



## Filing Receipt

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**PROJECT NO. 53401**

**ELECTRIC WEATHER  
PREPAREDNESS STANDARDS –  
PHASE II**

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**PUBLIC UTILITY COMMISSION  
  
OF TEXAS**

**COMMENTS OF  
TEXAS ELECTRIC COOPERATIVES, INC.**

Texas Electric Cooperatives, Inc. (TEC) respectfully submits these comments in response to the Proposal for Publication issued by the Public Utility Commission of Texas (Commission) regarding repeal and replacement of 16 Texas Administrative Code (TAC) §25.55 relating to Weather Emergency Preparedness in Project No. 53401 (the Proposal).<sup>1</sup> TEC is the statewide association of electric cooperatives operating in Texas, representing its members except as their interests may be separately represented.<sup>2</sup> The Proposal directs comments to be filed by June 23, 2022. These comments are timely filed.

**I. Comments in Response to Staff Questions**

**A. Does proposed 25.55(e) and proposed 25.55(h) appropriately define “repeated or major weather-related forced interruptions of service”?**

Proposed sections 25.55(e) and 25.55(h) do not appropriately define “repeated or major weather-related forced interruptions of service”. Instead, these sections outline the corrective actions required by a generation entity or transmission service provider (TSP) when a generation resource or transmission facility experience repeated or major weather-related forced interruptions of service. TEC presumes that instead of §25.55(e) and §25.55(h), it is Staff’s intent to inquire about the appropriateness of the proposed definitions in §25.55(b)(5) and §25.55(b)(6), which define major and repeated interruptions of service, respectively. As such, TEC believes that while the proposed definitions are a good starting point, they may impose an overly-conservative and arbitrary standard that could trigger the corrective actions described in §25.55(e) and §25.55(h) in excess of circumstances that TEC believes this rule is designed to address. TEC suggests the below

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<sup>1</sup> Project No. 53401, Proposal for Publication of Repeal of 16 TAC §25.55 and Replacement with Proposed New 16 TAC §25.55, As Approved at the May 26, 2022, Open Meeting.

<sup>2</sup> TEC’s 75 members include distribution cooperatives that provide retail electric utility service to approximately 5,000,000 consumers in statutorily authorized service areas that encompass more than half of the total area of the state. TEC’s G&T members generally acquire generation resources and power supply for their member distribution cooperatives and deliver electricity to them at wholesale.

changes to the definition to refine the circumstances wherein a generation resource or transmission facility owner must seek corrective action via a third party.

**i. Create a single definition for interruption of service based on repeated facility failures**

Rather than attempt to define two separate circumstances (“major interruption” and “repeated interruption”) under which facility owner’s must seek corrective action, TEC suggests that a single definition be used that captures repeated failures, including forced outages and failures to start, within a three-year period.

A single definition is appropriate because tying the corrective action to the size of an outage is problematic. Attempting to define a megawatt-hour (MWh) threshold, as laid out in the Proposal, will introduce some level of guesswork into the rule that will affect the variety of units throughout the system differently. For example, a single 315 MW unit forced offline for 24 hours will meet the 7,500 MWh threshold, but a 350 MW unit would not. It is further unclear if the MWh threshold should be considered on a contiguous basis or an accumulation over time. Use of a production-based metric also creates the perverse incentive of assigning the “major interruption” designation to a generation facility with a higher capacity factor (i.e., the most economic and efficient plants) before it would apply to a less efficient plant with a similar outage profile that ERCOT does not dispatch as frequently. Further, TEC believes that a derate is not a failure on the same scale as a complete outage or failure to start and recommends that outcome be removed as a trigger for an independent review. Additionally, transmission providers that experience an outage at a switchyard or substation will not necessarily have insight into the quantity MWh disruption directly caused by that outage or derate. TEC agrees with focusing on repeated failures, rather than the size of a single failure.

If the Commission must include a MWh threshold, TEC suggests that Staff work with generation entities and TSPs (including cooperatives) and ERCOT to determine whether the major interruption threshold of 7,500 MWh is a realistic and nondiscriminatory metric to formalize in the Commission’s rules.

**ii. Clarify that corrective action is not necessary if the outage is due to factors outside the facility owner's control**

The Commission should clarify that for all types of generation outage, a generation facility should not be deemed to have violated the Commission's rules when an outage is caused by factors outside of the control of the generation owner, including, but not limited to, a failure or limitation of fuel supply, limited transmission capacity, or instructions from an Regional Transmission Operator ("RTO")/Independent System Operator ("ISO") for switchable generation to deliver power to another RTO/ISO other than ERCOT. A violation only should be deemed to have occurred when an outage is related to the failure of the generation entity to adequately weatherize at its generation site.

**iii. Clarify that multiple "outages" during the same weather event are considered a single outage**

TEC recommends the Commission clarify that all failures that occur within a single weather emergency event should be considered one, single occurrence. TEC proposes this clarification because it is possible that the failure of a generation or transmission component during a weather event may result in multiple failures to start or several short, forced outages as plant personnel or transmission personnel troubleshoot and fix the problems. Generation entities and TSPs working to restore service during a weather emergency event should not be penalized for restoration efforts in this regard.

TEC's revised definition for repeated weather-related forced interruption of service is below (section 25.55(b)(5), major weather-related forced interruptions of service, would be deleted):

(56) Repeated weather-related forced interruption of service -- Three or more of any combination of the following occurrences as a result of a weather emergency that are due to factors within the facility owner's control within any three year period: a failure to start, or a forced outage, or a deration or more than fifty percent of the nameplate capacity of a generation resource or a transmission facility. Multiple occurrences during the same weather event shall be considered a single occurrence.

## **II. Comments Regarding Proposed New §25.55**

### **A. Timing and cost implications related to 25.55(c)(1)(A) and 25.55(f)(1)(A)**

Sections 25.55(c) and 25.55(f) describe weatherization preparedness measures to be undertaken by generation resource owners and transmission providers. On a bi-annual basis, entities must submit to ERCOT a declaration that they have completed certain measures (the declaration is due no later than December 1 for winter season preparations and by June 1 for summer season preparations). Included in the list of preparedness measures is the maintenance and testing of certain equipment on a monthly basis from November 1 through March 31 for winter and May 1 through September 30 for summer. Entities may not be able to declare that they have completed monthly checks for months that have not yet occurred. TEC asks that the Commission review the timelines to ensure entities must declare only actions they have already taken and not future actions that will occur after the declaration is submitted to ERCOT.

Further, because 25.55(c)(1)(A)(i)-(vii) requires annual completion of a set of measures that includes “installation” of certain equipment, TEC interprets the “installation” to be temporary and seasonal in nature. If these measures are intended to be permanent, TEC notes they could imply significant costs to resource owners. Additionally, TEC asks that the rule make clear that personnel may be used to complete these tasks, rather than automated “systems,” which implies new equipment or capital investment of a potentially significant nature. Clarification in the rule around the temporary nature of “installations” and the ability to use personnel rather than “systems” would be helpful in 25.55(c)(1)(A) and 25.55(c)(2)(A) as follows:

“...Such measures may be implemented on a seasonable basis and, where appropriate, may be implemented using either personnel or automated systems  
~~Such measures include,~~ as appropriate for the resource.”

### **B. Not all cold weather components require insulation and enclosures**

Electric cooperatives operating generation units in North and West Texas encounter various forms of winter weather threats and understand the best way to protect cold weather critical components of their generation fleet. Each cold weather critical component is treated differently and adequate protection of the components may not require both insulation and enclosures.

Therefore, TEC proposes a slight modification to the proposed language in §25.55(c)(1)(A)(ii) to read:

“Installation of insulation and/or enclosures for all cold weather critical components”

**C. Mandates regarding minimum and maximum ambient temperatures may be administratively burdensome**

Proposed language in §25.55(c)(1)(B) and §25.55(c)(2)(B) requires that generation entities implement measures to meet a minimum/maximum ambient temperature sustained operation requirement as determined by the historical performance of the resource or as reported in ERCOT weather study. Proposed language in §25.55(c)(3)(A)(iii) and §25.55(c)(3)(B)(iii) introduce new reporting requirements for generation entities to, as part of the bi-annual declaration, “provide the minimum [maximum] ambient temperature at which each resource has experienced sustained operations, as measured at the resource site or the weather station nearest to the resource site.” Sections 25.55(f)(1)(B), 25.55(f)(2)(B), 25.55(f)(3)(A)(iii), and 25.55(f)(3)(B)(iii) apply similarly to transmission providers. From the perspective of generation entities, TEC asks that the requirement be set forth on a going forward basis, as unit owners may not currently be recording the historical data in the manner outlined in the Proposal. The new subsections would read:

“Provides the minimum [maximum] ambient temperature at which each resource has experienced sustained operations, as measured at the resource site or the weather station nearest to the resource site, with measurements beginning in 2023.”

For transmission providers, the requirement to identify these temperature ratings for each substation and switchyard will be a difficult task applicable to thousands of facilities in the ERCOT footprint. Unlike generation resources, which vary substantially in their design parameters, transmission-level facilities are more uniform in their design and will be affected similarly by extreme weather. Regarding weather preparation measures, TEC asks that for transmission owners not be required to identify weather data for each facility and instead simply be required to implement measures that conform with the data in the ERCOT weather study. Further, a transmission provider’s summer and winter declaration (§25.55(f)(3)(A)(i) and (iii) and (B)(i) and

(iii)) should not require the provider to identify each facility and provide associated weather data for potentially thousands of these individual facilities. Rather, the TSP should be able to summarize the activities taken for the facilities under its control that are appropriate for the weather zone in which the facility is located, as required by 25.55(f)(3)(A)(ii). In particular, TEC recommends transmission providers not have to list temperatures recorded at nearby weather stations in their declarations. This aspect of the declaration is particularly onerous, as transmission providers would be required to measure and report temperatures for numerous facilities, and it is not clear to TEC how this information would be used support a more resilient transmission system. TEC recommends §25.55(f)(3)(A)(iii) and (B)(iii) therefore be deleted from the Proposal.

#### **D. Retain Good Cause Exception clause**

TEC respectfully recommends Staff not adopt the proposed deletion of §25.55(c)(6) and §25.55(f)(4), which create a good cause exception process for facility owners. New weatherization requirements could lead to installation of new weatherization equipment, which may result in engineering studies to ensure equipment compatibility and safe operations. In certain cases, the measures required by the new rule may be impractical, unnecessary, or not cost-effective. TEC therefore recommends these provisions be retained in the rule.

By way of example, the requirements for TSPs to perform annual maintenance that tests sulfur hexafluoride breaker heaters and supporting circuitry pursuant to §25.55(f)(A)(2) appear to originate, in part, from the report published by the North American Reliability Corporation (“NERC”) titled *Lesson Learned: Cold Weather Operation of SF6 Circuit Breakers*.<sup>3</sup> NERC’s report lists a lesson learned regarding the maintenance of SF6 gas breaker “tank” heaters, which are devices that are necessary when temperatures are between -30°F to -40°F. The proposed rule’s requirement may also originate from NERC’s *Lesson Learned Preparing Circuit Breakers for Operation in Cold Weather* in which recommendations were made regarding breaker compartment heaters based solely on two occurrences of breakers failing to operate correctly when compressed air equipment froze in 4°F weather.<sup>4</sup> The conditions that resulted in the breaker issues are not

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<sup>3</sup> See NERC, *Lesson Learned: Cold Weather Operation of SF6 Circuit Breakers*, available at [https://www.nerc.com/pa/rm/ea/Lessons%20Learned%20Document%20Library/LL20201101\\_SF6\\_CB\\_Operation\\_during\\_Cold\\_Weather.pdf](https://www.nerc.com/pa/rm/ea/Lessons%20Learned%20Document%20Library/LL20201101_SF6_CB_Operation_during_Cold_Weather.pdf).

<sup>4</sup> See NERC, *Lesson Learned Preparing Circuit Breakers for Operation in Cold Weather*, available at [https://www.nerc.com/pa/rm/ea/Lessons%20Learned%20Document%20Library/LL20180702\\_Preparing\\_Circuit\\_Breakers\\_for\\_Operation\\_in\\_Cold\\_Weather.pdf](https://www.nerc.com/pa/rm/ea/Lessons%20Learned%20Document%20Library/LL20180702_Preparing_Circuit_Breakers_for_Operation_in_Cold_Weather.pdf).

consistently experienced by all transmission facilities, and not all transmission breakers utilize air compression as an operating component. Therefore, the Commission's rules should focus on transmission facilities with specific vulnerabilities instead of imposing costly requirements on TSPs by applying this requirement to all transmission facilities in a general manner. Such a general requirement will only drive up costs, with no benefit to ratepayers, on the investment made to meet the requirement.

Allowing generation resources and transmission providers the ability to work with ERCOT and the Commission Staff on more appropriate approaches could provide needed flexibility to pursue weatherization solutions that are superior. By retaining the Good Cause Exemption clause, it provides generation entities with an avenue to appropriately analyze and install the necessary weatherization equipment without being penalized for non-compliance.

**E. New requirements may cause unintended consequences related to NSO or mothball status**

Commission Staff should be mindful that the proposed language in §25.55(a)(1) and 25.55(c)(3)(C) could be problematic in that it may disincentivize units in mothballed or notice of suspension of operations (NSO) status from returning to respond to an acute need. The Commission should consider an exception from compliance for certain generation resources returning to support reliability.

**F. Priority of ERCOT inspections should be based on reliability, past performance, and a minimum capacity threshold of 10 MW**

TEC supports the concept of ERCOT-conducted resource and transmission facility inspections, and believes that ERCOT must be efficient and focused in its prioritization of inspections each year in order to ensure critical components of the electric grid are appropriately weatherized and prepared for the upcoming operating season while minimizing the cost-impact of the inspections. While TEC agrees with the new provision requiring generation resources be subject to inspection once every three years, the number of smaller units, particularly energy storage facilities, expected to come online in the near future may strain the resources of the ERCOT inspection team without providing a corresponding reliability benefit. Market participants will be required to pay for a significantly increased number of inspections of these smaller resources. TEC therefore recommends the rule include a minimum capacity threshold of 10 MW for any inspected



resource, in addition to the current considerations around the impact on reliability and past history of major or repeated weather-related forced interruption of service. ERCOT may still inspect smaller units, but would not be required to inspect such units every three years. The relevant section of TEC's proposed §25.55(d)(1) would read as follows:

“...provided that every resource with a nameplate capacity over 10 megawatts interconnected to the ERCOT power region must be inspected at least once every three years.”

**G. Inspections performed by ERCOT and the Commission must not conflict with other regulations**

While TEC generally supports routine ERCOT inspections, granting ERCOT and/or Commission Staff complete access to a generation facility may conflict with NERC and/or Texas Regional Entity, Inc. (“Texas RE”) requirements and/or Nuclear Regulatory Commission (“NRC”) regulations. Proposed sections §25.55(d)(1)(A) & (B) should be modified to clarify that access to a generation facility is not permitted when such access would violate any NERC, Texas RE, NRC, and/or other rules, regulations, or laws.

**H. A generation entity reported by ERCOT to Commission Staff should not automatically be deemed to have committed a Class A violation**

TEC supports the Commission Staff's proposal to take enforcement action where a generation entity has not reasonably remedied deficiencies, but the language in §25.55(d)(2)(D) should be revised. Simply being reported by ERCOT to Commission Staff is not a sufficient basis for a Commission finding of a Class A violation. For example, a generation entity should not automatically be considered to have violated rules if the generation entity fails to remedy a deficiency during the ERCOT-prescribed cure period because of supply chain problems or because another issue renders compliance impossible. The generation entity should be provided an opportunity to provide evidence and to rebut the allegation, consistent with the Commission's processing of complaints and enforcement actions, generally. To address this concern, TEC recommends the following minor revision:

“A violation of this section ~~is~~ may be a Class A violation under section §25.8(b)(3)(A) ... .”

**I. References to “all cold weather critical components” are vague and overbroad**

Proposed 25.55(f)(1)(A)(i) requires TSPs to confirm “the operability of all systems and subsystems containing all cold weather critical components.” This language is a vague requirement that could result in determinations that TSPs are non-compliant with the rule’s requirements solely because the TSP did not identify or recognize a part of its system as vulnerable to cold or hot temperatures and such part unexpectedly fails during a weather emergency. The Commission should modify this language to avoid these scenarios. The rules are too vaguely worded for TSPs to ensure compliance and the threat of a violation notice will only add to the over-investment that TSPs are likely to undertake, coupled with the associated increased costs to ratepayers, because of the lack of specificity in the rules.

**J. Annual breaker heater testing may exceed manufacturer’s recommend maintenance practices, resulting in potential warranty violations**

Language in proposed section §25.55(f)(1)(A)(ii) requires a TSP to inspect and perform annual maintenance on breaker heaters. This could be problematic as it may contradict the manufacturer’s recommended installation and maintenance procedures. As an example, the Mitsubishi Electric Power Products, Inc. (MEPPI) SF6 Breaker Instruction Book recommends a 12-year periodicity for a functional check of the breaker heaters. From the MEPPI manual: “Deviations from recommended installation and maintenance procedures, or use of unauthorized parts or components, will void the warranty and other contractual responsibilities.” If the TSP were held to an annual cadence for inspection and maintenance as proposed, this could result in a practice that may greatly exceed the manufacturer’s recommended maintenance practices, resulting in potential warranty violations and reduction of the service life of these components. Loss of warranty coverage represents a risk of increased costs in the case where a warranty was found to be violated. TEC recommends removing the specific requirement to “perform annual maintenance” and instead add an annual verification and attestation confirming that all heater breakers and supporting circuitry have been tested in accordance with the manufacturer’s recommended maintenance schedule. This would produce a specific requirement to conduct these inspections where none currently exist, while also complying with manufacturer’s

recommendations and preventing any warranty violations and excessive component cycling. TEC suggests clarification in proposed §25.55(f)(1)(A)(ii) as follows:

(ii) Confirmation that the sulfur hexafluoride gas in breakers and metering and other electric equipment is at the correct pressure and temperature to operate safely during winter weather emergencies, and perform submission of an annual maintenance attestation assuring that tests all sulfur hexafluoride breaker heaters and supporting circuitry to assure that they are functional and have been tested in accordance with the manufacturer's recommended maintenance schedule;

Relatedly, proposed §25.55 (f)(1)(A)(iii)(I) specifically requires TSPs to inspect heaters in control cabinets without regard as to whether there are any cold weather critical components in the control cabinets. This requirement to inspect all control cabinets produces no meaningful return for ratepayers, and TEC recommends it be deleted from the Proposal.

**K. The Commission should clarify its reference to “verification of proper oil quality” in §25.55 (f)(1)(A)(iii)(V)**

Language in proposed section §25.55(f)(1)(A)(ii) requires a TSP to verify the quality of its oil to ensure that moisture and dissolved gases are within acceptable ranges for winter weather conditions. TSPs regularly take oil samples from transformers to test for moisture and dissolved gases. TSPs may perform these tests at any time of the year and often do so at times when other transmission facility maintenance is not feasible because of outages. TEC asks the Commission to clarify whether the rule’s reference to “verification” in this subsection is equivalent to a TSP’s review of oil test data or whether the rule simply requires the TSP to conduct its test by December 1 of each year.

**L. The Commission should define or clarify its references to “coolers” in §25.55 (f)(2)(A)**

Proposed §25.55(f)(2)(A) requires TSPs to inspect and clean transformer coolers on a regular basis during the summer season. TEC would note that all transformers have cooling methods or apparatuses; some transformers only have radiators, some have both radiators and cooling fans, while others may have some combination of radiators, cooling fans, and pump

systems. Because radiators, cooling fans, and pump systems all constitute cooling equipment, the Commission should define “cooler” because TSPs do not normally need to clean radiators, fans and pumps on a regular basis.

### **III. Conclusion**

TEC appreciates the opportunity to participate in the review of Commission Staff’s Proposal for Publication of Project No. 53401 and thanks the Commission and Commission Staff for its consideration. TEC supports the overall direction of Staff’s Proposal for Publication, and is available to provide any additional information to the Commission and Commission Staff that may be helpful as this project moves forward.

Dated: June 23, 2022

Respectfully submitted,

A handwritten signature in cursive script that reads "Julia Harvey".

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**Texas Electric Cooperatives, Inc. (TEC)  
Executive Summary of Comments**

- Avoid defining “major” outage in the rule. Instead, focus on repeated forced outages or failures to start.
- When defining “Repeated weather-related forced interruption of service”, clarify that multiple occurrences during the same weather event shall be considered a single occurrence and that failures requiring corrective action are only due to factors within the entity’s control.
- Requirements regarding weatherization measures and the submission of declarations may pose timing challenges for entities.
- Clarify that installation of measures may be temporary, seasonal, and that measures may be accomplished with personnel as opposed to automated systems.
- Not all cold weather components require insulation and enclosures. Suggestion to include “and/or” in the requirement.
- Reporting minimum and maximum ambient temperatures may be administratively burdensome, particularly for transmission facilities.
- Retain Good Cause Exception clause.
- Review unintended consequences for units returning from NSO.
- Priority of ERCOT inspections should be based on reliability, past performance, and a minimum capacity threshold of 10MW.
- Inspections performed by ERCOT and the Commission must not conflict with other regulations.
- A generation entity reported by ERCOT to Commission Staff should not automatically be deemed to have committed a Class A violation.
- Annual breaker heater testing may exceed manufacturer’s recommend maintenance practices, resulting in potential warranty violations.