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PROJECT NO. 52373

**REVIEW OF WHOLESALE
ELECTRIC MARKET DESIGN**

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**PUBLIC UTILITY COMMISSION
OF TEXAS**

**JOINT COMMENTS OF
SOLAR ENERGY INDUSTRIES ASSOCIATION
AND TEXAS SOLAR POWER ASSOCIATION**

COMES NOW the Solar Energy Industries Association (“SEIA”) and Texas Solar Power Association (“TSPA”) and file these joint comments regarding the Commission’s Second Strawman on Market Redesign filed in this proceeding on December 6, 2021. TSPA and SEIA are not affiliates, but we (“the Solar Associations”) have combined our comments for this filing to assist the Commission.

COMMENTS

The Solar Associations support the Commission’s efforts to ensure that the ERCOT grid provides reliable electric service to all Texans. In its Second Strawman of Market Design Changes, the Commission has proposed two phases in its efforts to adopt proposed changes to the ERCOT wholesale market design. The distinction between Phase I and Phase II remains unclear. With the expectation that each of the items in Phase I will have follow-on rulemaking or implementation efforts to work out details with stakeholders, we support this group of actions as important steps to improve operational reliability and support investment in long term resource adequacy. As discussed further below, there is a clear need for the Commission to establish a process for the thorough and transparent consideration and development of all of the items in Phase I.

In Phase II, the Commission has agreed to adopt a load-side reliability mechanism “that will serve the purpose of ensuring the supply of dispatchable generation is sufficient to meet system demand in ERCOT.”¹ We remain concerned that a market-wide Load Serving Entity Obligation could impose significant costs on Texans that remain unquantified as well as discriminate against solar generation resources that already are operational in the ERCOT region and those that may be built in the future.

During the November 19 Work Session, Sam Newell, on behalf of the Brattle Group, indicated that an LSE Obligation based on the NRG/E3 proposal or with the modifications Chairman Lake has proposed could increase the cost of electric service by about 7% and could

¹ Commission Memorandum and Request for Comments at 4 (Dec. 6, 2021).

move 30-40% of the revenue in today's energy market to new capacity payments.² There is not a public filing to disclose the calculations behind these representations, though.

It is important that the Commission and stakeholders have the opportunity for a transparent analysis to determine the accuracy of these projections. This is especially important since the projected cost of these proposals may not reflect the increased customer costs that could result from the changing wholesale market fundamentals that could discourage development of solar generation in ERCOT. The development of new low cost solar generation, including solar co-located with energy storage, is well positioned to contribute to reliable operations of the electric grid in ERCOT and serve as a hedge against the increasing cost of natural gas and its inflationary impact on electricity costs. Given the increasing cost of natural gas both domestically and globally, it is paramount that this process not attempt to solve one problem by exacerbating another; namely, over-reliance on a single fuel source with volatile price exposure for customers.

The Commission also has proposed a list of Principles that such a mechanism should adhere to, including sizing any new obligation imposed by the Commission. A key benefit of the Dispatchable Energy Credits (DEC) proposal is that it is sized to encourage the addition of new dispatchable generation to meet load growth. At the low level of new generation resources the DEC proposal seeks to attract, the concern that each MW of DEC-compliant capacity will force the same amount of existing thermal generation out of the market does not recognize the magnitude of the existing market and its complexity and robustness. A targeted approach to market redesign that focusses on clear objectives to be achieved is more likely meet the Legislature's desire for investment in new dispatchable capacity for the ERCOT grid with fewer unintended consequences, including not resulting in a lower value for a MWh of solar generation in the existing market or otherwise devaluing existing or planned investments. The Solar Associations continue to recommend maintaining as much of the ERCOT energy-only market as possible so that it remains the primary and substantial source of incentives and revenues, and further recommend that any new change to the ERCOT market be designed in such a way that it does not reduce revenue from the existing ERCOT market structures or interfere with their day-to-day operations.

Lastly, the Solar Associations are concerned about the practicality of implementing a forward capacity commitment in a market construct such as ERCOT without significant additional

² Sam Newell, The Brattle Group, Market Design Options for Managing Reliability in ERCOT at 7 (Nov. 19, 2021).

discussion and modeling. Implementing an LSE Obligation in a market with a predominance of vertically integrated utilities, or entities with long-term load certainty, is feasible; implementing an LSE Obligation in a market where load has greater pliability between LSEs risks adopting all of the worst qualities of a PJM centralized capacity market without any of its structure.

The Commission has also proposed in Phase II a Backstop Reliability Service. The Solar Associations support this concept as a reasonable addition to the ERCOT toolkit. Like the DEC proposal, the proposed Backstop Reliability Service seems to be designed to avoid impacts on the market while still buying an additional level of insurance. It can also be reduced in size the future as reliability concerns diminish in future years.

In its Principles for both the Load-Side Mechanism and the Backstop Reliability Service, the Commission has proposed net load as a basis for measurement. Net load is the amount of load minus the output of wind and solar generation resources. The result indicates the amount of demand that must be served by thermal generation and energy storage resources (or reduced through demand response). Sizing a load-side reliability mechanism based on net peak load excludes and obscures the very real impact thermal outages have on the reliable operations of the grid. Thermal resource outages occur at any time and are independent of the output of wind and solar generation.

Net load can be easy to forecast – since it based on the load forecast, wind forecast, and solar forecast – but there is no forecast of daily thermal outages, just seasonal averages. But a thermal unit tripping offline can have a dramatic effect on the grid. Based on recent operational data, the last year of Seasonal Assessment of Resource Adequacy (SARA) reports have shown “Typical” thermal outages ranging from 3,642 MW in the Summer to 14,774 MW in the Fall. “Extreme” scenarios contemplate thermal outages ranging from 10,779 MW in the Summer to 21,042 MW in the Winter. These potential outages should be considered as well when sizing reliability mechanisms. Moreover, reliance on net load may have the unintended consequence of discouraging the deployment of hybrid solar + storage resources on the grid – a key technology solution that should be encouraged for the future reliability of the ERCOT grid.

COMMENTS REGARDING PHASE I CHANGES

While the Solar Associations are supportive of the Phase I concepts, we remain very concerned regarding ancillary services cost allocation and respectfully submit that those proposals

require additional clarification and examination before the Commission proceeds with implementation. For example, in its description of the ERCOT Contingency Reserve Service (ECRS), the Commission has not recognized that ECRS is defined to address multiple issues:

ERCOT Contingency Reserve Service (ECRS)

An Ancillary Service that provides operating reserves that is intended to:

- (a) Restore Responsive Reserve (RRS) within ten minutes of a frequency deviation that results in significant depletion of RRS by restoring frequency to its scheduled value to return the system to normal;
- (b) Provide energy or continued Load interruption to avoid or during the implementation of an Energy Emergency Alert (EEA); and
- (c) Provide backup regulation.

ERCOT Protocols Section 2.1.³ ERCOT procures RRS “to ensure sufficient capacity is available to respond to frequency excursions during unit trips.”⁴ Historically, RRS has been used as an immediate response to large unexpected thermal trips. As a result, the Commission’s characterization that ECRS is “to serve as an additional operational reliability tool to help maintain grid reliability by managing increasing variability and ramping issues associates with higher renewable generation penetration on the grid in the future”⁵ fails to reflect the full purpose of ECRS, and a cost allocation based on the Commission’s narrow description would result in a discriminatory result that would fail to account for its use to address thermal unit trips as well as changing demand by loads.⁶ Moreover, there is no justification in amendments enacted by SB 3 for the Commission to take a piecemeal approach and only allocate the costs of a single ancillary service. All of the ancillary services ERCOT procures work together to support the reliable

³ ERCOT Nodal Protocols, Section 2, Definitions and Acronyms (Nov. 1, 2021) (greybox definition of ECRS).

⁴ Nitika Mago, Item 18: 2022 ERCOT Methodologies for Determining Minimum Ancillary Service Requirements, Board of Directors Meeting (Dec. 9-10, 2021) (available at https://www.ercot.com/files/docs/2021/12/02/18_2022_ERCOT_Methodologies_for_Determining_Minimum_AS_Requirements.pdf).

⁵ Commission Memorandum and Request for Comments at 3 (Dec. 6, 2021).

⁶ ERCOT defines Responsive Reserve Service in Section 2 of the Nodal Protocols as follows:

Responsive Reserve (RRS)

An Ancillary Service that provides operating reserves that is intended to:

- (a) Arrest frequency decay within the first few seconds of a significant frequency deviation on the ERCOT Transmission Grid using Primary Frequency Response and interruptible Load;
- (b) After the first few seconds of a significant frequency deviation, help restore frequency to its scheduled value to return the system to normal;
- (c) Provide energy or continued Load interruption during the implementation of the Energy Emergency Alert (EEA); and
- (d) Provide backup regulation.

ERCOT Nodal Protocols, Section 2, Definitions and Acronyms (Nov. 1, 2021).

operations of the ERCOT grid, as the very definition of ECRS shows. As a result, cost allocation of a single service with no operational experience to support that allocation is discriminatory at best. Other ancillary services have known causes for procurement and deployment. For example, regulation service is frequently used to counteract uncontrollable loads, like steel mills and data centers, which are very price responsive but operate outside of SCED. Non-discriminatory cost-causation based cost allocation will increase costs for all generation types and some loads that contribute to the Texas economy. This is one example of the many issues that need to be addressed in Phase I market design changes, and the Solar Associations respectfully insist that the Commission ensure a transparent process for these issues to be addressed prior to the development of any administrative rules or Protocol Revision Requests.

CONCLUSION

SEIA and TSPA appreciate the opportunity to provide these Comments and look forward to working with the Commission and other interested parties on these issues.

Respectfully submitted,



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EXECUTIVE SUMMARY

- Further transparent analysis of market design proposals is necessary to accurately assess the cost of each of the proposals to Texas consumers, including costs that will result from reduced development of solar generation resources.
- With appropriate subsequent rulemaking efforts, the Solar Associations support the proposed Backstop Reliability Service and Phase I items as meaningful improvements to grid reliability.
- The Solar Associations support the Principle that any new load obligation should be targeted and appropriately sized to encourage the addition of new dispatchable generation in ERCOT.
- Implementing an LSE Obligation that is a decentralized capacity market in a market with a predominance of vertically integrated utilities, or entities with long-term load certainty, is feasible. Implementing an LSE Obligation in a market where load has greater ability to switch from one LSE to another LSE risks adopting all of the worst qualities of a PJM centralized capacity market without any of its structure.
- Sizing a load-side reliability mechanism based on net peak load excludes and obscures the very real impact thermal outages have on the reliable operations of the grid. Thermal resource outages occur at any time and are independent of the output of wind and solar generation.
- Utilities Code §35.004(h) as added by SB 3 §14 requires the Commission to require ERCOT to modify the ... cost of ancillary services for the region in a manner consistent with cost-causation principles and on a nondiscriminatory basis.” The statute does not allow the Commission to modify the cost allocation of a single ancillary service. Rather, this statute requires the Commission to consider cost allocation for all ancillary services together because they operate in an integrated fashion to ensure reliable grid operations. Moreover, because the cost allocation must be based on cost causation principles and on a nondiscriminatory basis, the cost of the ancillary services must be allocated to all forms of generation and loads since all forms of generation and loads cause the need for ERCOT to procure ancillary services.