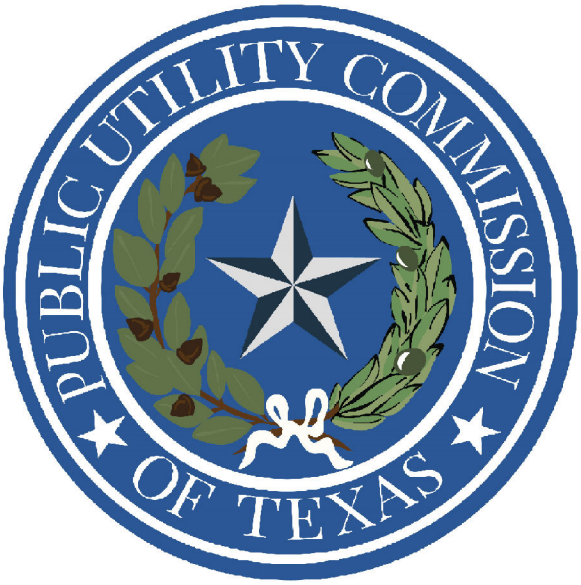

Filing Receipt

Received - 2021-11-01 09:47:19 AM
Control Number - 52373
ItemNumber - 191

PROJECT NO. 52373

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

CITY OF DENTON dba DENTON MUNICIPAL ELECTRIC'S RESPONSE TO STAFF'S 10/25/21 QUESTIONS FOR COMMENT

The City of Denton through its Municipally Owned Utility (MOU) Denton Municipal Electric (DME) appreciates the opportunity to respond to the questions for comment proposed by the Public Utility Commission of Texas (Commission)

Executive Summary

DME believes the Commission should continue to focus on the known immediate actions that will firm up existing generation and to implement, through the ERCOT stakeholder process, operational changes to the market that will enhance real-time reliability. Those immediate actions include ensuring that electric generation weatherization improvements are implemented and to work with the Railroad Commission to ensure that the natural gas delivery systems to electric generating resources are hardened to achieve a high level of reliability during cold and extended cold periods. These are the known causes of the winter storm Uri disaster. We recommend a more analytical, deliberative and quantitative approach that allows sufficient time for market participants and stakeholders to fully analyze proposals involving significant market changes including the ORDC changes and LSE Obligation items under consideration by the Commission. Addressing fuel deliverability in addition to the generation weatherization rules already in place, in DME's opinion, buys the market enough time to properly evaluate market redesign options.

I. ORDC Questions

DME has concerns that the proposed changes to the ORDC will not provide the intended market signals to incent new dispatchable generation as has been prioritized by the Commission throughout the discussions and work sessions on market design under this project. Without a well thought out analysis that simulates average and stressed market cases of the future generation mix and future load demand, it is impossible to weigh, even qualitatively, whether the cost to DME rate payers will be worth the potential (if any) increase to grid reliability. The back testing of these market design changes that the Commission has tasked it consultants with will not be a good indicator of the impact that such changes will have in the future due to the rapidly changing generation and other resource mix in the ERCOT market. We strongly recommend that the consultants and ERCOT work to define the future grid generation mix and stress scenarios against which these market reforms can be evaluated to properly define expected outcomes.

The suggested changes to the ORDC curve on a stand-alone basis will not guarantee that new dispatchable generation will be developed. What is certain from the proposed changes to ORDC is that increasing the amount of time that ORDC is in place will ultimately cost Texas ratepayers potentially billions of dollars annually. We believe that the Commission, as policy makers tasked with ensuring grid reliability and protecting electric consumers from unnecessary and ineffective incremental costs, should be more deliberative, pragmatic and conservative when potentially imposing large costs on all Texas ratepayers. While there has been much debate and stakeholder discussion about potential market design changes, without a very rigorously analyzed evaluation and probability weighted expectations of the

effectiveness of the market changes, such changes are not likely to result in the desired outcomes. While ORDC changes will provide "missing money" to existing generators, in the very near future, the increased low cost energy from queued solar and wind resources that become operational is likely to increase Physical Responsive Capability (PRC) levels in most hours, squeezing potential ORDC hours down and when combined with increase demand response and battery storage which will likely "clip" the first hour or more of scarcity pricing resulting in less ORDC revenues than are currently contemplated. The likely effect will be insufficient price signals to the industry to spur dispatchable generation investment and no significant increase in grid reliability. We do not believe this approach will achieve the objectives of SB3.

II. LSE Obligation Questions

The proposed LSE Obligation under consideration lacks the necessary details to effectively evaluate the financial impact on DME customers or the potential improvements to grid reliability. While there are many critical aspects of such an obligation that need to be fully fleshed out before real quantitative analysis can be performed, using the range of published reliability costs in another Regional Transmission Operation (RTO) market for the 21/22 and 22/23 planning years of $140/MW-day and $50/MW-day respectively **translates to an annual ERCOT market cost range of $1.6 to $4.5 billion per year**[1]. DME by no means is equating those market clearing price to the potential range of the cost of the proposed LSE Obligation scheme proposed. Rather we are simply using visible prices that are indications of the price of a well-developed LSE Obligation construct as a surrogate to provide the Commission with the indicative cost information it has requested.

Table 1 – Capacity Accreditation Example

Capacity Resource	ERCOT Installed Capacity (MW)	Capacity Accreditation (%)	Dependable Capacity (MW)	ERCOT 4CP (MW)
Natural Gas	51,667	92%	47,534	
Coal	13,630	89%	12,131	
Nuclear	5,153	96%	4,947	
Wind	31,390	16%	5,022	
Solar	6,177	50%	3,089	
Demand Resources	2,400	100%	2,400	
2021 Subtotal	110,417		75,122	70,488
New Solar	12,000	50%	6,000	
New Wind	8,000	16%	1,280	
2024 Forecasted Total *	130,417		82,402	74,057

* 2.5% annual demand growth assumed

DME is concerned that even if the cost to the ERCOT market is just half of the potential range stated above, before providing direction to ERCOT to develop a reliability product such as the LSE Obligation, the Commission, market participants and stakeholders should have sufficient time to perform the requisite analysis and ensure that such a product will achieve the reliability goals of the Commission. The above accreditation analysis shown in Table 1 provides a projected indicative reserve margin of 11% without

[1] Based on 2024 estimated 4 CP of 70,488 MW in 2020 escalated at 2.5% per year, plus 15% reserve margin and using the PJM capacity accreditation for wind (16%) and solar (50%) resources, and typical EROR rates for conventional generation resources.

any new dispatchable generation. The above analysis also provides no dependable capacity credit for what is likely to be a significant investment in energy storage resources that are under development and expected to be interconnected in the next several years. Also, the above indicative analysis assumes no growth in demand response and Load Resources (LR) or Controllable Load Resources (CLR). We believe that the Commission should have ERCOT or Brattle perform a comprehensive similar analysis – with significantly more granularity – as it shows that such a reliability product may not achieve the stated reliability goal of the Commission to incentivize additional dispatchable generation. Our concern is that unless ERCOT adopts a new accreditation methodology that lowers the dependable capacity value of wind/solar/energy storage as compared to what other RTOs have approved through their respective stakeholder and regulatory processes, adequate dependable capacity may exist and thus void he need for additional dispatchable generation under the LSE Obligation market construct being considered. For the avoidance of doubt, DME does not support accreditation methodologies that are counter to those developed in other RTOs.

III Alternative Ancillary Services Considerations to LSE Obligation

Increasing the amount of dispatchable generation to hedge against a Uri like event through ORDC changes and/or the development of an LSE Obligation have low potential to incentivize new dispatchable generation. However, DME believes a more directed ancillary service product to develop incremental dispatchable generation will have higher probability of success and at a likely lower cost to ERCOT ratepayers as compared to the ORDC and LSE Obligation market changes under consideration. Previously, DME provided comments to the Commission regarding Grid Reliability Service[2] discussing these options. After further consideration of the Commissions questions, specifically question 5 as stated below, we offer the following high-level approach for consideration.

> *5. Are there alternative to an LSE Obligation that could address the concerns raised about the stakeholder proposals submitted to the Commission?*

Grid Reliability Ancillary Service ("GRAS")– An uplifted charge to all LSE's associated with the procurement of dispatchable generation deemed necessary on an annual basis to provide reliability protection during periods of potential generation inadequacy. On a forward basis ERCOT would procure dispatchable resources meeting specific operational performance criteria based upon a predetermined level of acceptable loss of load probability. To provide the Commission with sufficient details of this alternative to enable Brattle or ERCOT staff to evaluate this reliability construct, we offer the following specifics. Numbers shown in brackets are suggestions that would need to be evaluated by ERCOT and decided upon by stakeholders and the PUCT.

- GRAS Qualifying resources –
    - Dispatchable Resources that can move from offline to online and respond to market dispatch instructions within [5] minutes
    - Must be able to operate at [80%] of rated capacity for a "minimum duration dispatch" period" of [6] hours
    - Must be able to achieve "minimum dispatch duration" requirement on multiple dispatch orders in any 24 hour period.

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[2] See DME's City of Denton dba DENTON MUNICIPAL ELECTRIC'S RESPONSE TO STAFF'S Questions FOR COMMENT, PUCT Project 52373 submittal dated 8/15/2021

    - If the qualifying resource is a Generating Resource, it must meet ERCOT specified fuel reliability criteria, such fuel reliability criteria to be established by ERCOT through its stakeholder process to achieve an acceptable probability of loss of load.

- Obligations of the qualified GRAS Resources
    - Initially, voluntarily participation in a GRAS annual auction by ERCOT to procure needed capacity.
    - Unless the resource is retired, GRAS cleared capacity in the annual auction must participate in all subsequent auctions until retired.
    - If cleared in the GRAS annual auction, must offer into the day-ahead market (binding commitment). Ancillary Service offers of RRS, Non-spin, RegUp and RegDown and any other Ancillary Service products developed by ERCOT, will be pursuant to ERCOT protocols. Energy offers from cleared Grid Reliability Ancillary Service capacity auctions must be binding in the day-ahead market to ensure that these cleared resources are committed to run if called upon.
    - Penalties for any market deviation costs for the failure of a GRAS capacity resource to meet day-ahead binding commitment (deviation costs) shall be uplifted to GRAS resource causing the deviation, not to exceed the annual Grid Reliability Ancillary Service awarded amounts. The cleared resource will have it's entire GRAS annual payment at risk.
- Annual Auction features
    - Forward market auction for [4] years in the future (to allow time for development, financing, permitting and construction)
    - Declining clock auction with limits on tranche size and maximum participation rate by offerors to mitigate market power issues.
    - Clearing price not to exceed Cost of New Entry (CONE) as determined by annual Market Monitor report.[3]
    - Credit rating requirements for auction participants published prior to each auction. If offeror can't meet such credit requirements ERCOT will specify cash or letter of credit alternative credit support facilities required for participation.
- Cost Allocation
    - Annually adjusted non-by passible energy charge applicable to all LSE's based upon Load Ratio Share in the year prior to the auction clearing year.
    - Establish acceptable probability of loss of load to use as the yardstick to determine needed reliability resources.
- Participation in Energy Markets
    - Cleared resources shall participate in the energy and ancillary service markets including ORDC revenues.

A key aspect of this alternative approach to achieve grid reliability is the establishment of the annual GRAS capacity volume. To establish the needed volume of GRAS capacity, ERCOT, or ERCOT's consultant(s) will establish an acceptable loss of load probability under market stress conditions including higher than expected forced outages, loss or significantly diminished intermittent generation capacity,

[3] In 2020, the estimated CONE values for both types of resources increased, with the CONE values for natural gas combustion turbines ranging from $70 to $117 per kW-year

higher than expected load demand, extreme weather conditions and other factors that ERCOT deems critical in establishing the volume of GRAS capacity needed. Scenario modeling protocols will be developed to consider probabilistic market conditions that should be protected against through the procurement of GRAS capacity.

Another key determinant in establishing the quantity of these services that must be procured is the accreditation of dependable capacity rating to be used for each Resource. ERCOT should use industry best practices and probability modeling to determine the dependable capacity accreditation of each type of Resource. DME's high level assessment is that the quantity of these resources is expected to be greater than 2500 MW based upon the dependable capacity modeled in Table 1 above and to achieve a 15% dependable capacity reserve margin.

Benefits of Proposed GRAS:

1. Less complicated than a comprehensive LSE Obligation reliability construct.
2. Cost of capacity limited only to the GRAS capacity cleared in annual auction. The market pays for only this capacity as opposed to the LSE Obligation that would have the market pay for all capacity needed to serve project peak load.
3. Directs reliability dollars paid by ratepayers directly to those quick starting long-duration assets that ERCOT determines are needed to achieve the desired level of reliability.
4. Uses a market-based approach (annual auction) to achieve the lowest cost investment
5. Preserves to the greatest extent possible, the energy only market construct and its benefits
6. Provides a mechanism to adjust needed reliability resources in the future due to generation retirements, load growth, demand side management changes, energy storage additions, etc.
7. Tempers market power concerns and credit quality concerns in the LSE Obligation proposal.
8. Provides for transition of resource mix in response to changing market conditions

Shortcomings:

1. Is not technology agnostic. Targets specific ramping, online and long duration technology that provides the best hedge against the increasing intermittent generation and extreme weather events.
2. Requires an annual forward-looking assessment of generation, demand and accreditation of generation resources and other resources.
3. Does not extend the life of legacy dispatchable assets since, in general, they would not qualify for this type of ancillary service. However, ERCOT can still use its existing Reliability Must Run (RMR) protocols to keep critical reliability generation in service.

This alternative proposal is forwarded in the spirit of providing options for consideration by the Commission in its pursuit of the lowest cost reliability enhancement option as directed by SB3. DME believes that this more targeted approach has a higher potential to achieve the desired objectives as communicated by the Commission to increase the level of dispatchable generation, thus increasing grid reliability. Additionally, we believe that this alternative to the LSE Obligation will position the ERCOT market to increase grid reliability as mandated by SB3 and to meet the challenges of the changing generation mix in the most cost-effective manner possible. At its heart is the establishment of a smaller LSE Obligation construct that is targeted to achieve the objectives of the market redesign effort. We believe this approach will easily accommodate the changing resource mix in ERCOT including energy storage and demand side management with the least structural impact to the ERCOT energy only market. The energy only market has served the competitive retail market well by providing low cost, environmentally responsible electric service to all Texans. We believe this more surgical approach to

increasing grid reliability will enable Texans to continue to access increasing levels of low cost, renewable energy and continue the investment in renewable energy generation sources while providing market-based price signals to increase demand side management programs and energy storage technologies.

V Conclusion

When the Legislature enacted Senate Bill 7 and amended PURA to provide for retail competition in 1999, the Legislature provided that municipally owned electric utilities would continue to operate as vertically integrated utilities, with the ability to provide generation, transmission and distribution service to their customers until customer choice was adopted. Also, the Legislature established the bounds of the Commission's authority over municipally owned utilities in Chapter 40 of PURA. Sections 40.001(a) and 40.004 of PURA state the jurisdiction of the Commission regarding municipally owned utilities. Nothing in either of those sections or any other provision in PURA that specially uses the term "municipally owner utility" gives the Commission the authority to control a municipally owned utility's decisions regarding either how it will supply power to its customers, with whom its contracts for power, or how much power it will purchase. The LSE Obligation proposal, if not structured properly, could be viewed as dictating how a municipally owned utility obtains tis power supply in contravention to the Legislature's intent expressed in PURA Chapter 40 to leave that decision to the municipally owned utility.

Denton Municipal Electric appreciates the opportunity to submit these comments. We look forward to working with the Commission, its staff, and the stakeholders on these important questions and the broader discussion in coming months.

Dated: November 1, 2021

Respectfully,

DocuSigned by:
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