NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Consideration of Comments

Project Name:	2019-06 Cold Weather | Standard Authorization Request (Third Posting)
Comment Period Start Date:	4/22/2020
Comment Period End Date:	5/21/2020

There were 51 sets of responses, including comments from approximately 141 different people from approximately 108 companies representing 10 of the Industry Segments as shown in the table on the following pages.

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

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

Questions

1. Do you agree with the redline modifications made to 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.

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

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Fred Meyer	Algonquin Power Co.	1	MRO
					John Chang	Manitoba Hydro	1,3,6	MRO
					James Williams	Southwest Power Pool, Inc.	2	MRO
					Jamie Monette	Minnesota Power / ALLETE	1	MRO
					Jamison Cawley	Nebraska Public Power	1,3,5	MRO
					Sing Tay	Oklahoma Gas & Electric	1,3,5,6	MRO
					Terry Harbour	MidAmerican Energy	1,3	MRO
					Troy Brumfield	American Transmission Company	1	MRO
PPL - Louisville Gas and Electric Co.	Devin Shines	3,5,6	RF,SERC	Louisville Gas and Electric Company and Kentucky	Charles Freibert	PPL - Louisville Gas and Electric Co.	3	SERC
					JULIE HOSTRANDER	PPL - Louisville Gas and Electric Co.	5	SERC

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
				Utilities Company	Linn Oelker	PPL - Louisville Gas and Electric Co.	6	SERC
Westar Energy	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
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
					Robert Loy	FirstEnergy - FirstEnergy Solutions	5	RF
					Ann Carey	FirstEnergy - FirstEnergy Solutions	6	RF
					Mark Garza	FirstEnergy-FirstEnergy	4	RF
	Mark Holman	2		SRC	Brandon Gleason	Electric Reliability	2	Texas RE

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
PJM Interconnection, L.L.C.						Council of Texas, Inc.		
					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
					Terry Bilke	Midcontinent Independent System Operator	2	RF
					Gregory Campoli	New York Independent System Operator	2	NPCC
Northern California Power Agency	Marty Hostler	3,4,5,6		NCPA	Michael Whitney	Northern California Power Agency	3	WECC

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Scott Tomashefsky	Northern California Power Agency	4	WECC
					Dennis Sismaet	Northern California Power Agency	6	WECC
					Marty	Northern California Power Agen	5	WECC
Public Utility District No. 1 of Chelan County	Meaghan Connell	1,3,5,6		PUD No. 1 of Chelan County	Ginette Lacasse	Public Utility District No. 1 of Chelan County	1	WECC
					Joyce Gundry	Public Utility District No. 1 of Chelan County	3	WECC
					Meaghan Connell	Public Utility District No. 1 of Chelan County	5	WECC
					Davis Jelusich	Public Utility District No. 1 of Chelan County	6	WECC
Southern Company - Southern	Pamela Hunter	1,3,5,6	SERC	Southern Company	Matt Carden	Southern Company - Southern	1	SERC

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
Company Services, Inc.						Company Services, Inc.		
					Joel Dembowski	Southern Company - Alabama Power Company	3	SERC
					William D. Shultz	Southern Company Generation	5	SERC
					Ron Carlsen	Southern Company - Southern Company Generation	6	SERC
Northeast Power Coordinating Council	Ruida Shu	1,2,3,4,5,6,7,8,9,10	NPCC	NPCC Regional Standards Committee	Guy V. Zito	Northeast Power Coordinating Council	10	NPCC
					Randy MacDonald	New Brunswick Power	2	NPCC
					Glen Smith	Entergy Services	4	NPCC
					Alan Adamson	New York State Reliability Council	7	NPCC

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					David Burke	Orange & Rockland Utilities	3	NPCC
					Michele Tondalo	UI	1	NPCC
					Helen Lainis	IESO	2	NPCC
					John Pearson	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

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Shivaz Chopra	New York Power Authority	5	NPCC
					Deidre Altobell	Con Ed - Consolidated Edison	4	NPCC
					Dermot Smyth	Con Ed - Consolidated Edison Co. of New York	1	NPCC
					Peter Yost	Con Ed - Consolidated Edison Co. of New York	3	NPCC
					Cristhian Godoy	Con Ed - Consolidated Edison Co. of New York	6	NPCC
					Nicolas Turcotte	Hydro-Qu?bec TransEnergie	1	NPCC
					Chantal Mazza	Hydro Quebec	2	NPCC
					Sean Bodkin	Dominion - Dominion Resources, Inc.	6	NPCC

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Nurul Abser	NB Power Corporation	1	NPCC
					Randy MacDonald	NB Power Corporation	2	NPCC
					Jim Grant	NY-ISO	2	NPCC
					Quintin Lee	Eversource Energy	1	NPCC
					Silvia Parada Mitchell	NextEra Energy, LLC	4	NPCC
					Michael Ridolfino	Central Hudson Gas and Electric	1	NPCC
					Vijay Puran	NYSPS	6	NPCC
					ALAN ADAMSON	New York State Reliability Council	10	NPCC
					John Hasting	National Grid USA	1	NPCC
					Michael Jones	National Grid USA	1	NPCC
					Sean Cavote	PSEG - Public Service Electric and Gas Co.	1	NPCC

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
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. Do you agree with the redline modifications made to 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.	
John Allen - City Utilities of Springfield, Missouri - 1,3,4	
Answer	No
Document Name	
Comment	
City Utilities of Springfield continues to have concerns with creating a continent-wide standard to address a very specific regional issue. As stated in previous comments, we believe the current suite of Reliability Standards already cover most of the issues this SAR attempts to address. If Reliability Standards have to specifically call out each and every ambient condition or operational situation that could occur across North America to be effective, then we're going to continue spending valuable industry resources and our customer's money on non-stop standards projects. We don't believe that's the case and the current EOP, IRO and TOP standards are adequate to address the responsibilities of the RC, BA and TOP to collect information, prepare and operate the Bulk Electric System under all conditions, including cold weather. Therefore, we recommend removing items 2-4 in the Detailed Description of the SAR. If the SAR drafting team maintains the position that we need clarity on these items, then a better use of industry resources would be development of Implementation Guidance to provide examples for implementing these standards to address cold weather events. Perhaps some of the guidelines already developed around this issue would be a good place to start. Therefore, the only thing we can support is item #1 in the Detailed Description of the SAR i.e., the development of new or revised requirements for Generator Owners to identify their ambient (cold weather) design parameters and for Generator Operators to provide a plan to their respective RC, BA and TOP to operate (or not) outside those parameters.	
Likes 1	Northern California Power Agency, 5, Hostler Marty
Dislikes 0	
Response: Thank you for your comment.	

1. The SAR DT understands that the FERC report does not clearly state the need for a Continent-Wide NERC Cold Weather Standard, however, the SAR DT believes that different levels of cold weather preparation and programs will be needed across the ERO due to varying cold weather conditions. As an example, US northeast-based BES generating units will require a more extensive and comprehensive cold weather preparation plan as compared to US southwest-based BES generating units. Additionally, any new or revised Standard that addresses generator winter preparation will take into consideration geographic differences and plant configurations. The cold weather guidelines have been in place for many years and based on the data, there have been 50% of outages over the past 6 of 12 years from cold weather; therefore, strictly utilizing Guidelines at this point is not a viable option. **2. The SAR DT understands that the relevant EOP, IRO and TOP standards respectively address: (1) reliability impacts of extreme weather conditions in Operating Plans, (2) data needed to monitor and assess operation of the BES, and (3) data needed to fulfill operational and planning responsibilities; however, it is clear that the reliability impacts of extreme weather conditions was not thoroughly considered, insufficient data existed or the data was not effectively utilized prior to or during the January 2018 South Central Cold Weather Event. Please see the modified bullets 2 and 3 of the SAR. The standards drafting team (SDT) when formed will review these standards to determine whether these standards are adequate, or whether further clarification to these standards is needed, to address the responsibilities delineated in the January 2018 Cold Weather Report. Implementation Guidance can be drafted based on modifications made to the requirements and will be up to the SDT for development in addition to the requirements of the standard. The SAR DT will recommend to the SDT to consider the development of Implementation Guidelines for the new standard.**

Kevin Conway - Public Utility District No. 1 of Pend Oreille County - 1,3,5,6	
Answer	No
Document Name	
Comment	
A standard of this type is not needed. There is sufficient guidance and market pressures to encourge entities to properly plan oin extreem weather events. A standard of this type is overly burdensome to most entities in an effort to get marginal entities to perform.	
Likes 1	Northern California Power Agency, 5, Hostler Marty
Dislikes 0	

Response: Thank you for your comment. Since the results of the 2018 South Central Cold Weather Event clearly demonstrate that there was insufficient guidance and market pressures (where a market existed) to encourage entities to properly plan for extreme weather events, Recommendation 1, Item 1 of the 2018 South Central Cold Weather Event report identified the need for development or enhancement of one or more NERC Reliability Standards; and Recommendation 1, Item 3 addresses market (Independent System Operators/Regional Transmission Organizations) rules where appropriate to ensure GOs/GOPs, RC's and BA's prepare for cold weather conditions.

Marty Hostler - Northern California Power Agency - 3,4,5,6, Group Name NCPA	
Answer	No
Document Name	
Comment	

NCPA does NOT support this SAR. NCPA DOES support TAPS' SAR comments.

The FERC report does not justify a Continent-Wide NERC Cold Weather Standard. The following two LiveWire Compliance Articles explain the issues mentioned in the 2018 FERC report, and are suggested reading prior to balloting and commenting. They are related to enforcement of Market Rules, Interconnection Agreements, and/or Regional PUC rules.

https://mcusercontent.com/81c75744170760af3b43dad9c/files/8350bfca-81c1-462f-9674-22e933856d8d/Spotlight_2020_04_28_Cold_Weather_SAR_Controversy.pdf

https://mcusercontent.com/81c75744170760af3b43dad9c/files/85a60b10-5ed2-45b7-96a2-b5febb45b961/Spotlight_2020_05_12_Project_2019_06_Cold_Weather_SAR_Draft_3.pdf

The following draft SAR and 2018 FERC event report comments are offered, along with Regional improvement suggestions, in lieu of a Continent-Wide NERC Standard.

2018 FERC Cold Weather Event Report Recommendation 1:

A. Development/enhancement of NERC Reliability Standards where appropriate

- Continent-Wide new Standards are NOT appropriate nor justified by the FERC report.
- The FERC Report does NOT identify any BES synchronized unit that tripped off-line.
- Contrary to SAR drafting team members' verbal comments, FERC's Report does not rule out regional standard(s) only; nor, implementing recommendations 2 and/or 3 only (B and C in these comments).
- IRO, TOP, and MOD Standards are not broken. They are, under used and/or not enforced.
- FERC staff and/or SAR drafting team members did not know, or will not accept, that existing NERC Standards already allow BA and RCs the ability to create a data specification(s) for Generator Facility information they need. BA/RCs can provide GO/GOP information, to each other and PA, TP, and TOPs.
- Numerous GO/GOPs, in several different BA/RC areas, informed FERC, NERC, and SAR drafting team members of the aforementioned facts, in SAR comments; and prior NERC documents filed with FERC (see TAPS comments for references to said NERC documents).
- BA/RCs involved in the 2018 FERC report event should have already requested design and other said information from GO/GOPs. It is a Standards Compliance or Market Enforcement issue if a GO/GOP does not provided requested information. This situation does NOT warrant enormous amounts of industry time and effort to develop a new standard.
- What is the status of BA/RCs, in the impacted area, requesting and receiving GO/GOP data?
- See EEI comments related to Gas Supply.

B. Market (ISO/RTO) rules where appropriate:

- Cold Weather Preparation issues are best suited for Market solutions. Existing Market rules are fair and penalize all Market Participants, GOPs and non-GOPs, equally.
- Enforce existing Market rules/penalties if a generating unit that bids into the Market does not perform; or the GOP failed to submit a timely outage card/notice.
- If aforementioned Rules do not exist, BA/RTO should developed similar rules.

- BA/RCs develop incentives for Cold and/or extreme (hot) weather unit availability.
- This SAR is counter to NERC Market Interface Principle "A reliability standard shall not give any market participant an unfair competitive advantage". Current California ISO (CAISO) Market rules do not allow GOPs to recover fixed cost for unfunded FERC reliability mandates. Non-GOP Market Participants have no said obligation(s) cost(s).
- If this SAR is to move forward FERC needs to level the playing field and first order BAs to compensate GO/GOPs for fixed NERC Compliance Costs. Otherwise this proposed Standard, among others, results in unfair Market competitive advantages for non-GOP generator Market Participants in the CAISO BA, and maybe others too.
- Another Market Interface Principle states "Standards shall not define an adequate amount of, or require expansion of, bulk power system resources or delivery capability." This SAR and FERC report recommendations run afoul with said principle; both seek forcing BA/RTO bid stack/resource increases. Also see AEPs comments and link: http://www.nerc.com/pa/Stand/Resources/Documents/Market_Principles.pdf

C. Enhanced outreach to GO/GOPs

- FERC, NERC, SAR drafting team and Industry all agree existing outreach has been working and improving; kudos to everyone.
- Increase Outreach to GO/GOPs, especially those in the event area that did not have plans, who do not know their design ratings, and those that had unplanned outages. Assist them with developing and maintaining Cold Weather plans and annual preparation. In addition, assist them with determining equipment ratings that BA/RC Planners and dispatchers will actually use.

Other Suggestions:

- Increase Spinning Reserves during Cold Weather.
- Warm up Generators Units long before anticipated cold weather to prepare for higher load demand and avoid additional unit startup stresses during Extreme Cold Weather.
- Do not include non-Market participant's resources in Loads and Resources Plan. During SAR drafting team meetings, it was mentioned, that some BA/RTOs had issues with non-market participants not starting up when called upon. Why did BA/RTOs call on said units to start up, or include them in Loads and Resources Plans?

- If GOP, Market Participant, does not submit a bid, nor an outage notice, do not assume their unit is available or ready to start; especially in extreme cold, call/email, and/or verify.
- Improve load and weather forecasting.
- Detail what data is really needed and if will actually be used by Planners or Dispatchers.
- BA or RC communicate directly with Gas Pipeline Owners/Operators.

The FERC Report does NOT mention:

- The primary cause of the event was extreme Cold Weather, not unplanned generation outages. Extreme Cold Weather was not forecasted by BAs, RCs, RTO, nor GOPs. Weather forecasts were inaccurate which caused load forecasts to be more inaccurate than they already were. Which required BA, RC, and RTOs to need more generation and reserves than forecasted.
- GO/GOPs communicated de-rates to BA, RTO, and RCs.
- BA/RCs need to ask for information, instead of saying standards do not allow.
- It is unclear if BA and RTOs' day-ahead, or beyond, loads and resources plans included Generation that had not bid into their Market(s) or non-Market Participant Generation.
- During SAR drafting team meetings BA/RTO people mentioned they were having issues with non-Market participants. Simple: do not include non-Market Participant generation in resource plans.
- To definitively conclude generation facilities were within their designed operating ratings, more detailed analysis necessary. It does not appear that units were within their designed operating temperature when BA/RTO finally called on them to start.
- Actual temperatures at each generating facility are not provided. The report identifies ranges of impacted area ambient temperatures that could have been in load area.
- Actual wind chill, icing, etc. adjusted temperatures at each generator is not in the report.

• It appears that BA/RTO waited too long, until it got too cold in load center areas, before requesting additional generation to come on line. Warming up units before temperatures dropped would have helped a lot.	
Likes 0	
Dislikes 0	

Response: Thank you for your comment. Although the SAR DT understands that the FERC report does not clearly state the need for a Continent-Wide NERC Cold Weather Standard, the SAR DT believes that different levels of cold weather preparation and programs will be needed across the ERO due to varying cold weather conditions. As an example, US northeast-based BES generating units will require a more extensive and comprehensive cold weather preparation plan as compared to US southwest-based BES generating units. Additionally, any new or revised Standard that addresses generator winter preparation will take into consideration geographic differences.

The SAR DT appreciates and understands the opinions of these articles especially related to Market Rules, Interconnection Agreements, and/or Regional PUC rules; Recommendation 1 of the 2018 South Central Cold Weather Event report clearly explains the three-pronged approach to prepare for cold weather conditions which includes as Item 1, development or enhancement of one or more NERC Reliability Standards; and under Item 3, market (Independent System Operators/Regional Transmission Organizations rules where appropriate. Market Rules, Interconnection Agreements and/or Regional PUC rules fall under Item 3 and are outside the scope, responsibility and authority of the SAR DT.

· The SAR DT has determined that a new standard is required after evaluating the conditions and requirements of other relevant NERC Reliability Standards such as EOP, FAC, IRO, and TOP.

· The FERC Report does identify that generator forced outages, derates or failures to start (FTS) occurred (See Pages 10, 43 and 81).
· The SAR DT understands that a Regional Standard can be developed at any time by a Regional Entity, this type of standard only supplements but cannot replace a NERC Reliability Standard and must include conditions and requirements that are typically more restrictive.
· Based on Regional Entity input, the IRO, TOP, and MOD Standards are: (1) considered in evaluating an entity's inherent risk to the BES, (2) are monitored or audited as determined by the outcome of the inherent risk assessment, (3) enforced as required by self-reports or Possible Non-Compliance (PNCs) as identified in the audit process.

· Although the SAR DT understands that the relevant EOP, IRO and TOP standards respectively address: (1) reliability impacts of extreme weather conditions in Operating Plans, (2) data needed to monitor and assess operation of the BES, and (3) data needed to fulfill operational and planning responsibilities; it appears that the reliability impacts of extreme weather conditions was not thoroughly considered, insufficient data existed or the data was not effectively utilized prior to or during the January 2018 South Central Cold Weather Event. Additionally, any new or revised Standard that addresses generator winter preparation will take into consideration geographic differences. **· The SAR DT with FERC and NERC support, has attempted and will continue to address the concerns of numerous GO/GOPs from several different BA/RC areas in their previous SAR comments.** **· The SAR DT understands that: (1) the BA/RCs involved in the 2018 FERC report event should have already requested design and other said information from GO/GOPs and (2) it may be a compliance or Market Enforcement issue if a GO/GOP has/does not provide the requested information. Both of these areas are outside the scope, responsibility and authority of the SAR DT. The January 2018 South Central Cold Weather Event warrants whatever time and effort is required to prevent another cold weather event.** **· It is outside the scope, responsibility and authority of the SAR DT to pursue if the BA/RCs in the impacted areas are requesting and receiving GO/GOP data.** **· See EEI comments related to Gas Supply. Item 1d has been removed from the SAR.**

Thomas Foltz - AEP - 3,5	
Answer	No
Document Name	
Comment	
AEP once again appreciates the efforts of the standards drafting team, and thanks them for their continued willingness to consider our feedback and to take it into account as they've further revised the SAR. While AEP's comments in response to this latest SAR revision	

build upon our previous feedback, we begin by supplementing additional concerns related to the SAR's potential impact on energy markets.

It is apparent by the SAR's inclusion of market based principles, that NERC recognizes the potential interaction between Reliability Standards and energy markets, and seeks to ensure that the SAR follows the Market Interface Principles. While we recognize that reliability standards do impact the energy markets, the markets themselves (especially RTOs/ISOs) specifically design energy products to incent reliable operations. AEP is unable to support this SAR, as any standard that directs activities to improve cold weather performance directly runs afoul of the Market Interface Principles, specifically: "Standards shall not define an adequate amount of, or require expansion of, bulk power system resources or delivery capability."
http://www.nerc.com/pa/Stand/Resources/Documents/Market_Principles.pdf Further, AEP believes that there are sufficient market constructs to ensure resources are prepared for any weather conditions, as it is in their best interest to produce energy. This is especially true during challenging weather conditions, as energy prices will typically reflect any shortage condition, and compensate resources for their efforts to ensure operability during these conditions.

Despite our stated objections, AEP does acknowledge the need for effective communication of resource capabilities, and believes that this communication regularly takes place in the markets where we operate (ERCOT, PJM, SPP). Generation limits can be submitted as far out as seven days in advance, with updates provided as system conditions change (e.g. weather, transmission topography, unit status, fuel, hydro, wind, and solar availability, etc.). Obviously, as the time horizon to real-time operations draws closer, the forecast accuracy of all of these inputs increases, and updates are provided to the RTO. Of course, there is always an emphasis on ensuring the accuracy of Day Ahead and Real Time limits, as these are the most critical to the reliable operation of the grid. Again, this is why there are market incentives to ensure this information is correct. (e.g. operating reserve charges, balance energy, etc.) As such, AEP has significant concern with developing any standard which would create an additional set of reporting criteria. A second set of reporting criteria would at best, cause confusion, and even worse, could potentially be called into question by Market Monitoring Units within the markets, and other regulating bodies, when reviewing an entity's market behavior, simply due to any differences in timing and reporting requirements.

While we are appreciative of the efforts of the SAR drafting team, AEP still 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. As a result, AEP would like to revise and restate our previous feedback and concerns as provided below.

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." 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 an 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 rule making that applies to 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 1	Northern California Power Agency, 5, Hostler Marty
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.	
Meaghan Connell - Public Utility District No. 1 of Chelan County - 1,3,5,6, Group Name PUD No. 1 of Chelan County	
Answer	No
Document Name	
Comment	
CHPD appreciates the consideration of comments the DT made in the third draft revision of the SAR. However, the language in the SAR maintaining the requirement that all BES generating units would be required to develop and implement cold weather preparedness plans continues to put an unnecessary compliance burden on the bulk of generating units that already operate reliably in historically cold climates. CHPD requests the DT add language providing an exemption for those units located in historically cold climates that already	

operate reliably in routinely cold weather regions in order to not add unnecessary compliance paperwork and divert resources from valuable work in maintaining these systems.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. While it is understood there are Generators in areas of the country that are well prepared for cold weather, the SAR is written to consider factors such as geographical location and plant configurations to allow the SDT, when formed, to provide requirements that would complement current cold weather programs and have minimal impact to current program in those areas. Exempted generator types or geographical locations would be considered by the SDT.	
Scott Berry - Indiana Municipal Power Agency - 4 - RF	
Answer	No
Document Name	
Comment	
A cold weather standard is not needed and IMPA does not support this SAR. The SAR is requested data that can be collected under MOD-032, IRO-010, and TOP-003 (some of it is being collected there today). The standard MOD-032 uses a data specification and intentionally lets the Planning Coordinators and Transmission Planners decide what data they needed to collect in the specification. The TOP-003 NERC standard lets the Transmission Operators and Balancing Authorities decide the necessary data to request in their data specifications. The IRO-010 standard lets the Reliability Coordinators collect their necessary data from entities. All three of these standards are written in a way to let the requesting entities decide the necessary data to collect from entities in order to do their required planning or work. For item 3, the use of the wording "when local forecasted cold weather conditions are expected to limit BES generating unit performance" is vague and subject to many interpretations. In the case of a peaking unit, a GO/GOP can't be expected to speculate if it knows of no problems prior to startup. If a new standard would require the GO/GOP to speculate, this could cause unnecessary calls during the winter season if the cold weather is "expected" to limit its BES generation. Do Reliability Coordinators, Balancing Authorities, and Transmission Operators really want the GO/GOP to guess and call them every time cold weather is "expected" to limit BES generation? If a generating unit located within the PJM area has a known derate, the GO/GOP would have to submit that to PJM. If the	

cold weather is known to limit the BES generation, then a call makes sense but every time the cold weather is expected to limit BES generation is very different. If item 3 is kept in the SAR, IMPA recommends replacing "expected" with the wording similar to "is known to actually limit" the BES generation. In addition to these comments, IMPA supports the comments submitted by Rebecca Baldwin (TAPS).

Likes 1	Northern California Power Agency, 5, Hostler Marty
Dislikes 0	

Response: Thank you for your comments. Please see the SAR DT's response to TAPS. With regard to Item 3, the FERC report recommends the GO and GOP be expected to understand when its unit will be operationally limited by cold weather and notify the RC and BA of such possibility. The GO and GOP should include such awareness in its cold weather winterization plan and base it on design specifications or historical demonstrated performance.

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

The thesis for our revised wording of the SAR is as follows.

1. Develop a cold weather preparedness plan and execute it
2. Establish a communication process between the GO/GOP and RC/BA for cold weather data

The accuracy of the data supplied should not be the focus, but rather the establishment of a communication/risk assessment process between the GO/GOP and RC/BA, along with a cold weather preparedness plan.

1. Generator Owner/Generator Operators develop and implement cold weather preparedness plans, procedures, and awareness training based on factors such as geographical location and plant configurations should include but not limited to the following:
2.
    i. Cold weather temperature unit design specifications or unit historical demonstrated performance and operating limitations during cold weather;
    ii. Implementation of freeze protection measures;
    iii. Performing periodic adequate maintenance and inspection of freeze protection measures
3. Reliability Coordinators/Balancing Authorities/Transmission Operators establish the expectations for the appropriate Generators Owner/Generator Operators to communicate the following, but not limited to:
4. Data in deliverable 1a
5. Notification of curtailments of natural gas once made available to the GO/GOP
6. Generating unit operating limitations in advance of a forecasted cold weather event

Likes 0	
Dislikes 0	

Response: Thank you for your comment. In regards to the development of a new NERC standard or revising current enforceable standards, the SDT will consider your comments that provide recommendations set forth to the NERC requirements and measures.

The SAR DT agrees with the communication of cold weather events would be a main focus of the SDT to provide adequate planning assessments.

Joshua Andersen - Salt River Project - 1,3,5,6 - WECC	
Answer	No
Document Name	
Comment	

SRP sees this SAR as overreaching. There are market penalties for lack of performance during cold weather and the necessary information can be requested by other means (TOP-003 and IRO-010).

Deliverable 1 should be revised to remove the term “accurate” from sub-item a, and the term “adequate” from sub-item c. The term “accurate” implies that there may be testing, or other verification methods, required at cold weather conditions to verify design parameters. The term “adequate” bring into question of who determines the adequacy? SRP recommends the term “accurate” removed and the terms “periodic adequate” be replaced with “preventative” in the sub-items in deliverable 1.

Furthermore, deliverable 1 states that the cold weather preparedness plans, procedures and training “may include” the sub-items; but deliverable 2 specifically requires sub-item d.

Likes 1	Northern California Power Agency, 5, Hostler Marty
Dislikes 0	

Response: Thank you for your comments. While market penalties do exist, there is a need for improving reliability with preparations and communication of cold weather. Cold weather has shown to pose a risk to BES reliability as stated in the 2019 FERC and NERC report, "The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018". While the IRO-010 and TOP-003 broadly cover the data needed to perform "its operational functions", this SAR is specific to cold weather data needed for TOP, BA, and RC to perform regional planning and operational analysis. The format of receiving this data is yet to be determined but would provide a reliability impact assessment specific to cold weather events following the recommendation in the 2019 FERC and NERC report, "The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018". The existing mandated NERC standards would be reviewed by the SDT for any inclusion of regional specifications of cold weather assessment requirements and revised if possible to reflect the information needed for regional reliability assessments.

The SAR DT determined that the word “accurate” would be appropriate for the SAR.
The importance for accuracy of data was an issue identified in the 2011 Southwest Cold Weather Event, the 2014 Polar Vortex and 2018 Cold Weather Event.

The SAR DT removed the word “adequate” from the deliverable 1.

The SAR DT removed 1d from the SAR.

Richard Jackson - U.S. Bureau of Reclamation - 1,5	
Answer	No
Document Name	
Comment	

Reclamation agrees with the change from all ambient weather back to only cold weather; however, Reclamation still does not support a nationwide cold weather standard that would apply to Generator Owners or Operators. Reclamation asserts that the increased costs, labor hours, and administrative compliance burden of a nationwide cold weather standard on Generator Owners and Operators would be better served with proper enforcement of existing standards and market rules at the Balancing Authority, Reliability Coordinator, Regional Transmission Organization, and/or Regional Entity level.

Reclamation appreciates the inclusion of "The need for accurate cold weather temperature design specifications or historical demonstrated performance and operating limitations during cold weather" into deliverable 1.a.; however, due to the power facilities of concern being natural gas or dual fuel facilities that are not designed for extreme cold weather operations, Reclamation does not agree with a nationwide standard or any cold weather standard that would apply to hydroelectric generators.

In accordance with the intent stated in SAR Footnote 2, Reclamation would support cold weather requirements contained in a SERC and/or MRO regional variance.

Reclamation appreciates the inclusion of "In implementing the project scope, the preference is for the Standards Drafting Team to utilize and revise, to the extent possible, the current Operating and Planning Suite of mandatory Reliability Standards subject to enforcement and create a new standard only if necessary and appropriate." Reclamation recommends that existing standards, such as IRO-010, TOP-003, and/or EOP-011 be revised with regional variances to address the areas of concern. A new standard is unnecessary and cold weather requirements should not apply to hydroelectric generators.

Where appropriate, Reclamation agrees with the inclusion of Transmission Operator as an applicable entity. A Transmission Operator should be added as an applicable entity only if the role of the Transmission Operator would change under cold weather conditions.

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

Likes 0	
Dislikes 0	

Response: Thank you for your comment. The geographical location would be considered for SDT in providing a reliability impact assessment specific to cold weather events following the recommendation in the 2019 FERC and NERC report, "The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018". The existing mandated NERC standards would be reviewed by the SDT for any inclusion of regional specifications of cold weather assessment requirements and revised if possible to reflect the information needed for regional reliability assessments.

1d has been removed from the SAR regarding natural gas.

The type of generator for inclusion into the Standard would be considered by the SDT.

Please see the SAR DTs response to NAGF.

Donald Lock - Talen Generation, LLC - 5	
Answer	No
Document Name	

Comment

Talen energy supports the comments of the North American Generator Forum (NAGF) and of the Edison Electric Institute (EEI), and we have the following additional comments:

- TOs should be included among the applicable entities for any standard on the subject of cold weather reliability, since they must prepare for winter much the same as GO/GOPs do.

- Starting-up generation units in the teeth of a winter storm is immensely more difficult than keeping already-running units online. Starting units out-of-merit due to forecasted perils, as was done in our area when Hurricane Sandy was approaching for example, does far more for BES reliability than trying to analytically predict if and when weather-related issues will occur.

- Accurate prediction of cold weather-caused outages is impractical, due to the limited significance of design specifications and the dependence of historical performance on multitudinous factors with undefinable interrelationships (minimum temperature experienced, duration of unusually low temperature, maximum wind speed, duration of unusually high wind speed, variation of wind speed with temperature, peak snowfall rate, duration of unusually heavy snowfall, etc). Successful wintertime reliability-enhancement initiatives (e.g. the market regulations in PJM Manual 14D Att. N) emphasize instead continuous improvement.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's response to NAGF. **The SAR DT appreciates Talen's comments and recognizes that each winter scenario is different. NERC has published Reliability Guidelines and Cold Weather Training materials and provides on an annual basis, a reminder of these materials. The 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018 specifically references voluntary efforts utilizing existing guidance and training materials available to industry and noted that extensive unplanned generation outages continue to occur during cold weather related events. It is not the intent of the SAR DT to add conflicting layers of regulatory requirements and included a preference within the SAR that the Standard Drafting Team revise existing standards, to the extent possible. It is outside the purview of the SAR Drafting Team to mandate market rules requiring wintertime reliability enhancement initiatives but the Standards Drafting Team will perform the appropriate due diligence associated with regional variances.**	
Dana Klem - MRO - 1,2,3,4,5,6 - MRO, 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 believes that the only item needed within the Technical Justification Section is: "The deliverable will be new or revised Reliability Standards, as appropriate, to promote reliability of the BES during cold weather and maximize to ensure that cold weather performance plans for BES generating units are developed, implemented, and communicated in order to maintain BES generating unit availability within performance capabilities or operating limiations". Webster defines justification as;" an acceptable reason for doing something : something that justifies an act or way of behaving". All items under this sections's 1, a, b, c, and d, are all too prescriptive to be in the SAR and are solely restating what was in the 2019 FERC and NERC report. Items in section 2, 3, and 4 are also prescriptive in nature and do not provide "justification" to create or revise a Reliability Standard. Transmission Operator should be added to the Industry Need Section. Recommend the above items in sections I, 2, 3, and 4 be deleted. This will allow the Standards Drafting Team with how to move forward with a contitinent wide Standard (new or revised) that mitigates the issues within the FERC and NERC report.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. In sections 1, 2,3, and 4, the SAR provides a degree of clarity to the industry on where the SAR Drafting Team sees specific gaps in the current standards that the Standard Drafting team will address through new or revised Reliability Standards. By including this level of detail in the SAR, the SAR Drafting Team is providing industry some preliminary detail on specific gaps that new or revised standards will need to address to promote reliability of the BES during cold weather and to ensure that cold weather performance plans for BES generating units are developed, implemented, and communicated in order to maintain BES generating unit availability within performance capabilities or operating limitations. It is the SAR Drafting Team's opinion that removing this detail would provide additional uncertainty to industry.	
Sing Tay - OGE Energy - Oklahoma Gas and Electric Co. - 1,3,5,6, Group Name OKGE	
Answer	No
Document Name	
Comment	

Oklahoma Gas & Electric supports Edison Electric Institute's (EEI) response to this third revision of the SAR.	
Likes 0	
Dislikes 0	
Response: Please see the SAR DT's response to EEI.	
Sean Bodkin - Dominion - Dominion Resources, Inc. - 3,5,6, Group Name Dominion	
Answer	No
Document Name	
Comment	

Dominion Energy does not support the current version of the proposed SAR. Dominion Energy supports the comments of both EEI and NAGF.

Dominion Energy supports the concepts behind the development of the proposed SAR but is of the opinion that the SAR proposes a scope that places undue compliance requirements on generator owners. The joint NERC/FERC report emphasizes that communication between the RC, BA and GO/GOP should be improved while the SAR appears to be focused on creating new reporting requirements for the GO/GOP. Dominion Energy supports the direction both EEI and NAGF recommend in their comments for appropriately scoping this project, specifically:

1. Item 1a of the detailed description is problematic as it specifies types of data a GO/GOP would be required to use for its cold weather program. Dominion Energy agrees that this should be removed from the scope of the SAR or use the following language: The need for cold weather performance or operating limitations.

2. Item 1d of the detailed description should be removed from the SAR. The joint report does not recommend that a standard be developed to address this issue but rather addresses gas generator firm fuel supply, which is clearly a market issue. If an RC or BA requires information on a generators ability to perform for cold weather conditions, both IRO-010-2 and TOP-003-3 provide an existing mechanism

to obtain this information. If the standard is unclear, Implementation Guidance could be developed to clarify the data specification requirements in these standards.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's response to EEI and NAGF. **1a cannot be removed as it is a part of the FERC/NERC report. demonstrated historical period so it could serve as a proxy in the event the design temperature is not available."** **The SAR DT removed 1d from the SAR.**	
Wayne Sipperly - NAGF - 1,2,3,6 - MRO,WECC,Texas RE,NPCC,SERC,RF	
Answer	No
Document Name	
Comment	
Comments: The North American Generator Forum (NAGF) does not support the latest iteration of the Cold Weather SAR. The NAGF understands that an approved SAR will document the scope and reliability benefit of a proposed project and therefore serves as the blue-print for a Standard Drafting Team to follow when determining modifications to existing or the development of new Reliability Standards. Due to the nature of this "blueprint", the NAGF respectively declines to support this SAR as written. The changes in the previous two SAR revisions are cosmetic in nature and do not address the root issues the NAGF finds with the requirements of this SAR. As stated in previous comments, the NAGF supports communication between functional entities when generator availability is expected to be affected by weather conditions. These communication requirements are already addressed via existing standards IRO-010 and TOP-003. All GO / GOP's must satisfy the obligations of documented specifications to assist in Real-time monitoring and planning assessments. The NAGF does not feel a continent-wide Winter-Preparation standard will enhance reliability as the lack of winter preparation cited in the FERC / NERC staff report occurred only in certain regions (MISO in particular). Adding a second, potentially	

conflicting layer of regulatory requirements to existing well-functioning regions will most likely be counter-productive and difficult to audit consistently.

- Section 1.a.: The NAGF recommends that this section be deleted in its entirety. Basing Cold Weather reliability requirements on prior generator performance (historical) during cold weather is subject to results of questionable value and bias due to the following:

o Factors other than weather impact a unit's performance

o Historical maintenance conditions are dynamic

o Economic dispatch considerations

Providing "Cold Weather" design data is problematic and complex and does not take into consideration the Cold Weather preparation such as wind breaks and heaters used by GO/GOPs to assure vulnerable areas are protected. Temperature and wind speed design values stated on heat tracing drawings are inputs to calculations and often do not correspond to actual cold weather capabilities of generating units.

- Section 1.b.: What is the difference between the opening statement of Section 1, "…develops and implements cold weather preparedness plans, procedures, and awareness training…" and 1.b., "Implementing freeze protection measures"?
- Section 1.c.: The NAGF respectfully requests "periodic" and "adequate" to be clearly defined as SAR revision(s) occur. Leaving auditors to determine the meanings will create issues for GO/GOP's to maintain adequate controls and close gaps when managing NERC registrations across different Regions.
- Section 1.d.: The NAGF has stated before that this requirement is already required as part of the daily communication to BA's, RC's and /or TOP's. However if there is an issue in particular with understanding unit curtailments due to fuel availability, the NAGF suggests revising to read: "GO / GOP's to communicate notice of natural gas curtailments (gas-line pressure reductions and/or reduced volume) to the applicable Reliability Coordinator, Balancing Authority and Transmission Operator ." This clarity belongs in a revision of IRO-010 and / or TOP-003.
- Section 2 should be deleted in its entirety for the same reasons as Section 1.a. Planning for the exceedingly complex matter of winter storm survivability cannot simply be predicated on "design specifications or historical demonstrated performance and operating limitations." Generator Operators use of additional freeze protection equipment during extreme cold weather

illustrates that the generators are already being operated outside of their design specifications (assuming adequate maintenance is performed on insulation and heat tracing) in order to provide safe and reliable power during winter events.

- Sections 3 and 4 appear to duplicate existing requirements in existing standards. GO / GOPs are already required to communicate generating unit availability and reasons for limitations on a twice daily and weekly look-ahead basis. RC, BA and TOPs are required to use that information to perform their respective Planning Analysis' and update as required. RC's and BA's do not yet use the most powerful countermeasure available to them: placing generators (especially those with low capacity factors or long start-up times) online early in the interest of BES reliability.
- The NAGF requests that each process requiring the GO/GOP to communicate Cold Weather Availability data or information to the RC, BA and/or TOP requires those entities to document in writing and communicate their specific process to the GO/GOP. To clarify, each RC, BA and TOP should document communication methods (telephone, ticket entry etc.) for the GO / GOP to follow when requested generating information is required. Additionally, any data requests from the RC, BA and TOP should be clearly defined and documented in a procedure or manual for the GO/GOP to follow for timely submittal.
- The NAGF supports the comments submitted by the Edison Electric Institute (EEI).

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

Response: Thank you for your comment. It is not the intent of the SAR DT to add conflicting layers of regulatory requirements and included a preference within the SAR that the Standard Drafting Team revise existing standards, to the extent possible. Additionally, any new or revised Standard that addresses generator winter preparation will take into consideration geographic differences.

1a cannot be removed as it is a part of the FERC/NERC report. demonstrated historical period so it could serve as a proxy in the event the design temperature is not available.

Section 1 addresses the development of plans, procedures and awareness training while 1.b is an element to be considered when developing those plans, procedures and awareness training.

1c: "Periodic" and "adequate" are terms specifically used in the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018. The terms, as universally defined, provide flexibility to industry to determine appropriate maintenance and inspection intervals and approaches in the development of their specific plans and procedures.

1d. has been removed from the SAR. **The SAR DT appreciates NAGF's comments. The team kept the original language and did not make modifications. (add EEI response here for why team did not add it.)** **The SAR DT appreciates NAGF's comments and understands that some of the items covered in the SAR may be addressed in existing Standards. The SAR DT included a preference within the SAR that the Standard Drafting Team revise existing standards, to the extent possible. It is outside the purview of the SAR Drafting Team to mandate market rules for RCs and BAs to address when to bring generators online.** **The SAR DT appreciates NAGF's comments. The Standard Drafting Team will ensure requirements for communication by GO/GOP to RC, BA and/or TOP are appropriately addressed similar to the data specifications in IRO-010 and TOP-003.** **The SAR DT appreciates NAGF's comments and support of EEI's comments. Please see the teams response to EEI.**

Maryanne Darling-Reich - Black Hills Corporation - 1,3,5,6 - MRO,WECC	
Answer	No
Document Name	
Comment	

Black Hills Corporation (BHC) understands the importance of this SAR, but we continue to not agree with the following:

- The deliverables should be to revise current standards (as mentioned, i.e. IRO-010, TOP-003, EOP-011) where needed . Additionally our Transmission Operator (TOP) stated that many of the items in the SARs deliverable are already addressed by the mentioned standards and TOP-003-4 for Operations Planning & Analysis for the TOP, as well as specific RC processes (which can vary from 1 to another).
- BHC continues to feel that "additional mandatory training" on Cold weather is not needed. This is an added burden to most generator operators whom already deal with preperations and implement freeze protection to their equipment/systems.

- BHC already does “periodic adequate” maintenance & inspection of equipment for cold weather (freeze) protection as our generators are all designed & in areas for very cold ambient temperatures. it is believed most generation facilities in the upper half of the USA are of the same removing the need to have additional mandatory requirments for something that is only affecting southern states.
- Adding the Transmission Operator is ok, but they already communicate outage information via the TOP standards to the BA/RC’s. As for the GO/GOP advising the BA/RC & TOP outage type of communication is already being done; just not to the extent of specifying “curtailment of natural gas”. In BHC’s case – we are getting this information to our TOP at this time, just unsure of other industry peers processes to this level.

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

Response: Thank you for your comment. While the IRO-010 and TOP-003 broadly cover the data needed to perform "its operational functions", this SAR is specific to cold weather data needed for TOP, BA, and RC to perform regional planning and operational analysis. The format of receiving this data is yet to be determined but would provide a reliability impact assessment specific to cold weather events following the recommendation in the 2019 FERC and NERC report, "The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018". The existing mandated NERC standards would be reviewed by the SDT for any inclusion of regional specifications of cold weather assessment requirements and revised if possible to reflect the information needed for regional reliability assessments.

While it is understood there are Generators in areas of country that are well prepared for cold weather, the SAR is written to consider factors such as geographical location and plant configurations to allow SDT to provide requirements that would complement current cold weather programs and have minimal impact to current program in those areas.

SDT would review current NERC standards for communication of cold weather curtailments and reliability risks due to cold weather. The current processes that provide communication of Generator cold weather derates and curtailments would be reviewed by SDT for additional information such as pre-outage data and communication that would strengthen the planning of cold weather events.

Andy Fuhrman - Minnkota Power Cooperative Inc. - 1 - MRO

Answer	No
Document Name	
Comment	
Minnkota Power supports comments submitted by the MRO NERC Standards Review Forum (NSRF).	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's response to MRO NSRF.	
Rebecca Baldwin - Transmission Access Policy Study Group - NA - Not Applicable - NA - Not Applicable	
Answer	No
Document Name	
Comment	

TAPS does not support creating a continent-wide standard to address a very specific regional issue, particularly given that, as stated in previous comments, existing Reliability Standards already cover most of the issues this SAR attempts to address. It is neither feasible nor desirable for Reliability Standards to specifically call out each and every ambient condition or operational situation that could occur across North America; attempting to do so requires the industry to spend valuable resources and our customers' money on non-stop standards projects.

There is no need for a new or revised standard "to ensure communications between functional entities of cold weather impacts to generator unit availability" (revised SAR at 1); such communications are already required by existing standards. In response to the comments submitted by TAPS on the prior posting of this SAR, the drafting team stated that "it is not clear that the conditions of [IRO-010 and TOP-003] focus on data specific to cold weather issues." The standards are written broadly by design, and thus include data specific to cold weather issues, as well as everything else that each RC, BA, or TOP needs to perform its operational functions.

Nor is there any indication in NERC's enforcement data that failure to respond to data specifications is a widespread problem. If RCs, BAs, and TOPs are, in fact, having trouble getting the information they need, that is a CMEP problem, not a standards problem, since, as noted above, IRO-010-2 and TOP-003-3 *already* require each RC, BA, and TOP to request, without limitation, "the data necessary for it to perform" its operational functions, and require the entities receiving the data specifications to provide all such data.

As NERC said in its petition for approval of (among others) IRO-010-1a, which used the same top-down approach as IRO-010-2 and TOP-003-3, "[t]he requirements in the standard specify a formal request as the method for the Reliability Coordinator to explicitly identify the data and information it needs for reliability; and require the entities with the data to provide it as requested. This method is sound because *the Reliability Coordinator is the only entity that knows what data it needs to properly perform its reliability tasks, and the most efficient format for accepting this data*." Docket No. RM10-15, at 35 (Dec. 31, 2009) (emphasis added). The alternative approach—listing each type of data that must be provided—will unavoidably be both under- and over-inclusive, since in addition to varying from one entity to another, data needs change over time as new technologies and risks emerge.

Much more recently, NERC stated in its April 6, 2020 comments on FERC's NOPR regarding the Phase 1 SER retirements (RM19-16 and RM19-17, at 9 (emphasis added)):

Reliability Standards MOD-032-1, IRO-010-2, and TOP-003-3 provide the entities responsible for the reliable modeling, planning, and operation of the BPS with the authority to obtain the information they need from Generator Owners and Transmission Owners to complete their reliability tasks, which may include next most limiting equipment information. *Now that these broader data specification standards are in place, NERC has identified no reliability need to maintain additional requirements expressly requiring the provision of this data in the FAC-008 standard*.

It is counterproductive to add specific requirements with respect to cold weather data at the same time that the industry and NERC are proposing to retire analogous requirements with respect to next most limiting equipment information. If the SAR drafting team maintains the position that additional clarity with respect to cold weather is needed, then a better use of industry resources would be development of Implementation Guidance to provide examples for implementing these standards to address cold weather events.

Finally, to the extent that clarifications to TOP-003 and IRO-010 *are* needed, we note that a draft SAR developed by the SER Phase 2 team proposes to clarify those standards—in a holistic manner—as to the scope and format of data specifications. TAPS supports the SER effort, and urges the Cold Weather drafting team not to spend resources developing piecemeal requirements to address an issue that can be handled more efficiently and effectively by the SER project.

With respect to the SAR's other prong—"To enhance the reliability of the BES during cold weather events by ensuring Generator Owners, Generator Operators, Reliability Coordinators, and Balancing Authorities prepare for cold weather conditions" (SAR at 1)—we refer the drafting team to our comments on that issue in response to the previous posting of this SAR, to which the drafting team did not respond. If this SAR proceeds, the SDT should take care to draft a results-based standard, avoiding unnecessary administrative burdens. In addition, the SDT should recognize that it would be uneconomic and inappropriate to require that every generator on the continent plan to operate under all conditions; generators must be permitted to identify their ambient design parameters and decline to make themselves available outside those parameters.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. The SAR DT understands that the FERC report does not clearly state the need for a Continent-Wide NERC Cold Weather Standard, but believes that different levels of cold weather preparation and programs will be needed across the ERO. As an example, US northeast-based BES generating units will require a more extensive and comprehensive cold weather preparation plan as compared to US southwest-based BES generating units. **The SAR DT understands that the relevant EOP, IRO and TOP standards respectively address: (1) reliability impacts of extreme weather conditions in Operating Plans, (2) data needed to monitor and assess operation of the BES, and (3) data needed to fulfill operational and planning responsibilities; but it appears that the reliability impacts of extreme weather conditions were not thoroughly considered, insufficient data existed or the data was not effectively utilized prior to or during the January 2018 South Central Cold Weather Event.** **The SAR DT agrees that each and every ambient condition or operational situation does not need to be specifically identified in the NERC Reliability Standards, but it appears that cold weather/freezing conditions must be specifically addressed as a result of the 2018 South Central Cold Weather Event.** **It is understood that neighboring RC operators demonstrated sound communication and coordination in managing real-time transmission constraints, but improvements in communication are needed related to generator availability, capability and the impacts to startup time due to cold weather conditions. Although some RTO/ISOs issue "Cold Weather Alerts" that communicate actions to GOPs such as: (1) implementing plans to winterize units and plants to ensure availability during emergency conditions, (2) coordinating personnel staffing to ensure all scheduled combustion turbines and diesel generators are available for loading during load pick up**	

period, and (3) reviewing fuel supply/delivery schedules availability during emergency conditions, this is not consistently practiced across the ERO. The relevant EOP, IRO and TOP standards respectively address: (1) reliability impacts of extreme weather conditions in Operating Plans, (2) data needed to monitor and assess operation of the BES, and (3) data needed to fulfill operational and planning responsibilities; but it appears that the reliability impacts of extreme weather conditions were not thoroughly considered, insufficient data existed or the data was not effectively utilized prior to or during the January 2018 South Central Cold Weather Event. The broader data specifications of these standards may have attributed to this event since it is uncertain if the data specifications focused on cold weather related issues and resulting limitations. The SAR DT understands there are numerous NERC Reliability Standards such as IRO, MOD, TOP, TPL, etc., that request and utilize data for monitoring, assessments, modeling, planning, etc., which have not effectively and consistently focused on cold weather conditions. The SAR DT will recommend to the SDT to consider if the development of implementation guidance would address data specifications related to cold weather events. The SAR DT will recommend to the SDT to consider the efforts of the SER Phase 2 team. With respect to the SAR's other prong— "To enhance the reliability of the BES during cold weather events by ensuring Generator Owners, Generator Operators, Reliability Coordinators, and Balancing Authorities prepare for cold weather conditions" (SAR at 1)—we refer the drafting team to our comments on that issue in response to the previous posting of this SAR, to which the drafting team did not respond. The SAR DT will remind the SDT to draft a results-based standard, avoiding unnecessary administrative burdens. The SAR DT believes that different levels of cold weather preparation and programs will be needed across the ERO due to varying cold weather conditions. As an example, US northeast-based BES generating units will require a more extensive and comprehensive cold weather preparation plan as compared to US southwest-based BES generating units. Please see the modified bullets 2 and 3 under the "detailed Description" section of the SAR.	
Laurie Williams - PNM Resources - Public Service Company of New Mexico - 1,3	
Answer	No

Document Name	
Comment	

PNMR supports the comments of EEI made in their Q1 SAR response, as follows:

Industry Need Statement: EEI agrees with the Industry Need statement, as currently written.

Purpose or Goal Statement: EEI generally agrees with the Purpose or Goal Statement but does not support the use of the phrase "ensure optimal reliability" in the opening sentence. The purpose of a NERC Reliability Standard to ensure an Adequate Level of Reliability in coordination with all of the other factors used in ensuring the efficient and reliable operation of the BES.

Project Scope Statement: EEI does not agree that all parts of Recommendation 1 from the South-Central United States Cold Weather BES Event Report (Cold Weather Report) should or were intended to be included in a new or revised NERC Reliability Standard. In the Cold Weather Report, it offered a three-prong approach that included 1) new and/or revised Reliability Standards, 2) enhanced outreach to GO/GOPs and 3) market rules. For this reason, we offer the following modified scope statement that we believe more closely aligns with the intent of the Cold Weather Report.

The project scope will address **those parts of** Recommendation 1 in the 2019 FERC and NERC Staff Report: The South-Central United States Cold Weather BES Event of January 17, 2018; **that are appropriate for inclusion in a** new or revised NERC Reliability Standards **addressing** activities, such as winterization activities on BES generating units, winter-specific and plant-specific operator awareness training, and processes **that ensure effective communications between** registered **entities on known events that could impact BES reliability**.

Detailed Description: EEI appreciates many of the changes made to the detailed description but still has the following concerns:

1. EEI remains concerned with the statement "historical demonstrated performance" in item 1.a of this section because this information does not always yield accurate estimates of resource performance. While this type of information, if accurate for the current facts and circumstances, may prove useful to RCs and BAs, it may also represents both a reliability risk if inappropriately used and a compliance risk for GOs. While a GO can provide historical operating data, that data is based both on the specific weather conditions and unit specifications at a previous point in time that may be different from current conditions. GOs should not be held accountable for the results of this data being used by the RC, BA, or TOP in operational and planning studies. For this

reason, we ask that item 1.a be modified to emphasize the communications aspect, while noting the potential accuracy aspect of historical demonstrated performance and operating limits during cold weather.

2. EEI remains concerned with the inclusion of gas supply availability as a specific notification requirement and recommends its removal from the scope of the SAR. Such a requirement will create an unnecessary compliance obligation for GOs, who may not be the entity with the most timely information on natural gas curtailments if they are operating within an organized wholesale market. It is also important to recognize that gas curtailments can have significant impacts on these markets and as such are more appropriately addressed through market rules rather than NERC Reliability Standards, particularly in these areas. Additionally, EEI understands that most RTO/ISOs are already establishing processes and forming relationships with gas suppliers to ensure the most current fuel supply information is available to responsible RCs and BAs. For this reason, a one size fits all solution should not be applied through a NERC Reliability Standard. EEI is also not convinced that this issue cannot be solved through the effective use of tools that already exist within NERC Reliability Standards (i.e., TOP-003-3 and IRO-010-2). From this perspective, it may be more useful to the industry if rather than requirements in a SAR NERC should encourage the development of Implementation Guideance for TOP-003-3 and IRO-010-2 that can be tailored to address these regional differences, rather than creating new nationwide regulatory obligations that are unnecessary and not likely to address how gas curtailments should be communicated in different regions.

Likes 0	
Dislikes 0	

Response: Thank you for your comment. Please see the SAR DT's response to EEI.

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

Comment

Duke Energy endorses EEI and NAGF comments communicated in their respective SAR Responses and specifically suggests the following changes:

Line Item #2:

(a) Suggestion:

· Delete "Generator Owner/";

· Add "Transmission Operators,";

· Substitute "or Reliability Coordinators, as applicable" for "and Reliability Coordinators".

Basis: Regional operational and communication protocols vary – a Generator Operators communication hierarchy may be limited to a Transmission Operator, Balancing Authority, or Reliability Coordinator, as applicable.

Suggested Text: Generator Operator communicates with the "Transmission Operators," Balancing Authorities", "or" Relability Coordinators", as applicable," the generating unit's…

(b) Suggestion: Delete "or historical demonstrated performance".

Basis: Duke Energy adopts the EEI position regarding this item. Basing a Reliability Standard requirement on prior generator unit performance during cold weather is both challenging and subject to results of questionable value and bias. For example, "historical demonstrated performance" is impacted by: 1 - factors other than weather impact a unit's performance, 2 - historical maintenance conditions are dynamic, and 3 - economic dispatch considerations.

Suggested Text: …the BES generating unit's associated design specification " " and operating limitations during cold weather, including as required by deliverable 1d.

(c) Suggestion: Add "s" to specification.

Basis: Generating unit equipment may have multiple design specifications depending on vendor, type of equipment, etc., and therefore not have a single design specification (assuming a design specification is available - it may be difficult if not impossible to determine design specification information for older units).

Suggested Text: …the BES generating unit's associated design specification"s"...

Line Item #3:

(a) Suggestion: Substitute an "or" for "and".

Basis: Regional operational and communication protocols vary – a Generator Operator's communication hierarchy may be limited to a Transmission Operator.

Suggested Text: Generator Owner/Generator Operator communicates with the Balancing Authorities, Reliability Coordinators, "or" Transmission Operators…

Line Items #2 and #3:

(a) Suggestion: Eliminate requirement to exchange information between Transmission Operators (TOP), Balancing Authorities (BA), and Reliability Coordinators (RC).

Basis: Mechanisms are already in place for the exchange of information between TOPs, BAs, and RCs in the Functions' Real-time Monitoring and Operational Planning Analysis as part of the TOP, BA and RC Data Specifications currently required by TOP-003 and IRO-010. Having the Generator Operator (GOP) utilize communication methods already established will reduce the GOP's compliance burden while maintaining an effective message delivery.

Line Item #4:

(a) Suggestion: Eliminate requirement for Transmission Operator (TOP), Balancing Authorities (BAs), and Reliability Coordinators (RC) to perform their respective Operational Planning Analysis, develop an Operating Plan (OP) or determine expected availability of contingency reserves for the appropriate next day operation horizon.

Basis: Mechanisms are already in place for the RC to incorporate its TOP and BA OPs as part of their Operating Plan Analysis (OPA) process. Specifically, IRO-008 R2 requires the RC to consider the OPs of its BAs and TOPs in the development of its OP. Additionally, data specifications for the TOP, BA, and RC detail the information exchanged for each Function to perform its OPA. Further, the OPA definition requires "applicable inputs including, but not limited to, load forecast; generation output levels; Interchange; known Protecton System and Special Protection System status or degradation; Transmission outages; generation outages;", etc. Finally, OPAs already have the requirement to include expected generator outages/output levels which would be communicated as part of the BAs OP and exchanged via the RC and TOP data specifications.

Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's response to EEI and NAGF.	
Rodney Warner - PNM Resources - Public Service Company of New Mexico - 3 - WECC	
Answer	No
Document Name	
Comment	
PNMR supports EEI comments	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's response to EEI.	
Ronald Bauer - MGE Energy - Madison Gas and Electric Co. - 3,4,5,6	
Answer	No
Document Name	
Comment	
Madison Gas and Electric (MGE) does not support creating a continent-wide standard to address a very specific regional issue, particularly given that, as stated in previous comments, existing Reliability Standards already cover most of the issues this SAR attempts to address. It is neither feasible nor desirable for Reliability Standards to specifically call out each and every ambient condition or operational situation that could occur across North America; attempting to do so requires the industry to spend valuable resources and our customers' money on non-stop standards projects.	

MGE supports the TAPS Comments.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. The SAR DT understands that the FERC report does not clearly state the need for a Continent-Wide NERC Cold Weather Standard, the SAR DT believes that different levels of cold weather preparation and programs will be needed across the ERO due to varying cold weather conditions. As an example, US northeast-based BES generating units will require a more extensive and comprehensive cold weather preparation plan as compared to US southwest-based BES generating units. Additionally, any new or revised Standard that addresses generator winter preparation will take into consideration geographic differences. **In addition, please see the SAR DT's response to TAPS.**	
Jamie Johnson - California ISO - 2	
Answer	No
Document Name	
Comment	
CAISO does not support the current redline version of the proposed SAR. We recommend the references to Reliability Coordinator be removed from SAR bullets #1d, 2 and 3. We agree with the need for Balancing Authorities and Reliability Coordinators to be aware of specific generating units' limitations, such as ambient temperatures beyond which they cannot be expected to perform or lack of firm gas transportation, and take such limitations into account in their operating processes to determine contingency reserves, and in performing operational planning analyses, respectively. The flow of information needs to be from the Generator Owner/ Operator to Balancing Authority then to the Reliability Coordinator. The Balancing Authority will inform Reliability Coordinator of the Generator Owner/ Operator's information via the already well established processes between the Balancing Authority and Reliability Coordinator. As stated in the Functional Model, "The Balancing Authority has the responsibility for generation-demand-interchange balance in the Balancing Authority Area. The Reliability Coordinator may direct a	

Balancing Authority within its Reliability Coordinator Area to take whatever action is necessary to ensure that this balance does not adversely impact reliability."	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the modifications made by the SAR DT to bullets 2 and 3. The SAR DT believes this addresses your concern.	
Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6	
Answer	No
Document Name	
Comment	
PacifiCorp supports the comments submitted by NSRF.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's response to NSRF.	
Carl Pineault - Hydro-Qu?bec Production - 1,5	
Answer	No
Document Name	
Comment	

HQP would like to reiterate its concerns about this SAR. Maintaining the requirement that all BES generating units would be required to develop and implement cold weather preparedness plans continues to put an unnecessary compliance burden on the generating units that already operate in historically cold climates 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.	
Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	No
Document Name	
Comment	
EEI supports many improvements made to the SAR but there are still important issues that need to be addressed. We offer the following comments and suggestions: **Industry Need Statement:** EEI agrees with the Industry Need statement, as currently written. **Purpose or Goal Statement:** EEI generally agrees with the Purpose or Goal Statement but does not support the use of the term "optimal" in the opening sentence and recommends its removal. **Project Scope Statement:** EEI does not agree that all parts of Recommendation 1 from the South-Central United States Cold Weather BES Event Report (Cold Weather Report) should or were intended to be included in a new or revised NERC Reliability Standard. The Cold Weather Report offered a three-prong approach that included 1) new and/or revised Reliability Standards, 2) enhanced outreach to GO/GOPs and 3) market rules. For this reason, we offer the following modified scope statement to more closely align with the intent of the Cold Weather Report.	

The project scope will address **those parts of** Recommendation 1 in the 2019 FERC and NERC Staff Report: The South-Central United States Cold Weather BES Event of January 17, 2018; **that are appropriate for inclusion in a** new or revised NERC Reliability Standards **addressing** activities, such as winterization activities on BES generating units, winter-specific and plant-specific operator awareness training, and processes **that ensure effective communications between** registered **entities on known events that could impact BES reliability**.

Detailed Description: EEI supports many of the changes made to the detailed description but has the following remaining concerns:

1. The language used in item 1.a of this section is problematic because resource owners cannot guarantee the accuracy of cold weather resource performance information regardless of whether it was derived from design specifications or historical demonstrated performance. While this type of information is useful to RCs and BAs for projecting resource performance during cold weather events, it may also represent both a reliability risk if inappropriately used and a compliance risk for GOs if they are held to the accuracy of the data provided. While a GO can provide the specified data, that data can and does often change over time for a wide variety of reasons. Therefore, GOs should not be held accountable for the results of this data when used by the RC, BA, or TOP in operational and planning studies. For this reason, we ask that item 1.a be modified to the following:

The need for **projected** accurate cold weather temperature performance and operating limitations during cold weather; (**EEI also struck** "*design specifications or historical demonstrated performance,*")

2. EEI recommends removal of the inclusion of gas supply availability as a specific notification requirement from the scope of the SAR. Such a requirement will create an unnecessary compliance obligation for GOs without coomensurate reliability benefits since they may not be the entity with the most timely information on natural gas curtailments if they are operating within an organized wholesale market. It is also important to recognize that gas curtailments can have significant impacts on these markets and as such are more appropriately addressed through market rules rather than NERC Reliability Standards, particularly in these areas. Additionally, EEI understands that most RTO/ISOs are already establishing processes and forming relationships with gas suppliers to ensure the most current fuel supply information is available to responsible RCs and BAs. For this reason, a one size fits all solution should not be applied through a NERC Reliability Standard. It would be more appropriate to solve this issue through the effective use of tools that already exist within NERC Reliability Standards (i.e., TOP-003-3 and IRO-010-2). One option to address this issue could be for the Standards Drafting Team to develop Implementation Guidance for TOP-003-3 and IRO-010-2 that can be tailored to address these regional differences, rather than creating new nationwide regulatory obligations that are unnecessary and not likely to address how gas curtailments should be communicated in different regions.

Likes 0	
Dislikes 0	
Response: Thank you for your comment. The SAR DT made modifications to the Purpose and Project Scope section that line up with EEI's proposed modifications. Bullet 1d has been removed from the SAR. The team agrees that the remainder of the detailed bulleted items line up with the FERC and NERC report; and therefore, did not make the proposed changes to the SAR.	
Devon Tremont - Taunton Municipal Lighting Plant - 1,3,5 - NPCC	
Answer	No
Document Name	
Comment	

The Taunton Municipal Lighting Plant ("TMLP") does not support creating a new Reliability Standard to address the Cold Weather SAR as there are already existing Reliability Standards that could be leveraged to accomplish these goals. In response to the comments submitted by TMLP on the prior posting of this SAR, the drafting team stated that "it is not clear that the conditions of [IRO-010 and TOP-003] focus on data specific to cold weather issues." While we recognize that the SAR drafting team has included their intent for the SDT (once formed) to review the requirements within IRO-010 and TOP-003, we note that the standards are written broadly by design, and thus include data specific to cold weather issues, as well as everything else that each RC, BA, or TOP needs to perform its operational functions. There is no indication in NERC's enforcement data that failure to respond to data specifications is a widespread problem. If RCs, BAs, and TOPs are, in fact, having trouble getting the information they need, that is a CMEP problem, not a standards problem, since IRO-010-2 and TOP-003-3 already require each RC, BA, and TOP to request, without limitation, "the data necessary for it to perform" its operational functions, and require the entities receiving the data specifications to provide all such data.

As NERC said in its petition for approval of (among others) IRO-010-1a, which used the same top-down approach as IRO-010-2 and TOP-003-3, "[t]he requirements in the standard specify a formal request as the method for the Reliability Coordinator to explicitly identify the data and information it needs for reliability; and require the entities with the data to provide it as requested. *This method is sound because the Reliability Coordinator is the only entity that knows what data it needs to properly perform its reliability tasks, and the most efficient format for accepting this data*." Docket No. RM10-15, at 35 (Dec. 31, 2009) (emphasis added). The alternative approach—listing

each type of data that must be provided—will unavoidably be both under- and over-inclusive, since in addition to varying from one entity to another, data needs change over time as new technologies and risks emerge.

In addition, NERC stated in its April 6, 2020 comments on FERC's NOPR regarding the Phase 1 SER retirements (RM19-16 and RM19-17, at 9 (emphasis added):

Reliability Standards MOD-032-1, IRO-010-2, and TOP-003-3 provide the entities responsible for the reliable modeling, planning, and operation of the BPS with the authority to obtain the information they need from Generator Owners and Transmission Owners to complete their reliability tasks, which may include next most limiting equipment information. *Now that these broader data specification standards are in place, NERC has identified no reliability need to maintain additional requirements expressly requiring the provision of this data in the FAC-008 standard*.

It is counterproductive to add specific requirements with respect to cold weather data at the same time that the industry and NERC are proposing to retire analogous requirements with respect to next most limiting equipment information. If the SAR drafting team maintains the position that additional clarity with respect to cold weather is needed, then a better use of industry resources would be development of Implementation Guidance to provide examples for implementing these standards to address cold weather events.

If this SAR proceeds, the SDT should take care to draft a results-based standard, avoiding unnecessary administrative burdens. In addition, the SDT should recognize that it would be uneconomic and inappropriate to require that every generator on the continent plan to operate under all conditions; generators must be permitted to identify their ambient design parameters and decline to make themselves available outside those parameters.

Likes 0	
Dislikes 0	

Response: Thank you for your comment. Although the 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018 specifically includes a bullet in Recommendation #1 to include "temperature design specifications" be incorporated into plans, procedures and training, the SAR DT believes "projected accurate cold weather temperature performance and operating limitations during cold weather" supports the recommendation and reflects a more appropriate data point than design specifications.

Robert Blackney - Edison International - Southern California Edison Company - 1,3,5,6 - WECC

Answer	No
Document Name	
Comment	
Please see comments submitted by the Edsion Electric Institute.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's response to EEI.	
Martin Sidor - NRG - NRG Energy, Inc. - 5,6	
Answer	No
Document Name	
Comment	
Comments: NRG Energy, Inc. (NRG) generally agrees with the changes made to the SAR but feels more improvements can be made. NRG supports the observations, comments and recommendations submitted by the NAGF and EEI that focus the SAR scope on items that should be addressed in NERC Reliability Standards and removing those that are better addressed in markets or through other means.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's responses to NAGF and EEI.	
Douglas Webb - Westar Energy - 1,3,5,6 - MRO, Group Name Westar-KCPL	
Answer	No
Document Name	

Comment	
Westar Energy / Kansas City Power & Light (Evergy companies) incorporate by reference the Edison Electric Institute's (EEI) response to Question 1.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's response to EEI.	
Truong Le - Florida Municipal Power Agency - 4 - SERC	
Answer	No
Document Name	
Comment	
We support the comments TAPS made to this SAR. FMPA would like to highlight that the BA/RCs already have the right to request specific pertinent operational data in IRO-010 & TOP-003 data specification requirements. This topic should be addressed within those standards as a regional-specific example of weather-related data specification for generator operation and it should be up to the BA/RCs to determine whether they need such information. Additionally, moving forward with this SAR would be contrary to the SER efforts that NERC is currently engaged in. All of this was stated by TAPS in the last posting of this SAR. We at FMPA would like to echo the comments TAPS has made. Thank you.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's response to TAPS.	
David Jendras - Ameren - Ameren Services - 1,3,6	
Answer	No

Document Name	
Comment	
Ameren agrees with and supports EEI comments.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's response to EEI.	
Devin Shines - PPL - Louisville Gas and Electric Co. - 3,5,6 - SERC, Group Name Louisville Gas and Electric Company and Kentucky Utilities Company	
Answer	No
Document Name	
Comment	
LG&E/KU appreciates the Drafting Team's work towards refining the scope of the 2019-06 Cold Weather SAR in order to best address the recommendations of the South-Central United States Cold Weather BES Event Report. We agree with the substance of the points made in EEI's comments. However, whereas EEI does not primarily ask for removal of language in the SAR stating that Standards be created or revised in order to address the problems cited in the Cold Weather Report, LG&E/KU recommends that NERC address the Report's recommendations through the development of Implementation Guidance for relevant existing Reliability Standards rather than creating or revising Standards. Therefore, we would recommend the Standards Committee reject the SAR and the development work of any Standards in response to the Report in accordance with Section 4.2 of the Standards Process Manual Rules of Procedure, Appenidix 3A. The changes requested in the Recommendations of the Cold Weather Report can be addressed efficiently through existing NERC Reliability Standards such as TOP-003-3 and IRO-010-2. These Standards already address the communication of generating unit availability and capability. The development of Implementation Guidance for the existing Reliability Standards could properly address existing issues while also accounting for regional variations. This approach allows for existing issues with communications to be addressed where they	

exist without creating duplicative Standards, unnecessary compliance obligations, and administrative burdens. If the Standards Committee does not reject the SAR and choose to address the Cold Weather Report's recommendations through the development of Implementation Guidance, we support EEI's proposed revisions to the Project Scope and Detailed Description sections of the SAR. Specifically, we agree that: (1) The Project Scope should be narrowed to specifically state that any revisions or new Standards will focus on ensuring communications between registered entities with regard to events that could impact reliability. This would more directly address the issues raised in the Cold Weather Report; and (2) Section 1.a of the Detailed Description should not specifically require GO/GOPs to use design specifications or historical demonstrated performances in their planning and procedures. While the GO/GOP may provide this data to the RC, BA, or TOP for use, the information can vary and may not provide reliable information to use in operational and planning studies.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. The 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018 specifically references voluntary efforts utilizing existing guidance and training materials available to industry and noted that extensive unplanned generation outages continue to occur during cold weather related events. Add blurb on IG and if the SDT feels that IG is warranted then it can be developed. See EEI comments. **It is not the intent of the SAR DT to add conflicting layers of regulatory requirements and included a preference within the SAR that the Standard Drafting Team revise existing standards, to the extent possible. The Standard Drafting Team will ensure requirements for communication by GO/GOP to RC, BA and/or TOP are appropriately addressed similar to the data specifications in IRO-010 and TOP-003.**	
Karie Barczak - DTE Energy - Detroit Edison Company - 3,4,5	
Answer	No
Document Name	

Comment	
DTE Esupports those comments made by the North American Generator Forum (NAGF). Please see the NAGF's response for the full extent of the comments. The NAGF respectively declines to support this SAR as written.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's response to NAGF.	
Jamie Monette - Allete - Minnesota Power, Inc. - 1	
Answer	No
Document Name	
Comment	
Minnesota Power agrees with the following aspects of MRO's NERC Standards Review Forum's (NSRF) comments: All items under this sections's 1, a, b, c, and d, are all too prescriptive to be in the SAR and are solely restating what was in the 2019 FERC and NERC report. Items in section 2, 3, and 4 are also prescriptive in nature and do not provide "justification" to create or revise a Reliability Standard. Transmission Operator should be added to the Industry Need Section. Recommend the above items in sections I, 2, 3, and 4 be deleted. This will allow the Standards Drafting Team with how to move forward with a contitinent wide Standard (new or revised) that mitigates the issues within the FERC and NERC report.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's response to MRO NSRF.	

Jennie Wike - Tacoma Public Utilities (Tacoma, WA) - 1,3,4,5,6 - WECC	
Answer	No
Document Name	
Comment	

Tacoma Power appreciates the SAR Drafting Team's (DT) consideration of our comments and allowing the opportunity to provide suggestions. While we concur with the changes the DT incorporated into the SAR as a result of our comments, additional information or changes to the project scope is needed to address our concerns.

The central concern behind Tacoma Power's initial comments was that sufficient justification for modifying the existing regulatory framework was not provided in either the SAR or the 2019 FERC and NERC report. This concern is echoed in multiple other comments submitted by SRP, CHPD, Reclamation, Pend Orielle PUD, City Utilities of Springfield and IMPA. Without this detailed regulatory gap analysis, Tacoma Power cannot determine what is missing in the current framework and if the scope proposed in the SAR is adequate to address these gaps. Additionally, the information provided by AEP and other entities regarding conflicts with the Market Interface Principles is concerning, and we would like to see these concerns addressed prior to approving the SAR.

In addition to our original comments, we share the concerns expressed by City Utilities of Springfield and the U.S. Bureau of Reclamation that this project is seeking a continent-wide Standard to address a regional issue. Updating the SAR to limit the project scope to cold weather conditions instead of all ambient conditions is a step in the right direction. However, the SAR DT should consider changing the scope of this project to issuing a regional variance or regional Standard, as suggested by Reclamation. Alternatively, the applicability of these new requirements should be limited to units not located in historically cold climates and to exclude certain generation types (i.e. hydroelectric), as suggested by Reclamation and CHPD.

Likes 0	
Dislikes 0	

Response: Thank you for your comment. Performing a regulatory gap analysis was determined to be outside of the scope of the SAR Drafting Team. It is our expectation that the Standards Drafting Team would perform the deeper dive on ensuring the correct fit with existing Standards including the reference Market Interface Principles. With regards to a Regional Standard, the Polar Vortex incident

highlighted that Cold Weather protection is not a regional issue as the freezing temperatures extended to the deep south. Therefore, Cold Weather has the potential impacts continent wide. The consideration will be made when the standard is drafted based on if specific generation types will be excluded.	
Larry Heckert - Alliant Energy Corporation Services, Inc. - 4	
Answer	No
Document Name	
Comment	
Alliant Energy supports the comments submitted by the MRO NERC Standards Review Forum.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's response to MRO NSRF.	
Colleen Campbell - AES - Indianapolis Power and Light Co. - 3	
Answer	Yes
Document Name	
Comment	
IPL agrees with the current SAR revisions and has no further comments.	
Likes 0	
Dislikes 0	
Response: Thank you for your support.	

Wayne Guttormson - SaskPower - 1	
Answer	Yes
Document Name	
Comment	
For "Generator Owner/Generator Operator communicates with the Balancing Authorities, Reliability Coordinators, and Transmission Operators the BES generating unit's associated design specification or historical demonstrated performance and operating limitations during cold weather, "; is the expectation that the PC/TP will have to add this to their MOD data request of GOs (or the BA's) to get access to this information being sent to the BA, RC, and TOP?	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. The SAR Drafting Team has not discussed the level of specificity with regards to how entities will adhere to the proposed new or revised standards. It is our belief that this level of detail will be developed by the Standard Drafting Team.	
Teresa Cantwell - Lower Colorado River Authority - 1,5	
Answer	Yes
Document Name	
Comment	
None	
Likes 0	
Dislikes 0	
Response	

Leonard Kula - Independent Electricity System Operator - 2	
Answer	Yes
Document Name	
Comment	
No Comments.	
Likes 0	
Dislikes 0	
Response	
Daniel Gacek - Exelon - 1,3,5,6	
Answer	Yes
Document Name	
Comment	

Exelon concurs with the EEI comments and offers the following additional comments:

1. Exelon supports the use of historical cold weather performance data. Exelon has prior experience with determining cold weather operating limits based on either design or historical experience, and has found the historical data to be superior, i.e., more easily determined and less subject assumptions. Exelon does not object to the inclusion in the SAR of design information as a basis for cold weather operating limits for those generators that can use it, but any eventual changes to Standards for cold weather operation should allow the flexibility of using historical data.
2. Exelon supports EEI recommendation to remove the inclusion of gas supply availability as a specific notification requirement. As EEI states the organized wholesale market are more appropriately positioned to respond through established market rules.

Likes 0	

Dislikes 0	
Response: Thank you for your comment. Please see the SAR DT's response to EEI. In addition, the SAR DT thanks you for your support regarding the historical cold weather performance data.	
Mark Holman - PJM Interconnection, L.L.C. - 2, Group Name SRC	
Answer	Yes
Document Name	
Comment	
The ISO/RTO Council's Standards Review Committee members PJM, NYISO, MISO, ISONE, IESO and SPP agree with and support the redline modifications.	
Likes 0	
Dislikes 0	
Response: Thank you for your support.	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4, Group Name FE Voter	
Answer	Yes
Document Name	
Comment	
None	
Likes 0	
Dislikes 0	
Response	

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC Regional Standards Committee	
Answer	Yes
Document Name	
Comment	
Purpose or Goal: We suggest removing the word "optimal" since reliability does not need to be described within the SAR. NERC has defined "Adequate Level of Reliability" which is used primarily to guide NERC Reliability Standards development.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. The word "optimal" has been removed from the SAR and replaced with ALR.	
Lisa Martin - Austin Energy - 1,3,4,5,6	
Answer	Yes
Document Name	
Comment	
City of Austin dba Austin Energy encourages this effort to align with existing, successful ISO/RTO cold weather requirements such as those already in place in the ERCOT region.	
Likes 0	
Dislikes 0	
Response: Thank you for your comment. Although FERC, NERC, and the SAR DT have seen improvements in generator availability and performance as a result of cold weather preparedness outreach programs sponsored or initiated by the Regions, RTOs and ISOs, this	

has not been a consistent practice across the ERO. The SAR DT will notate your suggestion for the SDT to consider as they draft proposed revisions.	
Bobbi Welch - Midcontinent ISO, Inc. - 2	
Answer	Yes
Document Name	
Comment	
Overall, MISO supports the IRC SRC comments and modifications made to the SAR. Specifically, MISO supports the following changes: · Reduction in scope to focus on cold weather conditions only · Added flexibility for design specifications as an alternative to historical performance information · Added specificity for unit performance capability · Addition of the Transmission Operator function · Recommendation to utilize and revise existing Reliability Standards and create a new standarid only if necessary and appropriate. We thank the SAR Drafting Team for its efforts.	
Likes 0	
Dislikes 0	
Response: Thank you for your support.	
LaTroy Brumfield - American Transmission Company, LLC - 1	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Bruce Reimer - Manitoba Hydro - 1,3,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Anthony Jablonski - ReliabilityFirst - 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

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

ERCOT generally agrees with the proposed SAR, including its recommendation to use existing Reliability Standards to the extent possible and to "create a new standard only if necessary and appropriate." Because IRO-010 and TOP-003 already address data specifications required by RCs, BAs, and TOPs for their Operational Planning Analyses (OPA), ERCOT sees no need to propose new requirements specifying procedures and formats for submission of the data contemplated under this SAR, although it may be necessary to create a new requirement for GOs/GOPs to provide that data. ERCOT also agrees with the SAR that existing requirements in EOP-011—especially R 2.2.3.1—should be considered in evaluating the need for additional standards or requirements.

Nevertheless, ERCOT recommends several further revisions to the SAR:

1. If the SAR continues to include deliverable 4 in the detailed description (contemplating a requirement for RCs, BAs, and TOPs to incorporate into their OPAs the information provided by GOs/GOPs), it should allow the RC, BA, or TOP to specify the format of the information provided by the GO/GOP, since it is the RC, BA, or TOP that would need to use the information in its OPA, and since it is likely that GOs/GOPs would provide different information in a variety of formats unless the format of the submission were standardized in some way. If the existing data specification constructs in IRO-010 and TOP-003 are used, the data would need to be provided to the RC, BA, or TOP in a "mutually agreeable format," which could also achieve this standardization function.

2. ERCOT questions the SAR's proposal in deliverable 2 to require GOs/GOPs to provide design specifications (such as a manufacturer's minimum ambient operating temperature) or historical cold-weather performance information to RCs, BAs, and TOPs. In ERCOT's experience, generator manufacturers do not always provide minimum ambient operating temperatures, and for those that do, the values provided are often overly conservative. Also, manufacturers have no control over whether GOs/GOPs will install additional weatherization measures that would substantially improve the generator's ability to continue generating during extremely cold situations, making manufacturer information about minimum operating temperatures even less useful. Similarly, historical performance information will be inaccurate to the extent it fails to consider weatherization improvements that may have been made by generators

during the period of historical evaluation. Given the unreliability of this information, ERCOT recommends against requiring GOs/GOPs to provide temperature-related design information or historical cold-weather performance information to RCs, BAs, and TOPs.

3. Although ERCOT agrees with deliverable 3's general purpose to require GOs/GOPs to notify RCs, BAs, and TOPs of generator limitations due to cold weather, ERCOT recommends several revisions to this deliverable.

a. ERCOT recommends that the SAR replace the reference to "performance" with "capability." This change, coupled with the existing references to "availability," would align the language in the SAR with the reference to "capability and availability" in EOP-011 R 2.2.3.1, which addresses a similar concept.

b. ERCOT recommends that the GO's/GOP's obligation to provide notice of natural gas curtailments—currently reflected in deliverable 1.d.—should instead be integrated into deliverable 3, as this deliverable more appropriately captures the GO/GOP communications with RCs, BAs, and TOPs concerning capability and availability. To address this concern, deliverable 3 should be modified to propose a requirement that the GO/GOP notify the BA, RC, and TOP when "local forecasted cold weather conditions or natural gas curtailments limit BES generating unit capability or availability."

c. The deliverable should also clarify the time horizons in which the GO/GOP should be required to notify the BA, RC, and TOP of impacts to generator capability or availability due to cold weather. Specifically, the SAR should clarify that this duty applies in the Operations Planning, Same-Day Operations, and Real-Time Operations Horizons. This is because the capability and or availability can change between the OPA timeframe and Real-time operations, often as the weather forecast changes.

Likes 0	
Dislikes 0	

Response: Thank you for your comments. The SAR DT understands that the relevant EOP, IRO and TOP standards respectively address: (1) reliability impacts of extreme weather conditions in Operating Plans, (2) data needed to monitor and assess operation of the BES, and (3) data needed to fulfill operational and planning responsibilities; but it appears that the reliability impacts of extreme weather conditions were not thoroughly considered, insufficient data existed or the data was not effectively utilized prior to or during the January 2018 South Central Cold Weather Event.
•The SAR DT will notate to the SDT to consider in the development of a Cold Weather Standard to address data specifications related to cold weather events. The SAR DT agrees If the existing data specification constructs in IRO-010 and TOP-003 are used, the data

would need to be provided to the RC, BA, or TOP in a "mutually agreeable format" as required by the existing data specifications standards. **• The SAR DT recognizes the experiences of ERCOT during site visits to understand that plant minimum ambient design temperature is not relevant. Adequate maintenance of freeze protection is what improves the reliability of generating units during cold weather.** **• performance was updated where necessary.** **• 1d has been removed.** **• has been addressed via deliverables 2 and 3. (ERCOT recommends that the GO's/GOP's obligation to provide notice of natural gas curtailments—currently reflected in deliverable 1.d.—should instead be integrated into deliverable 3, as this deliverable more appropriately captures the GO/GOP communications with RCs, BAs, and TOPs concerning capability and availability. To address this concern, deliverable 3 should be modified to propose a requirement that the GO/GOP notify the BA, RC, and TOP when "local forecasted cold weather conditions or natural gas curtailments limit BES generating unit capability or availability.")** **The 2019 FERC and NERC Staff Report: The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018 states "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." Additionally, the report states "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 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."**

Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	
Document Name	
Comment	
Texas RE provided the comments below for the second posting of the SAR, to which the SAR DT responded "(1) The SAR DT notes the situational aware part of recommendation #1." Texas RE is requesting a response regarding how this concern will be addressed within the SAR or why it will not be addressed within the SAR.	

- 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.

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 "*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.*" Additionally, the report states "*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 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.

Texas RE has the following additional comments:

- Texas RE recommends Deliverable 1d include notification to the TOP. Notification to the TOP is important to ensure the TOP has sufficient information to perform its OPA and is utilizing information in its OPA that is consistent with the information utilized by the RC. Inconsistent OPA results between the TOP and RC can lead to uncertainty regarding existence of reliability issues and actions needed to address the reliability issues.
- TOPs should also be added in the Industry Need section for completeness. The drafting team could consider the following verbiage: "Additionally, to ensure effective communications between functional entities regarding cold weather impacts to generator unit availability.
- In the "Detailed Description" section Texas RE requests consistency in the use of Transmission Operator(s) as some GO/GOPs may have multiple TOPs (even at a single location).
- There is a section that starts with "Are there any related standards or SARs…" that should include references to the TOPs in the phrase "applicable to Generator Owners, Generator Operators…."
- Texas RE recommends cold weather preparedness include seasonal operations planning as well because "**Operations Planning -** operating and resource plans from day-ahead up to and including seasonal." The winter season study should be performed in fall

with best available data provided by GO and GOP as identified in deliverables 1 and 2. Additionally, incorporating seasonal study in deliverables 3 and 5 is recommended to ensure impact of cold weather on generations fleet is studied and understood way ahead of time before Real-time and Next-day studies are performed.	
Likes 0	
Dislikes 0	
Response: Thank you for your comments. The SAR DT agrees that time horizons in which GO/GOP should be required to notify BA, RC and TOP of generator capability and availability should include Operations Planning, Same-Day Operations and Real-Time Operations Horizons. The SAR DT agrees this would assist in reflecting changes in weather forecasts between the Operations Planning, Day-Ahead, Same-Day and Real-Time Operations. **• addressed through #2 and #3.** **• TOP were added to the Industry Need and Detailed Descriptions section.** **• The SAR DT agrees that seasonal operations planning is needed, but understands that although these types of Winter Reliability Assessments (WRAs) have been annually performed by NERC/Regional, and certain ISO/RTOs, the assessments don't always consider the impact prolonged cold weather conditions or don't accurately study them. The SAR DT believes that Operations Planning, Next-Day planning and Real-Time Operations Analysis are more effective in determining possible issues related changes in weather conditions.** **As an example, the results of one collaborative effort is intended to enable the entities to discuss their plans for the upcoming winter period. Their 2017/2018 WRA determined that: (1) anticipated resources met or exceeded their respective Planning Reference Margins for the upcoming winter period, (2) winter preparedness continued to be a high priority, and (3) market-based initiatives reinforced the need to sustain generator performance during extreme weather conditions. An ISO in the assessment anticipated that reliability would be maintained, but urged generator owners to prepare for the winter by weatherizing their units. Once Region anticipated that: (1) current resources were adequate to meet the peak winter demand and, (2) entities within their Region continued winterization efforts to maintain unit availability. Another Region did not foresee any impacts to resource adequacy.** **.**	

End of Report