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PROJECT NO. 54584

**RELIABILITY STANDARD FOR THE
ERCOT MARKET**

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**PUBLIC UTILITY COMMISSION
OF TEXAS**

**TEXAS PUBLIC POWER ASSOCIATION'S RESPONSE TO
STAFF QUESTIONS FOR COMMENT**

The Texas Public Power Association (TPPA) appreciates the opportunity to respond to the questions for comment issued by the Staff of the Public Utility Commission of Texas (Commission), regarding the development of an appropriate reliability standard in the ERCOT power region. These comments are submitted on behalf of TPPA and do not necessarily reflect the opinions of any individual TPPA member.

Formed in 1978, TPPA is the statewide association for the 72 municipally-owned utilities (MOUs) in Texas. TPPA membership also includes several electric cooperatives and joint action agencies, as well as the Lower Colorado River Authority. TPPA members serve urban, suburban, and rural Texas and vary in size from large, vertically-integrated utilities to relatively small distribution-only systems. We are proud to serve approximately 5.1 million Texans across the state. Most of our members operate within the Electric Reliability Council of Texas (ERCOT) region,¹ though several are located within either the Southwest Power Pool (SPP) or Midcontinent Independent System Operator (MISO) region. MOUs offer a long track record of stability, and we serve an essential role in providing secure and reliable power to the wholesale electricity markets in these regions, including ERCOT. Many of our member systems have been providing stable and reliable electric power to communities in Texas for over 100 years, and collectively, our members provide more than 13,800 MW of generation and maintain more than 8,500 miles of high-voltage transmission assets.

On March 7, 2023, Commission Staff posted the questions for comment, seeking initial comments by March 29, 2023. These responses are timely filed.

¹ 70% of Lubbock Power and Light's customers were moved to the ERCOT region on May 29 and 30, 2021. The remainder will be transitioned from SPP later this year.

I. General Comments

TPPA appreciates the work that the Commission and Commission Staff have put into this project, including the multiple memos that provide a detailed history of the Commission's past work in this space. TPPA also appreciates ERCOT's willingness to work alongside stakeholders, including the special-purpose workshop ERCOT hosted earlier this month for a robust discussion of ERCOT's proposed framework. The development of a reliability standard will impact many, if not all, of the Commission's upcoming market design decisions, and the process so far has provided ample opportunity for stakeholder engagement.

To that end, TPPA emphasizes that much of this discussion may be forced to pivot in the coming months. The Texas Legislature currently has several bills before it that would change how the ERCOT market works, including, notably, bills that would implement firming requirements,² require the construction of rate-regulated generation (by generation owners³ or TDUs⁴), or bar the use of renewable energy sources entirely,⁵ among others. The Commission's Phase 2 market design will also fundamentally alter how the ERCOT market functions. ERCOT itself will also introduce new products (such as ERCOT Contingency Reserve Service) and expand upon other products (including the Firm Fuel Supply Service), each of which will have impacts on overall system reliability, as well as implement Real-Time Co-optimization of the energy and ancillary services markets. On the other side of the equation, the Commission's work on Aggregate Dispatchable Energy Resources will create new opportunities for load-side resources to provide additional reliability to the grid.⁶

Simply put, the Commission must ensure that its reliability standard is both robust enough to meet the needs of Texans and flexible enough to meet the challenges posed by new technologies and new regulations coming in the near future. To that end, TPPA makes two requests: First, the Commission should clarify how other reliability metrics it currently has available, including the Economically-Optimal Reserve Margin (EORM) and ERCOT's existing resource adequacy reporting requirements⁷, are expected to interact with each other and with any reliability standard the Commission is expected to adopt as a result of this project. Ensuring that these metrics complement each other will ultimately provide regulatory certainty that the fundamentals of the ERCOT market support necessary reliability.

² Tex. S.B. 7, 88th Leg., R.S. (2023).

³ Tex. S.B. 6, 88th Leg., R.S. (2023).

⁴ Tex. S.B. 2012, 88th Leg., R.S. (2023).

⁵ Tex. H.B. 2288, 88th Leg., R.S. (2023).

⁶ There are also multiple bills relating to demand response, energy efficiency, and distributed energy resources currently being debated in the Legislature.

⁷ See 16 Texas Administrative Code § 25.505.

Second, the Commission should clarify the purpose of the reliability standard. If it will be used merely as a benchmark for additional study, the Commission may be able to expedite this process. If, however, the reliability standard will directly feed into market elements, such as the ORDC or the Phase 2 market design (including the administratively-determined demand curve of the Performance Credits Mechanism), and explicitly or implicitly become a mandated reliability standard, the Commission should proceed cautiously, as this input could cause considerable downstream effects with the overall ERCOT market. Regardless, any mechanics to address a deficiency in meeting the standard should be clearly delineated in a Commission rule.

II. Response to Staff Questions for Comment

(1) The Commission has previously considered various reliability metrics, such as Loss of Load Expectation (LOLE), Loss of Load Hours (LOLH), and Expected Unserved Energy (EUE).

- Which reliability metrics, including those not previously studied, should the Commission consider in establishing a reliability standard for the ERCOT power region?*
- Which reliability metric, or combination of reliability metrics, should the Commission adopt for the reliability standard in ERCOT?*
- What are the advantages of your chosen reliability metrics, and what are the disadvantages of alternative approaches?*

TPPA believes that more data is needed before the Commission can select a particular reliability standard (or combination of standards). ERCOT is appropriately considering several different metrics, including LOLE, LOLH, and EUE, and the Commission should task ERCOT with providing deep analysis on how these metrics (and others suggested by stakeholders) would interact with the ERCOT market as a whole, both individually and in various combinations, to ensure that the Commission's ultimate decision to adopt a standard is well-informed, consensus-based, and does not result in aggressive overprocurement without meaningfully improving reliability in real-time operational experience.

In evaluating different proposed standards, the Commission should ensure that, in addition to reliability, the standard also reflects the cost to consumers to ensure that a reliable grid does not become an unaffordable one.

(2) What is the most effective way that the Commission can include deliverability in the reliability standard?

TPPA agrees that deliverability is an important aspect of the reliability standard. TPPA believes a regional approach to deliverability may spur investment in both transmission and dispatchable generation to increase the resiliency of the grid especially given the high load growth that is being experienced in many parts of Texas.

TPPA also believes that the Commission, in analyzing deliverability, should incorporate more than just addressing potential transmission constraints in its analysis. In the UT Energy Institute's 2021 report analyzing Winter Storm Uri, the report found that fuel limitations affected 6,700 MW or 131 units, while transmission and substation outages affected 1,900 MW or 18 units, demonstrating the relative scale of the issue with deliverability.⁸ The report further states that, "Detailed, unit-specific power plant outage information indicates that power plants with both 'firm' and 'non-firm' fuel supply contracts experienced fuel supply/curtailment issues. Also, at least five black-start-rated units reported outages or derates based on fuel supply issues" while "no coal, natural gas, or nuclear generation units listed transmission outage as a reason for an outage or derating."⁹

Winter Storm Uri demonstrated that lack of fuel can impact deliverability far more than any transmission constraint, and while the new Firm Fuel Supply Service will assist in ensuring additional reliability for these resources, the possibility of fuel supply issues should not be entirely discounted in ERCOT's modelling and the final reliability standard. Moreover, including an assessment of fuel reliability as a component of a regional approach has the potential to also incentivize natural gas infrastructure improvements.

(3) Additional considerations in establishing the reliability standard in the ERCOT power region.

- *Should the reliability standard include a locational requirement?*
- *Should the reliability standard include a seasonal component?*
- *How can extreme events be captured in a reliability standard?*
- *How can the value of distributed energy and load resources be captured in a reliability standard?*

As noted above, TPPA believes that the Commission should seek detailed analysis of multiple permutations of the different reliability standards under consideration. Each permutation should include financial analysis to fully inform stakeholders, the Commission, and the ERCOT Board of the costs and benefits of each option. At this early stage, this analysis should include studying the possibility of the inclusion of locational and/or seasonal components, even if those concepts are ultimately discarded in the final standard. TPPA recommends that the Commission also include in its analysis the potential for significant demand response capacity benefits in response to the market models under consideration.

Regardless of whether the Commission ultimately adopts an LOLE, LOLH, or EUE standard (or some combination of the above), these standards inherently focus on extreme events that cause loss of

⁸ "The Timeline and Events of the February 2021 Texas Electric Grid Blackouts," The University of Texas at Austin Energy Institute, July 2021 (pp. 31-32).

<https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary2021TexasBlackout%2020210714.pdf>

⁹ *Id.* at 31-32.

load. The Commission should ensure that remains the focus. To better incorporate extreme events and create a durable standard, the Commission should seek out scenarios involving extreme weather, extreme load growth, or extreme resource outages, as well as combinations of these factors.

TPPA believes that the reliability standard should account for the reliability benefits of distributed energy and load resources, and TPPA looks forward to reviewing suggestions made by other commenters.

(4) How frequently should the Commission update the calculation of the requirement necessary to meet the reliability standard?

- What criteria should help determine the frequency of the update?

TPPA believes that the Commission's reliability standard should be set such that it can be a durable, long-lasting standard that provides regulatory certainty for years at a time. As such, TPPA recommends that the Commission set regular reviews every ten years, with a supplemental trigger for special reviews should the fuel mix of the grid change dramatically (e.g., due to a substantial amount of resource retirements or the widespread deployment of new technologies, such as small modular reactors).

(5) If you have any industry or academic papers on the topic and best practices that you believe the Commission should review while establishing the reliability standard for the ERCOT power region, please provide them.

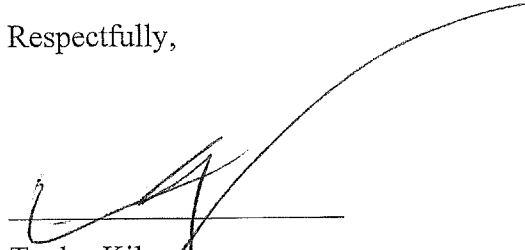
As the Commission reviews reliability standards found in other jurisdictions, TPPA recommends that the Commission seek out not just information about the standard itself, but also information about how often that standard is met (to see if the standard is an impossible-to-reach goal or something that is met regardless of market dynamics) as well as information about the market design that surrounds and supports that standard. This information will provide greater insight into the workability of the standard generally, as well as its potential applicability to the ERCOT market. The Commission must recognize that historical reliability metrics are being tested and questioned in all markets that are, or plan to transition to low or no carbon resource mixes. Work is currently underway in virtually all North American RTO markets and in Europe on this important topic and the Commission and ERCOT should take into account the conclusions and recommendations. TPPA believes that ERCOT should not look at each identified metric as a sole reliability construct. Rather, the Commission should consider the pluses and minuses associated with a combination of different metrics that would address not only the high-impact, long-duration episodes like Winter Storm Uri, but the shorter-term net load periods that are associated with reduction in solar output while waiting for the end of day wind ramp.

III. Conclusion

TPPA appreciates the opportunity to submit these comments. As always, TPPA looks forward to working with the Commission, its staff, and the stakeholders on these important questions and this broader discussion in the coming months.

Dated: March 29, 2023

Respectfully,

A handwritten signature in black ink, appearing to read 'Taylor Kilroy', is written over a horizontal line. The signature is stylized with a large, sweeping flourish that extends upwards and to the right.

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EXECUTIVE SUMMARY OF TPPA'S RESPONSE TO STAFF QUESTIONS FOR COMMENT

TPPA appreciates the work that the Commission, Commission Staff, and ERCOT have put into this effort, including the ample opportunity for stakeholder engagement thus far. TPPA believes this is critical, especially given the dramatic changes to the ERCOT market currently being considered by the Texas Legislature. TPPA recommends that the Commission ensure that its reliability standard is both robust and flexible. To that end, TPPA asks 1) that the Commission clarify how other reliability metrics (including the Economically-Optimal Reserve Margin and ERCOT resource adequacy reporting requirements) are expected to interact with each other and with this reliability standard and 2) what purpose this reliability standard will serve in this market, whether as a benchmark for additional study or a mandated reliability standard.

TPPA believes that more data is needed before the Commission can select a particular reliability standard and the Commission should task ERCOT with providing deep analysis on these metrics, including cost to consumers.

TPPA supports regional deliverability standards as well as a focus on fuel reliability.

TPPA recommends that the Commission seek detailed analysis of multiple permutations of different reliability standards, including locational and/or seasonal components, even if these concepts are ultimately discarded. In analyzing different permutations, the Commission should seek out scenarios involving extreme weather, extreme load growth, and extreme resource outages, including combinations of these factors.

TPPA believes that the Commission should set a durable reliability standard that provides regulatory certainty for years at a time. TPPA recommends regular reviews every ten years, with supplemental reviews for substantial fuel mix changes.

TPPA recommends that the Commission seek out information about other standards, including how often that standard is met, as well as the market design that surrounds and supports that standard. TPPA recommends that the Commission evaluate those standards not just in the terms of high-impact, long duration events, but also intraday net load periods.