

## Consideration of Comments

**Project Name:** 2019-06 Cold Weather | Standard Authorization Request (Second Posting)

**Comment Period Start Date:** 2/19/2020

**Comment Period End Date:** 3/19/2020

There were 47 sets of responses, including comments from approximately 122 different people from approximately 97 companies representing 10 of the Industry Segments as shown in the table on the following pages.

All comments submitted can be reviewed in their original format on the [project page](#).

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact Vice President of Engineering and Standards [Howard Gugel](#) (via email) or at (404) 446-9693.

## Questions

1. The drafting team modified the SAR to include communication between functional entities when generator unit availability is expected to be affected by all ambient weather conditions. (Note: the preparedness will remain focused on cold weather.) Do you agree with this proposed scope as described in the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope, please provide your recommendation and explanation.
2. If you have any additional comments on the SAR, please provide them here.

## The Industry Segments are:

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

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
Great Plains Energy - Kansas City Power and Light Co.	Douglas Webb	1,3,5,6	MRO,SPP RE	Westar-KCPL	Doug Webb	Westar	1,3,5,6	MRO
					Doug Webb	KCP&L	1,3,5,6	MRO
DTE Energy - Detroit Edison Company	Karie Barczak	3,4,5		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
Duke Energy	Kim Thomas	1,3,5,6	FRCC,RF,SERC	Duke Energy	Laura Lee	Duke Energy	1	SERC
					Dale Goodwine	Duke Energy	5	SERC
					Greg Cecil	Duke Energy	6	RF
FirstEnergy - FirstEnergy Corporation	Mark Garza	1,3,4		FE Voter	Julie Severino	FirstEnergy - FirstEnergy Corporation	1	RF
					Aaron Ghodooshim	FirstEnergy - FirstEnergy Corporation	3	RF

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Robert Loy	FirstEnergy - FirstEnergy Solutions	5	RF
					Ann Carey	FirstEnergy - FirstEnergy Solutions	6	RF
					Mark Garza	FirstEnergy-FirstEnergy	4	RF
PJM Interconnection, L.L.C.	Mark Holman	2		SRC	Brandon Gleason	Electric Reliability Council of Texas, Inc.	2	Texas RE
					Charles Yeung	Southwest Power Pool, Inc. (RTO)	2	SERC
					Ali Miremadi	California ISO	2	WECC
					Helen Laines	Independent Electric System Operator	2	NPCC
					Kathleen Goodman	ISO New England	2	NPCC
					Mark Holman	PJM Interconnection	2	RF

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Terry Bilke	Midcontinent Independent System Operator	2	RF
					Gregory Campoli	New York Independent System Operator	2	NPCC
Northeast Power Coordinating Council	Ruida Shu	1,2,3,4,5,6,7,8,9,10	NPCC	RSC no NGrid	Guy V. Zito	Northeast Power Coordinating Council	10	NPCC
					Randy MacDonald	New Brunswick Power	2	NPCC
					Glen Smith	Entergy Services	4	NPCC
					Brian Robinson	Utility Services	5	NPCC
					Alan Adamson	New York State Reliability Council	7	NPCC
					David Burke	Orange & Rockland Utilities	3	NPCC
					Michele Tondalo	UI	1	NPCC

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Helen Lainis	IESO	2	NPCC
					Sean Cavote	PSEG	4	NPCC
					Kathleen Goodman	ISO-NE	2	NPCC
					David Kiguel	Independent	7	NPCC
					Paul Malozewski	Hydro One Networks, Inc.	3	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

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Mike Forte	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
					Ashmeet Kaur	Con Ed - Consolidated Edison	5	NPCC
					Caroline Dupuis	Hydro Quebec	1	NPCC
					Chantal Mazza	Hydro Quebec	2	NPCC
					Sean Bodkin	Dominion - Dominion Resources, Inc.	6	NPCC
					Laura McLeod	NB Power Corporation	5	NPCC
					Randy MacDonald	NB Power Corporation	2	NPCC

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					Gregory Campoli	New York Independent System Operator	2	NPCC
					Quintin Lee	Eversource Energy	1	NPCC
					Silvia Parada Mitchell	NextEra Energy, LLC	4	NPCC
Midwest Reliability Organization	Russel Mountjoy	10		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 Administratino	1,6	MRO
					David Heins	Omaha Public Power District	1,3,5,6	MRO
					Terry Harbour	MidAmerican Energy Company	1,3	MRO
					Jeremy Volls	Basin Electric Power Coop	1	MRO



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					And Crooks	SaskPower Coporation	1	MRO
					Bryan Sherrow	Board of Public Utilities, (Kansas City)	1	MRO
					Bobbi Welch	Midcontinent ISO, Inc.	2	MRO
					Douglas Webb	Evergy	1,3,5,6	MRO
					Fred Meyer	Algonquin Power	1,3,5	MRO
					James Williams	Southwest Power Pool	2	MRO
					Jamie Monette	Minnesota Power/Allete	1,3,5	MRO
					Jamison Crawley	Nebraska Public Power District	1,3,5	MRO
					Sing Tay	Oklahoma Gas & Electric	1,3,5,6	MRO
					LaTroy Brumfield	American Transmission Company, LLC	1	MRO
					John Chang	Manitoba Hydro	1,3,5,6	MRO

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Dominion - Dominion Resources, Inc.	Sean Bodkin	3,5,6		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	1,3,5,6	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 Gas and Electric Co.	3	MRO
					Patrick Wells	OGE Energy - Oklahoma Gas and Electric Co.	5	MRO
		1,5			Michael Shaw	LCRA	6	Texas RE

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Lower Colorado River Authority	Teresa Cantwell			LCRA Compliance	Dixie Wells	LCRA	5	Texas RE
					Teresa Cantwell	LCRA	1	Texas RE

**1. The drafting team modified the SAR to include communication between functional entities when generator unit availability is expected to be affected by all ambient weather conditions. (Note: the preparedness will remain focused on cold weather.) Do you agree with this proposed scope as described in the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope, please provide your recommendation and explanation.**

**Thomas Foltz - AEP - 3,5**

**Answer**

No

**Document Name**

**Comment**

AEP appreciates the SAR drafting team’s willingness to consider our previous comments, and for taking them into account in this latest draft SAR. However, while we are appreciative of the efforts of the SAR drafting team, AEP does not believe the proposed SAR is the appropriate mechanism for addressing the concerns associated with cold weather and unit reliability. While the proposed efforts for both preparedness and communication as suggested in the draft SAR appear to be reasonable in and of themselves, AEP does not believe creating NERC obligations for them is the correct path to take. AEP instead offers an alternative approach that we hope the drafting team will consider.

AEP takes cold weather preparedness very seriously, and has developed and implemented procedures to ensure unit reliability for cold weather. In addition, NERC’s own Reliability Guideline “Generating Unit Winter Weather Readiness”, has been in effect for some time now. In its own words, this document provides a “framework for developing an effective winter weather readiness program for generating units throughout North America” and guidance “on maintaining individual unit reliability and preventing future cold weather related events.” We believe entities need the flexibility of engineering judgement to design and implement their own procedures to prepare for cold weather outside of prescriptive obligations. Original unit types, design, age, and geographic locations all drive what unique preparatory steps should be taken, making prescriptive obligations undesirable and perhaps even inappropriate. As generation types continue to evolve, winter weather preparation is taken into account more than ever before. In addition, EOP-011 already addresses weather preparedness in an appropriate manner. Functional Entities, such as the TOP and BA, have checklists and attestations required for Generator weatherization. Significant improvements to weather preparedness have been made since 2011, with increased

awareness and action plans driven by NERC recommendations.

Beyond the concerns provided above, is the impact of administrative burden to prove compliance of any revised or new NERC standards. While a majority of entities are likely already following the obligations being considered (for the RTOs, as mentioned previously) the impact on entities to prove compliance in addition to that already required for the RTOs, cannot be understated. Similarly, the proposed methodology of the draft SAR runs counter to that of both Paragraph 81 criteria (specifically that of Criteria B) and those which justified the retirements recently proposed in Project 2018-03 (Standards Efficiency Review Retirements). Paragraph 81 considerations continue to be an essential aspect of routine periodic reviews of existing standards subject to enforcement, as provided in Attachment 2 of NERC's Periodic Review Template shown [here](#). It would be ill-advisable for this project to pursue development of new obligations, which from their inception, would likely be flagged for later review for potential retirement under Paragraph 81. Once again, we believe many entities are already following prudent, localized strategies in preparing for cold weather, and are already incentivized to develop and execute prudent procedures based on existing market demands. AEP does not see any reliability benefit of developing new or revised standards which would eventually be flagged for retirement under either Paragraph 81 Criterion B or Standards Efficiency Review.

Rather than the course proposed in the draft SAR, AEP believes the best path forward involves the RTOs (presumably serving as the Balancing Authority) working directly with generating entities within their footprint to determine and monitor the preparatory steps necessary, and to follow up when issues are identified. RTOs are in the best position to provide this service, as they fully understand the system constraints, geography, weather patterns, and customers for their area. RTOs often provide their own guidance in this regard, for example, PJM's Manual 14D Attachment N: Cold Weather Preparation Guideline and Checklist. This is one of several guidance documents that is already available, and which emphasizes the reviewing of lessons learned after each event and implementations of defenses to prevent recurrence. Once in place, this creates a living effort that focuses improvements in areas of specific need that directly translates to continual improvement of the process that is in place. ERCOT already has a suitable mechanism in place, which has proven itself in practice. We are now seeing that REs are heading in a similar direction as well. AEP believes these established processes have proven their effectiveness, and will continue to be valuable going forward as well. Not only does this relationship between the RTOs and their generating entities help to develop prudent preparatory steps in regard to cold weather, it also allows the RTO to work more closely with those generators who may need to improve the methods they already have in place. Such a working relationship naturally fosters a good communication between the generator and the BA and/or RC which we believe the SAR drafting team is actively seeking.

Rather than pursue one-size-fit-all approaches for all entities, many of which have prudent cold weather procedures already in place, RTOs should instead work more closely with those entities where preparatory improvements may need to be made. By doing so, the RTOs

can more accurately determine exactly what deficiencies need to be addressed within these specific entities, and recommend appropriate entity-specific strategies accordingly.

Likes 0

Dislikes 0

**Response: Thank you for your comment. While the SAR DT understands your concerns, the SAR DT has been tasked to consider the development or enhancement of one or more NERC Reliability Standards to ensure generator cold weather reliability is addressed as recommended in the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. The 2019-06 Cold Weather project is focused on the first prong of the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018, which is Generator Cold Weather Reliability including the development or enhancement of one or more NERC Reliability Standards. The third prong is directed to market (ISO/RTO) rules which is outside the scope of the SAR.**

**John Allen - City Utilities of Springfield, Missouri - 1,3,4**

**Answer**

No

**Document Name**

**Comment**

City Utilities of Springfield, Missouri appreciates the drafting team’s consideration of our first comments to this SAR and understands the concern with cold weather preparedness and communications. Therefore, we support comments submitted by TAPS and offer the following points for consideration.

Regarding the expectations for “communication between functional entities”, this issue was settled with Project 2007-03. On page 23 of the petition filed by NERC in 2013 it states the following:

*The purpose of the proposed TOP-003-2, Requirements R1 through R5 were adapted for Transmission Operators and Balancing Authorities based on similar, Commission approved requirements for Reliability Coordinators in IRO-010-1a. They emphasize the need for Transmission Operators and Balancing Authorities to obtain all of the data that they need for reliability purposes and mandate that entities that have this data and that are requested to supply it, provide it to the Transmission Operator and Balancing Authority in an*

*approved and timely manner. Lack of adequate data for Real-time operations and modeling has been pointed out as contributing factors to system incidents in the past. The data specification concept will eliminate this problem by allowing the Transmission Operator and Balancing Authority to require entities to send them any data that is required for them to complete and honor reliability responsibilities.*

Additionally, pages 20 – 21 of the Mapping Document associated with this project describe requirements in TOP-002 that were retired in lieu of the new data specification in TOP-003. Those requirements were for information like what this SAR is trying address. Therefore, unless the drafting team can explain why generator unit availability is not already in scope today under the IRO-010 and TOP-003 standards, we cannot support adding redundant requirements. This is administratively inefficient and contrary to all the efforts the industry has spent over the years through various initiatives, including the current Standards Efficiency Review project.

Regarding cold weather preparedness, we believe it's not unreasonable to expect Generator Owners to implement cold weather plans, if they have commitments with a Balancing Authority to operate in those conditions. Therefore, if the drafting team moves forward with requirements for Generator Owners, then they should only apply to that subset of generators. It's also important to consider that a requirement to prepare will not safeguard against all forced outages in extreme conditions such as the January 2018 event that prompted this SAR. Therefore, we ask the drafting team consider enhancing requirements for the Balancing Authority to prepare, because in accordance with the [NERC Rules of Procedure, Appendix 5B – Statement of Compliance Registry Criteria](#), the Balancing Authority is “*The responsible entity that integrates resource plans ahead of time, maintains Load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real-time*”. Therefore, they are the entities that should be studying the effects of all extreme conditions including cold weather well ahead of the operating horizon and preparing operating plans to mitigate the risk of shortages. If that means committing more generation online and maintaining more operating reserves to ride through an event, then that is within their purview. If market monitors are hindering that activity to minimize costs, then FERC needs to decide which one takes precedence.

In accordance with the [NERC Functional Model Technical Document](#) the Market Operator is the “*interface point between reliability and commercial Functions*” and should not be performing reliability functions. We understand the line has become blurred in recent years by organized RTO markets where the Market Operator and Balancing Authority are consolidated under one organization. However, if the relationship has changed as described in the NERC Functional Model, then that issue needs to be given to the NERC Organization Registration and Certification Subcommittee and resolved within the Statement of Compliance Registry Criteria. Otherwise cold weather preparedness can be resolved with more stringent resource planning and validation processes for Balancing Authorities like what ERCOT and PJM have already done. If this SAR moves forward, then it should be focused on standards to enhance that effort across the Bulk Electric System.

Likes	0
Dislikes	0
<p><b>Response: Thank you for your comment. (1) While the SAR DT agrees that TOP-002-4, TOP-003-3, and IRO-010-2 address Operational Planning Analysis, it is not clear if data specifications for TOP-003 and IRO-010 consider data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these standards. In addition, TOP applicability will be added to the SAR since this function is also responsible for Data Specifications and Operational Planning Analysis. (2) These standards will apply to all generators classified as BES rather than a subset that engages in an organized market. (3) The 2019-06 Cold Weather project is focused on the first prong of the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018, which is Generator Cold Weather Reliability including the development or enhancement of one or more NERC Reliability Standards. The third prong is directed to market (ISO/RTO) rules which is outside the scope of the SAR.</b></p>	
<p><b>Kevin Conway - Public Utility District No. 1 of Pend Oreille County - 1,3,5,6</b></p>	
Answer	No
Document Name	
<p><b>Comment</b></p>	
<p>The modifications to the SAR do not satisfy Pend Oreille PUD's concerns that this standard is not needed. Adding communications requirements between functional entities will not change our opinion. To address the question: We already have contractual obligations and reliability obligations to communicate with our related functional entities for any condition that could affect BES reliability (this includes known weather conditions). Additional requirements for communications, assuming the Drafting Team's best intentions, will only add to confusion, additional administration, and possible compliance exposure if the new standards doesn't fit with existing communication protocols.</p>	
Likes	0
Dislikes	0
<p><b>Response: Thank you for your comment. The purpose of this project is to implement the recommendation contained in the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. Any contractual obligations for registered entities is outside the purview of NERC and the SAR Drafting Team.</b></p>	



<b>Marty Hostler - Northern California Power Agency - 4,5,6</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>NO. This is a Market Issue, not a Reliability Issue. If a Generator selected by their BA fails to start up due to lack of Cold Weather Winterization, that Unit incurs financial penalties, regardless of it being a BES or non-BES generating unit. Markets rules applicable to all Generation entities should fix this, not just BES Generator Owner/Operators that are subject to NERC Standards.</p> <p>Developing and imposing additional compliance obligations, such as Winterization NERC Standards, on GO/GOPs, that will increase our mandatory compliance costs, but not compliance costs for non-Registered generator entities that own and/or operate non-BES generators, is unfair. NERC is not allowed to make a Standard that creates an unfair competitive advantage for non-registered entities and/or non-BES generators at the expense of GO/GOPs.</p> <p>Since SPP is requesting this Standard, I suggest they work with FERC to develop Market rules in areas they operate that will insure all Market Participants in their area are Winterized and treated fairly. i.e. BES and non-BES participates both have to pay for Winterization rules (per Market rules) and both pay financial penalties if their unit(s) fails to start when called. Registered Entities that own/operate BES generator(s) shouldn't be the only one paying for Winterization and associated compliance costs; non-registered entities that own/operate non-BES generators should be paying too!</p> <p>MJH 03-05-20</p>	
Likes	0
Dislikes	0
<p><b>Response: Thank you for your comment. Please see the 3-pronged approach within the <i>2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018</i>. The SAR project is focused on the first prong which is Generator Cold Weather Reliability including the development or enhancement of one or more NERC Reliability Standards. The third prong is directed to market (ISO/RTO) rules which is outside the scope of the SAR. In addition, the SAR DT modified the SAR to add BES in front of the term 'generating unit' to clarify that the focus is on registered entities.</b></p>	

<b>Bret Galbraith - Seminole Electric Cooperative, Inc. - 1,3,4,5,6</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>The SAR requires the GO to communicate to both the BA and RC. Instead of the RC receiving multiple calls from GOs throughout their area, Seminole reasons that the GO contact the BA, for whom they usually have more interaction with, and if the resulting action requires notification to the RC, for that action to be performed by the BA.</p>	
Likes 0	
Dislikes 0	
<p><b>Response: Thank you for your comment. The SAR is not requiring anything at this point and has been revised to include a footnote that the Standard Drafting Team (once formed) will determine the proper entity for the GO/GOP communication.</b></p> <p><b>Although the SAR DT agrees that TOP-003-3 and IRO-010-2 address RC and BA data specifications, it is not clear that the conditions of these requirements focus on data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these standards. Additionally, TOP applicability will be added to the SAR since this function is also responsible for Data Specifications and Operational Planning Analysis.</b></p>	
<b>Jennie Wike - Tacoma Public Utilities (Tacoma, WA) - 1,3,4,5,6 - WECC</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>Tacoma Power does not agree with adding this proposed scope to the SAR. Communications regarding the capability and availability of BES resources under diverse ambient conditions is already covered under the IRO-010 and TOP-003 Standards. As part of these Standards,</p>	

the RC and BA are required to communicate changes to generation capability and availability, which includes availability impacted by extreme cold weather. Adding this proposed scope to the SAR undermines the efforts of Project 2018-03, Standards Efficiency Review, to eliminate redundancy of requirements.

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) Although the SAR DT agrees that TOP-003-3 and IRO-010-2 address RC and BA data specifications, it is not clear that the conditions of these requirements focus on data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these requirements. (2) See 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. This project's focus is on cold weather and therefore the SAR DT has limited communications related to only cold weather. (3) The SAR DT will forward your concern to the SDT (once formed) to closely work with and monitor the SERs actions.**

**Jerry Horner - Basin Electric Power Cooperative - 1,3,5,6**

**Answer**

No

**Document Name**

**Comment**

Basin Electric believes the creation of a cold weather standard is not necessary. The use of existing standards such as TOP-003 and IRO-010 can be updated to include cold weather information of need to the RC, BA, and TOP.

Likes 0

Dislikes 0

**Response: Thank you for your comment. Although the SAR DT agrees that TOP-003-3 and IRO-010-2 address RC and BA data specifications, it is not clear that the conditions of these requirements focus on data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these standards. Additionally, TOP applicability will be added to the SAR since this function is also responsible for Data Specifications and Operational Planning Analysis.**

<b>Richard Jackson - U.S. Bureau of Reclamation - 1,5</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>Reclamation is opposed to a new standard to address extreme cold weather preparation. If a new standard must be adopted to address extreme cold weather preparation, Reclamation recommends the standard not apply to hydro generators. If a new standard must apply to hydro generators, Reclamation recommends the standard prescribe engineering and design controls for equipment to adequately withstand severe cold weather conditions, rather than plans to address facility design challenges.</p> <p>Cold weather is a subjective term that varies greatly throughout the NERC footprint. Reclamation recommends the SAR specify the geographical locations and weather conditions that are intended to be included in the scope of “cold weather conditions.”</p> <p>The proposed scope neglects to address generation units that have decades of historical operational data supporting that they were designed with cold weather in mind (specifically hydro units). These facilities can take no additional measures that would provide any meaningful impact on generation in any realistic scenario.</p> <p>The proposed requirement to develop cold weather preparedness plans, procedures, and awareness training based on factors such as geographical location creates an administrative and financial burden for entities that already successfully operate in geographical locations that routinely experience cold weather, and does not meaningfully impact reliability in those locations. The addition of ambient weather conditions other than extreme cold weather vastly exceeds the reliability concern that elicited this SAR. Reclamation recommends that the SDT focus on a solution that tightly aligns with the scope of the original concern.</p> <p>Standards should not be imposed to address problems that are beyond the capabilities of human intervention or that are already accounted for in the facility’s design. A proposed standard that requires documented plans to address facility design challenges is only treating the symptom of not having facilities designed to adequately withstand severe cold weather conditions. A standard that prescribes engineering and design controls to address specific cold weather conditions would treat the root cause of the problem this SAR is trying to address. If facilities are designed for capabilities that are not typically used, these capabilities must be tested and verified to function properly when called upon (e.g., in an emergency).</p>	

Reclamation recommends that any proposed cold weather preparation requirements be in the form of a SERC regional variance to an existing standard; possibly EOP-011. If a continent-wide standard is required, it should not apply to hydro facilities.

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) Although the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018 did not identify any issues related to hydro generators, the SAR DT will forward your concern to the SDT (once formed) for consideration. (2) The SDT (once formed) will determine if a NERC definition for "cold weather" will be required and determine if regional variances are warranted. (3) Historical operational performance is addressed in Recommendation #1 of the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. (4) The SAR DT has removed 'all ambient' weather references, changed the scope back to "cold weather", and revised the SAR to be consistent with the FERC/NERC report. (5) The SAR DT will forward your concerns to the SDT (once formed) regarding facility design challenges and capabilities.**

**Russel Mountjoy - Midwest Reliability Organization - 10, Group Name MRO NSRF**

Answer

No

Document Name

Comment

“These comments represent the MRO NSRF membership as a whole but would not preclude members from submitting individual comments”. The NSRF recommends that the Cold Weather SAR be retired and the Cold Weather SAR attributes (based on the NERC report) be in the proposed language of the updated Standards contained with with the Standards Efficiency Review Phase 2 Operational Data Exchange Simplification Standard Authorization Request. The NSRF encourages the Cold Weather SAR DT to work with the Operational Data Exchange SAR DT to seek efficiencies in the scope where there overlap.

Regarding cold weather preparedness, the NSRF believe’s it’s not unreasonable to expect Generator Owners to implement cold weather plans, if they have commitments with a Balancing Authority to operate in those conditions. Therefore, if the drafting team moves forward with requirements for Generator Owners, then they should only apply to that subset of generators. It’s also important to

consider that a requirement to prepare will not safeguard against all forced outages in extreme conditions such as the January 2018 event that prompted this SAR.

The NSRF recommends the SAR maintain its focus on cold weather conditions only. It is the NSRF’s perspective that expansion of the SAR to include all forecasted ambient conditions will unnecessarily increase the administrative burden associated with compliance (without providing a corresponding commensurate reliability benefit) and detract from the clarity and intent of this requirement. As detailed in the SAR on page 4, real-time events adversely impacting the Bulk Electric System have all been tied to cold weather conditions.

In addition, the NSRF believes that limiting the scope of this requirement to cold weather conditions only, will support NERC’s effort on Standards Efficiency Review; i.e. to “evaluate NERC Reliability Standards using a risk-based approach to identify potential efficiencies through retirement or modification of Reliability Standard Requirements [and] ... to identify potential candidate requirements that are not essential for reliability, could be simplified or consolidated, and could thereby reduce regulatory obligations and/or compliance burden.”

Likes	1	Tacoma Public Utilities (Tacoma, WA), 1,3,4,5,6, Wike Jennie
Dislikes	0	

**Response: Thank you for your comment. (1) Although the SAR DT agrees that TOP-003-3 and IRO-010-2 address RC and BA data specifications, it is not clear that the conditions of these requirements focus on data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these requirements. The SAR DT will pass along this information to the SDT so they can work closely with and monitor the efforts of the Operational Data Exchange SAR DT. (2) The SAR DT has removed 'all ambient' weather references, changed the scope back to "cold weather", and revised the SAR to be consistent with the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. (3) These standards will apply to all generators classified as BES rather than a subset that engages in an organized market.**

Rebecca Baldwin - Transmission Access Policy Study Group - NA - Not Applicable - NA - Not Applicable

Answer	No
Document Name	
Comment	

As discussed in more detail in response to Question 2, RCs and BAs are already able to require GO/GOPs to provide information about when and how generator unit availability is expected to be affected by ambient weather conditions, pursuant to IRO-010-2 and TOP-003-3, respectively. Furthermore, with respect to those two standards, the SER Phase 2 Team’s Operational Data Exchange Simplification SAR, currently posted for comment, suggests that “more clarity regarding the scope of the core BES reliability-related tasks would be beneficial and is desired. The scope of the data specification would then just reflect the information necessary to cover the scope of the core BES reliability-related tasks for the individual Registered Entity.” The Operational Data Exchange Simplification SAR’s proposed approach could reduce the administrative burden associated with TOP-003 and IRO-010, while clarifying the information to be requested and supplied. It does not make sense to use this concurrent SAR to try to specifically call out weather conditions.

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) Although the SAR DT agrees that TOP-003-3 and IRO-010-2 address RC and BA data specifications, it is not clear that the conditions of these requirements focus on data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these requirements. The SAR DT will pass along this information to the SDT so they can work closely with and monitor the efforts of the Operational Data Exchange SAR DT. (2) The SAR DT has removed 'all ambient' weather references, changed the scope back to "cold weather", and revised the SAR to be consistent with the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018.**

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

**Answer**

No

**Document Name**

**Comment**

Duke Energy offers the following comments:

Item 1.d:

1) Delete Item 1.d. since the Duke Energy GO/GOP does not interface with the fuel supplier.

2) If item 1.d. is not deleted, add the following as Item 2a. and revise language to read:

Provide notification (when available) of fuel supply curtailments to generating unit's Reliability Coordinator, Balancing Authority, or other appropriate personnel.

It is important to remove:

a) "advance" since fuel suppliers may not provide advance notifications, and

b) "natural gas supply/gas-fueled" since many fuel types are subject to limited fuel supply, including fuel oil, coal, or biomass, during prolonged periods of cold weather.

Item 2:

1) Rewrite Item 2. to include language from existing Item 1.d.:

Generator Owner/Generator Operator will communicate to the Balancing Authorities which will communicate with the Reliability Coordinator the generating unit's performance and operating limitations anticipated during ambient cold weather.

It is important to rearrange:

BA and GO/GOP since the BA will provide the evidence to satisfy Requirement.

Item 3:

1) Rewrite Item 3 as noted below:

Generator Owner/Generator Operator will communicate to the Balancing Authorities which will communicate with the Reliability Coordinator when forecasted ambient weather conditions (including, but not limited to, cold weather temperatures) are expected to impact generating unit performance or generating unit availability for the appropriate next day operating horizon.

It is important to rearrange:

BA and GO/GOP since the BA will provide the evidence to satisfy Requirement.



Likes	0
Dislikes	0
<p><b>Response: Thank you for your comment. (1) The SAR DTs focus with this SAR is around NERC registered Functional Entities and not third party vendors or suppliers. The proposed method may be considered a good utility practice, but it is outside the purview of the SAR DT's direction and responsibility. (2) The SAR DT modified the SAR to include 1d from the SAR as part of 2 and added a footnote addressing your comment regarding the mapping issue. (3) Regarding fuel, the SAR has been modified to include 'when available'.</b></p>	
<p><b>Sean Bodkin - Dominion - Dominion Resources, Inc. - 3,5,6, Group Name Dominion</b></p>	
Answer	No
Document Name	
<p><b>Comment</b></p>	
<p>The proposed expansion to all ambient weather conditions goes beyond the conclusions of the joint NERC/FERC report as well as of the intent of industry when the initial SAR was approved. The NERC Standards Committee approved the SAR based in no small part of the limitation to cold weather, as the discussion at the meeting indicated. The proposed expansion to all ambient weather impact has not been demonstrated to be a gap or deficiency or even a potential risk to the BES.</p>	
Likes	0
Dislikes	0
<p><b>Response: Thank you for your comment. The SAR DT has removed 'all ambient' weather references, changing the scope back to "cold weather". The SAR has been modified to be consistent with the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018.</b></p>	
<p><b>Michael Brytowski - Great River Energy - 1,3,5,6 - MRO</b></p>	
Answer	No

<b>Document Name</b>	
<b>Comment</b>	
<p>GRE recommends the SAR maintain its focus on cold weather conditions only. It is the GRE's perspective that expansion of the SAR to include all forecasted ambient conditions will unnecessarily increase the administrative burden associated with compliance (without providing a corresponding commensurate reliability benefit) and detract from the clarity and intent of this requirement. As detailed in the SAR on page 4, real-time events adversely impacting the Bulk Electric System have all been tied to cold weather conditions.</p>	
Likes	0
Dislikes	0
<p><b>Response: Thank you for your comment. The SAR DT has removed 'all ambient' weather references, changing the scope back to "cold weather". The SAR has been modified to be consistent with the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018.</b></p>	
<b>George Brown - Acciona Energy North America - 5</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>Acciona Energy North America Corporation (AENAC) does not agree with the Cold Weather Preparedness and Communication Requirements between Functional Entities Standards Authorization Request (CW SAR) scope.</p> <p>AENAC believes that Recommendation 1 in the 2019 FERC and NERC Staff Report: The South-Central United States Cold Weather BES Event of January 17, 2018 (The Report) are currently captured through energy market mechanisms, Good Utility Practice, as defined in the Pro Forma Open Access Transmission Tariff (OATT) and enforceable NERC Reliability Standards.</p> <p>Notwithstanding, AENAC does recognize certain recommendations of The Report that align with the jurisdiction granted by the Energy Policy Act of 2005, §215 can assist in maintaining reliability.</p>	

AENAC recommends the CW SAR scope be modified as follows:

1. Ensuring that a Generator Owner (GO) has prepared its generation facility for cold weather conditions to meet its Facility Ratings as required by NERC Reliability Standard FAC-008-3 Facility Ratings (FAC-008).
2. Ensuring that a GO's Facility Ratings as required by FAC-008 are provided to all Functional Entities that may require them.
3. Ensuring that Generator Operator (GOP) is aware how to operate the generation facility, in cold weather conditions, to meet the Facility Ratings as required by FAC-008 for what the generation facility has been committed to provide to the Balancing Authority (BA), Transmission Operator (TOP) and Reliability Coordinator (RC)

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) The SAR DT agrees that the focus of FAC-008 is to establish Facility Ratings based on technically sound principles and consideration of ambient conditions and operating limitations. It is also understood that historical performance records is operational information that can be utilized to establish these ratings but during cold weather, the Facility capacity could be negatively impacted by not necessarily the Facility Rating. (2) Although FAC-008 requires the communication of Facility Ratings by GO's to the appropriate Functional Entities, it is more important during cold weather that the availability and capacity be provided to the Functional Entities. (3) The Cold Weather SAR includes winter specific and plant specific operator awareness training.**

**Daniel Gacek - Exelon - 1,3,5,6**

**Answer**

No

**Document Name**

**Comment**

1) The addition of non-cold weather communication requirements, when the entire balance of the SAR is focused on cold weather, is confusing. Either the name / focus of the SAR should be changed to "Weather Preparedness", or the "but not limited to cold weather" should be stricken from the Requirement.

2) If warm weather is generally not impactful to BES reliability, i.e., no significant “hot weather events” with impacts similar to polar vortex events, the “but not limited to” adds nothing to the Standard.

3) To develop operating plans, routine communications between BAs/RCs and the GOs/GOPs include availability concerns when hot and cold weather alerts are issued by system operators. Deliverable 3 should state, “The BA and RC notify generating units of forecasted ambient weather conditions that may impact generating units. The generating units implement their applicable plans and notify the BA and RC of any issues.”

4) As noted above, proposed Requirements 3 and 4 are duplicate existing controls and can be removed from the SAR.

5) Additionally, Exelon supports the comments submitted by EEI and NAGF on behalf of our industry.

Likes 0

Dislikes 0

n

**Response: Thank you for your comment. The SAR DTs response to EEI: (1) Although the SAR DT agrees that TOP-003-3 and IRO-010-2 address RC and BA data specifications, it is not clear that the conditions of these requirements focus on data specific to cold weather. The SAR has been modified to require the SDT (once formed) to review these standards. (2) The SAR has been modified to add 'as appropriate' related to data. (3) The SAR DT removed 'all ambient' weather references and changed the scope back to 'cold weather' in the SAR to remain consistent with the FERC/NERC report. (4) The word 'local' was added to the SAR. Additional language provided by EEI on this item will be provided to the SDT to consider for requirement drafting. (5) The SAR DT understands that historical performance records is an acceptable method to establish facility ratings for FAC-008.**

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

**Answer**

No

**Document Name**

**Comment**

MISO supports comments submitted by the ISO/RTO Council (IRC) Standards Review Committee (SRC).

MISO recommends the SAR maintain its focus on cold weather conditions only. It is MISO’s perspective that expansion of the SAR to include all forecasted ambient conditions has the potential to introduce human error in the form of oversight (in a standard otherwise dedicated to cold weather only) and unnecessarily increase the administrative burden associated with compliance (without providing a corresponding commensurate reliability benefit). As detailed in the SAR (page 4), real-time events adversely impacting the Bulk Electric System have all been tied to cold weather conditions.

MISO believes that limiting the scope of this requirement to cold weather conditions will support NERC’s Standards Efficiency Review effort; i.e. to “evaluate NERC Reliability Standards using a risk-based approach to identify potential efficiencies through retirement or modification of Reliability Standard Requirements [and] ... to identify potential candidate requirements that are not essential for reliability, could be simplified or consolidated, and could thereby reduce regulatory obligations and/or compliance burden.”

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) The SAR DT has removed 'all ambient' weather references, changing the scope back to "cold weather". The SAR has been modified to be consistent with the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. (2) Although the SAR DT agrees that TOP-003-3, IRO-010-2, and TOP-002-4 address Operational Planning Analysis, it is not clear if data specifications for TOP-003 and IRO-10 consider data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these standards. Additionally, TOP applicability will be added to the SAR since this function is also responsible for Data Specifications and Operational Planning Analysis. (3) The SDT will be encouraged to closely work with and monitor the NERC SER team to avoid duplication or contradictory efforts.**

**Truong Le - Florida Municipal Power Agency - 4 – SERC**

**Answer** No

**Document Name**

**Comment**

RCs and BAs are already able to require GO/GOPs to make a notification when generator unit is available/unavailable in all ambient weather conditions as require in IRO-010-2 and TOP-003-3. It does not make sense to use this concurrent SAR to try to specifically call out weather conditions. This SAR will become a redundant burden on GO/GOPs.

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) The SAR DT has removed 'all ambient' weather references, changing the scope back to "cold weather". The SAR has been modified to be consistent with the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. (2) Although the SAR DT agrees that TOP-003-3 and IRO-010-2 address RC and BA data specifications, it is not clear that the conditions of these requirements focus on data specific to cold weather issues. (3) The SAR has been modified to require the SDT (once formed) to review these standards.**

**Ronald Bauer - MGE Energy - Madison Gas and Electric Co. - 3,4,5,6**

**Answer**

No

**Document Name**

**Comment**

Madison Gas and Electric (MGE) thanks the SAR Drafting Team for their review and consideration of previous comments.

MGE fully supports the TAPS position:

As discussed in more detail in response to Question 2, RCs and BAs are already able to require GO/GOPs to provide information about when and how generator unit availability is expected to be affected by ambient weather conditions, pursuant to IRO-010-2 and TOP-003-3, respectively. Furthermore, with respect to those two standards, the SER Phase 2 Team’s Operational Data Exchange Simplification SAR, currently posted for comment, suggests that “more clarity regarding the scope of the core BES reliability-related tasks would be beneficial and is desired. The scope of the data specification would then just reflect the information necessary to cover the scope of the core BES reliability-related tasks for the individual Registered Entity.” The Operational Data Exchange Simplification SAR’s proposed approach could reduce the administrative burden associated with TOP-003 and IRO-010, while clarifying the information to be requested and supplied. It

does not make sense to use this concurrent SAR to try to specifically call out weather conditions. MGE recommends that the Cold Weather SAR be retired and the Cold Weather SAR attributes be incorporated into the proposed language of the updated Standards contained with the SER SAR.

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) The SAR DT has removed 'all ambient' weather references, the scope back to "cold weather". The SAR has been modified to be consistent with the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. (2) Although the SAR DT agrees that TOP-003-3, IRO-010-2, and TOP-002-4 address Operational Planning Analysis, it is not clear if data specifications for TOP-003 and IRO-10 consider data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these standards. Also, TOP applicability will be added to the SAR since this function is responsible for Data Specifications and Operational Planning Analysis. (3) The SDT will be encouraged to closely work with and monitor the NERC SER team to avoid duplication or contradictory efforts.**

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

**Answer**

No

**Document Name**

**Comment**

The focus of the SAR was appropriately changed to emphasize the need for good communication between Balancing Authorities (BA), Reliability Coordinators (RC) and Generator Owners (GO) and Generator Operators (GOP) in preparation for and during cold weather events, which is consistent with the 2019 FERC and NERC Staff Report: the South Central United States Cold Weather Bulk Electric System Event of January 17, 2018 Recommendation One (“Staff Report”). Enhancing communication between the GO/GOP and BA/RC during a cold weather event is appropriate for the SAR and is consistent with the issue identified in the Staff Report regarding GOs/GOPs taking proper steps to prepare for and communicate “generating unit design specifications and expected” performance during a cold weather event. Nevertheless, communications of generating unit availability and capability is already addressed within the current body of NERC Reliability Standards and the SDT should be careful not to create duplicate or similar requirements and confusion as on how to best meet compliance of any new requirements. Specifically, Standards IRO-010-2, Requirement R1 and TOP-003-3, Requirement R2 require the RC

and BA to establish the data necessary for them to fulfill their reliability functions. NERC Project 2014-03, which resulted in the development of Reliability Standards IRO-010-2 and TOP-003-3, directly addressed existing (at the time) requirements related to the communication of generating unit availability and capability to the Reliability Entities (i.e., RC, BA, TOP) while providing the appropriate level of flexibility for the RC and BA to specify the data appropriate for their reliability needs in their respective areas.

The IRO-010-2 and TOP-003-3 standards require the GO and GOP to provide any information specified by the RC and the BA, respectively, with the purpose of supporting Operational Planning Analyses, Real-time Monitoring and Real-time Assessments. Data, as referred to in these Standards, is not limited to static information but includes real-time data feeds and event-driven notifications, such as forecasted ambient weather conditions' impact on unit availability and capability projections as needed by the applicable RC and BA. Therefore, we ask the SDT to carefully review these existing requirements with an eye toward minimizing duplication in favor of providing clarity on how best to ensure that the "accuracy of their generating units' ambient temperature design specifications" are effectively communicated in advance of predicted cold weather

Additionally, we are concerned that the expansion of the SAR to include all ambient weather conditions is overreaching and inconsistent with the intent of the original SAR and is not supported by the Staff Report or any other known source. The Staff Report details an effort that conducted an extensive investigation and reviews over many months to determine the findings and recommendations. The Staff Report indicates no concern with all ambient conditions. It is premature to consider a change in scope without justification to support its expansion.

Even if the SAR were to be expanded to include all ambient conditions, "ambient weather" in and of itself can mean any change in weather conditions and attempting to define it for purposes of this SAR will unnecessarily take time and focus away from the intent of the original request which was based on the cold weather findings of the Staff Report.

**Comment on Purpose or Goal:**

EI suggests the following revised language for the SAR Purpose statement to better articulate the desired recommendations as stated within the Staff Report:

*To ensure that cold weather performance plans for generating units are developed, implemented and communicated in order to maintain generating resource availability within performance capabilities or operating limitations.*

**Comments on Project Scope (Detailed Description)**



In the opening statement, we have a number of concerns. First, we suggest changing the statement “The deliverable will be” to “The deliverable may be”. Next, we suggest adding the phrase “as appropriate” after “revised Reliability Standards”. Finally, the addition of “maximize generating unit availability” is not a term or phrase that should be used within a NERC SAR or Reliability Standard. The phrase is ambiguous because it is not clear what is meant by “maximize”. Additionally, there is no explanation for why BAs, RCs, GOPs or GOs might need to maximize the availability generating units for reliability purposes. The purpose of Reliability Standards is to ensure an adequate level of reliability is provided and maintained in the Bulk Power System. The use of the term “maximize” should be deleted since it disregards and creates an expansion of the clear purpose of Reliability Standards to provide an adequate level of reliability.

In the first item under the detailed description, the SDT proposes adding “a generating units historical demonstrated performance and limitations during ambient cold weather.” Aside from the issues using the word ambient previously discussed, basing a Reliability Standard requirement on prior generator unit performance during cold weather is both challenging and could yield results that are of questionable value. It is important to recognize that many factors impact a unit’s performance, not just weather. A unit could have been down for maintenance or it may not have been economical to run the unit. Basing performance on historical data from days with similar weather would produce inconsistent and inaccurate results.

In item b and c. “and technologies” was removed. Removing this term may limit the availability of options for responsible entities to mitigate the effects of cold weather, while also unnecessarily removing one of the recommendations within the Staff Report.

In item d, the SDT proposes to include gas supply within the scope of the requirements. However, narrowly tailoring a requirement to one fuel type has not been justified and would be prejudicial and is thus unsuitable for a NERC requirement. As the recent NERC Fuel Assurance Guidance indicates, planners would be the more appropriate party to determine fuel supply constraints for modeling purposes by the BA and RC. In addition, a GO/GOP may not even be aware of a potential fuel issue until the fuel supply is curtailed. Consequently, placing this burden on the GO/GOP would not enhance the ability of the BA or RC to appropriately address the issue. For all these reasons, the proposed expansion of scope is not appropriate for cold weather preparedness and enhanced communication.

Item 2: Please see our comments and concerns as described above for Item 1 on using historical data to predict and require future performance. A GO/GOP should communicate if a unit is not going to be able perform as committed but communicating on speculative items could potentially harm the ability of the BA and RC to appropriately plan and manage the grid during a cold weather event. Moreover, we agree with the Staff Report which states that GO/GOP needs to 1) validate the “accuracy of their generating units’ ambient temperature design specifications”; 2) incorporate “accurate ambient temperature design specifications and expected generating unit

performance, including for peak winter conditions” into GO/GOP plans, procedures and training for operating generating units; and 3) report this information to responsible RCs and BAs. (See Staff Report page 87)

Item 3: In the detailed scope, expanding the scope to include all ambient weather conditions in a project narrowly defined to address cold weather is inappropriate. Using forecasted weather conditions is risky because forecasts vary widely for the same time period and change quickly. If a weather forecast is specified, it should be for no more than a day-ahead forecast from a single forecast source and should be consistently used to prevent divergent results. Nevertheless, if it is desired that all routine communications between BAs/RCs and the GOs/GOPs regarding availability concerns for issued weather alerts by system operators then we suggest changing Item 3 to simply stating the following:

*Upon notification by the responsible BA and/or RC of forecasted cold weather conditions that may impact GO/GOP generating units, responsible GOs/GOPs shall take action to implement their applicable operating plans to mitigate the impacts and notify the BA and RC of their actions as well as any issues that might diminish generating unit performance.*

Item 4: EEI suggests the following alternative language for SDT consideration:

*Reliability Coordinators and Balancing Authorities receiving generator unit performance and availability data, as communicated in Item 3, should factor identified resource limitations into their respective Operational Planning Analysis, develop a modified Operating Plan, which considered expected resource availability and necessary contingency reserves for the next day operating horizon.*

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) Although the SAR DT agrees that TOP-003-3 and IRO-010-2 address RC and BA data specifications, it is not clear that the conditions of these requirements focus on data specific to cold weather. The SAR has been modified to require the SDT (once formed) to review these standards. (2) The SAR DT agrees to modifying the SAR by adding 'as appropriate' related to data requirements and has modified the SAR to reflect this addition. (3) The SAR DT removed 'all ambient' weather references and reduced the scope back to 'cold weather' in the SAR to remain consistent with the FERC/NERC report. (4) The word 'local' was added to the SAR. Additional language provided by EEI on this item will be provided to the SDT to consider for requirement drafting. (5) The SAR DT understands that historical performance records is an acceptable method to establish facility ratings for FAC-008**

<b>Devon Tremont - Taunton Municipal Lighting Plant - 1,3,5 – NPCC</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
As stated in previously submitted comments, we believe that the BAs and RCs are already well-equipped to address generator availability - including winter preparedness - with their GOs/GOPs without the need to create a mandatory Reliability Standard. Creating a Standard such as this would only place an administrative burden on GOs/GOPs while doing little to advance reliability.	
Likes 0	
Dislikes 0	
<b>Response: Thank you for your comment. Although the SAR DT agrees that TOP-003-3, IRO-010-2, and TOP-002-4 address Operational Planning Analysis, it is not clear if data specifications for TOP-003 and IRO-10 consider data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these standards. Additionally, TOP applicability will be added to the SAR since this function is also responsible for Data Specifications and Operational Planning Analysis.</b>	
<b>Sing Tay - OGE Energy - Oklahoma Gas and Electric Co. - 1,3,5,6, Group Name OKGE</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
Oklahoma Gas & Electric supports Edison Electric Institute's (EEI) responses to Question 1 and 2.	
Likes 0	
Dislikes 0	
<b>Response: Thank you for your comment. Please see the SAR DTs response to EEI.</b>	

<b>Douglas Webb - Great Plains Energy - Kansas City Power and Light Co. - 1,3,5,6 - MRO, Group Name Westar-KCPL</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
Westar Energy and Kansas City Power & Light, Evergy companies, incorporate by reference Edison Electric Institute's response to Question 1.	
Likes 0	
Dislikes 0	
<b>Response: Thank you for your comment. Please see the SAR DTs response to EEI.</b>	
<b>David Jendras - Ameren - Ameren Services - 1,3,6</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
Ameren agrees with and supports EEI comments.	
Likes 0	
Dislikes 0	
<b>Response: Thank you for your comment. Please see the SAR DTs response to EEI.</b>	
<b>Scott Berry - Indiana Municipal Power Agency - 4 – RF</b>	

<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>Indiana Municipal Power Agency (IMPA) does not believe a SAR is needed to create a standard to include communication between entities, and we agree with the options proposed by Transmission Access Policy Study (TAPS) group. Further, we fully support the comments submitted by Rebecca Baldwin representing TAPS.</p>	
Likes 0	
Dislikes 0	
<p><b>Response: Thank you for your comment. Although the SAR DT agrees that TOP-003-3, IRO-010-2, and TOP-002-4 address Operational Planning Analysis, it is not clear if data specifications for TOP-003 and IRO-10 consider data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these standards. Additionally, TOP applicability will be added to the SAR since this function is also responsible for Data Specifications and Operational Planning Analysis.</b></p>	
<b>Mark Holman - PJM Interconnection, L.L.C. - 2, Group Name SRC</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>The SRC recommends the SAR to be reworded to recognize the fact that RC is not mapped in the functional registry to GO or GOP. Recommend that the GO/GOP provide the information to the BA and TOP, BA will provide the information to RC.</p> <p>In addition, the SRC recommends the SAR maintain its focus on cold weather conditions only. It is our perspective that expansion of the SAR to include all forecasted ambient conditions has the potential to introduce human error in the form of oversight (in a standard otherwise dedicated to cold weather only) and unnecessarily increase the administrative burden associated with compliance (without</p>	

providing a corresponding commensurate reliability benefit). As detailed in the SAR (page 4), real-time events adversely impacting the Bulk Electric System have all been tied to cold weather conditions.

Finally, the SRC believes that limiting the scope of this requirement to cold weather conditions will support NERC’s Standards Efficiency Review effort; i.e. to “evaluate NERC Reliability Standards using a risk-based approach to identify potential efficiencies through retirement or modification of Reliability Standard Requirements [and] ... to identify potential candidate requirements that are not essential for reliability, could be simplified or consolidated, and could thereby reduce regulatory obligations and/or compliance burden.”

Comment supported by PJM, NYISO, CAISO, MISO, ISO-NE, IESO

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) The SAR DT has removed 'all ambient' weather references, changing the scope back to "cold weather". The SAR has been modified to be consistent with the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. (2) Although the SAR DT agrees that TOP-003-3, IRO-010-2, and TOP-002-4 address Operational Planning Analysis, it is not clear if data specifications for TOP-003 and IRO-10 consider data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these standards. Additionally, TOP applicability will be added to the SAR since this function is also responsible for Data Specifications and Operational Planning Analysis. (3) The SDT will be encouraged to closely work with and monitor the NERC SER team to avoid duplication or contradictory efforts.**

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

**Answer**

No

**Document Name**

**Comment**

Minnesota Power agrees with the following aspects of NSRF’s comments:

Regarding cold weather preparedness, the MRO’s NERC Standards Review Forum (NSRF) believes it’s not unreasonable to expect Generator Owners to implement cold weather plans, if they have commitments with a Balancing Authority to operate in those

conditions. Therefore, if the drafting team moves forward with requirements for Generator Owners, then they should only apply to that subset of generators. It’s also important to consider that a requirement to prepare will not safeguard against all forced outages in extreme conditions such as the January 2018 event that prompted this SAR.

The NSRF recommends the SAR maintain its focus on cold weather conditions only. It is the NSRF’s perspective that expansion of the SAR to include all forecasted ambient conditions will unnecessarily increase the administrative burden associated with compliance (without providing a corresponding commensurate reliability benefit) and detract from the clarity and intent of this requirement. As detailed in the SAR on page 4, real-time events adversely impacting the Bulk Electric System have all been tied to cold weather conditions.

In addition, the NSRF believes that limiting the scope of this requirement to cold weather conditions only, will support NERC’s effort on Standards Efficiency Review; i.e. to “evaluate NERC Reliability Standards using a risk-based approach to identify potential efficiencies through retirement or modification of Reliability Standard Requirements [and] ... to identify potential candidate requirements that are not essential for reliability, could be simplified or consolidated, and could thereby reduce regulatory obligations and/or compliance burden.”

Likes	0
Dislikes	0

**Response: Thank you for your comment. Please see the SAR DTs response to MRO NSRF.**

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

<b>Answer</b>	No
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<b>Document Name</b>	
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<b>Comment</b>
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Xcel Energy supports the comments of EEI. In support, we offer additional comments below.

We are concerned that the SAR as proposed includes direction to create a Standard around very general and difficult to define conditions. It is likely that each Generator Owner/Operator will be uniquely situated geographically and in terms of equipment such that

a standardized set of ambient weather conditions may widely impact the level of effort need to develop and implement a compliance based program.

For example, the SAR suggests taking into consideration the generator's historical demonstrated performance. What determines an acceptable history? The performance of a generator 20 years ago in similar weather conditions may not accurately predict present day performance. It may be impossible to put enforceable bounds on this type of assessment. Another ambiguity introduced in the SAR is the assessment of the periodic adequate maintenance. We caution the drafting team to avoid attempting to define what adequate means. Also, an effective periodicity of review of the freeze protection measures may be a difficult target to define.

Also, we believe the definition of weather conditions addressed by the SAR needs to be more clearly defined. We believe some of the terminology present in the SAR is somewhat ambiguous and not consistent throughout as to what conditions affected entities will be required to plan for and respond to. For example, the SAR includes the terms "all ambient weather impacts," "ambient cold weather," "cold weather events," and "forecasted ambient weather conditions (including, but not limited to, cold weather expected temperatures)." We believe the latter phrase could lead to scope drift if not specifically defined, as it could be interpreted to include other weather or ambient conditions such as hot weather, heavy precipitation, wind, tornadoes, flooding, and other conditions that could conceivably impact BES reliability.

We support the SAR's conclusion that these requirements already exist in existing Standard Requirements. There already exists a linkage between TOP-002-4, TOP-003-3, and IRO-010-2 in that the TOP, BA, and RC would not be able to perform their Operational Planning Analysis without knowing what its generators were going to be capable of during the Operating Day. The Data Specifications should already identify generator limitations due to weather as that is necessary to accurately conduct an OPA. Also, any lost capability should be included in the RC's outage coordination methodology and thus shared with affected entities per the IRO-017-1 requirements. The caution for the drafting team is that those Standards were intentionally edited in prior Standards Development projects to reduce the specificity of individual data items. That effort was undertaken to allow the recognized need for flexibility and customization necessary for the various operating entities. There is no real need to have a detailed freeze protection plan, costly equipment, and periodic reviews for generators located in regions that experience freezing temperatures only a few hours in a decade.

Likes	0
Dislikes	0

**Response: Thank you for your comment. Please see the SAR DTs response to EEI.**



In regards to your additional comments: 1) Ambiguity of language will be addressed through the SDT process. 2) Although the SAR DT agrees that TOP-003-3, IRO-010-2, and TOP-002-4 address Operational Planning Analysis, it is not clear if data specifications for TOP-003 and IRO-10 consider data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these standards. Additionally, TOP applicability will be added to the SAR since this function is also responsible for Data Specifications and Operational Planning Analysis. 3) The SAR DT appreciates your comments and will ensure they will be passed on to the SDT (once formed).

**Bruce Reimer - Manitoba Hydro - 1,3,5,6**

**Answer** Yes

**Document Name**

**Comment**

Removing the word "extreme" is a good idea. However, I think that "Cold Weather" needs to be well defined. In the report there are many adjectives used to describe Cold Weather, such as unusual, extremely below-normal, below-average, colder, severe. The new standard should not put additional administrative tasks on owners/operators that normally operate annually in "cold weather".

Likes 0

Dislikes 0

**Response: Thank you for your comment. Your comment will be forwarded to the SDT to determine if a NERC definition for "cold weather" will be needed.**

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

**Answer** Yes

**Document Name**

**Comment**

Black Hills Corporation (BHC) supports communication between functional entities when generator units availability is effected by ambient weather conditions. As noted by the National American Generator Forum (NAGF) Comments – we agree that this type of deliverables are met through existing Tariffs, Operating Agreements, Interconnection Agreements, ISO Market rules, BA Surveys, and other existing standards such as IRO-010, TOP-003, TPL-001. As noted by the NAGF and BHC agrees, the SAR does not provide additional reliability.

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) The SAR DT has removed 'all ambient' weather references, changing the scope back to "cold weather". The SAR has been modified to be consistent with the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. (2) Please see the 3-pronged approach within the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. The SAR project is focused on the first prong, which is Generator Cold Weather Reliability including the development or enhancement of one or more NERC Reliability Standards. (3) Although the SAR DT agrees that TOP-003-3 and IRO-010-2 address data specifications, it is not clear that the conditions of these requirements focus on data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these requirements. Since it appears that TPL-001 focuses on a broad spectrum of System conditions and probable contingencies, this may not be sufficient to address specific issues encountered during cold weather.**

**Anthony Jablonski - ReliabilityFirst – 10**

**Answer**

Yes

**Document Name**

**Comment**

The standard should address all weather conditions (hot, hurricanes, tornadoes, flooding, draught, etc.) not just cold weather. Also, since the South Central Cold Weather Event Report utilizes the term “extreme” 84 times when referring to weather or cold weather, “extreme” should be re-introduced into the SAR.

Likes 0

Dislikes	0
<p><b>Response:</b> Thank you for your comment. The SAR DT has removed 'all ambient' weather references, changed the scope back to "cold weather", and revised the SAR to be consistent with the <i>2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018</i>. Also, the SAR DT believes that "extreme" cold weather is already included in the SAR scope as a subset of cold weather.</p>	
<p><b>LaTroy Brumfield - American Transmission Company, LLC – 1</b></p>	
Answer	Yes
Document Name	
<p><b>Comment</b></p>	
<p>The addition of communication of information to relevant functional entities is appropriate because this communication is essential to reliable operation of the electric system. The SAR as currently drafted, though, still leaves a reliability gap by not requiring the Generator Owner(s) and Generator Operator(s) to also provide this information to their respective Transmission Operator (TOP). The TOP is required to perform an Operational Planning Analysis (OPA) under TOP-002, similar to what is required of the Reliability Coordinator (RC) under IRO-008. As such, the TOP needs this information for an accurate OPA of its TOP area. More significantly, the TOP, not the RC, is responsible for ensuring sufficient reactive resources for the upcoming operating period under VAR-001. Generation availability is critical to voltage and reactive power management. By not having the updated information on generation availability, the TOP cannot ensure there will be sufficient reactive resources available, which creates a reliability gap. As an example, for the northern states where extreme cold conditions do occur, the reliability risk may become more acute with the integration of more wind resources and the retirement of more traditional generation. As seen during the last two polar vortex events, wind resources appear to be almost universally susceptible to extreme cold weather conditions, such as not being able to operate below ~-20 degrees F. For TOPs, the loss of MWs and Mvars from such resources impacts the TOP's ability to conduct an accurate OPA and ensure that sufficient reactive resources will be available for the system. Because the TOP is required to perform an OPA, like the RC, and the TOP is the only entity mandated to ensure sufficient reactive resources will be available, the SAR should require communication of generator information to the TOP, in addition to the RC</p>	
Likes	0
Dislikes	0

**Response: Thank you for your comment. The SAR DT modified the SAR to include the TOP in Deliverables 2, 3, and 4. The SAR DT is not recommending at this time to include the TOP in deliverable 1.**

**Ginette Lacasse - Public Utility District No. 1 of Chelan County - 1,3,5,6**

**Answer** Yes

**Document Name**

**Comment**

Upon further consideration of this SAR, we would like to change our answer to NO.

We concur with Tacoma Power comments. Please refer to their comments.

Likes 0

Dislikes 0

**Response: Thank you for your comment. Please see the SAR DTs response to Tacoma Power.**

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

**Answer** Yes

**Document Name**

**Comment**

No Comments.

Likes 0

Dislikes 0

**Response**

<b>Donald Lock - Talen Generation, LLC - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Talen Energy supports the comments being submitted to NERC by the North American Generation Forum (NAGF).	
Likes	0
Dislikes	0
<b>Response: Thank you for your comment. Please see the SAR DTs response to NAGF.</b>	
<b>Wayne Sipperly - NAGF - 1,2,3,6 - MRO,WECC,Texas RE,NPCC,SERC,RF</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
<p>The North American Generator Forum (NAGF) supports communication between functional entities when generator unit availability is expected to be affected by all ambient weather conditions. However the NAGF believes the deliverables of the SAR are presently met through existing Tariffs, Operating Agreements, Interconnection Agreements, ISO market rules, BA Surveys, and other existing Standards such as IRO-010, TOP-003, and TPL-001. These existing documents, procedures, rules, and standards could be revised to address specific weather related communication if needed, but most likely already suffice as the GO/GOP must satisfy the obligations of documented specifications to assist in Real-time monitoring and planning assessments.</p> <p>The NAGF does not agree that the addition of non-cold weather communication requirements within the SAR provides additional reliability. Warm weather is not typically impactful to the reliability of the BES with the same significance as extreme cold weather events. Again, we believe that the routine communication requirements in existing standards address these issues.</p>	

Likes	0
Dislikes	0
<p><b>Response: Thank you for your comment. (1) Please see the 3-pronged approach within the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. The SAR project is focused on the first prong, which is Generator Cold Weather Reliability including the development or enhancement of one or more NERC Reliability Standards... (2) Although the SAR DT agrees that TOP-003-3 and IRO-010-2 address data specifications, it is not clear that the conditions of these requirements focus on data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these requirements. Since it appears that TPL-001 focuses on a broad spectrum of System conditions and probable contingencies, this may not be sufficient to address specific issues encountered during cold weather. (3) The SAR SDT has removed 'all ambient' weather and changed the scope back to "cold weather."</b></p>	
<p><b>Kenisha Webber - Entergy - NA - Not Applicable - SERC</b></p>	
Answer	Yes
Document Name	
<p><b>Comment</b></p> <p>This communication between generators and BAs should already happen but I understand that it is not included in any existing Reliability Standard, so I am OK including it here. The BA should also understand that severe weather conditions will affect reliability of units with conditions that may exceed the design criteria of the units. These instances do not happen very often so it is not possible to find everything on a generating unit that may make it trip under these conditions. ISO/BA should do what most Utilities have done in the past, dispatch extra units as a contingency for reliability of the generation on the system, with the assumption that a certain percentage of the generators will trip under certain conditions. It seems that every ISO/BA is learning this all over again. Under severe weather conditions, you cannot just dispatch for economics and assume all units will be reliable.</p> <p>I don't think there is a need for addressing all weather issues in this standard. This should only address severe cold weather, which is very different and more impactful than hot weather. Additionally, clarity of functional entities is needed.</p>	

Likes	0
Dislikes	0
<p><b>Response: Thank you for your comment. (1) The SAR DT has removed 'all ambient' weather references, changed the scope back to "cold weather", and revised the SAR to be consistent with the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. (2) Although the SAR DT agrees that TOP-003-3, IRO-010-2, and TOP-002-4 address Operational Planning Analysis, it is not clear if data specifications for TOP-003 and IRO-10 consider data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these standards. Additionally, TOP applicability will be added to the SAR since this function is also responsible for Data Specifications and Operational Planning Analysis. (3) The SDT will be encouraged to closely work with and monitor the NERC SER team to avoid duplication or contradictory efforts.</b></p>	
<p><b>Karie Barczak - DTE Energy - Detroit Edison Company - 3,4,5, Group Name DTE Energy - DTE Electric</b></p>	
Answer	Yes
Document Name	
<p><b>Comment</b></p>	
<p>DTE Electric supports comments submitted by the NAGF.</p>	
Likes	0
Dislikes	0
<p><b>Response: Thank you for your comment. Please see the SAR DTs response to NAGF.</b></p>	
<p><b>Dania Colon - Orlando Utilities Commission - 1,3,5</b></p>	
Answer	Yes
Document Name	
<p><b>Comment</b></p>	

Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Scott McGough - Georgia System Operations Corporation - 3,4</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Andrea Barclay - Georgia System Operations Corporation - 3,4</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4, Group Name FE Voter</b>	



<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Hillary Dobson - Colorado Springs Utilities - 1,3,5,6</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	

Dislikes	0
<b>Response</b>	
Teresa Cantwell - Lower Colorado River Authority - 1,5, Group Name LCRA Compliance	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes	0
Dislikes	0
<b>Response</b>	
Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name RSC no NGrid	
Answer	
Document Name	
<b>Comment</b>	
On item 3, GO/GOP should communicate with the TOP as well as the BA and RC.	
On item 4, the TOP, as well as the BA and RC should use performance and availability information in OPAs.	
Likes	0
Dislikes	0
<b>Response: Thank you for your comment. The SAR has been modified to include TOP applicability since this function is also responsible for Data Specifications and Operational Planning Analysis...</b>	

<b>Carl Pineault - Hydro-Quebec Production - 1,5</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
We support RSC comment	
Likes 0	
Dislikes 0	
<b>Response: Thank you for your comment. Please see the SAR DTs response to SRC.</b>	
<b>Rachel Coyne - Texas Reliability Entity, Inc. - 10</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<p>Texas RE recommends the SAR include utilization of Real-time data. The SAR discusses RC and BA utilization of parameter in operation planning studies (OPA, Operating Plans, reserves for next day operating horizon), but does not address utilization of parameters in Real-time (RTA, Real-time monitoring). By ignoring Real-time analysis and monitoring, the SAR does not address cold weather events where actual temperatures are more severe than forecasted temperatures and actions are needed in Real-time to account for these unexpected conditions.</p> <p>For example, the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018 states <i>“The forecasts improved somewhat, but even the forecasts for January 15 (two days ahead) were 3 to 8 degrees higher than the minimum temperature observed on January 17.”</i> Additionally, the report states <i>“The analyses and resulting next-day Operating Plans were completed by late afternoon on January 16, and thus could not reflect the significant amount of additional unplanned</i></p>	

*generation outages, derates and failures to start which occurred overnight, and the impacts of the higher power transfer levels and decreased system voltage levels resulting from those losses.” Together, these facts support the need to include consideration of these parameters for Real-time analysis and monitoring in addition to day-ahead studies.*

Additionally, Texas RE recommends the SAR include TOP applicability for cold weather preparedness. According to the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018 *“Transmission Operators have a similar requirement to perform daily OPAs, and prepare Operating Plans to address the OPA’s findings, under TOP-002-4 R1&R2.”* On page 50, the report states *“Transmission Operators have a similar requirement to perform real-time assessments, under TOP-001-4, Requirement R13”* which reinforces the need to address utilization of parameters in Real-time (RTA, Real-time monitoring).

In the FERC/NERC Staff Report on the 2011 Southwest Cold Weather Event the following is stated : *“Transmission Operators and Balancing Authorities should obtain from Generator Owner/Operators their forecasts of real output capability in advance of an anticipated severe weather event; the forecasts should take into account both the temperature beyond which the availability of the generating unit cannot be assumed, and the potential for natural gas curtailments.”* The 2011 Report also states, when discussing capability of transmission facilities performance during cold weather conditions, the following: *“Transmission Owner/Operators should determine the ambient temperature to which their equipment, including fire protection systems, is protected (taking into account the accelerated cooling effect of wind), and ensure that temperature requirements are met during operations.”*

Texas RE recommends the SAR differentiate between the GOP and GO function. Registered entities are not always registered for both functions.

Texas RE requests the SAR drafting team to consider adding a specific requirement for GOs, GOPs, and TOPs to submit cold weather data to the BA and RC. Communication from a GOP to RC is not covered in COM-001-3 so there is no Requirement to have Interpersonal Communications nor test those Interpersonal Communications between these two functions. Data specifications in IRO-010 may or may not contain all information needed and could result in gaps in understanding and operating.

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) The SAR DT notes the situational aware part of recommendation #1. (2) The SAR DT modified the SAR to include the TOPs in deliverables 2, 3, and 4. (3) The SAR DT agrees with the GO, GOP, and TOP and are**

**recommending that the SDT (once formed) look into this for the specific reason TRE requested. (Texas RE recommends the SAR differentiate between the GOP and GO function. Registered entities are not always registered for both functions.**

**Texas RE requests the SAR drafting team to consider adding a specific requirement for GOs, GOPs, and TOPs to submit cold weather data to the BA and RC. Communication from a GOP to RC is not covered in COM-001-3 so there is no Requirement to have Interpersonal Communications nor test those Interpersonal Communications between these two functions. Data specifications in IRO-010 may or may not contain all information needed and could result in gaps in understanding and operating.)**

<b>2. If you have any additional comments on the SAR, please provide them here.</b>	
<b>Amy Casuscelli - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
We support the comments of EEI and believe the SDT should remain focused on the recommendations contained in Staff Report and limit changes to the SAR to those recommendations.	
Likes 0	
Dislikes 0	
<b>Response: Thank you for your comment. Please see the SAR DTs response to EEI.</b>	
<b>Karie Barczak - DTE Energy - Detroit Edison Company - 3,4,5, Group Name DTE Energy - DTE Electric</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
DTE Electric supports the additional comments submitted by the NAGF.	
Likes 0	
Dislikes 0	
<b>Response: Thank you for your comment. Please see the SAR DTs response to NAGF.</b>	

<b>Jamie Monette - Allete - Minnesota Power, Inc. - 1</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
Minnesota Power agrees with NSRF's comments for question 2.	
Likes 0	
Dislikes 0	
<b>Response: Thank you for your comment. Please see the SAR DTs response to NSRF.</b>	
<b>Mark Holman - PJM Interconnection, L.L.C. - 2, Group Name SRC</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<b>Existing SAR Language:</b>	
2. Generator Owner/Generator Operator communicates with the Balancing Authorities, Transmission Operators and Reliability Coordinators the generating unit's associated historical demonstrated performance and operating limitations during ambient cold weather.	
<b>Suggested Language:</b>	

2. Generator Owner/Generator Operator communicates with the Balancing Authorities and Transmission Operators, and provides the generating unit’s associated historical demonstrated performance and operating limitations during ambient cold weather. Balancing Authorities communicate operating limitations to its Reliability Coordinators.

Please note Paragraph 2 can easily be incorporated into paragraph 3.

**Existing SAR Language:**

3. Generator Owner/Generator Operator communicates with the Balancing Authorities, Transmission Operators and Reliability Coordinators when forecasted ambient weather conditions (including, but not limited to, cold weather temperatures) are expected to impact generating unit performance or generating unit availability for the appropriate next day operating horizon.

**Suggested Language:**

3. Generator Owner/Generator Operator communicates with the Balancing Authorities and Transmission Operators when forecasted ambient weather conditions (including, but not limited to, cold weather temperatures) are expected to impact generating unit performance or generating unit availability for the appropriate next day operating horizon. Balancing Authorities communicate operating limitation to the Reliability Coordinators.

**Existing SAR Language:**

4. Reliability Coordinators, Transmission Operators and Balancing Authorities use of the generating unit performance and availability provided through deliverable #3 above to perform their respective Operational Planning Analysis, develop its Operating Plans, or determine the expected availability and contingency reserves for the appropriate next day operating horizon

**Suggested Language:**

Suggest adding TOP standards to the scope of SAR. Paragraph 4 is already included in TOP-003 (for BA) and IRO-008 (for RC).

Comment supported by PJM, NYISO, CAISO, MISO, ISO-NE, IESO

Likes	0
Dislikes	0



**Response: Thank you for your comment. (1) A footnote has been added to the SAR to address the mapping issue. (2) TOP has been added to the scope in the communication deliverables.**

**Carl Pineault - Hydro-Quebec Production - 1,5**

**Answer**

**Document Name**

**Comment**

We are aware of the FERC order, but we would like to raise our concerns about this new standard. All of our generators are located in areas where, each year, they already experience cold weather and extreme cold weather in north of Quebec. We already have cold weather preparations and procedures in place, our operators are trained for these conditions, our units are designed to handle very cold temperatures, ... A new standard/modification of standards would be time consuming and additional administrative burden without an appreciable increase in reliability.

Likes 0

Dislikes 0

**Response: Thank you for your comment. This project is necessary to respond to recommendations by FERC contained in the *2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018.***

**Scott Berry - Indiana Municipal Power Agency - 4 - RF**

**Answer**

**Document Name**

**Comment**

This SAR should not proceed and agree with the options proposed by the Transmission Access Policy Study Group (TAPS). IMPA agrees with and fully supports the comments submitted by Rebecca Baldwin representing TAPS.

Likes	0
Dislikes	0
<b>Response: Thank you for your comment. Please see the SAR DT responses to TAPS.</b>	
<b>David Jendras - Ameren - Ameren Services - 1,3,6</b>	
Answer	
Document Name	
<b>Comment</b>	
Ameren agrees with and supports EEI comments.	
Likes	0
Dislikes	0
<b>Response: Thank you for your comment. Please see the SAR DTs response to EEI.</b>	
<b>Douglas Webb - Great Plains Energy - Kansas City Power and Light Co. - 1,3,5,6 - MRO, Group Name Westar-KCPL</b>	
Answer	
Document Name	
<b>Comment</b>	
Westar Energy and Kansas City Power & Light, Evergy companies, incorporate by reference Edison Electric Institute's response to Question 2.	
Likes	0
Dislikes	0

**Response: Thank you for your comment. Please see the SAR DTs response to EEI.**

**Sing Tay - OGE Energy - Oklahoma Gas and Electric Co. - 1,3,5,6, Group Name OKGE**

**Answer**

**Document Name**

**Comment**

Oklahoma Gas & Electric supports Edison Electric Institute's (EEI) responses to Question 1 and 2.

Likes 0

Dislikes 0

**Response: Thank you for your comment. Please see the SAR DTs response to EEI.**

**Kenisha Webber - Entergy - NA - Not Applicable - SERC**

**Answer**

**Document Name**

**Comment**

Freeze protection and seasonal readiness has always been a focus at our company. All plants have PM's set up in our maintenance management system and some procedures to address this. This is all, good prudent operation of our plants, with that, it is very difficult to remedy all situations when these severe conditions do not apply very often, with that if good plans are in place, but a unit still trips, they should not be held accountable (violation of the standard) for these instances.

Overall, this standard is beneficial and should help the industry.

Likes 0

Dislikes 0

**Response: Thank you for your comments and support of this project.**

**Devon Tremont - Taunton Municipal Lighting Plant - 1,3,5 - NPCC**

**Answer**

**Document Name**

**Comment**

IRO-010-2 and TOP-003-3 already give RCs and BAs, respectively, the authority to require GO/GOPs to provide information about generator unit availability and how it is expected to be affected by ambient weather conditions. If some BAs and RCs are not requesting this information when necessary, or if GO/GOPs are failing to provide it when requested, the standards should be clarified if needed and enforced accordingly. The SDT noted in response to comments on the first posting of the SAR that those standards “do not specifically address freezing issues that occur to combustion turbines, boilers and balance of plant equipment,” but there is no need for such specificity; the standards require BAs and RCs to maintain “[a] list of data and information” that they need to carry out their responsibilities.

Additionally, the SER Phase 2 Team’s Operational Data Exchange Simplification SAR, currently posted for comment, suggests that “more clarity regarding the scope of the core BES reliability-related tasks would be beneficial and is desired. The scope of the data specification would then just reflect the information necessary to cover the scope of the core BES reliability-related tasks for the individual Registered Entity.” This proposed approach could reduce the administrative burden associated with TOP-003 and IRO-010, while clarifying the information to be requested and supplied. This would be more efficient and effective than creating another SAR to try to address issues arising from weather conditions. Generating units being available when called upon is a planning issue and the standards that require the communication of this information already exist.

It does not make sense from an economic or reliability perspective to winterize every generator in all regions, as not all regions experience the same cold weather conditions. Furthermore, Section 215(i)(2) of the Federal Power Act does not give NERC authority over the “adequacy... of electric facilities.” If there were a widespread need to retrofit generators to withstand colder temperatures, it would not be a problem that NERC could solve with a Reliability Standard. If the SDT decides to continue with its focus on increasing generating unit availability, it must at a minimum avoid creating the type of requirements that the SER initiative has been focused on retiring and revising, and instead strive for a results-based standard. The approach proposed by the Cold Weather SAR – creating and implementing a

cold weather preparedness plan – may offer increased reliability, but it will not be results-based and will add an administrative burden to every GO/GOP.

To conclude, the NERC Statement of Compliance Registry Criteria defines the BA as “[t]he responsible entity that integrates resource plans ahead of time, maintains Load-interchange-generation balance within a Balancing Authority Area, and supports interconnection frequency in real-time.” BAs should be studying the effects of all extreme conditions, including cold weather, well ahead of the operating horizon and preparing operating plans to mitigate the risk of shortages.

Likes 0

Dislikes 0

**Response: Thank you for your comment. Although the SAR DT agrees that TOP-003-3 and IRO-010-2 address RC and BA data specifications, it is not clear that the conditions of these requirements focus on data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these requirements. The SAR DT will pass along this information to the SDT so they can work closely with and monitor the efforts of the Operational Data Exchange SAR DT.**

**See response to EEI. The SAR recognizes that geographic location of the unit is one factor that determines how a GO develops and implements cold weather preparedness.**

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

**Answer**

**Document Name**

**Comment**

EEI supports a requirement for a GO/GOP to have a winterization plan (including appropriate maintenance and training), execute it, and communicate its completion to the RC/BA, prior to the onset of winter weather.

Nevertheless, the SDT should remain focused on the recommendations contained in Staff Report and limit changes to the SAR to those recommendations and not attempt to solve problems that there is no basis for concern.

Likes	0
Dislikes	0
<b>Response: Thank you for your comment. The SAR DT will provide your responses to the Standard Drafting Team, once formed.</b>	
<b>Ronald Bauer - MGE Energy - Madison Gas and Electric Co. - 3,4,5,6</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<p>It is MGE’s position that this SAR is not needed. As noted in TAPS’s response to Question 1, IRO-010-2 and TOP-003-3 already give RCs and BAs, respectively, the authority to require GO/GOPs to provide information about generator unit availability and how it is expected to be affected by ambient weather conditions. The SDT noted in response to comments on the first posting of the SAR that those standards “do not specifically address freezing issues that occur to combustion turbines, boilers and balance of plant equipment,” but there is no need for such specificity; the standards require BAs and RCs to maintain “[a] list of data and information” that they need to carry out their responsibilities. Indeed, as noted by City Utilities of Springfield in its comments on this SAR, NERC’s 2013 petition for approval of the TOP-003 requirements referenced above stated that the requirements “emphasize the need for Transmission Operators and Balancing Authorities to obtain all of the data that they need for reliability purposes and mandate that entities that have this data and that are requested to supply it, provide it to the Transmission Operator and Balancing Authority in an approved and timely manner.” Plainly, information about the impact of the weather on generator availability falls into the category of necessary information. And in much of the United States - MISO, PJM, and ISO-NE, for example - such information is in fact routinely requested and used. If requesting and communicating generator capability and availability information is in fact currently within the scope of the IRO-010 and TOP-003 standards, then any failure by registered entities to request or supply such information appears to be a shortcoming in executing the CMEP. If additional clarity is required, then TAPS recommends that the communication aspect of the Cold Weather SAR be transferred to the SER Phase 2 Operational Data Exchange Simplification SAR with the goal of clarifying core BES reliability-related tasks and their associated data specifications.</p>	

Generating units being unavailable when called upon, due to cold weather or other foreseeable problems, is a planning issue: the BA and RC should know the temperature constraints of the units in their areas, and should take those constraints into account in their planning, including calculating reserve margin. As described above, the standards requiring the necessary information exchange already exist.

In response to comments, the SDT states that market incentives for generators to avoid unexpected unit unavailability are inadequate because “plant freezing issues continue to occur when precautions have not been taken to prevent freezing during these [c]onditions.” Our response to that assertion is threefold. First, even given perfect information, a perfectly-maintained new plant may fail to synch on a blue-sky day. But the BA should have adequate operating reserves (that are rated to operate under then-current conditions) to withstand such a contingency. Second, it does not make sense from an economic or reliability perspective to winterize every generator in all regions, some of which may see a handful of hard freezes during a unit’s useful life. We should not be charging ratepayers to harden facilities when the issue can be addressed through communications and planning. Finally, and perhaps most importantly, Section 215(i)(2) of the Federal Power Act does not give NERC authority over the “adequacy... of electric facilities.” If there were a widespread need to retrofit generators to withstand colder temperatures - which TAPS does not believe to be the case - it would not be a problem NERC could solve with a standard.

TAPS strongly believes that this SAR should not proceed, and that if it does, it should be rolled into the Operational Data Exchange Simplification SAR and handled as a planning/communications issue, as described above. To the extent the SDT nevertheless decides to focus on increasing generating unit availability, it must at minimum avoid creating the type of requirements that the SER initiative has been focused on retiring and revising, and instead strive for a results-based standard. As stated in Order 672 (P 331), standards “should be designed to apply throughout the interconnected North American Bulk-Power System, to the maximum extent this is achievable with a single Reliability Standard,” and “should not be based on a single geographic... model but should take into account geographic variations in... weather, and other such factors.” Any standard prescribing actions that should reasonably be taken by registered entities in Florida, Minnesota, and California would necessarily be vague. Development and implementation of a cold weather preparedness plan, as contemplated by the SAR, might improve unit availability in cold weather; but such an approach is not results-based, and would create a new administrative burden for every GO/GOP. On the other hand, a results-based requirement could, for example, be based on unit availability when called to run (with a proviso that unavailability only “counts” where the BA and RC requested and received accurate information about the unexpectedly unavailable generator’s constraints, and they factored that information into their plans). Such a requirement would result in generators being penalized twice for failure to start - first by the market and then, if too many failures occurred, by NERC - but would at least avoid creating additional paperwork for those generators whose procedures are already adequate.

Finally, we note that the NERC Statement of Compliance Registry Criteria defines the Balancing Authority as “[t]he responsible entity that integrates resource plans ahead of time, maintains Load-interchange-generation balance within a Balancing Authority Area, and supports

Interconnection frequency in real-time.” BAs are thus the entities that should be studying the effects of all extreme conditions, including cold weather, well ahead of the operating horizon and preparing operating plans to mitigate the risk of shortages. It is within the BA's purview to commit more generation online and maintain more operating reserves as needed to ride through an event. If market monitors are hindering that activity to minimize costs, then FERC needs to decide whether reliability or economics takes precedence in this matter. In addition, as noted above, we question whether forcing generators to winterize is overall the more economic option.

Likes 0

Dislikes 0

**Response: Thank you for your comment. See the SAR DTs response to TAPS #1. Additionally, it is also understood that all forced outages may not be preventable during extreme conditions, but it has been demonstrated since the Polar Vortex, that direct oversight of winter preparations has improved generator reliability. The SAR is consistent with the FERC report to ensure GO/GOPs have a plan, implement that plan, and communicate with the RC and BA so that those entities can consider availability and limitations when developing their plans. Further, the SAR addresses the role information plays in the development of contingency reserve plans that are provided to the GOs/GOPs who implement their plans based on geographical location and plant configurations. Finally, the 2019-06 Cold Weather project is focused on the first prong of the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018, which is Generator Cold Weather Reliability including the development or enhancement of one or more NERC Reliability Standards. The third prong is directed to market (ISO/RTO) rules which is outside the scope of the SAR.**

**Teresa Cantwell - Lower Colorado River Authority - 1,5, Group Name LCRA Compliance**

**Answer**

**Document Name**

**Comment**

None.

Likes 0



Dislikes	0
<b>Response</b>	
<b>Truong Le - Florida Municipal Power Agency - 4 - SERC</b>	
Answer	
Document Name	
<b>Comment</b>	
<p>FMPA does not believe this SAR is needed. The deliverables of the SAR are presently met through existing Tariffs, Operating Agreements, Interconnection Agreements, ISO market rules, BA Surveys, and other existing Standards such as IRO-010, TOP-003, and TPL-001. Generating units being unavailable when called upon, due to weather or other foreseeable problems, is a planning issue: the BA and RC should know the temperature constraints of units in their areas and should take those constraints into account to plan adequate reserve margin. Additionally, even a perfectly maintained plant with the best in class operating practices has a risk of failing to sync on a blue-sky day. It does not make sense economically or reliably to enforce a single standard requiring winterization of all generation, some of which are nearing the end of life and others regionally may only see freezing temperatures once every several decades. Most importantly, Section 215(i)(2) of the Federal Power Act does not give NERC authority over the “adequacy... of electric facilities.” As such, FMPA strongly believes that this SAR should not proceed forward.</p>	
Likes	0
Dislikes	0
<p><b>Response: Thank you for your comment. Please see the SAR DTs response to NAGF #1. Additionally, please see the 3-pronged approach within the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. The 2019-06 Cold Weather project is focused on the first prong, which is Generator Cold Weather Reliability including the development or enhancement of one or more NERC Reliability Standards. The third prong is directed to market (ISO/RTO) rules which is outside the scope of the SAR.</b></p>	
<b>Bobbi Welch - Midcontinent ISO, Inc. - 2</b>	

<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<p>MISO supports comments submitted by the ISO/RTO Council (IRC) Standards Review Committee (SRC).</p> <p>In addition, MISO is supportive of the direction the SDT has taken and offers the following comments to enhance clarity or improve the quality of the SAR.</p> <p><b>Generating Unit versus Generating Facilities</b> - For clarity and to more clearly indicate inclusivity of renewables, MISO recommends the term “generating unit” be replaced with "generating Facilities" throughout.</p> <p><b>Flexibility to Accomodate Lack of Historical Performance</b> - Currently the SAR references “historical demonstrated performance” in items 1a and 2 under Detailed Description (page 2). MISO recommends the SDT modify the language to encompass generating Facilities that are new or those with a limited amount of “historical demonstrated performance” during cold weather conditions by providing an alternate means of providing anticipated output and availability information (<i>see</i> FAC-008, R1, part 1.1 as an example, excerpt below).</p> <ul style="list-style-type: none"> <li>&amp;bull; Design or construction information such as design criteria, ratings provided by equipment manufacturers, equipment drawings and/or specifications, engineering analyses, method(s) consistent with industry standards (e.g. ANSI and IEEE), or an established engineering practice that has been verified by testing or engineering analysis.</li> <li>&amp;bull; Operational information such as commissioning test results, performance testing or historical performance records, any of which may be supplemented by engineering analyses.</li> </ul> <p><b>Availability and Output</b> - The <i>2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018</i> discusses the need to maximize generator <i>output and</i> availability where as the Detailed Description of the SAR (page 2) states:</p> <p>“The deliverable will be new or revised Reliability Standards to promote reliability of the BES during cold weather and maximize generating unit availability.”</p>	

Of the two, if forced to make a choice, MISO would agree that it is more important to ensure generator start-up (availability) than full output (as a derate is less impactful); however, if the intent of the SAR is to address both, MISO recommends the language on page 2 be modified to state:

**Suggested Language:** “The deliverable will be new or revised Reliability Standards to promote reliability of the BES during cold weather and maximize generating unit output and availability.”

**SAR Time Horizon and Related Standards (page 4)** - Currently, the SAR calls out a few related standards (i.e. IRO-010-2 and TOP-003-3) and then goes on to state that, “The Operating and Planning suite of standards will be considered for this project.” MISO is supportive of this effort.

The section then goes on to reference “Real-time monitoring and Real-time Assessments.” Currently, the aspect of Real-time operations is not clearly articulated in the scope of the SAR as the majority of actions correspond to the Operations Planning (i.e. “for the appropriate next day operating horizon;” bullet items 3-4) or Long-Term Planning (i.e. “develops and implements cold weather preparedness plans, procedures and awareness training” bullet item 1) horizons.

- Develops and implements plans – Reliability impacts of extreme weather conditions (see EOP-011-1, R2, part 2.2.9)
- Next Day Operating Horizon - **Operations Planning** (see IRO-008-2, R1/R2; IRO-010-2; and R4 (BA); TOP-003-3)
- Generator Operator Training – **Long-Term Planning** (see PER-006-1)

MISO requests the SDT provide clarification whether the SAR is intended to address same-day operations and Real-time operations. If the latter, MISO requests the drafting team identify which items this is applicable to; e.g. bullet item 2 (page 2).

**Reliability Principles (page 5)** - MISO recommends box 6 be checked to indicate that training of generator operations personnel is supported by this project.

6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.

Likes	0
Dislikes	0

**Response: Thank you for your comment. Please see the SAR DTs response to SRC #1 comments. Additionally, the SAR has been revised to delete the “maximizing” language and focuses on maintaining generating resource availability within performance capabilities or operating limitations (See response to EEI #1). Also, the SAR has been updated to allow for historical demonstrated performance or associated design specifications consistent with the FERC report (see also response to EEI#1)**

**The SAR DT added BES before "generating unit" to provide clarity. It to the responsibility of the SDT to ensure consistency across all standards based on the term used.**

**Daniel Gacek - Exelon - 1,3,5,6**

**Answer**

**Document Name**

**Comment**

- 1) The “deliverable” statement includes “... during cold weather and maximize generating unit availability”. Statement implies that any generation availability less than 100% during cold weather, which may extend for half a year in some places, is unacceptable. Recommend re-writing statement to be: “... to promote reliability of the BES and improved generating unit availability during cold weather.”
- 2) It is recognized that the revised draft SAR, with increased flexibility to reflect geographical location and generating unit specific considerations, is an improvement over the initial issue. However, the lack of an international standard for “cold”, and the variability of equipment installations and protections, mitigation measures, and legal limitations on determining and transmitting non-public gas curtailment information, make Deliverable 1, items (b), (c), and (d) both insufficient and too detailed. Recommend folding Deliverable 1(a) into the body of the deliverable, and deleting items (b), (c), and (d). These are details the SDT can work out.
- 3) Given that the driver of concern in the 2018 cold weather event is lack of plans and/or failure to execute, the Deliverable should be limited to requiring registered entities to have cold weather preparation plans, and carrying them out.
- 4) Additionally, Exelon supports the comments submitted by EEI and NAGF on behalf of our industry.

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) The SAR has been modified, replacing "maximize" with "ensure" for Deliverable #1. (2) The SDT will determine if a NERC definition for "cold weather" is required. Also, the items under Deliverable #1 are intended to meet the recommendations of the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. The SAR DT will provide your recommendations and concerns to the SDT for consideration. (3) Please see the SAR DTs responses to EEI and NAGF for Q1 and Q2.**

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

**Answer**

**Document Name**

**Comment**

More often than not, dispersed power producing resources identified through Inclusion I4 of the Bulk Electric System definition, output capabilities, are driven by ambient weather conditions. Through NERC Reliability Standards IRO-010-2 Reliability Coordinator Data Specification and Collection (IRO-010) and TOP-003-3 Operational Reliability Data (TOP-003), Generator Owner (GO) and Generator Operator (GOP) are required to transmit/communicate specified data for Operational Planning Analyses, Real-time monitoring and Real-time Assessments. The Reliability Coordinator (RC), Balancing Authority (BA) and Transmission Operator (TOP), collectively Reliability Entities, prescribe these specifications based on what they believe they require for the purposes of reliability for their respective function. As such, mandating specific data/communications beyond what the Reliability Entities request could become burdensome and detract from reliability, especially when considering constantly changing ambient conditions and dispersed power producing resources.

Further, NERC has undertaken the Standards Efficiency Review (SER) with the overall project scope including identifying “potential candidate requirements that are not essential for reliability, could be simplified or consolidated, and could thereby reduce regulatory obligations and/or compliance burden.” The SER Phase 2 scope and approach intends to “reduce inefficiencies and unnecessary regulatory burdens for the purpose of supporting continued safe, secure and reliable operations.” AENAC feels that anything beyond the Cold Weather Preparedness and Communication Requirements between Functional Entities Standards Authorization Request (CW SAR) scope recommended in the response to question one, would in fact be a departure from SER Phase 2’s scope. SER Phase 2 has initiated

the SAR Operational Data Exchange Simplification which has a secondary purpose of removing other data exchange requirements dispersed in standards. Any data specification for the purpose of reliability should be identified through that SAR project.

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) Although the SAR DT agrees that TOP-003-3 and IRO-010-2 address Operational Planning Analysis, Real-time monitoring and Real-time Assessments, it is not clear if data specifications for TOP-003 and IRO-10 consider data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these standards. Additionally, TOP applicability will be added to the SAR since this function is also responsible for Data Specifications, Operational Planning Analysis, Real-time monitoring, and Real-time Assessments. (2) The SAR DT will pass along this information to the SDT so they can work closely with and monitor the efforts of the Operational Data Exchange SAR DT. (3) Please see the SAR DTs response to EEI Q1 and Q2 and City Utilities which involves substantially similar issues.**

**Michael Brytowski - Great River Energy - 1,3,5,6 - MRO**

**Answer**

**Document Name**

**Comment**

GRE has no further comments

Likes 0

Dislikes 0

**Response: Thank you for your support of this project.**

**Sean Bodkin - Dominion - Dominion Resources, Inc. - 3,5,6, Group Name Dominion**

**Answer**

Document Name	
Comment	
	<p>The addition of ‘maximize generating unit availability’ is not appropriate for a reliability standard. Units may or may not be available for any number of reasons and the identified issue related to the communications of the unit being able to perform as committed. The unit availability issue is more of a market related issue and not a reliability issue. The communication to the BA/RC of the unit being able to meet it’s commitments appears to be the issue.</p> <p>In the first item under detailed description, the SDT proposes adding ‘a generating units historical demonstrated performance and limitations during ambient cold weather’. Aside from the issues using the word ambient previously discussed, basing a reliability standard requirement on prior performance during cold weather is problematic. Many factors impact a units performance, not just weather. A unit could have been down for maintenance or it may not have been economical to run the unit. Basing performance based on historical data from days with similar weather would produce inconsistent and inaccurate results and this scope change should be deleted.</p> <p>In item d, the SDT proposes to include gas supply within the scope of the requirements. This would appear to be based on the joint NERC/FERC report. Narrowly tailoring a requirement to one fuel type would appear to be prejudicial and is inappropriate for a NERC requirement. Also, the GO/GOP would not be the appropriate entity to address fuel supply issues. As the recent NERC guidance document outlined, the planning horizon and the planners would be the more appropriate party to determine fuel supply constraints for the BA and RC to model around. The GO/GOP may not even be aware of a potential fuel issue until the fuel supply is curtailed, so placing this burden on the GO/GOP would not enhance the ability of the BA or RC to appropriately address the issue. Dominion Energy recommends deleting this expansion of scope as not appropriate to the issues being addressed, namely cold weather preparedness and enhanced communication.</p> <p>Please see the comments above for item 2 on using historical data to predict and require future performance. A GO/GOP could communicate if a unit is not going to be able perform as committed, but communicating on speculative items could actually harm the ability of the BA and RC to appropriately plan and manage the grid during a cold weather event.</p> <p>On item 3 in the detailed scope, Dominion Energy continues to have concerns about expanding the scope to include all ambient weather conditions in a project narrowly defined to address cold weather. Dominion Energy also has concerns about using forecasted weather conditions, as forecasts can vary widely for the same time period and change quickly. If a weather forecast is specified, it should be no more than a day ahead forecast and a single forecast source should be consistent used to prevent divergent results.</p>

Finally, item #4 should be deleted in its entirety as depending on facts and circumstances an RC or BA may choose not to use data provided by the GO/GOP, and requiring it to use data that may be problematic, inaccurate, or deemed unreliable for any reason would be extremely detrimental to BES reliability.

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) The SAR has been revised to delete the maximizing concept and focuses on maintaining generating resource availability within performance capabilities or operating limitations. (2) Item 1a has been revised to include either historical demonstrated performance or design specifications. It should be noted that FAC-008 allows Facility Ratings to be established by utilizing historical performance records. (3) Regarding Item 1d, the SAR is focused on gas supply issues since natural gas-fired units represented at least 70% of the unplanned generation outages and derates as identified in the FERC/NERC report. Also, a GO/GOP is usually associated with a central dispatch group or energy marketer who communicates with the fuel supplier under normal and emergency conditions. (4) Regarding Item 3, the SAR DT has removed 'all ambient' weather references, changed the scope back to "cold weather", and revised the SAR to be consistent with the FERC/NERC report.**

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

**Answer**

**Document Name**

**Comment**

Duke Energy offers the following additional comments;

1) Duke Energy supports the NAGF comment:

"NAGF supports a Cold Weather Standard that requires GO/GOPs to perform the following process-based enhancements:

a) Develop Cold Weather Preparedness Plans and Procedures.

b) Develop and Implement Operator awareness training for Cold Weather Preparedness.



c) Implement Cold Weather Preparedness Plans and Procedures."

2) Duke Energy echoes the concerns of the NAGF requiring unit availability data for all ambient weather conditions. With the focus of the SAR being on Cold Weather generator performance events, Duke Energy would like to see the emphasis to provide unit availability data for cold weather conditions only.

3) Duke Energy generally supports the changes made to the SAR and the comments provided by EEI through the expansion of the scope to include communication requirements between functional entities; but additional changes are necessary. Specifically, EEI's position on the Industry Need Statement that tying this obligation to "all ambient weather impacts" without requiring the development of reasonable performance expectations, will make it difficult for entities to comply with the requirement because the requirement could be interpreted to mean that any change in weather could result in scrutiny of all weather-related conditions and, consequently, make compliance audits subjective. For this reason, the SDT should consider reviewing the current language to better align with the Results Based Standards model such as adding the following as the second sentence in the industry need section of the SAR:

"Additionally, to ensure communications between functional entities for weather related events that may exceed resource performance capabilities impacting generator unit availability."

4) Finally, as stated by EEI regarding "Comments on Detained Description", Duke Energy does not support the use of the term "ambient cold weather" because it does not improve the clarity of the current term used in the SAR (extreme cold weather).

Likes 0

Dislikes 0

**Response: Thank you for your comment. Please see the SAR DTs response to NAGF and EEI.**

**Rebecca Baldwin - Transmission Access Policy Study Group - NA - Not Applicable - NA - Not Applicable**

**Answer**

**Document Name**

**Comment**

This SAR is not needed. As noted in TAPS’s response to Question 1, IRO-010-2 and TOP-003-3 already give RCs and BAs, respectively, the authority to require GO/GOPs to provide information about generator unit availability and how it is expected to be affected by ambient weather conditions. The SDT noted in response to comments on the first posting of the SAR that those standards “do not specifically address freezing issues that occur to combustion turbines, boilers and balance of plant equipment,” but there is no need for such specificity; the standards require BAs and RCs to maintain “[a] list of data and information” that they need to carry out their responsibilities. Indeed, as noted by City Utilities of Springfield in its comments on this SAR, NERC’s 2013 petition for approval of the TOP-003 requirements referenced above stated that the requirements “emphasize the need for Transmission Operators and Balancing Authorities to obtain all of the data that they need for reliability purposes and mandate that entities that have this data and that are requested to supply it, provide it to the Transmission Operator and Balancing Authority in an approved and timely manner.” Plainly, information about the impact of the weather on generator availability falls into the category of necessary information. And in much of the United States - MISO, PJM, and ISO-NE, for example - such information is in fact routinely requested and used. If requesting and communicating generator capability and availability information is in fact currently within the scope of the IRO-010 and TOP-003 standards, then any failure by registered entities to request or supply such information appears to be a shortcoming in executing the CMEP. If additional clarity is required, then TAPS recommends that the communication aspect of the Cold Weather SAR be transferred to the SER Phase 2 Operational Data Exchange Simplification SAR with the goal of clarifying core BES reliability-related tasks and their associated data specifications.

Generating units being unavailable when called upon, due to cold weather or other foreseeable problems, is a planning issue: the BA and RC should know the temperature constraints of the units in their areas, and should take those constraints into account in their planning, including calculating reserve margin. As described above, the standards requiring the necessary information exchange already exist.

In response to comments, the SDT states that market incentives for generators to avoid unexpected unit unavailability are inadequate because “plant freezing issues continue to occur when precautions have not been taken to prevent freezing during these [c]onditions.” Our response to that assertion is threefold. First, even given perfect information, a perfectly-maintained new plant may fail to synch on a blue-sky day. But the BA should have adequate operating reserves (that are rated to operate under then-current conditions) to withstand such a contingency. Second, it does not make sense from an economic or reliability perspective to winterize every generator in all regions, some of which may see a handful of hard freezes during a unit’s useful life. We should not be charging ratepayers to harden facilities when the issue can be addressed through communications and planning. Finally, and perhaps most importantly, Section 215(i)(2) of the Federal Power Act does not give NERC authority over the “adequacy... of electric facilities.” If there

were a widespread need to retrofit generators to withstand colder temperatures - which TAPS does not believe to be the case - it would not be a problem NERC could solve with a standard.

TAPS strongly believes that this SAR should not proceed, and that if it does, it should be rolled into the Operational Data Exchange Simplification SAR and handled as a planning/communications issue, as described above. To the extent the SDT nevertheless decides to focus on increasing generating unit availability, it must at minimum avoid creating the type of requirements that the SER initiative has been focused on retiring and revising, and instead strive for a results-based standard. As stated in Order 672 (P 331), standards “should be designed to apply throughout the interconnected North American Bulk-Power System, to the maximum extent this is achievable with a single Reliability Standard,” and “should not be based on a single geographic... model but should take into account geographic variations in... weather, and other such factors.” Any standard prescribing actions that should reasonably be taken by registered entities in Florida, Minnesota, and California would necessarily be vague. Development and implementation of a cold weather preparedness plan, as contemplated by the SAR, might improve unit availability in cold weather; but such an approach is not results-based, and would create a new administrative burden for every GO/GOP. On the other hand, a results-based requirement could, for example, be based on unit availability when called to run (with a proviso that unavailability only “counts” where the BA and RC requested and received accurate information about the unexpectedly unavailable generator’s constraints, and they factored that information into their plans). Such a requirement would result in generators being penalized twice for failure to start - first by the market and then, if too many failures occurred, by NERC - but would at least avoid creating additional paperwork for those generators whose procedures are already adequate.

Finally, we note that the NERC Statement of Compliance Registry Criteria defines the Balancing Authority as “[t]he responsible entity that integrates resource plans ahead of time, maintains Load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real-time.” BAs are thus the entities that should be studying the effects of all extreme conditions, including cold weather, well ahead of the operating horizon and preparing operating plans to mitigate the risk of shortages. It is within the BA’s purview to commit more generation online and maintain more operating reserves as needed to ride through an event. If market monitors are hindering that activity to minimize costs, then FERC needs to decide whether reliability or economics takes precedence in this matter. In addition, as noted above, we question whether forcing generators to winterize is overall the more economic option.

Likes	0
Dislikes	0

**Response: Thank you for your comment. (1) Although the SAR DT agrees that TOP-003-3 and IRO-010-2 address RC and BA data specifications, it is not clear that the conditions of these requirements focus on data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these requirements. The SAR DT will pass along this information to the SDT so**

they can work closely with and monitor the efforts of the Operational Data Exchange SAR DT. (2) The SAR DT has removed 'all ambient' weather references, changed the scope back to "cold weather", and revised the SAR to be consistent with the *2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018*.

Russel Mountjoy - Midwest Reliability Organization - 10, Group Name MRO NSRF

Answer

Document Name

Comment

“These comments represent the MRO NSRF membership as a whole but would not preclude members from submitting individual comments”.

The SAR DT should also consider the following recommendations to improve the clarity of the SAR.

**[Generating Facilities versus Generating Unit]**

For clarity and to more clearly indicate inclusivity of renewables, the NSRF recommends the term “generating unit” be replaced with generating Facilities throughout.

**Flexibility to Accommodate Lack of Historical Performance (page 2)**

Currently the SAR references “historical demonstrated performance” in items 1a and 2 under Detailed Description (page 2). The NSRF recommends the SDT modify the language to encompass generating Facilities that are new or those with a limited amount of “historical demonstrated performance” during cold weather conditions as follows:

**Suggested Language:**

1.a. A generating unit’s Facilities’ historical demonstrated performance or design specifications and operating limitations during ambient cold weather;

2. Generator Owner/Generator Operator communicates with the Balancing Authorities and Reliability Coordinators the generating unit's Facilities' associated historical demonstrated performance and operating limitations during ambient cold weather.

### **Availability and Output**

The *2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018* discusses the need to maximize generator *output and* availability where as the Detailed Description of the SAR (page 2) states:

"The deliverable will be new or revised Reliability Standards to promote reliability of the BES during cold weather and maximize generating unit availability."

The NSRF recommends to not include language that includes "maximize generator output".

### **SAR Time Horizon and Related Standards (page 4)**

Currently, the SAR calls out a few related standards (i.e. IRO-010-2 and TOP-003-3) and then goes on to state that, "The Operating and Planning suite of standards will be considered for this project." The NSRF is supportive of this effort.

The section then goes on to reference "Real-time monitoring and Real-time Assessments." Currently, the aspect of Real-time operations is not clearly articulated in the scope of the SAR as the majority of actions correspond to the Operations Planning (i.e. "for the appropriate next day operating horizon;" bullet items 3-4) or Long-Term Planning (i.e. "develops and implements cold weather preparedness plans, procedures and awareness training" bullet item 1) horizons.

- Develops and implements plans – Reliability impacts of extreme weather conditions (see EOP-011-1, R2, part 2.2.9)
- Next Day Operating Horizon - **Operations Planning** (see IRO-008-2, R1/R2; IRO-010-2; and R4 (BA); TOP-003-3)
- Generator Operator Training – **Long-Term Planning** (see PER-006-1)

The NSRF requests that the SDT provide clarification whether the SAR is intended to address same-day operations and Real-time operations. If the latter, the NSRF requests the drafting team identify which items this is applicable to; e.g. bullet item 2 (page 2).

### **Reliability Principles (page 5)**

The NSRF recommends box 6 be checked to indicate that training of generator operations personnel is supported by this project.

6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) The SAR DT added the term “BES” before "generating unit" to provide clarity. It is the responsibility of the SDT to ensure consistency across all standards based on the term used. (2) Please see the SAR DTs response to NSRF Q1 comments. Additionally, the SAR has been revised to delete the “maximizing” language and focuses on maintaining generating resource availability within performance capabilities or operating limitations (See response to EEI #1). Also, the SAR has been updated to allow for "historical demonstrated performance or associated design specifications" consistent with the FERC report (see also response to EEI#1). (2) The SAR DT agrees Real-time monitoring and Real-time assessments are addressed under TOP-003-3 and IRO-010-2 and the SAR has been modified to require the SDT (once formed) to review these standards.**

**Wayne Sipperly - NAGF - 1,2,3,6 - MRO,WECC,Texas RE,NPCC,SERC,RF**

**Answer**

**Document Name**

**Comment**

The NAGF supports a Cold Weather Standard that requires GO / GOPs to perform the following process-based enhancements:

- Develop Cold Weather Preparedness Plans and Procedures
- Develop and implement Operator awareness training for Cold Weather Preparedness
- Implement Cold Weather Preparedness Plans and Procedures

Any changes to existing or new standards should be process-based versus performance-based and written to allow for Continent-wide flexibility in meeting the requirements based on differences in geography, generator-type, design and regional ambient temperatures.

The NAGF takes exception to the phrase “maximize generating unit availability” This statement is too broad and open to interpretations. GO / GOPs may have robust Cold Weather Preparedness Programs and Implementation; that will not guarantee that a unit will be available during extreme cold weather. A Cold Weather Preparation standard will improve generator unit availability during extreme winter conditions, but it is not a guarantee that the unit will be at maximum availability.

As stated above, the NAGF supports GO / GOP communication of generator availability and limitations. However NAGF membership questions the value of providing “Item 1.a. historical demonstrated performance and operating limitations during ‘ambient’ cold weather”. As stated in the previous SAR, the NAGF believes the addition of specific Cold Weather Cause Codes and Failure mechanisms to the GADs, WADS and developing SADs data systems would provide the necessary data moving forward without an undue administrative burden.

Recommend to revise Item 1.c. to state “Perform periodic maintenance and inspection of freeze protection measures;”. The present wording can be misinterpreted to imply that any cold weather-related power generation limitation or outage indicates that the measures taken were inadequate, but many such incidents are not maintenance or inspection-related. They often derive instead from weather conditions that exceed the design capability of equipment (e.g. clogging of combustion turbine inlet air filters due to blizzard-level snowfall rates) or are impossible to mitigate (e.g. cooling water inlets becoming blocked due to rivers icing-over).

Recommend to revise Item 1.d. to remove the word “advanced” regarding notification of natural gas supply curtailments. It is unlikely that pipeline companies will provide such advance notifications. GO/GOPs can only pass-along curtailment notifications after they are received from pipeline companies (i.e. after-the-fact, not before-the-fact).

Likes	0
Dislikes	0

**Response: Thank you for your comment. Thank you for your support and recommendations. Please see the SAR DTs response to EEI Q1 and Q2 and NAFG Q1. (2) The SAR DT will provide your comments regarding process versus performance-based and continent-wide flexibility to the SDT. (3) The SAR has been revised to delete the maximizing concept and focuses on maintaining generating resource availability within performance capabilities or operating limitations. (4) Item 1a has been revised to include either historical demonstrated performance or design specifications. It should be noted that FAC-008 allows Facility Ratings to utilize historical**

performance records. (5) The recommendations regarding Cause Codes, et al. will be forwarded to the Standard Drafting Team for consideration.

**Richard Jackson - U.S. Bureau of Reclamation - 1,5**

Answer

Document Name

Comment

Reclamation supports the comments provided by the North American Generator Forum.

Likes 0

Dislikes 0

**Response: Thank you for your comment. Please see the SAR DTs response to NAGF.**

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

Answer

Document Name

Comment

Talen Energy supports the additional comments being submitted to NERC by the North American Generation Forum (NAGF), and adds the following points:

The word, “curtailments,” in item 1.d of the SAR should be defined:

- Supply pressure reductions making it impossible to achieve full output, or
- Complete shut-off of fuel, or



- Both of the above

Clarification is also needed for the word, “advance” in item 1.d:

- If it means that GO/GOPs are to pass-along curtailment announcements made by natural gas pipeline companies (i.e. after-the-fact information), we hope but cannot guarantee that such notifications will be received in advance of the supply pressure reductions or fuel shutoff. Also, this task could be addressed in the data specifications of existing standards IRO-010 and TOP-003; a new standard is not needed.
- If it means that GO/GOPs must attempt to obtain and pass-along curtailment plans in advance of the time they are made public (before-the-fact information), the SAR team should seek advice from NERC’s legal staff as to whether or not such inputs could be considered market insider information, in which case it might be inappropriate or even illegal in deregulated markets for GO/GOPs (which are heavily involved in power and fuel trading) to seek, have or pass-along this information.

We believe that the requirements proposed for GOs and GOPs should be made applicable also for TOs and DPs. These entities perform critically important winter preparation activities, and the proposed standard would be greatly weakened if failing to encompass all parties involved in ensuring BES reliability in this respect.

Likes 0

Dislikes 0

**Response: Thank you for your comment. (1) The SAR DT appreciates your support of NAGF's comments and will take them into consideration. (2) Although "Curtailment" is defined in the NERC Glossary of Terms, the SDT (once formed) may need to consider expanding this term to address fuel-related curtailments per your recommendations. (3) The SDT will consider the appropriate time period (minutes, hours, days, etc.) to clarify the term "advance". (4) Although the SAR DT agrees that TOP-003-3 and IRO-010-2 address data specifications, it is not clear that the conditions of these requirements focus on data specific to cold weather and possible curtailments. The SAR has been modified to require the SDT to review these requirements. (5) The SAR DT believes that the details of any contractual commitments are not part of this notification, but only the reason, time and length of the curtailment. (6) Although it is understood by the SAR DT that the applicability for a new standard could include TOs and DPs, this is beyond the scope and intentions of the *2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018*, which focus on generator availability. (7) Please see the SAR DTs responses to NAGF and EEI.**

**Jerry Horner - Basin Electric Power Cooperative - 1,3,5,6**

**Answer**

**Document Name**

**Comment**

Additionally:

1. We believe a new NERC standard addressing cold weather would only add regulatory burden with little or no benefit to our generation fleet.
2. We successfully operate more than 30 units multiple days each year in temperatures ranging from -20 to -40 F within states such as ND, SD, MT, and Wyoming.
3. Perhaps a regional standard should be considered addressing those units that had difficulty operating in cold weather.
4. Each generation facility has existing cold and warm weather plant procedures which are executed, and are UNIQUE to each facility. This uniqueness is based upon different physical designs at each facility.
5. We believe this cold weather issue is 'self policing' based upon the fact if a generation unit is bid into the market and has any type of issue to produce power, this becomes a financial burden for several reasons. Replacement power must be purchased, typically causing a financial loss, but also we do not receive the expected generation income.

Likes 0

Dislikes 0

**Response: Thank you for your comment. This project is in response to the FERC recommendations contained in the *2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018* and represents one-prong of FERC's suggested three-pronged approach. The SAR as crafted provides flexibility for the GO/GOP to prepare and implement winterization plans that are based on geographical location and plant configuration. In addition, market mechanisms to address cold weather are outside the purview of NERC and the scope of this SAR.**

**Jennie Wike - Tacoma Public Utilities (Tacoma, WA) - 1,3,4,5,6 - WECC**

**Answer**

**Document Name**

**Comment**

The SDT did not comprehensively address the comments provided by other entities in regards to existing Standard Requirements providing sufficient scope for the ERO to hold entities accountable for cold weather preparation. Tacoma Power understands that this Standards Project is initiated from the report titled, *2019 FERC and NERC Staff Report: The South Central United States Weather Bulk Electric System Event of January 17, 2018*. This report concludes that the existing regulatory framework is not sufficient in preventing cold weather events.

However, this report does not include justification as to why a new Standard is needed versus modifying existing Standards to include additional assurances. Tacoma Power recommends a detailed justification or analysis that evaluates the merits of a standalone Standard. This justification/analysis should, at a minimum, consider the following existing Standards:

- FAC-008 and MOD-025 should ensure the GO and GOP know the capability and availability of their BES resources under diverse ambient conditions, including extreme cold weather.
- MOD-031 and MOD-032 should ensure the PC and BA request and receive information from each RP to know the capability and availability of BES resources within their area under diverse ambient conditions, including extreme cold weather.
- NERC Reliability Assessments and TPL-001 should ensure near-term/long-term planning studies only include BES resources that are known to have the capability and availability under the specified ambient conditions, including extreme cold weather/winter peak.
- IRO-010 and TOP-003 should ensure the RC and BA request and receive information from each GO and GOP to know the capability and availability of BES resources in their area under diverse ambient conditions, including extreme cold weather.
- IRO-008, TOP-001 and TOP-002 should ensure the RC's and BA's Operational Planning Analysis and the RC's Real-time Assessment only includes BES resources that are known to have the capability and availability under the expected ambient conditions, including extreme cold weather/winter peak.

As part of this analysis/justification, Tacoma Power recommends that the SDT clearly articulate why the existing Standard Requirements do not provide sufficient scope to hold entities accountable, and how the new Standard would differ from these existing Requirements. This additional evaluation will help entities understand the scope of these changes, what needs to be implemented that isn't already in place for existing Standards, and the impacts of the new requirements.

Likes 0

Dislikes 0

**Response: Thank you for your comment. The SAR is structured in a manner that calls for new standard or modification to existing standards to implement the FERC recommendations. The SAR has been modified adding a recommended preference that the Standard Drafting Team review and modify existing operational and planning standards, as appropriate, rather than create a new standard.**

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

Answer

Document Name

Comment

No Comments.

Likes 0

Dislikes 0

**Response: Thank you for your support of this project.**

**Bret Galbraith - Seminole Electric Cooperative, Inc. - 1,3,4,5,6**

Answer

Document Name

Comment

The scope of the deliverable of the SAR under Section 1.d. requires the advance notification of curtailments of natural gas supply to an entity's RC and BA. However, natural gas scheduling curtailments occur frequently within the industry and requiring notification to the RC of every individual curtailment (when available) could result in a flood of information to the RC that does not require the RC's review, i.e., false alarms.

Because of this reasoning, Seminole requests the SAR language for this Section to be revised to only address some type of qualitative or quantitative physical curtailment that could result in BES reliability issues.

Likes 0

Dislikes 0

**Response: Thank you for your comment. The SAR's focus is for advanced notice (if available) of natural gas curtailments due to cold weather. The scope has not been expanded to address all weather conditions.**

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

Answer

Document Name

Comment

NO.

Likes 0

Dislikes 0

**Response: Thank you.**

**Anthony Jablonski - ReliabilityFirst - 10**

Answer

<b>Document Name</b>	
<b>Comment</b>	
	<p>Comments: The standard should address all weather conditions (hot, hurricanes, tornadoes, flooding, draught, etc.) not just cold weather. Also, since the South Central Cold Weather Event Report utilizes the term “extreme” 84 times when referring to weather or cold weather, “extreme” should be re-introduced into the SAR.</p> <p>Comments: How does the SAR address the confirmation of fuel switching capability since the South Central Cold Weather Event Report indicates that only four of the seven BAs had procedures in plant to test dual-fuel generating units, especially considering that 40 of 55 units in SERC successfully switched to their secondary fuel sources which provided the needed energy supply?</p> <p>Comments: How will the SAR ensure that RCs will take the necessary numerous mitigating measures to maintain BES reliability when outages occur during extreme weather conditions as mentioned in the South Central Cold Weather Event Report?</p> <p>Comments: How will the SAR ensure that SOLs will be based on, at a minimum, ambient temperature conditions instead of summer temperatures or on static, year-round ratings as mentioned in the South Central Cold Weather Event Report?</p>
Likes	0
Dislikes	0
	<p><b>Response: Thank you for your comment. (1) The SAR scope addresses Recommendation 1 in the <i>2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018</i> which is focused on cold weather conditions. The SAR implements the FERC recommendation to include information on unit availability in the RC's plans. (2) The "confirmation of fuel switching capability" will be addressed as part of the GO's winter preparation plan... (3) The SAR has been changed back to focus on cold weather, therefore, ambient temperatures are outside the scope of this SAR. See the <i>2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018</i> and the focus of recommendation 1. (page 28)</b></p>
	<p><b>Kevin Conway - Public Utility District No. 1 of Pend Oreille County - 1,3,5,6</b></p>
<b>Answer</b>	
<b>Document Name</b>	

**Comment**

The majority of the comments I reviewed from the previous Drafting team solicitation for comments indicated strong disapproval. Many of the responses by the drafting team were repetitive in defending this SAR. The Drafting Team should remand the SAR back to SPP for a Regional standard, and the Drafting Team be disbanded..

Likes 0

Dislikes 0

**Response: Thank you for your comment. The 2019-06 Cold Weather project is based on Recommendation 1 and focused on the first prong of the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018, which is Generator Cold Weather Reliability including the development or enhancement of one or more NERC Reliability Standards.**

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

**Answer**

**Document Name**

**Comment**

Black Hills Corporation (BHC) does not agree with the SAR in that it is mandating additional Operator Awareness Training for Cold Weather Preparedness. All of our generators are located in areas that we experience “Cold Weather” as the norm, and thus our units are designed to handle cold temperatures. We therefore have winter preparations, plans, and annual preventative measures already in place that address our facilities being ready to deal with ambient weather conditions. A training on our units operational conditions that is normal for us, would be considered a waste of our operators time and provides nothing for the reliability of the bulk electrical system.

BHC supports the NAGF with their comments on: the phrase “maximize generating unit availability”; “providing historical demonstrated performance & operating limitations during ambient cold weather”; and the noted recommendations for Item 1.c. & 1.d.

Likes 0

Dislikes 0

**Response: Thank you for your comment. Winter-specific and plant-specific operator awareness training is included in Recommendation 1 of the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018 and needs to be included in the SAR scope. Please see the SAR DTs responses to NAGF Q1.**

***Comments received by Southern Company***

**Q1** - Southern Company believes that the communication of generating unit availability and capability under all ambient conditions is already addressed in existing NERC Reliability Standards. Specifically, Standards IRO-010-2, Requirement R1 and TOP-003-3, Requirement R2 require the Reliability Coordinator (“RC”) and Balancing Authority (“BA”) to establish the data necessary for them to fulfill their reliability functions. NERC Project 2014-03, which resulted in the development of Standards IRO-010-2 and TOP-003-3, directly addressed existing (at the time) requirements related to the communication of generating unit availability and capability to the Reliability Entities (i.e., RC, BA, TOP) while providing the appropriate level of flexibility for the RC and BA to specify the data appropriate for their reliability needs in their respective areas.

Furthermore, these IRO-010-2 and TOP-003-3 standards require the Generator Owner and Generator Operator to provide any information specified by the Reliability Coordinator and the Balancing Authority, respectively, with the purpose of supporting Operational Planning Analyses, Real-time Monitoring and Real-time Assessments. Data, as referred to in these Standards, is not limited to static information but includes real-time data feeds and event-driven notifications, such as forecasted ambient weather conditions’ impact on unit availability and capability projections as needed by the applicable RC and BA.

For each of the following Standards and Requirements, the Mapping Document for Project 2014-03 indicates a clear and definitive correlation with TOP-003-3, Requirement R5 and, in most cases, with IRO-010-2, Requirement R3:

<b>Former Standard</b>	<b>Former Requirement(s)</b>
TOP-001-1a	R7 (incl. sub-parts)
TOP-002-2.1b	R3, R13, R14 (incl. sub-parts) and R15
TOP-003-1	R1, Part 1.1
TOP-006-3	R1, Part 1.1



Project 2014-03 SDT intentionally consolidated multiple existing Requirements in the development of IRO-010-2, Requirement R3 and TOP-003-3, Requirement R5 to include all information needed from Generator Owners and Generator Operators relative to Operational Planning, Monitoring and Assessments conducted by the RC, BA and TOP.

The development of an additional Standard addressing these types of communications for the same purpose would be duplicative, unnecessary, and potentially impose avoidable conflicts and associated compliance risks for any nuances between the data, as well as its format and required timing for communication. The duplicative nature of Requirements was a common theme in the justifications presented by the Standard Efficiency Review (SER) Phase I Team in their recent recommendations for retiring NERC Reliability Standards and Requirements. The vast majority of the Standards and Requirements recommended for retirement were approved by FERC, indicating the Commission's acknowledgement that duplicative Requirements are unnecessary.

**Response: Thank you for your comment. (1) Although the SAR DT agrees that TOP-003-3, IRO-010-2, and TOP-002-4 address Operational Planning Analysis, it is not clear if data specifications for TOP-003 and IRO-10 consider data specific to cold weather issues. The SAR has been modified to require the SDT (once formed) to review these standards. Additionally, TOP applicability will be added to the SAR since this function is also responsible for Data Specifications and Operational Planning Analysis. (2) The SDT will be encouraged to closely work with and monitor the NERC SER team to avoid duplication or contradictory efforts.**

**Q2** - Southern Company supports a requirement for a GO/GOP to have a winterization plan (including appropriate maintenance and training), execute it, and communicate its completion to the RC/BA, prior to the onset of winter weather. Southern Company also supports the dissemination of historical demonstrated performance and operating limitations by the GO/GOP to the RC and BA.

However, Southern Company believes that applicability of any new requirement should be limited to address the aforementioned GO/GOP standard gaps and has a concern over imposing unnecessary additional requirements for the RC and BA as described in Deliverable 4 . Specifically, as described in Question 1, there are already existing requirements for the RC and BA to specify all data needed to perform their respective reliability functions in IRO-010-2 and TOP-003-3, which necessarily includes data related to generating unit availability and capability from GOs and GOPs. Furthermore, other existing Standards and Requirements already require the RC and BA to utilize this data to perform the necessary reliability functions for all ambient conditions experienced in operations, including extreme weather conditions, or as a result of gas curtailments. For example, TOP-002-4 requires the BA to have a next-day Operating Plan that addresses the expected generation commitment and dispatch as well as capacity and energy reserve requirements, including deliverability capability and to

communicate the plan to its RC. Similarly, EOP-011-1 requires the BA to develop, maintain, and implement a plan to mitigate Capacity Emergencies and Energy Emergencies within its BA. This includes processes to prepare for and mitigate Emergencies including managing generating resources to address generator capability and availability, fuel supply concerns and reliability impacts of forecasted ambient weather conditions. Adding additional RC and/or BA requirements as contemplated in Deliverable 4 would be duplicative, unnecessary, and potentially impose avoidable conflicts and associated compliance risks with the existing standards that cover all the necessary reliability functions performed by the RC/BA.

**Response: Thank you for your comment. Please see the SAR DTs responses to EEI, City Utilities, and NSRF as they involve substantially the same issues. The Standards Drafting Team will review all the Operating and Planning standards to ensure duplicity and overlap is mitigated. The SAR has been modified adding a recommended preference that the Standard Drafting Team review and modify existing operational and planning standards, as appropriate, rather than create a new standard.**

**End of Report**