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PROJECT NO. 52373

**REVIEW OF WHOLESALE
ELECTRIC MARKET DESIGN**

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**PUBLIC UTILITY COMMISSION

OF TEXAS**

TCPA RESPONSE TO COMMISSION QUESTIONS

Texas Competitive Power Advocates (TCPA) is a trade association representing power generation companies and wholesale power marketers with investments in Texas and the Electric Reliability Council of Texas (ERCOT) wholesale electric market. TCPA members¹ and their affiliates provide a wide range of important market functions and services in ERCOT, including development, operation, and management of power generation assets, power scheduling and marketing, energy management services and sales of competitive electric service to consumers. TCPA members provide approximately seventy percent (70%) of the total net operable electric generating capacity in ERCOT, most of which is dispatchable thermal resources that the Legislature, Governor Abbott, and the Commission have indicated they want more of. TCPA members have invested billions of dollars in the state and employ thousands of Texans.

TCPA appreciates the opportunity to provide these initial responses to the PUCT's market redesign questions filed on August 2, 2021. The association and its members will provide additional ideas and details on concepts or proposals as more information is presented, and additional Commission guidance and/or questions are issued. Our intent is aligned with that of the Legislature, Governor and Commission – we want to redesign the ERCOT market to introduce additional revenues that will drive investments in new and existing dispatchable, reliable generation resources. TCPA believes the Commission should adopt several market reforms to accomplish that goal.

Single changes, while helpful, such as incremental changes to in the Operating Reserve Demand Curve (ORDC), or adding ancillary service or reliability products, will not alone likely generate the sufficient, reliable revenues that are necessary to achieve those goals. It will take a

¹ TCPA member companies participating in these comments include: Calpine, EDF Trading North America, Exelon, Luminant, NRG, Shell Energy North America, Talen Energy, Tenaska, and TexGen Power.

combination of the new products *and* overall design changes as recommended below to accomplish the Legislature, Governor and Commission's goals. Additionally, as the resource mix in ERCOT continues to evolve, there may be a need to revisit the product offerings and market design to ensure the market is driving investment in the resources capable of maintaining reliable electricity production. This must be balanced by providing a stable and supportive regulatory environment. Without the right incentives and revenue streams, market participants will continue to face challenges in financing new resources and maintaining existing assets; and the market could see retirements, suspensions of operations or a lack of development, particularly of dispatchable resources that provide reliability. TCPA members are focused on designing a viable and durable market structure for the ERCOT region for years to come and not just for the near-term future.

EXECUTIVE SUMMARY

- Reasonably predictable revenues for dispatchable resources can signal the need for investment in new and existing resources without relying solely on scarcity of electricity.
- Changes should be adopted that target the development of a mix of resources, in particular, dispatchable resources which are critical to balancing the intermittent nature of renewables. The Commission should diligently monitor the resource mix and ERCOT's needs. It should continue to propose and adopt solutions that will actually increase the supply of dependable, reliable generation.
- The ERCOT market should provide price signals to ensure that new and existing market participants are properly incentivized to supply the real-time operating reserve needs for energy and ancillary services based on defined reliability standards.
- The ORDC must be reconceptualized to move away from the current scarcity model and provide increased revenue, in a more consistent and predictable manner. Scarcity energy-only signals have failed to bring sufficient new dispatchable generation to meet Texas' policy objectives and require the ERCOT market to operate too close to the edge regarding grid reliability.
- Supplementing a redesigned ORDC should be new products that give ERCOT the flexibility to narrowly target critical reliability needs, such as fuel resiliency, firming capacity, inertia, voltage support, reactive service, and frequency.

- ERS should be refined to either prohibit pre-deployment or counteract the price-suppressive impact of pre-deployment.
- Reliability objectives should be achieved through transparent, technology-neutral competitive market-based mechanisms. Products should be specified by the quality of MWs needed and not by technology type so that the market can innovate and compete to provide the service in the most efficient way.

COMMISSION QUESTIONS

1. **What specific changes, if any, should be made to the Operating Reserve Demand Curve (ORDC) to drive investment in existing and new dispatchable generation? Please consider ORDC applying only to generators who commit in the day-ahead market (DAM). Should that amount of ORDC - based dispatchability be adjusted to specific seasonal reliability needs?**

The ORDC must be restructured if the Commission wishes to move away from a “crisis-based model” that relies on periods of high loss of load probability to provide all investment and retirement signals. A lower ORDC cap must be combined with a structural extension that provides more expected revenues than the current ORDC structure. This must be supplemented with changes beyond the energy market that incentivize the additional generation and higher reserves needed to actually improve grid resilience, generation adequacy, and reliability.

Changes should be market-based, procuring of reserves through existing or new market structures rather than through out-of-market actions and implementing measures to offset the price impacts of unavoidable out-of-market actions. As a baseline, TCPA recommends the Commission require ERCOT to provide the real-time operating reserve target based on an objective reliability standard. Projected failure to meet this target for future periods should result in price signals that ensure adequate incentives for new investment to bridge the gap with some regulatory certainty. The reconstructed ORDC solves for this issue, in part, by facilitating the necessary MW procurement, allowing the ERCOT market to incorporate the new reserve strategy into the day-ahead and real-time markets (DAM and RTM, respectively).

The ORDC was designed to incentivize resources to make themselves available when real time emergencies develop by rewarding them commensurate with the timeliness of their availability and performance. Limiting ORDC-eligible resources to those assets committed in

the DAM would defeat the purpose of the real time reserve pricing signal. It would be especially punitive to fast start resources' commitment decisions (which are more likely to be decided near RTM operations) and Load Resources that might not get selected in the DAM but may still provide significant value during RTM emergencies. As such, limiting ORDC payments to only resources actually committed via the DAM process would be counter-productive.

2. **Should ERCOT require all generation resources to offer a minimum commitment in the day-ahead market as a precondition for participating in the energy market? a. If so, how should that minimum commitment be determined? b. How should that commitment be enforced?**

TCPA member companies do not have consensus on this issue at this time; and therefore, individual companies will provide their perspectives in their individual comments.

3. **What new ancillary service products or reliability services or changes to existing ancillary service products or reliability services should be developed or made to ensure reliability under a variety of extreme conditions? Please articulate specific standards of reliability along with any suggested AS products. How should the costs of these new ancillary services be allocated.**

SB 3 has some provisions related to ancillary services and separate provisions regarding reliability services. Section 14 of the bill addresses ancillary services and directs the Commission, in part, to "evaluate whether additional services are needed for reliability in the ERCOT power region while providing adequate incentives for dispatchable generation."² In order to create the necessary incentives for dispatchable generation, the Commission should create incentives for intermittent renewable resources (IRRs) to internalize the cost of displacing dispatchable capacity. This could be achieved intrinsically (e.g., onsite energy storage) or extrinsically (e.g., purchase agreement with dispatchable capacity). The incentives could be created as a cost assignment of certain costs related to AS procured to address net load variability or a compliance penalty like the Renewable Portfolio Standard (RPS). This could encourage forward contracting to ensure that periods of low renewable output are sufficiently backed up with dispatchable generation and provides an avenue of new revenue for dispatchable generation that is directly correlated with the volatility on the system caused by IRRs. To be clear, TCPA is not recommending that the

² Enrolled SB 3, 87th Regular Session, Texas Legislature Online - 87(R) Text for SB 3, p.22

Commission abandon the longstanding practice of assigning AS costs to load, only that IRRs bear their externality costs directly related to grid reliability on the rest of the system.

Another component of SB 3, contained in Section 18 of the bill, requires the Commission to, at least annually, review ancillary service products and sizing of the resource procurements to ensure they meet the needs of high demand and low supply scenarios through dispatchable generation resources.³ This would be an opportune time each year for the Commission to review whether the products and market design are driving investment in dispatchable generation and to make any necessary adjustments. The Commission should also evaluate procuring an annual ancillary service product from dispatchable resources during maintenance seasons and to backstop any unexpected contingency scenarios. This would be a good complement to the seasonal reliability product discussed below and work to ensure the market has sufficient reliable, dispatchable generation and adequate revenues on a year-round basis not just during periods of potential extreme weather.

The dispatchable generation provisions in Section 18 of SB 3 also direct the development of specific reliability products and establishes some parameters around them.⁴ The types of investments required to provide these types of products – installing dual fuel capabilities or onsite fuel storage, for example – are not variable costs but significant fixed costs that need a steady revenue stream to justify the investment. While individual member companies are best suited to discuss what their fleets are capable of and specific products that may suit them, TCPA recommends these reliability products, requiring fuel resiliency, be procured on a multi-year basis through an RFP process in which ERCOT determines the amount of megawatts that are needed. We recommend an independent study on the fuel shortfall in February 2021, accounting for likely additional shortfalls that would have materialized absent forced outages, to determine the minimum amount of fuel storage or dual fuel capability needed as well as the number of days and amount of megawatts. To qualify to provide this product, there could be specific qualifications similar to requirements for providing Black Start service. Since natural gas market transparency was not specifically addressed in legislation, this multi-year procurement would allow the ERCOT market to address the problem through a stable revenue stream that would justify the expensive

³ Enrolled SB 3, 87th Regular Session, [Texas Legislature Online - 87\(R\) Text for SB 3](#) p.34-35

⁴ *Id.*

fixed cost investment associated with adding these fuel capabilities. Additionally, conducting the process of sizing resources, determining megawatts, and awarding the service bids will minimize the cost to loads and be the least disruptive to loads because the process avoids front-loading costs. Ensuring a stable revenue stream through a multi-year procurement is crucial to the success of such a product.

4. Is available residential demand response adequately captured by existing retail electric provider (REP) programs? Do opportunities exist for enhanced residential load response?

TCPA has no comment on this question at this time.

5. How can ERCOT's emergency response service program be modified to provide additional reliability benefits? What changes would need to be made to Commission rules and ERCOT market rules and systems to implement these program changes?

The Commission should address the price suppression that pre-deployment of ERS causes in the market. ERS is the only product created to support reliability in ERCOT that is allowed to pre-deploy, and any ERS expansion must be tempered to ensure the rest of the market can counteract the market impacts that pre-deployment causes. If this is not counteracted, any expansion of the ERS program will undermine many of the benefits that ERCOT market redesign could have, and it would therefore undermine the Commission's intent to make new investments in dispatchable generation attractive. One option to prevent that consequence would be to prohibit pre-deployment of ERS, so that a reliability service does not undercut the market and exacerbate reliability issues by removing revenues that would otherwise be put into the market to support reliable resources.

It is also important to note that when ERS is deployed, the ERCOT operators do not know with any certainty how many megawatts they are getting because it is not telemetered to ERCOT like generation resources. As a result, the ERS product operates counter to how a reliability product should work in that the ERCOT control room should know exactly how many megawatts it is getting for the product it has procured in the name of reliability, similar to all of the other ancillary services.

6. How can the current market design be altered (e.g., by implementing new products) to provide tools to improve the ability to manage inertia, voltage support, or frequency?

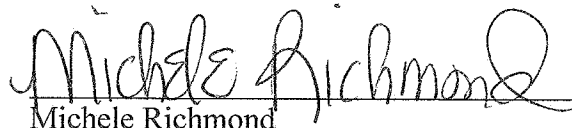
TCPA addressed several new product concepts in question 3 above, and individual member companies may provide additional product ideas in their own comments. TCPA member companies believe that products for inertia, voltage support, and governor-based frequency control should be developed and implemented because ERCOT should be compensating resources for providing these services. Thermal generators have provided inertia, voltage and governor-based frequency support since the market's inception and have done so without compensation. These products should be incorporated into the market product regime, with associated prices and revenues, to help close this compensation gap. While these services were previously abundant when most generation capacity was dispatchable, without proper compensation for these and other vital services, revenues available from ERCOT's market will not be sufficient going forward to support the necessary investments in reliable, dispatchable generation resources.

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TCPA appreciates the opportunity to provide input on these important market design issues and looks forward to participating in work sessions and future discussions on market design changes. Our member companies have invested in the ERCOT competitive market for more than two decades and want to invest in additional infrastructure where it is economically rational, and we will continue to work with the Commission to seek new market design meets the overarching goal of having a reliable grid and a vibrant competitive wholesale market.

Dated: August 16, 2021

Respectfully submitted,

A handwritten signature in black ink that reads "Michele Richmond". The signature is fluid and cursive, with the first name "Michele" and last name "Richmond" clearly distinguishable.

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