

## Comment Report

**Project Name:** 2019-06 Cold Weather | Draft 2 – EOP-011-2, IRO-010-4, TOP-003-5  
**Comment Period Start Date:** 4/2/2021  
**Comment Period End Date:** 4/26/2021  
**Associated Ballots:** 2019-06 Cold Weather EOP-011-2 AB 2 ST  
2019-06 Cold Weather IRO-010-4 AB 2 ST  
2019-06 Cold Weather TOP-003-5 AB 2 ST

There were 89 sets of responses, including comments from approximately 210 different people from approximately 137 companies representing 10 of the Industry Segments as shown in the table on the following pages.

## Questions

- 1. The SDT removed the generator unit-specific training from Requirement R7 and created a new Requirement R8. The new Requirement R8 was created by the SDT to add the GOP to the functional entities responsible for training. Whereas Requirement R7 is narrowly constructed for the GO to be responsible for the cold weather preparedness plan(s), Requirement R8 requires both the GO and GOP to provide the generating unit-specific training to their respective maintenance and operations personnel. Do you agree with this new requirement placement in the EOP-011 standard? If you do not agree, please provide an alternative. If you agree but have comments or suggestions on the SDT's recommendation, please provide your explanation and suggested language.**
- 2. In response to comments from the first posting, the SDT added cold weather data specification requirements for the BA within TOP-003, similar to what is required of the RC and TO. Do you agree with the inclusion of these requirements in the TOP-003 standard? If you do not agree, please provide an alternative to address the comments. If you agree but have comments or suggestions on the SDT's recommendation, please provide your explanation and suggested language.**
- 3. In response to comments, the SDT modified the Implementation Plan to allow eighteen (18) months following the effective date to become compliant with EOP-011, IRO-010, and TOP-003. Do you agree with this modification? If you do not agree, please provide an alternative implementation timeframe. If you agree but have comments or suggestions on the SDT's recommendation, please provide your explanation and suggested language.**
- 4. The SDT has provided draft Implementation Guidance to address some issues identified by industry during the previous comment period. Recognizing that Implementation Guidance is not subject to ballot body approval, do you agree with the SDT proceeding with the development of the Implementation Guidance? If you do not agree, or have additional topics you would like the SDT to consider in the Implementation Guidance, please provide your explanation and suggested language.**
- 5. Please provide any additional comments for the SDT to consider, if desired.**

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
Santee Cooper	Chris Wagner	1		Santee Cooper	Rene' Free	Santee Cooper	1,3,5,6	SERC
					Jennifer Richards	Santee Cooper	1,3,5,6	SERC
					Paul Camilletti	Santee Cooper	1,3,5,6	SERC
					LaChelle Brooks	Santee Cooper	1,3,5,6	SERC
MRO	Dana Klem	1,2,3,4,5,6	MRO	MRO NSRF	Joseph DePoorter	Madison Gas & Electric	3,4,5,6	MRO
					Larry Heckert	Alliant Energy	4	MRO
					Michael Brytowski	Great River Energy	1,3,5,6	MRO
					Jodi Jensen	Western Area Power Administration	1,6	MRO
					Andy Crooks	SaskPower Corporation	1	MRO
					Bryan Sherrow	Kansas City Board of Public Utilities	1	MRO
					Bobbi Welch	Omaha Public Power District	1,3,5,6	MRO
					Jeremy Voll	Basin Electric Power Cooperative	1	MRO
					Bobbi Welch	Midcontinent ISO	2	MRO
					Douglas Webb	Kansas City Power & Light	1,3,5,6	MRO

					Fred Meyer	Algonquin Power Co.	1	MRO
					John Chang	Manitoba Hydro	1,3,6	MRO
					James Williams	Southwest Power Pool, Inc.	2	MRO
					Jamie Monette	Minnesota Power / ALLETE	1	MRO
					Jamison Cawley	Nebraska Public Power	1,3,5	MRO
					Sing Tay	Oklahoma Gas & Electric	1,3,5,6	MRO
					Terry Harbour	MidAmerican Energy	1,3	MRO
					Troy Brumfield	American Transmission Company	1	MRO
New York Independent System Operator	Gregory Campoli	2		ISO/RTO Standards Review Committee	Gregory Campoli	New York Independent System Operator	2	NPCC
					Helen Lainis	IESO	2	NPCC
					Michael Del Viscio	PJM	2	RF
					Charles Yeung	Southwest Power Pool, Inc. (RTO)	2	MRO
					Bobbi Welch	Midcontinent ISO, Inc.	2	RF
					Ali Miremadi	CAISO	2	WECC
					Kahtleen Goodman	ISO-NE	2	NPCC
Jennie Wike	Jennie Wike		WECC	LPPC	Jennie Wike	LPPC	1,3,4,5,6	WECC
					John Babik	JEA	5	SERC
					Joe Tarantino	SMUD	1,3,4,5,6	WECC
					Tyson Archie	Platte River Power Authority	5	WECC
ACES Power Marketing	Jodirah Green	1,3,4,5,6	MRO,NA - Not Applicable,RF,SERC,Texas RE,WECC	ACES Standard Collaborations	Bob Solomon	Hoosier Energy Rural Electric	1	SERC

						Cooperative, Inc.		
					Kevin Lyons	Central Iowa Power Cooperative	1	MRO
					Bill Hutchison	Southern Illinois Power Cooperative	1	SERC
					David Hartman	Arizona Electric Power Cooperative	1	WECC
					Nick Fogleman	Prairie Power Incorporated	1,3	SERC
					Susan Sosbe	Wabash Valley Power Association	3	RF
					Amber Skillern	East Kentucky Power Cooperative	1	SERC
					Ellen Watkins	Sunflower Electric Power Corporation	1	MRO
Entergy	Julie Hall	6		Entergy	Oliver Burke	Entergy - Entergy Services, Inc.	1	SERC
					Jamie Prater	Entergy	5	SERC
DTE Energy - Detroit Edison Company	Karie Barczak	3		DTE Energy - DTE Electric	Adrian Raducea	DTE Energy - Detroit Edison Company	5	RF
					Daniel Herring	DTE Energy - DTE Electric	4	RF
					Karie Barczak	DTE Energy - DTE Electric	3	RF
MRO	Kendra Buesgens	1,2,3,4,5,6	MRO	MRO NSRF	Bobbi Welch	Midcontinent ISO, Inc.	2	MRO
					Christopher Bills	City of Independence Power & Light	4	MRO
					Fred Meyer	Algonquin Power Co.	1	MRO
					Jamie Monette	Allele - Minnesota Power, Inc.	1	MRO
					Jodi Jensen	Western Area Power	1,6	MRO

						Administration - Upper Great Plains East (WAPA)		
					John Chang	Manitoba Hydro	1,3,6	MRO
					Larry Heckert	Alliant Energy Corporation Services, Inc.	4	MRO
					Marc Gomez	Southwestern Power Administration	1	MRO
					Matthew Harward	Southwest Power Pool, Inc.	2	MRO
					LaTroy Brumfield	American Transmission Company, LLC	1	MRO
					Bryan Sherrow	Kansas City Board Of Public Utilities	1	MRO
					Terry Harbour	MidAmerican Energy	1,3	MRO
					Jamison Cawley	Nebraska Public Power	1,3,5	MRO
					Seth Shoemaker	Muscatine Power & Water	1,3,5,6	MRO
					Michael Brytowski	Great River Energy	1,3,5,6	MRO
					Jeremy Voll	Basin Electric Power Cooperative	1,3,5	MRO
					Joe DePoorter	Madison Gas and Electric	4	MRO
					David Heins	Omaha Public Power District	1,3,5,6	MRO
Duke Energy	Kim Thomas	1,3,5,6	FRCC,RF,SERC,Texas RE	Duke Energy	Laura Lee	Duke Energy	1	SERC
					Dale Goodwine	Duke Energy	5	SERC
					Greg Cecil	Duke Energy	6	RF
Southern Indiana Gas and Electric Co.	Leslie Hamby	3,5,6	RF	SIGE Project 2019-06	Erin Spence	Southern Indiana Gas and Electric Co.	6	RF

					Larry Rogers	Southern Indiana Gas and Electric Co.	5	RF
					Ryan Abshier	Southern Indiana Gas and Electric Co.	3	RF
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
					Ann Carey	FirstEnergy - FirstEnergy Solutions	6	RF
					Mark Garza	FirstEnergy-FirstEnergy	4	RF
Public Utility District No. 1 of Chelan County	Meaghan Connell	5		CHPD	Joyce Gundry	Public Utility District No. 1 of Chelan County	3	WECC
					Ginette Lacasse	Public Utility District No. 1 of Chelan County	1	WECC
					Glen Pruitt	Public Utility District No. 1 of Chelan County	6	WECC
					Meaghan Connell	Public Utility District No. 1 Chelan County	5	WECC
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
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
					Jim Howell	Southern Company - Southern Company Services, Inc. - Gen	5	SERC
Northeast Power Coordinating Council	Ruida Shu	1,2,3,4,5,6,7,8,9,10	NPCC	NPCC Regional Standards Committee No Dominion	Guy V. Zito	Northeast Power Coordinating Council	10	NPCC
					Randy MacDonald	New Brunswick Power	2	NPCC
					Glen Smith	Entergy Services	4	NPCC
					Alan Adamson	New York State Reliability Council	7	NPCC
					David Burke	Orange & Rockland Utilities	3	NPCC
					Helen Lainis	IESO	2	NPCC
					David Kiguel	Independent	7	NPCC
					Nick Kowalczyk	Orange and Rockland	1	NPCC



Joel Charlebois	AESI - Acumen Engineered Solutions International Inc.	5	NPCC
Mike Cooke	Ontario Power Generation, Inc.	4	NPCC
Salvatore Spagnolo	New York Power Authority	1	NPCC
Shivaz Chopra	New York Power Authority	5	NPCC
Deidre Altobell	Con Ed - Consolidated Edison	4	NPCC
Dermot Smyth	Con Ed - Consolidated Edison Co. of New York	1	NPCC
Peter Yost	Con Ed - Consolidated Edison Co. of New York	3	NPCC
Cristhian Godoy	Con Ed - Consolidated Edison Co. of New York	6	NPCC
Nurul Abser	NB Power Corporation	1	NPCC
Randy MacDonald	NB Power Corporation	2	NPCC
Michael Ridolfino	Central Hudson Gas and Electric	1	NPCC
Vijay Puran	NYSPPS	6	NPCC
ALAN ADAMSON	New York State Reliability Council	10	NPCC
Sean Cavote	PSEG - Public Service Electric and Gas Co.	1	NPCC

					Brian Robinson	Utility Services	5	NPCC
					Quintin Lee	Eversource Energy	1	NPCC
					Jim Grant	NYISO	2	NPCC
					John Pearson	ISONE	2	NPCC
					John Hastings	National Grid USA	1	NPCC
					Michael Jones	National Grid USA	1	NPCC
					Nicolas Turcotte	Hydro-Qu?bec TransEnergie	1	NPCC
					Chantal Mazza	Hydro-Quebec	2	NPCC
					Michele Tondalo	United Illuminating Co.	1	NPCC
					Paul Malozewski	Hydro One Networks, Inc.	3	NPCC
Dominion - Dominion Resources, Inc.	Sean Bodkin	6		Dominion	Connie Lowe	Dominion - Dominion Resources, Inc.	3	NA - Not Applicable
					Lou Oberski	Dominion - Dominion Resources, Inc.	5	NA - Not Applicable
					Larry Nash	Dominion - Dominion Virginia Power	1	NA - Not Applicable
					Rachel Snead	Dominion - Dominion Resources, Inc.	5	NA - Not Applicable
OGE Energy - Oklahoma Gas and Electric Co.	Sing Tay	6	SPP RE	OKGE	Sing Tay	OGE Energy - Oklahoma	6	MRO
					Terri Pyle	OGE Energy - Oklahoma Gas and Electric Co.	1	MRO
					Donald Hargrove	OGE Energy - Oklahoma	3	MRO

						Gas and Electric Co.		
					Patrick Wells	OGE Energy - Oklahoma Gas and Electric Co.	5	MRO

1. The SDT removed the generator unit-specific training from Requirement R7 and created a new Requirement R8. The new Requirement R8 was created by the SDT to add the GOP to the functional entities responsible for training. Whereas Requirement R7 is narrowly constructed for the GO to be responsible for the cold weather preparedness plan(s), Requirement R8 requires both the GO and GOP to provide the generating unit-specific training to their respective maintenance and operations personnel. Do you agree with this new requirement placement in the EOP-011 standard? If you do not agree, please provide an alternative. If you agree but have comments or suggestions on the SDT's recommendation, please provide your explanation and suggested language.

**John Allen - City Utilities of Springfield, Missouri - 4**

**Answer** No

**Document Name**

**Comment**

The requirement does not state a clear measurable reliability objective. Without this clarity, the ERO and industry will likely have various interpretations and it may not meet its intended objective. Additionally, it applies to the GOP but the GOP has no requirement for a preparedness plan. Whose plan is this referencing? If the GOP is supposed to have a plan, then it needs to be a requirement. Otherwise, I offer the following alternative to R8.

*Each Generator Owner shall provide training to personnel on their roles and responsibilities for implementing the cold weather preparedness plan(s) developed in R7.*

Likes 0

Dislikes 0

**Response**

**Matthew Nutsch - Seattle City Light - 1,3,4,5,6 - WECC**

**Answer** No

**Document Name**

**Comment**

If the SDT believes R8 is justified and should include the GOP, it should also include the requirement to provide training on the specific cold-weather preparedness plan developed pursuant to R7. Seattle remains concerned about changes to this draft of EOP-011 and in particular the language of the subrequirements of R7, and these concerns are discussed in our responses to items 4 and 5, below.

Likes 0

Dislikes 0

**Response**

**Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC**

**Answer** No

<b>Document Name</b>	
<b>Comment</b>	
BPA supports Reclamation's comments.	
Likes 0	
Dislikes 0	
<b>Response</b>	
Donna Wood - Tri-State G and T Association, Inc. - 1	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>Although, Tri-State agrees with separating out the generator unit-specific training requirement under R8, we believe this training requirement would be better placed under PER-006-1. Even though PER-006-1 R1 applies to protective relaying, the purpose of the standard is to ensure that personnel are receiving training on specific topics essential to reliability to perform or support real-time operations of the Bulk Electric System. This applies to the specific training requirement for Cold Weather plans as well. In addition, we would like to see one entity responsible for training, not both. Having both GO or GOP providing training could lead to confusion of responsibility where the GO and GOP do not belong to the same entity.</p>	
Likes 2	Tarantino Joe On Behalf of: Foung Mua, Sacramento Municipal Utility District, 3, 5, 6, 4, 1; Kevin; City Utilities of Springfield, Missouri, 4, Allen John
Dislikes 0	
<b>Response</b>	
Joe O'Brien - NiSource - Northern Indiana Public Service Co. - 6	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p><i>EOP-011-1 is presently applicable to System Operators (TOP, BA, RC). Adding GO/GOP applicability to EOP-011-2 with proposed Requirement 7 does not appear to be a good fit. NIPSCO suggests that creating a new standard may be more appropriate here, similar to what was done with EOP-010-1 GMD Operations. Also for the new training requirements, there appears to be a concern placing these in EOP-011 where they may be difficult to track. Within the PER standards may be a better location, possibly within PER-006. Also, the term "calendar year" should be considered in lieu of "annual".</i></p>	
Likes 2	Tarantino Joe On Behalf of: Foung Mua, Sacramento Municipal Utility District, 3, 5, 6, 4, 1; Kevin; City Utilities of Springfield, Missouri, 4, Allen John
Dislikes 0	

<b>Response</b>	
Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
Training requirements for the GO/GOP should be placed into the PER-006 standard. There was a concerted effort a few years ago to have all training requirements within one standard so that Registered Entities would know where to look to find all the requirements associated with training.	
Likes 3	Tarantino Joe On Behalf of: Foung Mua, Sacramento Municipal Utility District, 3, 5, 6, 4, 1; Kevin; City Utilities of Springfield, Missouri, 4, Allen John; Wike Jennie On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 3, 1, 4, 5, 6; John Merre
Dislikes 0	
<b>Response</b>	
Jennie Wike - Jennie Wike On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 3, 1, 4, 5, 6; John Merrell, Tacoma Public Utilities (Tacoma, WA), 3, 1, 4, 5, 6; Marc Donaldson, Tacoma Public Utilities (Tacoma, WA), 3, 1, 4, 5, 6; Ozan Ferrin, Tacoma Public Utilities (Tacoma, WA), 3, 1, 4, 5, 6; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 3, 1, 4, 5, 6; - Jennie Wike, Group Name LPPC	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>LPPC is concerned with locating training requirements in a Standard other than the PER suite of standards. While we agree with the inclusion of the Cold Weather requirements in EOP-011, we disagree with the inclusion of the training requirement associated with cold weather preparedness in the EOP-011 standard and believe more appropriate to be included in the PER suite of training standards. Adding training requirements to other non-training standards creates a condition that makes training requirements hard to find and easy to lose; a condition that is not conducive to a quality standard. Locating training requirements outside of PER Standards is also not following industry precedent, such as the Standards Efficiency Review recommendations and the recent Project 2007-06.2 that moved training requirements from PRC Standards to the new PER-006-1 Standard.</p> <p>Currently, PER-006 includes training for the GOP and respective plant personnel. A simple fix to this issue is to strike Requirement R8 from the EOP-011 standard and place it into the appropriate PER-006 standard. If PER-006 is not allowed to be modified due to the scope of the SAR, then a new SAR to address this training requirements should be created.</p>	
Likes 5	Tarantino Joe On Behalf of: Foung Mua, Sacramento Municipal Utility District, 3, 5, 6, 4, 1; Kevin; Snohomish County PUD No. 1, 3, Chaney Holly; City Utilities of Springfield, Missouri, 4, Allen John; Platte River Power Authority, 5, Archie Tyson; Platte River Power Authority, 3, Kiess Wade
Dislikes 0	
<b>Response</b>	

**Joe Tarantino - Joe Tarantino On Behalf of: Foung Mua, Sacramento Municipal Utility District, 3, 5, 6, 4, 1; Kevin Smith, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 5, 6, 4, 1; Wei Shao, Sacramento Municipal Utility District, 3, 5, 6, 4, 1; - Joe Tarantino**

**Answer** No

**Document Name**

**Comment**

*SMUD is concerned with locating training requirements in a Standard other than the PER suite of standards. While we agree with the inclusion of the Cold Weather requirements in EOP-011 we disagree with the inclusion of the training requirement associated with cold weather preparedness in the EOP-011 standard and believe it to be more appropriate for Requirement R8 to be moved into the PER suite of training standards. Adding training requirements to other non-training standards creates a condition that makes training requirements hard to find and easy to lose; a condition that is not conducive to a quality standard. Locating training requirements outside of PER Standards is also not following industry precedent, such as the Standards Efficiency Review recommendations and the recent Project 2007-06.2 that moved training requirements from PRC Standards to the new PER-006-1 Standard.*

Likes 3 City Utilities of Springfield, Missouri, 4, Allen John; Wike Jennie On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 3, 1, 4, 5, 6; John Merre; Platte River Power Authority, 5, Archie Tyson

Dislikes 0

**Response**

**Ben Burnett - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE**

**Answer** No

**Document Name**

**Comment**

CenterPoint Energy Houston Electric, LLC (CEHE) recognizes the urgency to develop and implement the recommendations identified in the 2019 Federal Energy Regulatory Commission (FERC) and North American Electric Reliability Corporation (NERC) Staff Report. However, CEHE maintains that cold weather preparedness should be considered standard operating procedure and thus preventative measures to avoid an Emergency Operation.

While CEHE supports the development of a requirement for cold weather rating of facilities and associated training for applicable personnel, CEHE encourages the SDT to reconsider the development of a new FAC Standard which would cover Generation and TO/TOP Substation Winterization practices and requirements. The proposed new FAC Standard would focus on the development and implementation of preventative standard operating procedures intended to mitigate cold weather emergency-level situations.

Likes 0

Dislikes 0

**Response**

**Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF, Group Name SIGE Project 2019-06**

**Answer** No

**Document Name**

**Comment**

Southern Indiana Gas & Electric Company (SIGE) recognizes the urgency to develop and implement the recommendations identified in the 2019 Federal Energy Regulatory Commission (FERC) and North American Electric Reliability Corporation (NERC) Staff Report. However, SIGE maintains that cold weather preparedness should be considered standard operating procedure and thus preventative measures to avoid an Emergency Operation.

While SIGE supports the development of a requirement for cold weather rating of facilities and associated training for applicable personnel, SIGE encourages the SDT to reconsider the development of a new FAC Standard which would cover Generation and TO/TOP Substation Winterization practices and requirements. The proposed new FAC Standard would focus on the development and implementation of preventative standard operating procedures intended to mitigate cold weather emergency-level situations.

Likes 0

Dislikes 0

**Response**

**Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC**

**Answer**

No

**Document Name**

**Comment**

The “Redline to Last Posted” version of EOP-011-2 does not appear to be a true redline to last posted version. There was no R7, part 7.4 (as reflected in Draft 1) redlined out.

Requirement R7 in Draft 2 replaces the phrase “...shall develop, maintain, and implement...” with “...shall implement and maintain...”. It would seem the Generator Owner should develop and maintain cold weather preparedness plan(s) for its generating unit(s) in consultation with the Generator Operator(s) of the unit(s). The Generator Operator will foreseeably be responsible for implementing some elements of the plan, particularly those that require execution during or nearing Real-time operations. Part of the plan should be to establish those accountabilities. We suggest Requirement R7 be restated as follows:

“R7. Each Generator Owner, in conjunction with its Generator Operator(s), shall develop and maintain one or more cold weather preparedness plans for its generating units. The cold weather preparedness plan(s) shall address the following concerns, as applicable:

7.1. Accountabilities for implementing the plan. *[new].....”*

Then shift the 7.1 through 7.3.2.3 in Draft 2 to 7.2 through 7.4.2.3. Measure M7 would need to be revised to “Each Generator Owner will have evidence that demonstrates its cold weather preparedness plans have been developed and maintained in conjunction with its Generator Operator(s). Each Generator Owner and Generator Operator will have evidence that demonstrates it implemented actions in the cold weather preparedness plans that it is accountable for.”

Requirement R8 starts by stating, “Each Generator Operator or Generator Owner...”. The “or” infers that one or the other must do this. When the GO and GOP are separate entities, how is it to be determined which will be responsible? We recommend changing the “or” to an “and” such that each is responsible for the training of their “personnel responsible for implementing cold weather preparedness plan(s)”. The same comment goes for the wording in section 1.2, Evidence Retention. This goes along with the Technical Rationale for Requirement R8, which states in part, “...The SDT created R8 as applicable to both the Generator Owner **and** the Generator Operator...” and with the question above which states in part,



“... Requirement R8 requires **both the GO and GOP** to provide the generating unit-specific training to their respective...”. Similarly, Measure M8 should start with “Each Generator Operator and Generator Owner...”.

Likes 0

Dislikes 0

### Response

**Paul Mehlhaff - Sunflower Electric Power Corporation - 1**

**Answer**

No

**Document Name**

**Comment**

Sunflower agrees with the comments ACES provided for question 1.

Likes 0

Dislikes 0

### Response

**Rich Hydzik - Rich Hydzik On Behalf of: Scott Kinney, Avista - Avista Corporation, 3, 5, 1; - Rich Hydzik**

**Answer**

No

**Document Name**

**Comment**

R7 is a significant administrative burden on the portion of the industry that operates in seasonally cold environments. Those facilities are engineered to operate through expected cold weather conditions, and R7 does not appear to improve the reliability those facilities. The cold weather events that the industry has experienced have disproportionately affected entities that rarely see extreme cold. It may make more sense to pursue a regional standard to address these issues.

As I do not support R7, I also see no need for R8 on a continent wide basis.

Likes 0

Dislikes 0

### Response

**Truong Le - Truong Le On Behalf of: David Owens, Gainesville Regional Utilities, 1, 5, 3; Neville Bowen, Ocala Utility Services, 3; - Truong Le**

**Answer**

No

**Document Name**

**Comment**

We support the comments made by John Allen from City Utilities of Springfield, Missouri: "

The requirement does not state a clear measurable reliability objective. Without this clarity, the ERO and industry will likely have various interpretations and it may not meet its intended objective. Additionally, it applies to the GOP but the GOP has no requirement for a preparedness plan. Whose plan is this referencing? If the GOP is supposed to have a plan, then it needs to be a requirement. Otherwise, I offer the following alternative to R8.

*Each Generator Owner shall provide training to personnel on their roles and responsibilities for implementing the cold weather preparedness plan(s) developed in R7. "*

Likes 0

Dislikes 0

**Response****W. Dwayne Preston - Austin Energy - 3**

**Answer**

No

**Document Name**

**Comment**

*Austin Energy is concerned with locating training requirements in a Standard other than the PER suite of standards. Adding training requirements to other non-training standards creates a condition that makes training requirements hard to find and easy to lose; a condition that is not conducive to a quality standard. Locating training requirements outside of PER Standards is also not following industry precedent, such as the Standards Efficiency Review recommendations and the recent Project 2007-06.2 that moved training requirements from PRC Standards to the new PER-006-1 Standard.*

*Currently, PER-006 includes training for the GOP and respective plant personnel. A simple fix to this issue is to strike Requirement R8 from the EOP-011 standard and place it into the appropriate PER-006 standard. If PER-006 is not allowed to be modified due to the scope of the SAR, then a new SAR to address this training requirements should be created.*

Likes 2

Wike Jennie On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 3, 1, 4, 5, 6; John Merre; Austin Energy, 6, Martin Lisa

Dislikes 0

**Response****Glen Farmer - Avista - Avista Corporation - 5**

**Answer**

No

**Document Name**

**Comment**

Having a cold weather plan should be enough from a regulatory point. Reaching to far into the business. Its not clear who all should be trained.

Likes 0

Dislikes 0

### Response

#### Marty Hostler - Northern California Power Agency - 3,4,5,6

Answer

No

Document Name

### Comment

NO. Requiring GO/GOP Market participants to perform activities that non-registered generator market participants do not have to perform, nor pay for, runs afoul with NERC Market Interference Principles., namely: "A reliability standard shall not give any market participant an unfair competitive advantage".

Likes 0

Dislikes 0

### Response

#### Wendy Center - U.S. Bureau of Reclamation - 5

Answer

No

Document Name

### Comment

Reclamation disagrees with placement of a training requirement in an Emergency Operations standard. As identified by NERC's Standards Efficiency Review Team in 2019, training requirements should be consolidated into the Personnel Performance, Training and Qualifications (PER) family of standards to not only help prevent an entity from inadvertently overlooking a training requirement but to avoid the churn required to review and revise inefficiently written standards.

Reclamation disagrees with a continent-wide reliability standard to address cold weather preparation. Because different geographic locations require different levels of cold weather preparation, the fact that entities in geographic locations that commonly experience cold weather may already have adequate preparations in place, but are now required to provide extra documentation of these preparations simply to support compliance, is an added administrative burden that does not directly improve reliability and is therefore inappropriate for a continent-wide standard.

Likes 0

Dislikes 0

### Response

**Scott Berry - Scott Berry On Behalf of: Jack Alvey, Indiana Municipal Power Agency, 1, 4; - Scott Berry**

**Answer** No

**Document Name**

**Comment**

The GOP is not required to have a cold weather preparedness plan as per requirement R7. The two requirements, R7 and R8, need to be aligned. The GOP should be added to requirement R7, especially when considering that the GOP is very likely the party to operate and maintain the generating unit(s) for the GO.

After fixing the applicability and alignment issue, the requirement for training should be moved to the PER standard family, more than likely in the PER-006 standard. If there is an issue with the SAR for addressing this recommendation, the SAR should be corrected to allow for this training requirement to be included in the proper group of standards.

Likes 1 Wike Jennie On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 3, 1, 4, 5, 6; John Merre

Dislikes 0

**Response**

**Erin Green - Western Area Power Administration - 1,6**

**Answer** No

**Document Name**

**Comment**

WAPA supports the comments submitted by BPA.

Erin Green, WAPA, Segment 6

Likes 0

Dislikes 0

**Response**

**Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1**

**Answer** No

**Document Name**

**Comment**

AEPC agrees with this revision as applicable to the GO, however we do not agree with inclusion of the GOP in EOP-011. AEPC recommends that the GOP applicability be added as R2 in PER-006. PER-006 is the current standard applicable to the GOP for "Specific Training for Personnel" that we believe meets and fits the intent of this requirement, and furthermore does not add a new/additional Standard for GOP applicability.

AEPC has signed on to ACES comments.

Likes 0

Dislikes 0

**Response**

**John Babik - JEA - 5**

**Answer**

No

**Document Name**

**Comment**

In support of LPPC comments

Likes 0

Dislikes 0

**Response**

**Joe McClung - JEA - 1**

**Answer**

No

**Document Name**

**Comment**

We support LPPC's comments.

Likes 0

Dislikes 0

**Response**

**LeRoy Patterson - Public Utility District No. 2 of Grant County, Washington - 6**

**Answer**

No

**Document Name**

**Comment**

The requirement for each Generator Operator (GOP) or Generator Owner (GO) to provide generating unit-specific training to its maintenance or operations personnel responsible for implementing cold weather preparedness plan(s) annually conflicts with PER-005 requirements that expect training to be task-based with training requirements related to the difficulty, importance, and frequency of each task. In addition, NERC has modified other standards to remove training requirements from individual standards in favor of placing them within PER standards. The EOP-011-2 requirement ignores that effort, which is unfortunate considering PER-006 deals specifically with GO and GOP training expectations. Finally, proposed training requirements deal with cold weather only. Training for all applicable extreme weather events should be included in the requirement, not just cold weather.

Place the training requirement in a new PER standard or add it to the PER-006 standard.

Likes 0

Dislikes 0

**Response**

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

**Answer**

No

**Document Name**

**Comment**

Thank you for the opportunity to review and comment. BC Hydro supports the comments made by CenterPoint Energy Houston Electric, LLC in regards to the placement of these requirements in a new FAC standard. BC Hydro supports Sacramento Municipal Utility District (SMUD)'s comments in regards to placing the training requirements in PER-006-1.

Likes 0

Dislikes 0

**Response**

**Lisa Martin - Austin Energy - 6**

**Answer**

No

**Document Name**

**Comment**

I support comments made by W. Dwayne Preston, Austin Energy, Segment 3.

Likes 0

Dislikes 0

**Response**

**Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations**

**Answer** No

**Document Name**

**Comment**

ACES agrees with this revision as applicable to the GO, however we do not agree with inclusion of the GOP in EOP-011. ACES recommends that the GOP applicability be added as R2 in PER-006. ACES recommends that the GOP applicability be added as R2 in PER-006. PER-006 is the current standard applicable to the GOP for "Specific Training for Personnel" that we believe meets and fits the intent of this requirement, and furthermore does not add a new/additional Standard for GOP applicability.

Likes 0

Dislikes 0

**Response**

**Glenn Pressler - CPS Energy - 3**

**Answer** No

**Document Name**

**Comment**

No, CPSE supports concerns of LPPC, SMUD, TVA, and others, including being concerned with locating training requirements in a Standard other than the PER suite of standards. While OK with the inclusion of the Cold Weather requirements in EOP-011, we disagree with the inclusion of the training requirement associated with cold weather preparedness in the EOP-011 standard and believe more appropriate to be included in the PER suite of training standards. Adding training requirements to other non-training standards creates a condition that makes training requirements hard to find and easy to lose; a condition that is not conducive to a quality standard. Locating training requirements outside of PER Standards is also not following industry precedent, such as the Standards Efficiency Review recommendations and the recent Project 2007-06.2 that moved training requirements from PRC Standards to the new PER-006-1 Standard.

Currently, PER-006 includes training for the GOP and respective plant personnel. A simple fix to this issue is to strike Requirement R8 from the EOP-011 standard and place it into the appropriate PER-006 standard. If PER-006 is not allowed to be modified due to the scope of the SAR, then a new SAR to address this training requirements should be created.

Training requirements for the GO/GOP should be placed into the PER-006 standard. There was a concerted effort a few years ago to have all training requirements within one standard so that Registered Entities would know where to look to find all the requirements associated with training.

New training requirements should be in PER; concerned with placing new training requirements in EOP-011, PER-006 may be a better location.

There is confusion regarding who (GO or GOP) is required to have the plan, who owns the plan and who must train to who's plan when GO/GOP not same entity, nor required under R7.

Likes 0

Dislikes 0

**Response**

**Dennis Sismaet - Northern California Power Agency - 6**

**Answer** No

**Document Name**

**Comment**

NERC should not create a reliability standard that applies to all regional entities. Since cold weather is geographic specific, NERC should let the regional entities decide how best to implement any cold weather regional standards specific to their geographic area. For example, in California, there are no cold weather issues that other parts of the country are facing.

Also, requiring GO/GOP Market participants to perform activities that non-registered generator market participants do not have to perform, nor pay for, runs afoul with NERC Market Interference Principles., namely: "A reliability standard shall not give any market participant an unfair competitive advantage".

Likes 0

Dislikes 0

**Response**

**Gladys DeLaO - CPS Energy - 1**

**Answer** No

**Document Name**

**Comment**

No, CPSE supports concerns of LPPC, SMUD, TVA, and others, including being concerned with locating training requirements in a Standard other than the PER suite of standards. While OK with the inclusion of the Cold Weather requirements in EOP-011, we disagree with the inclusion of the training requirement associated with cold weather preparedness in the EOP-011 standard and believe more appropriate to be included in the PER suite of training standards. Adding training requirements to other non-training standards creates a condition that makes training requirements hard to find and easy to lose; a condition that is not conducive to a quality standard. Locating training requirements outside of PER Standards is also not following industry precedent, such as the Standards Efficiency Review recommendations and the recent Project 2007-06.2 that moved training requirements from PRC Standards to the new PER-006-1 Standard.

Currently, PER-006 includes training for the GOP and respective plant personnel. A simple fix to this issue is to strike Requirement R8 from the EOP-011 standard and place it into the appropriate PER-006 standard. If PER-006 is not allowed to be modified due to the scope of the SAR, then a new SAR to address this training requirements should be created.

Training requirements for the GO/GOP should be placed into the PER-006 standard. There was a concerted effort a few years ago to have all training requirements within one standard so that Registered Entities would know where to look to find all the requirements associated with training.

New training requirements should be in PER; concerned with placing new training requirements in EOP-011, PER-006 may be a better location.

There is confusion regarding who (GO or GOP) is required to have the plan, who owns the plan and who must train to who's plan when GO/GOP not same entity, nor required under R7.

Likes 0



Dislikes 0

**Response**

**Michael Whitney - Northern California Power Agency - 3, Group Name NCPA**

**Answer** No

**Document Name**

**Comment**

See Marty Hostler's comments.

Likes 0

Dislikes 0

**Response**

**Amy Jones - Public Utility District No. 2 of Grant County, Washington - 1,4,5,6**

**Answer** No

**Document Name**

**Comment**

Changes to requirements 1 and 2 single out cold weather conditions from other extreme weather events. This creates additional effort, tracking, and training for Balancing Authorities and Transmission Operators without providing benefit since determining reliability concerns and impacts provide reliability benefit only to the extent conditions, cold weather or otherwise, are beyond those normally or routinely encountered. Similarly, adding requirement 7 for GOs should relate to extreme weather conditions, of which cold weather is one aspect to be considered. Data sharing requirements of R7 appear useful, but should include generator equipment that may be affected by all applicable extreme weather events not just cold weather.

As presently worded, changed requirements cause entities that already deal with ongoing cold weather conditions to produce plans, tracking processes, training, etc. for routine and/or annual events rather than focusing on consequences of extreme

events.

Regarding training, the requirement for each Generator Operator (GOP) or Generator Owner (GO) to provide generating unit-specific training to its maintenance or operations personnel responsible for implementing cold weather preparedness plan(s) annually conflicts with PER-005 requirements that expect training to be task-based with training requirements related to the difficulty, importance, and frequency of each task. In addition, NERC has modified other standards to remove training requirements from individual standards in favor of placing them within PER standards. The EOP-011- 2 requirement ignores that effort, which is unfortunate considering PER-006 deals specifically with GO and GOP training expectations. Finally, proposed training requirements deal

with cold weather only. Training for all applicable extreme weather events should be included in the requirement, not just cold weather.

Likes 0

Dislikes 0

**Response**

**Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer**

Yes

**Document Name**

**Comment**

The NSRF agrees with splitting out the training requirement in R7 to R8.

Likes 0

Dislikes 0

**Response**

**Larry Heckert - Alliant Energy Corporation Services, Inc. - 4**

**Answer**

Yes

**Document Name**

**Comment**

Alliant Energy supports the comments submitted by the MRO NSRF.

Likes 0

Dislikes 0

**Response**

**Brian Evans-Mongeon - Utility Services, Inc. - 4**

**Answer**

Yes

**Document Name**

**Comment**

With the 'or' language within Requirement R8 (i.e. Generator Operator or Generator Owner), when the GOP and GO functional registrations are not both retained by one registered entity, the responsibility for who must implement training is not clearly defined and may lead to missed compliance obligations.

Suggest looking at TPL-007-4 R1 language that describes a way for multiple functional registrations to determine responsibilities (i.e. "Each PC in conjunction with its TP shall identify the individual and joint responsibilities..."). Proposed EOP-011 R8 language:

Each Generator Operator in conjunction with its Generator Owner shall identify the organization responsible for providing the generating unit-specific training, and that identified entity shall provide the training to its maintenance or operations personnel, as needed, for the implementation of the cold weather preparedness plan(s).

Likes 2

City Utilities of Springfield, Missouri, 4, Allen John; Taunton Municipal Lighting Plant, 1, Tremont Devon

Dislikes 0

### Response

**Dana Klem - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer**

Yes

**Document Name**

**Comment**

The NSRF agrees with splitting out the training requirement in R7 to R8.

Likes 0

Dislikes 0

### Response

**Donald Lock - Talen Generation, LLC - 5**

**Answer**

Yes

**Document Name**

**Comment**

R8 does not say whether training is a one-time obligation or must be renewed each year. If annual refresher training is intended the standard should say so.

Likes 0

Dislikes 0

### Response

<b>Julie Hall - Entergy - 6, Group Name</b> Entergy	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Entergy agrees with the recommendation but suggests the inclusion of "Each Generator Operator and/or Generator Owner" to clarify the applicability to both the GO and the GOP. Perhaps additional clarity is needed to suggest entities collaborate when they are not both a GO and GOP.	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Leonard Kula - Independent Electricity System Operator - 2</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
N/A.	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
MPC supports MRO NERC Standards Review Forum comments.	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name</b> Southern Company	
<b>Answer</b>	Yes

<b>Document Name</b>	
<b>Comment</b>	
Southern Company supports this change to EOP-011.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Martin Sidor - NRG - NRG Energy, Inc. - 6</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
NRG Energy agrees with the addition of R8 to train personnel to implement cold-weather preparedness plans. The location of the training requirement in EOP-011 is acceptable, providing a direct link to R7 for content.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
If tasks that are performed by maintenance personnel within a "cold weather plan" are the same as daily/routine tasks, however on specific components, would additional "specific" training be required per this Requirement or would the regular training evidence be sufficient?	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Patricia Lynch - NRG - NRG Energy, Inc. - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	

**Comment**

NRG Energy agrees with the addition of R8 to train personnel to implement cold-weather preparedness plans. The location of the training requirement in EOP-011 is acceptable, providing a direct link to R7 for content.

Likes 0

Dislikes 0

**Response****Terry Harbour - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1****Answer**

Yes

**Document Name****Comment**

MEC supports the MRO NSRF comments.

Likes 0

Dislikes 0

**Response****Meaghan Connell - Public Utility District No. 1 of Chelan County - 5, Group Name CHPD****Answer**

Yes

**Document Name****Comment**

CHPD agrees with moving the generator unit-specific training from Requirement R7 and placing it in the new Requirement R8. CHPD however believes the use of "or" in the statement "shall provide generating unit-specific training to its maintenance OR operations personnel responsible for implementing cold weather preparedness plan(s)" causes confusion as to what the compliance obligation is if an entity is both registered as a Generator Owner and Generator Operator and implies there is a choice of who is trained.

Likes 0

Dislikes 0

**Response****Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF****Answer**

Yes

<b>Document Name</b>	
<b>Comment</b>	
The NAGF agrees with placement of the generator unit-specific training Requirement R8 in the EOP-11 standard.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Joshua Andersen - Salt River Project - 1,3,5,6 - WECC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
SRP agrees it should be the GO's responsibility to ensure the facilities are reasonably prepared for expected cold weather for the facility. SRP also agrees that it may be the GO or GOP's that are best situated to be the ones to activate cold weather preparations.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Jennifer Flandermeyer - Jennifer Flandermeyer On Behalf of: Allen Klassen, Evergy, 6, 1, 3, 5; Derek Brown, Evergy, 6, 1, 3, 5; Marcus Moor, Evergy, 6, 1, 3, 5; Thomas ROBBEN, Evergy, 6, 1, 3, 5; - Jennifer Flandermeyer</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
While we agree with the training requirement, the additional change in R7 (also included in IRO-010) specifically 7.3 requires additional discussion and consideration to effectively accomplish the best approach. Agree with the need and pressure to address, however, it is complex and shouldn't be pushed through last minute without due consideration.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Amy Casuscelli - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC</b>	
<b>Answer</b>	Yes

**Document Name****Comment**

Xcel Energy agrees with the new training Requirement and the close proximity to R7. Including this training Requirement in PER-006 may not adequately address the specific nature of the training.

Likes 0

Dislikes 0

**Response****Jamie Johnson - California ISO - 2****Answer**

Yes

**Document Name****Comment**

The California ISO agrees with comments submitted by the ISO/RTO Counsel (IRC) Standards Review Committee.

Likes 0

Dislikes 0

**Response****Bobbi Welch - Midcontinent ISO, Inc. - 2****Answer**

Yes

**Document Name****Comment**

MISO supports comments submitted by the ISO/RTO Council Standards Review Subcommittee (IRC SRC). In addition, we are submitting additional comments on behalf of MISO as an individual entity.

With regard to placement of the requirement, i.e. whether in **EOP-011-2: Emergency Preparedness and Operations** or **PER-006-1: Specific Training for (Generator Operator) Personnel**, MISO is neutral.

**Enhance the training requirement to clarify accountability and specify a periodicity to ensure awareness and preparedness of generator personnel** - MISO believes it is more important to focus on the content of the training requirement as opposed to the placement of the requirement. To that end, we recommend the following changes to clarify accountability and require a periodicity in training as we believe the proposed requirement does not go far enough in these areas:

1. **Clarify Accountability for Performing Training** - As proposed, requirement R8 applies to the Generator Operator (GOP) **or** Generator Owner (GO) but not both (as this would require the use of "**and**"). This leaves the door open to only one of the GO/GOP functions having to provide training to its maintenance **or** operations personnel but not both (as this would require the use of "**and**"). Typically, maintenance and operations are separate functions where maintenance is the function of the GO and operations the function of the GOP. Therefore, to ensure applicability to each function, MISO



recommends the requirement be modified to be inclusive of all functions whereby use of the word “its” limits applicability to employees of the relevant function.

**2. Require a Periodicity for Preparedness Plan Training** – As proposed, requirement R8 only requires the GO or GOP to perform training on preparedness plans one time. Over time, this could result in generator personnel falling out of familiarity and not being apprised of revisions to preparedness plans. To remedy this, MISO recommends the training be performed annually similar to the inspection and maintenance of freeze protection measures as required under Part 7.2.

**Recommendation:** Revise the language to read as follows

**R8.** Each Generator Operator **and** Generator Owner shall provide **annual** generating unit-specific training to its maintenance **and** operations personnel responsible for implementing cold weather preparedness plan(s). [Violation Risk Factor: Medium] [Time Horizon: Longterm Planning, Operations Planning]

Likes 0

Dislikes 0

### Response

**David Jendras - Ameren - Ameren Services - 3**

**Answer**

Yes

**Document Name**

### Comment

Ameren generally agrees with the SDT's recommendation but has some comments. Since changes are being made to both standards, an error in one standard could lead to an error in another standard, which doesn't make much sense and seems repetitive.

Ameren would like to know what is going to be done with all the data that needs to be collected. If the data is not being used for a specified purpose why does it need to be collected?

Ameren would like to know how the potential conflict would be resolved if the data is requested but the GOP isn't required to send it and denies the request?

Likes 0

Dislikes 0

### Response

**Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric**

**Answer**

Yes

**Document Name**

### Comment

As much as we would like to see all training related requirements in the PER standard family, we understand why the Standards Drafting Team chose its placement in EOP-011 R8.

Likes 0

Dislikes 0

### Response

**Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name** NPCC Regional Standards Committee No Dominion

**Answer** Yes

**Document Name**

### Comment

With the 'or' language within Requirement R8 (i.e. Generator Operator or Generator Owner), when the GOP and GO functional registrations are not both retained by one of the registered entities, the responsibility for who must implement training is not clearly defined and may lead to missed compliance obligations.

Suggest looking at TPL-007-4 R1 language that describes a way for multiple functional registrations to determine responsibilities (i.e. "Each PC in conjunction with its TP shall identify the individual and joint responsibilities..."). Proposed EOP-011 R8 language:

Each Generator Operator in conjunction with its Generator Owner shall identify the organization responsible for providing the generating unit-specific training, and that identified entity shall provide the training to its maintenance or operations personnel, as needed, for the implementation of the cold weather preparedness plan(s).

Likes 0

Dislikes 0

### Response

**Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable**

**Answer** Yes

**Document Name**

### Comment

EI supports the proposed changes to EOP-011-2 R7.

Likes 0

Dislikes 0

### Response

**Devon Tremont - Taunton Municipal Lighting Plant - 1**

**Answer** Yes

**Document Name**

**Comment**

The Taunton Municipal Lighting Plant supports the comments submitted by Utility Services, Inc., which state:

With the 'or' language within Requirement R8 (i.e. Generator Operator or Generator Owner), when the GOP and GO functional registrations are not both retained by one registered entity, the responsibility for who must implement training is not clearly defined and may lead to missed compliance obligations.

Suggest looking at TPL-007-4 R1 language that describes a way for multiple functional registrations to determine responsibilities (i.e. "Each PC in conjunction with its TP shall identify the individual and joint responsibilities..."). Proposed EOP-011 R8 language:

Each Generator Operator in conjunction with its Generator Owner shall identify the organization responsible for providing the generating unit-specific training, and that identified entity shall provide the training to its maintenance or operations personnel, as needed, for the implementation of the cold weather preparedness plan(s).

Likes 0

Dislikes 0

**Response**

**George Brown - Acciona Energy North America - 5**

**Answer** Yes

**Document Name**

**Comment**

Acciona Energy USA Global, LLC (Acciona) would like to suggest the following requirement language.

R8. Each Generator Operator or Generator Owner shall provide generating unit-specific training on its cold weather preparedness plan(s) developed in Requirement R7 to its maintenance or operations personnel responsible for implementing cold weather preparedness plan(s).

Likes 0

Dislikes 0

**Response**

**Shannon Ferdinand - Capital Power Corporation - 5 - MRO,WECC,Texas RE,SERC**

**Answer** Yes

**Document Name**

**Comment**

R7 only requires a GO to develop and implement a cold weather preparedness plan. For consistency, R7 should be revised to include GOP OR R8 should be revised to only exclude GOP.

Likes 0

Dislikes 0

**Response**

**Daniel Gacek - Exelon - 1**

**Answer**

Yes

**Document Name**

**Comment**

Exelon supports the proposed changes to EOP-011-2 R7 and the creation of R8.

Submitted on behalf of Exelon, Segments 1, 3, 5, 6

Likes 0

Dislikes 0

**Response**

**Constantin Chitescu - Ontario Power Generation Inc. - 5**

**Answer**

Yes

**Document Name**

**Comment**

OPG supports NPCC RSC's comments.

Likes 0

Dislikes 0

**Response**

**Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2**

**Answer**

Yes

**Document Name**

**Comment**

ERCOT agrees with the addition of GOPs to the functional entities responsible for training.

With respect to the current draft revisions to EOP-011-2, Requirement R7, Part 7.3, ERCOT suggests switching “operating limitations” in Part 7.3.1 with “capability and availability” in Part 7.3.1.1. because “capability and availability” are determined by operating limitations, fuel supply, environmental constraints, etc. ERCOT views “operating limitations” as one of the factors that determines “capability and availability,” not the other way around.

Likes 0

Dislikes 0

**Response**

**Gul Khan - Gul Khan On Behalf of: Lee Maurer, Oncor Electric Delivery, 1; - Gul Khan**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Maryanne Darling-Reich - Black Hills Corporation - 1,3,5,6 - MRO,WECC**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Laura Nelson - Laura Nelson**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**LaTroy Brumfield - American Transmission Company, LLC - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kathleen Goodman - ISO New England, Inc. - 2 - NPCC**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>
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Likes 0
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Dislikes 0
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<b>Response</b>
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**Thomas Foltz - AEP - 5**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>
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Likes 0
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Dislikes 0
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<b>Response</b>
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**Jamie Monette - Allete - Minnesota Power, Inc. - 1**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>
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Likes 0
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Dislikes 0
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<b>Response</b>
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**Sing Tay - OGE Energy - Oklahoma Gas and Electric Co. - 6, Group Name OKGE**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>
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Likes 0

Dislikes 0

**Response**

**Anthony Jablonski - ReliabilityFirst - 10**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Daniela Atanasovski - APS - Arizona Public Service Co. - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Keith Jonassen - Keith Jonassen On Behalf of: Michael Puscas, ISO New England, Inc., 2; - Keith Jonassen**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Michael Courchesne - Michael Courchesne On Behalf of: Michael Puscas, ISO New England, Inc., 2; - ISO New England, Inc. - 2 - NPCC**



<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Michael Dillard - Austin Energy - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Jun Hua - Austin Energy - 4</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Aidan Gallegos - PNM Resources - Public Service Company of New Mexico - 1,3</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	

Dislikes 0

**Response**

**Dan Roethemeyer - Vistra Energy - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Teresa Krabe - Lower Colorado River Authority - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**James Baldwin - Lower Colorado River Authority - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jamison Cawley - Nebraska Public Power District - 1**

**Answer**

Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Gregory Campoli - New York Independent System Operator - 2, Group Name ISO/RTO Standards Review Committee</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Elizabeth Davis - Elizabeth Davis On Behalf of: Tom Foster, PJM Interconnection, L.L.C., 2; - Elizabeth Davis</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Rachel Coyne - Texas Reliability Entity, Inc. - 10</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<p>Texas RE agrees with adding a specific training requirement. Texas RE recommends adding a more specific part to document the roles and responsibilities of the personnel. Additionally, there should be a periodicity for personnel to receive training on the cold weather preparedness plan as well as a provision that training be conducted prior to the winter season. Texas RE notes that the 2019 FERC and NERC Staff Report on the South</p>	

Central United States Cold Weather BES Event of January 18, 2018 (“2019 Cold Weather Event Report”) mentions in several places the importance of training and states training should be done annually (page 135).

Additionally, Texas RE is concerned that Requirement R8 requires training for the GOP or GO for its maintenance or operations personnel. As the requirement is written, an entity can choose to train the GOP or GO but is not explicitly required to train both. In Texas RE’s experience, GOP personnel should understand the GOs’ cold weather preparedness plans and a requirement specifying training for appropriate personnel for both functions is appropriate.

Likes 0

Dislikes 0

**Response**

**Kenya Streeter - Edison International - Southern California Edison Company - 1,3,5,6**

**Answer**

**Document Name**

**Comment**

See comments submitted by Edison Electric Institute

Likes 0

Dislikes 0

**Response**

**Neil Shockey - Edison International - Southern California Edison Company - 5**

**Answer**

**Document Name**

**Comment**

See comments submitted by Edison Electric Institute.

Likes 0

Dislikes 0

**Response**

**Romel Aquino - Edison International - Southern California Edison Company - 3**

**Answer**

<b>Document Name</b>	
<b>Comment</b>	
See comments submitted by Edison Electric Institute.	
Likes 0	
Dislikes 0	
<b>Response</b>	

2. In response to comments from the first posting, the SDT added cold weather data specification requirements for the BA within TOP-003, similar to what is required of the RC and TO. Do you agree with the inclusion of these requirements in the TOP-003 standard? If you do not agree, please provide an alternative to address the comments. If you agree but have comments or suggestions on the SDT's recommendation, please provide your explanation and suggested language.

**Amy Jones - Public Utility District No. 2 of Grant County, Washington - 1,4,5,6**

**Answer** No

**Document Name**

**Comment**

IRO-010-4 Comments

The added sub-requirement singles out cold weather conditions only rather than making cold weather one of several possible extreme weather events, which could benefit by providing Reliability Coordinators with additional information.

TOP-003-5 Comments

The added sub-requirements single out cold weather conditions only rather than making cold weather one of several possible extreme weather events, which could benefit by providing Balancing Authorities and Transmission Operators with additional information.

Likes 0

Dislikes 0

**Response**

**Michael Whitney - Northern California Power Agency - 3, Group Name NCPA**

**Answer** No

**Document Name**

**Comment**

See Marty Hostler's comments.

Likes 0

Dislikes 0

**Response**

**Gladys DeLaO - CPS Energy - 1**

<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
No, CPSE does not agree and in general supports the responses by NCPA, Seattle, and Reclamation recommends.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Dennis Sismaet - Northern California Power Agency - 6</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
NERC Standards already allow registered entities to ask for this data if they need it.	
Requiring entities to request specific data they may not need, use, or have any awareness training on how to use adds expense and administrative burden to all GO/GOPs and has no value.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Glenn Pressler - CPS Energy - 3</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
CPSE does not agree and in general and supports the responses by NCPA, Seattle, and Reclamation.	
Likes 0	
Dislikes 0	
<b>Response</b>	

**LeRoy Patterson - Public Utility District No. 2 of Grant County, Washington - 6**

**Answer** No

**Document Name**

**Comment**

Adding the BA is acceptable, but the added sub-requirements single out cold weather conditions only rather than making cold weather one of several possible extreme weather events, which could benefit by providing Balancing Authorities and Transmission Operators with additional information.

Likes 0

Dislikes 0

**Response**

**David Jendras - Ameren - Ameren Services - 3**

**Answer** No

**Document Name**

**Comment**

Ameren would like to know what is going to do be done with the data collected? Why does this need to be added to TOP, and what are they expecting them to do with that info? Why would we want to have the info if it doesn't serve a purpose? Why should TO collect it if RC already has it?

Likes 0

Dislikes 0

**Response**

**Wendy Center - U.S. Bureau of Reclamation - 5**

**Answer** No

**Document Name**

**Comment**

Reclamation recommends TOP-003 R1.3 be revised to include the word "status" to align with TOP-003 R2.3.

Important questions have arisen in the industry about what the BA will do with the referenced data. Reclamation is concerned about the required collection of a substantial amount of data coupled with the unidentified purpose for which it is to be used. For example, there have already been modeling standards that resulted in delivery of data that the recipient was not using in any way, creating a regulatory burden for all involved parties with no reliability benefit. Reclamation recommends all requirements should directly support or improve BES reliability and the reliability purpose of all requirements should be readily ascertainable. Requirements should not be imposed that have no identifiable reliability benefit.

Likes 0



Dislikes 0

**Response**

**Marty Hostler - Northern California Power Agency - 3,4,5,6**

**Answer**

No

**Document Name**

**Comment**

NO. Requiring entities to request specific data they may not need, use, or have any awareness training on how to use adds expense and administrative burden to all GO/GOPs and has no value.

Likes 0

Dislikes 0

**Response**

**Glen Farmer - Avista - Avista Corporation - 5**

**Answer**

No

**Document Name**

**Comment**

Having a cold weather plan should be enough from a regulatory point. Reaching to far into the business.

Likes 0

Dislikes 0

**Response**

**Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion**

**Answer**

No

**Document Name**

**Comment**

Dominion Energy fully supports addressing cold weather planning and communication but has concerns over some of the recent additions to the proposed changes to the Standards. Adding requirements requiring the GO/GOP to put fuel supply in its cold weather preparedness plan is not within the scope of the project. The SAR is very specific that communication regarding fuel constraints in operations during cold weather is in scope, but the suggested language places requirements far beyond communication on the GO/GOP. A number of fuel supplies for various types of generators are real-time, for example gas, wind and solar. Asking a GO/GOP to include fuel supply in its cold weather plan is extremely problematic as the fuel supply is dependent on either nature, which changes with little warning, or on a third party supplier (i.e. gas) that does not necessarily communicate or even know

about supply issues to generators on the planning horizon. The SAR for this project is about communicating capabilities and expanding the scope to items such as fuel supply should not occur. Dominion Energy recommends striking the language in the existing standard addressing BA operational plans accounting for fuel supply from the proposed additions.

Likes 0

Dislikes 0

### Response

**Rich Hydzik - Rich Hydzik On Behalf of: Scott Kinney, Avista - Avista Corporation, 3, 5, 1; - Rich Hydzik**

**Answer**

No

**Document Name**

**Comment**

If the request specified under TOP-003 includes generators, why is that different than any other cold weather effects on any BES equipment? Reasonably, if the BA requests data on generator cold weather performance, should the TOP request data on SF6 breaker tank heater performance? It is assumed that a generator owner or operator has some idea as to whether the facility will operate in extreme cold and that awareness is reflected in its availability or schedule to operate.

Likes 0

Dislikes 0

### Response

**Julie Hall - Entergy - 6, Group Name Entergy**

**Answer**

No

**Document Name**

**Comment**

Entergy does not agree with this inclusion. As was expressed in the first round of comments, Entergy also does not agree with the inclusion of cold weather-specific generation data as proposed for R1.3. This applies to the proposed R2.3 as well. It should be left up to the individual BA to request additional data as system conditions dictate.

Likes 0

Dislikes 0

### Response

**Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper**

**Answer**

No

<b>Document Name</b>	
<b>Comment</b>	
The requirements in TOP-003 R1.3 should be removed. Can the SDT explain how a TOP should be using this data? A TOP does not need this data to perform its OPA. We agree that these should be included in TOP-003 R2.3 for a BA.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
Duke Energy supports the following NAGF comment:  “The NAGF requests clarification regarding Requirement R7.3.1.2 “fuel supply and inventory concerns”. The data to be provided is not so much concerns but has to be actionable/usable for planning models and real-time operations. Generating facility NG pipeline pressure trip limit, % of contract firm gas supply, number of run hrs available on alternate/backup fuel, river flow with current/anticipated ice conditions, and available battery storage MW/Hrs are far more usefull than “concerns”.”	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Matthew Nutsch - Seattle City Light - 1,3,4,5,6 - WECC</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
Seattle understands the desire the create a continental standard but remains concerned about the “one-size-fits-all” nature of the data specification language of TOP-003 R1.3 and R2.3, and suggests the following change (in CAPS):  R1.3 (and R2.3) Provisions for notification of BES generating unit(s) status during local forecasted cold weather to include, AS APPROPRIATE:  The reasoning for this change is to allow reasonable flexibility to accommodate the relevant information while avoiding administrative burden and trivia for the wide variety of generation units across North America. The vast majority of units are incapable of fuel switching, for instance, including nuclear, hydroelectric, wind, and solar, among others. Seasonal irrigation-based hydroelectric units that do not operate during winter months (due to lack of	

irrigation flow) represent another category about which detailed cold weather information may be un-useful to anyone and burdensome to acquire and maintain.

Likes 0

Dislikes 0

### Response

#### Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2

Answer

Yes

Document Name

### Comment

ERCOT agrees with the inclusion of these requirements in TOP-003.

Similar to its comments in connection with EOP-011-2, with respect to TOP-003, Requirement R1, Part 1.3.1, ERCOT suggests switching “operating limitations” in Part 1.3.1 with “capability and availability” in Part 1.3.1.1. because “capability and availability” are determined by operating limitations, fuel supply, environmental constraints, etc. ERCOT views “operating limitations” as one of the factors that determines “capability and availability,” not the other way around.

With respect to TOP-003, Requirement R1, Part 1.3.2, and Requirement R2, Part 2.3.2, ERCOT suggests revising this to require the data specification to include a generating unit minimum operating temperature that is based on design specification, historical performance, or other engineering analysis.

The language would read as follows:

1.3.2 Generating unit minimum operating temperature based on:

1.3.2.1 design specification; or

1.3.2.2 historical performance; or

1.3.2.3 engineering analysis.

Likes 0

Dislikes 0

### Response

#### Constantin Chitescu - Ontario Power Generation Inc. - 5

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
OPG supports NPCC RSC's comments.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Daniel Gacek - Exelon - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Exelon supports the changes made to TOP-003.	
Submitted on behalf of Exelon, Segments 1, 3, 5, 6	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
ACES agrees with the inclusion of these revisions in TOP-003, but does have concerns over the term "local forecasted cold weather," which has not been defined and could become a burden for any entity over a large geographical area and/or within multiple Regional Entity, BA, TOP, and/or RC zones. Additionally, the revisions do not address the difference in "cold weather" unit parameters for units that are online versus offline, and how that data would be captured and implemented.	
Likes 0	
Dislikes 0	
<b>Response</b>	

**Devon Tremont - Taunton Municipal Lighting Plant - 1**

**Answer** Yes

**Document Name**

**Comment**

The Taunton Municipal Lighting Plant supports the comments submitted by Utility Services, Inc., which state:

With the 'generator data specification' Requirement language in IRO-010 and TOP-003 the same for the RC/BA/TOP; which data specification the GO should follow and incorporate into their cold weather preparedness plan may be unclear.

Suggest modifying EOP-011 R7.3 to clarify which data specification should be utilized:

"7.3. Generating unit(s) cold weather data (from the RC, BA, or TOP data specification as needed), to include:"

Likes 0

Dislikes 0

**Response**

**Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable**

**Answer** Yes

**Document Name**

**Comment**

EI supports the changes made to TOP-003 aligning the data requirements for local forecasted cold weather for TOs and BAs.

Likes 0

Dislikes 0

**Response**

**Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC Regional Standards Committee No Dominion**

**Answer** Yes

**Document Name**

**Comment**

With the 'generator data specification' Requirement language in IRO-010 and TOP-003 the same for the RC/BA/TOP; which data specification the GO should follow and incorporate into their cold weather preparedness plan may be unclear.

Suggest modifying EOP-011 R7.3 to clarify which data specification should be utilized:

7.3. Generating unit(s) cold weather data (from the RC, BA, or TOP data specification, as needed), to include:....

Likes 0

Dislikes 0

### Response

**Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name** DTE Energy - DTE Electric

**Answer**

Yes

**Document Name**

**Comment**

We agree with the inclusion of the cold weather data specification requirements for the BA in the TOP-003 standard.

Likes 0

Dislikes 0

### Response

**Bobbi Welch - Midcontinent ISO, Inc. - 2**

**Answer**

Yes

**Document Name**

**Comment**

MISO supports comments submitted by the ISO/RTO Council Standards Review Subcommittee (IRC SRC). In addition, we are submitting additional comments on behalf of MISO as an individual entity.

**Process improvement opportunity regarding the placement of cold weather data requirements** - MISO believes it is appropriate to include the day-ahead, current day and real-time aspects of the cold weather data requirements in IRO-010 and TOP-003; i.e. IRO-010-4, Parts 1.3.1.1 (operating capability and availability) and 1.3.1.2 (fuel supply and inventory concerns).

**Recommendation:** The balance of proposed cold weather data requirements; e.g. fuel switching capabilities, environmental constraints, minimum design temperature, minimum historical operating temperature and engineering analysis to determine minimum cold weather temperature, are more static in nature and may better reside in another NERC standard.

Likes 0

Dislikes 0

### Response

**Jamison Cawley - Nebraska Public Power District - 1****Answer** Yes**Document Name****Comment**

The requirement for information related to cold weather is appropriate for the BA and RC data specifications, but not appropriate that the TOP should have these same requirements. Suggest removing R1.3. from the proposed TOP-003 requirements.

Likes 0

Dislikes 0

**Response****Jamie Johnson - California ISO - 2****Answer** Yes**Document Name****Comment**

The California ISO agrees with comments submitted by the ISO/RTO Counsel (IRC) Standards Review Committee.

Likes 0

Dislikes 0

**Response****Amy Casuscelli - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC****Answer** Yes**Document Name****Comment**

Xcel Energy agrees with the inclusion of the requirements in TOP-003 and feels they align with IRO-010 and EOP-011. However, we do suggest modifications to R1.3 and R2 to add clarity to who is supposed to notify who.

Likes 0

Dislikes 0

**Response**



**Jennifer Flandermeyer - Jennifer Flandermeyer On Behalf of: Allen Klassen, Evergy, 6, 1, 3, 5; Derek Brown, Evergy, 6, 1, 3, 5; Marcus Moor, Evergy, 6, 1, 3, 5; Thomas ROBBEN, Evergy, 6, 1, 3, 5; - Jennifer Flandermeyer**

**Answer**

Yes

**Document Name**

**Comment**

Evergy endorses the EEI comments submitted in this comment period.

Likes 0

Dislikes 0

**Response**

**Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1**

**Answer**

Yes

**Document Name**

**Comment**

AEPC agrees with the inclusion of these revisions in TOP-003, but does have concerns over the term "local forecasted cold weather," which has not been defined and could become a burden for any entity over a large geographical area and/or within multiple Regional Entity, BA, TOP, and/or RC zones. Additionally, the revisions do not address the difference in "cold weather" unit parameters for units that are online versus offline, and how that data would be captured and implemented.

AEPC has signed on to ACES comments.

Likes 0

Dislikes 0

**Response**

**Joshua Andersen - Salt River Project - 1,3,5,6 - WECC**

**Answer**

Yes

**Document Name**

**Comment**

SRP agrees tha cold weather data requests from the TO and BA are best situated in the TOP-003 Standard. SRP sees that the existing standard provides the mechanism for those entities to gather the data without being expressing required to do so. Adding the requirement that GOs implement and maintain specific cold weather plans with specific requirements adds a burden to the GO and GOP that may not have reliability impacts. Sufficient

unit capabilities should already be gathered with the existing data request in TOP-003, if not then it may be a shortcoming with the entities making the request.

Likes 0

Dislikes 0

### Response

#### Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer

Yes

Document Name

Comment

The NAGF agrees with the inclusion of the cold weather data specification requirements for the BA in the TOP-003 standard.

Likes 0

Dislikes 0

### Response

#### Terry Harbour - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1

Answer

Yes

Document Name

Comment

MEC supports the MRO NSRF comments.

Likes 0

Dislikes 0

### Response

#### Paul Mehlhaff - Sunflower Electric Power Corporation - 1

Answer

Yes

Document Name

Comment

Sunflower agrees with the comments ACES provided for question 2.

Likes 0

Dislikes 0

**Response**

**Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC**

**Answer**

Yes

**Document Name**

**Comment**

No additional comments

Likes 0

Dislikes 0

**Response**

**Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company**

**Answer**

Yes

**Document Name**

**Comment**

Southern Company supports this change to TOP-003.

Likes 0

Dislikes 0

**Response**

**Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman**

**Answer**

Yes

**Document Name**

**Comment**

MPC supports MRO NERC Standards Review Forum comments.

Likes 0

Dislikes 0

**Response**

**Leonard Kula - Independent Electricity System Operator - 2**

**Answer** Yes

**Document Name**

**Comment**

N/A.

Likes 0

Dislikes 0

**Response**

**Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF, Group Name SIGE Project 2019-06**

**Answer** Yes

**Document Name**

**Comment**

The inclusion of the requirements for the BA in TOP-003 aligns with the recommendations made in the 2019 FERC and NERC Staff Report and with the purpose of this Project 2019-06.

Likes 0

Dislikes 0

**Response**

**Ben Burnett - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE**

**Answer** Yes

**Document Name**

**Comment**

The inclusion of the requirements for the BA in TOP-003 aligns with the recommendations made in the 2019 FERC and NERC Staff Report and with the purpose of this Project 2019-06.

Likes 0

Dislikes 0

**Response**

**Dana Klem - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer** Yes

**Document Name**

**Comment**

Note: Question correction. Should read," BA within TOP-003, similar to what is required of the RC and TOP." Not the TO.

Likes 0

Dislikes 0

**Response**

**Brian Evans-Mongeon - Utility Services, Inc. - 4**

**Answer** Yes

**Document Name**

**Comment**

With the 'generator data specification' Requirement language in IRO-010 and TOP-003 the same for the RC/BA/TOP; which data specification the GO should follow and incorporate into their cold weather preparedness plan may be unclear.

Suggest modifying EOP-011 R7.3 to clarify which data specification should be utilized:

7.3. Generating unit(s) cold weather data (from the RC, BA, or TOP data specification as needed), to include:....

Likes 0

Dislikes 0

**Response**

**Larry Heckert - Alliant Energy Corporation Services, Inc. - 4**

**Answer** Yes

**Document Name**

**Comment**

Alliant Energy supports the comments submitted by the MRO NSRF.

Likes 0

Dislikes 0

**Response**

**Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer** Yes

**Document Name**

**Comment**

Note: Question correction. Should read," BA within TOP-003, similar to what is required of the RC and TOP." Not the TO.

Likes 0

Dislikes 0

**Response**

**Elizabeth Davis - Elizabeth Davis On Behalf of: Tom Foster, PJM Interconnection, L.L.C., 2; - Elizabeth Davis**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Gregory Campoli - New York Independent System Operator - 2, Group Name ISO/RTO Standards Review Committee**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**George Brown - Acciona Energy North America - 5**

**Answer** Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>John Babik - JEA - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>James Baldwin - Lower Colorado River Authority - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Teresa Krabe - Lower Colorado River Authority - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	

**Response**

**Dan Roethemeyer - Vistra Energy - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Erin Green - Western Area Power Administration - 1,6**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Meaghan Connell - Public Utility District No. 1 of Chelan County - 5, Group Name CHPD**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Aidan Gallegos - PNM Resources - Public Service Company of New Mexico - 1,3**

**Answer** Yes

**Document Name**



**Comment**

Likes 0

Dislikes 0

**Response****Jun Hua - Austin Energy - 4****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response****Michael Courchesne - Michael Courchesne On Behalf of: Michael Puscas, ISO New England, Inc., 2; - ISO New England, Inc. - 2 - NPCC****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response****W. Dwayne Preston - Austin Energy - 3****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response**

**Patricia Lynch - NRG - NRG Energy, Inc. - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Truong Le - Truong Le On Behalf of: David Owens, Gainesville Regional Utilities, 1, 5, 3; Neville Bowen, Ocala Utility Services, 3; - Truong Le**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Daniela Atanasovski - APS - Arizona Public Service Co. - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Anthony Jablonski - ReliabilityFirst - 10**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Martin Sidor - NRG - NRG Energy, Inc. - 6**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Donald Lock - Talen Generation, LLC - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Sing Tay - OGE Energy - Oklahoma Gas and Electric Co. - 6, Group Name OKGE**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jamie Monette - Allete - Minnesota Power, Inc. - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Thomas Foltz - AEP - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kathleen Goodman - ISO New England, Inc. - 2 - NPCC**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Donna Wood - Tri-State G and T Association, Inc. - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**LaTroy Brumfield - American Transmission Company, LLC - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Laura Nelson - Laura Nelson**

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Maryanne Darling-Reich - Black Hills Corporation - 1,3,5,6 - MRO,WECC</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>John Allen - City Utilities of Springfield, Missouri - 4</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Gul Khan - Gul Khan On Behalf of: Lee Maurer, Oncor Electric Delivery, 1; - Gul Khan</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0

**Response**

**Shannon Ferdinand - Capital Power Corporation - 5 - MRO,WECC,Texas RE,SERC**

**Answer**

**Document Name**

**Comment**

Capital Power has no comment on this revision

Likes 0

Dislikes 0

**Response**

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

**Answer**

**Document Name**

**Comment**

While BC Hydro agrees that the data specification requirements should be included for the BA, the specific data specification items should be improved as per our comments in Question 5.

Likes 0

Dislikes 0

**Response**

**Romel Aquino - Edison International - Southern California Edison Company - 3**

**Answer**

**Document Name**

**Comment**

See comments submitted by Edison Electric Institute.

Likes 0

Dislikes 0

**Response**

**Neil Shockey - Edison International - Southern California Edison Company - 5**

**Answer**

**Document Name**

**Comment**

See comments submitted by Edison Electric Institute.

Likes 0

Dislikes 0

**Response**

**Keith Jonassen - Keith Jonassen On Behalf of: Michael Puscas, ISO New England, Inc., 2; - Keith Jonassen**

**Answer**

**Document Name**

**Comment**

Yes, No Comment

Likes 0

Dislikes 0

**Response**

**Kenya Streeter - Edison International - Southern California Edison Company - 1,3,5,6**

**Answer**

**Document Name**

**Comment**

See comments submitted by Edison Electric Institute

Likes 0

Dislikes 0

**Response**



**Rachel Coyne - Texas Reliability Entity, Inc. - 10**

**Answer**

**Document Name**

**Comment**

Texas RE inquires as to whether the SDT considered updating the definitions of Real-time Assessment (RTA) and Operations Planning Analysis (OPA). The language “during local forecasted cold weather” in proposed TOP-003-5 Requirement Part 1.3 could be read to indicate this only applies to Real-time data, but this data is also needed in the operations horizon to prepare and plan for cold weather events. Texas RE notes that during Project 2007-06.2 Phase 2 of System Protection Coordination, these definitions were updated when IRO-010 and TOP-003 were updated.

Likes 0

Dislikes 0

**Response**

3. In response to comments, the SDT modified the Implementation Plan to allow eighteen (18) months following the effective date to become compliant with EOP-011, IRO-010, and TOP-003. Do you agree with this modification? If you do not agree, please provide an alternative implementation timeframe. If you agree but have comments or suggestions on the SDT's recommendation, please provide your explanation and suggested language.

**Laura Nelson - Laura Nelson**

**Answer** No

**Document Name**

**Comment**

Idaho Power requests a phased implementation over 36 months, with 1/3 of BES facilities being implemented the first year; 1/3 the second year, and 1/3 the third year to reach full implementation. With the requirement of additional engineering analysis for each of our BES units, the implementation will need to vary from unit-to-unit. Although Idaho Power feels it has adequate cold weather protections in place, this information is not known to us at this time but would be available after the engineering analysis. Appropriate time needs allotted to budget for, and procure, the engineering analysis, as well as implement any recommendations from the engineering analysis.

Likes 0

Dislikes 0

**Response**

**Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy**

**Answer** No

**Document Name**

**Comment**

Suggest the proposed 18 month Implementation Plan not include immediate training roll-out compliance, but instead allow training initiation and completion that would be staggered at least one full year after the Implementation Plans effective date.

Likes 0

Dislikes 0

**Response**

**Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC**

**Answer** No

**Document Name**

**Comment**

BPA supports Reclamation's comments.

Likes 0

Dislikes 0

**Response**

**Kathleen Goodman - ISO New England, Inc. - 2 - NPCC**

**Answer**

No

**Document Name**

**Comment**

12 months seems to be a sufficient amount of time to become compliant given that most of these new requirements have been recommended "best practices" for many years. Also note that the 18 month implementation plan would result in completion after the second winter following approval (2022-2023). A 12 month implementation would only miss implementation for one winter (2021-2022).

Likes 0

Dislikes 0

**Response**

**Brian Evans-Mongeon - Utility Services, Inc. - 4**

**Answer**

No

**Document Name**

**Comment**

EOP-011 R7 contains data specification details that must be included in the cold weather preparedness plan, but without the direction from the BA/RC/TOP on what format this data should be documented, the GO's plan may be inconsistent with the expectations. Suggest IRO-010 and TOP-003 Implementation Plan be 12 months, and EOP-011 Implementation Plan be 18 months to allow GO time to incorporate the data specifications as requested into their plan.

Likes 0

Dislikes 0

**Response**

**Joe O'Brien - NiSource - Northern Indiana Public Service Co. - 6**

**Answer**

No

**Document Name**

**Comment**

*Comments: 18 months is an improvement however considering the complexity of the project a 24 month implementation plan may be more appropriate*

Likes 0

Dislikes 0

**Response****Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC**

**Answer**

No

**Document Name**

**Comment**

All requirements go into effect at the same time under the proposed Implementation Plan.

If the data specifications from the TOP / BA or RC required in TOP-003-5 and IRO-010-4, respectively, aren't received until late into the proposed implementation period, it may not give the GO or GOP receiving the specifications enough time to meet or properly implement their new data requirements. As such, IRO-010-4 Requirement R3 and TOP-003-5 Requirement R5 (while unchanged) should have a later implementation period for the GO and GOP for these versions, to allow the entities to process and respond to the new data specifications from their BA, RC, TOP. The recommendation for this separate implementation period is to be at least 12-months.

Likes 0

Dislikes 0

**Response****Anthony Jablonski - ReliabilityFirst - 10**

**Answer**

No

**Document Name**

**Comment**

As the requirements proposed do not require Registered Entities to install any specific freeze protections, rather, they require the entity to have a plan and provide training to its personnel, 18 months seems to be excessive. ReliabilityFirst believes 12 months may be more appropriate. Depending on the timing of the effective date, an 18 month period could potentially have Registered Entities going through two cold weather seasons without being required to perform the steps outlined within the requirements. ReliabilityFirst believes these requirements need to be in place to address cold weather readiness as soon as possible.

Likes 0

Dislikes 0

**Response**

**Rich Hydzik - Rich Hydzik On Behalf of: Scott Kinney, Avista - Avista Corporation, 3, 5, 1; - Rich Hydzik**

**Answer** No

**Document Name**

**Comment**

Eighteen months (18) seems to be a short time to make any required facility changes. Given capital budgeting processes, engineering, and construction timelines, and the inevitable re-prioritizing over the next 18 months, this time frame seems short. Three to four years is probably more feasible.

Likes 0

Dislikes 0

**Response**

**Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion**

**Answer** No

**Document Name**

**Comment**

**Given the date is unknown for when the standard/requirements will go effective, each generating unit may not have enough historical data to 1) determine capability based on historical operating performance or 2) perform an adequate engineering analysis. Dominion Energy recommends a 24 month implementation period to allow for at least two cold weather seasons to pass and allow generators to gain the necessary information to ensure proper engineering analysis.**

Likes 0

Dislikes 0

**Response**

**Glen Farmer - Avista - Avista Corporation - 5**

**Answer** No

**Document Name**

**Comment**

two years minimum. or 1/2 first year (Thermal Plants) and 1/2 second year (Hydro plants).

Likes 0

Dislikes 0

**Response**

**Michael Courchesne - Michael Courchesne On Behalf of: Michael Puscas, ISO New England, Inc., 2; - ISO New England, Inc. - 2 - NPCC**

**Answer** No

**Document Name**

**Comment**

ISO-NE believes that 12-months would be a sufficient amount of time to become compliant given that most of these new requirements have been recommended “best practices” for many years. Also note that the 18-month implementation plan would result in completion after the second winter following approval (2022-2023). A 12-month implementation would only miss implementation for one winter (2021-2022).

Likes 0

Dislikes 0

**Response**

**Marty Hostler - Northern California Power Agency - 3,4,5,6**

**Answer** No

**Document Name**

**Comment**

NO. See prior NCPA comments. Two to three years is need.

Likes 0

Dislikes 0

**Response**

**Wendy Center - U.S. Bureau of Reclamation - 5**

**Answer** No

**Document Name**

**Comment**

Reclamation recommends a 24-month implementation plan to allow entities appropriate time to comply with new requirements. Reclamation is concerned that the hasty implementation of requirements that are not carefully thought out will not support or improve BES reliability and in fact could divert entities from performing tasks that do support or improve BES reliability. This is especially important as proposed requirements become more complex. The cold weather modifications project began with the concepts of having a plan and training staff on it periodically. Now, data communications among entities, an annual inspection and maintenance program, and *unit-specific* training have been added to the proposed requirements. Even a 24-month implementation plan would not allow sufficient time for entities with a large number of facilities, generators, and/or personnel to successfully implement all these new mandates.

Likes 0

Dislikes 0

**Response**

**Jamison Cawley - Nebraska Public Power District - 1**

**Answer** No

**Document Name**

**Comment**

Recommend a 24 month implementation period.

Likes 0

Dislikes 0

**Response**

**Bobbi Welch - Midcontinent ISO, Inc. - 2**

**Answer** No

**Document Name**

**Comment**

MISO supports comments submitted by the ISO/RTO Council Standards Review Subcommittee (IRC SRC). In addition, we are submitting additional comments on behalf of MISO as an individual entity.

**12 months is a sufficient amount of time to implement the proposed changes** – The original Implementation Plan proposed a 12 month implementation timeline. Following industry comments, the implementation timeline was extended to 18 months based on feedback provided by the GO/GOP community. This fails to demonstrate a sense of urgency in resolving cold weather issues to ensure reliable operations.

In addition, a 6-month delay in implementing these standards, would likely place the effective date (assuming FERC adopts them expeditiously) as April 1, 2023 (just after the winter season); whereas a 12-month implementation would place the effective date as October 1, 2022 (just prior to the winter season), leaving the industry to operate through another entire cold weather season without the benefit of these provisions.

As many of these practices have been recommended by NERC for years, some dating back to the February 2011 Southwest Cold Weather Event, the proposed requirements are largely expense items; i.e. the development of preparedness plans, delivery of training to personnel and the provision of cold weather data, the amount of effort should be minimal. There is no requirement for generators to make capital investments; i.e. install freeze protection measures, which would justify the need for more time to implement.

As a Reliability Coordinator (RC) and Balancing Authority (BA), MISO is prepared to receive cold weather data from the GO and GOP as described under EOP-011, Part 7.3 within a 12 month timeframe. It is important to for reliable grid operations and situational awareness that this information be provided to reliability entities. This will enforce the current provisions that MISO has under its existing business practices for generators to provide this information.

**Recommendation:** Revise the Implementation Plan to reinstate a 12-month implementation period

Likes 0

Dislikes 0

**Response**

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

**Answer** No

**Document Name**

**Comment**

BC Hydro appreciates this opportunity to comment. However, without additional changes to the EOP-011 language, BC Hydro's assessment at this time is that the EOP-011 standard implementation would take 24 months from adoption due to initial assessment of equipment specifications. Please see our comments to Question 5.

Likes 0

Dislikes 0

**Response**

**Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC Regional Standards Committee No Dominion**

**Answer** No

**Document Name**

**Comment**

EOP-011 R7 contains data specification details that must be included in the cold weather preparedness plan, but without the direction from the BA/RC/TOP on what format this data should be documented, the GO's plan may be inconsistent with the expectations. Suggest IRO-010 and TOP-003 Implementation Plan be 12 months, and EOP-011 Implementation Plan is 18 months to allow GO time to incorporate the data specifications as requested into their plan.

Likes 0

Dislikes 0

**Response**

**Devon Tremont - Taunton Municipal Lighting Plant - 1**

**Answer** No

**Document Name**

**Comment**



The Taunton Municipal Lighting Plant supports the comments submitted by Utility Services, Inc., which state:

EOP-011 R7 contains data specification details that must be included in the cold weather preparedness plan, but without the direction from the BA/RC/TOP on what format this data should be documented, the GO's plan may be inconsistent with the expectations. Suggest IRO-010 and TOP-003 Implementation Plan be 12 months, and EOP-011 Implementation Plan be 18 months to allow GO time to incorporate the data specifications as requested into their plan.

Likes 0

Dislikes 0

### Response

**Gregory Campoli - New York Independent System Operator - 2, Group Name ISO/RTO Standards Review Committee**

**Answer** No

**Document Name**

### Comment

12 months seems to be a sufficient amount of time to become compliant given that most of these new requirements have been recommended "best practices" for many years. Also note that the 18 month implementation plan would result in completion after the second winter following approval (2022-2023). A 12 month implementation would only miss implementation for one winter (2021-2022).

*\*\* CAISO did not join this group response. \*\**

Likes 0

Dislikes 0

### Response

**Constantin Chitescu - Ontario Power Generation Inc. - 5**

**Answer** No

**Document Name**

### Comment

OPG supports NPCC RSC's comments.

Likes 0

Dislikes 0

### Response

**Dennis Sismaet - Northern California Power Agency - 6**

<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
See prior NCPA comments. Two to three years is needed.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Michael Whitney - Northern California Power Agency - 3, Group Name NCPA</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
See Marty Hostler's comments.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>John Allen - City Utilities of Springfield, Missouri - 4</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
It's unclear why 18 months is needed if we only have administrative obligations to create a plan and identify design parameters based on what we already have implemented.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Maryanne Darling-Reich - Black Hills Corporation - 1,3,5,6 - MRO,WECC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	

**Comment**

18 Months will be acceptable depending on the Reliability Coordinator data specifications.

Likes 0

Dislikes 0

**Response****Thomas Foltz - AEP - 5**

**Answer**

Yes

**Document Name**

**Comment**

AEP appreciates the changes made in extending the Implementation Plan to 18 months, and thanks the SDT for their consideration of our suggestion.

Likes 0

Dislikes 0

**Response****Ben Burnett - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE**

**Answer**

Yes

**Document Name**

**Comment**

Implementation of currently proposed changes to TOP-003 and EOP-011 would require considerable coordination with interconnected resources, assessment and comparison of current practices to proposed changes, and additional time for training personnel on new processes and procedures. As such, CEHE would prefer a minimum of 24 months to implement the changes, but understands the desire for an accelerated timeline.

Likes 0

Dislikes 0

**Response****Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF, Group Name SIGE Project 2019-06**

**Answer**

Yes

**Document Name**

**Comment**

Implementation of currently proposed changes to TOP-003 and EOP-011 would require considerable coordination with interconnected resources, assessment and comparison of current practices to proposed changes, and additional time for training personnel on new processes and procedures. As such, SIGE would prefer a minimum of 24 months to implement the changes, but understands the desire for an accelerated timeline.

Likes 0

Dislikes 0

### Response

**Leonard Kula - Independent Electricity System Operator - 2**

**Answer**

Yes

**Document Name**

**Comment**

N/A.

Likes 0

Dislikes 0

### Response

**Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company**

**Answer**

Yes

**Document Name**

**Comment**

Southern Company supports this change to the Implementation Plan.

Likes 0

Dislikes 0

### Response

**Martin Sidor - NRG - NRG Energy, Inc. - 6**

**Answer**

Yes

**Document Name**

**Comment**

NRG agrees with the 18 months. It will take much time to develop a plan, implement the plan and needed changes, then develop and train personnel on the site-specific plan for each site. The time issue becomes magnified in larger fleets with diverse generators in varying locations.

Likes 0

Dislikes 0

### Response

**Keith Jonassen - Keith Jonassen On Behalf of: Michael Puscas, ISO New England, Inc., 2; - Keith Jonassen**

**Answer**

Yes

**Document Name**

**Comment**

No,

12 months seems to be a sufficient amount of time to become compliant given that most of these new requirements have been recommended “best practices” for many years. Also note that the 18 month implementation plan would result in completion after the second winter following approval (2022-2023). A 12 month implementation would only miss implementation for one winter (2021-2022).

Likes 0

Dislikes 0

### Response

**Patricia Lynch - NRG - NRG Energy, Inc. - 5**

**Answer**

Yes

**Document Name**

**Comment**

NRG agrees with the 18 months. It will take much time to develop a plan, implement the plan and needed changes, then develop and train personnel on the site-specific plan for each site. The time issue becomes magnified in larger fleets with diverse generators in varying locations.

Likes 0

Dislikes 0

### Response

**Terry Harbour - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1**

**Answer**

Yes

**Document Name**

**Comment**

MEC supports the MRO NSRF comments.

Likes 0

Dislikes 0

**Response**

**Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF**

**Answer**

Yes

**Document Name**

**Comment**

The NAGF agrees with modifying the Implementation Plan to allow for eighteen (18) months to become compliant following the effective date.

Likes 0

Dislikes 0

**Response**

**Joshua Andersen - Salt River Project - 1,3,5,6 - WECC**

**Answer**

Yes

**Document Name**

**Comment**

SRP agrees that entities that do not already have the Cold weather plans and the associated training can benefit from the 18 month implementation period. SRP also feels that any imediate unit capabilities can be required through the existing TOP-003 and IRO-010 data requests.

Likes 0

Dislikes 0

**Response**

**Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1**

**Answer**

Yes

**Document Name**

**Comment**

AEPC has signed on to ACES comments.

Likes 0

Dislikes 0

**Response**

**Jennifer Flandermeyer - Jennifer Flandermeyer On Behalf of: Allen Klassen, Evergy, 6, 1, 3, 5; Derek Brown, Evergy, 6, 1, 3, 5; Marcus Moor, Evergy, 6, 1, 3, 5; Thomas ROBBEN, Evergy, 6, 1, 3, 5; - Jennifer Flandermeyer**

**Answer** Yes

**Document Name**

**Comment**

Evergy endorses the EEI comments submitted in this comment period.

Likes 0

Dislikes 0

**Response**

**Amy Casuscelli - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC**

**Answer** Yes

**Document Name**

**Comment**

The 18 month implementation period provides sufficient time to become compliant.

Likes 0

Dislikes 0

**Response**

**David Jendras - Ameren - Ameren Services - 3**

**Answer** Yes

**Document Name**

**Comment**

Ameren agrees with the change to extend the implementation plan to 18 months

Likes 0

Dislikes 0

**Response**

**Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric**

**Answer**

Yes

**Document Name**

**Comment**

We agree with modifying the Implementation Plan to allow for eighteen (18) months to become compliant following the effective date and appreciate the extra time.

Likes 0

Dislikes 0

**Response**

**Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable**

**Answer**

Yes

**Document Name**

**Comment**

EI supports the SDT's proposal to modify the Implementation Plan to 18 months.

Likes 0

Dislikes 0

**Response**

**Shannon Ferdinand - Capital Power Corporation - 5 - MRO,WECC,Texas RE,SERC**

**Answer**

Yes

**Document Name**

**Comment**



In regards to EOP-011, Capital Power agrees with 18 month timeline for the development of the plan; however, implementation and training may take longer. Capital Power recommends a phased in implementation plan – Phase 1) Development of Plan (18 monts) 2) Implementation & Training (24 months).

Likes 0

Dislikes 0

### Response

**Elizabeth Davis - Elizabeth Davis On Behalf of: Tom Foster, PJM Interconnection, L.L.C., 2; - Elizabeth Davis**

**Answer**

Yes

**Document Name**

**Comment**

PJM understands additional resources and commitments may be required to develop and distribute revised data specifications and develop and implement cold weather preparedness plans. Nevertheless, PJM continues to urge the immediate implementation of the revised standards with a subsequent twelve-month period before auditable compliance is required. If the SDT rejects this request and requires implementation of the revised standard 18 months after the adoption of the standard, PJM requests that NERC clearly state in its submission of the standard to the NERC Board and FERC that NERC strongly encourages Responsible Entities to voluntarily implement the revised standard as soon as possible to enhance winter readiness at the earliest date practicable within the Responsible Entity's region.

Likes 0

Dislikes 0

### Response

**Daniel Gacek - Exelon - 1**

**Answer**

Yes

**Document Name**

**Comment**

Exelon supports an 18 month Implementation Plan.

Submitted on behalf of Exelon, Segments 1, 3, 5, 6

Likes 0

Dislikes 0

### Response

**Gladys DeLaO - CPS Energy - 1****Answer** Yes**Document Name****Comment**

Yes, CPS Energy agrees.

Likes 0

Dislikes 0

**Response****Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2****Answer** Yes**Document Name****Comment**

ERCOT agrees with this modification given the system changes that may be necessary in order to implement the revised Reliability Standards.

Likes 0

Dislikes 0

**Response****Gul Khan - Gul Khan On Behalf of: Lee Maurer, Oncor Electric Delivery, 1; - Gul Khan****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

**Response****Matthew Nutsch - Seattle City Light - 1,3,4,5,6 - WECC****Answer** Yes**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**LaTroy Brumfield - American Transmission Company, LLC - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Donna Wood - Tri-State G and T Association, Inc. - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Larry Heckert - Alliant Energy Corporation Services, Inc. - 4**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Dana Klem - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jamie Monette - Allele - Minnesota Power, Inc. - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Sing Tay - OGE Energy - Oklahoma Gas and Electric Co. - 6, Group Name OKGE**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Donald Lock - Talen Generation, LLC - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Julie Hall - Entergy - 6, Group Name Entergy**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Daniela Atanasovski - APS - Arizona Public Service Co. - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Paul Mehlhaff - Sunflower Electric Power Corporation - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Truong Le - Truong Le On Behalf of: David Owens, Gainesville Regional Utilities, 1, 5, 3; Neville Bowen, Ocala Utility Services, 3; - Truong Le**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**W. Dwayne Preston - Austin Energy - 3**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jun Hua - Austin Energy - 4**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Aidan Gallegos - PNM Resources - Public Service Company of New Mexico - 1,3**

Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
<b>Response</b>	
Meaghan Connell - Public Utility District No. 1 of Chelan County - 5, Group Name CHPD	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
<b>Response</b>	
Erin Green - Western Area Power Administration - 1,6	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
<b>Response</b>	
Dan Roethemeyer - Vistra Energy - 5	
Answer	Yes
Document Name	
Comment	
Likes	0



Dislikes 0

**Response**

**Teresa Krabe - Lower Colorado River Authority - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jamie Johnson - California ISO - 2**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**James Baldwin - Lower Colorado River Authority - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**John Babik - JEA - 5**

**Answer**

Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>George Brown - Acciona Energy North America - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Glenn Pressler - CPS Energy - 3</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	

**Response**

**Rachel Coyne - Texas Reliability Entity, Inc. - 10**

**Answer**

**Document Name**

**Comment**

Texas RE understands that the principal rationale for extending the implementation timeline was to provide additional timelines for generators to perform engineering studies of their resources. Texas RE does not agree modification to the implementation timeline is needed and instead believes the original 12-month timeline provides a sufficient window for generators to perform initial assessments based on design or minimum historical operating experience. Generators will then have the option to update that analysis with engineering information, but the interim operational information will enhance cold weather reliability during the period in which more detailed information is being developed.

Likes 0

Dislikes 0

**Response**

**Kenya Streeter - Edison International - Southern California Edison Company - 1,3,5,6**

**Answer**

**Document Name**

**Comment**

See comments submitted by Edison Electric Institute

Likes 0

Dislikes 0

**Response**

**Neil Shockey - Edison International - Southern California Edison Company - 5**

**Answer**

**Document Name**

**Comment**

See comments submitted by Edison Electric Institute.

Likes 0

Dislikes 0

<b>Response</b>	
<b>Romel Aquino - Edison International - Southern California Edison Company - 3</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
See comments submitted by Edison Electric Institute.	
Likes 0	
Dislikes 0	
<b>Response</b>	

4. The SDT has provided draft Implementation Guidance to address some issues identified by industry during the previous comment period. Recognizing that Implementation Guidance is not subject to ballot body approval, do you agree with the SDT proceeding with the development of the Implementation Guidance? If you do not agree, or have additional topics you would like the SDT to consider in the Implementation Guidance, please provide your explanation and suggested language.

Michael Whitney - Northern California Power Agency - 3, Group Name NCPA

Answer No

Document Name

Comment

See Marty Hostler's comments.

Likes 0

Dislikes 0

Response

Dennis Sismaet - Northern California Power Agency - 6

Answer No

Document Name

Comment

Conforming to/with Implementation guidance is not considered during audits.

Likes 0

Dislikes 0

Response

George Brown - Acciona Energy North America - 5

Answer No

Document Name

Comment

Acciona Energy USA Global, LLC (Acciona) does not believe additional guidance is necessary.

Likes 0

Dislikes 0

**Response**

**LeRoy Patterson - Public Utility District No. 2 of Grant County, Washington - 6**

**Answer** No

**Document Name**

**Comment**

If approved, entities will be held to requirements. Implementation Guidance is not binding on auditors when they review evidence for compliance. Requirements should be modified to address issues identified by industry during the previous comment period.

Likes 0

Dislikes 0

**Response**

**Jamison Cawley - Nebraska Public Power District - 1**

**Answer** No

**Document Name**

**Comment**

The information included in the Implementation Guidance should be included in the Standard, to ensure its consideration during compliance monitoring activities. For example, Requirement R7 includes vague requirements (freeze protection measures) that are open to interpretation. The clarification provided by the Implementation Guidance is helpful, but since it is not part of the Standard it may be disregarded. Request the information be included in the Standard rather than an additional document.

Likes 0

Dislikes 0

**Response**

**Marty Hostler - Northern California Power Agency - 3,4,5,6**

**Answer** No

**Document Name**

**Comment**

Conforming to/with Implementation guidance is not considered during audits.

Likes 0

Dislikes 0

**Response**

**Glen Farmer - Avista - Avista Corporation - 5**

**Answer** No

**Document Name**

**Comment**

Need more time.

Likes 0

Dislikes 0

**Response**

**Anthony Jablonski - ReliabilityFirst - 10**

**Answer** No

**Document Name**

**Comment**

ReliabilityFirst supports providing guidance to the Registered Entities and developing Implementation Guidance. However, if the guidance is only intended to provide additional explanation and context of the requirements, ReliabilityFirst believes the SDT should rather focus on clarifying the actual Requirements, Measures etc. while the standard is still draft form. Requirements, Measures, etc. should be written to remove any ambiguity and should be written in a clear and concise manner. If the guidance is purely explaining examples on how a Registered Entity may go about meeting the requirements, this is potentially something for the SDT to consider.

Likes 0

Dislikes 0

**Response**

**Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC**

**Answer** No

**Document Name**

**Comment**

As a general rule, Implementation Guidance is a good thing. However, it doesn't override or provide enforceable requirements. As such, having the recommendation for 5 years of historical operating temperatures in the guidance document doesn't prevent an auditor from expecting (requiring) the history to go back to initial commercial operation. As such, this limitation must be included in EOP-011 Requirement 7.3.2.2 and not in a non-

enforceable guidance document. It must also be included in IRO-010 Requirement 1.3.2.2 and TOP-003 Requirements 1.3.2.2 and 2.3.2.2 to keep RCs, BAs, and TOPs from requiring something more than 5 years.

Likes 0

Dislikes 0

**Response**

**Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2**

**Answer**

Yes

**Document Name**

**Comment**

ERCOT supports the development of Implementation Guidance. ERCOT suggests information concerning how minimum operating temperature information would be utilized in connection with Operational Planning Analysis and Real-time Assessment be included in the Implementation Guidance.

Likes 0

Dislikes 0

**Response**

**Gladys DeLaO - CPS Energy - 1**

**Answer**

Yes

**Document Name**

**Comment**

Yes, CPS Energy agrees.

Likes 0

Dislikes 0

**Response**

**Constantin Chitescu - Ontario Power Generation Inc. - 5**

**Answer**

Yes

**Document Name**

**Comment**

OPG supports NPCC RSC's comments.



Likes 0

Dislikes 0

**Response**

**Daniel Gacek - Exelon - 1**

**Answer** Yes

**Document Name**

**Comment**

Exelon support EEI's comment:

- Among the areas where expanded guidance would provide greater clarity is the intent of Requirement R7, subpart 7.3.

Exelon support NAGF's comments:

- The Implementation Guidance document should reference existing cold weather best practice documents available from NERC and industry.

Submitted on behalf of Exelon, Segments 1, 3, 5, 6

Likes 0

Dislikes 0

**Response**

**Elizabeth Davis - Elizabeth Davis On Behalf of: Tom Foster, PJM Interconnection, L.L.C., 2; - Elizabeth Davis**

**Answer** Yes

**Document Name**

**Comment**

PJM requests the SDT consider including the following in the development of the Implementation Guidance:

1. Specific guidance for the Generator Owner to provide the host Regional Entity/RC/TOP upon request or on a periodic basis (annually, seasonally or some other periodicity) with the Generator Owner's cold weather preparedness plans and associated data that the Generator Owner uses to ensure the freeze protection measures are designed to be consistent with the geography and meteorology for the location of the unit. The requirement to have Generator Owners provide cold weather preparedness plans to the RC/TOP allows the RC/TOP to have increased visibility into the plans of the Generator Owners and to incorporate Generator Owner's cold weather preparedness plans into the RC's/TOP's operational assessments.
2. A specific requirement that a Generator Owner's document supporting source data as assurance that the preparedness plans are based on equipment limitations, historical performance, and other relevant data to ensure the effectiveness of the plans. To the extent that weather forecasts or historical weather information other than those prepared by NOAA are relied upon, the Generator Owners should be required to provide an explanation in the supporting materials explaining why such an alternative forecast or historic data was utilized.

3. A provision that authorizes periodic spot checks outside audit cycles conducted by the host Regional Entity and results coordinated with the host BA/TOP/RC.

4. A provision that clearly states that the Generator Owner cold weather preparedness plans be based on unit size, type, and fuel sources as appropriate.

5. Provisions that ensure there are standard requirements and increased transparency in each Generator Owner's cold weather preparedness plans that allows comparability between such plans for equivalent generation types. Without more specifics in terms of the winterization contents and the data used in its development, there will be little ability for reviewers and auditors to determine whether a particular plan was sufficient or insufficient relative to plans covering similar generation technology in the same or similar geographic area.

Likes 0

Dislikes 0

### Response

**Gregory Campoli - New York Independent System Operator - 2, Group Name ISO/RTO Standards Review Committee**

**Answer**

Yes

**Document Name**

**Comment**

The IRC/SRC recommends the SDT considers the following in the development of the of additional guidance in the Implementation Guidance document:

The IRC/SRC recommends the Generator Owner's cold weather preparedness plans to be based on unit size, type, and fuel sources as appropriate.

The IRC/SRC recommends the Generator Owner document supporting data as assurance that the preparedness plans are based on equipment limitations, historical performance and other relevant data to ensure the effectiveness of the plans.

The IRC/SRC recommends the Implementation Guidance ensures that there are basic requirements and more transparency that allows comparability between such plans for equivalent generation types. Without more specifics in terms of the winterization contents and the data used in its development, there will be little ability for reviewers and auditors to determine whether a particular plan was sufficient or insufficient relative to plans covering similar generation technology in the same or similar geographic area.

Likes 0

Dislikes 0

### Response

**Shannon Ferdinand - Capital Power Corporation - 5 - MRO,WECC,Texas RE,SERC**

**Answer**

Yes

**Document Name**

**Comment**

Capital Power appreciates the flexibility in allowing entities to define cold weather. However, this flexibility may introduce the potential for subjectivity during an audit or guided self-certification. Capital Power would like to see additional guidance regarding a risk based approach to compliance with this standard which may include differences in defining and preparing for cold weather vs. extreme cold weather. In many instances it is within an entities standard operating procedure to operate in 'cold weather' and it is only extreme weather or abnormal weather (cold or hot) that may require an entity to make different / additional preparations. Regulating conditions that are within an entities standard operating procedure and present little risk to the grid is inconsistent with the principals of NERC's Risk Based Compliance Monitoring and Enforcement Plan.

Likes 0

Dislikes 0

### Response

**Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable**

**Answer** Yes

**Document Name**

**Comment**

EEl supports plans to develop implementation guidance. Among the areas where expanded guidance would provide greater clarity is the intent of Requirement R7, subpart 7.3.

Likes 0

Dislikes 0

### Response

**Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC Regional Standards Committee No Dominion**

**Answer** Yes

**Document Name**

**Comment**

Requesting that the Guidance document contains examples of freeze protection measures that are existing.

Please consider adding EOP-011-2 Implementation Guidance for Requirement R7.3 and its subparts involving Generating unit(s) cold weather data, in regard to cold weather preparedness plan(s). For example, does the plan simply involve the communication of data to the Reliability Coordinator, Transmission Operator, and Balancing Authority, or does it involve more than a plan to communicate the data that is required by IRO-010-4 and TOP-003-5? Please consider explaining why it is necessary to have the cold weather data within the cold weather preparedness plan(s). The reason for the data in the cold weather preparedness plan(s) could be subject to different interpretations.

Likes 0

Dislikes 0

**Response**

**Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name DTE Energy - DTE Electric**

**Answer** Yes

**Document Name**

**Comment**

DTEE supports the comments made by the NAGF.

Likes 0

Dislikes 0

**Response**

**David Jendras - Ameren - Ameren Services - 3**

**Answer** Yes

**Document Name**

**Comment**

Ameren generally agrees with the SDT's course of action, but we think the development of the Implementation Guidance is being rushed through an aggressive schedule.

Likes 0

Dislikes 0

**Response**

**Bobbi Welch - Midcontinent ISO, Inc. - 2**

**Answer** Yes

**Document Name**

**Comment**

MISO would like to acknowledge the Standard Drafting Team (SDT) for seeking to incorporate its recommendation in part; i.e. to establish a national reference with geographic locational emphasis that can be used as a standard for consistency of application across the NERC footprint. Page 1 of the **Implementation Guidance for Reliability Standard EOP-011-2** includes a suggestion for Generator Owners (GOs) to: *“utilize an additional resource to develop their definition of cold weather, such as one or more commonly used industry resources (e.g. the National Weather Service Climate Predictions Center maps sponsored by the National Oceanic and Atmospheric Administration which depicts average annual extreme minimum temperatures within the United States);”* however, stops short of dictating any specific definition for cold weather.

Likewise, the proposed standard, **EOP-011-2**, stops short of requiring GOs to use a national reference in establishing the level of winterization measures required to enable its facility to operate through extreme temperatures as recommended by MISO in its comments submitted on March 12, 2021.

**Lack of a “cold weather” definition means we may not see much of a reliability benefit** – In the absence of a “cold weather” definition, each individual GO/GOP is left to define “cold weather” for themselves. As the recommendation contained in the **Implementation Guidance for Reliability Standard EOP-011-2** is merely a suggestion, it does not compel the GO/GOP to use the National Weather Service Climate Predictions Center maps as a reference. This could result in a wide variation of generator interpretations and compliance applications across the footprint with no means for NERC to enforce a minimum application of performance.

**Recommendation:** MISO reiterates its recommendation for NERC to establish a national reference with geographic locational emphasis that can be used as a standard for consistency of application across the NERC footprint.

Likes 0

Dislikes 0

### Response

**Jamie Johnson - California ISO - 2**

**Answer**

Yes

**Document Name**

**Comment**

The California ISO agrees with comments submitted by the ISO/RTO Counsel (IRC) Standards Review Committee.

Likes 0

Dislikes 0

### Response

**Jennifer Flandermeyer - Jennifer Flandermeyer On Behalf of: Allen Klassen, Evergy, 6, 1, 3, 5; Derek Brown, Evergy, 6, 1, 3, 5; Marcus Moor, Evergy, 6, 1, 3, 5; Thomas ROBBEN, Evergy, 6, 1, 3, 5; - Jennifer Flandermeyer**

**Answer**

Yes

**Document Name**

**Comment**

If Requirement 7.3 is not addressed as requested / suggested above, I recommend the SDT take this up with Implementation Guidance.

Likes 0

Dislikes 0

### Response

**Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1**

**Answer** Yes

**Document Name**

**Comment**

AEPC has signed on to ACES comments.

Likes 0

Dislikes 0

**Response**

**Joshua Andersen - Salt River Project - 1,3,5,6 - WECC**

**Answer** Yes

**Document Name**

**Comment**

SRP agrees that these guidance documents assist the industry in understanding the intent of the drafting team. However, as noted in the questions these guidance documents are not auditable or resources for entities to base compliance plans on.

Likes 0

Dislikes 0

**Response**

**Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF**

**Answer** Yes

**Document Name**

**Comment**

The NAGF supports the development of Implementation Guidance to provide example approaches for achieving compliance with EOP-011-2. The NAGF provides the following comments for consideration:

- The Implementation Guidance document should reference existing cold weather best practice documents available from NERC and industry.
- The draft Implementation Guidance document as written is very basic and should incorporate additional clarification for the items listed under Question #5.

Likes 0

Dislikes 0

**Response**

**Wendy Center - U.S. Bureau of Reclamation - 5**

**Answer** Yes

**Document Name**

**Comment**

Reclamation supports the development of implementation guidance; however, the problem with the proposed cold weather modifications is the universal application of a compliance burden to solve a problem in a limited geographic area that is limited to certain types of generation facilities. Reclamation observes the lack of specificity in the proposed implementation guidance does little to guide the implementation of the new requirements. Lack of solid guidance almost certainly guarantees conflict between entities and auditors based on varying interpretations.

The implementation guidance states that Generator Owners will determine their own definition of cold weather and identify any associated protection measures. By avoiding prescriptive requirements to address a very specific problem, the result is requirements that are simply administrative in nature and that do not significantly improve reliability. Reclamation observes that this approach is not dissimilar from the current industry approach, which purportedly led to the recent cold weather reliability problems; i.e., that market factors “could” encourage entities in warm climates to proactively prepare for cold weather but the reality that those entities were not adequately prepared.

Reclamation recommends entities that are already adequately protected against cold weather do not need a reliability standard to require cold weather protections and entities that are not adequately protected against cold weather need clear, definitive requirements to meet NERC and FERC’s objectives of electric reliability during extreme cold weather. This is appropriately achieved by a regional reliability standard or by excluding certain geographic locations and/or certain types of generators. The fact that an entity can write its cold weather preparedness plan to be as little or as much detailed as it wants gives little support to genuinely improving reliability.

Likes 0

Dislikes 0

**Response**

**Terry Harbour - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1**

**Answer** Yes

**Document Name**

**Comment**

MEC supports the MRO NSRF comments.

Likes 0

Dislikes 0

**Response**

**Michael Courchesne - Michael Courchesne On Behalf of: Michael Puscas, ISO New England, Inc., 2; - ISO New England, Inc. - 2 - NPCC**

**Answer** Yes

**Document Name**

**Comment**

ISO-NE recommends the SDT considers the following in the development of the of additional guidance in the Implementation Guidance document:

ISO-NE recommends the Generator Owner's cold weather preparedness plans to be based on unit size, type, and fuel sources as appropriate.

ISO-NE recommends the Generator Owner document supporting data as assurance that the preparedness plans are based on equipment limitations, historical performance and other relevant data to ensure the effectiveness of the plans.

ISO-NE recommends the Implementation Guidance ensures that there are basic requirements and more transparency that allows comparability between such plans for equivalent generation types. Without more specifics in terms of the winterization contents and the data used in its development, there will be little ability for reviewers and auditors to determine whether a particular plan was sufficient or insufficient relative to plans covering similar generation technology in the same or similar geographic area.

Likes 0

Dislikes 0

**Response**

**Keith Jonassen - Keith Jonassen On Behalf of: Michael Puscas, ISO New England, Inc., 2; - Keith Jonassen**

**Answer** Yes

**Document Name**

**Comment**

The IRC/SRC recommends the SDT considers the following in the development of the of additional guidance in the Implementation Guidance document:

The ISO-NE recommends the Generator Owner's cold weather preparedness plans to be based on unit size, type, and fuel sources as appropriate.

The ISO-NE recommends the Generator Owner document supporting data as assurance that the preparedness plans are based on equipment limitations, historical performance and other relevant data to ensure the effectiveness of the plans.

The ISO-NE recommends the Implementation Guidance ensures that there are basic requirements and more transparency that allows comparability between such plans for equivalent generation types. Without more specifics in terms of the winterization contents and the data used in its development, there will be little ability for reviewers and auditors to determine whether a particular plan was sufficient or insufficient relative to plans covering similar generation technology in the same or similar geographic area.

Likes 0

Dislikes 0

**Response**



**Rich Hydzik - Rich Hydzik On Behalf of: Scott Kinney, Avista - Avista Corporation, 3, 5, 1; - Rich Hydzik**

**Answer** Yes

**Document Name**

**Comment**

Implementation guidance for a new requiriement is always helpful.

Likes 0

Dislikes 0

**Response**

**Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company**

**Answer** Yes

**Document Name**

**Comment**

Southern Company supports the drafting of Implementation Guidance.

Likes 0

Dislikes 0

**Response**

**Leonard Kula - Independent Electricity System Operator - 2**

**Answer** Yes

**Document Name**

**Comment**

N/A.

Likes 0

Dislikes 0

**Response**

**Donald Lock - Talen Generation, LLC - 5**

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
<p>We agree that GOs should not have to retrofit existing generation units to meet cold weather criteria different from those for which plants were designed, but the statement, "Requirement R7 does not requires a Generator Owner to install any specific freeze protections measures on their generating unit(s)," appears to invite those building new facilities to ignore the subject and report for EOP-011 a freeze protection design temperature of 33 F. New units should be designed for at least the lowest historical ambient air temperature for their locations, plus a substantial wind speed.</p> <p>NERC should explain that the preparedness plans cited in R7 and R8 pertain solely to pre-winter equipment preparations, and do not address non-equipment issues (e.g. checking inventories of food, cots and blankets for operators, hiring a snowplowing contractor) and actions taken during winter storms (e.g. criteria for calling-out extra personnel, expanded operator's rounds, turning-on heaters at various temperature trigger-points, cold-weather lay-up practices following shutdown).</p> <p>NERC should explain that the preparedness plan of R7 and R8 is to address all wintertime equipment protection measures, not just those related to the freezing of water, despite use of the term, "freeze protection measures," in R7.1 and R7.2. Alternatively, replace, "freeze protection," in the standard with, "winterization," or, "cold weather."</p> <p>The Implementation Guidance document should provide recommended best practices for key winter storm survival issues supplemental to those addressed in the requirements of EOP-011, such as keeping CTG inlet air filters from becoming blocked by snow.</p> <p>The Implementation Guidance document should educate readers as to why freeze prevention measures often fail to function as designed, in particular the fact that the IEEE-515 formula for piping represents an insulation-encapsulated system suspended in midair. Substantial additional heating is needed in places for heat lost through supports and clamps, and for bare surfaces on valves. Again recommended best practices should be discussed.</p>	
Likes	0
Dislikes	0
<b>Response</b>	
Sing Tay - OGE Energy - Oklahoma Gas and Electric Co. - 6, Group Name OKGE	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
<p>OKGE agrees with the creation of an Implementation Guidance. However, we suggest adding clarification on R8 regarding the periodicity of training required. Currently, the language is not clear and it is open to interpretation during an audit as to how often training is required.</p> <p>Also, we are not certain if the proposed Implementation Guidance (IG) will be approved as part of the whole package when the project receives approval from the industry. Our understanding is that Implementation Guidance follows a separate process, different from the standard development process. So, we want to emphasize that it is important for the IG to be endorsed by the ERO prior to the effective date of the three standards so that registered entities are able to use it to adequately plan and implement by the effective date.</p>	
Likes	0
Dislikes	0

**Response**

**Joe O'Brien - NiSource - Northern Indiana Public Service Co. - 6**

**Answer** Yes

**Document Name**

**Comment**

Comments: *Guidance likely to be usefull*

Likes 0

Dislikes 0

**Response**

**Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper**

**Answer** Yes

**Document Name**

**Comment**

The Implementation Guidance is helpful. The analysis to determine the “minimum historical operating temperature” still includes the 5 years of operational data which was removed from the standard. It also requires you to use the most recent extreme cold weather event even if that was 10 years ago. For Registered Entities in the South cold weather is rare and there may not be data available from the Registered Entity for the most recent cold weather event.

Likes 0

Dislikes 0

**Response**

**Matthew Nutsch - Seattle City Light - 1,3,4,5,6 - WECC**

**Answer** Yes

**Document Name**

**Comment**

Seattle appreciates the efforts of the SDT to develop implementation guidance for EOP-011. However, we find the guidance provided to contradict itself. EOP-011 Implementation Guidance for R7 indicates “but the requirement does not dictate any specific definition for cold weather” whereas that provided for R8 states “The cold weather preparedness plan must contain, however, information on freeze protection measures currently in place...” By connecting freeze protection with cold weather in the guidance for R8, the SDT directly implies that freezing conditions must be included in any definition of cold weather. This directly contradicts the R7 guidance.

Seattle is concerned about this contradiction because we remain confused by the expectations of new EOP-011 for generation units located in naturally cold locations, designed for cold conditions, and with long histories of successful operation in winter. Some of our hydroelectric units are located high in mountains and have operated in all winter conditions over more than 100 years. The guidance for R7 directs that we would be able to define “cold weather” as “abnormally cold weather” and focus our preparation plans on such conditions. The guidance of R8, however, directs that we include all existing freeze protection measures in such plans, which implies that cold weather plans should accommodate all conditions below freezing.

Seattle finds this contradictory thinking to pervade all aspects of Project 2019-06 and asks that the SDT resolve in its mind which is meant: that entities may define cold weather for themselves and develop appropriate preparedness plans, or that cold weather is defined as “below freezing” and entities must plan for and document how they address freezing conditions and below. Seattle strongly prefers the former interpretation.

Seattle also asks that the guidance clarify the flexibility in definitions and plans envisioned by the SDT. For example, is an entity is permitted to develop different definitions for cold weather for different units located in different areas with different cold weather conditions, or is each entity is expected to have a common definition for cold weather and a common preparedness plan. Is a summer-only unit, such as a hydroelectric unit powered by irrigation flows that does not operate during winter, required to document and train on a comprehensive cold weather operating plan?

Likes	1	Wike Jennie On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 3, 1, 4, 5, 6; John Merre
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Dislikes	0	
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**Response**

**John Allen - City Utilities of Springfield, Missouri - 4**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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**Comment**

I fully support the SDT drafting Implementation Guidance to describe one or more ways to implement this standard. If it moves forward, then it will need more detail.

Likes	0	
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Dislikes	0	
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**Response**

**Glenn Pressler - CPS Energy - 3**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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**Comment**

Likes	0	
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Dislikes	0	
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**Response**

**Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Devon Tremont - Taunton Municipal Lighting Plant - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**John Babik - JEA - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**James Baldwin - Lower Colorado River Authority - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Teresa Krabe - Lower Colorado River Authority - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Dan Roethemeyer - Vistra Energy - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Meaghan Connell - Public Utility District No. 1 of Chelan County - 5, Group Name CHPD**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Aidan Gallegos - PNM Resources - Public Service Company of New Mexico - 1,3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jun Hua - Austin Energy - 4**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**W. Dwayne Preston - Austin Energy - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Patricia Lynch - NRG - NRG Energy, Inc. - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Truong Le - Truong Le On Behalf of: David Owens, Gainesville Regional Utilities, 1, 5, 3; Neville Bowen, Ocala Utility Services, 3; - Truong Le**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Paul Mehlhaff - Sunflower Electric Power Corporation - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Daniela Atanasovski - APS - Arizona Public Service Co. - 1**



Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Martin Sidor - NRG - NRG Energy, Inc. - 6</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Julie Hall - Entergy - 6, Group Name Entergy</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0

**Response**

**Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF, Group Name SIGE Project 2019-06**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Ben Burnett - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jamie Monette - Allete - Minnesota Power, Inc. - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Dana Klem - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer** Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Brian Evans-Mongeon - Utility Services, Inc. - 4</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Thomas Foltz - AEP - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Kathleen Goodman - ISO New England, Inc. - 2 - NPCC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	

**Response**

**Larry Heckert - Alliant Energy Corporation Services, Inc. - 4**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Donna Wood - Tri-State G and T Association, Inc. - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**LaTroy Brumfield - American Transmission Company, LLC - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Laura Nelson - Laura Nelson**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Maryanne Darling-Reich - Black Hills Corporation - 1,3,5,6 - MRO,WECC**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Gul Khan - Gul Khan On Behalf of: Lee Maurer, Oncor Electric Delivery, 1; - Gul Khan**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer**

**Document Name**

**Comment**

BC Hydro supports the comments of Seattle City Light.

Likes 0

Dislikes 0

**Response**

**Romel Aquino - Edison International - Southern California Edison Company - 3**

**Answer**

**Document Name**

**Comment**

See comments submitted by Edison Electric Institute.

Likes 0

Dislikes 0

**Response**

**Neil Shockey - Edison International - Southern California Edison Company - 5**

**Answer**

**Document Name**

**Comment**

See comments submitted by Edison Electric Institute.

Likes 0

Dislikes 0

**Response**

**Kenya Streeter - Edison International - Southern California Edison Company - 1,3,5,6**

**Answer**

**Document Name**

**Comment**

See comments submitted by Edison Electric Institute

Likes	0	
Dislikes	0	
<b>Response</b>		
<b>Rachel Coyne - Texas Reliability Entity, Inc. - 10</b>		
<b>Answer</b>		
<b>Document Name</b>		
<b>Comment</b>		
<p>Texas RE understands the purpose of implementation guidance is to include “examples or approaches to illustrate how registered entities could comply with a standard.” (Compliance Guidance Policy, page 3). This implementation guidance does not include any specific examples or approaches for complying with proposed EOP-011 Requirements R7 and R8. In general, it is preferable for the requirement language to set clear compliance expectations as is noted on page 5 of the Compliance Guidance Policy: “Compliance expectations should be made as clear as possible through the standards development process which should minimize the need for guidance after final ballot approval of a standard.”</p>		
Likes	1	OGE Energy - Oklahoma Gas and Electric Co., 6, Tay Sing
Dislikes	0	
<b>Response</b>		



**5. Please provide any additional comments for the SDT to consider, if desired.**

**John Allen - City Utilities of Springfield, Missouri - 4**

**Answer**

**Document Name**

**Comment**

Overall, I believe the new requirements are not results-based and instead mostly administrative without a clear measurable reliability objective. This makes it unclear if any of the new requirements will actually benefit reliability. However, I will vote affirmative to move this project forward so the SDT can meet their mandate to the NERC BOT.

Likes 0

Dislikes 0

**Response**

**Matthew Nutsch - Seattle City Light - 1,3,4,5,6 - WECC**

**Answer**

**Document Name**

**Comment**

Seattle appreciates the efforts of the SDT to address the many comments of industry while accommodating the mandates of FERC and NERC surrounding this project, especially in light of the recent cold weather event in the Texas area. It's a challenging effort.

Seattle does not believe that all changes have improved the proposed Standards. In particular, Seattle asks that the language of EOP-011 R1.2.6.2 be restored, such that the term "and other" remains to modify "extreme weather conditions." As currently written, R1.2.6.1 and R1.2.6.2 taken together imply that "cold weather" is an extreme weather condition. Which may be true in Texas and many southern states, but is manifestly not true in northern parts of North America such as Minnesota or New York or Washington or Canada. Although restoring the modifier "and other" to R1.2.6.2 does not fully clarify what is meant by "cold weather," it does suggest that the type of cold weather of concern for EOP-011 (and by extension IRO-010 and TOP-003) is the "extreme" variety, i.e., not those conditions that occur annually but rather those that occur once every 5 or 10 or 20 years, perhaps.

Seattle furthermore asks, as in our prior comments, that the SDT better clarify the intent regarding "cold weather conditions" for Project 2019-06 by replacing everywhere in EOP-011, IRO-010, and TOP-003 the term "cold weather" with "abnormally cold weather." This change would make clear the intent and reach of these revised and new requirements, resolve confusion about how to apply these changes to the majority of North American generation units, and minimize purely administrative, trivial activities having no reliability benefit.

Seattle's comments for item 4, above, also discuss clarification of what is meant by "cold weather," in this case as exposed by a contradiction in the draft implementation guidance for EOP-011 R7 and R8. Clearing up the contradiction here would help clarify what is intended in the proposed changes to EOP-011 R1, R7, and R8, and by extension IRO-010 and TOP-003.

Thank you for your consideration.

Likes 0

Dislikes 0

Response	
Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF	
Answer	
Document Name	
Comment	
<p>IRO-010-5, R1 Sub requirement numbering correction.</p> <p>1.3.2. Generating unit(s):</p> <p>2.3.2.1. minimum design temperature; or</p> <p>2.3.2.2. minimum historical operating temperature; or</p> <p>2.3.2.3. engineering analysis to determine current minimum cold weather performance temperature.</p> <p>These should be 1.3.2.1, 1.3.2.2 and 1.3.2.3 respectively.</p>	
Likes	0
Dislikes	0
Response	
Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy	
Answer	
Document Name	
Comment	
<p>Regarding the Transmission Operator data specification requirements within TOP-003-5 R1.3:</p> <p>1. For TOP-003-5 R1.3, suggest removal of the phrase “generating unit-specific design specification or minimum historical performance during cold weather” because this information is only valuable if the facility has a single cold weather design specification.</p> <p>Regarding the Reliability Coordinator data specification requirements within IRO-010-4 R1.3:</p> <p>1. The proposed change is made redundant by the proposed change in TOP-003 and existing coordination required between the RC, BA, and TOP in IRO-008-2 R2. Since the BAs and TOPs will be required to include cold weather considerations as part of their data specifications and into their Operational Planning Analyses, the RC will have to consider the potential cold weather impacts of the generators that have been accounted for in the Operating Plans of the respective BAs and TOPs. Suggest removal of R1.3 Reliability Coordinator data specification requirements.</p>	

Additionally, Duke Energy supports the following NAGF comments:

“The NAGF provides the following comments for consideration:

EOP-011-2:

1. The NAGF requests clarifying the term “extreme weather conditions” referenced in R1.2.6.2 and R2.2.9.2. For example, does the term address non-temperature related cold weather conditions (heavy snowfall, ice storms, freezing fog, etc.) and/or warm extreme weather conditions (tornados, hail storms, derecho, etc.)? Clarifying this term will help to confirm the conditions that the TOP and BA operating plans need to address as well as the data to be provided by the GO/GOPs.
2. The NAGF requests clarification regarding the Requirement 7.3.1 request for “Generating unit(s) cold weather data, to include”. We suggest that NERC specify that this requirement pertains only to known, measurable effects on capacity, start-up capability or operational reliability.
3. The NAGF requests clarification regarding the terms “capability and availability” referenced in R7.3.1.1.
4. The NAGF requests clarification regarding Requirement R7.3.1.2 “fuel supply and inventory concerns”. The data to be provided is not so much concerns but has to be actionable/usable for planning models and real-time operations. Generating facility NG pipeline pressure trip limit, % of contract firm gas supply, number of run hrs available on alternate/backup fuel, river flow with current/anticipated ice conditions, and available battery storage MW/Hrs are far more usefull than “concerns”.
5. The NAGF requests clarification regarding Requirement R7.3.2.2 “minimum historical operating temperature” with respect to wind speed and wet-bulb temperatures affecting the generator unit operation. Generator facilities may be able to operate at -1 deg F with little or no wind but could suffer a freeze-related forced outage at -1 deg F with sustained 20 mph winds (-23 deg F wind chill).”

Likes 0

Dislikes 0

### Response

**Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter**

**Answer**

**Document Name**

**Comment**

N/A

Likes 0

Dislikes 0

### Response

**Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC**

**Answer**

**Document Name**

**Comment**

BPA believes this should be a regional standard. Many areas in the country experience extreme weather regularly and are prepared to maintain reliability during extreme weather. In those areas, the standard would be additional compliance burden without a reliability benefit.

Likes 0

Dislikes 0

**Response**

**Larry Heckert - Alliant Energy Corporation Services, Inc. - 4**

**Answer**

**Document Name**

**Comment**

Alliant Energy supports the comments submitted by the MRO NSRF.

Likes 0

Dislikes 0

**Response**

**Kathleen Goodman - ISO New England, Inc. - 2 - NPCC**

**Answer**

**Document Name**

**Comment**

**EOP-11**

ISO-NE believes weatherization must be addressed. We support the inclusion of preparedness requirements in EOP-011; however, we think that the proposed language in requirement R7 does not go far enough. Without a clear, measurable objective, the requirement may not achieve its intended outcome or provide a measurable reliability benefit. **The proposed draft of EOP-011 R7 shown below illustrates how the SDT might incorporate comments #1-6 (shown below recommended language).**

**Recommended language:**

R7. Each Generator Owner shall develop, implement and maintain, and implement one or more cold weather preparedness plan(s) for its generating units. The cold weather preparedness plan(s) shall include the following, at a minimum: *[Violation Risk Factor: High] [Time Horizon: Operations Planning and Real-Time Operations]*

7.X (new) An evaluation of each generating unit's capability to operate:

7.X.1 (new) At the lowest temperature in the previous 40 years as recorded at the generator's physical location (or nearest physical location for which temperature data exists); and

7.X.2 (new) during extreme weather conditions as recorded at the generator's physical location (or nearest physical location for which temperature data exists) which includes temperatures and other meteorological conditions (e.g. wind, precipitation, icing, flooding) which exceed the most severe conditions on record

7.1. Generating unit(s) freeze protection measures based on unique factors

such as geographical location and plant configuration;

7.2. Annual maintenance and inspection and maintenance of generating unit(s) freeze

protection measures;

7.3. Generating unit(s) cold weather data, to include:

7.3.1. Generating unit(s) operating limitations in cold weather (including impacts of precipitation) to include:

7.3.1.1. capability and availability;

7.3.1.2. fuel supply and inventory concerns; and

7.3.1.3. environmental constraints and air permitting limitations.

7.3.2. Generating unit(s):

7.3.2.1. minimum design temperature; or,

7.3.2.2 minimum historical operating temperature; or

7.3.2.3 engineering analysis to determine current minimum cold weather performance temperature

7.3.2.4. fuel switching capabilities; and

1) Within R7, add a new sub-bullet under "the cold weather preparedness plan shall include, at a minimum," which states the following "an evaluation of the resource's ability to operate the lowest recorded temperature in the previous 40 years at the generator's physical location (or nearest location where temperature was recorded for which data exists)".

2) In addition, "Extreme Weather" (if added based on our other comments below) should be clearly defined as temperatures exceeding the lowest (or highest) recorded temperature at the generator's physical location (or nearest location where temperature was recorded for which data exists) for a sustained period greater than or equal to one day.

3) R1 1.2.6.2 requires the TO to have Operating Plans that mitigate operating Emergencies and these Operating Plans must include provisions to determine the reliability impacts of **extreme weather** conditions, while the GO requirement for having a cold weather plan, as prescribed within R7, only requires a cold weather plan addressing "cold weather" (not "extreme") conditions. Consideration should be given to having the GO requirement under R7 include the identification of limitations in more extreme weather conditions (including impacts of temperature, wind, precipitation, icing, flooding) similar to those experienced in ERCOT earlier this year.

4) R7 As part of 7.3.1 recommend including a requirement that the GO's cold weather preparedness plan includes data related to the impacts of precipitation (e.g. icing, snowpack)

5) R7 Recommend moving 7.3.1.3 to under 7.3.2 since "fuel switching capabilities" is not a **limitation** (7.3.1 is "Generating unit(s) operating limitations in cold weather to include:"). Alternatively, clarify that, as written, this 7.3.1.3 is meant to be "limitations when operating on alternate fuels" (not sure that is the intent though).

6) R7 As part of 7.3.1.4 or as another item, recommend including air permitting constraints. The reason for this is that some generators cannot utilize alternate fuels unless RC/BA declares specific abnormal/emergency conditions and these limitations might not be captured as an "environmental constraint".

7) R8 Recommend including an annual periodicity requirement for the cold weather preparedness plan training – as written, this requirement could be interpreted as being a one time requirement. Also recommend clarifying that the training on the cold weather preparedness plan must be provided to "new" maintenance and operations personnel prior to the first winter in which each individual has assumed responsibility for maintenance or operation of the plant.

### **IRO-010**

1.3 Suggest rewording as "Provisions for notification of BES generating unit(s) operating limitations during cold and extreme weather conditions to include:"

1.3.1 Recommend moving 1.3.1.3 to under 1.3.2 since "fuel switching capabilities" is not a **limitation** (1.3.1 is "Generating unit(s) operating limitations in cold weather to include:"). Alternatively, clarify that, as written, this 1.3.1.3 is meant to be "limitations when operating on alternate fuels" (not sure that is the intent though).

### **TOP-003**

Same comments as those listed above for IRO-010. Comments apply to R1 (TO) and R2 (BA).

Likes 0

Dislikes 0

### **Response**

**Thomas Foltz - AEP - 5**

**Answer**

**Document Name**

**Comment**

EOP-011:

The meaning of the phrase "provision to determine" in R's 1.2.6 and 2.2.9 is unclear due to the subjectivity of the word "provision." As currently proposed, the obligation might be inconsistently interpreted among entities. AEP believes the original text "Reliability impacts of..." is far superior, and recommends the SDT refrain from changing it and retaining the original text as part of R's 1.2.6 and 2.2.9.

Newly proposed R 1.2.6 and R 2.2.9 state that the Transmission Operator's and Balancing Authority's Operating Plans must include "provisions to determine" the reliability impacts of cold weather conditions and extreme weather conditions, however nothing is stated which requires action taken as a result of any determinations which might require them. The team might wish to consider whether or not a potential reliability gap exists as a result of not requiring that action be taken, for those determinations made which would require that action(s) be taken.

AEP believes that R 7.3.1 could be improved by making it clear that operations limitations in cold weather are dependent on the unit's operating status. AEP suggests that R 7.3.1 be revised to state "7.3.1. Generating unit(s) operating limitations in cold weather (including units in-service and units out-of-service) to include..."

The terms "capability" and "availability" as proposed for 7.3.1.1 are of potential concern, as these terms are commercial in nature. The meaning of these terms within the commercial environment are obviously quite different than the meanings intended for this standard. As a result, the usage of these terms within this standard may result in confusion and would not provide the desired results. Rather than these terms, AEP recommends instead using "impact assessment" or perhaps "likelihood of availability."

#### EOP-011 Violation Severity Levels for R8:

AEP is concerned by the reference to "personnel at a single generating unit" within the proposed Violation Severity Levels (VSLs). Personnel are typically assigned to a generating facility as opposed to a single generating unit. Therefore, AEP recommends changing "single generating unit" to "generating facility" across all VSLs.

In addition, AEP recommends SDT to consider the followings modifications to VSLs:

- 1) Revise the phrase of "5% or less of its total applicable personnel" in the Lower VSL to state "5% of its total applicable personnel".
- 2) The VSL table should be revised to allow for a grace period to accommodate the scenarios where the identified applicable personnel may be returning from extended period of leave (e.g., sick, military service, etc.)
- 3) Add qualifiers to GO and GOP in each of the VSLs as in "The Generator Owner or Generator Operator that implemented the cold weather preparedness plan" failed to provide ...

#### EOP-011 Technical Rationale for R8:

AEP also recommends SDT to consider adding the following languages to the associated Technical Rationale to R8: "It is recommended that Generator Owner's and/or Generator Operator's cold weather preparedness plans address operator and maintenance training for all personnel specific to job functions outlined in these plans with roles including step-up employees and temporary roles that perform weatherization functions at the plant. In addition, it is recommended that Generator Owner and Generator Operator include the specific scenarios, in their training program, such as training requirements for maintenance and operations regional personnel who may travel to more than one site."

#### TOP-003:

As similarly stated for EOP-011, the terms "capability" and "availability" as proposed for 1.3.1.1 are of potential concern, as these terms are commercial in nature. The meaning of these terms within the commercial environment are obviously quite different than the meanings intended for this standard. As a result, the usage of these terms within this standard may result in confusion and would not provide the desired results. Rather than these terms, AEP recommends instead using "impact assessment" or perhaps "likelihood of availability."

Likes 0

Dislikes 0

#### Response

**Dana Klem - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer**

**Document Name**

**Comment**

IRO-010-5, R1 Sub requirement numbering correction.

1.3.2. Generating unit(s):

2.3.2.1. minimum design temperature; or

2.3.2.2. minimum historical operating temperature; or

2.3.2.3. engineering analysis to determine current minimum cold weather performance temperature.

These should be 1.3.2.1, 1.3.2.2 and 1.3.2.3 respectively.

Likes 0

Dislikes 0

## Response

**Chris Wagner - Santee Cooper - 1, Group Name** Santee Cooper

**Answer**

**Document Name**

**Comment**

R7.3.1.1 refers to cold weather data related to generating unit operating limitations in cold weather to include capability and availability. Specifically, what items should be addressed to meet this requirement?

The Technical Reference, under Rationale for Requirement R7 says, "The Generator Owner plans and procedures should include, but are not limited to, necessary and appropriate freeze protection measures, periodic maintenance and inspection of such measures, accurate ambient temperature design specifications, and generating unit limitations and expected performance in cold weather." What is meant by accurate ambient temperature design specifications? The design ambient temperature was determined as part of the original design. Records for the design temperatures may not be available for older units. The basis of the design temperatures may also not be available. Recalculating these numbers based on current methods does not change the as built condition.

What is meant by Generating unit limitations and expected performance in cold weather? Does this mean that the Facility needs to be rated with respect to an expected net or gross output based on a range of temperatures?

The Technical Reference, under Rationale for Requirement R7, Paragraph 2 says, "The standard requires the cold weather preparedness plan to contain a generating-units operating limitations during cold weather and other availability and capability information, and an annual requirement to inspect with associated maintenance of the generating unit(s).

What does "other availability and capability information specifically refer to?

What does "an annual requirement to inspect with associated maintenance of the generating unit(s)" mean and specifically refer to?

If deficiencies are documented on the inspection, is there a time requirement related to correcting the deficiencies?

The Technical Reference, under Rationale for Requirement R7, Paragraph 3 says, "Additionally, Requirement R7 requires the Generator Owner to develop accurate data to include the generating unit(s)' minimum design temperature (i.e., faceplate capability) during cold weather."

What is an "accurate units design temperature"



When a temperature is cited on a combustion turbine nameplate along with a KW rating, it is for the purposes of determining if the turbine is performing as designed. The KW cited on a turbine nameplate is a mathematical conversion of horsepower. It does not necessarily refer to the unit's electrical generating capability.

Likes 0

Dislikes 0

### Response

**Joe O'Brien - NiSource - Northern Indiana Public Service Co. - 6**

**Answer**

**Document Name**

**Comment**

*The efforts of the SDT are appreciated*

Likes 0

Dislikes 0

### Response

**Sing Tay - OGE Energy - Oklahoma Gas and Electric Co. - 6, Group Name OKGE**

**Answer**

**Document Name**

**Comment**

1) Technical Rationale and Justification for EOP-011-2:

On page 1, under Rationale for Requirement R8, there are some spelling errors (highlighted in bold):

*See the Glossary terms for Generator Operator and Generator Owner.*

1. **Generator Operator** – “The entity that operates generating **Favility**(ies) and performs the functions of supplying energy and **Interconnected Opeartions Services**.”

2. **Geneartor Onwer** – “Entity that owns and maintains generating Facility(ies).”

2) OKGE recommends the SDT to expand the Technical Rationale to clarify the intent of the modifications to R7 and its subrequirements. Expanded technical rationale and Implementation Guidance will help prevent misinterpretations by both registered entities and auditors.

Likes 0

Dislikes 0

**Response**

**Rachel Coyne - Texas Reliability Entity, Inc. - 10**

**Answer**

**Document Name**

**Comment**

Texas RE appreciates the development of a specific standard for training. As stated in response to Question 1, Texas RE notes that Requirement R8 does not include a periodicity for training as was recommended in the 2019 Cold Weather Report.

Proposed EOP-011-2 Requirement Parts 1.2.6 and Part 2.2.9 require the TOP and BA to provide provisions to determine the reliability impacts of cold weather conditions in their Emergency Operating Plans. Texas RE recommends the TOP and BA also be required to include actions to address those reliability impacts in their Emergency Operating Plans.

Likes 0

Dislikes 0

**Response**

**Ben Burnett - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE**

**Answer**

**Document Name**

**Comment**

**EOP-011-2:**

R1 and R2: CEHE appreciates the removal of the term "any other" from R1 and R2 of the first draft. However, the inclusion of the term "provisions to determine reliability impacts" seems vague. CEHE requests clarification from the SDT on the intent of this requirement, and would suggest using "methods" instead of "provisions".

R8: The use of "or" between "maintenance" and "operations" in R8 leaves uncertainty as to which Registered Function is responsible for training which personnel. Both the Implementation Guidance and Technical Rationale use "and".

**IRO-010-4:**

R1.3.2: The R1.3.2 sub-requirements are miss-numbered. In the latest draft, the R1.3.2 sub-requirement numbers are currently 2.3.2.1, 2.3.2.2, and 2.3.2.3.

**TOP-003-5:**

CEHE questions the data specification requirements included in TOP-003 for all registered TOP functions. For those TOPs that do not own generation and only perform Real-time monitoring, the proposed data specification requirements would be an excessive administrative burden and only provide information for situational awareness. If the SDT determines that a TOP which performs Operational Planning Analyses and/or owns generation in its Transmission Operator Area has a reliability need for the data proposed in this modification, there should be a separate requirement with appropriate functional entity applicability. CEHE suggests the following modification:

R1. Each Transmission Operator that performs Real-time monitoring only shall maintain a documented specification for the data necessary for it to perform its Real-time monitoring. The data specification shall include, but not be limited to: [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

1.1. A list of data and information needed by the Transmission Operator to support its Real-time monitoring, including non-BES data and external network data as deemed necessary by the Transmission Operator.

1.2. Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.

1.3. A periodicity for providing data.

1.4. The deadline by which the respondent is to provide the indicated data.

R2. Each Transmission Operator that performs Operational Planning Analyses, Real-time monitoring, and Real-time Assessments shall maintain a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The data specification shall include, but not be limited to: [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

2.1. A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time Assessments, and Real-time monitoring, including non-BES data and external network data as deemed necessary by the Transmission Operator.

2.2. Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.

2.3. Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:

2.3.1. Operating limitations based on:

2.3.1.1. capability and availability;

2.3.1.2. fuel supply and inventory concerns;

2.3.1.3. fuel switching capabilities; and

2.3.1.4. environmental constraints.

2.3.2. Generating unit(s):

2.3.2.1. minimum design temperature; or

2.3.2.2. minimum historical operating temperature; or

2.3.2.3. engineering analysis to determine current minimum cold weather performance temperature.

2.4. A periodicity for providing data.

2.5. The deadline by which the respondent is to provide the indicated data.

R3. Each Balancing Authority shall maintain a documented specification for the data necessary for it to perform its analysis functions and Real-time monitoring. The data specification shall include, but not be limited to: [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

- 3.1. A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring.
  - 3.2. Provisions for notification of current Protection System and Remedial Action Scheme status or degradation that impacts System reliability.
  - 3.3. Provisions for notification of BES generating unit(s) status during local forecasted cold weather to include:
    - 3.3.1. Operating limitations based on:
      - 3.3.1.1. capability and availability;
      - 3.3.1.2. fuel supply and inventory concerns;
      - 3.3.1.3. fuel switching capabilities; and
      - 3.3.1.4. environmental constraints.
    - 3.3.2. Generating unit(s):
      - 3.3.2.1. minimum design temperature; or
      - 3.3.2.2. minimum historical operating temperature; or
      - 3.3.2.3. engineering analysis to determine current minimum cold weather performance temperature.
  - 3.4. A periodicity for providing data.
  - 3.5. The deadline by which the respondent is to provide the indicated data.
- R4. Each Transmission Operator shall distribute its data specification to entities that have data required by the Transmission Operator's Operational Planning Analyses, Realtime monitoring, and Real-time Assessments. [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]
- R5. Each Balancing Authority shall distribute its data specification to entities that have data required by the Balancing Authority's analysis functions and Real-time monitoring. [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]
- R6. Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data specification in Requirement R3 or R4 shall satisfy the obligations of the documented specifications using: [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]
- 6.1. A mutually agreeable format
  - 6.2. A mutually agreeable process for resolving data conflicts
  - 6.3. A mutually agreeable security protocol

Likes 0

Dislikes 0

**Response**

**Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF, Group Name SIGE Project 2019-06**

**Answer**

**Document Name****Comment****EOP-011-2:**

- R1 and R2: SIGE appreciates the removal of the term “any other” from R1 and R2 of the first draft. However, the inclusion of the term “provisions to determine reliability impacts” seems vague. SIGE requests clarification from the SDT on the intent of this requirement, and would suggest using “methods” instead of “provisions”.
- R8: The use of "or" between "maintenance" and "operations" in R8 leaves uncertainty as to which Registered Function is responsible for training which personnel. Both the Implementation Guidance and Technical Rationale use "and".

**IRO-010-4:**

**R1.3.2:** The R1.3.2 sub-requirements are miss-numbered. In the latest draft, the R1.3.2 sub-requirement numbers are currently 2.3.2.1, 2.3.2.2, and 2.3.2.3.

**TOP-003-5:**

SIGE questions the data specification requirements included in TOP-003 for all registered TOP functions. For those TOPs that do not own generation and only perform Real-time monitoring, the proposed data specification requirements would be an excessive administrative burden and only provide information for situational awareness. If the SDT determines that a TOP which performs Operational Planning Analyses and/or owns generation in its Transmission Operator Area has a reliability need for the data proposed in this modification, there should be a separate requirement with appropriate functional entity applicability. SIGE suggests the following modification:

R1. Each Transmission Operator that performs Real-time monitoring only shall maintain a documented specification for the data necessary for it to perform its Real-time monitoring. The data specification shall include, but not be limited to: [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

1.1. A list of data and information needed by the Transmission Operator to support its Real-time monitoring, including non-BES data and external network data as deemed necessary by the Transmission Operator.

1.2. Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.

1.3. A periodicity for providing data.

1.4. The deadline by which the respondent is to provide the indicated data.

R2. Each Transmission Operator that performs Operational Planning Analyses, Real-time monitoring, and Real-time Assessments shall maintain a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The data specification shall include, but not be limited to: [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

2.1. A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time Assessments, and Real-time monitoring, including non-BES data and external network data as deemed necessary by the Transmission Operator.

2.2. Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.

2.3. Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:

2.3.1. Operating limitations based on:

2.3.1.1. capability and availability;

2.3.1.2. fuel supply and inventory concerns;

2.3.1.3. fuel switching capabilities; and

2.3.1.4. environmental constraints.

2.3.2. Generating unit(s):

2.3.2.1. minimum design temperature; or

2.3.2.2. minimum historical operating temperature; or

2.3.2.3. engineering analysis to determine current minimum cold weather performance temperature.

2.4. A periodicity for providing data.

2.5. The deadline by which the respondent is to provide the indicated data.

R3. Each Balancing Authority shall maintain a documented specification for the data necessary for it to perform its analysis functions and Real-time monitoring. The data specification shall include, but not be limited to: [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

3.1. A list of data and information needed by the Balancing Authority to support its analysis functions and Real-time monitoring.

3.2. Provisions for notification of current Protection System and Remedial Action Scheme status or degradation that impacts System reliability.

3.3. Provisions for notification of BES generating unit(s) status during local forecasted cold weather to include:

3.3.1. Operating limitations based on:

3.3.1.1. capability and availability;

3.3.1.2. fuel supply and inventory concerns;

3.3.1.3. fuel switching capabilities; and

3.3.1.4. environmental constraints.

3.3.2. Generating unit(s):

3.3.2.1. minimum design temperature; or

3.3.2.2. minimum historical operating temperature; or

3.3.2.3. engineering analysis to determine current minimum cold weather performance temperature.

3.4. A periodicity for providing data.

3.5. The deadline by which the respondent is to provide the indicated data.

R4. Each Transmission Operator shall distribute its data specification to entities that have data required by the Transmission Operator's Operational Planning Analyses, Realtime monitoring, and Real-time Assessments. [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

R5. Each Balancing Authority shall distribute its data specification to entities that have data required by the Balancing Authority's analysis functions and Real-time monitoring. [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

R6. Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data specification in Requirement R3 or R4 shall satisfy the obligations of the documented specifications using: [Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]

6.1. A mutually agreeable format

6.2. A mutually agreeable process for resolving data conflicts

6.3. A mutually agreeable security protocol

Likes 0

Dislikes 0

## Response

**Donald Lock - Talen Generation, LLC - 5**

**Answer**

**Document Name**

**Comment**

1. R1.2 of EOP-011-2 should be supplemented with, "Identification of essential fuel supply infrastructure that shall not be subject to load shedding, including natural gas pipeline compressor stations, LNG storage plants, natural gas processing plants, natural gas field wellhead compressors and other critical gas system components." This verbiage is drawn from NERC's Reliability Guideline Gas and Electrical Operational Coordination Considerations (see p.4, [https://www.nerc.com/comm/OC\\_Reliability\\_Guidelines\\_DL/Gas\\_and\\_Electrical\\_Operational\\_Coordination\\_Considerations\\_20171213.pdf](https://www.nerc.com/comm/OC_Reliability_Guidelines_DL/Gas_and_Electrical_Operational_Coordination_Considerations_20171213.pdf)). Blacking-out natural gas compression stations, thereby forcing NG-fueled generation units offline, was reportedly a major contributor to the Texas blackouts of February, 2021.

2. R1 should be supplemented by a plan to put additional generation units online in advance of severe winter storms, since keeping them running through extreme weather is far more reliable than waiting until temperatures have bottomed-out before requesting cold start-up. This is by far the best and easiest means of bolstering BES wintertime reliability, but for unknown reasons it is almost never used.

3. The phrase, "extreme weather conditions," in Requirement 1.2.6.2 should be replaced by, "non-temperature-related winter challenges, e.g. heavy snowfall, ice storms and freezing fog."

{4. Requirement 7.3.1 should be changed to, "Known generating unit(s) operating limitations in cold weather, to include..." Cold weather-related forced outages are caused principally by hidden vulnerabilities, e.g. mis-installed heat tracing, which cannot be detected in inspection and maintenance activities because it is covered by insulation. EOP-011-2 should not give the impression that GOs will be held responsible for knowing the unknowable.

5. R7.3.1.1 should be changed to, "capacity and start-up reliability." The present references to "capability" and "availability" are excessively vague.

6. The qualifier, "real-time" should be added to R7.3.1.2. Inputs such as, "We'll lose capacity if the NG pipeline pressure falls another 20 psi," and, "Roads are closed, and we only have 10 hours of oil fuel left," would be far more useful than, "MW output depends on fuel pressure," and, "Need periodic oil truck deliveries."

7. R7.3.2.1 should be changed to, "design ambient air temperature and wind speed for heat tracing/insulation systems." This is the principal equipment of interest, and that plants can do something about. There can be many other items with design temperatures, such as lube oil reservoir heaters, fuel oil storage tank heaters, coal plant tripper floor roof heaters, oil gun ignitors, air preheat coils, ash handling systems, and aux boilers. Plants can consequently have a multitude of design temperatures, many of which are known only to the original equipment manufacturers and not to GOs.

8. R7.3.2.2 should be changed to, "minimum historical ambient dry bulb air temperature or (preferably) wind chill temperature." Many plants have been able to ride-out weather dipping to, say, -5 F with little or no wind, only to later suffer a freeze-related forced outage at -1 F with sustained 20 mph winds (-23 F wind chill).

9. R7.3.2.3 should be deleted, because it gives the false impression that winter storm survivability can be determined solely via calculations. One needs accurate input data to obtain authoritative results, and it is often the case that:

- No one knows how the heat tracing beneath piping and instrument system insulation was installed, e.g. as regards using the specified spiral pitch or looping it for extra heat input at valves and supports
- No one knows if or how bare surfaces on valves were accounted-for in the heat tracing design.
- Numerous elements come into play for which information is sparse or nonexistent, ref. comment #5 above
- Temperature is not the issue when outages are caused by heavy snowfall rates, high winds, ice storms and freezing fog.

10. The expressions, "implement and maintain," in R7 and, "implemented and maintained," in M7 should be shortened to just reference implementation. One maintains equipment, not plans, and this obligation is addressed in R7.2.

Likes 0

Dislikes 0

### Response

**Julie Hall - Entergy - 6, Group Name** Entergy

**Answer**

**Document Name**

**Comment**

Entergy would like the Standard Drafting Team to take into consideration that cold weather design limit is not helpful information. It is the mitigation activities that drive the ability to reliably operate in cold weather. Water cooled condensers cannot operate with water below about 32 degrees and generally sites do not shut down at a prescribed temperature. Some sites have more design features (trip critical small lines in buildings or insulated with heat trace protection, circulating water discharge recirculating to intake structures, cooling fan deicing modes, and etc). Other sites rely more on temporary insulation, heaters and scaffolding tents.

Likes 0

Dislikes 0

### Response

**Leonard Kula - Independent Electricity System Operator - 2**



<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
N/A.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
MPC supports MRO NERC Standards Review Forum comments.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<p>To ensure all sub-parts are worded consistently, Southern Company recommends re-wording 7.3.2.3 in EOP-011 to “Minimum cold weather performance temperature determined by an engineering analysis”. This is also applicable to 2.3.2.3 in both TOP-003 and IRO-010.</p> <p>Also, the team should consider shortening M8 in EOP-011, similar to the way that M7 was shortened. For example, “Each Generator Operator or Generator Owner will have documented evidence that the applicable personnel completed training of the Generator Owner’s cold weather preparedness plan(s).”</p>	
Likes 0	
Dislikes 0	
<b>Response</b>	

**Martin Sidor - NRG - NRG Energy, Inc. - 6**

Answer

Document Name

Comment

For EOP-011-2, R7.3.2., NRG has concerns with the quality of the requested data and how it will be used. Generating units can be designed to operate down to a given temperature or have historical temperature information showing successful operation, but other weather factors can influence real-time operating performance. The addition of wind or precipitation to a unit operating at its defined cold temperature limit can have a significant impact on the unit's ability to perform. Any temperature limit data that is submitted to the TOP, BA, and RC should be considered a starting point for analysis and not an absolute.

Likes 0

Dislikes 0

Response

**Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC**

Answer

Document Name

Comment

In all versions of the latest IRO-010-4, the sub-steps under section 1.3.2 are numbered incorrectly, i.e. they start with a 2 rather than a 1.

Likes 0

Dislikes 0

Response

**Anthony Jablonski - ReliabilityFirst - 10**

Answer

Document Name

Comment

General Comment – ReliabilityFirst believes all cold weather requirements should be located in a new standard specifically dedicated to cold weather preparedness. One standard will promote continuity of the cold weather preparedness process and the responsibilities of the associated functional entities. Placing cold weather requirements across three different standards only dilutes the importance of cold weather preparedness and may lead to confusion and possible gaps in responsibilities.

Specific feedback for EOP-011-2 R7. The concerns and suggested rewording/changes are listed below:

- The wording, “minimal historical operating temperature”, in 7.3.2.2 could be interpreted that historical cold weather information is only applicable when the generator is typically running/operational. Suggest to reword so that 7.3.2.2 is focused on cold weather experienced over a period of time at a plant location like, “minimum demonstrated historical cold weather experienced in the previous 10 years”. The timeframe of 10 years aligns with the language in BAL-0502-RF-03 to review resource adequacy based on “one day in ten year” loss of Load expectation. Other Reliability Coordinators/Planning Coordinators also has various assessment test methods that are designed to review risks associated with a “one day in ten year” type of event. This change may better cover geographic areas that do not frequently experience cold weather events.
- The language in 7.3.2.3, “engineering analysis to determine current minimum cold weather performance temperature”, may prove difficult to enforce and provides enough flexibility that historical cold weather information is only applicable when the generator is typically running/operational. It is recommended to remove 7.3.2.3.

Likes 0

Dislikes 0

## Response

### Paul Mehlhaff - Sunflower Electric Power Corporation - 1

#### Answer

#### Document Name

#### Comment

Sunflower agrees with the comments ACES provided for question 5 plus we have additional comments below.

#### **Sunflower Additional Comments:**

The requirement 7.3.1.1 obligates each generation owner to implement and maintain a cold weather preparedness plan for generating units that must include undefined “cold weather data” which must include cold weather capability and availability.

Capability and availability are undefined terms that are not described within the IEEE 762 methodology nor within current or planned revised SPP testing criteria to my knowledge.

*This is no different than the point about the undefined term “maintenance” and how it might contribute to a future audit dispute.*

It appears the terms were well-intentioned, but without clear definition, the draft language has the potential for causing a lot of confusion. Here is a simple example:

Generally speaking, I would presume that the term availability would be similarly referenced to the defined term availability factor. The availability factor for a unit over a given period is simply the available hours a unit was capable of operation or was actually in service during a given period divided by the period hours. Simple enough. But let’s apply some different scenarios.

- 1) If a unit is in service before ambient temperatures drop and if the unit is allowed to continuously operate over this cold period, the unit could easily achieve a 100% availability factor.
  - a. Available hours = Service hours
  - b. Service hours = Period hours
  - c. Available hours = Period hours resulting in 100% Availability Factor
- 2) Take the same unit and leave it out of service as ambient temperatures collapse; then, issue dispatch orders for the unit to enter service at the worst possible time coinciding with the lowest ambient temperatures. This sets up conditions likely resulting in a unit start failure resulting in no service

hours and some accumulation of forced outage hours which results in a lower calculated availability factor over the same period with the exact same ambient conditions.

a. Available hours = Period hours – Forced Outage hours associated with start failure

b. Resulting Availability Factor < 100%

3) Or pass ill-advised compliance rules forcing the owner to take a conservative approach to managing regulatory risk, and force the owner to develop a plan where this same unit is considered unavailable any time ambient temperatures drop below freezing if the unit isn't already in service – which results in a calculated availability factor that is very low during the winter season.

a. Available hours = all hours of the period where ambient temperature is >32F

b. Availability Factor <<<100%

4) In all three scenarios, identical unit exposed to identical ambient conditions with the same owner and same operator.

So what is that generation owner/operator supposed to put into their cold weather operating plan that must address, at a minimum, the expected generator's availability and capability?

Is availability the same thing as IEEE 762 availability factor? Or some new concept? If new, where is availability defined/described?

Capability is similarly a new concept not reflected clearly in the draft standard, IEEE 762, or SPP criteria. Even under conditions where a unit is already in service, I'm not aware of any uniform methodology to determine unit output as temperatures drop. There are methodologies that can be used as temperatures increase such as condenser backpressure correction curves. So, predicting unit output during high temperatures extremes is "a thing." However, I'm not aware of concepts that work similarly as temperatures continue to drop.

Thank you for your hard work on this project and thank you for the opportunity to provide feedback.

Likes 0

Dislikes 0

### Response

**Rich Hydzik - Rich Hydzik On Behalf of: Scott Kinney, Avista - Avista Corporation, 3, 5, 1; - Rich Hydzik**

**Answer**

**Document Name**

**Comment**

No further comments.

Likes 0

Dislikes 0

### Response

**Kenya Streeter - Edison International - Southern California Edison Company - 1,3,5,6**

Answer

Document Name

Comment

See comments submitted by Edison Electric Institute

Likes 0

Dislikes 0

**Response**

**Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion**

Answer

Document Name

Comment

**It appears that the Registered Entities will define "cold weather". Will it be required for the definition of cold weather be the same across the entire fleet of generation or can it be specific to the generating units capabilities, design and/or fuel type? Many factors impact what what may be considered "cold weather" in the area of preparedness.**

Likes 0

Dislikes 0

**Response**

**Keith Jonassen - Keith Jonassen On Behalf of: Michael Puscas, ISO New England, Inc., 2; - Keith Jonassen**

Answer

Document Name

Comment

**EOP-11**

The ISO-NE believes weatherization must be addressed. We support the inclusion of preparedness requirements in EOP-011; however, we think that the proposed language in requirement R7 does not go far enough. Without a clear, measurable objective, the requirement may not achieve its intended outcome or provide a measurable reliability benefit. **The proposed draft of EOP-011 R7 shown below illustrates how the SDT might incorporate comments #1-6 (shown below recommended language).**

**Recommended language:**

R7. Each Generator Owner shall develop, implement and maintain, and implement one or more cold weather preparedness plan(s) for its generating units. The cold weather preparedness plan(s) shall include the following, at a minimum: *[Violation Risk Factor: High] [Time Horizon: Operations Planning and Real-Time Operations]*

7.X (new) An evaluation of each generating unit's capability to operate:

7.X.1 (new) At the lowest temperature in the previous 40 years as recorded at the generator's physical location (or nearest physical location for which temperature data exists); and

7.X.2 (new) during extreme weather conditions as recorded at the generator's physical location (or nearest physical location for which temperature data exists) which includes temperatures and other meteorological conditions (e.g. wind, precipitation, icing, flooding) which exceed the most severe conditions on record

7.1. Generating unit(s) freeze protection measures based on unique factors such as geographical location and plant configuration;

7.2. Annual maintenance and inspection and maintenance of generating unit(s) freeze protection measures;

7.3. Generating unit(s) cold weather data, to include:

7.3.1. Generating unit(s) operating limitations in cold weather (including impacts of precipitation) to include:

7.3.1.1. capability and availability;

7.3.1.2. fuel supply and inventory concerns; and

7.3.1.3. environmental constraints and air permitting limitations.

7.3.2. Generating unit(s):

7.3.2.1. minimum design temperature; or,

7.3.2.2 minimum historical operating temperature; or

7.3.2.3 engineering analysis to determine current minimum cold weather performance temperature

7.3.2.4. fuel switching capabilities; and

1) Within R7, add a new sub-bullet under "the cold weather preparedness plan shall include, at a minimum," which states the following "an evaluation of the resource's ability to operate the lowest recorded temperature in the previous 40 years at the generator's physical location (or nearest location where temperature was recorded for which data exists)".

2) In addition, "Extreme Weather" (if added based on our other comments below) should be clearly defined as temperatures exceeding the lowest (or highest) recorded temperature at the generator's physical location (or nearest location where temperature was recorded for which data exists) for a sustained period greater than or equal to one day.

3) R1 1.2.6.2 requires the TO to have Operating Plans that mitigate operating Emergencies and these Operating Plans must include provisions to determine the reliability impacts of **extreme weather** conditions, while the GO requirement for having a cold weather plan, as prescribed within R7, only requires a cold weather plan addressing "cold weather" (not "extreme") conditions. Consideration should be given to having the GO requirement under R7 include the identification of limitations in more extreme weather conditions (including impacts of temperature, wind, precipitation, icing, flooding) similar to those experienced in ERCOT earlier this year.

4) R7 As part of 7.3.1 recommend including a requirement that the GO's cold weather preparedness plan includes data related to the impacts of precipitation (e.g. icing, snowpack)

5) R7 Recommend moving 7.3.1.3 to under 7.3.2 since "fuel switching capabilities" is not a **limitation** (7.3.1 is "Generating unit(s) operating limitations in cold weather to include:"). Alternatively, clarify that, as written, this 7.3.1.3 is meant to be "limitations when operating on alternate fuels" (not sure that is the intent though).

6) R7 As part of 7.3.1.4 or as another item, recommend including air permitting constraints. The reason for this is that some generators cannot utilize alternate fuels unless RC/BA declares specific abnormal/emergency conditions and these limitations might not be captured as an "environmental constraint".

7) R8 Recommend including an annual periodicity requirement for the cold weather preparedness plan training – as written, this requirement could be interpreted as being a one time requirement. Also recommend clarifying that the training on the cold weather preparedness plan must be provided to "new" maintenance and operations personnel prior to the first winter in which each individual has assumed responsibility for maintenance or operation of the plant.

### **IRO-010**

1.3 Suggest rewording as "Provisions for notification of BES generating unit(s) operating limitations during cold and extreme weather conditions to include:"

1.3.1 Recommend moving 1.3.1.3 to under 1.3.2 since "fuel switching capabilities" is not a **limitation** (1.3.1 is "Generating unit(s) operating limitations in cold weather to include:"). Alternatively, clarify that, as written, this 1.3.1.3 is meant to be "limitations when operating on alternate fuels" (not sure that is the intent though).

### **TOP-003**

Same comments as those listed above for IRO-010. Comments apply to R1 (TO) and R2 (BA).

Likes 0

Dislikes 0

### **Response**

**Patricia Lynch - NRG - NRG Energy, Inc. - 5**

**Answer**

**Document Name**

**Comment**

For EOP-011-2, R7.3.2., NRG has concerns with the quality of the requested data and how it will be used. Generating units can be designed to operate down to a given temperature or have historical temperature information showing successful operation, but other weather factors can influence real-time operating performance. The addition of wind or precipitation to a unit operating at its defined cold temperature limit can have a significant impact on the unit's ability to perform. Any temperature limit data that is submitted to the TOP, BA, and RC should be considered a starting point for analysis and not an absolute.

Likes 0

Dislikes 0

## Response

Michael Courchesne - Michael Courchesne On Behalf of: Michael Puscas, ISO New England, Inc., 2; - ISO New England, Inc. - 2 - NPCC

Answer

Document Name

Comment

### EOP-11

The ISO/RTO Council Standards Review Committee (IRC SRC) believes weatherization must be addressed. We support the inclusion of preparedness requirements in EOP-011; however, we think that the proposed language in requirement R7 does not go far enough. Without a clear, measurable objective, the requirement may not achieve its intended outcome or provide a measurable reliability benefit. **The proposed draft of EOP-011 R7 shown below illustrates how the SDT might incorporate comments #1-6 (shown below recommended language).**

#### Recommended language:

R7. Each Generator Owner shall develop, implement and maintain, and implement one or more cold weather preparedness plan(s) for its generating units. The cold weather preparedness plan(s) shall include the following, at a minimum: *[Violation Risk Factor: High] [Time Horizon: Operations Planning and Real-Time Operations]*

*7.X (new) An evaluation of each generating unit's capability to operate:*

7.X.1 (new) At the lowest temperature in the previous 40 years as recorded at the generator's physical location (or nearest physical location for which temperature data exists); and

7.X.2 (new) during extreme weather conditions as recorded at the generator's physical location (or nearest physical location for which temperature data exists) which includes temperatures and other meteorological conditions (e.g. wind, precipitation, icing, flooding) which exceed the most severe conditions on record

7.1. Generating unit(s) freeze protection measures based on unique factors such as geographical location and plant configuration;

7.2. Annual maintenance and inspection and maintenance of generating unit(s) freeze protection measures;

7.3. Generating unit(s) cold weather data, to include:

7.3.1. Generating unit(s) operating limitations in cold weather (including impacts of precipitation) to include:

7.3.1.1. capability and availability;

7.3.1.2. fuel supply and inventory concerns; and

7.3.1.3. environmental constraints and air permitting limitations.

7.3.2. Generating unit(s):

7.3.2.1. minimum design temperature; or,

7.3.2.2 minimum historical operating temperature; or



7.3.2.3 engineering analysis to determine current minimum cold weather performance temperature

7.3.2.4. fuel switching capabilities; and

1) Within R7, add a new sub-bullet under “the cold weather preparedness plan shall include, at a minimum,” which states the following “an evaluation of the resource’s ability to operate the lowest recorded temperature in the previous 40 years at the generator’s physical location (or nearest location where temperature was recorded for which data exists)”.

2) In addition, “Extreme Weather” (if added based on our other comments below) should be clearly defined as temperatures exceeding the lowest (or highest) recorded temperature at the generator’s physical location (or nearest location where temperature was recorded for which data exists) for a sustained period greater than or equal to one day.

3) R1 1.2.6.2 requires the TO to have Operating Plans that mitigate operating Emergencies and these Operating Plans must include provisions to determine the reliability impacts of **extreme weather** conditions, while the GO requirement for having a cold weather plan, as prescribed within R7, only requires a cold weather plan addressing “cold weather” (not “extreme”) conditions. Consideration should be given to having the GO requirement under R7 include the identification of limitations in more extreme weather conditions (including impacts of temperature, wind, precipitation, icing, flooding) similar to those experienced in ERCOT earlier this year.

4) R7 As part of 7.3.1 recommend including a requirement that the GO’s cold weather preparedness plan includes data related to the impacts of precipitation (e.g. icing, snowpack)

5) R7 Recommend moving 7.3.1.3 to under 7.3.2 since “fuel switching capabilities” is not a **limitation** (7.3.1 is “Generating unit(s) operating limitations in cold weather to include:”). Alternatively, clarify that, as written, this 7.3.1.3 is meant to be “limitations when operating on alternate fuels” (not sure that is the intent though).

6) R7 As part of 7.3.1.4 or as another item, recommend including air permitting constraints. The reason for this is that some generators cannot utilize alternate fuels unless RC/BA declares specific abnormal/emergency conditions and these limitations might not be captured as an “environmental constraint”.

7) R8 Recommend including an annual periodicity requirement for the cold weather preparedness plan training – as written, this requirement could be interpreted as being a one time requirement. Also recommend clarifying that the training on the cold weather preparedness plan must be provided to “new” maintenance and operations personnel prior to the first winter in which each individual has assumed responsibility for maintenance or operation of the plant.

### **IRO-010**

1.3 Suggest rewording as “Provisions for notification of BES generating unit(s) operating limitations during cold and extreme weather conditions to include:”

1.3.1 Recommend moving 1.3.1.3 to under 1.3.2 since “fuel switching capabilities” is not a **limitation** (1.3.1 is “Generating unit(s) operating limitations in cold weather to include:”). Alternatively, clarify that, as written, this 1.3.1.3 is meant to be “limitations when operating on alternate fuels” (not sure that is the intent though).

### **TOP-003**

Same comments as those listed above for IRO-010. Comments apply to R1 (TO) and R2 (BA).

Likes 0

Dislikes 0

**Response**

**Terry Harbour - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1**

**Answer**

**Document Name**

**Comment**

MEC supports the MRO NSRF comments.

Likes 0

Dislikes 0

**Response**

**Neil Shockey - Edison International - Southern California Edison Company - 5**

**Answer**

**Document Name**

**Comment**

See comments submitted by Edison Electric Institute.

Likes 0

Dislikes 0

**Response**

**Marty Hostler - Northern California Power Agency - 3,4,5,6**

**Answer**

**Document Name**

**Comment**

NO.  
a. Another unfair violation of NERC Market Interference Principles is the fact that BAs and regional RC RTOs will be able to use requested information in bid stack analysis for award Day Ahead and real-time dispatch. Non-GO/GOPs will not have to submit the same information used in Modeling evaluations of their competitive bids.  
b. The STD refuses to make reliability enhancement requirements for BA and RC Winterization training, load forecasting improvements, and reserve increases which the FERC/NERC Report also discusses.

c. STD responses to the last round of Stakeholder comments states a new SAR would be required to include these concerns. A couple months ago, during the SC meeting discussing SAR approval, NERC and the STD chair advertised that the SAR the was written broadly to address stakeholder concerns. Now the STD is refuses to address these concerns.

Likes 0

Dislikes 0

### Response

#### Wendy Center - U.S. Bureau of Reclamation - 5

Answer

Document Name

Comment

Reclamation again recommends the cold weather modifications not apply to hydroelectric generators and/or to certain geographic locations. Reclamation supports the comments provided by NAGF in response to Question 5.

Likes 0

Dislikes 0

### Response

#### Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF

Answer

Document Name

Comment

The NAGF provides the following comments for consideration:

EOP-011-2:

1. The NAGF recommends that R1.2 of EOP-011-2 be supplemented with, "Identification of essential fuel supply infrastructure that shall not be subject to load shedding, including natural gas pipeline compressor stations, LNG storage plants, natural gas processing plants, natural gas field wellhead compressors and other critical gas system components." This verbiage is drawn from NERC's Reliability Guideline Gas and Electrical Operational Coordination Considerations (see p.4):  
[https://www.nerc.com/comm/OC\\_Reliability\\_Guidelines\\_DL/Gas\\_and\\_Electrical\\_Operational\\_Coordination\\_Considerations\\_20171213.pdf](https://www.nerc.com/comm/OC_Reliability_Guidelines_DL/Gas_and_Electrical_Operational_Coordination_Considerations_20171213.pdf)
2. The NAGF requests clarifying the term "extreme weather conditions" referenced in R1.2.6.2 and R2.2.9.2. For example, does the term address non-temperature related cold weather conditions (heavy snowfall, ice storms, freezing fog, etc.) and/or warm extreme weather conditions (tornados, hail storms, derecho, etc.)? Clarifying this term will help to confirm the conditions that the TOP and BA operating plans need to address as well as the data to be provided by the GO/GOPs.

3. The NAGF requests clarification regarding the Requirement 7.3.1 request for “Generating unit(s) cold weather data, to include”. We suggest that NERC specify that this requirement pertains only to known, measurable effects on capacity, start-up capability or operational reliability.
4. The NAGF requests clarification regarding the terms “capability and availability” referenced in R7.3.1.1.
5. The NAGF requests clarification regarding Requirement R7.3.1.2 “fuel supply and inventory concerns”. The data to be provided is not so much concerns but has to be actionable/usable for planning models and real-time operations. Generating facility NG pipeline pressure trip limit, % of contract firm gas supply, number of run hrs available on alternate/backup fuel, river flow with current/anticipated ice conditions, and available battery storage MW/Hrs are far more usefull than “concerns”.
6. The NAGF requests clarification regarding Requirement R7.3.2.2 “minimum historical operating temperature” with respect to wind speed and wet-bulb temperatures affecting the generator unit operation. Generator facilities may be able to operate at -1 deg F with little or no wind but could suffer a freeze-related forced outage at -1 deg F with sustained 20 mph winds (-23 deg F wind chill).

Likes 0

Dislikes 0

**Response**

**Romel Aquino - Edison International - Southern California Edison Company - 3**

**Answer**

**Document Name**

**Comment**

See comments submitted by Edison Electric Institute.

Likes 0

Dislikes 0

**Response**

**Joshua Andersen - Salt River Project - 1,3,5,6 - WECC**

**Answer**

**Document Name**

**Comment**

SRP urges the drafting team to review the verbiage used in TOP-003 and IRO-008. As the requirement is written the enteties responding to the data request are required to provide the requested items and status changes during cold weather. SRP requests flexibility be given to those requesting the data to determine the granularity of data necessary rather than requiring every unti to provide the specific information. Units that are not severely impacted by local forcasted cold weather may not have to provide the same level of detail as those that are more adversely impacted.

Likes 0

Dislikes 0

**Response**

**Dan Roethemeyer - Vistra Energy - 5**

**Answer**

**Document Name**

**Comment**

EOP-011 R7 has been revised in the new draft to provide more specificity as requested by several commenters. However, the new wording still leaves unclear what data is required from the GO. Below are specific comments we provide for consideration.

7.3.1 General Concern: As currently drafted, this provision could be read to require generating units to provide information regarding operating limitations that is not known to the generating units. For example, fuel supply and inventory concerns could arise from pipeline capacity limitations that generators would only be aware of if it were communicated by the pipeline. We believe that the intent of this provision is to require generators to only include such information that is known by the generating units. Thus, we propose the following revision to 7.3.1.

7.3.1. Generating unit(s) operating limitations in cold weather to include, to the best of its/their knowledge,

7.3.1.1. capability and availability;

7.3.1.2. fuel supply and inventory concerns;

7.3.1.3. fuel switching capabilities; and

7.3.1.4. environmental constraints.

Additionally, we are highlighting specific comments regarding the subsections under 7.3.1 and 7.3.2.

*7.3.1.1 Capability and availability* – daily capability/availability numbers are routinely shared with the RC already; it’s not clear what is being asked for here

*7.3.1.2 Fuel supply and inventory concerns* – limitations on gas supply (i.e., compressor malfunction) depend on the gas supplier informing the GO

*7.3.2.1 Minimum design temperature* – it’s not clear if the Standard is asking for a single temperature for the entire generating unit. A generating unit has many components and auxiliary systems required to support generation, each with its own design criteria.

Likes 0

Dislikes 0

**Response**

**Scott Berry - Scott Berry On Behalf of: Jack Alvey, Indiana Municipal Power Agency, 1, 4; - Scott Berry**

**Answer**

**Document Name**

**Comment**

In Requirement R7, IMPA agrees with the use of “implementing” a cold weather preparedness plan but not the use of “maintain”. Even if the other previous requirements include this word it does not mean that this requirement should not be corrected since it is a new requirement. To maintain a plan is a pure administrative action and the focus should be on results based actions.

IMPA understands the priority of getting this standard approved and implemented, but we also believe in doing the standard in the correct fashion to prevent issues which will require additional time to fix.

Likes 0

Dislikes 0

### Response

**Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1**

**Answer**

**Document Name**

**Comment**

AEPC encourages the SDT to define the term “cold weather,” which is broadly used in each of these standards and may create confusion, discrepancies, and a compliance burden due the potentially numerous definitions, conditions, and parameters that entities across the NERC footprint could use.

We are also concerned about EOP-011 requirement 7.2 that requires entites to perform “annual inspection and maintenance.” As written it makes performing annual maintenance a requirement when there may not be any maintenance actually required. We recommend rephrasing and adding language to state that maintenance is only required when identified by the inspection i.e. “Annual inspection of generating unit(s) freeze protection measures and any maintenance identified during inspection.”

Thank you for the opportunity to provide feedback on this project.

AEPC has signed on to ACES comments.

Likes 0

Dislikes 0

### Response

**Jennifer Flandermeyer - Jennifer Flandermeyer On Behalf of: Allen Klassen, Evergy, 6, 1, 3, 5; Derek Brown, Evergy, 6, 1, 3, 5; Marcus Moor, Evergy, 6, 1, 3, 5; Thomas ROBBEN, Evergy, 6, 1, 3, 5; - Jennifer Flandermeyer**

**Answer**

**Document Name**

**Comment**

Energy endorses the EEI comments submitted in this comment period.

Likes 0

Dislikes 0

**Response**

**Amy Casuscelli - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC**

**Answer**

**Document Name**

**Comment**

Additional clarification could be added to EOP-011 to differentiate between minimum operating temperatures and minimum starting temperatures.

Likes 0

Dislikes 0

**Response**

**Jamie Johnson - California ISO - 2**

**Answer**

**Document Name**

**Comment**

The California ISO requests the SDT consider that data being requested in TOP-003-4 R1.3.2 and R2.3.2 is not appropriately requested “during local forecasted cold weather” as stated in R1.3 and R2.3. The same comment relates to IRO-010-3 R1.3.2 for R1.3

Likes 0

Dislikes 0

**Response**

**Jamison Cawley - Nebraska Public Power District - 1**

**Answer**

**Document Name**

**Comment**

Numerous entities already provide adequate cold weather measures due to being exposed regularly to freezing temperatures. Mandating compliance requirements for all registered entities overly applies compliance with a broad brush and does not properly address the specific risk to the BES of

entities that are not exposed regularly to freezing temperatures. Recommend implementing an alternative approach by each State to allow States not experiencing these risks to be exempt and possibly removing Canadian entities completely from the requirements due to their current cold weather preparations. The proposed requirements are vague to allow flexibility, but more specific requirements for entities not regularly exposed to freezing temperatures will better address the risk. With an active investigation currently being conducted on the February 2021 Cold Weather Event, a sound approach would be to wait for the recommendations from that event before voting on new NERC Reliability requirements today. Also, proposed EOP-011 Requirement R1.2.6. includes provisions for impacts of both cold weather conditions and extreme weather conditions. Cold weather conditions should be considered when evaluating extreme weather conditions, and the requirement is therefore redundant. Suggest deletion of the cold weather sub-part of R1.2.

Likes 0

Dislikes 0

## Response

**Bobbi Welch - Midcontinent ISO, Inc. - 2**

**Answer**

**Document Name**

**Comment**

MISO supports comments submitted by the ISO/RTO Council Standards Review Subcommittee (IRC SRC). In addition, we are submitting additional comments on behalf of MISO as an individual entity.

**Lack of a requirement to install freeze protection measures means we may not see much of a reliability benefit.** Without a mandate to install relevant freeze protection measures; i.e. heat trace equipment, wind breaks, insulation, etc., no additional operational output will be realized. Notifications alone will merely serve to provide the RC and BA with a means to forecast impending emergencies with incremental advance notice.

**Recommendation: Winterization must be addressed.** Although we support the intent of the proposed requirements in EOP-011, IRO-010 and TOP-003 as they seek to move industry forward in the right direction, we don't think the proposed requirements are sufficient without clear, measurable objectives, i.e. a "cold weather" definition and performance requirements tied to that definition, the proposed standards may not achieve their intended outcome or provide a measurable reliability benefit. MISO offers some proposed language below; that language is offered consistent with the current scope of this drafting effort with its focus on the 2018 recommendations. MISO notes that the events of February 2021 will generate more lessons learned which may require additional modifications to this standard.

**Recommended language:**

**R7. Each Generator Owner** shall implement and maintain one or more cold weather preparedness plan(s) for its generating units. The cold weather preparedness plan(s) shall include the following, at a minimum: [Violation Risk Factor: High] [Time Horizon: Operations Planning and Real-Time Operations]

**7.1. Generating unit(s) freeze protection measures based on geographical location and plant configuration that are adequate to operate through extreme temperatures and weather. The methodology used to establish extreme temperatures for each solely and joint owned unit shall be one or more industry standards to include temperature, wind, precipitation and other relevant factors for the geography.**

Likes 0

Dislikes 0



**Response**

**LeRoy Patterson - Public Utility District No. 2 of Grant County, Washington - 6**

**Answer**

**Document Name**

**Comment**

EOP-011-2 Comments:

Changes to requirements 1 and 2 single out cold weather conditions from other extreme weather events. This creates additional effort, tracking, and training for Balancing Authorities and Transmission Operators without providing benefit since determining reliability concerns and impacts provide reliability benefit only to the extent conditions, cold weather or otherwise, are beyond those normally or routinely encountered. Similarly, adding requirement 7 for GOs should relate to extreme weather conditions, of which cold weather is one aspect to be considered. Data sharing requirements of R7 appear useful, but should include generator equipment that may be affected by all applicable extreme weather events not just cold weather.

As presently worded, changed requirements cause entities that already deal with ongoing cold weather conditions to produce plans, tracking processes, training, etc. for routine and/or annual events rather than focusing on consequences of extreme events.

TOP-003-5 comments:

The added sub-requirements single out cold weather conditions only rather than making cold weather one of several possible extreme weather events, which could benefit by providing Balancing Authorities and Transmission Operators with additional information. Similarly, IRO-010 changes have the same affect related to Reliability Coordinators.

Likes 0

Dislikes 0

**Response**

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

**Answer**

**Document Name**

**Comment**

On EOP-011-2: BC Hydro believes further clarification is required for the intent of the term “cold weather”. Provisions should be made to clarify whether “cold weather” is intended to capture normal seasonal preparations that many utilities take, or should be focusing only on extremes of cold weather when temperatures are outside of normal seasonal ranges. To include existing cold weather preparations (i.e. normal seasonal cold and freeze protection measures taken by many northern utilities seems excessive and not contributing to improving BES reliability). BC Hydro supports Seattle City Light’s comments on further defining ‘abnormally cold weather’ to ensure the focus is on the extreme cold issues.

On IRO-010-5: BC Hydro is supportive of the comments made by Duke Energy to remove IRO-010 R1.3 as redundant to the TOP-003 requirements.

Likes 0

Dislikes 0

**Response**

**Karie Barczak - DTE Energy - Detroit Edison Company - 3, Group Name** DTE Energy - DTE Electric

**Answer**

**Document Name**

**Comment**

DTEE supports the extensive comments made by the NAGF.

Likes 0

Dislikes 0

**Response**

**Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name** NPCC Regional Standards Committee No Dominion

**Answer**

**Document Name**

**Comment**

In IRO-010-4 Evidence Retention (1.2), why are there 3 separate retention periods listed? It should be as same for all. "since the last compliance audit."

The Reliability Coordinator (BA, GO, GOP, TOP, TO, & DP for R3, M3) shall retain its dated, current, in force documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments for Requirement R1, R2, R3 Measure M1, M2 & M3 as well as any documents in force since the last compliance audit.

In TOP-003-5, why does the BA, GO, GOP, TOP, TO, & DP receiving data only have a 90-day retention period. It should be three calendar years to be consistent with the rest of the data retention period.

Provide clarification in Section 7.2 that this is for equipment that is permanent. Provide clarification of what the definition of freeze protection "measures" is in relation to procedures and plans. Section 7.2 could be interpreted that the plans have to be maintained annually.

Likes 0

Dislikes 0

**Response**

**Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable**

**Answer**

**Document Name**

**Comment**

In addition to expanding the current Implementation Guidance, the Technical Rationale should also be expanded to clarify the intent of the modifications to all parts and subparts of Requirement R7. Expanded technical rationale and Implementation Guidance will help prevent misinterpretations by both entities and auditors.

Likes 0

Dislikes 0

**Response**

**George Brown - Acciona Energy North America - 5**

**Answer**

**Document Name**

**Comment**

Acciona Energy USA Global, LLC (Acciona) would like to thank the SDT on its hard work in the expedited time frame and understand that the priority is to have an enforceable standard regarding generator preparation for cold weather that can be further refined in future versions. Acciona does have the following question and suggestion:

1: How has the SDT addressed the uniqueness of dispersed power producing resources identified through Inclusion I4 of the Bulk Electric System definition, such as wind generation Facilities, where each individual wind turbine generator could have a dozen or more possible freeze protections installed, as it relates to proposed EOP-011, Requirement 7.2. “annual inspection & maintenance of freeze protection measures”, especially considering that an outage of an individual generating unit (single wind turbine generator) would not cause adverse effects to the BES and the precedent set by Project 2014-01 Standards Applicability for Dispersed Generation Resources SDT?

2: In regards to EOP-011, Requirement R7.2 please consider adding the language “,as applicable based on the inspection,” after “and maintenance”. As currently written, the requirement requires a generator owner to perform maintenance on its freeze protection regardless of the results of the inspection.

Likes 0

Dislikes 0

**Response**

**Shannon Ferdinand - Capital Power Corporation - 5 - MRO,WECC,Texas RE,SERC**

**Answer**

**Document Name**

**Comment**

Capital Power appreciates the opportunity to participate in NERC’s stakeholder consultation process. We recognize the risk that severe weather can have on the grid and appreciate the desire to implement a regulation to mitigate the risk. However, Capital Power believes that EOP-011 R7, as it is currently written, does not set out a clear or measurable path for entities to meet the reliability objective.

1. Capital Power would like to see the incorporation of NERC's risk based approach to grid reliability within Project 2019-06. Specifically, Capital Power believed that the integration of language related to abnormal / unusual / extreme weather vs. cold weather would:
  - o **Focus resources on areas of highest risk:** Operating in cold weather conditions is standard / normal operating procedure for many entities and the inclusion of language specifically directed at extreme / abnormal / unusual weather may help ensure appropriate focus is placed on areas of highest risk.
  - o **Clarity:** Although the current version of the standard allows entities to define 'cold weather', this flexibility creates ambiguity which may increase the likelihood of subjectivity during the audit process. The inclusion of language related to extreme / abnormal / unusual weather offers more clarity to the entities in forming their definition of 'extreme weather', and to auditors in assessing compliance.
  - o **Consistency:** Capital Power believes that the inclusion of more direct / clear language is consistent with NERC's risk based approach to compliance as well as language in the 2019 FERC and NERC Staff Report: The South-Central United States Cold Weather BES Event of January 17, 2018:
  - o "A mandatory Reliability Standard would require Generator Owner/Operators to properly prepare for extreme cold weather, and would help RCs and BAs identify units which may not be able to perform during an extreme weather event"<sup>[1]</sup>
2. Capital Power requests clarification on R7.2 – This requirement requires the annual inspection and maintenance of generating units freeze protection measures, but if the entity does not have any freeze protection measures they will have nothing to implement. Capital Power recommends the inclusion of 'as applicable' in R7.2 to offset the 'at a minimum' language in R7
3. Capital Power requests clarification on M7 – and the auditability of 'implementation'. Based on the minimum requirements of the entities [Extreme] Cold Weather Preparedness plan (R7.1-7.3) the only element that can be 'implemented' (if applicable) is R7.2, the annual inspection and maintenance of generating unit(s). The rest of the 'at a minimum' requirements outlined in this requirement are essentially data related to the existing facility/ operational capability with nothing to actively implement.

[1] [https://www.nerc.com/pa/rrm/ea/Documents/South\\_Central\\_Cold\\_Weather\\_Event\\_FERC-NEC-Report\\_20190718.pdf](https://www.nerc.com/pa/rrm/ea/Documents/South_Central_Cold_Weather_Event_FERC-NEC-Report_20190718.pdf)

Likes 0

Dislikes 0

## Response

**Gregory Campoli - New York Independent System Operator - 2, Group Name ISO/RTO Standards Review Committee**

**Answer**

**Document Name**

**Comment**

### EOP-11

The ISO/RTO Council Standards Review Committee (IRC SRC) believes weatherization must be addressed. We support the inclusion of preparedness requirements in EOP-011; however, we think that the proposed language in requirement R7 does not go far enough. Without a clear, measurable objective, the requirement may not achieve its intended outcome or provide a measurable reliability benefit. **The proposed draft of EOP-011 R7 shown below illustrates how the SDT might incorporate comments #1-6 (shown below recommended language).**

#### Recommended language:

R7. Each Generator Owner shall develop, implement and maintain, and implement one or more cold weather preparedness plan(s) for its generating units. The cold weather preparedness plan(s) shall include the following, at a minimum: *[Violation Risk Factor: High] [Time Horizon: Operations Planning and Real-Time Operations]*

7.X (new) An evaluation of each generating unit's capability to operate:

7.X.1 (new) At the lowest temperature in the previous 40 years as recorded at the generator's physical location (or nearest physical location for

which temperature data exists); and

7.X.2 (new) during extreme weather conditions as recorded at the generator's physical location (or nearest physical location for which temperature data exists) which includes temperatures and other meteorological conditions (e.g. wind, precipitation, icing, flooding) which exceed the most severe conditions on record

7.1. Generating unit(s) freeze protection measures based on unique factors such as geographical location and plant configuration;

7.2. Annual maintenance and inspection and maintenance of generating unit(s) freeze protection measures;

7.3. Generating unit(s) cold weather data, to include:

7.3.1. Generating unit(s) operating limitations in cold weather (including impacts of precipitation) to include:

7.3.1.1. capability and availability;

7.3.1.2. fuel supply and inventory concerns; and

7.3.1.3. environmental constraints and air permitting limitations.

7.3.2. Generating unit(s):

7.3.2.1. minimum design temperature; or,

7.3.2.2 minimum historical operating temperature; or

7.3.2.3 engineering analysis to determine current minimum cold weather performance temperature

7.3.2.4. fuel switching capabilities; and

1) Within R7, add a new sub-bullet under "the cold weather preparedness plan shall include, at a minimum," which states the following "an evaluation of the resource's ability to operate the lowest recorded temperature in the previous 40 years at the generator's physical location (or nearest location where temperature was recorded for which data exists)".

2) In addition, "Extreme Weather" (if added based on our other comments below) should be clearly defined as temperatures exceeding the lowest (or highest) recorded temperature at the generator's physical location (or nearest location where temperature was recorded for which data exists) for a sustained period greater than or equal to one day.

3) R1 1.2.6.2 requires the TO to have Operating Plans that mitigate operating Emergencies and these Operating Plans must include provisions to determine the reliability impacts of **extreme weather** conditions, while the GO requirement for having a cold weather plan, as prescribed within R7, only requires a cold weather plan addressing "cold weather" (not "extreme") conditions. Consideration should be given to having the GO requirement under R7 include the identification of limitations in more extreme weather conditions (including impacts of temperature, wind, precipitation, icing, flooding) similar to those experienced in ERCOT earlier this year.

4) R7 As part of 7.3.1 recommend including a requirement that the GO's cold weather preparedness plan includes data related to the impacts of precipitation (e.g. icing, snowpack)

5) R7 Recommend moving 7.3.1.3 to under 7.3.2 since "fuel switching capabilities" is not a **limitation** (7.3.1 is "Generating unit(s) operating limitations in cold weather to include:"). Alternatively, clarify that, as written, this 7.3.1.3 is meant to be "limitations when operating on alternate fuels" (not sure that is the intent though).

6) R7 As part of 7.3.1.4 or as another item, recommend including air permitting constraints. The reason for this is that some generators cannot utilize alternate fuels unless RC/BA declares specific abnormal/emergency conditions and these limitations might not be captured as an "environmental constraint".

7) R8 Recommend including an annual periodicity requirement for the cold weather preparedness plan training – as written, this requirement could be interpreted as being a one time requirement. Also recommend clarifying that the training on the cold weather preparedness plan must be provided to "new" maintenance and operations personnel prior to the first winter in which each individual has assumed responsibility for maintenance or operation of the plant.

#### **IRO-010**

1.3 Suggest rewording as "Provisions for notification of BES generating unit(s) operating limitations during cold and extreme weather conditions to include:"

1.3.1 Recommend moving 1.3.1.3 to under 1.3.2 since "fuel switching capabilities" is not a **limitation** (1.3.1 is "Generating unit(s) operating limitations in cold weather to include:"). Alternatively, clarify that, as written, this 1.3.1.3 is meant to be "limitations when operating on alternate fuels" (not sure that is the intent though).

**TOP-003**

Same comments as those listed above for IRO-010. Comments apply to R1 (TO) and R2 (BA).

\*\* CAISO and SPP did not join this group response. \*\*

Likes 0

Dislikes 0

### Response

**Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations**

**Answer**

**Document Name**

**Comment**

ACES encourages the SDT to define the term “cold weather,” which is broadly used in each of these standards and may create confusion, discrepancies, and a compliance burden due the potentially numerous definitions, conditions, and parameters that entities across the NERC footprint could use. ACES also encourages the SDT to define “capability and availability” as used in EOP-011 R7.3.1.1. Additionally, we are concerned about EOP-011 requirement 7.2 that requires entites to perform “annual inspection and maintenance.” As written it makes performing annual maintenance a requirement when there may not be any maintenance actually required. We recommend rephrasing and adding language to state that maintenance is only required when identified by the inspection i.e. “Annual inspection of generating unit(s) freeze protection measures and any maintenance identified during inspection.”

Thank you for the opportunity to provide feedback on this project.

Likes 0

Dislikes 0

### Response

**Elizabeth Davis - Elizabeth Davis On Behalf of: Tom Foster, PJM Interconnection, L.L.C., 2; - Elizabeth Davis**

**Answer**

**Document Name**

**Comment**

In addition to supporting the IRC SRC comments, PJM requests consideration of the following:

PJM requests the SDT to add EOP-011 Requirement for GOs to include the following additional items:

1. A specific requirement for the Generator Owner to provide the host Regional Entity/RC/TOP upon request or on a periodic basis (annually, seasonally or some other periodicity) with the Generator Owner’s cold weather preparedness plans and associated data that the Generator Owner uses to ensure the freeze protection measures are designed to be consistent with the geography and meteorology for the location of the unit. The

requirement to have Generator Owners provide cold weather preparedness plans to the RC/TOP allows the RC/TOP to have increased visibility into the plans of the Generator Owners and to incorporate Generator Owner's cold weather preparedness plans into the RC's/TOP's operational assessments.

2. A specific requirement that a Generator Owner's document supporting source data as assurance that the preparedness plans are based on equipment limitations, historical performance, and other relevant data to ensure the effectiveness of the plans. To the extent that weather forecasts or historical weather information other than those prepared by NOAA are relied upon, the Generator Owners should be required to provide an explanation in the supporting materials explaining why such an alternative forecast or historic data was utilized.

3. A provision that authorizes periodic spot checks outside audit cycles conducted by the host Regional Entity and results coordinated with the host BA/TOP/RC.

4. A provision that clearly states that the Generator Owner cold weather preparedness plans be based on unit size, type, and fuel sources as appropriate.

Likes 0

Dislikes 0

### Response

**Daniel Gacek - Exelon - 1**

**Answer**

**Document Name**

**Comment**

Exelon supports EEI's comment:

- In addition to expanding the current Implementation Guidance, the Technical Rationale should also be expanded to clarify the intent of the modifications to all parts and subparts of Requirement R7. Expanded technical rationale and Implementation Guidance will help prevent misinterpretations by both entities and auditors.

Submitted on behalf of Exelon, Segments 1, 3, 5, 6

Likes 0

Dislikes 0

### Response

**Constantin Chitescu - Ontario Power Generation Inc. - 5**

**Answer**

**Document Name**

**Comment**

OPG supports NPCC RSC's comments.

Likes 0

Dislikes 0

**Response**

**Dennis Sismaet - Northern California Power Agency - 6**

**Answer**

**Document Name**

**Comment**

1. Another unfair violation of NERC Market Interference Principles is the fact that BAs and regional RC RTOs will be able to use requested information in bid stack analysis for awarded Day Ahead and real-time dispatch. Non-GO/GOPs will not have to submit the same information used in Modeling evaluations of their competitive bids.
2. The STD refuses to make reliability enhancement requirements for BA and RC Winterization training, load forecasting improvements, and reserve increases which the FERC/NERC Report also discusses.
3. STD responses to the last round of Stakeholder comments states a new SAR would be required to include these concerns. A couple months ago, during the SC meeting discussing SAR approval, NERC and the STD chair advertised that the SAR was written broadly to address stakeholder concerns. Now the STD is refusing to address these concerns.

Likes 0

Dislikes 0

**Response**

**Gladys DeLaO - CPS Energy - 1**

**Answer**

**Document Name**

**Comment**

N/A, CPS Energy has no additional comment.

Likes 0

Dislikes 0

**Response**

**Michael Whitney - Northern California Power Agency - 3, Group Name NCPA**



<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
See Marty Hostler's comments.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<p>ERCOT also proposes to revise IRO-010, Requirement R1, Parts 1.3.1 and 1.3.1.1, to switch “operating limitations” with “capability and availability” in order to be consistent with the changes suggested by ERCOT in response to Questions 1 and 2. ERCOT also suggests revising Part 1.3.2, to be consistent with the revisions proposed for TOP-003, Requirement R1, Part 1.3.2 in response to Question 2.</p> <p>ERCOT is supportive of the cold weather preparedness plan requirements. However, ERCOT continues to believe that a GOP requirement to communicate generator capability and availability due to cold weather would be more straightforward than a data specification requirement, and could be included as a new requirement in EOP-011, if the proposed R7 for GOs is adopted. The language of the new requirement could read as follows:</p> <p>R__. Each Generator Operator shall notify each impacted Balancing Authority and Transmission Operator of the capability and availability of each of its generating units based on any operating limitations or unit-specific design specifications during actual or anticipated cold weather conditions. [Violation Risk Factor: High] [Time Horizon: Operations Planning, Same Day Operations, and Real-Time Operations]</p> <p>If not included now, ERCOT suggests including this requirement in the future.</p>	
Likes 0	
Dislikes 0	
<b>Response</b>	