Filing Receipt

Received - 2021-09-30 01:47:03 PM
Control Number - 52373
ItemNumber - 147

PROJECT NO. 52373

REVIEW OF WHOLESALE ELECTRIC MARKET DESIGN	**§ § §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

EXECUTIVE SUMMARY FOR TCPA MARKET DESIGN PROPOSAL

TCPA supports six market design concepts to create the competitive environment in ERCOT that achieves policy makers' grid reliability objectives, in which consumers would have a more predictable pricing structure and generation resource owners can earn a competitive return on their investment without the need for emergency conditions on the system.

RECOMMENDATION 1: The Commission must adopt a reliability standard for ERCOT. A reliability standard is essential for planning and operating the grid to meet ERCOT's reliability objectives.

RECOMMENDATION 2: The energy market and ancillary services markets must continue to serve as the foundation of the competitive market.

RECOMMENDATION 3: The Commission must adopt a holistic redesign of the ORDC pricing mechanism, in conjunction with lowering the HCAP, by moving out the PBMCL and evaluating shifts to the ORDC curve.

RECOMMENDATION 4: The Commission must adopt one or more reliability service products as a mechanism for meeting the reliability standard through the competitive market.

RECOMMENDATION 5: Direct ERCOT to adopt a fuel resiliency service as part of the suite of market design changes, consistent with SB 3 requirements to bridge some of the fuel issues generators have experienced.

RECOMMENDATION 6: Develop a voluntary, forward market for the suite of existing ancillary services.

PROJECT NO. 52373

REVIEW OF WHOLESALE ELECTRIC MARKET DESIGN	**§ § §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

TCPA PROPOSED MARKET DESIGN CHANGES

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 members[1] 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 almost ninety percent (90%) of the non-wind electric generating capacity in ERCOT. TCPA members have invested billions of dollars in the state and employ thousands of Texans.

TCPA appreciates the opportunity to recommend market design reforms its member companies support in order to achieve and sustain reliability in ERCOT's competitive market. In these comments, the association puts forward six market design concepts that would create the competitive environment in ERCOT that achieves policy makers' grid reliability objectives, while providing consumers with a more predictable pricing structure and generation resource owners with a mechanism to earn a competitive return on their investment without the need for emergency conditions on the system. The Legislature has consistently expressed its desire to retain the existing fleet and to incent new investment in reliable dispatchable resources. TCPA believes that a multi-pronged approach to market design is required to meet that goal. One or two changes in isolation will not produce the pricing signals and predictable revenues that investors need to justify

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

substantial investment in ERCOT. TCPA's recommendations outline six areas in which the Commission should act to achieve grid reliability in ERCOT through competitive markets.

RECOMMENDATION 1: The Commission must adopt a reliability standard for ERCOT. A reliability standard is essential for planning and operating the grid to meet ERCOT's reliability objectives. ERCOT is the only grid in the United States that has established no formal standard for reliability, which means that there are no obvious signals to the market that additional capacity is needed if the current generation supply is unable to meet that standard. Currently, ERCOT has a reserve target, but it is not enforced. Over the years, ERCOT reserve margins have fluctuated widely from approximately seven percent (7%) to over twenty percent (20%).[2] Moreover, as Winter Storm Uri demonstrated, absent specific grid performance standards, a reserve margin alone may not be a sufficient assurance of reliability in extreme conditions.

TCPA recommends the Commission direct ERCOT to determine the reliability standard to be maintained in all seasons as temperatures vary including in extreme times. The Commission may wish to define this standard with a single metric or multiple metrics. A common metric is the loss of load expectation (LOLE) – typically defined as one loss of load event every 10 years (or an LOLE of 1/10 or 0.1). Other metrics that the Commission has previously considered are loss of load hours (LOLH) and expected unserved energy (EUE). The Commission received many comments on these and other options in Project No. 42302. TCPA recommends that the Commission revisit these proposals and formally endorse at least one standard, which will serve as an anchor point in the Commission's pursuit of a more reliable, sustainable market. In that effort, TCPA also recommends the Commission consider whether different required reliability standards for each season would be appropriate. System needs vary considerably by season when demand and key resource attributes differ. Consequently, a single reliability requirement may not drive investments in resources that meet grid reliability needs for ERCOT's varied weather conditions. For instance, a standard for shoulder season months may produce market signals around scheduled thermal maintenance to ensure sufficient megawatts remain operational in the spring and fall to solve for any deficiency in intermittent generation output.

[2] ERCOT Capacity, Demand & Reserves (CDR) Reports

Any reliability standard evaluation will necessarily require a review of the ways in which reliability is measured and projected. The Capacity, Demand, and Reserves (CDR) report provides limited value in planning for a reliable grid and its methodology has become obsolete. This is primarily because its assumptions do not adequately account for resource mix variability and potential lack of availability. The CDR currently considers peak load as occurring from 4pm to 5pm. However, ERCOT's resource mix has changed with the proliferation of intermittent resources and the times of resource deficiency are increasingly correlated to with drops in intermittent resource production. For example, the winter peak demand may be more likely to occur in the morning hours or even twice a day (also in early evening hours); during the summer, it may be more likely to occur in mid-afternoon and linger until the time period that the sun sets. In both instances, the growth of solar generation on the ERCOT system is expected to exacerbate the net peak load demands and ramping needs around those times. The Seasonal Assessment of Resource Adequacy (SARA) is very similar to the CDR but does layer in an analysis of certain contingency scenarios that "stress test" the resource adequacy outlook. ERCOT and ERCOT stakeholders have evaluated changes to both the CDR and SARA to help them evolve with the generation fleet, which is an ongoing effort. Some of these dynamics are also recognized in ERCOT's biennial study of the Market Equilibrium Reserve Margin (MERM). The MERM is a more holistic analysis of resource adequacy for evaluating reliability outcomes of the current market design which is a different application than a reliability standard. Changes in the energy, ancillary service, and reliability service markets should be prioritized to help achieve the reliability standard adopted by the Commission.

If planning assumptions are reasonably accurate and a proper reliability standard is (or standards are) adopted by the Commission, however, then the market should respond to the requirement if other market design changes indicate investors can expect to receive a competitive return. A reliability requirement can only be successful if reliable resources are available to meet that standard. How ERCOT values reserves is a key driver signaling to investors which resources are needed. For example, the reliability standard could put greater emphasis on dispatchable resources that can respond to ERCOT instruction and to price signals by turning on or off, or ramping up and down. TCPA specifically recommends the Commission require a certain percentage or number of megawatts be from dispatchable resources to meet the new reliability requirement.

RECOMMENDATION 2: TCPA recommends that the energy market and ancillary services markets continue to serve as the foundation of the competitive market. Generators should be able to recoup their reasonable operating costs and a earn a competitive return during typical market conditions, and not be overly dependent on the occurrence of scarcity events, out of market actions, make whole payments, or any newly-proposed reliability backstop market design features in order to finance ongoing operations. Generators also should not be expected to operate at a loss in the name of reliability because energy or ancillary service prices are insufficient to recover expenses associated with providing power in ERCOT – including all fuel costs required to run reliably, maintenance costs, labor, opportunity costs, and other inputs needed to produce electricity. The energy and ancillary service market designs should be changed to better achieve a reliability standard adopted by the Commission so that reliance on any out-of-market actions can be minimized or eliminated.

Market prices, in concert with the Operating Reserve Demand Curve (ORDC), should help support and contribute to the reliability requirement and provide requisite price signals that more investment is needed in both the existing fleet and new resources.

RECOMMENDATION 3: The ORDC is a key component of pricing in ERCOT's energy market and therefore drives market outcomes. The Commission must adopt a holistic redesign of this pricing mechanism. The ORDC must value the system operating reserves needed to yield resource self-commitments into the market, eliminating or substantially minimizing the need for out-of-market control room actions such as the Reliability Unit Commitment (RUC). TCPA recognizes the broad interest in reducing the HCAP from the current $9,000 per MWh level and asks that the Commission accompany such a change with a commensurate adjustment to the ORDC, outlined in TCPA comments filed in Project 52631 (Review of 25.505), to incorporate into the markets the increase in system reserves ERCOT now requires. ORDC reforms will be needed to create the revenue stability needed during normal and near-normal conditions with current reliability needs and expectations, as well as the reliability standard(s) TCPA recommends be adopted by the Commission.

In considering potential ORDC modifications, the Commission should bear in mind that the market will compete away any excess in ORDC pricing in the form of additional online reserves. However, if ORDC changes underestimate what is needed, the market will not receive

proper pricing signals and current market scarcity risks would persist or worsen. Simply put, higher prices will self-correct and decline with new investment, but ORDC reforms that aim too low will exacerbate resource adequacy problems and necessitate additional market design changes to meet resource adequacy needs. Price changes from the ORDC will primarily incentivize performance and investment in dispatchable resources because those resources can respond to price signals while intermittent resources cannot. Further, requiring a percentage of reserves to come from dispatchable generation could further help focus the ORDC on achieving reliability. TCPA is concurrently providing additional comments regarding the ORDC in Project 52631, Review of 25.505.

RECOMMENDATION 4: TCPA recommends the adoption of one or more backstop insurance products for ensuring reliability through the market. While some proposals have focused on centrally-procured backstop ideas, TCPA supports approaches to provide similar backstop mechanisms in a more targeted manner. These concepts would necessitate allocations to load-serving entities (LSEs). As a principle, TCPA recommends that any such mechanisms be structured to support the state's reliability goals and provide hedging and other opportunities for LSEs to competitively manage their exposure.

One such approach that will be offered separately would require LSEs to demonstrate they have contracted for sufficient resources to meet their forecasted customer peak demand, along with establishing a reliability or reserve requirement, during periods when intermittency has historically put our grid at risk. Once a reliability standard has been established and market design changes identified, ERCOT will assess the amount of reliability needed and LSEs would be charged with demonstrating that they have procured sufficient resources to meet their obligations to the reliability requirement. Since demand response programs are often put in place by retail electric providers (REPs) and electricity aggregators, such a requirement on LSEs would enable them to better develop existing and new demand response programs in a manner that ERCOT can count on. Since some generation resources are more dependable than others, a certification of reliability weight from ERCOT would be needed to value capacity depending on a resource's contributions toward overall system reliability. Such a weight would allow the market to determine which resources, and in what amounts, will be contracted. ERCOT's Renewable Energy Credit (REC) program could serve as a model for such an LSE Obligation Program, which could create a

hedgeable and tradeable commodity within the ERCOT market. Failure to perform on the part of an LSE or a contracted resource could result in a substantial penalty to both incentivize operational reliability and offset any costs from such failures.

Another approach that will be offered separately would come through a new ancillary service that provides ERCOT with the ability to procure standby dispatchable capacity on a monthly or seasonal basis. This standby capacity would be reserved from the energy and ancillary service markets, and when activated its capacity would be offered subject to a price floor and its capacity subtracted from the reserves calculation for ORDC determinations. This would allow ERCOT to effectively have a call option on additional reliable capacity while continuing to let energy and ancillary service markets be the primary drivers of new investment decisions. In this way, the service would provide a competitive alternative to RUC in some applications. Importantly, this service would provide an opportunity for economically marginal but reliability-critical existing dispatchable generation to continue to provide value to the market.

TCPA believes such concepts, individually or in tandem, are consistent with Senate Bill (SB) 3 and would be effective in addressing the intermittent nature of renewable resources through a competitive market mechanism in which intermittency must be firmed up through some type of dispatchable resource in order to satisfy the reliability requirement and it will require a scientific assessment of the reliability associated with the various energy resources and how those resources impact the grid. Such programs are consistent with competitive market principles and would drive pricing and long-term investment in a cost-effective and predictable manner. The REC structure is familiar to ERCOT and market participants, which should make implementation much easier and faster than structures unknown in this market. Unlike subsidized or regulated generation, these concepts allow the market to solve the reliability need based on their reliability attributes rather than picking winners and losers through subsidized funding. These structures also create incentives for prudent contracting and investment that is often absent from regulated markets or centralized forward capacity markets.

RECOMMENDATION 5: TCPA recommends ERCOT adopt a fuel resiliency service as part of the suite of market design changes. Such a product is consistent with SB 3 requirements and would bridge some of the fuel issues generators have experienced as a result of action – or inaction – on the part of industries that are part of the electricity supply chain but outside of generator control.

Fuel resiliency capital expenditures are typically fixed costs with some additional ongoing operational and maintenance (O&M) expense that can face economic challenges in ERCOT's competitive market. TCPA recommends the Commission design a product that is procured two years ahead of time through attribute certification and a request for proposal (RFP) process, with entities awarded a contract for providing the service contracted for on a multi-year time frame. This design will provide the market certainty from both an expected revenue and a predictable cost standpoint. In addition, ERCOT already procures Black Start capability through a similar competitive process so the recommended fuel resiliency product could be implemented similarly and completed timely. Contracts could be awarded based on cost to customers; the degree of resiliency the offer provides; and duration of the contracts. The procurement time frame would help to support longer lead times for procurement in the case of new resiliency investments and provide the requisite time to complete dual fuel installation, add new or additional onsite fuel storage, build or contract for adjacent, offsite fuel storage, or any variety of potential fuel resiliency enhancements that the Commission and ERCOT may determine are necessary to ensure the generation fleet has the fuel it needs to produce power. There are several different proposals that TCPA members and other stakeholders will provide to accomplish fuel resiliency, and TCPA recommends that the Commission ensure whichever design is adopted for this product ensure the ability to recoup the fixed cost investments required as well as ongoing O&M and the competitive return, as part of the pricing and procurement structure, that will enable the market to deliver.

RECOMMENDATION 6: Develop a voluntary, forward ancillary services market similar to the existing Congestion Revenue Rights (CRR) market already in place in ERCOT. This would be an additional ancillary service market that ERCOT would administer by potentially procuring ancillary service requirements in advance beyond the day ahead market. If, and when, Real-Time Co-optimization is implemented, Ancillary Service Demand Curves should be implemented in DAM and virtual Ancillary Service offers and bids should be allowed in the DAM. A forward market for ancillary services would establish another layer of revenue certainty for investors and cost predictability for LSEs and consumers.

* * *

TCPA appreciates the opportunity to provide these proposals supported by its entire membership for creating a market design that will achieve reliability in ERCOT through

competitive market mechanisms. We look forward to continuing to participate in work sessions and other discussions on both market design changes and achieving reliability.

Dated: September 30, 2021

Respectfully submitted,

Michele Richmond

Michele Richmond
Executive Director
Texas Competitive Power Advocates (TCPA)
(512) 653-7447

michele@competitivepower.org