

# Unofficial Comment Form

## Project 2021-07 Extreme Cold Weather Grid Operations, Preparedness, and Coordination

**Do not** use this form for submitting comments. Use the [Standards Balloting and Commenting System \(SBS\)](#) to submit comments on **Project 2021-07 Extreme Cold Weather Grid Operations, Preparedness, and Coordination** by **8 p.m. Eastern, June 17, 2022**.

Additional information is available on the [project page](#). If you have questions, contact Senior Standards Developer, [Alison Oswald](#) (via email), or at 404-446-9668.

### Background Information

From February 8 through February 20, 2021, extreme cold weather and precipitation caused large numbers of generating units to experience outages, derates or failures to start, resulting in energy and transmission emergencies (referred to as “the Event”). The total Event firm Load shed was the largest controlled firm Load shed event in U.S. history and was the third largest in quantity of outaged megawatts (MW) of Load after the August 2003 northeast blackout and the August 1996 west coast blackout. The Event was most severe from February 15 through February 18, 2021, and it contributed to power outages affecting millions of electricity customers throughout the regions of ERCOT, SPP and MISO South. Additionally, the February 2021 event is the fourth cold weather event in the past 10 years, which jeopardized bulk-power system reliability. A joint inquiry was conducted to discover reliability-related findings and recommendations from FERC, NERC, and Regional Entity staff. The FERC, NERC, and Regional Entity staff Joint Staff Inquiry into the February 2021 Cold Weather Grid Operations (“Joint Inquiry Report”) was published on November 16, 2021.

The scope of the proposed project is to address the ten recommendations for new or enhanced NERC Reliability Standards proposed by the Joint Inquiry Report. In November 2021, the NERC Board of Trustees (Board) approved a Board Resolution directing that new or revised Reliability Standards addressing these recommendations be completed in accordance with the timelines recommended by the joint inquiry team, as follows:

- New and revised Reliability Standards to be submitted for regulatory approval before Winter 2022/2023: development completed by September 30, 2022, for the Board’s consideration in October 2022 to address Key Recommendations 1d, 1e, 1f, and 1j;
- New and revised Reliability Standards to be submitted for regulatory approval before Winter 2023/2024: development completed by September 30, 2023, for the Board’s consideration in October 2023 to address Key Recommendations 1a, 1b, 1c, 1g, 1h, and 1i.

## Questions

1. The SDT revised EOP-011-3 requirements R1 and R2 for the TOP to minimize the overlap of UFLS and UVLS circuits from those used for manual load shed or those that serve critical loads. Should PRC-006-5 Requirement R7 and PRC-010-2 Requirement R8 also be modified to include a Requirement that Planning Coordinators shall provide UFLS and/or UVLS (as applicable) program database data to Transmission Operator's upon request, in order to ensure that all TOPs have the necessary data to minimize the overlap of circuits as required in the newly proposed EOP-011-3 Requirement R1.2.5.3? Please provide any explanation with your response.

Yes

No

Comments: TCPA is an organization with generators as members so we have no input on this question.

2. Should the BA be the entity to determine the "winter season", which is used to define applicable generating units in proposed EOP-012-1 Section 4.2 Facilities? If you do not agree, please provide your recommendation and, if appropriate, technical or procedural justification.

Yes

No

Comments: It should either be the BA or the agency with regulatory oversight of the Balancing Authority. Within a large BA, there may be wide variability in temperature gradients across the BA's footprint and that variability should be accounted for. Regardless, stakeholder input should be allowed in determining the winter season.

3. The SDT proposes to include as applicable Facilities in EOP-012-1 only those generating units that operate during the winter weather season, while exempting those units utilized for summer peaking purposes only (and without penalizing such units that may be called upon by the BA during winter weather in response to energy emergencies). Do you agree with the applicability of EOP-012-1 as drafted? If you do not agree, please provide recommended language for how to address from the standard's applicability consistent with the recommendations of The Report.

Yes

No

Comments: EOP-012-1 should only be applied to units that participate in the market during the winter season. Note that the potential cost implications of R1 which can be millions if not tens of millions of dollars, which may result in generators either retiring or opting out of the winter season. Unfunded mandates such as R1 that have such a high material economic impact may ultimately reduce winter season reliability due to reduced generation available for dispatch.

4. Does the proposed language in EOP-012-1 requirement R1 that require existing units to implement new freeze protection measures or modification of existing freeze protection measures, raise any stakeholder concerns? If so, please provide details of the concern, suggestions to the proposed language that addresses the risk presented in recommendation 1f, and if appropriate, technical or procedural justification.

- Yes  
 No

Comments: The requirements of R1, without addressing Key Recommendation #2 in the November 2021 FERC/NERC report is the most significant concern of the Texas generators. Unfunded mandates of this economic magnitude that do not have proposed cost recovery will result in reduced generation available the winter season, at the least, and permanent retirement, at the worst. Neither of these outcomes will enhance grid reliability. Quite the opposite, this requirement will very likely reduce grid reliability by reducing available generation to the grid. Focus should be on Freeze protection measures, not full retrofits/redesign, and should address only those critical components that could potentially trip/derate the unit. Root cause analysis of previous freeze-related outages have not revealed concerns for auxiliary systems that support operation but are considered part of balance-of-plant. These can be addressed through sound operational practices and startup prior to freeze events. In summary, retrofits of existing units should not include all operating systems and should not be required without some cost recovery realized. The SDT should consider ASHRE, a statistically-based standard which uses daily average temperatures, which has been accepted and used by industry for many years. Finally, oversized cold weather protection will reduce hot weather reliability. Without practical limit to winter preparation, summer reliability may subsequently be reduced.

5. The SDT has proposed that owners of new generation that determine that they are not able to implement freeze protection measures due to technical, commercial, or operational constraints review their determination every five years for EOP-012-1 Requirement R2. Is this separate requirement for “new” generation necessary, given that proposed Requirement R4 provides for Generator Owners to perform a similar review every five years to address the ongoing need to review freeze protection measures and historical cold weather temperatures? Please provide any explanation with your response.

- Yes  
 No

Comments: Differentiating between new and existing generation in R2 is not necessary. This requirement as written should be considered and applied only to the retrofit of existing units as it may not be economically feasible to retrofit these units to meet the requirements in Requirement 1.1, 1.2 and 1.3. Existing units should be eligible for exemptions due to technical and operational constraints. Exemptions due to commercial concerns are unclear in the draft and need to more clearly defined. The SDT should consider changing exception for commercial reasons to commercial/economic reasons as requirement that would make a unit uneconomic will result in mothball or retirement of the unit. Exceptions for uneconomic is needed to ensure that standards do not result in greater resource adequacy problems.

6. The Standard, as proposed, would require Generator Owners to develop plans for modifying generating units to operate to the minimum hourly temperature over the next five years after Commission approval. While Generator Owners identify those generating units that need modifications, develop corrective action plans, and implement modifications, it is important for

the ERO Enterprise to have aggregated data about the status of Generation Owners' extreme cold weather preparedness for its generating units for use in its reliability oversight activities.

The SDT believes that there is benefit to having the ERO Enterprise collect information on progress of Generator Owner plans for modifying generating units. The information could be collected through reporting under mandatory Reliability Standard requirements, through a Periodic Data Submittal under Section 400 of the Rules of Procedure (which may or may not be specified in the Compliance section of the standard), or through a request for data under Section 1600 of the Rules of Procedure. Which of these options do you believe is the best procedural option for collecting this information?

Comments: NERC does not need detailed information on progress on the CAP's. Ultimately, the requirements of the EOP-012-1 require development of the CAP and implementing the CAP. The generator owners should be required to provide a timeline for units to be compliant with the RS but not periodic progress reports. An annual statement that the generator owner is on schedule with the CAP should be sufficient for NERC.

7. The drafting team has developed a proposed data collection framework which could form the basis for a periodic data submittal. If you have any comments or edits to the suggested language, please propose an alternative to address the identified risk during the phased-in compliance period.

#### **Collection framework:**

- The Generator Owner will submit an annual summary table **by October 1 of each year** to its Regional Entity regarding the status of its generating units (as that term is used in EOP-012-1 4.2 Facilities) having freeze protection measures in accordance with Requirements R1 and R2, along with a nine-year projection of status based on the timetables it has determined for Requirement R1. All projections will be based on the Generator Owner's timetables under Requirement R1.4.2; if timetables are not complete for all units, some MW can be designated as "to be determined." The summary table shall contain:
  - Status year (for current year, and future years 1-9);
  - Sum of capacities (in MW) of all generating units applicable under Facilities, section 4.2;
  - Sum of capacities (MW) of generating units meeting (for current year) and projected to meet (for each of the future years 1-9) the criteria of Requirement R1.1;
  - Sum of capacities (MW) of generating units not meeting (for current year) and projected to not meet (for each of the future years 1-9) the criteria of Requirement R1.1;
  - Sum of the capacities (MW) of existing generating units declared for no action under Requirement R1 (for current year, and projected for future years 1-9);
  - Sum of the capacities (MW) of new generating units identified for no action under Requirement R2 (for current year, and projected for future years 1-9).

Comments:

If this is information the Planning Coordinators and Transmission Planners can use, then TCPA would rather submit this information to the PC or TP who could then send it to the Regional Entity. Generator Owners sending additional data to the Regional Entities duplicates work and may cause conflicting information

8. The SDT proposes that the modifications in EOP-011-3 and the newly drafted EOP-012-1 meet the key recommendations in The Report in a cost effective manner. Do you agree? If you do not agree, or if you agree but have suggestions for improvement to enable more cost effective approaches, please provide your recommendation and, if appropriate, technical or procedural justification.

Yes

No

Comments: EOP-011-3 and EOP-012-1 should meet the key recommendations in The Report. Unfortunately, Key Recommendation #2 regarding cost recovery is not addressed. Compliance with EOP-012-1 should be tied to the presence of cost recovery mechanisms in the generator's marketplace. If there is no provision available for cost recovery, compliance with EOP-012-1 should be deferred until a suitable cost recovery mechanism is available to the generator. Further comments on cost recovery from TCPA are contained in our response to Question #10.

9. The SDT is proposing an 18-month implementation time frame for all revised and new requirements except EOP-012-1 Requirements R1 and R2 which have a 5-year implementation time frame. Do you agree with this implementation time frame? If you think an alternate timeframe is needed, please propose an alternate implementation plan and time period, and provide a detailed explanation of actions planned to meet the implementation deadline.

Yes

No

Comments: To clarify, the 5-year requirement for R1 and R2 is to develop a Corrective Action Plan, and not to retrofit existing units with freeze protection designed to the lowest hourly average temperature since 1/1/1975. This is unclear if the implementation plan is for full compliance of R1 /R2 requirements or if the 5 year requirements is to develop a CAP and not to retrofit existing units. This needs to be clarified by the SDT. Retrofits of existing units to the proposed standard requirements under R1 and R2 will require considerable time to implement based upon outage and resource constraints to perform freeze protection hardening as well as budgetary considerations. A 5 year horizon is not consistent with other new standards that have allowed for 10 or 12 years to implement, such as MOD-026 and MOD-027 as well as PRC-005, that are tied with outages to schedule and implement. NRG believes that this should be extended to a 10 year window.

10. Provide any additional comments for the standard drafting team to consider, including the provided technical rationale document, if desired.

Comments: TCPA comments are attached in a separate pdf file.



Texas Competitive Power Advocates (TCPA) is a trade association representing power generation companies and wholesale power marketers with investments in Texas and the Electric Reliability Council of Texas (ERCOT) wholesale electric market. TCPA members<sup>1</sup> and their affiliates provide a wide range of important market functions and services in ERCOT, including development, operation, and management of power generation assets, power scheduling and marketing, energy management services and sales of competitive electric service to consumers. TCPA members provide more than 52,000 MW of generating capacity in ERCOT, representing almost ninety percent (90%) of the non-wind electric generating capacity in ERCOT. TCPA members have invested billions of dollars in the state and employ thousands of Texans.

## GENERAL COMMENTS

The ERCOT market is unlike any other market in NERC, and independent generators bear a greater financial risk in the ERCOT market than in others across North America. Independent generators – unlike transmission service providers (TSPs), municipally-owned utilities (MOUs), and electric cooperatives (coops) – receive no cost recovery and no guaranteed rate of return. The current market design in ERCOT pays generators only when they are producing megawatts (MWs) or operating reserves through Ancillary Services, and does not provide a capacity payment for making sure sufficient MWs are available to keep up with resource adequacy needs like occurs in markets in other parts of the country.

While the ERCOT market is undergoing a redesign, it remains unclear whether any of the costs associated with hardening independent generation resources will be compensated. To date, TCPA member companies have already spent more than \$120 million on Phase I weatherization requirements adopted by the Public Utility Commission of Texas (PUCT) at the end of 2021. The PUCT is currently undertaking a rulemaking to implement Phase II weatherization requirements that will most likely be implemented on a faster timeline than the proposed NERC requirements. With significant additional expenditure requirements potentially stemming from the PUCT Phase

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<sup>1</sup> TCPA member companies participating in these comments include: Calpine, Cogentrix, Constellation (formerly Exelon), EDF Trading North America, Luminant, NRG, Shell Energy North America, Talen Energy, Tenaska, TexGen Power, and WattBridge.



If weatherization as well as this one, it is important to consider that there is no cost recovery in ERCOT, at present, and an inability for independent generators to cover costs and earn a return overall.

## **COST RECOVERY**

As mentioned, non-rate-based companies, such as the independent generators in ERCOT represented by TCPA, have no mechanism for cost recovery if market revenues are insufficient. Unlike ERCOT TSPs, MOUs and coops, competitive electric generators in Texas do not receive cost recovery and the current market design does not compensate for expenditures needed to comply with new weatherization requirements. Additionally, in other non-centrally cleared markets, regulated and independent generators compete directly with one another. Some MOUs and coops in ERCOT own generation resources that compete in the ERCOT wholesale market against independent competitive generation owners. The likely significant costs expended to comply with the proposed reliability standard, likely to be tens of millions of dollars if the PUCT Phase I requirements offer any indication, will exacerbate an already uneven playing field between competitive independent generation and regulated generation if cost recovery is not addressed.

While TCPA recognizes that NERC does not have jurisdiction over cost recovery, our member companies respectfully request that NERC encourage, recommend, and engage both the Federal Energy Regulatory Commission (FERC) and the PUCT regarding any standards passed so those jurisdictions implement cost recovery mechanisms for any entity that does not already have such a mechanism in place. Alternately, if a cost recovery mechanism isn't available for a generator, compliance with the requirements of EOP-012-1 R1 should be deferred until such a suitable mechanism exists with this exemption written into the Reliability Standard.

ERCOT's dispatchable generation fleet has a number of resources that are over thirty years old and on the verge of being uneconomic, absent the standards under consideration at NERC and at PUCT. Some of these units may be forced into retirement or to be seasonally mothballed if the cost of complying with these new requirements is not covered. The result may be to



exacerbate reliability issues and resource adequacy concerns in ERCOT, rather than enhancing them. TCPA respectfully requests that NERC consider what the timeline will be to retire or mothball units that will become uneconomic with these requirements if cost recovery is not guaranteed. Similarly, clarification is needed as to whether the five-year requirement is to develop the timetable for completing all items or the actual requirement that all items be completed.

## TEMPERATURE STANDARD

TCPA asserts that a standard of using the single lowest temperature since 1975 is impractical. We understand that 1975 was considered to represent the older of units, but that has no relationship to future weather possibilities. Similarly, a standard of “continuous” operation is unnecessarily restrictive. It is impractical to redesign a plant to the lowest temperature ever recorded since 1975 and then require continuous operation at that temperature, particularly since the most extreme temperature will not exist for an entire winter season. TCPA recommends using a probabilistic approach, similar to that being considered by the PUCT, which would have the ISO/RTO (ERCOT) issue a weather study covering a longer time frame and setting the 95<sup>th</sup> percentile for average minimum temperatures over a 72-hour period. TCPA recommends NERC adopt this approach, utilizing a standardized reference of the 95<sup>th</sup> percentile winter minimum temperatures averaged over a rational time period such as 72 hours.

It is important to consider that normal conditions should be the standard, and those are going to differ for each ISO/RTO and may even vary between different regions within a single ISO/RTO. For example, temperatures in south Texas vary considerably from those seen in north Texas within the ERCOT region. In ERCOT, there is a need to balance requirements for operations in high temperatures since the prevalence in Texas is much greater for sustained heat than for sustained cold. Over-designed cold weather protection will reduce hot weather reliability particularly if cold weather protection results in overheated transmitters and steaming in sensing lines, as an example. Without a practical limit to winter preparation, summer reliability will be reduced; and summer is the season where peak loads are typically set in markets like ERCOT.





## PREPAREDNESS STANDARD

Statutory language in SB 3, 87<sup>th</sup> Regular Session of the Texas Legislature, establishes a winter weather preparedness standard, not a performance standard. A performance standard is unrealistic because no one can fully guarantee performance in any weather condition. In contrast, preparedness can be reasonably assessed on a periodic or ongoing basis. Specific events may still combine previously unforeseen or weather-unrelated factors in a way that may still challenge operations during winter weather conditions.

Since some performance risks are outside of a generator's control but preparedness is within the generator's control, TCPA recommends NERC focus on freeze prevention as opposed to redesigning plant equipment, such as gas turbines or cooling towers. In addition, the burden of proof regarding a failure should not be on the resource owner to prove whether the failure is weather-related or a result of normal wear-and-tear. Generators are complex machines that have a significant number of parts; something that breaks or fails during a weather event does not necessarily mean the failure is a weather-related.

## GOOD CAUSE EXCEPTION

It is crucial that a good cause exception be maintained for a variety of situations that materially impact a resource owner's ability to comply with both NERC and other standards (such as the separate standards set by the PUCT). The COVID-19 pandemic has hampered the ability to get materials and labor, just as in many other industries. There are a limited number of contractors that perform the work needed and a limited number of suppliers for specific supplies needed, so it will be critical to maintain a good cause exception when resource owners encounter these barriers to compliance.

Just as we discussed regarding a lack of cost recovery for independent generators in ERCOT, TCPA recommends that the exception provided for "commercial" issues be expanded to include "economic" as well since requirements that make a plant uneconomic are likely to lead to the plant either being mothballed or retired. To ensure the new standards do not exacerbate



resource adequacy problems, a good cause exception for those plants that will become uneconomic should be included.

Finally, ERCOT has implemented a very restrictive planned outage standard in which ERCOT will only approve a certain number of planned outages at any given time. Given the specialized nature of the weatherization work, the need for resource owners all over the country to schedule this work, and the limited number of contractors available to perform the work, TCPA members are concerned that a good cause exception be made available if ERCOT rejects the requested time needed for the resource owner to take a planned outage to conduct weatherization retrofits, or if ERCOT requires the owner to cancel or delay the planned outage due to near-term reliability concerns. TCPA respectfully requests inclusion of a good cause exception if actions of the Balancing Authority, ISO/RTO, or some other regulatory body with jurisdiction over the resource owner makes a decision or issues an order that prevents the resource order from timely compliance.

## CONCLUSION

TCPA appreciates the opportunity to provide additional comments on the proposed weatherization for standards for generation resources. We appreciate consideration of the recommendations and requests made in these comments, and further would appreciate alignment of NERC standards with other standards across jurisdictions to avoid conflicting standards or the potential that one set of standards could be more onerous such that a resource owner must mothball or retire their facility instead of making the required investments.

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Respectfully submitted,

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