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**PROJECT NO. 53401**

**ELECTRIC WEATHER  
PREPAREDNESS STANDARDS –  
PHASE II**

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**BEFORE THE  
PUBLIC UTILITY COMMISSION  
OF TEXAS**

**VISTRA CORP.’S COMMENTS ON PROPOSED RULE REGARDING PHASE II  
WEATHER PREPAREDNESS STANDARDS**

Vistra Corp. (Vistra), on behalf of its jurisdictional subsidiaries, files these comments in response to the proposal to repeal 16 Tex. Admin. Code (TAC) § 25.55 and replace it with new 16 TAC § 25.55 in order to implement Phase II weather preparedness standards, as approved at the May 26, 2022 open meeting of the Public Utility Commission of Texas (Commission) and published in the *Texas Register* on June 10, 2022 (hereafter, Proposed Rule).<sup>1</sup> These comments are timely filed.<sup>2</sup>

**I. COMMENTS**

**A. Introduction**

The Commission has appropriately based the Phase II weather preparedness standards on the ERCOT weather study, which, in turn, relies on data from the state climatologist.<sup>3</sup> Basing the weather preparedness standards on that study is consistent with the requirement in Public Utility Regulatory Act (PURA)<sup>4</sup> § 35.0021 for the Commission, in adopting weather preparedness rules, to “take into consideration weather predictions produced by the office of the state climatologist.”<sup>5</sup> Providing meaningful, uniform, data-based, and objectively-measured standards such as the Commission’s proposal leveraging the ERCOT weather study helps to provide a bright line for compliance with PURA’s and the Commission’s preparedness standards. While Vistra believes a

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<sup>1</sup> 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 (May 26, 2022) (hereafter, Proposed Rule); 47 Tex. Reg. 3353, 3369-3375 (Jun. 10, 2022).

<sup>2</sup> Proposed Rule at 5 (May 26, 2022) (setting deadline for comments on June 23, 2022).

<sup>3</sup> *Project for ERCOT Weather Study to Implement Reliability Standards Under PURA 35.0021 and 38.075*, Project No. 52691, ERCOT Historical Weather Study Final Report (Dec. 15, 2021).

<sup>4</sup> Tex. Util. Code §§ 11.001-66.016 (PURA).

<sup>5</sup> PURA § 35.0021(b).

uniform statewide standard would be better from a competitive neutrality standpoint, the regional approach taken in ERCOT’s weather study is a reasonable second-best alternative from that lens.

However, Vistra proposes that the Phase II weather preparedness standards rely only on the ERCOT weather study, rather than provide an alternative standard based on the minimum or maximum (as applicable) ambient temperature at which a particular resource has experienced “sustained” operations, which is undefined. The alternative proposal would create an ambiguous standard that would render the ERCOT weather study (and the associated weather predictions from the state climatologist) irrelevant to the weather preparedness rule, in contravention of the statutory mandate in PURA § 35.0021. It would also add material risk, complexity, and costs to compliance efforts, while having more widely disparate cost impacts across competing generators that do not have channels through which to ensure compliance cost recovery.

Vistra recommends additional refinements to the Proposed Rule below, in an effort to ensure that the rule, as adopted, provides meaningful, clear, and achievable weather preparedness standards.

## **B. Preamble Question**

Question 2:<sup>6</sup> Does proposed 25.55(e) and proposed 25.55(h) appropriately define “repeated or major weather-related forced interruptions of service”?

Proposed subsection (e)<sup>7</sup> relates to the requirement in PURA § 35.0021(d) for the Commission to require by rule that a provider of electric generation service for a “generator that experiences repeated or major weather-related forced interruptions of service” take additional actions to have its weatherization plans and practices audited. Vistra suggests refinements to both proposed definitions<sup>8</sup> below to ensure that the definitions trigger the required robust analysis of a generation resource’s weather preparedness only in the types of circumstances intended by the Legislature in adopting the statutory language underpinning the Proposed Rule, which was adopted following the widespread, multi-hour and multi-day outages due to the extreme temperatures that

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<sup>6</sup> Question 1 is directed solely to transmission service providers; Vistra has no comment at this time.

<sup>7</sup> Proposed subsection (h) (also referenced in the preamble question) applies solely to transmission service providers; Vistra’s comments focus on the sections applicable to generation entities.

<sup>8</sup> Vistra focuses this response on the definitions as they appear in subsection (b).

were experienced in Winter Storm Uri.<sup>9</sup> Under the statute, the consequence of a forced outage or derate qualifying as a “major” or “repeated weather-related forced interruption of service” is the triggering of a requirement for the generation resource owner to undergo a comprehensive review of its weather preparedness measures, plans, procedures, and operations by an independent professional engineer, with further potential analysis by the Commission and ERCOT.<sup>10</sup> The terms “major” and “repeated” should be defined with this context in mind, as discussed in more detail below.

i. Major Weather-Related Forced Interruptions of Service

The Proposed Rule’s definition of “major weather-related forced interruptions of service” should be modified to set a uniform standard that fairly applies to all resources and to clarify that the term applies only when a weather emergency is the direct cause of a major forced service interruption.

The Proposed Rule would define the term based on the loss of 7,500 megawatt-hours (MWh) of generation capability “occurring as a result of a weather emergency.” This proposed MWh-based measure would result in a regulatory structure biased against large dispatchable generators, because a forced outage or derate for a sizeable generation resource could trigger the “major” threshold within a matter of hours, but it may be several days or even weeks of a forced outage before a smaller resource would trigger the same threshold and its attendant independent review process, notwithstanding that forced outages of multiple small resources would have the same reliability impact as a forced outage of a single large resource. Thus, as proposed, the definition would create an arbitrary distinction in its application to different resources that would

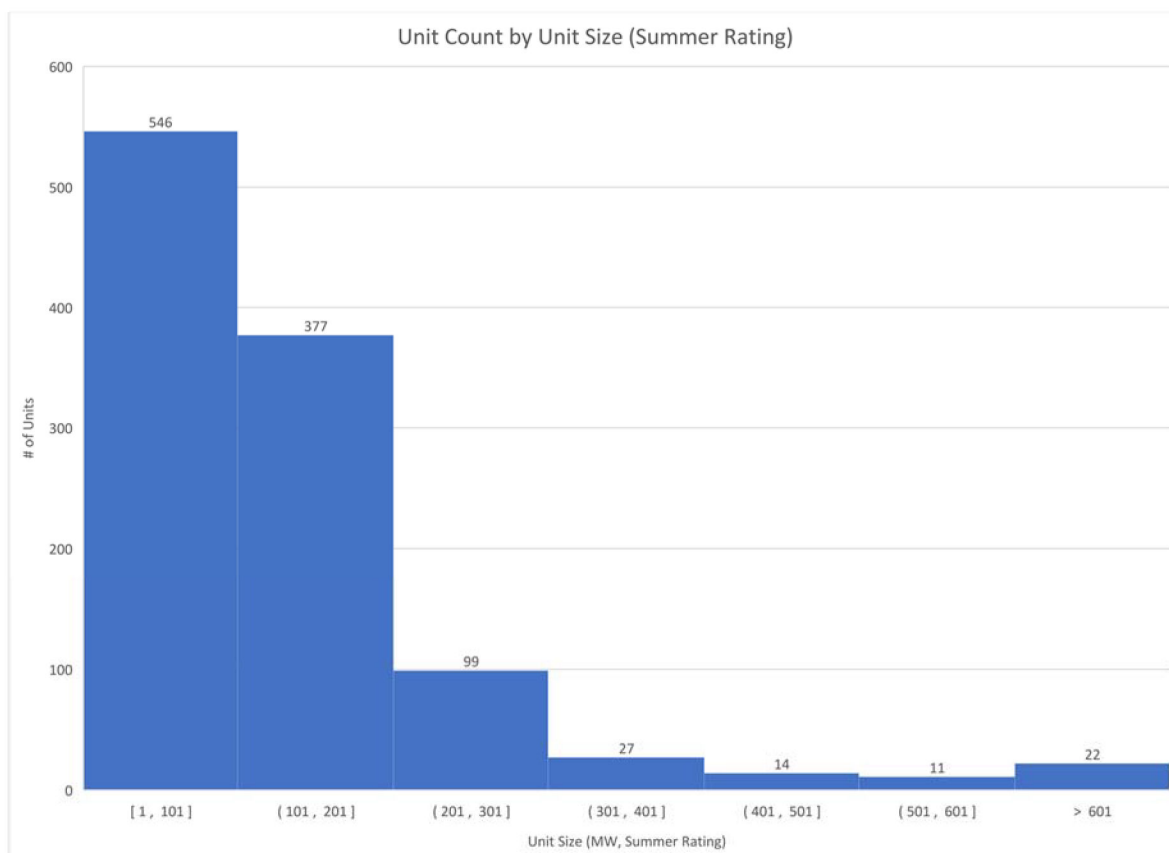
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<sup>9</sup> See 87<sup>th</sup> Tex. Leg., R.S., S.B. 3, Enrolled Bill Analysis (Jun. 1, 2021) (“Since Winter Storm Uri, legislators have heard hours of testimony from industry stakeholders and agency leadership regarding the Texas power grid’s failure to supply enough power to meet demand. The most consequential and repeatedly mentioned problems include a lack of oversight, a breakdown of communication, and major failures in coordination within and between Texas’s regulatory agencies. The proposed changes in S.B. 3 are an important step to ensure we have a reliable electricity grid and to strengthen the state’s prevention of and preparation for energy emergencies.”); 87<sup>th</sup> Tex. Leg., R.S., S.B. 3, Section 13 (Jun. 1, 2021) (codified in Tex. Util. Code § 35.0021(d)) (requiring that the Commission “by rule shall require of electric generation service ... for a generation asset that experiences repeated or major weather-related forced interruptions of service: to contract with a person who is not an employee of the provider to assess the provider’s weatherization plans, procedures, and operations for that asset ...”).

<sup>10</sup> See Proposed Rule, subsection (e).

not ensure a robust review of weather-preparedness plans across the ERCOT fleet for similar durations of outages.

To put the proposal in perspective, setting aside for simplicity any considerations about whether or when a unit would otherwise be committed, a 50 MW unit would have to experience a forced outage of 100 percent of its capacity for nearly a full week<sup>11</sup> due to a weather emergency to trigger the Proposed Rule's standard, while a 1,200 MW unit would trigger the standard based on a 50 percent derate for only 12.5 hours.<sup>12</sup> For context, consider that the vast majority of generating units in ERCOT are 300 MW or less, and the average unit size is about 130 MW (closer to 170 MW if counting thermal units only).<sup>13</sup>

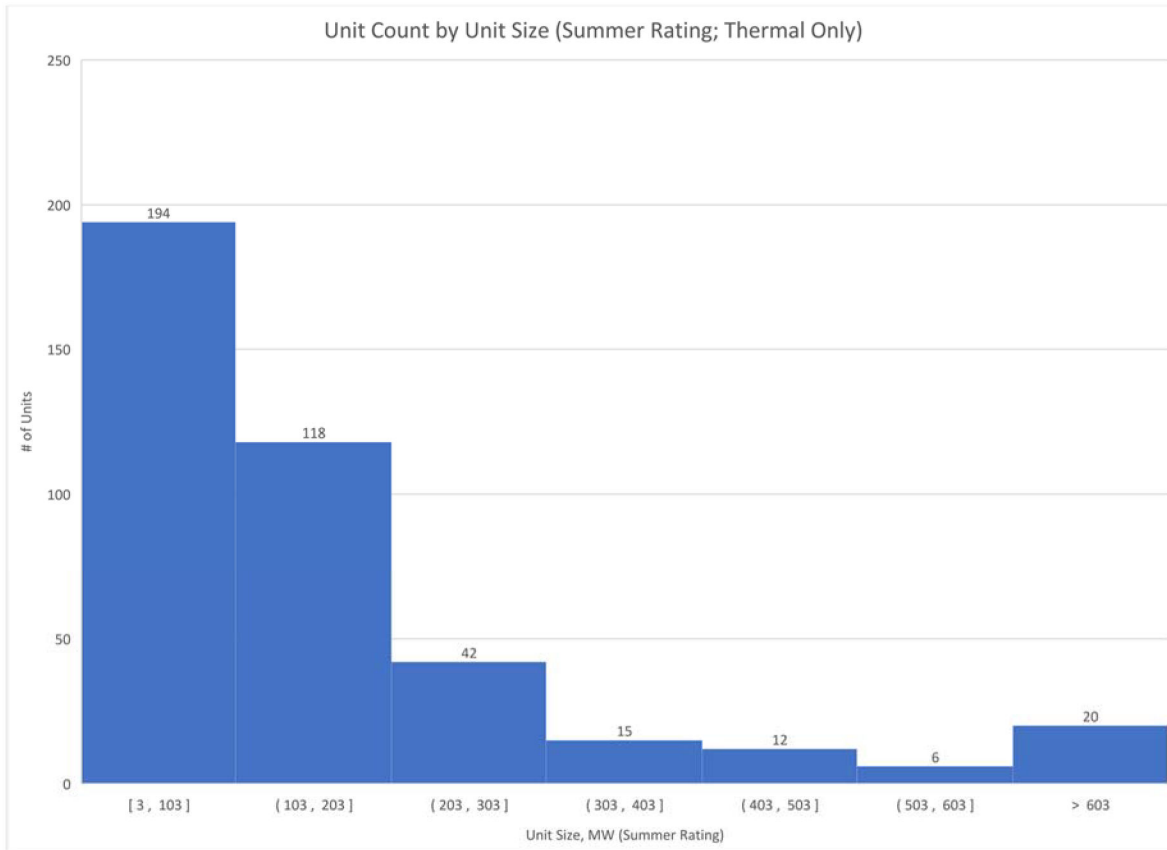


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<sup>11</sup> 50 MW times 150 hours equals 7,500 MWh. 150 hours divided by 24 hours in a day equals 6.25 days.

<sup>12</sup> 50 percent of 1,200 MW equals 600 MW. 600 MW times 12.5 hours equals 7,500 MWh.

<sup>13</sup> Unit data is Summer MW capacity per the May 2022 ERCOT Capacity, Demand, and Reserves (CDR) report (May 16, 2022). Available at: [https://www.ercot.com/files/docs/2022/05/16/CapacityDemandandReservesReport\\_May2022.xlsx](https://www.ercot.com/files/docs/2022/05/16/CapacityDemandandReservesReport_May2022.xlsx).



The weather-related events that seemingly have had the greatest impact on consumers have been ones where several resources, of varying sizes, lost a significant portion of their capacity for several hours to several days. As indicated above, those are the types of events that prompted the Legislature to adopt a requirement in Senate Bill 3 for the Commission to require an independent review of weather preparedness plans in the event of “major” (or repeated) weather-related forced interruptions of service. Thus, the standard should be one that would apply to any resource experiencing a relatively significant loss of its individual capacity for a significant duration of time, regardless of the size of the individual generating unit.

To transform the Proposed Rule’s 7,500 MWh standard into one that would apply more equitably to resources of all sizes and require a robust review of weather preparedness for the average-sized resource in ERCOT following a significant loss of power due to a weather emergency, Vistra proposes that the standard be modified to reference a 50 percent or greater derate over a consecutive 48-hour duration. This is generally equivalent to what the Commission has proposed:  $7,500 \text{ MWh} / 48 \text{ hours} = \sim 156 \text{ MW}$ . That is, the total loss of a 156 MW unit (or a 50 percent derate at a 312 MW unit) for 48 hours would yield the same outcome as the 7,500 MWh

standard for the average-sized resource in ERCOT.<sup>14</sup> But Vistra’s proposal would yield a more conservative outcome by holding the nearly 800 units smaller than 156 MW that collectively account for nearly a third of the ERCOT fleet to the same standard as larger units.

In addition, one critical distinction is that the rule should clarify that only a forced interruption of service *directly related* to a weather event should be included within this term, as forced outages and derates can occur during a weather event for reasons having nothing to do with the weather and that are outside the scope of what a generator can prepare for. For example, a fully weatherized gas-fired generator may nonetheless suffer a material derate if natural gas pipeline pressures are insufficient to support normal operations. While the weather emergency may be a proximate cause of curtailments on the natural gas pipeline system, it is the pipeline pressures and not the weather emergency that are the direct cause of the lost generating capacity.

Vistra proposes clarifying edits consistent with the feedback above. Note that Vistra’s proposed 50 percent and 48-hour parameters are flexible; they are intended to reasonably mimic the proposed 7,500 MWh standard in a more equitable fashion, which is Vistra’s primary concern. If the Commission agrees with the general approach but prefers to explore other formulations, Vistra welcomes further discussion. Vistra’s edits are reflected in the redline below, which “accepts” the proposed changes and shows Vistra’s proposed edits in underlines and strikethroughs (in red font, for better visibility):

**Major weather-related forced interruption of service** -- The loss of ~~7,500 megawatt-hours~~ at least 50 percent of a generation resource’s or transmission facility’s operating capacity capability for a period of at least 48 consecutive hours directly occurring as a result of a weather emergency.

ii. Repeated Weather-Related Forced Interruption of Service

Similarly, the Proposed Rule’s definition of “repeated weather-related forced interruption of service” should be modified to clarify that the relation to weather is one of direct causality (to ensure that outages occurring during a weather event, but for some other, non-weather-related reason are excluded) and to input a relative duration threshold for failures to start, forced outages, and derations. Without a duration requirement, only a few minutes of a delayed start, forced

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<sup>14</sup> Again, this makes the simplifying assumption that a unit would have been committed for that period.

outage, or forced derate could be deemed to contribute to triggering the third-party analysis required for repeated weather-related forced interruptions of service, even if such minor events are immaterial to grid reliability. Given that the statutory requirement underlying the Proposed Rule was adopted in response to Winter Storm Uri, it is reasonable to interpret the statutory requirement as including some materiality threshold for the “repeated” weather-related outage/derate prong of the requirement—i.e., as effectively equating the “repeated” requirement with the “major” requirement, with one capturing repeat events that add up to a major impact and the other capturing a single major loss of capacity. A delay of minutes or even a few hours to start a resource (especially if the unit is coming on ahead of when actually needed to reduce the risk of an unexpected outage during more severe conditions), or a relatively brief derate or outage that is quickly restored (e.g., when a unit trips but is able to successfully go directly back into startup to come back online) should not require incurring the cost of a full-blown audit of the generation resource’s weather preparedness. These types of events are common, especially for older generators, even in normal weather conditions.

Instead, incorporating a twelve-hour duration requirement would ensure that the definitions of “repeated” and “major” weather-related forced interruptions of service capture losses of capacity with similar cumulative impact. More specifically, three instances of a twelve-hour outage equals three quarters of Vistra’s proposed 48-hour duration for a “major” forced interruption of service. While cumulatively lower, the twelve-hour duration threshold recognizes that repeated smaller interruptions of service may warrant the same policy treatment as one major interruption of service and would trigger the same independent review of weather preparedness.

In addition, there should be some clarification regarding what constitutes a “failure to start” (i.e., a failure to start for some period past the generation resource’s start time that constitutes a forced outage). As noted above regarding the 50 percent and 48-hour parameters, Vistra arrived at the 12-hour duration proposal for repeated interruptions through an attempt to reasonably harmonize the two provisions while being consistent with the scope of the Commission’s proposed 7,500 MWh “major interruption” threshold. With that said, Vistra’s primary concern is the structure of the definitions, and it welcomes additional discussion on the specific parameters if warranted. Vistra’s proposed edits are below:



**Repeated weather-related forced interruption of service** -- Three or more of any combination of the following ~~occurrences~~ directly occurring as a result of a weather emergency within any three year period: a failure to start resulting in a forced outage lasting at least 12 hours past the generation resource's communicated start time, a forced outage lasting at least 12 hours, or a deration of more than fifty percent of the nameplate capacity of a generation resource or a transmission facility lasting at least 12 hours.

### C. Comments on Subsections in Proposed Rule

#### i. Proposed Rule, Subsection (a) - Application

Generation resources should be exempted from the requirements of the weather preparedness rule once they have submitted a notice of suspension of operations (NSO) to ERCOT, unless the resource will remain in service for the relevant season (e.g., through a seasonal mothball or a reliability must run (RMR) agreement) or the resource returns to service. The Proposed Rule would exclude a resource that submits an NSO only once ERCOT “approved” the NSO. However, ERCOT does not technically approve NSOs. While ERCOT, in reviewing an NSO, can determine that a resource is needed “to provide voltage support, stability or management of localized transmission constraints under applicable reliability criteria, where market solutions do not exist,”<sup>15</sup> the result of such a determination is first an evaluation by ERCOT of whether viable alternatives exist to an RMR,<sup>16</sup> and if not, then negotiation between the resource owner and ERCOT regarding a potential RMR contract,<sup>17</sup> which ERCOT cannot compel the resource owner to execute.<sup>18</sup> Rather, the generation resource and ERCOT must agree to the RMR terms (which could and should include recovery for weather-preparedness related costs<sup>19</sup>). In the interim period while ERCOT and a generation resource are negotiating the terms of an RMR, the generation resource is required to remain available only for reliability unit commitment (RUC) until either

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<sup>15</sup> ERCOT Protocols § 3.14.1(1).

<sup>16</sup> *Id.* § 3.14.1(1)(b).

<sup>17</sup> *Id.* §§ 3.14.1, 3.14.1.1, 3.14.1.2.

<sup>18</sup> *Id.* § 3.14.1(1)(g).

<sup>19</sup> While the existing Protocols do not list weather-preparedness costs as an existing eligible cost for purposes of RMR, eligible costs are broadly defined as “costs that would be incurred by the RMR Unit owner to provide the RMR Service” and include things like costs “associated with maintenance [d]ue to regulatory requirements”; the Protocols also do not expressly preclude inclusion of such costs. ERCOT Protocols § 3.14.1.10. In addition, Section 6.5.1.1(4) allows for ERCOT to contract with a Resource Entity to provide capacity for resource adequacy purposes and to provide for capital contributions as part of the contract, which could include any costs to retrofit a unit to meet weather preparedness requirements; such a contract could also apply in the context of a Resource Entity that otherwise planned to cease operations via an NSO.

ERCOT and the resource owner reach an RMR contract, the Commission orders that a resource owner provide RMR service, or ERCOT or the Commission decides the resource is not needed for reliability.<sup>20</sup> Resources that are called upon for RUC recover only certain operating costs,<sup>21</sup> such recovery would not encompass the costs that will be required to satisfy the Phase II weather preparedness standards once adopted. Thus, a generation resource that has filed an NSO, but is still awaiting its suspension date and is required to remain available only for RUC, should not be required to comply with those weather preparedness standards. Instead, the generation resource should have to comply with the weather preparedness standards when it remains in service for the relevant season (through a seasonal mothball), returns to service (on the date indicated in its NSO), or after it begins the term of an RMR agreement negotiated with ERCOT.

To effectuate the above recommendations, Vistra suggests the following revisions to the Proposed Rule's application section:

(a) **Application.** This section applies to the Electric Reliability Council of Texas, Inc. (ERCOT) and to generation entities and transmission service providers (TSPs) in the ERCOT power region.

(1) A generation resource ~~with an ERCOT-approved~~ that has submitted a notice of suspension of operations for the summer season or winter season to ERCOT is not required to comply with this section unless the generation resource returns to service for the applicable season, in which case the generation resource is not required to comply with this section until the return to service date identified in its notice of change of generation resource designation required under the ERCOT protocols or until after the start date of an applicable reliability must run agreement or on the start date of a seasonal operation period.

ii. Proposed Rule, Subsection (b) - Definitions

In addition to the suggested changes proposed above in response to the preamble question, Vistra suggests revisions to the following definitions in the Proposed Rule:

- Weather critical component: Consistent with much of the discussion above, this definition should be modified to limit the definition to components that are susceptible to fail *due to* a weather emergency, rather than *during* a weather emergency, in order to ensure that the

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<sup>20</sup> *Id.* § 3.14.1.2(10); 16 TAC § 25.502(e)(2).

<sup>21</sup> ERCOT Protocols §§ 5.6.1 *et seq.*; 5.7.1 *et seq.*; Verifiable Cost Manual.

rule's requirements are limited to issues caused by weather emergencies, rather than applying to issues that arise for unrelated reasons that just happen to occur during a weather emergency:

**Weather critical component** -- Any component of a resource or transmission facility that is susceptible to fail ~~during~~ due to a weather emergency, the occurrence of which failure is likely to significantly hinder the ability of the resource or transmission facility to function as intended or, for a resource, is likely to lead to a trip, derate, or failure to start.

- Weather emergency: this definition should be modified to clarify that the emergency is one that impacts generation resources, as opposed to a general weather event that results in some type of emergency notice by ERCOT. While the Proposed Rule's definition does appropriately limit applicability relating to transmission service providers (TSPs) by referencing the possibility for load shed, generators are not mentioned. Instead, the Proposed Rule's definition refers generally to a "situation for which ERCOT provides advance notice to market participants involving weather-related risks to the ERCOT power region." That definition could be construed as applying to something like a spring-time Operating Condition Notice that does not actually cause any performance issues or risks of performance issues for generators. It is important that the definition of "weather emergency" be appropriately limited in scope, given that the term factors into the definitions of "major" and "repeated weather-related major interruption of service," which, in turn, trigger a requirement for additional auditing of weather-preparedness procedures. Accordingly, Vistra recommends that it be modified as follows:

**Weather emergency** -- A situation resulting from weather conditions that produces significant risk for a TSP that firm load must be shed or a situation for which ERCOT provides advance notice to market participants involving weather-related risks to generation resources in the ERCOT power region.

- Winter season: This term should be defined in the same manner as it is in the ERCOT Protocols, which define the winter months as occurring from December 1 to February 28.<sup>22</sup> The Proposed Rule's definition of "winter season" would include March, which is typically

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<sup>22</sup> ERCOT Protocols § 2 (defining "Peak Load Season" as "Summer months are June, July, August, and September; winter months are December, January, and February" and defining "Season" or "Seasonal" as "Winter months are December, January, and February; Spring months are March, April, and May; Summer months are June, July, and August; Fall months are September, October, and November").

a milder month in ERCOT. For consistency with existing Protocols that incorporate the concept of the “winter season,” Vistra recommends that the rule match the Protocols definition:

**Winter Season** – December 1 to ~~March 31~~ February 28 each year.

iii. Proposed Rule, Subsection (c) – Weather Emergency Preparedness Standards for a Generation Entity

a. *General Requirements – Subsection (c)(1) and (c)(2)*

In the initial paragraphs describing the general requirements for winter and summer season preparations, the Proposed Rule should be modified to require that the generation entity maintain the required preparedness measures “to the extent they are reasonably within the generation entity’s control.” For example, some preparedness measures – such as maintenance of supplies – could be impacted by supply chain disruptions following the depletion of supplies during an extreme weather event. Given the severe penalties that could apply for violations of the weather preparedness rule,<sup>23</sup> the rule should incorporate a reasonability standard and not require “assurances” from generation entities to achieve and maintain a preparedness standard beyond their reasonable control.

Further, the Proposed Rule should clarify that a generation entity need not update its weather preparation measures following an update by ERCOT to its historical weather study, if the updated report does not indicate a need to update the preparedness measures or if other good cause exists to extend or waive the compliance deadline. Presumably not every update to an ERCOT weather study will change the weather preparedness standard to such a degree that new preparation measures are needed. For example, if the average 95<sup>th</sup> percentile 72-hour average minimum and maximum temperatures (i.e., the standard in the Proposed Rule that relies on the ERCOT weather study, as discussed further below) change only a single degree, it is unlikely that a generation resource would need to do anything differently to prepare for sustained operations in those temperatures since they likely would fall within the confidence interval of an existing engineering analysis of the unit’s design temperature. Further, there may be circumstances in

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<sup>23</sup> 16 TAC § 25.8(b)(3)(A) (imposing up to \$1 million per violation per day for violations of PURA § 35.0021).

which a generation resource cannot reasonably implement new preparedness measures, to the extent needed following an update to the ERCOT weather study, within the one-year timeframe identified in the Proposed Rule, due to issues such as supply chain disruptions. The rule thus should allow for a showing of good cause to extend or waive the deadline on a case-by-case basis. Vistra's proposed revisions to subsections (c)(1) and (c)(2) are below:

**(c)(1) Winter season preparations.** By December 1 each year, a generation entity must complete the following winter weather emergency preparation measures for each resource under its control. A generation entity must maintain these measures throughout the winter season to the extent they are reasonably within the generation entity's control. A generation entity must update its winter weather emergency preparation measures no later than one year after ERCOT files a historical weather study report under subsection (i) of this section unless the generation entity reasonably concludes that the report does not require any updates to the generation entity's winter weather emergency preparation measures or the generation entity demonstrates good cause to extend or waive the compliance deadline.

...

**(c)(2) Summer season preparations.** By June 1 of each year, a generation entity must complete the following summer weather emergency preparation measures for each resource under its control. A generation entity must maintain these measures throughout the summer season to the extent they are reasonably within the generation entity's control. A generation entity must update its summer weather emergency preparation measures no later than one year after ERCOT files a historical weather study report under subsection (i) of this section unless the generation entity reasonably concludes that the report does not require any updates to the generation entity's summer weather emergency preparation measures or the generation entity demonstrates good cause to extend or waive the compliance deadline.

b. *Proposed Weather Standard for both Winter and Summer – Subsection (c)(1)(B), (c)(2)(B)*

Vistra supports the Proposed Rule's use of a standard, for both the summer and winter season, that incorporates the results of the ERCOT weather study, using the 95<sup>th</sup> percentile minimum (for winter) and maximum (for summer) average 72-hour temperatures. Use of that standard (i.e., one that relies on the results of ERCOT's weather study) is consistent with the statutory mandate in PURA § 35.0021 for the Commission, in adopting weather preparedness rules, to "take into consideration weather predictions produced by the office of the state

climatologist.”<sup>24</sup> As explained by ERCOT in its weather study, ERCOT’s study incorporates data recommendations of the state climatologist.<sup>25</sup> ERCOT’s weather study evaluates minimum and maximum temperatures across a broad study period (i.e., from 1898 to present, where data exists) and provides observed temperatures at both the 95<sup>th</sup> and 99<sup>th</sup> percentiles.<sup>26</sup>

The Proposed Rule appropriately proposes the use of the 95<sup>th</sup> percentile data from ERCOT’s study for purposes of identifying the temperatures for which generation resources must be reasonably prepared to operate, because the 95<sup>th</sup> percentile is a conservative measure (representing minimum and maximum temperatures that would be colder and hotter, as applicable, than 95 percent of observed temperatures over the long study period dating back to 1898 (where data was available)), but is not unrealistically (and in turn, uneconomically) extreme, and thus is a reasonable target for which generation resources feasibly can prepare. In addition, the use of a 72-hour average is appropriate to represent a more impactful extreme weather scenario (i.e., including the cumulative effects of sustained extreme weather) than a one-time 95<sup>th</sup> percentile low or high temperature experienced in the past 120-plus years. Vistra thus supports the Proposed Rule’s use of a 95<sup>th</sup> percentile minimum and maximum average 72-hour temperature as the basis for weather preparedness standards.

With that said, the alternative standard in the Proposed Rule—i.e., the lowest (for winter) or highest (for summer) ambient temperature “at which the resource has experienced sustained operations”—should not be included in the rule as adopted. This alternative would result in a non-uniform and difficult-to-apply standard across generation resources, by requiring each resource to determine the lowest and highest temperatures at which the resource “experienced sustained operations,” which is not defined in the rule or in an independent weather study. This alternative is too imprecise and open to interpretation to result in a uniform level of preparedness across the ERCOT fleet for likely extreme weather scenarios.

Crucially, the alternative standard would likely effectively eliminate the standard based on the ERCOT weather study, in contravention of the statutory mandate in PURA § 35.0021,

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<sup>24</sup> PURA § 35.0021(b).

<sup>25</sup> *Project for ERCOT Weather Study to Implement Reliability Standards Under PURA 35.0021 and 38.075*, Project No. 52691, ERCOT Historical Weather Study Final Report (Dec. 15, 2021).

<sup>26</sup> *Id.*

described above, because the Proposed Rule would dictate use of the alternative standard if it is the lower (for winter) or higher (for summer) temperature. The lowest or highest temperature at which a particular resource experienced some amount of “sustained operations” (e.g., one hour?, twelve hours?, 72 hours? Etc.) will always be lower or higher, as applicable (and depending on what “sustained operations” means), than the 95<sup>th</sup> percentile of the 72-hour average minimum temperatures dating back 120-plus years, since the 95<sup>th</sup> percentile, by definition, is always going to be more moderate than an absolute coldest or hottest temperature (which is more akin to the 99.999<sup>th</sup> percentile). To that point, though, Vistra would support increasing the cold weather standard to the 99<sup>th</sup> percentile of the 72-hour minimum average daily temperature in order to better reflect the more extreme winter weather that the standards are supposed to protect against.

In sum, PURA requires that the standard for weather preparedness must take into account predictions by the state climatologist, and those predictions are effectively encompassed in the ERCOT weather study, not in an individual generation resource’s historical experience. Thus, that weather study (or some other method of incorporating the state climatologist’s weather predictions) must, under the statute, inform the weather preparedness standard. If the weather study is rendered inapplicable in determining the weather preparedness standard, then the PURA mandate would not be satisfied. Accordingly, Vistra recommends that the Proposed Rule eliminate the alternative standard and rely solely on the standard that incorporates the ERCOT weather study.

Vistra proposes modifications to the Proposed Rule as follows:

(c)(1)(B) Beginning in 2023, implement weather emergency preparation measures, in addition to the weather emergency preparation measures required by paragraph (A) of this subsection, reasonably expected to ensure sustained operation of the resource during ~~the lesser of the minimum ambient temperature at which the resource has experienced sustained operations or the 95<sup>th</sup>~~ 99<sup>th</sup> percentile minimum average 72-hour temperature reported in ERCOT’s historical weather study, required under subsection (i) of this section, for the weather zone in which the resource is located.

...

(c)(2)(B) Beginning in 2023, implement weather emergency preparation measures, in addition to the weather emergency preparation measures required by paragraph (A) of this subsection, reasonably expected to ensure sustained operation of the resource during ~~the greater of the maximum ambient temperature at which the resource has experienced sustained operations or the 95<sup>th</sup>~~ percentile maximum

average 72-hour temperature reported in ERCOT's historical weather study, required under subsection (i) of this section, for the weather zone in which the resource is located.

*c. Additional Recommendations in Proposed Rule, Subsection (c)*

Vistra makes a few additional recommended changes to subsection (c) of the Proposed Rule, as described below:

- Subsection (c)(1)(A)(ii) – this section of the Proposed Rule details required preparedness measures that generation entities must take related to the winter season. This particular subpart proposes “installation of insulation and enclosures for all cold weather critical components.” Vistra recommends that the rule be changed to allow for installation of insulation *or* enclosures, as not all cold weather critical components will require both insulation *and* enclosures in order to reasonably prepare for sustained operations during the winter season. As modified, the language would read:

(c)(1)(A)(ii) Installation of insulation or ~~and~~ enclosures for all cold weather critical components.

- Subsection (c)(2)(A)(ii) – this section of the Proposed Rule details required preparedness measures that generation entities must take related to the summer season. This particular subpart proposes assurance of adequate water supplies for various needs. Vistra recommends that this section be modified to tie the requirement to maintain adequate water supplies to the duration in the temperature standard identified in the subsequent subparagraph (i.e., the 72-hour timeframe). In other words, generation entities should only be required to assure water supplies necessary to get through an extreme hot weather event of the duration that the Proposed Rule sets as the weather standard. As modified, the language would read:

(c)(2)(A)(ii) Assurance of adequate water supplies for cooling towers, reservoirs, heat exchangers, and adequate cooling capacity of the water supplies used in the cooling towers, reservoirs, and heat exchangers for the duration referenced in paragraph (c)(2)(B).

- Subsection (c)(2)(A)(vi) – this subsection of the Proposed Rule requires that generation entities, in preparation for the summer season, install monitoring systems for “all” hot weather critical components. However, unlike cold weather critical components, where



freeze protection panels or other monitoring systems can be implemented broadly, not all hot weather critical components are effectively monitored via electronic systems. Rather, hot weather adjustments may involve using things like opportunistic evaporative cooling. In recognition of this reality, Vistra proposes that the term “all” be stricken and that the phrase “as practicable and reasonable” be inserted:

(c)(2)(A)(vi) – Installation of monitoring systems for ~~all~~ hot weather critical components as practicable and reasonable.

- Subsection (c)(3)(A)(iii), (v) / Subsection (c)(3)(B)(iii), (v) – Vistra recommends that the notarized attestation required by the rule, as adopted, allow for a representative, official, or officer with responsibility for the generation resource’s operations to sign the attestation, rather than requiring the highest-ranking officer to sign. The weather preparedness requirements and accompanying attestation involve very technical operational details of a generation entity, which puts the highest-ranking officer, who is in charge of the entire organization, in a position of having to attest to the completion of all activities required for the particular season – a technical question that other officers or officials are actually better positioned to attest to. In addition, if the Commission agrees with Vistra’s recommendation to strike the alternative minimum/maximum temperature standard in the rule (above), then there also would be no reason to require generation entities to include the minimum and maximum ambient temperatures at which they have experienced “sustained operations” in their attestations:

(c)(3)(A)(iii) / (c)(3)(B)(iii) – ~~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.~~

(c)(3)(A)(v) / (c)(3)(B)(v) – Includes a notarized attestation sworn to by ~~the generation entity’s highest ranking~~ a representative, official, or officer with responsibility for the generation resource’s operations and binding authority over the generation entity attesting to the completion of all applicable activities described in paragraph [(1) / (2)] of this subsection, and to the accuracy and veracity of the information described in subparagraph [(3)(A) / (3)(B)] of this paragraph.

iv. Proposed Rule, Subsection (d) – ERCOT Inspections

Vistra proposes a few changes to this section:

- Subsection (d)(1) – the Proposed Rule’s direction for ERCOT to develop winter and summer weather inspection checklists in consultation with Commission Staff should be modified to clarify that such development will be through the adoption of Protocols or Other Binding Documents, as that is the manner in which ERCOT takes actions (i.e., through the stakeholder process). Doing so does not preclude ERCOT’s consultation with Commission Staff:

(d)(1) ERCOT must conduct inspections of resources and may prioritize inspections based on factors such as whether a resource is critical for electric grid reliability; has experienced a forced outage, forced derate, or failure to start related to weather emergency conditions; or has other vulnerabilities related to weather emergency conditions. ERCOT must determine, in consultation with commission staff, the number, extent, and content of inspections, provided that every resource interconnected to the ERCOT power region must be inspected at least once every three years. ERCOT must ~~develop~~ establish in its protocols or other binding documents, in consultation with commission staff, a winter weather inspection checklist and a summer weather inspection checklist for use during resource inspections. Inspections may be conducted by ERCOT’s employees or contractors.

- Subsection (d)(2)(D) – the Proposed Rule states that a violation of “this section” (presumably referring to the entirety of 16 TAC § 25.55) “is a Class A violation.” Vistra recommends that the rule be modified to state that a violation “may be determined to be” a Class A violation. While violations of PURA § 35.0021 are Class A violations under 16 TAC § 25.8, it is possible that a particular violation of 16 TAC § 25.55 might not be a violation of the substance of PURA § 35.0021, which is focused on actual weather preparedness standards, but rather could be a technical or procedural violation. Thus, the rule as adopted should allow for the possibility that a particular violation (e.g., a late submission to ERCOT) may not be appropriate for Class A classification, particularly with enhanced penalty risk; such a change would not prejudice the Commission’s ability to prosecute a violation as such if appropriate:

(d)(2)(D) A generation entity reported by ERCOT to commission staff under subparagraph (C) of this paragraph will be subject to enforcement investigation under §22.246 (relating to Administrative Penalties) of this title. A violation of this section ~~is~~ may be determined to be a Class A violation under §25.8(b)(3)(A) (relating to Classification System for Violations of Statutes, Rules, and Orders Applicable to Electric Service Providers) and may be subject to a penalty not to exceed \$1,000,000 per violation per day.

- Subsection (d)(3) (proposed for addition) – Vistra recommends that the rule include a provision providing for the cost of ERCOT inspections to be recovered through ERCOT’s system administration fee, so that it is clear how those costs will be reimbursed:

(d)(3) ERCOT shall recover the cost of inspections under this section through its system administration fee.

v. Proposed Rule, Subsection (e) – Repeated or Major Weather-related Failures

Vistra recommends two changes to this section. First, ERCOT should affirmatively notify a generation entity if they have triggered a “strike” against this “three strike” rule related to repeated weather-related failures as well as if they have triggered the requirement to engage an engineer and submit an assessment under this section. There are a variety of reasons that a generation entity might not know that such an assessment is necessary: generation entities do not typically record and document outages in terms of cumulative megawatt-hours, for instance (if the Commission were to retain that approach). And if a resource is sold or transferred from one generation entity to another, the new owner may not be aware of previous weather-related outages. This rule poses the risk of significant penalties for non-compliance, so it is only fair that a generation entity would receive affirmative notice that it has partially or fully triggered additional requirements under subsection (e) – which should include a process for adjudication if there are factual disputes. Vistra also recommends that the rule as adopted not include the limitation on qualified professional engineers that they “not have participated in previous assessments for the resource for at least five years.” The proposed limitation is unnecessarily restrictive given the limited pool of qualified professional engineers with the relevant expertise and also exceeds the statutory requirement, which requires only that the professional engineer not be an employee of the generation entity.<sup>27</sup> Vistra proposes that the rule more closely track the statute:

**(e) Weather-related failures by a generation entity to provide service.** A generation entity that is notified by ERCOT that its ~~with a resource has that~~ experiences one or more instances of a repeated or major weather-related forced interruptions of service must contract with a qualified professional engineer to assess its weather emergency preparation measures, plans, procedures, and

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<sup>27</sup> PURA § 35.0021(d)(1) (“The commission by rule shall require a provider of electric generation service described by Subsection (a) for a generation asset that experiences repeated or major weather-related forced interruptions of service to: (1) contract with a person who is not an employee of the provider to assess the provider’s weatherization plans, procedures, and operations for that asset”).

operations. A generation entity may dispute whether the notice is factually supported. The qualified professional engineer must not be an employee of the generation entity or its affiliate. ~~The qualified professional engineer must not have participated in previous assessments for the resource for at least five years, unless the generation entity provides documentation that no other qualified professional engineers are reasonably available for engagement.~~ The qualified professional engineer must conduct a root cause analysis of the failure and develop a corrective action plan to address any weather-related causes of the failure. The generation entity must submit the qualified professional engineer's assessment to the commission and ERCOT. A generation entity to which this subsection applies may be subject to additional inspections by ERCOT. ERCOT must refer to commission staff for investigation any generation entity that does not comply with a provision of this subsection.

vi. Proposed Rule, Subsection (h) – ERCOT weather study

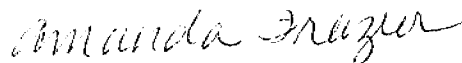
Vistra has no recommended changes to this section, but notes that this section would be rendered effectively meaningless if the rule as adopted contains the alternative weather standard based on the minimum or maximum ambient temperature (as applicable) at which a particular resource has sustained operations. Vistra recommends that this section be retained and that the alternative weather standard be stricken from the rule, as detailed above.

## II. CONCLUSION

Vistra appreciates the opportunity to provide these comments for the Commission's consideration

Dated June 23, 2022

Respectfully submitted,



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Amanda Frazier  
State Bar No. 24032198  
Senior Vice President, Regulatory Policy

1005 Congress Ave., Suite 750  
Austin, TX 78701  
512-349-6442 (phone)  
[amanda.frazier@vistracorp.com](mailto:amanda.frazier@vistracorp.com)

**PROJECT NO. 53401**

**ELECTRIC WEATHER  
PREPAREDNESS STANDARDS –  
PHASE II**

§  
§  
§

**BEFORE THE  
PUBLIC UTILITY COMMISSION  
OF TEXAS**

**STAND-ALONE EXECUTIVE SUMMARY REGARDING VISTRA CORP.'S  
COMMENTS ON PROPOSED RULE REGARDING PHASE II WEATHER  
PREPAREDNESS STANDARDS**

- The weatherization standard should consist only of the proposed 72-hour minimum/maximum average temperature percentile standards based on the ERCOT weather study and not include the alternative “lesser [greater] of the minimum [maximum] ambient temperature at which the resource has experienced sustained operations,” since the alternative is ambiguous, undefined, and would effectively negate the use of a standard based on the ERCOT weather study, in contravention of Public Utility Regulatory Act (PURA) § 35.0021(b).
- Vistra supports use of the proposed 95<sup>th</sup> percentile, but would also support use of the more conservative 99<sup>th</sup> percentile for the minimum average 72-hour temperature, so that the preparedness standard for winter would be even more robust, consistent with the aim of the underlying statute (PURA § 35.0021), which was adopted in response to Winter Storm Uri.
- The definition of “major” outage should be translated from the proposed 7,500 MWh standard to something that applies equitably across the whole fleet, such as a 50 percent or greater derate for at least 48 consecutive hours, which would roughly translate to a 7,500 MWh loss for the average sized unit in ERCOT.
  - Vistra is open to different parameters for the percentage of derate and the length of the outage needed to qualify as “major,” so long as the standard is reasonable and applies equitably across different resource sizes (rather than targeting large dispatchable resources to a greater extent than smaller resources as the 7,500 MWh standard would).
- The definition of “repeated” outages similarly should be modified to be consistent in the measured reliability impact across resource sizes, such as by requiring a 12-hour duration for each type of capacity loss outlined in the definition.
- For both “major” and “repeated” outages, it is imperative that the rule language reflect causality from the weather event and not simply reflect outages “during” a weather event.
- The rule should require an update to weather preparedness plans following an update to the ERCOT weather study *only if* the updated study indicates the need for updates to the plan, and the rule should allow for good cause exceptions or extensions to the one year compliance timeline to account for unforeseen or irreconcilable circumstances such as supply chain issues.
- Resources that have submitted a notification of suspension of operation (NSO) should be exempt from the requirements of the rule without having to await “ERCOT approval,” which is not required under the Protocols. If the resource enters a reliability must run (RMR) agreement or will be operating during the season under a seasonal mothball (or

later returns to service), the requirements of the rule should apply at those times (i.e., after the RMR contract term starts, during the seasonal operation period, and on the return to service date in the NSO).

- ERCOT should notify generators when it believes they have experienced a “major” outage or incurred a strike against the “repeated” outage standard, and there should be a process to adjudicate factual disputes pertaining to ERCOT’s assertion.
- Preparation requirements and “assurances” attested to under the proposed rule should be “reasonably within the generator’s control” to account for circumstances such as supply chain issues or natural gas pressure issues.
- The rule should provide that a violation of the rule “may be determined” to be a Class A violation, to acknowledge that there could be technical or procedural violations of the rule that do not rise to the level of Class A and would not constitute a violation of the substance of PURA § 35.0021.
- The required attestation in the rule should be able to be signed by an officer or representative with technical expertise, rather than requiring the highest ranking officer to sign the attestation, given the highly technical nature of what the attestation must address.
- The rule should not prevent a generation resource from using the same qualified engineer if it has to do an audit more than once in a five year period, as such a requirement exceeds the statutory requirement, which is only for the engineer to not be an employee, and as the field of qualified engineers is limited.
- The rule should specify that ERCOT will recover the costs of inspections through the system administration fee.
- The rule should clarify that inspection checklists will be developed by ERCOT, in consultation with Commission staff, through the adoption of Protocols or Other Binding Documents, since those are the mechanisms through which ERCOT takes action.
- The definition of “winter” should mirror the ERCOT Protocols and extend through February, rather than March.