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PROJECT NO. 54335

**REVIEW OF MARKET REFORM
ASSESSMENT PRODUCED BY ENERGY
AND ENVIRONMENTAL ECONOMICS,
INC. (E3)**

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**PUBLIC UTILITY COMMISSION

OF TEXAS**

**COMMENTS OF
ADVANCED ENERGY MANAGEMENT ALLIANCE**

COMES NOW the Advanced Energy Management Alliance (AEMA) and files these Comments in response to the Commission Staff's Request for Comments filed in this proceeding on November 25, 2022. AEMA is a trade association under Section 501(c)(6) of the Federal tax code whose members include national distributed energy resource companies and advanced energy management service and technology providers, including demand response (DR) providers, as well as some of the nation's largest demand response and distributed energy resources (DERs) and consumers. The comments herein represent the views of the organization as a whole rather than those of any individual member.

Introduction

The Commission should ensure dispatchable demand-side technologies, or DR, are able to play a greater role in ensuring the reliability of the grid. It is possible for a market design for resource adequacy to send powerful incentives to demand to flex energy usage during system-critical hours to both save consumers money and improve reliability.

Unfortunately, the E3 report itself fails to appropriately incorporate demand-side solutions, including both demand response and energy efficiency. For example, DR is modeled with no net

additions between 2022 and 2026,¹ and consequently the output for each market design reform proposal is static – demand response does not grow between 2022 and 2026.² The lack of growth in DR seem to contradict the report’s conclusion that all of the new market designs, including the Load Serving Entity Reliability Obligation (LSERO), the Forward Reliability Market (FRM), the Performance Credit Mechanism (PCM), the Backstop Reliability Service (BRS), and the Dispatchable Energy Credits (DEC) proposal, create a “strong ability to facilitate demand response.”³ While load-serving entities and customers are likely to be able to use DR as a hedge against the costs of any new reliability product the Commission adopts, the Commission should make clear that demand response can also proactively participate as an eligible resource in the new product and not just use demand response as a cost mitigation tool.

Even when demand response is increased as part of the sensitivity analysis, the quantity of demand response is limited to a doubling of the current 925 MW available in the Emergency Response Service, a small fraction of ERCOT demand.⁴ In previous comments, AEMA has urged the Commission to procure demand response at a minimum of five percent of peak demand.⁵ And, as noted above, the report does not contemplate any other pathway to grow demand response, contributing to the implicit assumption that the market cap on demand response is tied to ERS and limited to less than 1 GW.

The report also fails to incorporate any energy efficiency goals, measures, or programs in its analysis or its conclusions. The load forecast that is selected is based on ERCOT’s 2022 Long-

¹ Energy+Environmental Economics, *Assessment of Market Reform Options to Enhance Reliability in the ERCOT System* Report, filed in Project No. 52373, *Review of Wholesale Electric Market Design*, Nov. 10, 2022 (hereinafter E3 Report), Table 2, at p. 4.

² *Ibid.*, Table 17, at p. 52

³ *Ibid.*, p.90

⁴ *Ibid.*, p. 67

⁵ Comments of Advanced Energy Management Alliance, filed in Project No. 52373, *Review of Wholesale Electric Market Design*, (Aug. 16, 2021).

Term Hourly Energy Forecast Study and, while it applies some variable factors, none of them appear to be energy efficiency or conservation efforts.⁶

The exclusion of these demand-side solutions skews the analysis, particularly the computations of system costs, because these resources and technologies are capable of providing grid reliability at a comparatively low cost. The report's analysis of the system costs for the LSERO and FRM mechanisms forecast a reliability credit cost of \$85.9/kW-yr,⁷ a value that is *higher* than the Avoided Cost of Capacity used in the Energy Efficiency Implementation Project, which is \$80/kW-yr.⁸ More striking, Sierra Club brought to attention in its Petition that during the Program Year 2020, utility energy efficiency programs averaged a lifetime cost of just \$11.56 per kW.⁹

Irrespective of the market design selected by the Commission, due to the lack of meaningful consideration of demand-side resources, we urge the Commission to commit to and prioritize the following additional actions:

1. Include in any resolution adopting market design changes a directive that any resources capable of providing new services will be eligible to participate, including demand resources.
2. Clarify how demand response will be able to participate as a market-integrated resource in the new market design and expediently develop appropriate participation models.
3. Set a peak demand goal and energy savings target to spur the development of additional cost-effective demand response and energy efficiency resources.

⁶ E3 Report, p. 33

⁷ *Ibid.*, p. 56

⁸ <https://www.puc.texas.gov/industry/projects/electric/38578/38578.aspx>.

⁹ Petition of Lone Star Chapter of the Sierra Club to Initiate Rulemaking to Amend PUC Subst. 25.181 (Energy Efficiency Goal) and 25.182 (Energy Efficiency Cost Recovery Factor), Project No. 53971 (Aug. 17, 2022) at p. 9.

4. If PCM is adopted, a seasonal or more granular approach should be pursued. Shorter periods will not eliminate significant risks discussed below but could help reduce the commercial impracticability of settling charges significantly in arrears of when they are provided and consumed.

We believe these actions deserve prioritization because demand-side resources can provide immediate grid reliability support. The new market design is expected to take years to develop and implement, and possibly even longer to successfully incentivize investment in new generation resources. As an interim step, the Commission should seek to support the rapid deployment of additional demand response and energy efficiency.

Comments

- 1. The E3's report observes that the Performance Credit Mechanism (PCM) has no prior precedent for implementation, does this fact present a significant obstacle to its operation for the ERCOT market?**

AEMA believes that there is a risk in adopting any novel market design because the design inherently has not been tested. However, the PCM has the potential to carry additional risk because of the core element of its design: the retroactive settlement process. This creates levels of uncertainty, especially at the initial launch of the market when retailers must try and forecast their credit needs based on yet-to-occur grid conditions and generators must try and develop a reasonable credit valuation without any prior experience. AEMA recommends that, if the PCM proposal or other major market redesigns are implemented, in addition to a robust and transparent analysis of how the market design(s) would have impacted the ERCOT market using historic ERCOT data, a financially non-binding procurement be run to promote transparency around the market design's mechanics.

Demand response is well-suited to provide availability during the exact hours where reliability risk occurs. However, the *value* of the resource seems likely to fluctuate year to year depending on a number of factors such as the clearing price in the forward market, the level of supply needed during the hours of highest reliability risk, and the causes of the reliability risk events (*e.g.*, extreme weather versus generator outage). In addition, because settlement will occur retroactively, the value of the DR resource will not be realized possibly for months. This design runs against how customers often wish to participate in demand response programs – with a clear understanding of the value proposition.

2. Would the PCM design incentivize generation performance, retention, and market entry consistent with the Legislature's and the commission's goal to meet demand during times of net peak load and extreme power consumption conditions? Why or why not?

The PCM market design should include specific demand response resource types that best reflect the capabilities of these resources. Presently, the most meaningful ERCOT-integrated market for demand response is the ERS program. However, as AEMA has stated in previous comments, there are multiple ways ERS can be improved to make it more available to DR resources.¹⁰ In addition, the Commission can continue to explore additional ways that DERs are able to directly interface with ERCOT, such as expanding the work of the ADER Task Force.

5. Over what period should the hours of highest reliability risk be determined? A year, a season, a month, or some other interval? At what point in time should that determination be made?

The reliability risk should be calculated at least on a seasonal basis, if not more frequently. While not eliminating the risk discussed in AEMA's response to Question 1, shorter periods will

¹⁰ See, for example, Project No. 52373, Review of Wholesale Market Design, Comments of AEMA (Aug. 16, 2021): https://interchange.puc.texas.gov/Documents/52373_24_1147630.PDF.

help mitigate some of the uncertainty inherent in the PCM proposal. ERS has had success with a seasonal procurement approach and is able to procure the appropriate types of resources depending on distinct seasonal needs, while other services are better procured on a daily approach. A procurement approach that is more granular than annual also should provide clearer indications of the value of the new product and its impact on market participants and customers.

9. If implementing a short-term design as a "bridge" delays the ultimate solution, should it be considered? Is there an alternative to a bridge solution that could be implemented immediately, using existing products, such as a long-term commitment to buy the additional 5,630 MW of Ancillary services necessary to achieve the 1-in-10 LOLE reliability standard?

AEMA strongly encourages the Commission to grow demand-side resources as an initial solution to immediately address grid reliability. These resources are cost-competitive, able to be aggregated in a matter of days or weeks, and can meaningfully reduce peak load.

Conclusion

AEMA appreciates the opportunity to provide these Comments and looks forward to working with the Commission and other interested parties on these issues.

Respectfully submitted,



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EXECUTIVE SUMMARY

- The E3 report fails to appropriately incorporate demand-side solutions, including both demand response and energy efficiency, which skews the analysis, particularly the computations of system costs, because these resources are capable of providing grid reliability at a comparatively low cost.
- Irrespective of the market design selected by the Commission, we urge the Commission to commit to and prioritize the following additional actions, because demand-side resources can provide immediate grid reliability support:
 - Include in any resolution adopting market design changes a directive that any resources capable of providing new services will be eligible to participate, including demand resources.
 - Clarify how demand response will be able to participate as a market-integrated resource in the new market design and expediently develop appropriate participation models.
 - Set a peak demand goal and energy savings target to spur the development of additional cost-effective demand response and energy efficiency resources.
 - If PCM is adopted, a seasonal or more granular approach should be pursued. Shorter periods will not eliminate significant risks of the proposal but could help reduce the commercial impracticability of settling charges significantly in arrears of when they are provided and consumed.

Summary of responses to the 12 Questions:

1. There is a risk in adopting any novel market, but the PCM has the potential to carry additional risk because of its retroactive settlement process. If any market redesigns are implemented, in addition to a robust and transparent analysis of how the market design(s) would have impacted the ERCOT market using historic ERCOT data, a financially non-binding procurement should be run to promote transparency around the market design's mechanics. Demand response is well-suited to provide availability during the exact hours where reliability risk occurs, but the *value* of the resource seems likely to fluctuate year to year depending on a number of factors. Because settlement will occur retroactively, the value of the DR resource will not be realized

possibly for months, making it challenging for customers to have a clear understanding of the value proposition.

2. The PCM market design should include specific demand response resource types that best reflect the capabilities of these resources. The Commission should continue to explore additional ways to remove barriers to DR in ERCOT, including ERS, and ensure DERs are able to directly interface with ERCOT, such as expanding the work of the ADER Task Force.
5. The reliability risk should be calculated at least on a seasonal basis, if not more frequently. Shorter periods will not eliminate the risks discussed in Question 1, but could help mitigate some of the uncertainty inherent in the PCM proposal.
9. AEMA strongly encourages the Commission to grow demand-side resources as an initial solution to immediately address grid reliability. These resources are cost-competitive, able to be aggregated in a matter of days or weeks and can meaningfully reduce peak load.