1, but is concerned that certain provisions of Attachment 1 are not consistent with FERC's guidance in its June 2024 Order. In those areas and in others where the language could create ambiguity, the SRC provides alternative language to ensure that the final Standard complies with FERC's directives and is clear and unambiguous. The SRC's primary concerns fall into six overarching categories:

- The definition of Generator Cold Weather Constraint and some of the constraints listed in Attachment 1 do not strike the right balance between recognizing current technological constraints and encouraging the development and deployment of new solutions to existing freeze protection challenges. The SRC proposes revised language for the Generator Cold Weather Constraint

definition and Attachment 1 that is designed to better incentivize technological advancements while respecting current technological limitations.

- Part 2.1 of Requirement R2 does not comply with FERC's directive in paragraph 72 of the June 2024 Order that "any Requirement R2 corrective action plans must be completed prior to the generating unit's commercial operation date." The SRC proposes revised language to address this issue.

- Items 5.a and 5.c in the case-by-case constraint list in Attachment 1, which allow constraint declarations to avoid premature unit retirement or cancellation of planned units, although theoretically understandable, are overbroad, subjective, and unauditable and would require NERC and the Regional Entity to review forward market prices and the economics of particular units in order to properly assess if the requirement to winterize actually was the cause of a premature retirement or the cancellation of a planned new generating unit. Such language does not meet FERC's directive that constraint criteria be objective, unambiguous, and auditable.

- The SRC proposes additional language for the end of Attachment 1 to provide an avenue for the RC or BA to contribute to the analysis of individual constraint declarations as appropriate without imposing compliance obligations on the RC or BA.

- While the SRC believes Generator Cold Weather Constraints should be reviewed annually under Requirement R9, the 36-month review cycle in the current draft of EOP-012-3 would be more effective if it required Generator Owners to react to new information that may become available in between reviews. It would also be more effective if review results were required to be submitted to the Compliance Enforcement Authority (CEA) to enable the CEA to stay better informed of the overall pace of changes of freeze protection technology within the industry.

- The revisions to Part 1.1 of Requirement R1 regarding missing or invalid temperature data are not required to address FERC's directives from the June 2024 Order. The topic of missing or invalid data could be more effectively addressed through a dedicated working group as the industry gains real-world experience with the limitations of available datasets.

The SRC believes that generator weatherization, EOP-012-3 effectiveness, and the development of new freeze protection technologies would be significantly enhanced if NERC provided a transparent method of collecting and disseminating best practices and technological advancements to the industry. Collecting and disseminating such information would be consistent with FERC's directive in Paragraph 47 of the June 2024 Order that:

"*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."*

Affected generation owners and the regional entities enforcing the standard would both benefit from the availability and use of such transparent information portals in their decision-making. Although the SRC recognizes that EOP-012-3 appropriately focuses on Generator Owner actions rather than on NERC activities, the SRC has proposed changes to the standard language that would provide clearer direction on how generators can stay abreast of technology changes and industry best practices. The SRC believes that these additions will address FERC's directive from paragraph 47 of the June 2024 Order that NERC explain clearly '*how it will assess the extent of such [industry] adoption in a way that provides for consistent compliance and enforcement outcomes."*

Known constraint list, item #3.

Request: Revise item 3 of the known constraint list to read as follows: "Replacing existing wind turbine blades with new blades solely for the purpose of adding de-icing or ice-minimizing capabilities when wind turbine blades with effective de-icing or ice-minimizing capabilities were not made commercially available by the OEM for generating units of comparable types in regions that experience similar winter climate conditions at the time the existing blades were procured."

Justification: The SRC is concerned that the third item on the known constraint list could result in a scenario where a Generator Owner deliberately chooses to construct a unit with substandard wind turbine blades and subsequently seeks to declare a constraint. The SRC agrees that unit owners should not be required to replace existing blades solely because more effective blades subsequently become available. However, if a Generator Owner deliberately chooses to purchase and install substandard blades at a time when more effective blades are available, the Generator Owner should not be able to claim a constraint as a result of the decision to sacrifice performance to reduce construction costs. Otherwise, the standard, as proposed, would invite the use of the constraint process to avoid the consequences of decisions to install substandard equipment by creating an unjustified safe harbor for Generator Owners that chose not to perform winterization that should have occurred when the blades were purchased and installed.

To address this concern, the SRC recommends that this item be revised to read as follows: "Replacing existing wind turbine blades with new blades solely for the purpose of adding de-icing or ice-minimizing capabilities when wind turbine blades with effective de-icing or ice-minimizing capabilities were not made commercially available by the OEM for generating units of comparable types in regions that experience similar winter climate conditions at the time the existing blades were procured."

Case-by-case constraint list, item #2.

Request: Remove item 2 on the case-by-case constraint list, or revise it read as follows: "For generating units that began commercial operation before October 1, 2027, the implementation of a specific freeze protection measure would require exceeding a structural limitation of, or otherwise reasonably be expected to functionally impair the effective operation of, a specific component that is necessary to the safe and effective operation of the generating unit or facility."

Justification: The SRC is concerned that item 2 on the list of case-by-case constraints in Attachment 1 is overly broad. As currently drafted, item 2 could be understood to mean that any manufacturer design limitation is valid grounds for a constraint, even if the design limitation affects only a portion of the plant and can easily be worked around (for example, if the design limitation consists of a minimum operating temperature for a piece of equipment that can easily be kept warm with an external heater) or if the manufacturer of the

equipment in question is no longer in business or is otherwise unavailable to opine on the feasibility of implementing a freeze protection measure that was not considered when the equipment in question was originally designed and constructed.

In other words, the SRC is concerned that item 2 could be understood to imply that generators do not need to winterize to temperatures below the designed minimum operating temperature of some component of the plant (even if it would be technically feasible to do so through measures such as the addition of external heat sources).

Additionally, it is not clear to the SRC what scenario item 2 addresses that could not be addressed equally well by item 1 or item 3.b., and the SRC therefore recommends that item 2 be removed. If the drafting team elects to retain item 2, the SRC recommends that item 2 be limited as follows to scenarios in which an existing plant is physically unable to accommodate the freeze protection measures:

"For generating units that began commercial operation before October 1, 2027, the implementation of a specific freeze protection measure would require exceeding a structural limitation of, or otherwise reasonably be expected to functionally impair the effective operation of, a specific component that is necessary to the safe and effective operation of the generating unit or facility."

Case-by-case constraint list, item #4 & Generator Cold Weather Constraint definition.

Request—GCWC definition: return to the definition of Generator Cold Weather Constraint that was proposed in the October draft of EOP-012-3, or revise the second sentence of the Generator Cold Weather Constraint definition to read as follows:

"Freeze protection measures are not intended to be limited to optimum practices, methods, or technologies, but are also intended to include practices, methods, or technologies that would reasonably be expected to result in effective facility performance while operating at the Extreme Cold Weather Temperature."

Request—item 4: revise item 4 of the case-by-case constraint list to read as follows:

"A determination, through an analysis (which may be supported by an analysis of industry best practices and the state of proven technologies), that the freeze protection measure has been shown to be ineffective or could reasonably be expected to be ineffective in enabling facility performance while operating at the Extreme Cold Weather Temperature."

Justification—Industry practice: While the SRC agrees with the language in the first portion of item 4 of the case-by-case constraint list in Attachment 1, the SRC is concerned that neither the second portion of item 4 nor the new language added to the Generator Cold Weather Constraint definition are responsive to FERC's directive in Paragraph 47 of the June 2024 Order. Specifically, Paragraph 47 states:

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.

The language in the second portion of item 4 and the new language (reinstated from Project 2021-07) added to the Generator Cold Weather Constraint definition both indicate that the extent of industry adoption of winterization technologies should be a criterion for declaring a constraint, but do not explain how the extent of such adoption will be assessed in a way that provides for consistent compliance and enforcement outcomes. Consequently, the SRC believes this language is inconsistent with FERC's directive.

The SRC is also concerned that this language could be construed to allow generating units to ignore technological advancements in freeze protection technology, as any new technology needs to have at least one early adopter before it can develop the track record necessary to conclude it has been effectively utilized on similar types of units in areas with similar winter weather conditions. If no unit owner is willing to try a new freeze protection technology, there will never be a record that the technology has been effectively utilized, and constraints that are based on the absence of that technology will continue to remain in effect.

While the SRC recognizes that FERC did not categorically reject the use of industry practice as a barometer for measuring the technological effectiveness of freeze protection measures, any reliance on industry practice should follow FERC's directive in Paragraph

47 of the June 2024 Order. Additionally, current industry practice should not be the sole barometer of technology effectiveness for the application of freeze protection measures. Industry practice proved ineffective to ensure reliable performance during Winter Storms Uri and Elliott, resulting in the development of EOP-012. Additionally, current industry practice may not capture technological advances in freeze protection measures, and basing constraints on current industry practice alone may create an incentive for generating units to avoid implementing technological advancements in freeze protection measures in order to keep industry practice static and maintain the validity of existing constraints.

While industry practice and experience may provide valuable supporting information in demonstrating that an entity meets the criteria for declaring a constraint, it should not form the sole basis for or definition of what constitutes a constraint. For these reasons, the SRC recommends that the constraint not be based on 'current industry practice.' Rather, the basis of the constraint should be the effectiveness of the freeze protection measures in question. Information about industry best practices and technological advancement or why a unit is not compatible with an application of best practices and new technologies may be useful information for the CEA in evaluating the validity of the constraint declaration. To aid in the implementation of this requirement and save Generator Owners from having to consult multiple sources of information on technological advancements, the SRC proposes in its introductory comments above that NERC develop and maintain a database of best practices and winterization technology advancements.

Justification—Drafting best practice: As a matter of drafting practice, the SRC also disagrees with including language that clarifies the definition of freeze protection measures within the Generator Cold Weather Constraint definition, as nested definitions can make it difficult to analyze the meaning of a standard. If the term *freeze protection measures* does not appear in the NERC Glossary of Terms, an entity should be able to conclude that the dictionary definition or common meaning of the term applies. The entity should not need to begin reviewing other defined terms in the NERC Glossary just to ensure that no other term contains language limiting or clarifying the meaning of *freeze protection measures*.

Justification—Burden on Generator Owners: Finally, the SRC is concerned that a constraint based on undefined "industry practice" could be difficult for Generator Owners to document and burdensome for the CEA to review. Without the SRC's suggested NERC database of best practices and technological developments as described above, it is not clear how thoroughly a Generator Owner would need to survey the current state of industry in order to convince the CEA that "no record" exists of a given freeze protection measure being effectively used elsewhere, nor is it clear how the CEA would evaluate such a survey. Even if a Generator Owner could convincingly

demonstrate that no record exists of a freeze protection measure being effectively used elsewhere, such a demonstration would not necessarily be dispositive of the question of whether the freeze protection measure would function effectively or whether there are legitimate technical or operational reasons the freeze protection measure should not or could not be applied to a particular generating unit or facility.

Proposed solutions: To address these concerns, the SRC recommends that the drafting team either return to the definition of Generator Cold Weather Constraint that was proposed in the October draft of EOP-012-3 or revise the second sentence of the Generator Cold Weather Constraint definition to focus on the inherent effectiveness of the freeze protection measure rather than on industry practice, as follows:

"Freeze protection measures are not intended to be limited to optimum practices, methods, or technologies, but are also intended to include practices, methods, or technologies that would reasonably be expected to result in effective facility performance while operating at the Extreme Cold Weather Temperature."

The SRC likewise recommends that item 4 of the case-by-case constraint list be revised to read as follows:

"A determination, through an analysis (which may be supported by an analysis of industry best practices and the state of proven technologies), that the freeze protection measure has been shown to be ineffective or could reasonably be expected to be ineffective in enabling facility performance while operating at the Extreme Cold Weather Temperature."

Case-by-case constraint list, item #5.

The SRC notes that evaluating constraints based on the impact of potential generating unit retirements may be difficult without input from the RC or BA, as these functional entities have visibility into the overall state of the bulk-power system and the generator interconnection queue that individual Generator Owners likely do not possess. Later on in these comments, the SRC proposes some additional language for the end of Attachment 1 to provide an avenue for the RC or BA to contribute to the analysis as appropriate without imposing compliance obligations on the RC or BA.

Case-by-case constraint list, item #5.a.

Request: Remove item 5.a from the case-by-case constraint list.

Justification: The SRC recommends that item 5.a on the case-by-case constraint list in Attachment 1 be removed, as it does not meet FERC's directive that constraint criteria be objective, unambiguous, and auditable. The proposed language in item 5.a does not address how "accelerated" or "premature" a retirement must be in order to qualify as a constraint, nor does it provide a basis for making an auditable determination that the requirement to implement freeze protection measures was the clear cause of the premature retirement.

To effectively evaluate whether the requirement to winterize "resulted" in a "premature retirement," auditors would have to examine the cost of the freeze protection measures, forecasts of future energy prices, and commercially sensitive data about unit operating costs and profitability to determine whether winterizing the unit would truly be uneconomic over the unit's future remaining life. Moreover, the analysis would also need to consider the across-the-board electricity price impacts that would result from competitors of that unit attempting to pass through the costs of similar weatherization work. Such price increases could offset the costs of implementing freeze protection measures, making it extremely difficult to effectively review or audit a determination that the requirement to implement the winterization measure 'resulted' in premature retirement. Such a review or audit would likely require a complete examination of the projected future profitability of the unit under a range of scenarios.

This degree of economic analysis and forecasting is not an appropriate role for NERC or the Regional Entities, nor is it their traditional area of expertise. It would also involve what could be a highly subjective examination of that unit's competitive position relative to its peers on a forward-looking basis. As a result, although the SRC respects the SDT's efforts to avoid driving unit retirements, creating a blanket exemption for units that otherwise would 'prematurely retire' creates an unworkable and unauditable exception that could stymie enforcement of EOP-012-3 and frustrate the underlying intent of improving weatherization for all generation.

Along these same lines, item 5.a would also require the unit owner to prognosticate on whether 'acceptable replacements' are available for its unit. In competitive markets, this information is highly confidential and market sensitive, leaving the Generator Owner declaring the constraint unable to make the required showing.

For these reasons, and in light of FERC's directive that constraint criteria be objective, unambiguous, and auditable, the SRC urges the elimination of item 5.a as written. Item 6 on the case-by-case constraint list is sufficient to address generating unit retirements.

Case-by-case constraint list, item #5.b.

Request: Remove item 5.b from the case-by-case constraint list.

Justification: While the SRC recognizes that item 5.b, which addresses the potential cancellation of planned new generating units, aligns closely with language that the June 2024 Order indicated may be acceptable, the SRC believes item 5.b similarly lacks an objective standard that the CEA could use to determine whether implementation of the freeze protection measures 'caused' the Generation Owner to cancel plans to finish development of a new generating unit.

Decisions to cancel a unit are based on many factors, including changes to the underlying economics of developing the unit. In this case, evaluating the asserted basis for cancelling the development of the planned new generating unit would require NERC or the Regional Entity to attempt to forecast future generator revenues while accounting for higher wholesale electricity prices resulting from increased costs faced by other units as a result of installing freeze protection measures. NERC and the Regional Entity might have to examine minutes of Board meetings and question company officials in order to effectively determine whether the decision to cancel the development of the new unit was truly 'caused' by the requirement to install freeze protection measures instead of some other factor, such as higher interest rates or increased permitting costs (as compared to expected future revenues).

This constraint is unauditable without a level of investigation and examination of company decision making that is beyond what is reasonable in the context of evaluating a constraint declaration. For these reasons, as well as those addressed in the discussion of item 5.a above, the SRC believes that item 5.b is not objective, unambiguous, and auditable and should be removed. A unit that is unavailable on a cold, peak-demand day because of inadequate freeze protection measures is of little value. As a result, a blanket constraint that would allow such units to remain on the system based on unauditable assertions that the Generator Owner would otherwise 'prematurely retire' the unit or 'cancel' the construction of a new generating unit undermines the goal of ensuring reliability by bringing all generating units up to a minimum winterization level (subject to only a limited set of constraints based on the physical limitations of certain units) based on expected conditions.

Case-by-case constraint list, item #5.c.

The SRC recommends that the language at the end of item 5.c on the case-by-case constraint list in Attachment 1 be revised to read as follows to clarify the meaning of the language: " . . . during conditions in which freeze protection measures are not required to ensure reliable operation of the generating unit."

Case-by-case constraint list, items #5.c and #5.d.

Request: The SRC recommends that the references to "TP, RC, BA, etc." in items 5.c and 5.d of the case-by-case constraint list be replaced with references to just the RC.

Justification: Larger entities will often be registered as BAs or TPs in addition to being registered as Generator Owners. According to the NERC Compliance Registry as of the date of these comments, 69 Generator Owners are also registered as BAs, while 117 Generator Owners are also registered as TPs. In contrast, only four Generator Owners are also registered as RCs. Even though this analysis does not account for scenarios in which a Generator Owner has a corporate affiliate that is registered as an RC, BA, or TP, it still indicates that, for a given constraint declaration, the RC is more likely to be an independent entity that can offer an unbiased, third-party perspective on the appropriate reliability threshold for items 5.c and 5.d.

Case-by-case constraint list, item #9.

Request: Revise item 9 of the case-by-case constraint list to read as follows: "Implementation of freeze protection measures would not increase reliability of a generating unit due to clearly delineated fuel supply restrictions imposed for technical or physical reasons by the generating unit's fuel supplier that the generating unit has communicated to its Reliability Coordinator or Balancing Authority."

Justification: The SRC is concerned that item 9 on the case-by-case constraint list in Attachment 1 could be construed to provide a basis for constraints based on speculation regarding potential fuel supplier nonperformance during cold weather or past intermittent fuel supplier performance issues. While the SRC agrees that a constraint may exist in a scenario in which the fuel supplier notifies the Generator Owner in advance that it is categorically unable to supply fuel below a certain temperature, the SRC is concerned that item 9 goes beyond this scenario.

As currently drafted, item 9 could be understood to allow a constraint in a scenario in which a Generator Owner's fuel supplier has a poor track record of delivering fuel in certain weather conditions, but sometimes delivers fuel in those conditions. A track record of intermittent performance by a Generator Owner's fuel supplier should not be grounds for a constraint, as the definitions of Fixed Fuel Supply Component, Generator Cold Weather Critical Component, and Generator Cold Weather Reliability Event all explicitly exclude factors that are outside of the Generator Owner's control.

To address this concern, the SRC recommends that item 9 be revised as follows so that it is limited to a scenario in which it is known in advance that a fuel supplier is categorically unable to supply fuel in certain conditions: "Implementation of freeze protection measures would not increase reliability of a generating unit due to clearly delineated fuel supply restrictions imposed for technical or physical reasons by the generating unit's fuel supplier that the generating unit has communicated to its Reliability Coordinator or Balancing Authority."

End of Attachment 1.

The SRC recommends that the last paragraph in Attachment 1 be revised to read as follows to clarify that the relevant Reliability Coordinator or Balancing Authority may choose to provide information that would assist the CEA in evaluating certain types of constraints and to clarify that a valid constraint declaration does not necessarily carry any weight for purposes of any non-EOP-012 regulatory regimes that may apply to the unit in question: When submitting a Generator Cold Weather Constraint declaration to the CEA per Requirement R8, the Generator Owner must include documentation that defends and supports the declared constraint and also describes other compensating or mitigating freeze protection measures, if applicable, that the Generator Owner will apply. ***If a Generator Cold Weather Constraint declaration indicates that the application of a specific freeze protection measure or measures would adversely affect the reliability of the Bulk-Power System to an extent that outweighs the reliability benefit of applying the freeze protection measure(s), the documentation that defends and supports the constraint should include any assessment that the applicable Balancing Authority or Reliability Coordinator might agree to provide concerning the impact to the reliability of the Bulk-Power System if the constraint were to be granted.*** An approved Generator Cold Weather Constraint declaration for any specific Generator Cold Weather Critical Component does not relieve the Generator Owner of its obligation to otherwise prepare its applicable generating unit(s) to meet the requirements of EOP-012-3***, and does not in any way purport to relieve the Generator Owner of any other legal obligations or requirements outside of the requirements of EOP-012-3, including tariff, regulatory, or statutory obligations or requirements***.

Likes 0	
Dislikes 0	

Response
Thank you for your comments. The drafting team has reviewed the comments and discussed against the SAR work scopes as well as the FERC Directives. The drafting team and Standards Committee made some modifications where appropriate.

Colin Chilcoat - Invenergy LLC - 6	
Answer	No
Document Name	
Comment	

Invenergy appreciates the work of the drafting team and agrees with many of the edits to Attachment 1 in Draft 2. That said, we would like the drafting team to consider the comment below.

Please consider revising bullet 1 of the Known Generator Cold Weather Constraints to read, “Individual wind turbine towers that have structural limitations established by Original Equipment Manufacturers (OEMs) based on a minimum temperature that is higher than the Extreme Cold Weather Temperature calculated per Requirement R1.” The structural limitations of wind turbine towers relative to extreme cold temperatures are not limited to only existing wind turbine towers as implied by the revisions in Draft 2. The same or similar structural limitations will also be present in wind turbine towers manufactured after October 1, 2027, and for the foreseeable future.

Likes 0	
Dislikes 0	

Response

Thank you for your comments. The drafting team has reviewed the comments and discussed against the SAR work scopes as well as the FERC Directives. The drafting team and Standards Committee made some modifications where appropriate.

Rhonda Jones - Invenergy LLC - 5

Answer	No
Document Name	

Comment

Invenergy appreciates the work of the drafting team and agrees with many of the edits to Attachment 1 in Draft 2. That said, we would like the drafting team to consider the comment below.

Please consider revising bullet 1 of the Known Generator Cold Weather Constraints to read, “Individual wind turbine towers that have structural limitations established by Original Equipment Manufacturers (OEMs) based on a minimum temperature that is higher than the Extreme Cold Weather Temperature calculated per Requirement R1.” The structural limitations of wind turbine towers relative to extreme cold temperatures are not limited to only existing wind turbine towers as implied by the revisions in Draft 2. The same or similar structural limitations will also be present in wind turbine towers manufactured after October 1, 2027, and for the foreseeable future.

Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The drafting team has reviewed the comments and discussed against the SAR work scopes as well as the FERC Directives. The drafting team and Standards Committee made some modifications where appropriate.	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC	
Answer	Yes
Document Name	
Comment	
WECC appreciates the efforts made by the DT to clarify Generator Cold Weather Constraints in Attachment 1. Consider adding additional guidance, if given the chance, to the Technical Rationale regarding like events at “similar” units.	
Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comments.	
Martin Sidor - NRG - NRG Energy, Inc. - 6	
Answer	Yes
Document Name	
Comment	
While NRG agrees with the changes to Attachment 1, the cost of implementing many of the actions that are up for subjective review may be a large driver of an owner filing for a Generator Cold Weather Constraint. We understand NERC’s lack of authority in addressing cost considerations as a basis for a constraint. NRG’s concern is that the owner and the CEA may end up talking past one another in Case-by-Case determinations since cost issues are not addressed in the attachment. While the SDT assures the industry that cost considerations	

can be addressed, the plain language in Attachment 1 can be read not to allow this. This may force owners into decisions, including unit retirement, that will have an unwanted impact on reliability. *While the language as proposed does provide known constraints for solar power facilities in Attachment 1, the terminology of "solar panels" used in the 5th bullet of the known constraint section may be perceived as too constrictive. There are solar facilities that utilize heliostats to focus solar energy, and the heliostats have similar characteristics making freezing precipitation not feasible to remedy. NRG believes that the terminology of "solar panels" was chosen due to its more colloquial understood meanings, which would include heliostats, but NRG believes distinct identification of technologies in known constraints would lead to clarity during constraint declarations and audits.*	
Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comments. The June FERC Order was explicit on removal of cost and similar language.	
Patricia Lynch - NRG - NRG Energy, Inc. - 5	
Answer	Yes
Document Name	
Comment	
While NRG agrees with the changes to Attachment 1, the cost of implementing many of the actions that are up for subjective review may be a large driver of an owner filing for a Generator Cold Weather Constraint. We understand NERC's lack of authority in addressing cost considerations as a basis for a constraint. NRG's concern is that the owner and the CEA may end up talking past one another in Case-by-Case determinations since cost issues are not addressed in the attachment. While the SDT assures the industry that cost considerations can be addressed, the plain language in Attachment 1 can be read not to allow this. This may force owners into decisions, including unit retirement, that will have an unwanted impact on reliability. *While the language as proposed does provide known constraints for solar power facilities in Attachment 1, the terminology of "solar panels" used in the 5th bullet of the known constraint section may be perceived as too constrictive. There are solar facilities that utilize heliostats to focus solar energy, and the heliostats have similar characteristics making freezing precipitation not feasible to remedy. NRG believes that the terminology of "solar panels" was chosen due to its more colloquial understood meanings, which would include*	

heliostats, but NRG believes distinct identification of technologies in known constraints would lead to clarity during constraint declarations and audits.	
Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comments. The June FERC Order was explicit on removal of cost and similar language.	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter	
Answer	Yes
Document Name	
Comment	
FirstEnergy agrees with the Case-by-Case language.	
Likes 0	
Dislikes 0	
Response	
Thank you for your supportive comments.	
Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	Yes
Document Name	
Comment	
Within Attachment 1 is the revised definition of Generator Cold Weather Constraint, which we do not fully support. To address our concerns, we offer the following edits in boldface (below) for DT consideration, which are intended to limit entity obligations to address those freeze protection measures that have been shown to be effective in areas with similar winter weather conditions.	

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. **Viable f**reeze protection measures include practices, methods, or technologies **that have been successfully** implemented by the electric industry in areas that experience similar winter climate conditions and are not intended to be limited to optimum practices, methods, or technologies.

EEI also suggests changes to the 4th bullet that addresses the "accumulation of frozen precipitation on solar panels." While EEI is supportive of this predefined limitation that recognizes the technical problems associated with ice and snow clearing on solar panels, we also believe the proposed language does not align with the other four (4) Generator Cold Weather Constraints. To address this concern, we suggest the following changes in boldface to bullet 4:

Implementation of technologies for the mitigation of accumulated frozen precipitation on solar panels.

Likes 1	Berkshire Hathaway Energy - MidAmerican Energy Co., 3, Amato Joseph
Dislikes 0	

Response

Thank you for your constructive comments. The verbiage provided ("viable" and "have been successfully") were not accepted by the DT. Concerns were raised regarding the need to allow innovation and improvements in freeze protection measures to occur while balancing the thought that new technologies are new until proven to work. New technologies are not required to be implemented as a result of a single GO testing the technology. The DT and Standards Committee reviewed the Generator Cold Weather Constraints and provided some updates.

Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro

Answer	Yes
Document Name	

Comment

BC Hydro appreciates the drafting team efforts and the opportunity to comment, and offers the following.

The Attachment 1 repeats the Generator Cold Weather Critical Component (GCWCC) definition. As this will be part of the NERC Glossary of Terms, BC Hydro suggests that its direct reference is sufficient, and that the second paragraph of the Attachment 1 can be removed.

Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comments.	
Andrew Smith - APS - Arizona Public Service Co. - 5	
Answer	Yes
Document Name	
Comment	
AZPS agrees with this approach	
Likes 0	
Dislikes 0	
Response	
Thank you for your supportive comments.	
Nikki Carson-Marquis - Nikki Carson-Marquis On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Nikki Carson-Marquis	
Answer	Yes
Document Name	
Comment	
Minnkota Power Cooperative supports comments made by the MRO NSRF.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to MRO NSRF comments.	

Mary Smith - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF	
Answer	Yes
Document Name	
Comment	
SIGE supports EEI comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Daniel Gacek - Exelon - 1, Group Name Exelon	
Answer	Yes
Document Name	
Comment	
Exelon supports the comments submitted by the EEI	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Selene Willis - Edison International - Southern California Edison Company - 5	
Answer	Yes
Document Name	
Comment	

See EEI Comments	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company	
Answer	Yes
Document Name	
Comment	
Additionally, Southern Company agrees with the changes recommended by EEI.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Jessica Cordero - Unisource - Tucson Electric Power Co. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Thank you for your support.	
Julie Hall - Entergy - 6, Group Name Entergy	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Lovita Griffin - Austin Energy - 1,3,4,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Michael Dillard - Austin Energy - 1,3,4,5,6	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Tony Hua - Austin Energy - 1,3,4,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Foung Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kevin Smith, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Ryder Couch, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Erin Wilson - NB Power Corporation - New Brunswick Power Transmission Corporation - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Jeffrey Streifling - NB Power Corporation - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Thank you for your support.	
Carver Powers - Utility Services, Inc. - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Thomas Foltz - AEP - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Mohamad Elhusseini - DTE Energy - Detroit Edison Company - 5, Group Name DTE Energy	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Donna Wood - Tri-State G and T Association, Inc. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Darcy O'Connell - California ISO - 2	
Answer	
Document Name	
Comment	
CAISO agrees with comments submitted by the ISO/RTO Counsel (IRC) Standards Review Committee	
Likes 0	

Dislikes 0	

Response
Thank you for your comments. Please see responses to IRC comments.

Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	
Document Name	

Comment
Texas RE is has the following clarification recommendations: • Consider revising case 3e and move the verbiage to 3 (recommended change in bold):   ○ "The implementation of a specific freeze protection measure is precluded by technical or physical limitations, **as determined through operating experience or engineering analysis and supported with justification**. For example:" This edit clarifies the criterion by which situation 3 circumstances are determined, without introducing what could be perceived as an additional set of circumstances. • Consider revising case 5e in a similar manner. • In case 4, consider removing the verbiage "or that there is no record that such a measure has been effectively utilized" as it is unclear how an entity would provide evidence that there is no record of a measure being effectively utilized in comparable circumstances. • Consider removing case 10. While it allows for possibilities not thought of by the SDT, this Texas RE is concerned it is overly broad and permissive. If it is retained, consider replacing "limit" with "preclude" since it is the latter term that defines a Generator Cold Weather Constraint.

Likes 0	
Dislikes 0	

Response
Thank you for your constructive comments.

2. In paragraph 68 of the June 2024 Order, FERC directed NERC to modify Requirement R7 of 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. FERC provided an example for how to address this directive, such as to require shorter timeframes for those units that have experienced issues and allow longer timeframes to address similar potential issues across a fleet for those units that have not experienced issues. **The drafting team modified Requirement R6 based on industry feedback, while still maintaining the FERC directive. Do you agree that the modifications in Requirement R6 are responsive to the FERC Directives? If you do not agree, please provide your language change suggestions for the drafting team.**	
Rhonda Jones - Invenergy LLC - 5	
Answer	No
Document Name	
Comment	
Invenergy believes Requirement R6, specifically R6.3.5.1. and the accompanying footnote, remains too subjective and does not provide a uniform amount of time to Generator Owners to implement any needed corrective actions following an event. For example, does an	

event experienced in September qualify as “early in the season,” and therefore require implementation of corrective actions prior to December 1 of that same year? Invenergy understands FERC’s desire for shorter deadlines to implement corrective actions, and we believe an 18-month timetable from the date of the event both meets FERC’s desire and provides the necessary clarity and flexibility for Generator Owners to schedule needed maintenance outages in a manner that supports BES reliability and keeps generators online.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The Drafting Team and Standards Committee believe the language is clear and meets the FERC Order.	
Constantin Chitescu - Ontario Power Generation Inc. - 5	
Answer	No
Document Name	
Comment	
OPG support NB Power's comment: Requirement R6 assumes that Generator Cold Weather Reliability Events are identified based on their definition, but there is a weakness in the definition of Generator Cold Weather Reliability Event that may make it unsuitable for auditing in its present form. The issue stems from the fact that a Generator Cold Weather Reliability Event is defined in terms of “apparent cause”: *Generator Cold Weather Reliability Event – One of the following events for which the apparent cause(s) is due to freezing of equipment or impacts of freezing precipitation (e.g., sleet, snow, ice, and freezing rain) on equipment within the Generator Owner’s control, and the dry bulb temperature at the time of the event was at or above the Extreme Cold Weather Temperature:* *(1) a forced derate of more than 10% of the total capacity of the unit, but not less than 20 MWs for longer than four hours in duration;* *(2) a start-up failure where the unit fails to synchronize within a specified start-up time; or* *(3) a Forced Outage*	

Thus the definition of Generator Cold Weather Reliability Events is based on apparent causes(s) and Apparent Cause Analysis (ACA).

Referring to *Cause Analysis Methods for NERC, Regional Entities, and Registered Entities – September 2011*, Section 3.4, *Apparent Cause Analysis (quoting Revision 2, dated September 20, 2011 in the version history table)*:

An apparent cause is defined as a determination based on the evaluator's judgment and experience, and where reasonable effort is made to determine WHY the problem occurred. ACA seeks to determine why the problem occurred based on reasonable effort and the investigator's judgment and experience (the investigator is often a subject matter expert.) The emphasis of an ACA is primarily to correct a particular event or problem without a special effort to identify the underlying system or process problems that may have contributed to the problem. Performing an ACA should not prevent the identification and correction of these underlying contributors if they can be discovered and addressed easily. Several tools can be used to accomplish an ACA. One of the simplest and most effective tools is the "why staircase."

NOTE: ACA is not industry standard for system disturbances or major events and is not referenced in the Department of Energy (DOE) Guidelines for Root Cause Analysis. A proper corrective action plan cannot be determined based on apparent causes. To establish proper corrective action plans to prevent reoccurrence, the root causes of the event must be determined. By only looking at apparent causes, the underlying root cause may be overlooked allowing a reoccurrence of the deficiency leading to the event.

Thus, according to NERC's guidelines, an apparent cause is based on the evaluator's judgment and experience, and is not suitable for the determination of a proper corrective action plans. Quoting NERC's guidance, "to establish proper corrective action plans to prevent reoccurrence, the root causes of the event must be determined. By only looking at apparent causes, the underlying root cause may be overlooked, allowing a reoccurrence of the deficiency leading to the event."

In order to determine proper corrective action plans, a proper root cause analysis must be completed; however, undertaking proper root cause analysis requires time, planning, and resources. Moreover, northern and Canadian entities operate in sub-freezing temperatures for substantial parts of each year. Many generator outages, derates, and startup failures occur in sub-freezing temperatures for reasons completely unrelated to "freezing of equipment" or "freezing precipitation." To require that all outages, derates, and startup failures must be investigated to a level to convince an auditor that there is no possible link to freezing weather outside, and thus is not a Generator Cold Weather Reliability Event would impose a disproportionate burden on northern and Canadian entities, many of which have extensive experience operating reliability in sub-freezing temperatures. Exposing northern and Canadian entities to an audit in

which their identification of "apparent causes" based on "judgement and experience" is called into question after the fact by an auditor who may not have the background or contextual information about the equipment and may not have had extensive experience with regional weather patterns is likely to lead to inconsistent audit outcomes and disproportionate compliance burden that will do little or nothing to improve system reliability.

The process of selecting generator outages, derates, and startup failures for investigations that would be worthwhile to investigate for possible identification as Generator Cold Weather Reliability Events will necessarily be different from region to region due to regional variations in weather and climate, generating station design, operating experience, and even language (e.g., what Americans call 'sleet' is referred to as 'ice pellets' in Canada). Thus, it is suggested to split the implicit requirement to investigate generator forced outages and derates and startup failures out of Requirement R6 and write a new requirement (here styled R10), something like:

R10. Each Generator Owner of generating units with Extreme Cold Weather Temperatures at or below 32°F/0°C and that self-commit or are required to operate at or below 32°F/0°C shall implement a documented process to identify, investigate, and analyze root causes for the subset of generator forced outages, forced derates, and startup failures that is likely to lead to the identification of Generator Cold Weather Reliability Events. Such a process shall include:

Criteria for selecting candidate generator forced outages, forced derates, and startup failures to be investigated,

A requirement that at least one [or some minimum number] forced outage, forced derate, or startup failure occurring at temperatures at or below 32°F/0°C minimum number be selected for investigation each year unless no such events occur,

A systematic methodology for investigating, analyzing the root causes of, and developing Corrective Action Plans for selected forced outages, forced derates, and startup failures, and

{C}· *Criteria for determining if a generator forced outage, forced derate, or startup failure is in fact a Generator Cold Weather Reliability Event.*

With the addition of a documented process to identify Generator Cold Weather Reliability Events, Requirement R6 could be rewritten to begin:

R6. Each Generator Owner shall, when experiencing a Generator Cold Weather Reliability Event identified pursuant to Requirement R10, develop and implement a Corrective Action Plan(s) to address the identified root causes as follows…

The application of a documented, systematic methodology to select, analyze root causes for, and develop Corrective Action Plans for Generator Cold Weather Reliability Events would lead to more consistent audit outcomes by removing auditor judgment from the

evaluation of causal analysis and better reliability outcomes through the completion of properly established Corrective Action Plan(s) based on systematic root cause analysis.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The drafting team considered the comments and discussed against the SAR work scopes as well as the FERC Directives. Given that this definition was in the previously approved standard and not subject to a Directive, no changes were made.	
Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion	
Answer	No
Document Name	
Comment	
Section 6.4 and the Generator Cold Weather CAP Extension and Constraint Process need to align with one another. The Standard and the Process should make allowances for changes to a CAP schedule *due to circumstances beyond the GOs control* that may occur within 60 days of the original CAP deadline. An example is a generator that is scheduled for a Planned Outage to conduct the work and due to unexpected weather or other constraints within the generators system, the outage is reschedule by the TP or BA. This often occurs at the last minute and will put the GO past the “60 calendar days before the original CAP due date” required by the Extension Process. We suggest specifying in the standard a specific due date for applying for CAP extensions with the allowable exceptions. Sixty days prior is unreasonable when there are many issues beyond the GO’s control that could affect the implementation schedule of a CAP with the aforementioned 60 calendar days.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The DT discussed setting a timeframe for applying for CAP extensions but felt the language provided, in conjunction with the flexibility provided in the NERC process, was reasonable.	

Colin Chilcoat - Invenergy LLC - 6	
Answer	No
Document Name	
Comment	
Invenergy believes Requirement R6, specifically R6.3.5.1. and the accompanying footnote, remains too subjective and does not provide a uniform amount of time to Generator Owners to implement any needed corrective actions following an event. For example, does an event experienced in September qualify as “early in the season,” and therefore require implementation of corrective actions prior to December 1 of that same year? Invenergy understands FERC’s desire for shorter deadlines to implement corrective actions, and we believe an 18-month timetable from the date of the event both meets FERC’s desire and provides the necessary clarity and flexibility for Generator Owners to schedule needed maintenance outages in a manner that supports BES reliability and keeps generators online.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The Drafting Team and Standards Committee believe the language is clear and meets the FERC Order.	
Lindsay Wickizer - Berkshire Hathaway - PacifiCorp - 6	
Answer	No
Document Name	
Comment	
PacifiCorp supports EEI comments.	
Likes 0	
Dislikes 0	
Response	

Thank you for your comments. Please see responses to EEI comments.	
Kimberly Turco - Constellation - 6	
Answer	No
Document Name	
Comment	
CEG Supports the NAGF response to this question. Kimberly Turco on behalf of Constellation Segments 5 and 6	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to NAGF comments.	
Glen Farmer - Avista - Avista Corporation - 1,3,5	
Answer	No
Document Name	
Comment	
We support EEi's comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	

Mike Magruder - Avista - Avista Corporation - 1	
Answer	No
Document Name	
Comment	
See EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Nick Leathers - Nick Leathers On Behalf of: David Jendras Sr, Ameren - Ameren Services, 3, 6, 1; - Nick Leathers	
Answer	No
Document Name	
Comment	
Ameren supports EEI's and NAGF's comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to those organization’s comments.	
Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators	
Answer	No
Document Name	
Comment	

We at ACES greatly appreciate the tremendous effort put forth by the drafting team in developing the proposed updates to EOP-012-2 in accordance with the FERC directives.

From the perspective of ACES, the proposed modifications to Requirement R6 are an improvement over previous drafts; however, we believe further refinement would be beneficial. We believe that, as written, the timelines identified in Requirement R6 are too ambiguous and may unduly discriminate against a GO based solely upon the date the generating unit(s) experienced a Generator Cold Weather Reliability event.

It is our opinion that any required compliance timelines would be best defined by removing the inherent obscurity associated with using specific calendar days. In short, we recommend using a timeline based solely on a clearly defined quantity of calendar days and removing all references to explicit months and/or days. Please consider the following hypothetical scenarios as an illustration:

- Generating Unit 1 belonging to Entity A experiences a Generator Cold Weather reliability event on October 22nd, 2025. Per the currently proposed version of Requirement R6 Part 6.3.5.1, Entity A has until December 1st, 2026, to implement a CAP.
- Generating Unit 2 belonging to Entity B experiences a Generator Cold Weather reliability event on March 17th, 2025. Per the currently proposed version of Requirement R6 Part 6.3.5.1, Entity B has until December 1st, 2026, to implement a CAP.
- In the above examples, Entity A is allowed 406 calendar days after their event to implement a CAP whereas Entity B is only allowed 260 calendar days after the same event type to do the same.
    - This results in an unequal application of the Reliability Standard by granting Entity A an additional 146 calendar days to complete the same, or substantially similar, compliance activities as Entity B.

It is the viewpoint of ACES that entities should be provided with the **same** length of time to complete compliance activities required by a Reliability Standard. We recommend that the timeline in part 6.3.5.1 be modified to 12 calendar months regardless of when the Generator Cold Weather Event occurs.

Additionally, it is our opinion that the timeline to address similar potential issues across a fleet is too short. We are concerned that a GO with either a large generating fleet (large IOU) or limited resources (small electric cooperative), may not be able to complete all corrective actions on all applicable units within 24 calendar months of the GCWRE. This is especially true when considering that an entity has 12 calendars months following the GCWRE to complete the review required by part 6.2. We recommend that part 6.3.5.2 be modified to 24 calendar months following the development of the CAP as required by part 6.2.

Thus, we recommend modifying Requirement R6 as follows (note: for the sake of brevity, the text for any sections without recommended changes has been omitted): 6.3.5. A timetable specifying that implementation of the Corrective Action Plan(s) shall be completed as follows: 6.3.5.1. For the generating unit experiencing the Generator Cold Weather Reliability Event, no later than twelve (12) calendar months following the Generator Cold Weather Reliability Event. 6.3.5.2. For other generating unit(s) owned by the Generator Owner, no later than twenty-four (24) calendar months following the development of a Corrective Action Plan under Part 6.2.

Likes 0	
Dislikes 0	

Response
Thank you for your comments. The Drafting Team and Standards Committee believe the language meets the urgency noted within the FERC Order.

Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company	
Answer	No
Document Name	

Comment
Southern Company recommends modifying Requirement 6 to allow 24-calendar months to implement changes to like equipment after the allowed 12-calendar month review of similar units of the GO, per EEI comments.

Likes 0	
Dislikes 0	

Response
Thank you for your comments. Please see responses to EEI comments.

Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	No
Document Name	
Comment	
Manitoba Hydro recommends that for non-US Registered Entities: Prior to the implementation of any element of a Corrective Action Plan developed in accordance with this Requirement all applicable corporate, regulatory, provincial, and federal evaluations and approvals must be completed and obtained. The applicable timeline for implementation of a Corrective Action Plan shall be determined by the Registered Entities Generator Owner. A concern with Requirement R6 is that many outages, derates, and start-up failures would have no relationship to the fact that the weather happens to be below freezing when they occur, and an implicit requirement to investigate all outages and derates to rule out freezing equipment and freezing precipitation as causes would result in a disproportionate compliance burden on Canadian entities in regards to documenting which event is a cold weather event and how to differentiate these events from other outages.	
Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comments. Outages or derates, if they occur, should be reviewed in any case to understand the cause of the event.	
Selene Willis - Edison International - Southern California Edison Company - 5	
Answer	No
Document Name	
Comment	
See EEI Comments	
Likes 0	

Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Carey Salisbury - Santee Cooper - 5, Group Name Santee Cooper	
Answer	No
Document Name	
Comment	
As revised, R6 no longer specifies when the Corrective Acton Plan must be developed following a Cold Weather Reliability Event but only states when the corrective actions must be implemented. The standard should be revised to clarify if there is a deadline to develop the CAP. Any repair or modification that can reasonably be completed before December 1st should be completed, however any repair or modification that needs an outage or if qualified materials and people are not available CAP completion may have to wait until the next planned outage. Planned outages are scheduled to maintain reliability. Adding unplanned outages either postpones scheduled outages or forces outages into periods of time when demand is high therefore reducing the reliability to satisfy load requirements. The expertise for making decisions regarding the timing repairs is best left with the GOs, GOPs, and BAs rather than require approval from the CEA for an extension. Furthermore, if the CEA does not approve an extension request the timeframe to complete the corrective actions would be further reduced to a potentially unreasonable duration.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Upon review and edits by the Standards Committee, the timeframe to develop the CAP was set to match completion of the CAP for compliance clarity. The FERC Order required NERC pre-approval of any Corrective Action Plan extension request. Note that if a GO proposes an extension to a Corrective Action Plan, efforts to complete the Corrective Action Plan should not stop during the review process.	
Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF	

Answer	No
Document Name	
Comment	
As written, the requirement implies that the CAP must be developed while the unit is offline/derated and experiencing the GCWRE. This should be re-written to say "after experiencing a Generator Cold Weather Reliability Event". *The NAGF notes that footnote 10 needs clarity to state that, by adding the event to an already existing CAP, this does not require the creation of a new declaration. As currently structured, it appears that a request for a declaration would need to be made again, which does not address the obligation to complete annual "blade icing and snow-covered solar panel" declarations for many generators.*	
Likes 1	Jennie Wike, N/A, Wike Jennie
Dislikes 0	
Response	
Thank you for your comments. The DT addressed the tense of Requirement R6 and made edits regarding Generator Cold Weather Constraints. The Drafting Team and Standards Committee also have edited R8 to include part 8.4 for recurring GCWREs of the same cause.	
Daniel Gacek - Exelon - 1, Group Name Exelon	
Answer	No
Document Name	
Comment	
Exelon supports the comments submitted by the EEI	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	

Scott Thompson - PNM Resources - Public Service Company of New Mexico - 1,3,5 - WECC	
Answer	No
Document Name	
Comment	
PNM agrees with the comments of EEI.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Robert Follini - Avista - Avista Corporation - 3	
Answer	No
Document Name	
Comment	

Avista does not object to the proposed shortened deadlines except for the language in Requirement R6, subpart 6.1.6. We understand 6.1.6 to mean that a GO is to complete freeze protection CAPs on similar equipment vulnerabilities within 24 months, however, we disagree that this is what the Commission directed in Paragraph 68 of the order. What they directed was that corrective actions needed to be taken on "similar equipment on all of its fleet within 24 months of becoming **aware of the freeze issue**." In other words, the clock should start after the GO has confirmed similar vulnerabilities on similar equipment on other generating resources. To address this issue, Avista suggests adding the following clarifying language to 6.1.6 as suggested below in boldface:

6.1.6. A review of applicability **to of** similar **freeze protection** equipment **installed on similar generating units within 12 calendar months of the of the Generator Cold Weather Reliability event** by the Generator Owner, with a specified timetable for corrective actions to be completed within 24 calendar months of **confirming a generating unit has similar equipment vulnerabilities**;

Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The DT and Standards Committee reviewed the FERC Order and determined there would be ambiguity introduced in determining and documenting when an entity becomes “aware of the freeze issue”. Further review and editing added provisions for longer implementation on similar units in a fleet based on the timeframe for development of the CAP.	
Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples	
Answer	No
Document Name	
Comment	
Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI), Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF), and the North American Generator Forum (NAGF) on question 2	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to those organization’s comments.	
Chantal Mazza - Chantal Mazza On Behalf of: Junji Yamaguchi, Hydro-Quebec (HQ), 1, 5; Nicolas Turcotte, Hydro-Quebec (HQ), 1, 5; - Chantal Mazza	
Answer	No
Document Name	
Comment	
We support NB Power's comment:	

Requirement R6 assumes that Generator Cold Weather Reliability Events are identified based on their definition, but there is a weakness in the definition of Generator Cold Weather Reliability Event that may make it unsuitable for auditing in its present form. The issue stems from the fact that a Generator Cold Weather Reliability Event is defined in terms of "apparent cause":

Generator Cold Weather Reliability Event – One of the following events for which the apparent cause(s) is due to freezing of equipment or impacts of freezing precipitation (e.g., sleet, snow, ice, and freezing rain) on equipment within the Generator Owner's control, and the dry bulb temperature at the time of the event was at or above the Extreme Cold Weather Temperature:

(1) a forced derate of more than 10% of the total capacity of the unit, but not less than 20 MWs for longer than four hours in duration;

(2) a start-up failure where the unit fails to synchronize within a specified start-up time; or

(3) a Forced Outage

Thus the definition of Generator Cold Weather Reliability Events is based on apparent causes(s) and Apparent Cause Analysis (ACA).

Referring to *Cause Analysis Methods for NERC, Regional Entities, and Registered Entities – September 2011*, Section 3.4, *Apparent Cause Analysis (quoting Revision 2, dated September 20, 2011 in the version history table)*:

An apparent cause is defined as a determination based on the evaluator's judgment and experience, and where reasonable effort is made to determine WHY the problem occurred. ACA seeks to determine why the problem occurred based on reasonable effort and the investigator's judgment and experience (the investigator is often a subject matter expert.) The emphasis of an ACA is primarily to correct a particular event or problem without a special effort to identify the underlying system or process problems that may have contributed to the problem. Performing an ACA should not prevent the identification and correction of these underlying contributors if they can be discovered and addressed easily. Several tools can be used to accomplish an ACA. One of the simplest and most effective tools is the "why staircase."

NOTE: ACA is not industry standard for system disturbances or major events and is not referenced in the Department of Energy (DOE) Guidelines for Root Cause Analysis. A proper corrective action plan cannot be determined based on apparent causes. To establish proper

corrective action plans to prevent reoccurrence, the root causes of the event must be determined. By only looking at apparent causes, the underlying root cause may be overlooked allowing a reoccurrence of the deficiency leading to the event.

Thus, according to NERC's guidelines, an apparent cause is based on the evaluator's judgment and experience, and is not suitable for the determination of a proper corrective action plans. Quoting NERC's guidance, "to establish proper corrective action plans to prevent reoccurrence, the root causes of the event must be determined. By only looking at apparent causes, the underlying root cause may be overlooked, allowing a reoccurrence of the deficiency leading to the event."

In order to determine proper corrective action plans, a proper root cause analysis must be completed; however, undertaking proper root cause analysis requires time, planning, and resources. Moreover, northern and Canadian entities operate in sub-freezing temperatures for substantial parts of each year. Many generator outages, derates, and startup failures occur in sub-freezing temperatures for reasons completely unrelated to "freezing of equipment" or "freezing precipitation." To require that all outages, derates, and startup failures must be investigated to a level to convince an auditor that there is no possible link to freezing weather outside, and thus is not a Generator Cold Weather Reliability Event would impose a disproportionate burden on northern and Canadian entities, many of which have extensive experience operating reliability in sub-freezing temperatures. Exposing northern and Canadian entities to an audit in which their identification of "apparent causes" based on "judgement and experience" is called into question after the fact by an auditor who may not have the background or contextual information about the equipment and may not have had extensive experience with regional weather patterns is likely to lead to inconsistent audit outcomes and disproportionate compliance burden that will do little or nothing to improve system reliability.

The process of selecting generator outages, derates, and startup failures for investigations that would be worthwhile to investigate for possible identification as Generator Cold Weather Reliability Events will necessarily be different from region to region due to regional variations in weather and climate, generating station design, operating experience, and even language (e.g., what Americans call 'sleet' is referred to as 'ice pellets' in Canada). Thus, it is suggested to split the implicit requirement to investigate generator forced outages and derates and startup failures out of Requirement R6 and write a new requirement (here styled R10), something like:

R10. Each Generator Owner of generating units with Extreme Cold Weather Temperatures at or below 32°F/0°C and that self-commit or are required to operate at or below 32°F/0°C shall implement a documented process to identify, investigate, and analyze root causes for the subset of generator forced outages, forced derates, and startup failures that is likely to lead to the identification of Generator Cold Weather Reliability Events. Such a process shall include:

Criteria for selecting candidate generator forced outages, forced derates, and startup failures to be investigated,

A requirement that at least one [or some minimum number] forced outage, forced derate, or startup failure occurring at temperatures at or below 32°F/0°C minimum number be selected for investigation each year unless no such events occur, *A systematic methodology for investigating, analyzing the root causes of, and developing Corrective Action Plans for selected forced outages, forced derates, and startup failures, and* {C}· *Criteria for determining if a generator forced outage, forced derate, or startup failure is in fact a Generator Cold Weather Reliability Event.* With the addition of a documented process to identify Generator Cold Weather Reliability Events, Requirement R6 could be rewritten to begin: *R6. Each Generator Owner shall, when experiencing a Generator Cold Weather Reliability Event identified pursuant to Requirement R10, develop and implement a Corrective Action Plan(s) to address the identified root causes as follows…* The application of a documented, systematic methodology to select, analyze root causes for, and develop Corrective Action Plans for Generator Cold Weather Reliability Events would lead to more consistent audit outcomes by removing auditor judgment from the evaluation of causal analysis and better reliability outcomes through the completion of properly established Corrective Action Plan(s) based on systematic root cause analysis.

Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to NB Power comments.	
Nikki Carson-Marquis - Nikki Carson-Marquis On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Nikki Carson-Marquis	
Answer	No
Document Name	
Comment	

Minnkota Power Cooperative supports comments made by the MRO NSRF and ACES. Addressing these concerns would change Minnkota's vote to a "Yes" vote.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to those organization's comments.	
Ruchi Shah - AES - AES Corporation - 5	
Answer	No
Document Name	
Comment	
AES US Renewables does not support the language as proposed in part 6.2. For example, we own and operate wind farms in several regions. Although we may utilize similar equipment model across the regions, the weather conditions & the ECWTs faced by each wind farm are different. Therefore, we suggest the following change to the language in part 6.2: The Generator Owner shall conduct a review of the applicability of the corrective actions from the Corrective Action Plan developed under Part 6.1 to freeze protection measures on similar equipment at other generating unit(s) owned by the Generator Owner **that have been identified as having similar vulnerabilities and ECWT** and, if corrective actions are applicable, develop or update an existing Corrective Action Plan no later than 12 calendar months following the Generator Cold Weather Reliability Event to address the other unit(s). We also suggest similar changes to language in part 6.3.5.2. Additionally, we want to note that the FERC Order language in paragraph 68 that directed NERC to modify Requirement R7 of EOP-012-2 to ensure corrective actions are applied to "similar equipment on all of its fleet within 24 months of becoming aware of the freeze issues". Therefore, part 6.3.5.2 should account for the 12 calendar months	

provided to GOs to conduct their part 6.2 review before the 24 calendar months begin, not 24 months after the Generator Cold Weather Reliability Event: For other generating unit(s), owned by the Generator Owner, **which have been identified through a 6.2 review that they have similar vulnerabilities and ECWT to another generating unit, owned by the Generator Owner, that experienced a** Generator Cold Weather Reliability Event **shall complete their corrective action** within 24 calendar months **of the completion of their 6.2 review**.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The Drafting Team and Standards Committee believe the existing language is appropriate for the first of your proposals, but upon review of section 6.3.5.2, further edits have been made to offer additional time.	
Dwanique Spiller - Berkshire Hathaway - NV Energy - 5	
Answer	No
Document Name	
Comment	
NV Energy would recommend the following grammatical modifications: 6.1 The Generator Owner shall develop a Corrective Action Plan for the generating unit that has experienced experiencing a Generator Cold Weather Reliability Event. 6.3.5.1. For the generating unit that has experienced experiencing the Generator Cold Weather Reliability Event, prior to the first day of the first December following the Generator Cold Weather Reliability Event.	

Addititionally, NV Energy would recommend that the following modifications be made to 6.3.5.2 to account for the time it may take entities to perform the assessments necessary to determine if additional units have similar vulnerabilities. 6.3.5.2. For other generating unit(s) owned by the Generator Owner, within 24 calendar months of completion of the review required in section 6.2. The intent is so that after you conduct a review of all equipment to determine if similar vulnerabilities exist (within 12 months of the initial GCWRE as per 6.2), you will then have 24 months to address the similar vulnerabilities across the fleet.	
Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comments. The Drafting Team and Standards Committee reviewed and edited these sections in a manner similar to your suggestions.	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	No
Document Name	
Comment	
MRO NSRF would recommend the following grammatical modifications: **6.1** The Generator Owner shall develop a Corrective Action Plan for the generating unit that **has experienced** a Generator Cold Weather Reliability Event. **6.3.5.1.** For the generating unit that **has experienced** the Generator Cold Weather Reliability Event, prior to the first day of the first December following the Generator Cold Weather Reliability Event.	

Addititionally, MRO NSRF would recommend that the following modifications be made to 6.3.5.2 to account for the time it may take entities to perform the assessments necessary to determine if additional units have similar vulnerabilities. **6.3.5.2.** For other generating unit(s) owned by the Generator Owner, within 24 calendar months of completion of the review required in section 6.2. The intent is so that after you conduct a review of all equipment to determine if similar vulnerabilities exist (within 12 months of the initial GCWRE as per 6.2), you will then have 24 months to address the similar vulnerabilities across the fleet.	
Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comments. The Drafting Team and Standards Committee reviewed and edited these sections in a manner similar to your suggestions.	
Joseph Amato - Berkshire Hathaway Energy - MidAmerican Energy Co. - 3	
Answer	No
Document Name	
Comment	
MEC supports EEI and MRO NSRF comments. MEC would cast an affirmative ballot if NAGF comments for Q1, and EEI comments for Questions 2 and 3 are adopted by the SDT.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to those organization’s comments.	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	No

Document Name	
Comment	
Minnesota Power feels that section 6.1 needs to be clarified to include a required timeline for the CAP.	
Likes 0	
Dislikes 0	
Response	
Thank you for the comment. The Drafting Team and Standards Committee have included a requirement for development of the CAP that aligns with the completion date for compliance clarity.	
Richard Vendetti - NextEra Energy - 5	
Answer	No
Document Name	
Comment	
NextEra supports the comments provided from EEI below: As stated in our previous comments, we do not support the language contained in subpart 6.3.5.2, which we believe does not align with requirements associated with subpart 6.2, or paragraph 68 of the June FERC Order that directed NERC to modify Requirement R7 of EOP-012-2 to ensure corrective actions are applied to "similar equipment on all of its fleet within 24 months of **becoming aware of the freeze issues** (*emphasis added*)". We note that the Commission rightly suggested that corrective actions should be completed on other generating units that utilize similar equipment associated with a Generator Cold Weather Reliability Event within 24 months **after becoming aware** of the use of similar equipment on other generating units within their fleet. We further note that GOs are afforded 12 months to assess and determine which of their other generators have similar equipment that share similar risks. Therefore, subpart 6.3.5.2 should account for the 12 months provided to GOs to conduct their 6.2 review before the 24 months begin, not 24 months after the Generator Cold Weather Reliability Event. To address this concern, we offer the following edits in boldface below:	

6.5.5.2. For other generating unit(s), owned by **the a** Generator Owner, **which have been identified through a 6.2 review that they have similar vulnerabilities to another generating unit, owned by the Generator Owner, that experienced a** Generator Cold Weather Reliability Event **shall complete their corrective action** within 24 **of the completion of their 6.2 review**.

Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to the EEI comments.	
Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1	
Answer	No
Document Name	
Comment	
AEPC signed on to ACES comments. Please see ACES comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to the ACES comments.	
Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group	
Answer	No
Document Name	
Comment	

WEC Energy Group supports the comments of the MRO NSRF.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to MRO NSRF comments.	
Rachel Schuldt - Black Hills Corporation - 6, Group Name Black Hills Corporation - All Segments	
Answer	No
Document Name	
Comment	
Black Hills Corporation agrees with the NAGF in that as written the Corrective Action Plan (CAP) must be developed while the generator unit is offline/derated and experiencing the GCWRE. As suggested, could be re-written to say “after experiencing a Generator Cold Weather Reliability Event”. Footnote 10 also need to be clarified. Black Hills Corporation continues to support EEI’s comments that subpart 6.3.5.2. does not align with requirements associated with 6.2. or paragraph 68 of the June FERC Order.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to those organization’s comments.	
Andrew Smith - APS - Arizona Public Service Co. - 5	
Answer	No
Document Name	
Comment	

AZPS agrees with comments submitted by EEI on behalf of its members that the 24 calendar month timeline for completion of corrective actions should begin upon completion of the 6.2 review of similar equipment.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to the EEI comments.	
Donna Wood - Tri-State G and T Association, Inc. - 1	
Answer	No
Document Name	
Comment	
Tri-State Supports the MRO NSRF Comments	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to MRO NSRF comments.	
Bob Cardle - Bob Cardle On Behalf of: Tyler Brun, Pacific Gas and Electric Company, 3, 1, 5; - Bob Cardle	
Answer	No
Document Name	
Comment	
PGAE supports the NAGF position regarding updating the drafted language for the CAP to be developed after experiencing the event.	
Likes 0	

Dislikes 0	
Response	
Thank you for your comments. Please see response to NAGF comments.	
Becky Burden - Public Utility District No. 1 of Snohomish County - 5	
Answer	No
Document Name	
Comment	
6.3.5.1 timetable scheme seems arbitrary, requesting simplification to be a time frame alone.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments.	
David Vickers - David Vickers On Behalf of: Daniel Roethemeyer, Vistra Energy, 5; - David Vickers	
Answer	No
Document Name	
Comment	
Vistra agrees with comments made on behalf of EEI.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to the EEI comments.	
Jeremy Lawson - Northern California Power Agency - 3,4,5,6	

Answer	No
Document Name	
Comment	
See Marty Hostler comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to Marty Hostler comments.	
Jeffrey Streifling - NB Power Corporation - 1	
Answer	No
Document Name	
Comment	

Requirement R6 assumes that Generator Cold Weather Reliability Events are identified based on their definition, but there is a weakness in the definition of Generator Cold Weather Reliability Event that may make it unsuitable for auditing in its present form. The issue stems from the fact that a Generator Cold Weather Reliability Event is defined in terms of "apparent cause":

Generator Cold Weather Reliability Event *– One of the following events for which the apparent cause(s) is due to freezing of equipment or impacts of freezing precipitation (e.g., sleet, snow, ice, and freezing rain) on equipment within the Generator Owner's control, and the dry bulb temperature at the time of the event was at or above the Extreme Cold Weather Temperature:*

(1) a forced derate of more than 10% of the total capacity of the unit, but not less than 20 MWs for longer than four hours in duration;

(2) a start-up failure where the unit fails to synchronize within a specified start-up time; or

(3) a Forced Outage

Thus, the definition of Generator Cold Weather Reliability Events is based on apparent causes(s) and Apparent Cause Analysis (ACA).

Referring to *Cause Analysis Methods for NERC, Regional Entities, and Registered Entities – September 2011*, Section 3.4, *Apparent Cause Analysis (quoting Revision 2, dated September 20, 2011, in the version history table)*:

An apparent cause is defined as a determination based on the evaluator's judgment and experience, and where reasonable effort is made to determine WHY the problem occurred. ACA seeks to determine why the problem occurred based on reasonable effort and the investigator's judgment and experience (the investigator is often a subject matter expert.) The emphasis of an ACA is primarily to correct a particular event or problem without a special effort to identify the underlying system or process problems that may have contributed to the problem. Performing an ACA should not prevent the identification and correction of these underlying contributors if they can be discovered and addressed easily. Several tools can be used to accomplish an ACA. One of the simplest and most effective tools is the "why staircase."

NOTE: ACA is not industry standard for system disturbances or major events and is not referenced in the Department of Energy (DOE) Guidelines for Root Cause Analysis. A proper corrective action plan cannot be determined based on apparent causes. To establish proper corrective action plans to prevent reoccurrence, the root causes of the event must be determined. By only looking at apparent causes, the underlying root cause may be overlooked allowing a reoccurrence of the deficiency leading to the event.

Thus, according to NERC's guidelines, an apparent cause is based on the evaluator's judgment and experience and is not suitable for the determination of a proper corrective action plans. Quoting NERC's guidance, "to establish proper corrective action plans to prevent reoccurrence, the root causes of the event must be determined. By only looking at apparent causes, the underlying root cause may be overlooked, allowing a reoccurrence of the deficiency leading to the event."

In order to determine proper corrective action plans, a proper root cause analysis must be completed; however, undertaking proper root cause analysis requires time, planning, and resources. Moreover, northern and Canadian entities operate in sub-freezing temperatures for substantial parts of each year. Many generator outages, derates, and startup failures occur in sub-freezing temperatures for reasons completely unrelated to "freezing of equipment" or "freezing precipitation." To require that all outages, derates, and startup failures must be investigated to a level to convince an auditor that there is no possible link to freezing weather outside, and thus is not a Generator Cold Weather Reliability Event would impose a disproportionate burden on northern and Canadian entities, many of which have extensive experience operating reliability in sub-freezing temperatures. Exposing northern and Canadian entities to an audit in which their identification of "apparent causes" based on "judgement and experience" is called into question after the fact by an auditor who may not have the background or contextual information about the equipment and may not have had extensive experience with regional weather patterns is likely to lead to inconsistent audit outcomes and disproportionate compliance burden that will do little or nothing to improve system reliability.

The process of selecting generator outages, derates, and startup failures for investigations that would be worthwhile to investigate for possible identification as Generator Cold Weather Reliability Events will necessarily be different from region to region due to regional variations in weather and climate, generating station design, operating experience, and even language (e.g., what Americans call 'sleet' is referred to as 'ice pellets' in Canada). Thus, it is suggested to split the implicit requirement to investigate generator forced outages and derates and startup failures out of Requirement R6 and write a new requirement (here styled R10), something like:

R10. Each Generator Owner of generating units with Extreme Cold Weather Temperatures at or below 32°F/0°C and that self-commit or are required to operate at or below 32°F/0°C shall implement a documented process to identify, investigate, and analyze root causes for the subset of generator forced outages, forced derates, and startup failures that is likely to lead to the identification of Generator Cold Weather Reliability Events. Such a process shall include:

- *Criteria for selecting candidate generator forced outages, forced derates, and startup failures to be investigated,*
- *A requirement that at least one [or some minimum number] forced outage, forced derate, or startup failure occurring at temperatures at or below 32°F/0°C minimum number be selected for investigation each year unless no such events occur,*
- *A systematic methodology for investigating, analyzing the root causes of, and developing Corrective Action Plans for selected forced outages, forced derates, and startup failures, and*
- *Criteria for determining if a generator forced outage, forced derate, or startup failure is in fact a Generator Cold Weather Reliability Event.*

With the addition of a documented process to identify Generator Cold Weather Reliability Events, Requirement R6 could be rewritten to begin:

R6. Each Generator Owner shall, when experiencing a Generator Cold Weather Reliability Event identified pursuant to Requirement R10, develop and implement a Corrective Action Plan(s) to address the identified root causes as follows…

The application of a documented, systematic methodology to select, analyze root causes for, and develop Corrective Action Plans for Generator Cold Weather Reliability Events would lead to more consistent audit outcomes by removing auditor judgment from the evaluation of causal analysis and better reliability outcomes through the completion of properly established Corrective Action Plan(s) based on systematic root cause analysis.

Likes 0	
Dislikes 0	
Response	

Thank you for your constructive comments. Project 2021-07 DT utilized "apparent" in the definition as it exists today. An example of comments from Project 2021-07 includes "*Additionally, the SDT is using the definition of apparent as defined in the dictionary as "clear or manifest to the understanding*". A unit suffering a Generator Cold Weather Reliability Event will do an analysis of the event and act accordingly including actions associated with an apparent cause.	
Erin Wilson - NB Power Corporation - New Brunswick Power Transmission Corporation - 5	
Answer	No
Document Name	
Comment	

Requirement R6 assumes that Generator Cold Weather Reliability Events are identified based on their definition, but there is a weakness in the definition of Generator Cold Weather Reliability Event that may make it unsuitable for auditing in its present form. The issue stems from the fact that a Generator Cold Weather Reliability Event is defined in terms of "apparent cause":

Generator Cold Weather Reliability Event – One of the following events for which the apparent cause(s) is due to freezing of equipment or impacts of freezing precipitation (e.g., sleet, snow, ice, and freezing rain) on equipment within the Generator Owner's control, and the dry bulb temperature at the time of the event was at or above the Extreme Cold Weather Temperature:

(1) a forced derate of more than 10% of the total capacity of the unit, but not less than 20 MWs for longer than four hours in duration;

(2) a start-up failure where the unit fails to synchronize within a specified start-up time; or

(3) a Forced Outage

Thus, the definition of Generator Cold Weather Reliability Events is based on apparent causes(s) and Apparent Cause Analysis (ACA).

Referring to *Cause Analysis Methods for NERC, Regional Entities, and Registered Entities – September 2011*, Section 3.4, *Apparent Cause Analysis (quoting Revision 2, dated September 20, 2011, in the version history table)*:

An apparent cause is defined as a determination based on the evaluator's judgment and experience, and where reasonable effort is made to determine WHY the problem occurred. ACA seeks to determine why the problem occurred based on reasonable effort and the investigator's judgment and experience (the investigator is often a subject matter expert.) The emphasis of an ACA is primarily to correct a particular event or problem without a special effort to identify the underlying system or process problems that may have contributed to the problem. Performing an ACA should not prevent the identification and correction of these underlying contributors if they can be discovered and addressed easily. Several tools can be used to accomplish an ACA. One of the simplest and most effective tools is the "why staircase."

NOTE: ACA is not industry standard for system disturbances or major events and is not referenced in the Department of Energy (DOE) Guidelines for Root Cause Analysis. A proper corrective action plan cannot be determined based on apparent causes. To establish proper corrective action plans to prevent reoccurrence, the root causes of the event must be determined. By only looking at apparent causes, the underlying root cause may be overlooked allowing a reoccurrence of the deficiency leading to the event.

Thus, according to NERC's guidelines, an apparent cause is based on the evaluator's judgment and experience and is not suitable for the determination of a proper corrective action plans. Quoting NERC's guidance, "to establish proper corrective action plans to prevent reoccurrence, the root causes of the event must be determined. By only looking at apparent causes, the underlying root cause may be overlooked, allowing a reoccurrence of the deficiency leading to the event."

In order to determine proper corrective action plans, a proper root cause analysis must be completed; however, undertaking proper root cause analysis requires time, planning, and resources. Moreover, northern and Canadian entities operate in sub-freezing temperatures for substantial parts of each year. Many generator outages, derates, and startup failures occur in sub-freezing temperatures for reasons completely unrelated to "freezing of equipment" or "freezing precipitation." To require that all outages, derates, and startup failures must be investigated to a level to convince an auditor that there is no possible link to freezing weather outside, and thus is not a Generator Cold Weather Reliability Event would impose a disproportionate burden on northern and Canadian entities, many of which have extensive experience operating reliability in sub-freezing temperatures. Exposing northern and Canadian entities to an audit in which their identification of "apparent causes" based on "judgement and experience" is called into question after the fact by an auditor who may not have the background or contextual information about the equipment and may not have had extensive experience with

regional weather patterns is likely to lead to inconsistent audit outcomes and disproportionate compliance burden that will do little or nothing to improve system reliability.

The process of selecting generator outages, derates, and startup failures for investigations that would be worthwhile to investigate for possible identification as Generator Cold Weather Reliability Events will necessarily be different from region to region due to regional variations in weather and climate, generating station design, operating experience, and even language (e.g., what Americans call 'sleet' is referred to as 'ice pellets' in Canada). Thus, it is suggested to split the implicit requirement to investigate generator forced outages and derates and startup failures out of Requirement R6 and write a new requirement (here styled R10), something like:

R10. Each Generator Owner of generating units with Extreme Cold Weather Temperatures at or below 32°F/0°C and that self-commit or are required to operate at or below 32°F/0°C shall implement a documented process to identify, investigate, and analyze root causes for the subset of generator forced outages, forced derates, and startup failures that is likely to lead to the identification of Generator Cold Weather Reliability Events. Such a process shall include:

{C}· *Criteria for selecting candidate generator forced outages, forced derates, and startup failures to be investigated,*

{C}· *A requirement that at least one [or some minimum number] forced outage, forced derate, or startup failure occurring at temperatures at or below 32°F/0°C minimum number be selected for investigation each year unless no such events occur,*

{C}· *A systematic methodology for investigating, analyzing the root causes of, and developing Corrective Action Plans for selected forced outages, forced derates, and startup failures, and*

{C}· *Criteria for determining if a generator forced outage, forced derate, or startup failure is in fact a Generator Cold Weather Reliability Event.*

With the addition of a documented process to identify Generator Cold Weather Reliability Events, Requirement R6 could be rewritten to begin:

R6. Each Generator Owner shall, when experiencing a Generator Cold Weather Reliability Event identified pursuant to Requirement R10, develop and implement a Corrective Action Plan(s) to address the identified root causes as follows… The application of a documented, systematic methodology to select, analyze root causes for, and develop Corrective Action Plans for Generator Cold Weather Reliability Events would lead to more consistent audit outcomes by removing auditor judgment from the evaluation of causal analysis and better reliability outcomes through the completion of properly established Corrective Action Plan(s) based on systematic root cause analysis.

Likes 1	Berkshire Hathaway Energy - MidAmerican Energy Co., 3, Amato Joseph
Dislikes 0	

Response
Thank you for your constructive comments. Project 2021-07 DT utilized “apparent” in the definition as it exists today. An example of comments from Project 2021-07 includes “Additionally, the SDT is using the definition of apparent as defined in the dictionary as “clear or manifest to the understanding”. A unit suffering a Generator Cold Weather Reliability Event will do an analysis of the event and act accordingly including actions associated with an apparent cause.

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	No
Document Name	

Comment
As stated in our previous comments, we do not support the language contained in subpart 6.3.5.2, which we believe does not align with requirements associated with subpart 6.2, or paragraph 68 of the June FERC Order that directed NERC to modify Requirement R7 of EOP-012-2 to ensure corrective actions are applied to “similar equipment on all of its fleet within 24 months of **becoming aware of the freeze issues** (*emphasis added*)”. We note that the Commission rightly suggested that corrective actions should be completed on other generating units that utilize similar equipment associated with a Generator Cold Weather Reliability Event within 24 months **after becoming aware** of the use of similar equipment on other generating units within their fleet. We further note that GOs are afforded 12 months to assess and determine which of their other generators have similar equipment that share similar risks. Therefore, subpart

6.3.5.2 should account for the 12 months provided to GOs to conduct their 6.2 review before the 24 months begin, not 24 months after the Generator Cold Weather Reliability Event. To address this concern, we offer the following edits in boldface below: **6.5.5.2.** For other generating unit(s), owned by **a** Generator Owner, **which have been identified through a 6.2 review that they have similar vulnerabilities to another generating unit, owned by the Generator Owner, that experienced a** Generator Cold Weather Reliability Event **shall complete their corrective action** within 24 **of the completion of their 6.2 review**.	
Likes 1	Berkshire Hathaway Energy - MidAmerican Energy Co., 3, Amato Joseph
Dislikes 0	
Response	
Thank you for your comments. The Drafting Team and Standards Committee reviewed the language and have made edits that provide additional time in a manner similar to your proposal.	
Mason Jones - Mason Jones On Behalf of: Michael Whitney, Northern California Power Agency, 4, 6, 3, 5; - Mason Jones	
Answer	No
Document Name	
Comment	
This, also creates an unfair competitive advantage. Forcing some entities pay for the development of correction action plans requiring them to make modifications to operate at a temperature they were designed, built, or financed to operate at. This shows no regard to affordability, competitiveness, or ensured cost recovery for providing a higher level of reliability above and beyond what other generators are required to provide.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The Drafting Team and Standards Committee reviewed and edited language to respond to direction from FERC.	
Michael Whitney - Northern California Power Agency - 3, Group Name NCPA	

Answer	No
Document Name	
Comment	
See Marty Hostler comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to Marty Hostler comments.	
Marty Hostler - Northern California Power Agency - 4	
Answer	No
Document Name	
Comment	
NO. This, also creates an unfair competitive advantage. Forcing some entities pay for the development of correction action plans that require them to make modifications to operate at temperatures they were not designed, built, or financed to operate at creates an unfair competitive disadvantage for some and advantage for others. This shows no regard to affordability, competitiveness, or ensured cost recovery for providing a higher level of reliability above and beyond what other generators are required to provide.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The Drafting Team and Standards Committee reviewed and edited language to respond to direction from FERC.	
Patricia Lynch - NRG - NRG Energy, Inc. - 5	
Answer	No

Document Name	
Comment	
While the proposed language does respond to the FERC Order Paragraph 8, the forced use of the CAP Extension Process to address those larger or complicated CAP implementations that may require more than 12 months seems to add excessive administration efforts for entities. Lead times for materials or parts can exceed 18 months, language to allow CAP actions affected by long lead times to exceed past the "first day of the first December" would allow entities to focus more on implementation of the CAPs rather than administering extension of CAPs. Providing requirement language that has specific "large and complex" considerations could allow entities needed flexibility to develop accurate CAPs initially and not be forced into the extension process. The FERC Order Paragraph 68 does seem to indicate allowance for up to 48 months on CAP(s) if such conditions exist and the CAP takes a staged approach.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The Drafting Team and Standards Committee reviewed the language and have made edits that provide additional time.	
Martin Sidor - NRG - NRG Energy, Inc. - 6	
Answer	No
Document Name	
Comment	
While the proposed language does respond to the FERC Order Paragraph 8, the forced use of the CAP Extension Process to address those larger or complicated CAP implementations that may require more than 12 months seems to add excessive administration efforts for entities. Lead times for materials or parts can exceed 18 months, language to allow CAP actions affected by long lead times to exceed past the "first day of the first December" would allow entities to focus more on implementation of the CAPs rather than administering extension of CAPs. Providing requirement language that has specific "large and complex" considerations could allow entities needed flexibility to develop accurate CAPs initially and not be forced into the extension process. The FERC Order Paragraph 68 does seem to indicate allowance for up to 48 months on CAP(s) if such conditions exist and the CAP takes a staged approach.	

Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The Drafting Team and Standards Committee reviewed the language and have made edits that provide additional time.	
Donald Lock - Talen Generation, LLC - 5	
Answer	No
Document Name	
Comment	
Talen supports the comments of the NAGF on this issue, and adds that the, “first day of the first December following the Generator Cold Weather Reliability Event,” deadline in R6.3.5.1 is unrealistic for completing an analysis, identifying a root cause, weighing corrective action alternatives, preparing a specification, collecting competing bids, awarding a contract, designing equipment, procuring materials and installing retrofits (without interfering with the summer peak season). The time frame allowed should be two years, the same as in R6.3.5.2. also, change the 45 days deadline in the 2nd bullet point of R8.1 to 90 days.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to NAGF comments. The Drafting Team and Standards Committee reviewed language and believe it is responsive to the FERC Order.	
Julie Hall - Entergy - 6, Group Name Entergy	
Answer	No
Document Name	
Comment	

Req 6.2 allows 12 months for the development of a CAP plan. If CAP plan development actually takes 12 months, the entity would only have the remaining 12 months if the 24 calendar months from the Generator Cold Weather reliability event to implement the CAP plan across the rest of the fleet. This could prove problematic based on the nature of the event and remediation required. Does NERC anticipate that the Generator Cold Weather Constraint process will address this concern?

Likes 0	
Dislikes 0	

Response
Thank you for your comments. The Drafting Team and Standards Committee reviewed the language and have made edits that provide additional time.

Richard Jackson - U.S. Bureau of Reclamation - 1	
Answer	No
Document Name	

Comment
Reclamation does not agree. Shortening time frames to 24 months does not alleviate the burden of lack of material, contracting resources, outages or other schedulable items.

Likes 0	
Dislikes 0	

Response
Thank you for your comments.

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	
Answer	No
Document Name	

Comment

The time required of the December 1st date is too restrictive for most mod projects. Duke Energy does not support the language used in requirement R6.3.5.1 which requires the resolution of all winter event corrective actions by December 1st of the following year. This interval is too restrictive to allow for evaluation and correction on many freeze protection repairs or for the installation of new freeze protection measures. The inadequacies of this time interval are compounded when the effects of a major winter storm are considered. Large storms, like Elliott or a Polar Vortex, impact multiple units across multiple utilities. It would be difficult for a GO to address multiple events in this timeframe with available vendor support, and competing vendor availability with other utilities will only exacerbate this situation. Maintaining R6.3.5.1 as proposed will also result in higher levels of extension approvals for CEAs to process. Duke Energy recommends the requirement be modified to a period of 24 calendar months.

Likes 0	
Dislikes 0	

Response
Thank you for your comments. The Drafting Team and Standards Committee reviewed language and believe it is responsive to the FERC Order.

Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee (SRC)	
Answer	Yes
Document Name	

Comment
The SRC recommends that Requirement R6, Part 6.4 be revised to include a timeline for submitting extension requests (for example, 60 days before the first deadline that would be impacted by the extension request). This would help reduce last-minute extension requests and ensure the CEA has adequate time to review and process extension requests.

Likes 0	
Dislikes 0	

Response
Thank you for your comments. Note the NERC process has timelines for submitting the extension requests. The DT discussed the possibility of timelines within the Standard but agreed with the flexibility provided in the NERC process.

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter	
Answer	Yes
Document Name	
Comment	
FirstEnergy believes compliance with R7 should be reasonably achievable. Please see the additional comments regarding deadline extensions.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments.	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC	
Answer	Yes
Document Name	
Comment	
WECC appreciates the efforts in clarifying this Requirement. The DT should consider adding additional language to clarify the following: If a unit has a Generator Cold Weather Reliability event and creates a CAP then subsequentially declares a Generator Cold Weather Constraint—what happens if another GCWRE occurs for the same cause (e.g., blade icing)? Standard language tends to possibly be interpreted as requiring a new CAP and new declaration. A footnote exists for updating a CAP and the NERC process covers updating Generator Cold Weather Constraints for "other" units. Suggest the following: 8.4 If a validated declared Generator Cold Weather Constraint exists for a generating unit(s), a Generator Owner that experiences a Generator Cold Weather Reliability Event for the generating unit(s) shall review the cause(s) of the Generator Cold Weather Reliability Event. If the cause(s) are the same for the existing validated Generator Cold Weather Constraint, no Corrective Action Plan or subsequent re-declaration of the Generator Cold Weather Constraint is required.	

M8 Language: Each Generator Owner shall have dated evidence that demonstrates it performed the actions in accordance with Requirement R8. Acceptable evidence may include, but is not limited to, the following dated documentation (electronic or hardcopy format): a copy of the Generator Cold Weather Constraint declaration, evidence the declaration was provided to the Compliance Enforcement Authority in accordance with the specified timeframe, records that document update(s) to the operating limitations, as needed, and updated Corrective Action Plan(s), if applicable, and documentation of Generator Cold Weather Reliability Event cause reviews.	
Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comments. The DT and Standards Committee have reviewed and edited language similar to your suggestion.	
Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Mohamad Elhusseini - DTE Energy - Detroit Edison Company - 5, Group Name DTE Energy	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Carver Powers - Utility Services, Inc. - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Foung Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kevin Smith, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Ryder Couch, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Tony Hua - Austin Energy - 1,3,4,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Michael Dillard - Austin Energy - 1,3,4,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Thank you for your support.	
Lovita Griffin - Austin Energy - 1,3,4,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Jessica Cordero - Unisource - Tucson Electric Power Co. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	
Document Name	
Comment	

Texas RE is concerned that there is the potential for confusion regarding when a Corrective Action Plan (CAP) should be developed and implemented. The verbiage of Requirement R6 could potentially be read to imply that a CAP must be developed concurrently with a "Generator Cold Weather Reliability Event" (as indicated by the language "when experiencing a Generator Cold Weather Reliability Event"). Texas RE recommends clarifying that CAP development and implementation can occur *following* the Generator Cold Weather Reliability Event. The proposed measures are clear that CAPs should be developed **following** a Generator Cold Weather Event. Texas RE recommends similar language be included in the requirement language itself to avoid any possible confusion.	
Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comments. The DT addressed the tense in Requirement R6.	
Darcy O'Connell - California ISO - 2	
Answer	
Document Name	
Comment	
CAISO agrees with comments submitted by the ISO/RTO Counsel (IRC) Standards Review Committee	
Likes 0	
Dislikes 0	
Response	
Please see responses to IRC comments.	

3. In paragraph 72 of the June 2024 Order, FERC directed NERC to develop and submit modifications to Requirement R7 of Reliability Standard EOP-012-2 to clarify that any Requirement R7 corrective action plans for new generation (i.e. commercially operational after October 1, 2027) must be completed prior to the generating unit's commercial operation date.

The drafting team provided updated language in Requirement R2 to address the issue of units in different stages of design and construction to support meeting this directive. June 29, 2023 was chosen as a date of demarcation, as that was the date the Extreme Cold Weather Temperature was settled upon, after the approval date of February 16, 2023. Do you agree that the industry driven edits to Requirement R2 are responsive to the FERC directives? If you do not agree, please provide your language change suggestions for the drafting team.

Donald Lock - Talen Generation, LLC - 5	
Answer	No
Document Name	
Comment	
Talen supports the comments of the NAGF on this issue.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to NAGF comments.	
Marty Hostler - Northern California Power Agency - 4	

Answer	No
Document Name	
Comment	
N/A	
Likes 0	
Dislikes 0	
Response	
N/A	
Michael Whitney - Northern California Power Agency - 3, Group Name NCPA	
Answer	No
Document Name	
Comment	
See Marty Hostler comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. We were not able to identify comments from Marty Holster for Question 3.	
Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	No
Document Name	
Comment	

EEI does not agree with aligning GO compliance for Requirement R2 to the June 29, 2023 date. While we do not dispute that "June 29, 2023, may have been chosen as a date of demarcation" for the settlement of the definition Extreme Cold Weather Temperature, what matters is when the compliance obligations within Requirement R2 became enforceable. EEI notes that EOP-012-2 Enforcement date of EOP-012-2 is June 27, 2024, therefore this should be the date when GOs are held accountable for the R2 Requirement. To hold GOs accountable to requirements prior to the Enforcement Date of a Reliability Standard is unjustified and should be changed.	
Likes 1	Berkshire Hathaway Energy - MidAmerican Energy Co., 3, Amato Joseph
Dislikes 0	
Response	
Thank you for your comments. October 1, 2024 was the effective date of EOP-012-2. GOs, and any other entity, are accountable to the Requirements upon the effective date approved by FERC. There are always efforts done before an effective date and decisions made to ensure an entity is in compliance upon the effective date. By June 29, 2023, the obligations and responsibilities included in EOP-012 were known to GOs and efforts to ensure compliance should have begun to be addressed. Requirement R2 is designed for units that were in developmental stages when these obligations could have and should have been known. Establishing a contractually committed to design criteria date simply offers those potential projects that were further along in their development process to utilize a CAP to get them through their first winter of operation. This approach was considered reasonable to the drafting team and the Standards Committee.	
Jeffrey Streifling - NB Power Corporation – 1	
Answer	No
Document Name	
Comment	
Suggest expanding on footnote 4 and 6 in the Standard explaining the rationale for the June 29, 2023, date (and/or a reference/link to the FERC Order approving the ECWT definition).	
Likes 0	
Dislikes 0	
Response	

Thank you for your comments. The drafting team has reviewed the comments and discussed against the SAR work scopes as well as the FERC Directives. The drafting team and/or Standards Committee made some modifications where appropriate.	
Jeremy Lawson - Northern California Power Agency - 3,4,5,6	
Answer	No
Document Name	
Comment	
See Marty Hostler comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. We were not able to identify comments from Marty Holster for Question 3.	
David Vickers - David Vickers On Behalf of: Daniel Roethemeyer, Vistra Energy, 5; - David Vickers	
Answer	No
Document Name	
Comment	
Vistra agrees with comments made on behalf of EEI.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Bob Cardle - Bob Cardle On Behalf of: Tyler Brun, Pacific Gas and Electric Company, 3, 1, 5; - Bob Cardle	
Answer	No

Document Name	
Comment	
PGAE supports the NAGF position regarding suggested revisions to Attachment 1 Known Constraints timeline.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to NAGF comments.	
Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro	
Answer	No
Document Name	
Comment	
Requirement R2 specifies an April 1, 2028 date to complete CAPs for generating units that begin commercial operation on or after October 1, 2027 and which committed to design criteria before the date of the ECWT definition was approved be FERC or other applicable government authority in non-US jurisdictions. The Technical Rationale clarifies that the April 1, 2028 was selected based on the EOP-012-1 adoption timelines in the US, and that a footnote has been added to allow for date adjustments needed for Canadian entities. The posted EOP-012-3 Draft 2 does not appear to include such a footnote. BC Hydro asks that at a minimum, a footnote be added to this effect. Similar to comments submitted on the previous draft, BC Hydro recommends that instead of referencing specific dates in the body of a Requirement, appropriate wording clarifying the compliance enforcement date's determination, such as, in case of Footnote 4 as an example, "date on which the definition of Extreme Cold Weather Temperature was approved in the relevant jurisdiction" be used instead. The specific date for US enforcement could be added in a footnote or other associated documentation, such as compliance implementation or CMEP guidance documents. This will help with the process of standard adoption in non-FERC regulated jurisdictions, such as Canada.	
Likes 0	
Dislikes 0	

Response	
Thank you for the constructive comments. During the last webinar a meeting was suggested between Canadian entities and NERC legal to discuss the issues with dates within a Standard. Please watch for further opportunities to discuss these concerns.	
Donna Wood - Tri-State G and T Association, Inc. – 1	
Answer	No
Document Name	
Comment	
Tri-State Supports the MRO NSRF Comments	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to MRO NSRF comments.	
Andrew Smith - APS - Arizona Public Service Co. – 5	
Answer	No
Document Name	
Comment	
AZPS agrees with comments submitted by EEI on behalf of its members that the date of demarcation should be the enforcement date of the Standard and not tied to the date for the ECWT definition.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	

Rachel Schuldt - Black Hills Corporation - 6, Group Name Black Hills Corporation - All Segments	
Answer	No
Document Name	
Comment	
Black Hills Corporation does not agree with the updated language for Requirement R2; we do not support any imposition of any requirement within a NERC Reliability Standard that intends to impose legal obligations retroactively.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. GOs, and any other entity, are accountable to the Requirements upon the effective date approved by FERC. There are always efforts done before an effective date and decisions made to ensure an entity is in compliance upon the effective date. By June 29, 2023, the obligations and responsibilities included in EOP-012 were known to GOs and efforts to ensure compliance should have begun to be addressed. Requirement R2 is designed for units that were in developmental stages when these obligations could have and should have been known. Establishing a contractually committed to design criteria date simply offers those potential projects that were further along in their development process to utilize a CAP to get them through their first winter of operation. This approach was considered reasonable to the drafting team and the Standards Committee..	
Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group	
Answer	No
Document Name	
Comment	
WEC Energy Group supports the comments of the MRO NSRF.	
Likes 0	
Dislikes 0	
Response	

Thank you for your comments. Please see responses to MRO NSRF comments.	
Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1	
Answer	No
Document Name	
Comment	
AEPC signed on to ACES comments. Please see ACES comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to ACES comments.	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	No
Document Name	
Comment	
Minnesota Power believes that the R2.2 contractually committed to design criteria date should be the effective date of the standard (October 1, 2024).	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment.	
Joseph Amato - Berkshire Hathaway Energy - MidAmerican Energy Co. - 3	

Answer	No
Document Name	
Comment	
MEC supports EEI and MRO NSRF comments. MEC would cast an affirmative ballot if NAGF comments for Q1, and EEI comments for Questions 2 and 3 are adopted by the SDT.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to those organization's comments.	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	No
Document Name	
Comment	
MRO NSRF believes that this should be the date that a standard became effective which brought the term ECWT became part of a Reliability Standard that is Subject to Enforcement, which occurred when EOP-012-2 became effective on 10/1/2024 for US Entities.	
Likes 0	
Dislikes 0	
Response	
Thank you for the constructive comment.	
Dwanique Spiller - Berkshire Hathaway - NV Energy - 5	
Answer	No
Document Name	

Comment	
NV Energy believes that this should be the date that a standard became effective which brought the term ECWT became part of a Reliability Standard that is Subject to Enforcement, which occurred when EOP-012-2 became effective on 10/1/2024 for US Entities.	
Likes 0	
Dislikes 0	
Response	
Thank you for the constructive comment.	
Ruchi Shah - AES - AES Corporation - 5	
Answer	No
Document Name	
Comment	
While AES US Renewables appreciates the intent of the February 16, 2023 date, we do not agree that compliance date should be aligned to a glossary term, rather it should be aligned to the implementation plan of EOP-012-1 as that is usually what registered entities are held accountable to. In the case of EOP-012-1's implementation plan, the effective date is supposed to be 10/1/2024. Therefore, we request that the drafting team revise the June 29, 2023 date to October 1, 2024.	
Likes 0	
Dislikes 0	
Response	
Thank you for the constructive comment.	
Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples	
Answer	No
Document Name	

Comment	
Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF) on question 3	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to those organization's comments.	
Robert Follini - Avista - Avista Corporation - 3	
Answer	No
Document Name	
Comment	
Although the changes made to Requirements R6 and R7 comply with the intent of the FERC Order, there needs to be more detail defining the timelines associated with the CEA reviews and determinations. We further ask that consideration be given to including an appeals process for a denial of a Corrective Action Plan extension. While we understand that NERC is not bound to Requirements contained in Reliability Standards, determinations that represent the denial of a CAP extension may be caused by a misunderstanding or missing information that can be resolved through an appeals process. Avista additionally questions the value of Footnotes 11 and 12, which state that extension requests will be evaluated in accordance with NERC processes and extension requests for non US-Registered entities should be implemented in a manner consistent with the responsible government authority. Given NERC or applicable governmental authorities or agencies in non-US jurisdiction are not subject to Requirements within NERC Reliability Standards, these footnotes have no utility and should be removed.	
Likes 0	

Dislikes 0	
Response	
Thank you for your comments. The drafting team has reviewed the comments and discussed against the SAR work scopes as well as the FERC Directives. The drafting team made some modifications where appropriate.	
Scott Thompson - PNM Resources - Public Service Company of New Mexico - 1,3,5 - WECC	
Answer	No
Document Name	
Comment	
PNM agrees with comments of EEI	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Daniel Gacek - Exelon - 1, Group Name Exelon	
Answer	No
Document Name	
Comment	
Exelon supports the comments submitted by the EEI	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF	
Answer	No
Document Name	
Comment	
The NAGF does not agree with the updated language for Requirement R2. The proposed NAGF modifications to Attachment 1 identified under Question 1 need to be incorporated into Requirement R2 or Attachment 1 to address the NAGF concerns.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. This question was " **Do you agree that the industry driven edits to Requirement R2 are responsive to the FERC directives?"** The industry driven comments were regarding the demarcation timeline for the definition of ECWT and were not addressing the FERC approved October 1 , 2027 date already in effect. Question 1 NAGF comments were directed at extending timelines for turbine tower usage based on current design temperatures which may limit the placement of generating units or increase the utilization of the Generator Cold Weather Constraints for such locations. NAGF mentioned the OEM approach to "new" designs mentioned at the Technical Conference. The DT provided the answer to Question 1 as follows:" At the Technical Conference for EOP-012, OEMs also shared a "Texas" special inverter that had been designed, manufactured, and shipped in less than three years because of the need for reliable operations." FERC expressed urgency in the June 2024 Order because of the nature of extreme cold weather events and the performance of generating units in extreme cold weather events since 2011(and before). The DT and the SC do not support continued extension of timelines that appear opposed to directives in the FERC Order.	
Selene Willis - Edison International - Southern California Edison Company - 5	
Answer	No
Document Name	
Comment	
See EEI Comments	

Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	No
Document Name	
Comment	
Manitoba Hydro recommends **all** dates specified in R2 include: In non-US jurisdictions, use the effective date for the EOP-012-3 standard, as the applicability criteria for the Generator Owner first contractual commitment to design criteria, thus avoiding retroactively imposing compliance obligations through new or revised requirements.	
Likes 0	
Dislikes 0	
Response	
Thank you for the constructive comments. During the last webinar a meeting was suggested between Canadian entities and NERC legal to discuss the issues with dates within a Standard. Please watch for further opportunities to discuss these concerns.	
Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company	
Answer	No
Document Name	
Comment	
Southern Company agrees with the recommendations by EEI regarding the enforcement date.	
Likes 0	
Dislikes 0	

Response	
Thank you for your comments. Please see responses to EEI comments.	
Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators	
Answer	No
Document Name	
Comment	

It is the opinion of ACES that the current language of Requirement 2.1 is not responsive to paragraph 72 of the FERC directive. This paragraph does not explicitly require a corrective action plan ("CAP"), merely that, if a CAP is needed, "…it should be completed by the time that such generating units go into commercial operation." In our judgment, a provision within Requirement R2 to develop and implement a CAP prior to beginning commercial operations is reasonable, sensible, and in-line with the industry standard CAP process. We contend that by directing that a CAP must be completed prior to beginning commercial operations, FERC has rendered said CAP process both superfluous and moot for Requirement R2.

In brief, if GOs must implement freeze protection measures on a new generating unit(s) prior to beginning commercial operation, why does it matter which process the GO followed to implement said measures? Therefore, ACES recommends removing the date of demarcation entirely and striking any provisions for a CAP from Requirement R2.

However, if the SDT is unwaveringly committed to including a conditional provision for including a CAP process then, in the opinion of ACES, the date of demarcation for contractual commitments is best defined by the effective date of EOP-012-2. It is our perspective that Implementation Plans are a useful and valuable tool that provide the industry with time to interpret and implement any required compliance actions or activities.

Succinctly stated, it is our opinion that the SDT should **not** break from established precedent by tying the compliance date to the governmental authority approval date in lieu of the effective date of the NERC Standard.

To comply with the FERC directive, ACES recommends using language that is substantially similar to EOP-012-2 as demonstrated below:

R2. Applicable to generating units that begin commercial operation on or after October 1, 2027: Each Generator Owner, for each generating unit that has a calculated Extreme Cold Weather Temperature at or below thirty-two (32) degrees Fahrenheit (zero (0) degrees

Celsius) as determined in Requirement R1, and that self-commits or is required to operate at or below a temperature of thirty-two (32) degrees Fahrenheit (zero (0) degrees Celsius), shall: 2.1. Prior to beginning commercial operations, implement freeze protection measures to protect Generator Cold Weather Critical Components that provide the capability to operate at the generating unit(s)' Extreme Cold Weather Temperature with sustained concurrent twenty (20) mph (thirty-two (32) km/h) wind speed for (i) a period of not less than twelve (12) continuous hours, or (ii) the maximum operational duration for intermittent energy resources if less than twelve (12) continuous hours; or 2.2 Document in a declaration, with justification, if applicable, a Generator Cold Weather Constraint in accordance with Requirement R8.	
Likes 0	
Dislikes 0	
Response	
Thank you for the constructive comments. Probably need some help from Lauren Perotti here.	
Nick Leathers - Nick Leathers On Behalf of: David Jendras Sr, Ameren - Ameren Services, 3, 6, 1; - Nick Leathers	
Answer	No
Document Name	
Comment	
Ameren supports EEI's and NAGF's comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to those organization's comments.	
Glen Farmer - Avista - Avista Corporation - 1,3,5	
Answer	No

Document Name	
Comment	
We support EEi's comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Kimberly Turco - Constellation - 6	
Answer	No
Document Name	
Comment	
CEG Supports the NAGF response to this question. Kimberly Turco on behalf of Constellation Segments 5 and 6	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to NAGF comments.	
Lindsay Wickizer - Berkshire Hathaway - PacifiCorp - 6	
Answer	No
Document Name	

Comment	
PacifiCorp supports EEI comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee (SRC)	
Answer	No
Document Name	
Comment	

Request: Revise the second bullet point in Part 2.1 as follows: "Develop, implement, and complete by ***the earlier of*** April 1, 2028, ***or the generating unit's commercial operation date*** a Corrective Action Plan . . . ."

Justification: The SRC believes the updated language in Requirement R2 does not fully respond to FERC's directive. Specifically, FERC's directive in paragraph 72 of the June 2024 Order requires that "any Requirement R2 corrective action plans must be completed prior to the generating unit's commercial operation date." Under Part 2.1 of Requirement R2, a unit is not required to complete its Corrective Action Plan until April 1, 2028, and a unit that enters commercial operations before that date might still have an incomplete Corrective Action Plan, which is not a permissible scenario under FERC's directive. To address this issue, the SRC recommends the following revision to the second bullet point in Part 2.1: "Develop, implement, and complete by ***the earlier of*** April 1, 2028, ***or the generating unit's commercial operation date*** a Corrective Action Plan . . . ."

Footnotes 4 and 6: Additionally, it is not clear which applicable governmental authority approval date footnotes 4 and 6 refer to. The SRC recommends that these footnotes be clarified as follows: " . . . use the date **EOP-012-1 was** approved . . ."

Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comments. The intent of Part 2.1 is to allow commercial operation of new generating units that contractually committed to design criteria by the indicated date during the winter of 2027-2028 as long as they are working on a CAP that will result in full compliance with R2 no later than April 1, 1028. This carefully considered language recognizes the need to balance provisions of the FERC directives with the desire to mitigate narrow winter reserve margins being experienced in many areas.	
Rhonda Jones - Invenergy LLC - 5	
Answer	No
Document Name	
Comment	
The drafting team provided updated language in Requirement R2 to address the issue of units in different stages of design and construction to support meeting this directive. June 29, 2023 was chosen as a date of demarcation, as that was the date the Extreme Cold Weather Temperature was settled upon, after the approval date of February 16, 2023. Do you agree that the industry driven edits to Requirement R2 are responsive to the FERC directives? If you do not agree, please provide your language change suggestions for the drafting team.	
Likes 0	
Dislikes 0	
Response	
N/A	
Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	
Answer	Yes
Document Name	

Comment	
None.	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC	
Answer	Yes
Document Name	
Comment	
WECC appreciates the efforts to provide a smoother path to reliability for units being considered, under construction, and near commercial operation.	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter	
Answer	Yes
Document Name	
Comment	
No additional comments.	

Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Erin Wilson - NB Power Corporation - New Brunswick Power Transmission Corporation - 5	
Answer	Yes
Document Name	
Comment	
Suggest expanding on footnote 4 and 6 in the Standard explaining the rationale for the June 29, 2023, date (and/or a reference/link to the FERC Order approving the ECWT definition).	
Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comment and support. During the last webinar a meeting was suggested between Canadian entities and NERC legal to discuss the issues with dates within a Standard. Please watch for further opportunities to discuss these concerns.	
Carver Powers - Utility Services, Inc. - 4	
Answer	Yes
Document Name	
Comment	
Suggest expanding on footnote 4 and 6 in the Standard explaining the rationale for the June 29, 2023 date (and/or a reference/link to the FERC Order approving the ECWT definition).	
Likes 0	
Dislikes 0	

Response	
Thank you for your constructive comment and support.	
Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC	
Answer	Yes
Document Name	
Comment	
Suggest expanding on footnote 4 and 6 in the Standard explaining the rationale for the June 29, 2023, date (and/or a reference/link to the FERC Order approving the ECWT definition).	
Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comment and support.	
Richard Jackson - U.S. Bureau of Reclamation - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Jessica Cordero - Unisource - Tucson Electric Power Co. - 1	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Julie Hall - Entergy - 6, Group Name Entergy	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Lovita Griffin - Austin Energy - 1,3,4,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Thank you for your support.	
Michael Dillard - Austin Energy - 1,3,4,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Tony Hua - Austin Energy - 1,3,4,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Foung Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kevin Smith, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Ryder Couch, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Martin Sidor - NRG - NRG Energy, Inc. - 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Patricia Lynch - NRG - NRG Energy, Inc. - 5	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Becky Burden - Public Utility District No. 1 of Snohomish County - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Mohamad Elhusseini - DTE Energy - Detroit Edison Company - 5, Group Name DTE Energy	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Thank you for your support.	
Nikki Carson-Marquis - Nikki Carson-Marquis On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Nikki Carson-Marquis	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Colin Chilcoat - Invenergy LLC - 6	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Richard Vendetti - NextEra Energy - 5	
Answer	
Document Name	
Comment	
NextEra supports the comments provided from EEI below: EEI does not agree with aligning GO compliance for Requirement R2 to the June 29, 2023 date. While we do not dispute that "June 29, 2023, may have been chosen as a date of demarcation" for the settlement of the definition Extreme Cold Weather Temperature, what matters is when the compliance obligations within Requirement R2 became enforceable. EEI notes that EOP-012-2 Enforcement date of EOP-012-2 is June 27, 2024, therefore this should be the date when GOs are held accountable for the R2 Requirement. To hold GOs accountable to requirements prior to the Enforcement Date of a Reliability Standard is unjustified and should be changed.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. Please see responses to EEI comments.	
Darcy O'Connell - California ISO - 2	
Answer	

Document Name	
Comment	
CAISO agrees with comments submitted by the ISO/RTO Counsel (IRC) Standards Review Committee	
Likes 0	
Dislikes 0	
Response	
Please see responses to IRC comments.	
Carey Salisbury - Santee Cooper - 5, Group Name Santee Cooper	
Answer	
Document Name	
Comment	
No Comment.	
Likes 0	
Dislikes 0	
Response	
N/A	
Mike Magruder - Avista - Avista Corporation - 1	
Answer	
Document Name	
Comment	
See EEI's comments.	

Likes 0	
Dislikes 0	
Response	
Please see responses to EEI comments.	

4. In paragraph 94 of the June 2024 Order, FERC directs NERC to develop and submit modifications to Requirement R8, Part 8.1 of Reliability Standard EOP-012-2 to implement more frequent reviews of Generator Cold Weather Constraint declarations (than every five years) to verify that the declaration remains valid. **Based on industry feedback, the drafting team created Requirement 9 to require review every 36 calendar months. Do you agree that the revision addresses this directive and provides an effective balance with administrative efforts to ensure Generator Cold Weather Constraints remain valid? If you do not agree, please provide your language change suggestions for the drafting team.**	
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee (SRC)	
Answer	No
Document Name	
Comment	

Constraints determined to be invalid: The SRC recommends that Requirement R9 be revised to specify the Generator Owner would need to implement freeze protection measures or develop a Corrective Action Plan as required by Requirement R7 if a Generator Owner determines that a previously validated Generator Cold Weather Constraint is no longer valid as a result of its periodic review.

As Requirement R9 is currently drafted, it is not clear to the SRC how long a Generator Owner would have to implement new freeze protection measures, develop and implement a Corrective Action Plan under Requirement R7, or take any other actions that may be needed as a result of a constraint no longer being valid.

Knowledge of changed circumstances: Additionally, the SRC recommends that Requirement R9 be revised as follows to require Generator Owners to react to knowledge of changed circumstances outside of the 36-month review cycle, such as any NERC Alerts or other guidance NERC or FERC might issue as part of their oversight of the constraint declaration process and the technological state of freeze protection measures in the industry:

"The Generator Owner shall review each Generator Cold Weather Constraint declaration validated by the CEA at least once every 36 calendar months to determine if it remains valid in accordance with Attachment 1. ***The Generator Owner shall also review each Generator Cold Weather Constraint declaration validated by the CEA upon gaining actual or constructive knowledge of a material change in the circumstances that formed the basis for the Generator Cold Weather Constraint declaration to determine if it remains valid in accordance with Attachment 1.***"

CEA submission: Finally, the SRC recommends that Requirement R9 be revised to require the Generator Owner to submit the results of each constraint review to the CEA. This would provide the CEA additional insight into the overall state and usage of constraints within the industry, and may help the CEA stay informed of the overall pace of changes of freeze protection technology within the industry. It would also help NERC maintain a database of best practices and technological advancements, as recommended in the SRC's response to question 1.

Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The drafting team has reviewed the comments and discussed againt the SAR work scopes as well as the FERC Directives. The drafting team made some modifications where appropriate. The DT altered Requirement R8 and Requirement R9. The industry, and the DT, remain divided on the issue of recognizing and addressing substantive changes in the status of Generator Cold Weather Constraints that are off-cycle from the Requirement R9 language.	
Glen Farmer - Avista - Avista Corporation - 1,3,5	
Answer	No
Document Name	
Comment	
We support EEi's comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	No
Document Name	
Comment	
Reviewing the Generator Cold Weather Constraints declaration more frequently than reviewing the Generating Unit’s Cold Weather Preparedness plan (R1 - 5 calendar years) will not improve BES reliability in Manitoba where we seasonally operate near our ECWT for	

extended periods of time. Our generating units must operate reliably every winter season. Reviewing Generator Cold Weather Constraints every 36 months to see if they remain valid will be an additional administrative burden for utilities operating in Canada.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Note that reviews to cold weather preparedness plans may occur more frequently depending upon the nature causing the review (e.g., Generator Cold Weather Reliability Event).	
Carey Salisbury - Santee Cooper - 5, Group Name Santee Cooper	
Answer	No
Document Name	
Comment	
R9 places the burden on the GO to determine if a constraint remains valid in accordance with Attachment 1. As previously stated in the comments to question 1, Attachment 1 does not provide objective and sufficiently detailed criteria for applicable entities to understand what is required of them. There is no certainty for the GO that the CEA or auditor will agree with subsequent determinations that a constraint remains valid which creates unnecessary compliance risks. Furthermore, if the SDT believes that the GO can make subsequent determinations of the validity of constraints based on the criteria of Attachment 1 then it should not be necessary to require CEA approval of the initial constraint declaration as the criteria would be the same for the initial and subsequent determinations.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The DT contends that Attachment 1 does provide expectations for entities. Please review the FERC Order that mandated NERC actions with regards to Generator Cold Weather Constraints.	
Robert Follini - Avista - Avista Corporation - 3	

Answer	No
Document Name	
Comment	
While Avista appreciates the intent of the February 16, 2023, date, we do not agree that compliance date should be aligned to when a glossary term is approved. We also note that there are other changes within the proposed standard that could impact what an entity includes in the design of their resource beyond the definition of Extreme Cold Weather Temperature, including the proposed definition of Generator Cold Weather Constraint. For this reason, we ask that the date used for Requirement R2, subparts 2.1 and 2.2 for new resources should be the approval of this Standard. NERC Reliability Standards should be forward looking and should not be aligned to compliance measures or dates from previous versions of Reliability Standards or approval dates of Glossary Terms.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The DT considered the urgency that FERC reiterated in the FERC Order that this DT was obligated to facilitate and would suggest that further deferments are not considered actionable at this point.	
David Vickers - David Vickers On Behalf of: Daniel Roethemeyer, Vistra Energy, 5; - David Vickers	
Answer	No
Document Name	
Comment	
Vistra agrees with comments made by Entergy.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to Entergy comments.	

Jeremy Lawson - Northern California Power Agency - 3,4,5,6	
Answer	No
Document Name	
Comment	
See Marty Hostler comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to Marty Hostler comments.	
Michael Whitney - Northern California Power Agency - 3, Group Name NCPA	
Answer	No
Document Name	
Comment	
See Marty Hostler comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to Marty Hostler comments.	
Mason Jones - Mason Jones On Behalf of: Michael Whitney, Northern California Power Agency, 4, 6, 3, 5; - Mason Jones	
Answer	No
Document Name	
Comment	

See response to #2.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to question #2.	
Marty Hostler - Northern California Power Agency - 4	
Answer	No
Document Name	
Comment	
NO. See response to #2.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to question #2. Please review the June 27 FERC Order that the DT was obligated to facilitate.	
Julie Hall - Entergy - 6, Group Name Entergy	
Answer	No
Document Name	
Comment	
For “known” constraints, a longer timeframe, such as 5 years, would be more applicable to reduce administrative burden on the entity.	
Likes 0	

Dislikes 0	
Response	
Thank you for your constructive comments. Bifurcating review based on a designation was not supported by the DT.	
Lindsay Wickizer - Berkshire Hathaway - PacifiCorp - 6	
Answer	Yes
Document Name	
Comment	
PacifiCorp supports EEI comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Kimberly Turco - Constellation - 6	
Answer	Yes
Document Name	
Comment	
CEG Supports the NAGF response to this question. Kimberly Turco on behalf of Constellation Segments 5 and 6	
Likes 0	
Dislikes 0	

Response	
Thank you for your comments. Please see responses to NAGF comments.	
Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators	
Answer	Yes
Document Name	
Comment	
ACES agrees with the approach taken by the SDT to create a new Requirement R9 stipulating periodicity of the reviews. We believe this is the cleanest and most straightforward approach to address paragraph 94 of the FERC directive.	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company	
Answer	Yes
Document Name	
Comment	
Southern Company agrees with EEI and requests the SDT to consider changing the required review period for GCWC declarations in Requirement 9 from 36-calendar months to 3 years.	
Likes 0	
Dislikes 0	
Response	
Thank you for your support and comments. Please see responses to EEI comments.	

Selene Willis - Edison International - Southern California Edison Company - 5	
Answer	Yes
Document Name	
Comment	
See EEI Comments	
Likes 0	
Dislikes 0	
Response	
Thank you for your support and comments. Please see responses to EEI comments.	
Daniel Gacek - Exelon - 1, Group Name Exelon	
Answer	Yes
Document Name	
Comment	
Exelon supports the comments submitted by the EEI	
Likes 0	
Dislikes 0	
Response	
Thank you for your support and comments. Please see responses to EEI comments.	
Scott Thompson - PNM Resources - Public Service Company of New Mexico - 1,3,5 - WECC	
Answer	Yes
Document Name	
Comment	

PNM agrees with comments of EEI	
Likes 0	
Dislikes 0	
Response	
Thank you for your support and comments. Please see responses to EEI comments.	
Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples	
Answer	Yes
Document Name	
Comment	
Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF) on question 4	
Likes 0	
Dislikes 0	
Response	
Thank you for your support and comments. Please see responses to those organization’s comments.	
Mary Smith - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF	
Answer	Yes
Document Name	
Comment	
SIGE supports EEI comments.	

Likes 0	
Dislikes 0	
Response	
Thank you for your support and comments. Please see responses to EEI comments.	
Nikki Carson-Marquis - Nikki Carson-Marquis On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Nikki Carson-Marquis	
Answer	Yes
Document Name	
Comment	
Minnkota Power Cooperative supports comments made by the MRO NSRF.	
Likes 0	
Dislikes 0	
Response	
Thank you for your support and comments. Please see responses to MRO NSRF comments.	
Dwanique Spiller - Berkshire Hathaway - NV Energy - 5	
Answer	Yes
Document Name	
Comment	
NV Energy agrees that the revision addresses this directive and provides an effective balance with administrative efforts, however NV Energy would prefer the use of 3 calendar years instead of 36 calendar months to allow more flexibility in timing the analysis while not substantially impacting the frequency that the analysis occurs.	
Likes 0	
Dislikes 0	

Response	
Thank you for your support and comments. The use of 3 calendar years would extend review by as much as 364 days which does not support the FERC urgency noted within the June Order. The 36 calendar months selected may be more reasonable in garnerning FERC endorsement based on the urgency noted.	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	Yes
Document Name	
Comment	
MRO NSRF agrees that the revision addresses this directive and provides an effective balance with administrative efforts, however MRO NSRF would prefer the use of 3 calendar years instead of 36 calendar months to allow more flexibility in timing the analysis while not substantially impacting the frequency that the analysis occurs.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments and support. The use of 3 calendar years would extend review by as much as 364 days which does not support the FERC urgency noted within the June Order. The 36 calendar months selected may be more reasonable in garnerning FERC endorsement.	
Joseph Amato - Berkshire Hathaway Energy - MidAmerican Energy Co. - 3	
Answer	Yes
Document Name	
Comment	
MEC supports EEI and MRO NSRF comments.	
Likes 0	

Dislikes 0	
Response	
Thank you for your support and comments. Please see responses to those organization's comments.	
Richard Vendetti - NextEra Energy - 5	
Answer	Yes
Document Name	
Comment	
NextEra supports the comments provided from EEI below: EEI does not object to including a requirement to review Generator Cold Weather Constraints every 36 calendar months to address the Commission's concerns as described in paragraph 94, however EEI requests that the Drafting Team consider changing the proposed 36 calendar month review cycle to 3 calendar years in order to allow for more flexibility in timing entity reviews.	
Likes 0	
Dislikes 0	
Response	
Thank you for your support and comments. Please see responses to EEI comments.	
Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1	
Answer	Yes
Document Name	
Comment	
AEPC signed on to ACES comments. Please see ACES comments.	
Likes 0	

Dislikes 0	
Response	
Thank you for your comments and support. Please see responses to ACES comments.	
Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group	
Answer	Yes
Document Name	
Comment	
WEC Energy Group support the comments of the MRO NSRF.	
Likes 0	
Dislikes 0	
Response	
Thank you for your support and comments. Please see responses to MRO NSRF comments.	
Rachel Schuldt - Black Hills Corporation - 6, Group Name Black Hills Corporation - All Segments	
Answer	Yes
Document Name	
Comment	
Black Hills Corporation feels that the review of every 36 calendar months to be fair.	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Andrew Smith - APS - Arizona Public Service Co. - 5	

Answer	Yes
Document Name	
Comment	
AZPS agrees with this approach	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Thomas Foltz - AEP - 5	
Answer	Yes
Document Name	
Comment	
AEP has no objections in requiring review every 36 calendar months.	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	Yes
Document Name	
Comment	

EEI does not object to including a requirement to review Generator Cold Weather Constraints every 36 calendar months to address the Commission's concerns as described in paragraph 94, however EEI requests that the Drafting Team consider changing the proposed 36 calendar month review cycle to 3 calendar years in order to allow for more flexibility in timing entity reviews.	
Likes 1	Berkshire Hathaway Energy - MidAmerican Energy Co., 3, Amato Joseph
Dislikes 0	
Response	
Thank you for your comments. The use of 3 calendar years would extend review by as much as 364 days which does not support the FERC urgency noted within the June Order. The 36 calendar months selected may be more reasonable in garnerning FERC endorsement based on the urgency noted.	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter	
Answer	Yes
Document Name	
Comment	
FirstEnergy does believe compliance to R8 should be achievable, but not preferred. The 5- year review cycle would span the typical generating unit planned outage cycle of 36-48 months, which promotes efficient planning and execution of winterization system/equipment upgrades necessary to eliminate constraints.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments.	
Patricia Lynch - NRG - NRG Energy, Inc. - 5	
Answer	Yes
Document Name	

Comment	
Overall this language works for GOs. NRG has a concern with the period from when an owner submits a Generator Cold Weather Constraint request and when a determination is finally made. Is that considered a "grace period" while awaiting the determination? What happens if the CEA review takes a long time, are there remedies or extensions that can be allowed if a CAP must be developed instead? Would this be part of the CEA's process?	
Likes 0	
Dislikes 0	
Response	
Thank you for your support and comments. The NERC process does have expectations built into it for CEA staff.	
Martin Sidor - NRG - NRG Energy, Inc. - 6	
Answer	Yes
Document Name	
Comment	
Overall this language works for GOs. NRG has a concern with the period from when an owner submits a Generator Cold Weather Constraint request and when a determination is finally made. Is that considered a "grace period" while awaiting the determination? What happens if the CEA review takes a long time, are there remedies or extensions that can be allowed if a CAP must be developed instead? Would this be part of the CEA's process?	
Likes 0	
Dislikes 0	
Response	
Thank you for your support and comments. The NERC process does have expectations built into it for CEA staff.	
Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	
Answer	Yes

Document Name	
Comment	
None.	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Rhonda Jones - Invenergy LLC - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Colin Chilcoat - Invenergy LLC - 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Thank you for your support.	
Nick Leathers - Nick Leathers On Behalf of: David Jendras Sr, Ameren - Ameren Services, 3, 6, 1; - Nick Leathers	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Ruchi Shah - AES - AES Corporation - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Donna Wood - Tri-State G and T Association, Inc. - 1	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Mohamad Elhusseini - DTE Energy - Detroit Edison Company - 5, Group Name DTE Energy	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Bob Cardle - Bob Cardle On Behalf of: Tyler Brun, Pacific Gas and Electric Company, 3, 1, 5; - Bob Cardle	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Thank you for your support.	
Becky Burden - Public Utility District No. 1 of Snohomish County - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Carver Powers - Utility Services, Inc. - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Jeffrey Streifling - NB Power Corporation - 1	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Erin Wilson - NB Power Corporation - New Brunswick Power Transmission Corporation - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Foung Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kevin Smith, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Ryder Couch, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	

Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Tony Hua - Austin Energy - 1,3,4,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Michael Dillard - Austin Energy - 1,3,4,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Thank you for your support.	
Lovita Griffin - Austin Energy - 1,3,4,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Donald Lock - Talen Generation, LLC - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Jessica Cordero - Unisource - Tucson Electric Power Co. - 1	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Richard Jackson - U.S. Bureau of Reclamation - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Mike Magruder - Avista - Avista Corporation - 1	
Answer	
Document Name	
Comment	
See EEI's comments.	
Likes 0	
Dislikes 0	
Response	

Thank you for your comment. Please see responses to EEI comments.	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	
Document Name	
Comment	
Texas RE agrees with the 36-month review of the Generator Cold Weather Constraints. Texas RE recommends, however, that there be an explicit requirement to submit any significant updates to the CEA, since the Constraints are submitted to the CEA initially.	
Likes 0	
Dislikes 0	
Response	
Thank you for the constructive comments.	
Darcy O'Connell - California ISO - 2	
Answer	
Document Name	
Comment	
CAISO agrees with comments submitted by the ISO/RTO Counsel (IRC) Standards Review Committee	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to IRC comments.	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC	
Answer	

Document Name	
Comment	
WECC appreciates the separation of this responsibility into a new Requirement and believes the 36 calendar months is an adequate timeframe for reviews to occur.	
Likes 0	
Dislikes 0	
Response	
Thank you for the constructive comment.	

5. Please provide any additional comments for the standard drafting team to consider, if desired.	
Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	
Answer	
Document Name	
Comment	
None.	
Likes 0	
Dislikes 0	
Response	
Thank you for your support.	
Donald Lock - Talen Generation, LLC - 5	
Answer	
Document Name	
Comment	
Talen supports the comments of the NAGF, and adds: 1. Replace, “and adjustments utilized for missing or invalid hourly temperature data, if necessary,” in R1 and M1 with a footnote stating, “NOAA and ASOS data are deemed adequate as-is, and bad data points may be expunged. An alternative weather station must be used for filling the gap, however, if the one selected for ECWT calculations does not have records going back to 1/1/2000.” The reason for this change is that statistical analysis exists for the purpose of quickly developing an approximate answer that is close enough for all practical purposes, so seeking 100.000% exactness in the ECWT calculation does nothing but divert effort and attention from the important freeze	

prevention work to be done, especially since NERC's 0.2 percentile criterion is simply a benchmark and has no inherent BES reliability significance.

2. Replace, "provide the capability," in R2 with, "are designed to provide the capability." Our #1 freeze prevention problem is heat tracing/insulation systems that are oversold and/or mis-installed, such that they do not protect to the stated design conditions. A system rated for say -10 F and 20 mph may be suitable for -10 F/0 mph, but survival is questionable at -10 F/10 mph, and there's usually no chance of staying online at -10 F/20 mph. Such trips should under EOP-012-3 require that the GO install improved protection (if the trip occurred when above the ECWT), but they should not constitute a NERC violation on the grounds that the GO failed to, "provide the capability."

3. The Known Generator Cold Weather Constraints in Att. 1 are introduced by saying that they are circumstances, but some are activities rather than nouns. "Applying heat upstream of inlet air filters to prevent the buildup of frozen precipitation on combustion turbine inlet air filters," for example should be, "Systems that apply heat upstream of inlet air filters to prevent the buildup of frozen precipitation on combustion turbine inlet air filters." That is, such systems provide a finite degree of protection, and the point at which they can be overwhelmed by unusually severe winter storms is unknown. Trips therefore do not require replacement by larger equipment (which would still be subject to the same uncertainties), nor do GOs incur a GCWRE if reducing load in a snowstorm as a proactive operational measure to maximize their safety margin.

Likes 0	
Dislikes 0	

Response

Thank you for your comments. Please see responses to NAGF comments. Please review the ECWT calculation document updated by the DT. Draft Implementation Guidance is being developed and reviewed by DT members who have sought collaborative support from industry. If a unit fails to perform, it fails whether it was a design or installation failure. The scenario suggested reflects a plant failing the first time it meets the ECWT criteria. The DT is not obligated to opine on compliance and defers related comments to NERC staff. The DT made changes to Attachment 1 based on industry feedback. Please review the definition of Generator Cold Weather Reliability Event.

Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer	
Document Name	

Comment

R1 appears to require entities to find data to address missing data points. The approach should align more with the following NAGF suggestion:

"Using publicly available government data sources (such as NOAA or ASOS), the ECWT calculation is complete if the data source has greater than 90 percent of the expected data points and any gap greater than 168 hours is addressed."

Entities are capable of policing themselves. The reporting process with the CEA will be an additional burden potentially requiring multiple iterations of revisions. This may impact the actual goal of restoring equipment in a timely manner.

Implementation Plan, R3 was revised to include existing units, but expanded description appears to only apply to entities beginning commercial operation after the effective date of EOP-012-3.

Likes 1	Berkshire Hathaway Energy - MidAmerican Energy Co., 3, Amato Joseph
Dislikes 0	

Response

Thank you for your comments. Please see responses to NAGF comments.

Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC

Answer	
Document Name	

Comment

WECC recognizes there is a lot of compliance concern being expressed with regards to ECWT determination. The DT has done a great job trying to alleviate the concern listen to the points of view, and provide clarity where it could. Implementation Guidance should be considered.

WECC believes the Technical Rationale could be updated to include thoughts on "existing" versus "new" freeze protection measures. The language should reflect the high level thoughts on what those terms mean to avoid entities replacing failed heat trace with "new" heat trace that may simply be a different brand, ampacity, or length. Additionally, changes in the Technical Rationale to provide guidance on units that are similar in nature and exposed to similar climates may help understanding of expectations (within R6/R7 and Attachment 1).

Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comments. Implementation Guidance is in the process of being drafted.	
Martin Sidor - NRG - NRG Energy, Inc. - 6	
Answer	
Document Name	
Comment	
NRG would appreciate the SDT to update the NERC guidance on calculating the ECWT to address the new verbiage in R1.1 where adjustments for missing or invalid hourly temperature data is addressed. The method suggested by NAGF in achieving 90% of expected data points should be sufficient. *Requirement R4.1 was adjusted to include ECWT identification by unit- this generally doesn't change at each site footprint.* *Regarding the CW CAP Extension Request and Constraint process, the timelines for submittal are 60 days ahead of an expiration. If NERC/RE/CEA takes the full 15 days to acknowledge receipt and 45 days to review, but rejects the request, there is not time for an entity to correct a deficiency. This should be a shorter review period or require a longer time period for follow up. If the Process document is to be utilized as enforcement policy there is no recourse for Registered Entities to avoid non-compliance associated with timelines of CAP Extensions or Constraint Rejections.*	
Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comments. Please see responses to NAGF comments. The DT agrees with the idea that ECWT will be by site and would expect a single ECWT determination effort to note that accordingly. The DT defers comments regarding the NERC process to NERC staff.	
Patricia Lynch - NRG - NRG Energy, Inc. - 5	

Answer	
Document Name	
Comment	

NRG would like to express its appreciation of the drafting team's work to incorporate FERC Order language in consultation with industry participants.

NRG would appreciate the SDT to update the NERC guidance on calculating the ECWT to address the new verbiage in R1.1 where adjustments for missing or invalid hourly temperature data is addressed. The method suggested by NAGF in achieving 90% of expected data points should be sufficient.

Requirement R4.1 was adjusted to include ECWT identification by unit- this generally doesn't change at each site footprint.

Regarding the CW CAP Extension Request and Constraint process, the timelines for submittal are 60 days ahead of an expiration. If NERC/RE/CEA takes the full 15 days to acknowledge receipt and 45 days to review, but rejects the request, there is not time for an entity to correct a deficiency. This should be a shorter review period or require a longer time period for follow up. If the Process document is to be utilized as enforcement policy there is no recourse for Registered Entities to avoid non-compliance associated with timelines of CAP Extensions or Constraint Rejections.

Likes 0	
Dislikes 0	
Response	

Thank you for your constructive comments. Please see responses to NAGF comments. The DT agrees with the idea that ECWT will be by site and would expect a single ECWT determination effort to note that accordingly.

Marty Hostler - Northern California Power Agency - 4	
Answer	
Document Name	
Comment	
Further, during webinars it was noted that the CEAs will not be required to disclose details of any entities Corrective Plans or Cold Weather Constraints. This suggest an unwillingness to be transparent. It sets up giving an unfair competitive advantage to some entities over others. For instance, one entity that may have a corrective action plan that includes repairing/replacing structural steel or wind turbine blades, but a CEA may rule them as manufacture limitiations and thus not requiring them to be replaced. On the other hand another entity my be required to spend time and dollars making CEA ruled corrective actions that are too costly for that entity to remain competitive in the market. Without transparency entities don't know if they are being unfairly required to replace or modify equipment.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Being "required" versus being willing are two different things and in no way should be considered as being transparent or not.	
Mason Jones - Mason Jones On Behalf of: Michael Whitney, Northern California Power Agency, 4, 6, 3, 5; - Mason Jones	
Answer	
Document Name	
Comment	
Further, during webinars it was noted that the CEAs will not be required to disclose details of any entities Corrective Plans or Cold Weather Constraints. This suggest an unwillingness to be transparent.	

It sets up giving an unfair competitive advantage some entity over others. For instance, one entity that may be required to repair/replace structural steel or wind turbine blades may not be required to replace them but a different entity may need to replace some of their equipment. Without transparency entities don't know if are being unfairly required to replace or modify equipment.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Being "required" versus being willing are two different things and in no way should be considered as being transparent or not.	
Michael Whitney - Northern California Power Agency - 3, Group Name NCPA	
Answer	
Document Name	
Comment	
See Marty Hostler comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. See responses to Marty Hostler comments.	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter	
Answer	
Document Name	
Comment	

-FirstEnergy believes language should exist to exempt implementation of protection measures (and thereby exempting a cold weather reliability event) in the case of risk to employee health and safety due to exposure to hazardous conditions beyond control (severe wind chill, poor visibility, flooding, fire, etc). - FirstEnergy believes language should exist exempting a reliability event in the case of extreme cold weather conditions below the established ECWT. - FirstEnergy believes that the term 'due to circumstances beyond its control' in sections 6.4 and 7.2 is too subjective to be a condition of compliance and should be removed; this would broaden the qualifying circumstances to include unforeseen events or conditions of any nature, and leave approval or denial of an extension request at the full discretion of the CEA.	
Likes 0	
Dislikes 0	
Response	
Thank you for your constructive comments. The DT would expect that each entity will make a decision as to when the implementation of freeze protection measures is to occur. The definition of Generator Cold Weather Reliability Event includes the caveat language: "the dry bulb temperature at the time of the event was at or above the Extreme Cold Weather Temperature" so no change is needed. The DT believes the language is flexible enough and reflects current expectations in other Standards (e.g., PRC-004 R5) .	
Erin Wilson - NB Power Corporation - New Brunswick Power Transmission Corporation - 5	
Answer	
Document Name	
Comment	

Consideration should be given to updating the MOD-032-1 Requirement R1 data requirements to include generator cold weather data operating limitations under EOP-012-3 Requirement R1, with the objective to ensure that Planning Coordinators and Transmission Planners developing benchmark planning cases for performing Extreme Temperature Assessments pursuant to TPL-008-1 R3 have the information necessary to realistically posture their cases for identified benchmark temperature events.

Regarding the ECWT calculation, suggest adding guidance to the Technical Rationale regarding combining data from different weather data resources, so that the frequency sampling is the same. For example, if one weather data source gathers temperature data three times per hour and another weather data source gathers weather data one time per hour, this will skew the 0.2 percentile in favor of the more frequent weather data source. Suggest adding guidance with a threshold such as at least 66% of the hours for each year from each weather data source must have hourly data.

Could add examples to the Technical Rationale and/or the ECWT Calculation document that shows what would be considered a valid approach to handling missing temperature data.

Add clarification in the Technical Rationale regarding the R5 training requirement. For dispersed generation resources with Remote Operation Centers, is it the expectation that these personnel be trained on the Cold Weather Preparedness Plan or is it just on-site operations and maintenance personnel? Also, R5 does not use the NERC defined term of “Agreement” (A contract or arrangement, either written or verbal and sometimes enforceable by law) being needed between the GO and GOP regarding who is responsible for the training. Suggest clarifying in the Technical Rationale that this is not the expectation, but rather it can be an informal agreement between the GO and GOP.

Likes 0	
Dislikes 0	

Response

Thank you for the constructive comments. Members of the DT and industry groups are drafting Implementation Guidance regarding ECWT for NERC review and approval. Note that examples to demonstrate compliance are to be provided in Implementation Guidance and

not the Technical Rationale. Requirement R5 is for anyone responsible for implementing the cold weather preparedness plan regardless of location (or company). It is understood that there will be discussions and an agreement on who is designated to provide training.	
Jeffrey Streifling - NB Power Corporation - 1	
Answer	
Document Name	
Comment	
Consideration should be given to updating the MOD-032-1 Requirement R1 data requirements to include generator cold weather data operating limitations under EOP-012-3 Requirement R1, with the objective to ensure that Planning Coordinators and Transmission Planners developing benchmark planning cases for performing Extreme Temperature Assessments pursuant to TPL-008-1 R3 have the information necessary to realistically posture their cases for identified benchmark temperature events. Regarding the ECWT calculation, suggest adding guidance to the Technical Rationale regarding combining data from different weather data resources, so that the frequency sampling is the same. For example, if one weather data source gathers temperature data three times per hour and another weather data source gathers weather data one time per hour, this will skew the 0.2 percentile in favor of the more frequent weather data source. Suggest adding guidance with a threshold such as at least 66% of the hours for each year from each weather data source must have hourly data. Could add examples to the Technical Rationale and/or the ECWT Calculation document that shows what would be considered a valid approach to handling missing temperature data. Add clarification in the Technical Rationale regarding the R5 training requirement. For dispersed generation resources with Remote Operation Centers, is it the expectation that these personnel be trained on the Cold Weather Preparedness Plan or is it just on-site operations and maintenance personnel? Also, R5 does not use the NERC defined term of “Agreement” (A contract or arrangement, either written or verbal and sometimes enforceable by law) being needed between the GO and GOP regarding who is responsible for the training. Suggest clarifying in the Technical Rationale that this is not the expectation, but rather it can be an informal agreement between the GO and GOP.	
Likes 0	

Dislikes 0	

Response
Thank you for the constructive comments. Members of the DT and industry groups are drafting Implementation Guidance regarding ECWT for NERC review and approval. Note that examples to demonstrate compliance are to be provided in Implementation Guidance and not the Technical Rationale. Requirement R5 is for anyone responsible for implementing the cold weather preparedness plan regardless of location (or company). It is understood that there will be discussions and an agreement on who is designated to provide training.

Carver Powers - Utility Services, Inc. - 4	
Answer	
Document Name	

Comment
1. Regarding the ECWT calculation, suggest adding guidance to the Technical Rationale regarding combining data from different weather data resources, so that the frequency sampling is the same. For example, if one weather data source gathers temperature data three times per hour and another weather data source gathers weather data one time per hour, this will skew the 0.2 percentile in favor of the more frequent weather data source. Suggest adding guidance with a threshold such as at least 66% of the hours for each year from each weather data source must have hourly data. Could add examples to the Technical Rationale and/or the ECWT Calculation document that shows what would be considered a valid approach to handling missing temperature data. 2. Add clarification in the Technical Rationale regarding the R5 training requirement. For dispersed generation resources with Remote Operation Centers, is it the expectation that these personnel be trained on the Cold Weather Preparedness Plan or is it just on-site operations and maintenance personnel? Also, R5 does not use the NERC defined term of “Agreement” (A contract or arrangement, either written or verbal and sometimes enforceable by law) being needed between the GO and GOP regarding who is responsible for the training. Suggest clarifying in the Technical Rationale that this is not the expectation, but rather it can be an informal agreement between the GO and GOP.

Likes 0	

Dislikes 0	

Response
Thank you for the constructive comments. Members of the DT and industry groups are drafting Implementation Guidance regarding ECWT for NERC review and approval. Note that examples to demonstrate compliance are to be provided in Implementation Guidance and not the Technical Rationale. Requirement R5 is for anyone responsible for implementing the cold weather preparedness plan regardless of location (or company). It is understood that there will be discussions and an agreement on who is designated to provide training.

Thomas Foltz - AEP - 5	
Answer	
Document Name	

Comment
The most recent revision of R2 removes the phrase “in place”, and as a result, there is no longer a requirement to have CAP in place upon beginning commercial operation. AEP requests that text be added to make it clear exactly when the CAP needs to be in place. R6’s “Each Generator Owner shall, when experiencing a Generator Cold Weather… Reliability Event at a generating unit” is problematic. The text “when experiencing” infers (likely quite unintentionally) that the Corrective Action Plan will be developed and implemented *during* when the event is occurring. The latest draft of R6 removes the text “The Corrective Action Plan shall be developed before the first day of July, but not more than 150 days after the Generator Cold Weather Reliability Event.” This is problematic, as it is no longer clear when the CAP must be in place. In the current draft, it is only clear when the CAP is to be completed. AEP recommends re-inserting the text that was removed. Section E “Associated Documents” specifies the “Calculating Extreme Cold Weather Temperature” document, but does not include a hyperlink to it. We suggest that a hyperlink be added for this document, perhaps as a footnote or similar.

Likes 0	
Dislikes 0	

Response

Thank you for the constructive comments. The Drafting Team and Standards Committee reviewed these sections and made changes to Requirement R6 language defining the timeline for development of the CAP. In R2, the requirement is to develop, implement, and complete the CAP prior to April 1, 2028.	
Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro	
Answer	
Document Name	
Comment	
The Generator Cold Weather CAP Extension and Constraint Process sets timeline expectations for CAP extensions, including for CEA. There could be situations where if the CEA exceeds the 45-day expectation to approve an extension, the submitting GO would be in potential noncompliance to EOP-012-3 if the extension rejection is received after the initial CAP implementation deadline. BC Hydro recommends that a provision to allow flexibility for compliance enforcement should there be a case where the CAP timetables are exceeded while an extension request is being processed by the CEA.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. However, as stated in many NERC documents, potential noncompliance is inherently dependent upon the facts and circumstances.	
Donna Wood - Tri-State G and T Association, Inc. - 1	
Answer	
Document Name	
Comment	
Tri-State Supports the MRO NSRF Comments	
Likes 0	

Dislikes 0	
Response	
Thank you for your comments. Please see responses to MRO NSRF comments.	
Rachel Schuldt - Black Hills Corporation - 6, Group Name Black Hills Corporation - All Segments	
Answer	
Document Name	
Comment	
Black Hills Corporation agrees with the NAGF's additional proposed EOP-012-3 comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to NAGF comments.	
Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group	
Answer	
Document Name	
Comment	
WEC Energy Group supports the comments of the MRO NSRF.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to MRO NSRF comments.	
Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1	

Answer	
Document Name	
Comment	
Thank you for the opportunity to comment.	
Likes 0	
Dislikes 0	
Response	
Thank you for the support.	
Richard Vendetti - NextEra Energy - 5	
Answer	
Document Name	
Comment	

NextEra would like to address concerns contained in the proposed modifications to EOP-012-3 and the Generator Cold Weather CAP Extension and Constraint Process:

CAP Extension Request and Cold Weather Constraint Review Process

NextEra does not dispute the time frame in which to submit a CAP extension, however, is concerned with the vague language contained in the CAP Extension Request Review Process and the Constraint Review Process. NextEra cannot determine what type of documentation is required to satisfy both submittals to the CEA. This document should include various examples for generation sites, including wind and solar.

NextEra does not agree that Align is the best system to utilize for compliance obligations with EOP-012-3. Is NERC proposing a separate module for these submittals? As currently configured, submittal in Align will be unduly burdensome and will co-mingle self-report and mitigation plans regarding potential non-compliance items with operational reporting. Further, NextEra is concerned the Align system may not be able to handle such voluminous data as NextEra will likely have to submit for CAP and cold weather constraints. NextEra currently operates approximately 320 generation sites, with that number increasing in 2025. NextEra is concerned that not only would

this be burdensome to the entities, but also to CEA staff as well in processing and addressing CAP submittals, extensions and cold weather constraints and cause undue delays. NextEra does not dispute the need for a review or "appeal" process following the denial of a CAP extension request and Cold Weather Constraint, however this process should be further defined within the document by the Standard Drafting Team. NextEra does not recognize the benefit of a joint review of a denial by NERC and the CEA without the opportunity for sufficient due process, including (i) a clearly defined process, (ii) opportunity to submit additional documentation, as needed, and (iii) review by an independent source such a designated cold weather panel or advisory committee. There is no further explanation of the steps following the denial of a CAP extension request or cold weather constraint. Will entities be out of compliance with EOP-012-3 if a cold weather constraint is denied and the entity has not submitted a CAP? If so, will the entity have time in order to submit a CAP without being non-compliant? This process should be fully explained within the document. NextEra would like to see industry visibility on the approval and denial of Cold Weather Constraints. NERC should be transparent in the release of this information, as all of the industry faces similar challenges in dealing with extreme cold weather and would benefit in understanding what type of constraints are being approved and denied by the CEA. This could be accomplished in a manner such as quarterly reports and CEA subcommittee meetings. The submitting entity need not be recognized within the reports, however the type of constraint with reasons for approval or denial should be stated.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The NERC process indicates that the PDS module may be the primary interaction with Align with other tools available but evidence to support Align entries will utilize the SEL (or other options as needed). The industry has been unclear as to how many Corrective Action Plans, Corrective Action Plan extensions, and Generator Cold Weather Constraints that may be needed. The DT will recommend that NERC staff provide information related to approval/denial of Generator Cold Weather Constraints in a manner similar to potential noncompliances or compliance exceptions.	
Darcy O'Connell - California ISO - 2	
Answer	
Document Name	

Comment	
CAISO agrees with comments submitted by the ISO/RTO Counsel (IRC) Standards Review Committee	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to IRC comments.	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	
Document Name	
Comment	
N/A	
Likes 0	
Dislikes 0	
Response	
N/A	
Joseph Amato - Berkshire Hathaway Energy - MidAmerican Energy Co. - 3	
Answer	
Document Name	
Comment	
MEC supports NAGF comments. MEC would cast an affirmative ballot if NAGF comments for Q1, and EEI comments for Questions 2 and 3 are adopted by the SDT.	

Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to NAGF comments.	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	
Document Name	
Comment	

Due to the realized ambiguity of the requirement for ECWT calculation and the flexibility afforded this standard drafting team by their SAR, the MRO NSRF makes the following suggestion to improve the clarity and auditability of the ECWT calculation, possibly via footnote in R1.1.

If using publicly available government data sources (such as NOAA or ASOS), the ECWT calculation will be considered complete if the data source (or sources) has greater than 90 percent of the necessary data points and any gap greater than 168 continuous hours is addressed.

MRO NSRF also suggests the following changes to the GCWRE definition to ensure that the language matches the intent. There are concerns that the language would for (2) and (3) would look at individual generating units of an I4 generator and not the plant/facility in aggregate as intended.

Generator Cold Weather Reliability Event – One of the following events for which the apparent cause(s) is due to freezing of equipment or impacts of freezing precipitation (e.g., sleet, snow, ice, and freezing rain) on equipment within the Generator Owner's control, and the dry bulb temperature at the time of the event was at or above the Extreme Cold Weather Temperature:

(1) a forced derate of more than 10% of the total capacity of the unit, but not less than 20 MWs for longer than four hours in duration;

(2) a start-up failure where the unit or **IBR fails** to synchronize within a specified start-up time; or

(3) a Forced Outage **of the unit or IBR**.

MRO NSRF does believe that these two issues is important and must be addressed, preferably by this drafting team as it would be within the scope of the SAR which it is operating under, however MRO NSRF also recognizes the constraints under which this Standard Drafting

Team is operating and does not view correcting these issues as a something must be addressed by this Standard Drafting Team at this time. Overall, MRO NSRF appreciates the improvement that has been made between the first and second drafts of this standard. Even if this improvement doesn't translate to a significantly higher balloting result, the MRO NSRF does feel that this standard is much closer to passing than it was previously. Although MRO NSRF still has concerns about this standard as currently written, if the concerns are addressed, this would move the standard into an acceptable state for many members.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The DT considered the change in definition and noted that the current flexibility is consistent with the directives of the FERC order. An effort is underway to draft Implementation Guidance that may provide additional clarity on ECWT calculation. The DT does not believe the injection of IBR into the Generator Cold Weather Reliability Event is necessary at this point.	
Dwanique Spiller - Berkshire Hathaway - NV Energy - 5	
Answer	
Document Name	
Comment	
Due to the realized ambiguity of the requirement for ECWT calculation and the flexibility afforded this standard drafting team by their SAR, NV Energy makes the following suggestion to improve the clarity and auditability of the ECWT calculation, possibly via footnote in R1.1. If using publicly available government data sources (such as NOAA or ASOS), the ECWT calculation will be considered complete if the data source (or sources) has greater than 90 percent of the necessary data points and any gap greater than 168 continuous hours is addressed. NV Energy also suggests the following changes to the GCWRE definition to ensure that the language matches the intent. There are concerns that the language would for (2) and (3) would look at individual generating units of an I4 generator and not the plant/facility in aggregate as intended.	

Generator Cold Weather Reliability Event – One of the following events for which the apparent cause(s) is due to freezing of equipment or impacts of freezing precipitation (e.g., sleet, snow, ice, and freezing rain) on equipment within the Generator Owner's control, and the dry bulb temperature at the time of the event was at or above the Extreme Cold Weather Temperature: (1) a forced derate of more than 10% of the total capacity of the unit, but not less than 20 MWs for longer than four hours in duration; (2) a start-up failure where the unit or IBR fails to synchronize within a specified start-up time; or (3) a Forced Outage of the unit or IBR. NV Energy does believe that these two issues is important and must be addressed, preferably by this drafting team as it would be within the scope of the SAR which it is operating under, however NV Energy also recognizes the constraints under which this Standard Drafting Team is operating and does not view correcting these issues as a something must be addressed by this Standard Drafting Team at this time. Overall, NV Energy appreciates the improvement that has been made between the first and second drafts of this standard. Even if this improvement doesn't translate to a significantly higher balloting result, NV Energy does feel that this standard is much closer to passing than it was previously. Although NV Energy still has concerns about this standard as currently written, if the concerns are addressed, this would move the standard into an acceptable state for many members.

Likes 0	
Dislikes 0	

Response
Thank you for your comments. The DT considered the change in definition and noted that the current flexibility is consistent with the directives of the FERC order. An effort is underway to draft Implementation Guidance that may provide additional clarity on ECWT calculation. The DT does not believe the injection of IBR into the Generator Cold Weather Reliability Event is necessary at this point.

Ruchi Shah - AES - AES Corporation - 5	
Answer	
Document Name	
Comment	

AES US Renewables still has concerns about the process described in the EOP-012-3 Generator Cold Weather CAP Extension and Constraint Process. Although the timelines listed in the document (eg: no less than 60 calendar days) are considered un-enforceable, we are concerned that this document leaves a lot of room for interpretation by each Regional Entity's team that will be utilizing this document to review and approve CAP Extensions and Constraint Declarations. We do appreciate that there is language added in the latest version concerning the ability to request a joint NERC and CEA review of a denial (applies to both CAP extension and constraint declaration). However, this still does not resolve the issue that if a denial is given, what are the next steps Generator Owners are required to take - for example, does Generator Owner cease operation of the generation facility to avoid going into non-compliance because the Generator Owner could not get extension of CAP or constraint declaration approved?

We are also concerned about R8 Part 8.1 where there are only 15 calendar days allowed to submit a constraint declaration for new generators after commercial operation that could not meet R2. Again, based on the concerns mentioned above regarding the constraint approval process, this does not leave a lot of room for Generator Owners to work on next steps should the constraint be denied. Additionally, if the constraint is denied under R2.2, does that mean the Generator Owner is already under non-compliance?

We request that the drafting team take these scenarios into account to provide further clarifications or include additional language to make the process clearer, including guidance on next steps when a constraint declaration is denied under R2.2 and whether the GO can continue to operate the facility as is.

Likes 0	
Dislikes 0	

Response
Thank you for your comments. Note that Standards are written to support reliable operations and not guarantee compliance. Ceasing operation to avoid compliance does not appear to be prudent or reasonable.

Nikki Carson-Marquis - Nikki Carson-Marquis On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Nikki Carson-Marquis	
Answer	
Document Name	

Comment
Minnkota Power Cooperative appreciates the diligent efforts of the Standard Drafting Team to incorporate industry feedback while ensuring compliance with the FERC Directives. For EOP-012-2: requirement R1.1 and Measure M1, Minnkota recommends replacing “adjustments” with “methodology” to improve clarity and auditability. A methodology should be utilized for missing and invalid temperature data such that the entire dataset is processed in a consistent manner. In addition, Minnkota would like to echo the MRO NSRF’s concerns regarding the realized ambiguity of the Extreme Cold Weather Temperature (ECWT) calculation requirement. It is unrealistic to expect a multi-decade, hourly observation dataset to be 100% complete for all NOAA weather stations. Missing observations in a dataset may be due to a number of reasons including, but not limited to, malfunctioning instrumentation, observations not logged/saved/recorded in the official climate record, communications issues, or observations being flagged in the National Weather Service’s QAQC process, just to name a few. Thus, reasonable expectations are important to minimize auditing disparities between regions in the ERO Enterprise when entities are performing their required ECWT calculation(s). Minnkota understands the Standard Drafting Team is working to meet strict goals that do not allow for sufficient time to adequately address this issue.

Likes 0	
Dislikes 0	

Response
Thank you for the constructive comments. Please see responses to NAGF comments. The Technical Rationale and ECWT Calculation document were updated to reflect some of the current thoughts on missing data. After the posting, the members of the DT are developing draft Implementation Guidance to address the ECWT concerns further.

Mary Smith - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF	
Answer	
Document Name	

Comment

N/A	
Likes 0	
Dislikes 0	
Response	
N/A	
Chantal Mazza - Chantal Mazza On Behalf of: Junji Yamaguchi, Hydro-Quebec (HQ), 1, 5; Nicolas Turcotte, Hydro-Quebec (HQ), 1, 5; - Chantal Mazza	
Answer	
Document Name	
Comment	
We support NBPower's comment: Consideration should be given to updating the MOD-032-1 Requirement R1 data requirements to include generator cold weather data operating limitations under EOP-012-3 Requirement R1, with the objective to ensure that Planning Coordinators and Transmission Planners developing benchmark planning cases for performing Extreme Temperature Assessments pursuant to TPL-008-1 R3 have the information necessary to realistically posture their cases for identified benchmark temperature events.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to NB Powers comments.	
Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples	
Answer	
Document Name	

Comment
Evergy supports and incorporates by reference the comments of the Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF) and the North American Generator Forum (NAGF) on question 5

Likes 0	
Dislikes 0	

Response
Thank you for your comments. Please see responses to those organization’s comments.

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC RSC

Answer	
Document Name	

Comment
Regarding the Extreme Cold Weather Temperature (ECWT) calculation, suggest adding guidance to the Technical Rationale regarding combining data from different weather data resources, so that the frequency sampling is the same. For example, if one weather data source gathers temperature data three times per hour and another weather data source gathers weather data one time per hour, this will skew the 0.2 percentile in favor of the more frequent weather data source. Suggest adding guidance with a threshold such as at least 66% of the hours for each year from each weather data source must have hourly data. Recommend adding examples to the Technical Rationale and/or the ECWT Calculation document that shows what would be considered a valid approach to handling missing temperature data. Recommend adding clarification in the Technical Rationale regarding the R5 training requirement. For dispersed generation resources with Remote Operation Centers, is it the expectation that these personnel be trained on the Cold Weather Preparedness Plan or is it just on-site operations and maintenance personnel? Also, R5 does not use the NERC defined term of “Agreement” (A contract or arrangement, either written or verbal and sometimes enforceable by law) being needed between the GO and GOP regarding who is

responsible for the training. Suggest clarifying in the Technical Rationale that this is not the expectation, but rather it can be an informal agreement between the GO and GOP.	
Likes 0	
Dislikes 0	
Response	
Thank you for the constructive comments. After posting, the members of the DT are developing draft Implementation Guidance to address most of the ECWT concerns. Note that examples are to be provided in Implementation Guidance and not Technical Rationale. Requirement R5 is for anyone responsible for implementing the cold weather preparedness plan regardless of location (or company). It is understood that there will be discussions and an agreement on who is designated to provide training.	
Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF	
Answer	
Document Name	
Comment	
The NAGF provides the following comments related to the proposed EOP-012-3 Draft #2: *Concerns with Requirement R1 – The modifications appear to require entities to find data to address missing data points. If the data points are randomly missing, this effort is completely unnecessary and burdensome and does not increase reliability. This position is supported by the statistical process being used. Similar to the process used under BAL-003 (which uses the median to determine compliance) the use of the percentile is very unlikely to be materially impacted due to randomly missing data points. The language in EOP-012-2 and draft EOP-012-3 R1 is somewhat misleading as the process to determine a percentile does not involve calculation of the data point. It only requires an entity to determine which data point is the one to be used for the stated purpose. The NAGF is not asking that the SDT correct this language at this time in the interest of expediently completing the effort. The NAGF is pointing it out only to help the SDT understand the true nature of the process used to determine the ECWT for any given location.* *As currently structured, each NERC Region is implementing different means of determining when an ECWT determination is sufficient, and this makes the standard unenforceable due to the ambiguous nature of the process. For this reason, the NAGF asks that the SDT address this flaw in the standard.* ***This issue, which was identified through the implementation of EOP-012-2, is an important issue for the NAGF***	

membership. The NAGF notes that this issue was raised starting with the draft SAR for EOP-012-3 and continues to be a concern for the NAGF.

As requested by the SDT, the NAGF is providing proposed language to address the concern. The NAGF does not believe this to be the only way to address the issue, but is providing this recommendation as one means to address the issue.

Requirement R1 - The NAGF recommends adding the following footnote to R1, 1.1:

"Using publicly available data sources (such as NOAA or ASOS), the ECWT calculation is complete if the data source has greater than 90 percent of the expected data points and any gap greater than 168 hours is addressed."

This footnote provides clarity and will ensure consistent enforcement related to the reasonable determination of the ECWT for all entities.

Requirement R8 – Recommend re-wording to read "If the CEA determines the declared Generator Cold Weather Constraint is not valid,"

Requirement R5 - This requirement continues to be written such that the process for compliance is not clear when a plant is operated by an entity other than the Generator Owner. The NAGF notes that the RSAW requests an agreement between the GO and GOP that is not part of the requirement. It is recommended that the SDT remedy this issue that has been identified since EOP-012 -1 was developed. The NAGF feels obligated to mention it since this is a flaw in the standard that should be addressed in order to improve the standard so that it meets the goals stated in NERC's Ten Benchmarks of an Excellent Standard, specifically items 6 (Completeness), 8 (Clear Language) and 9 (Practicality).

Generator Cold Weather Reliability Event Definition

While working to implement EOP-012-2 and EOP-012-3 Cold Weather Reliability Events materials, NAGF membership has identified a significant issue that needs to be corrected for EOP-012-3 in the NERC Cold Weather Reliability Event definition for bullets 2 and 3. In short, the 10% of total capacity and not less than 20 MW language should be added to bullet 3 at a minimum and potentially to bullet 2 if NERC intended "failure to start" to apply to IBR "plants" and not individual turbines/inverters.

Alternately, EOP-012-3 could add individual unit exclusion language similar that found in PRC-004.

Generator Cold Weather Reliability Event Definition:

For bullet 2: *It appears that bullet 2 only applies to synchronous units and not IBRs. The NAGF requests language be added to clarify this issue.*

For bullet 3: *The NAGF notes that the current NERC Glossary of Terms - Forced Outage language is too vague and could have unintended consequences.*

To address this concern, the modifications below are provided for consideration:

• (2) a start-up failure where the unit fails to ***synchronize*** *more than 10% of the total capacity of the unit but not less than 20 MWs*

• (3) a Forced Outage of more than 10% of the total capacity of the unit but not less than 20 MWs.

As an example, if a renewable plant has a bus outage that results in the complete loss of power to all auxiliary heating equipment and the renewable Facility (one unit out of 200 or the entire plant?) either fails to start at or above the ECWT, this could trigger the Generator Cold Weather Reliability Event per the existing bullets 2 and / or 3. Note the plant bus is the only power source nearby that can supply auxiliary heating power. Note the current NERC Glossary of Terms definition for NERC Forced Outage could also bring in the bus failure due to item 2 even though there wasn't a plant / unit trip.

Provided for Reference:

Generator Cold Weather Reliability Event: *One of the following events for which the apparent cause(s) is due to freezing of equipment or impacts of freezing precipitation (e.g., sleet, snow, ice, and freezing rain) on equipment within the Generator Owner's control, and the dry bulb temperature at the time of the event was at or above the Extreme Cold Weather Temperature:*

(1) a forced derate of more than 10% of the total capacity of the unit but not less than 20 MWs for longer than four hours in duration;

(2) a start-up failure where the unit fails to synchronize (does this or does this not apply to IBRs?) within a specified start-up time; or

(3) a Forced Outage.

NERC Glossary of Terms Forced Outage:

1. The removal from service availability of a generating unit, transmission line, or other facility for emergency reasons.

2. The condition in which the equipment is unavailable due to unanticipated failure.

Concerns with the ERO Process Document: *The NAGF appreciates that the SDT is not drafting nor in charge of modifications to the process document posted with the proposed standard. However, since there is not a stated means for industry to provide input to the document otherwise, the NAGF has identified there are still concerns with the process document. The primary and overarching concerns are:* *1. While the document now has a footnote that states the ERO is aware that some issues may arise within the 60 days prior to the deadline for a CAP, the document still states it is a requirement to submit a CAP extension 60 days prior to the deadline. These two statements contradict each other. There is either a hard deadline or there is a desire to receive the request and associated documentation by that deadline but no requests will be denied. Please ask NERC and regional staff to clarify which this is and modify the document to clearly state if there is a hard deadline or if the Generator Owner should submit the request when identified.* *2. It appears that it is possible that a requested constraint may be denied after the deadlines stated in R6 and R7. This seems unreasonable, assuming that the Generator Owner has determined that there is not, in their estimation, a reasonable means to address the issue that caused the Generator Cold Weather Reliability Event. More details need to be added related to allowing additional time to address the issue without also going through the effort related to a self-report of a Potential Non-Compliance issue. A self-report for something that is already being discussed with the regional entity is unproductive and extremely inefficient for both the registered entity and the regional entities.* *The NAGF will provide a copy of the draft document with all our comments through an email to NERC staff if requested.*

Likes 0	
Dislikes 0	

Response
Thank you for your comments. The Drafting Team believes the current language provides reasonable flexibility in ECWT calculation, and Implementation Guidance is being drafted by some DT members and industry groups to provide additional guidance. Requirement R5 is clear and an agreement, whether formal or informal, is needed to determine who has the responsibility to train the personnel. The DT does not believe the injection of IBR into the Generator Cold Weather Reliability Event is necessary at this point. The DT defers comments to the NERC process to NERC staff.

Carey Salisbury - Santee Cooper - 5, Group Name Santee Cooper	
Answer	

Document Name	
Comment	
Santee Cooper supports the NAGF comments pertaining to missing/invalid data associated with R1 ECWT calculation. Clarity should be provided regarding criteria for when missing/invalid data must be addressed.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to NAGF comments.	
Romel Aquino - Edison International - Southern California Edison Company - 3	
Answer	
Document Name	EEI Near Final Draft Comments _ Project 2024-03 _ Draft 2 _ Rev 0f _ 12_13_2024.docx
Comment	
See comments submitted by the Edison Electric Institute	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see responses to EEI comments.	
Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company	
Answer	
Document Name	
Comment	
Southern Company endorses MRO's NERC Standards Review Forum (NSRF) comments and suggestions in response to this question.	

Southern Company is also appreciative and supportive of the SDT completing the process but looks forward to the opportunity to improve the Standard further with the remaining commenting periods.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Please see response to MRO NSRF comments.	
Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators	
Answer	
Document Name	
Comment	
Thank you for the opportunity to comment.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment.	
Nick Leathers - Nick Leathers On Behalf of: David Jendras Sr, Ameren - Ameren Services, 3, 6, 1; - Nick Leathers	
Answer	
Document Name	
Comment	
Ameren supports NAGF's comments.	
Likes 0	
Dislikes 0	

Response
Thank you for your comments. Please see response to NAGFs comments.
Kimberly Turco - Constellation - 6
Answer
Document Name
Comment
Constellation has no additional comments
Likes 0
Dislikes 0
Response
Thank you for your comment.
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2, Group Name ISO/RTO Council Standards Review Committee (SRC)
Answer
Document Name
Comment
The SRC has concerns and recommendations regarding some of the revised Requirements and regarding the Technical Rationale, as follows. **Requirement R1**. **Request:** Remove the language from Part 1.1 that addresses missing or invalid temperature data.

Justification: The SRC believes that the language added to Part 1.1 of Requirement R1 regarding missing or invalid temperature data is outside the scope of what is needed to address FERC's directives from the June 2024 Order and is a much broader topic that should be addressed with a dedicated project or working group as entities gain real-world experience calculating Extreme Cold Weather Temperatures and implementing EOP-012.

Consequently, the SRC recommends that the drafting team remove this language from the standard and that NERC establish a working group to analyze and develop guidance material on the topic of accounting for missing and invalid temperature data in Extreme Cold Weather Temperature calculations. This approach will allow the development of best practices for addressing missing and invalid data without rewarding poor data collection and retention practices or providing an avenue for entities to cherry-pick temperature data to artificially elevate an Extreme Cold Weather Temperature.

Requirement R7, Part 7.2.2.

Request: Revise Part 7.2.2 to read as follows: "Revisions to the selected actions in Part 7.1, if any, and any operational measures that will be in place while the Corrective Action Plan is being implemented."

Justification: The SRC notes that Part 7.2.2 of Requirement R7 uses the lowercase term "operating procedures" as distinguished from the term "Operating Procedures" defined in the NERC Glossary of Terms. To further clarify that the Glossary definition of "Operating Procedures" does not apply in Part 7.2.2, the SRC recommends that the term "operational measures" be used instead of "operating procedures."

To further clarify Part 7.2.2, the SRC recommends that it be revised to read as follows: "Revisions to the selected actions in Part 7.1, if any, and any operational measures that will be in place while the Corrective Action Plan is being implemented."

Requirement R8, Part 8.1.

Request: Revise Part 8.1 of Requirement R8 to require new generating units to submit constraint declarations to the CEA within 5 calendar days after commercial operation (instead of the 15 calendar days proposed in the current draft of EOP-012-3). **Justification:** While the SRC recognizes that a new Generator Owner may not be able to complete the NERC registration process before its unit reaches commercial operations, new units should generally be designed and constructed to perform at the Extreme Cold Weather Temperature, and new units generally undergo an operational testing period that provides an opportunity to identify performance limitations before beginning commercial operations. As a result, any constraints for new units should be submitted for evaluation as quickly as possible to minimize the amount of time that elapses between the commercial operation date and the Compliance Enforcement Authority determination regarding the validity of the constraint. To minimize this gap, the SRC recommends that Part 8.1 of Requirement R8 be revised to require new generating units to submit constraint declarations to the CEA within 5 calendar days after commercial operation (instead of the 15 calendar days proposed in the current draft of EOP-012-3). **Technical Rationale**. The SRC recommends that the Technical Rationale be revised to include a flowchart detailing the process that applies when a Generator Cold Weather Reliability Event occurs, similar to the broader process flowchart currently included at the end of the Technical Rationale.

Likes 0	
Dislikes 0	

Response
Thank you for your constructive comments. After the posting, the members of the DT are drafting Implementation Guidance to consider. The use of “Operating Procedure” was a direct lift from TPL-007. GOs wanted lower-case because of the definition (as innocuous as it is) and the DT allowed that lower-casing but will consider the language provided if given the opportunity.

Colin Chilcoat - Invenergy LLC - 6	
Answer	
Document Name	
Comment	

Invenergy is comfortable with the requirements around the calculation of the Extreme Cold Weather Temperature, but it is concerned about the growing administrative burden implied by the revisions in Draft 2 of EOP-012-3 and in the associated Technical Rationale. It is unreasonable to expect Generator Owners to determine whether missing hourly data sourced from NOAA or ASOS would have been included in the list of the lowest 100 hourly temperature values in the dataset. We recommend that the drafting team establish a minimum percentage of expected data points above which a Generator Owner can consider their dataset sufficient to determine the ECWT. For example, the drafting team could select a confidence level consistent with NERC's Sampling Methodology Guidelines and Criteria.

Likes 0	
Dislikes 0	

Response
Thank you for your comments. The DT has entertained various aspects of ECWT determination and has seen several examples using simply Excel functions to determine missing data points. The DT is aware of consultants provide functional Excel spreadsheets that determine the ECWT, how many points are missing, and where the missing points are located that leads it to believe it is not unreasonable to review data once every five years (or during unit construction). The DT considered changes in the ECWT but declined to address the changes as more ambiguity in the determination of ECWT could result.

Rhonda Jones - Invenergy LLC - 5	
Answer	
Document Name	

Comment
Invenergy is comfortable with the requirements around the calculation of the Extreme Cold Weather Temperature, but it is concerned about the growing administrative burden implied by the revisions in Draft 2 of EOP-012-3 and in the associated Technical Rationale. It is unreasonable to expect Generator Owners to determine whether missing hourly data sourced from NOAA or ASOS would have been included in the list of the lowest 100 hourly temperature values in the dataset. We recommend that the drafting team establish a minimum percentage of expected data points above which a Generator Owner can consider their dataset sufficient to determine the ECWT. For example, the drafting team could select a confidence level consistent with NERC's Sampling Methodology Guidelines and Criteria.

Likes 0	
Dislikes 0	
Response	
Thank you for your comments. The DT has entertained various aspects of ECWT determination and has seen several examples using simply Excel functions to determine missing data points. The DT is aware of consultants provide functional Excel spreadsheets that determine the ECWT, how many points are missing, and where the missing points are located that leads it to believe it is not unreasonable to review data once every five years (or during unit construction). The DT considered changes in the ECWT but declined to address the changes as more ambiguity in the determination of ECWT could result.	
Constantin Chitescu - Ontario Power Generation Inc. - 5	
Answer	
Document Name	
Comment	
OPG support NBPower's comment: Consideration should be given to updating the MOD-032-1 Requirement R1 data requirements to include generator cold weather data operating limitations under EOP-012-3 Requirement R1, with the objective to ensure that Planning Coordinators and Transmission Planners developing benchmark planning cases for performing Extreme Temperature Assessments pursuant to TPL-008-1 R3 have the information necessary to realistically posture their cases for identified benchmark temperature events.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comments. Suggestions to other Standards will be sent to other Projects (as applicable).	

End of Report