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RULEMAKING ESTABLISHING ELECTRIC WEATHERIZATION STANDARDS	**§ § §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

ONCOR ELECTRIC DELIVERY COMPANY LLC'S RESPONSE TO COMMISSION STAFF'S DISCUSSION DRAFT AND REQUEST FOR COMMENTS

Oncor Electric Delivery Company LLC ("Oncor") files this response to the Discussion Draft and Request for Comments ("Discussion Draft") from the Staff of the Public Utility Commission of Texas ("Commission Staff") filed in this project on July 19, 2021. This response is timely filed on or before 3 p.m. on July 30, 2021.

I. INTRODUCTION

Oncor appreciates Commission Staff's diligent work in preparing this rule on an expedited basis. At the same time, Oncor's ability to offer thorough and final comments on this rule is constrained by the fact that the specifics of the weatherization requirements are not yet known, because they are anticipated to come out of ERCOT's weather study that has not yet occurred. Oncor understands that the Commission will review ERCOT's weather study and, upon approval of that weather study with or without modifications, implement its requirements. That further step, which is perhaps the most important aspect of this weatherization-rulemaking effort, should take place pursuant to a rule amendment that allows a reasonable opportunity for notice of and comment on the precise contours of these new requirements.

The details of ERCOT's weather study will have far-ranging consequences for how these new weatherization standards apply to ERCOT transmission service providers (TSPs) such as Oncor. As of December 31, 2020, Oncor's transmission system comprises more than 18,000 circuit miles of transmission lines and more than 1,100 stations across a wide range of weather zones. The level of capital investment required to implement new weatherization standards and the speed with which implementation can occur will be directly correlated to the magnitude of difference between the to-be-determined ERCOT weatherization standards and the National Electric Safety Code (NESC) standards in place today. The Commission should also consider the increased operations and maintenance (O&M) expense that will be associated with that same magnitude of difference.

Given the unknown parameters of those requirements and the timing of their ultimate adoption through an amendment to proposed Rule §25.55, Oncor recommends that the effective date of the substantive inspection, reporting and other compliance requirements not be set until the Commission has reviewed and is prepared to approve ERCOT's weather study and its related weatherization requirements through an amendment to proposed Rule §25.55. A phase-in period is also likely to be appropriate, to allow, among other things, in-flight projects adequate time to incorporate the new standards so that investments already made will not be wasted.

In short, under the current structure of the proposed rule, ERCOT's weather study should serve as the beginning of the comment process on the weatherization requirements, not the end of it, for the simple reason that TSPs cannot begin to inspect facilities, implement new design and construction practices, and otherwise assess and ensure compliance with any new requirements until the Commission-approved version of the weather study and weatherization requirements is finalized.

II. EXECUTIVE SUMMARY

With respect to the questions for comment and the current draft provisions of new Rule §25.55, Oncor provides the following executive summary of its comments as requested by Commission Staff's Discussion Draft:

- Question 1 – The National Centers for Environmental Information provides detailed, reliable weather information through its website and represents the single most reliable source of such data.
- Question 2 – Oncor has no comment on generation-market recovery mechanisms, but does believe that existing TSP capital recovery mechanisms provide sufficient cost recovery opportunities for TSP capital costs resulting from this proposed rule; however, O&M costs resulting from this proposed rule are likely—depending on the scope of the ultimate new requirements—to be significant, and should be recorded and recovered through a regulatory asset.
- Rule §§ 25.55(b) and/or 25.55(l) – The Commission should clarify that ERCOT's inspection authority derives from PURA §§ 14.204 and 14.206 and ensure corresponding protections are built into this rule.
- Rule § 25.55(c) – Clarifying edits are needed to help ERCOT and TSPs understand the intended meaning of terms such as "weather scenarios" based on "percentile probabilities."

For example, a weather scenario with a 98th percentile probability should be interpreted to refer to a once-in-50-years mean recurrence interval for that type of weather event.

- Rule § 25.55(i)
  - Oncor undertakes a significant number of seasonal preparedness checks and other preparedness measures for extreme weather.
  - Detailed comments on this provision are difficult at this juncture because the specific weatherization requirements arising from ERCOT's weather study remain unknown.
  - Adopting requirements in line with NESC requirements will lessen the time and expense required to assess weatherization compliance, while weatherization requirements that exceed NESC requirements will require correspondingly greater investments of time and expense to evaluate, inspect and potentially retrofit or rebuild those facilities.
  - While many of Oncor's older facilities may nevertheless meet current NESC requirements, detailed assessments would still need to be performed for verification.
  - Clarifications would be helpful to address the types of service interruptions that would violate this rule and that ERCOT's weather study should look at different types of 98th percentile probability weather scenarios independently, not simultaneously.
- Rule § 25.55(j)
  - The timelines for compliance with the weatherization requirements determined in ERCOT's weather study should be determined only after ERCOT conducts the weather study so that the level of resources needed to perform the required inspections, assessments and reports are known with greater certainty.
  - Clarifying edits would better distinguish the facilities outside of a station to which this subsection refers, and transmission lines should be expressly included as facilities that are outside of a station for purposes of this rule.
- Rule § 25.55(k)

- Similar to the comments with respect to the timing for implementing these new weatherization requirements, the required timeline for compliance with these new requirements should not be determined until after those requirements are known.
- In any event, the annual compliance reports under this subsection should occur no earlier than, and at the same time as, the deadline for compliance established in subsection (j), which under the Discussion Draft would be November 30, 2023.

- Rule § 25.55(m) – The Commission should limit the circumstances under which a transmission facility would be ordered to cease operations during the cure period to those that would threaten the safety of people or property.
- Oncor also respectfully requests that temporary transmission facilities, such as emergency installations and temporary bypass lines that are needed to maintain situational reliability and allow needed projects to proceed more quickly, be exempted from the requirements of this rule. Similarly, the Commission should add a subsection that explicitly allows exemptions or deadline extensions for specific facilities or projects for good cause shown.

III. RESPONSES TO QUESTIONS IN DISCUSSION DRAFT

Oncor appreciates the opportunity to provide these responses to the following numbered questions in Commission Staff's Discussion Draft:

1. *What is the availability of statistically reliable weather information from, e.g. the American Society of Heating, Refrigeration and Air Conditioning Engineers; National Weather Service; or other sources for the ERCOT power region? Please share the source of that information.*

Response:

The National Centers for Environmental Information (NCEI), a part of the National Oceanic and Atmospheric Administration (NOAA), provides access to a wide and deep array of detailed, reliable weather information through its website at https://www.ncei.noaa.gov/. To the best of Oncor's knowledge, NCEI is the best source of such data and should be sufficient to meet the needs of this rulemaking effort.

2. *Do existing market-based mechanisms provide sufficient opportunity for cost recovery to meet the weather reliability standards proposed in the discussion draft? If not, what cost recovery mechanisms should be included in the proposed rule?*

Response:

With respect to capital costs associated with retrofitting or rebuilding facilities, the existing interim transmission cost of service update mechanism provides sufficient opportunity for TSPs

to recover capitalized expenses associated with meeting the weather reliability standards set forth in this Discussion Draft.

With respect to the significant levels of non-capitalized expenses likely to be associated with the inspections, reports and other actions required by these proposed weatherization standards, the Commission should provide for regulatory asset treatment through a new rule subsection as follows:

> (n) **Regulatory Asset Treatment for Non-Capitalized Expenses of a Transmission Service Provider.** Each transmission service provider in the ERCOT power region may record as a regulatory asset its new, non-capitalized expenses resulting from the requirements of this rule. In future proceedings, the Commission will consider the appropriate adjustment to the utility's rates to reflect the recovery of the approved amount of regulatory assets recorded in accordance with this rule.[1]

IV. COMMENTS ON PROPOSED RULE § 25.55 IN DISCUSSION DRAFT

Proposed §25.55(a) – Application

No comments.

Proposed § 25.55(b) – Definitions

Either in this subsection or in subsection § 25.55(l), the definition of "inspection" should be clarified to explicitly state that ERCOT's inspection authority under the rule derives from the Commission's statutory authority under PURA § 14.204, which allows the Commission to authorize an agent to "inspect the plant, equipment, and other property of a public utility within its jurisdiction … at a reasonable time for a reasonable purpose."[2] Clearly stating the legal basis for this power may help ERCOT explain the source of its inspection authority to landowners or other stakeholders that will be impacted but are likely to be unaware of it.

Consistent with the due process considerations existing in PURA § 14.206,[3] ERCOT's inspection program should require that inspections occur at a reasonable time with reasonable advanced notice to the utility, including a reasonable opportunity to secure a representative and to

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[1] *Cf. Issues Related to the State of Disaster for the Coronavirus Disease 2019*, Project No. 50664, Order Related to Accrual of Regulatory Assets (Mar. 26, 2020).

[2] PURA § 14.204.

[3] PURA § 14.206 (requiring a Commission agent to provide reasonable notice to the public utility and conduct an inspection or other action during reasonable hours, with reasonable time for the utility to secure a representative, before an agent may enter the "premises occupied by a public utility to conduct an inspection [or other authorized action]").

notify other stakeholders, such as the landowners mentioned above. In the context of site visits, advanced notice also allows for reasonable coordination to ensure the safety of personnel, plant, and equipment.

Proposed § 25.55(c) – Weather Study

As stated in the Introduction above, comments on the more substantive provisions in this rule are necessarily general in nature at this stage due to the unknown details regarding the particulars of these new weatherization requirements. Nevertheless, the framework of this rule, into which the actual requirements will be added, could be tightened in certain places.

For example, the Commission should clarify the meaning of "weather scenarios in the 95th, 98th, and 99th percentile probabilities" for the weather study that would be required by proposed rule § 25.55(c)(1). Oncor interprets the listed percentiles to refer to weather events that would on average be expected to recur once every 20, 50, and 100 years, respectively,[4] but Commission clarification would be helpful.

The Commission should also clarify the intended breadth of "precipitation" in the context of this rule. While Oncor interprets this word to cover rainfall, snow, ice, freezing rain, and similar occurrences, Commission clarification would provide more certainty regarding the term's scope.

Proposed Rule § 25.55(c)(2) should also adopt the following additional language underlined below to correct what appears to have been an inadvertent omission from the Discussion Draft: "If changes to weather occur that materially affect the ability of generation entities and transmission service providers to meet the weather reliability standards in this section, ERCOT must promptly prepare and file with the commission <u>an updated weather study</u> before the otherwise applicable five-year deadline."

Proposed § 25.55(d)–(h) – Generation-Related Provisions

No comments.

Proposed § 25.55(i) – Weather Reliability Standards for a Transmission Service Provider

<u>Background</u>: To prepare its facilities for extreme temperatures during both summer and winter weather, Oncor has developed a robust list of weather preparation measures to help ensure

[4] A once-in-50-year weather event standard would make the 98th percentile weather probability analysis consistent with NESC Rules 250C and 250D, which evaluate Extreme Wind and Extreme Ice with Concurring Wind conditions, respectively, based on a 50 year mean recurrence interval.

its facilities are ready to serve during these times.[5] Oncor conducts semiannual seasonal preparation checks to prepare its facilities for summer and winter peaks. An overview of the main components of these comprehensive measures are summarized below:

Summer

- Aerial or ground-based inspection of 345 kV lines for encroachments or right-of-way issues with respect to loading/sagging;
- Inspection and testing of selected protection systems;
- Infrared inspections of stations;
- Switching station and substation checks of control houses, transformers/autotransformers, circuit breakers, general station equipment, and related facilities;
- Application of special inspection scrutiny for critical facilities and those subject to potential contingency overload or near-overload conditions based on projected weather;
- Inspections of station capacitor readiness; and
- Inspections of mobile substation readiness.

Winter

- Switching station and substation checks of control houses; transformers/autotransformers, circuit breakers, general station equipment, and related facilities;
- Other facility checks to ensure appropriate levels of necessary items and coverage, such as antifreeze levels, exposed plumbing insulation, etc.;
- Emergency generator checks to gauge adequacy of fuel and functionality in expected weather conditions;
- Mobile equipment checks to gauge adequacy of fuel and functionality in expected weather conditions;
- Transportation/vehicular checks to gauge adequacy of fuel and functionality in expected weather conditions; and

[5] If requested by Commission Staff, Oncor will confidentially share its procedures for these measures under seal or through table-top review.

- Personnel and personal protective equipment (PPE) checks for employee safety.

Additional Weather Preparedness Measures

- Facility design and siting also influence extreme weather preparedness. For example, Oncor locates certain important facilities, such as sensitive components of static synchronous compensators (STATCOMs), "FACTS" devices, and static var compensators (SVCs), inside station houses to reduce potential weather impacts.
- In addition to annual seasonal preparedness inspections, Oncor has engaged in numerous efforts to further enhance operational readiness during extreme weather conditions by evaluation of operational risks and asset conditions. These efforts include capital improvement projects such as high voltage circuit breaker and switch replacements, switch gear circuit breaker retro-fits, transformer bushing and arrestor replacements, and improved monitoring capabilities by way of temperature and dissolved gas analysis monitor installations. Oncor also performed a number of on-demand preventative maintenance activities such as additional transmission line inspections in high loading and heavy vegetation-prone corridors, equipment overhauls (*e.g.*, switchgear), component replacements like transformer fans/pumps, and inspection and diagnostic testing of equipment in locations with limited to no back-stand capabilities.

Comments on Discussion Draft § 25.55(i) – Governing requirements of the NESC inform good utility practice regarding extreme weather preparedness. The NESC was first adopted in 1916, and subsequent versions changed its requirements over time. The NESC's basic structural loading requirements applicable to Oncor's transmission system have, with respect to low temperature and radial ice loading conditions, remained relatively constant in each weather zone since the NESC was first adopted. Requirements relating to wind pressure, wind speed, and extreme icing, however, have not. Wind pressure requirements have varied since 1916. New wind speed requirements were adopted in 1977 (Rule 250C on Extreme Wind) and again in the 1980s to supplement wind pressure requirements. The NESC's Extreme Ice with Concurring Wind requirements (Rule 250D) were not adopted until 2007. In short, minimum standards for utility facilities have evolved as NESC requirements have changed over time. Given existing Commission rules requiring adherence to NESC requirements, the new rules on weatherization should explicitly state that a facility's compliance with NESC standards in effect at the time of its

initial construction (or subsequent capital upgrade/rebuild, if applicable) is deemed to conform with good utility practice for purposes of this section.

If ERCOT's weather study effectively adopts weatherization requirements consistent with existing, grandfathered NESC requirements,[6] TSPs will be able to conduct inspections and determine compliance in a relatively efficient manner, as they will know the design criteria and construction standards applied to their facilities by reference to NESC and internal standards in effect at the relevant time. If ERCOT's weather study imposes weatherization requirements above and beyond what NESC requires, however, TSPs will be unable to rely on their known design criteria and construction standards, effectively requiring them to conduct a span-by-span re-analysis of their entire transmission system. For Oncor this endeavor would take a very large amount of time and both O&M and capital expense, given its system's wide geographic footprint, varying facility ages, and the evolution of NESC wind and icing condition requirements (among others) over the years.

As a ballpark reference point, more than 8,000 miles of Oncor's transmission lines were built prior to the 1977 adoption of NESC Rule 250C on Extreme Wind Conditions, and over 50% of its stations were also built before this date. Similarly, more than 10,000 miles of Oncor's transmission lines were built prior to the 2007 adoption of NESC Rule 250D on Extreme Ice with Concurring Wind conditions, and more than 80% of its stations were also built before this date.

The foregoing cautions relate to the cost and difficulty of ensuring that every single transmission line complies in every single respect with the current version of the NESC. And as noted above, NESC requirements have indeed been modified and expanded multiple times over the years. Interestingly, however, Oncor believes a majority of its facilities that pre-date adoption of Rules 250C and 250D may nonetheless comply with the current versions of those NESC requirements, partly because NESC changes often represent calculation changes that do not necessarily increase what is required of transmission equipment, and partly because Oncor built many facilities to exceed then-existing NESC requirements. But more detailed analysis, with the cost and time investment mentioned above, would be needed to achieve certainty. Relatedly, Oncor notes that the facilities least likely to comply with current NESC standards are older 69 kV lines on wooden structures; many of those lines are already slated for improvement (such as steel

[6] Generally, new facilities must meet current NESC requirements while older facilities must meet the NESC requirements then in effect at the time of the facility's initial construction.

crossarm installation) or rebuilding in the coming years, and they tend to be nearer the fringes, both operationally and geographically, of the backbone ERCOT transmission system.

If the weatherization requirements ultimately go above and beyond NESC grandfathered requirements, then much depends on which new requirements that is true for, and how much beyond NESC they go. It is possible that span-by-span inspection granularity (if that is the Commission's desired level of detail) would be necessary to assess compliance. But that simply cannot be known until additional analyses are performed, and those analyses and inspections cannot begin until the Commission approves the applicable weatherization requirements based on ERCOT's study.

In order to comply with the requirement in this subsection to "provide service" consistent with the enforcement provision in subsection (m)(3) of the draft rule, Oncor respectfully suggests that this portion of the rule be revised as follows: "A transmission service provider must maintain weather preparation measures that reasonably ensure that its transmission system can provide service <u>without repeated or major weather-related forced interruptions of service, including forced outages, derates, or maintenance-related outages</u> at the system's applicable rated capabilities as defined by ERCOT...."

Finally, the Commission should clarify that this rule requires facilities to meet each 98th percentile extreme weather scenario occurring *independently*, not multiple 98th percentile extreme weather scenarios occurring *simultaneously*. Consideration of multiple 98th percentile extreme weather scenarios simultaneously would likely result in new weatherization requirements that, given the historical performance of ERCOT transmission facilities, would substantially and unnecessarily exceed existing NESC requirements.

Proposed § 25.55(j) – Implementation of Weather Reliability Standards for Transmission Facilities

As stated above, any new requirements arising from ERCOT weather study that exceed NESC requirements for new facilities should be subject to a phase-in to allow for their incorporation into planning, design, engineering, procurement and construction phases of in-flight projects. And any new requirements arising from this rule should become effective well after those requirements are known and approved by the Commission. The specific length of the phase-in,

and the effective date, cannot reasonably be set until the ERCOT weather study requirements are known.

Additionally, this subsection of the rule should provide a clearer demarcation on transmission facilities inside versus outside of a substation or switching station, especially as it relates to transmission lines that enter and exit stations. As written, the rule could be read to apply to most transmission lines despite the apparent intent to draw a clear compliance distinction between station-related facilities, on the one hand, and transmission lines that are located well beyond station boundaries on the other. One way to clarify this demarcation would be as follows:

> A transmission service provider's transmission system must meet subsection (i) of this section no later than November 30, 2023, except for:
>
> (1) transmission lines, or
>
> (2) other transmission facilities outside of a substation or switching ~~sub~~station, ~~that~~ so long as such facilities were designed in conformance with good utility practice but are insufficient to meet the standard....

Proposed § 25.55(k) – Compliance with Weather Reliability Standards by a Transmission Service Provider

As drafted, this portion of the rule could be interpreted to require annual weatherization inspections of the entirety of Oncor's transmission system, which would be a resource intensive undertaking.[7] Until the weather study is conducted and ERCOT's market rules are known, TSPs cannot realistically get a head-start on conducting these inspections, implementing changes, and/or studying potential rebuild projects. For the reasons stated above, therefore, an effective date for implementing and enforcing compliance with these yet-unknown standards should be pegged to their Commission approval date through an amended rule § 25.55 adopting the relevant ERCOT weather study and resulting requirements.

Even apart from Oncor's suggested clarification, the apparent timing requirement in this subsection creates a mismatch with subsections (i) and (j). Whereas subsection (j) mandates weatherization compliance by November 1, 2023, this subsection does not specify when the first report under subsection (k) would be required other than "November 1 of each year." Without further clarification, that date might be interpreted to begin November 1, 2022. An ERCOT weather study submitted by January 1, 2022, and approved by the PUC at a later point in 2022,

[7] This contrasts with PURA § 38.102 and 16 TAC § 25.97, which require 5-year and annual reporting but do not impose annual system-wide inspections of all transmission facilities.

would provide an extremely short timeframe for Oncor to comprehensively study its entire 18,000+ circuit miles of transmission lines and 1,100+ stations and then compose a report by November 1, 2022 that verifies Oncor's entire transmission system "is in compliance with the weather reliability standard in subsection (i) of this section."

For consistency, this subsection of the rule should, at the least, sync with the November 30, 2023, report timing required in subsection (j) by clarifying that the first annual compliance report and affidavit under this subsection would be filed in November 2023. The applicable amendment to this rule subsection should therefore read as follows: "A transmission service provider must submit an annual report to ERCOT no later than November ~~1~~ 30 of each year, beginning on November 30, 2023, that addresses compliance with subsection (i) of this section." As mentioned above, however, the better course would be to delay setting definitive compliance timelines until the substantive weatherization requirements are known following Commission adoption of ERCOT's weather study.

Finally, Oncor also respectfully requests that the Commission adopt a procedure to allow case-by-case review of potential good cause exemptions from these weatherization requirements or deadline extensions for individual facilities or projects. That suggested language is included below in proposed new § 25.55(o).

Proposed § 25.55(l) – Inspections for a Transmission Service Provider

As discussed above, either the definition of "inspection" in subsection (b) or the provisions of this section should clarify that ERCOT's inspection authority arises from its designation as a Commission agent under PURA §§ 14.204 and 14.206.

Proposed § 25.55(m) – Violations of Reliability Standards for a Transmission Service Provider

In order to provide clarity on the potential basis for, and length of, a determination that transmission facilities should not be operated based on noncompliance with weatherization requirements, Oncor suggests the following edits to subsection (m)(2) of the proposed rule: "A transmission service provider may continue to operate its transmission facility during the cure period unless ~~otherwise determined by~~ ERCOT reasonably determines that such facility should be temporarily de-energized because it presents an imminent and substantial safety hazard to people or property."

Suggested New § 25.55(n) - Regulatory Asset Treatment for Non-Capitalized Expenses of a Transmission Service Provider

See Oncor's response to Staff Question 2 in Section II above for suggested language.

Suggested New § 25.55(o) – Exemption for Temporary Transmission Facilities and for Good Cause

In order to avoid possible unintended consequences of mandating weatherization requirements for emergency installations of transmission facilities[8] or intentionally non-permanent transmission facilities such as temporary bypass lines, the Commission should exempt these facilities from the rule's requirements.[9] Similarly, the Commission should retain flexibility to exempt or delay the implementation of weatherization requirements for specific facilities if a TSP or ERCOT shows good cause. Accordingly, Oncor suggests the following language:

> (o) **Exemptions for Temporary Transmission Facilities or for Good Cause.** This section does not apply to: (1) temporary transmission facilities a transmission service provider installs due to an emergency, such as interim repairs or temporary rebuilding of transmission facilities following an outage event; (2) temporary transmission facilities a transmission service provider installs to provide service on a temporary basis, such as temporary bypass lines that may be installed to help provide service during construction of permanent transmission facilities; or (3) specific facilities or projects that, upon a showing of good cause by a transmission service provider or ERCOT, the commission by order exempts from one or more of the requirements of this rule or extends a deadline otherwise imposed by this rule.

V. CONCLUSION

Oncor appreciates the opportunity to provide this response to Commission Staff's Discussion Draft, and it looks forward to providing additional input on these issues throughout this rulemaking proceeding and upon ERCOT's issuance of the weather study contemplated by the proposed rule.

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[8] *See, e.g.,* 16 TAC § 25.83(d) (discussing repair or reconstruction of a transmission facility due to emergency situations).

[9] Certain of these temporary and/or emergency transmission facilities may still be subject to NESC requirements.

Respectfully submitted,

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