



## Filing Receipt

**Received - 2021-08-16 01:16:06 PM**  
**Control Number - 52373**  
**ItemNumber - 18**

**PROJECT NO. 52373**

|                                |          |                                  |
|--------------------------------|----------|----------------------------------|
| <b>REVIEW OF</b>               | <b>§</b> | <b>PUBLIC UTILITY COMMISSION</b> |
|                                | <b>§</b> |                                  |
| <b>WHOLESALE MARKET DESIGN</b> | <b>§</b> | <b>OF TEXAS</b>                  |

**AUSTIN ENERGY’S RESPONSE  
TO REQUEST FOR COMMENTS**

Austin Energy<sup>1</sup> submits these comments in response to the Public Utility Commission of Texas (Commission) staff’s request for comments issued on August 2, 2021. Austin Energy is a municipally-owned utility that serves over 500,000 customers in the greater Austin region since 1895. Austin Energy provides all functions related to its obligation to provide electricity service to its customers, including generation, transmission, distribution, and customer service. Austin Energy manages a diverse generation resource portfolio of more than 5,000 MW of total generation capacity comprised of natural gas, nuclear, coal, biomass, wind, and solar resources that fully participate in the competitive ERCOT wholesale electricity market. This fleet of generation resources benefits Austin Energy customers by providing a physical hedge against volatile price spikes and by giving Austin Energy customers any financial gains made in the market as a pass-through on bills. It also provides value to the ERCOT system by supporting reliability through ancillary services and energy and contributing to long-term resource adequacy.

Austin Energy appreciates this initial opportunity to offer its perspective on the Electric Reliability Council of Texas (ERCOT) wholesale electricity market design with consideration of the recent impacts of the February 2021 winter weather event (Winter Storm Uri) from both a reliability and financial perspective. We look forward to working collaboratively with the Commission, its staff, and ERCOT stakeholders to identify opportunities for improving the market design to meet evolving needs with the primary objective of enhancing reliability of the ERCOT system and addressing potential impacts of future extreme weather events at an affordable cost.

---

<sup>1</sup> City of Austin d/b/a Austin Energy.

## **I. Executive Summary**

Adjusting the Operating Reserve Demand Curve (ORDC) to provide for more frequent scarcity pricing payments during tighter supply/demand intervals may provide near-term benefit to aging or less efficient generation. It may also help encourage marginal units to remain in operation despite increased costs associated with meeting new weatherization standards. However, adjustments to the ORDC are not likely to have a material impact on the types of resource investments being made in ERCOT in the long term. As exhibited by the current ERCOT generation queue, there are additional external drivers to these investment decisions in the ERCOT region. This includes increasing customer demand for renewable energy and significant growth in corporate buyers of renewable energy to meet climate goals.

Given these considerations, Austin Energy does not find that adjustments to the ORDC will directly lead to the addition of new dispatchable units. Nor will it address the evolving reliability needs of the ERCOT wholesale electricity market. If the Commission is concerned that the current system-wide offer cap of \$9,000/MWh is too high given the risk of extended duration scarcity events, and the emergency pricing program created by Senate Bill 3 is insufficient to address this risk, it could consider lowering the price cap and modifying the curve to ensure similar pricing outcomes are achieved during scarcity conditions. Smoothing and extending the curve would allow generators to receive more frequent scarcity payments while reducing price shocks.

Austin Energy believes that priority should instead be given to modifying procurement levels of existing ancillary service products through a transparent and objective approach and consider additional ancillary service and reliability products to improve generator performance during extreme weather events (e.g., dual fuel and on-site fuel storage procurement) and address emerging reliability needs (e.g., a new ramping product). Similar to existing ancillary service products, any new or modified products should be designed to be resource and technology-neutral by focusing on the attributes needed to provide the reliability service rather than prescribing which resource or technology is eligible. Designing attribute-based ancillary service products will help ensure that reliability needs are met at an affordable cost while providing incentives for technology advancements and innovation. We also support opportunities to leverage the potential of demand-side resources.

## II. Introduction

As a customer-driven organization, Austin Energy views the ERCOT wholesale electricity market through two lenses:

1. Is the market operating efficiently and achieving fair market outcomes that support affordable electricity service?
2. Is the market supporting ERCOT's primary objectives of reliability and stability?

The current ERCOT wholesale electricity market design has generally provided for fair and efficient market outcomes over the past decade, providing electricity customers in the ERCOT region with some of the lowest average electricity prices in the United States. However, the design has come into question recently due to the exposure of both physical and financial vulnerabilities as a result of Winter Storm Uri. Further, there is justifiable concern that as the resource mix in ERCOT continues to change, sufficient quick response resources and expanded demand response will be needed to ensure continuous supply of electricity and flexibility to respond quickly to dispatch instructions when there is a need to ramp supply up or down to balance the system.

ERCOT's energy-only market design may require changes to provide incentives for resources of all types to better perform during future extreme weather events while ensuring fair market outcomes and reliability as the grid evolves. Additionally, as envisioned by the emergency pricing program included in Senate Bill 3, targeted changes may be needed to ensure market stability when rare, high-impact and long-duration events occur.

It is important for the Commission to recognize throughout its deliberations that the cause of the extended ERCOT-directed electricity outages from February 15-18, 2021, was a confluence of several factors. The failure was not tied directly to the electricity market design or the failure of a particular type or category of generation resource. The Energy Institute at the University of Texas at Austin concluded in its report on "The Timeline and Events of the February 2021 Texas Electric Grid Blackouts" that the extended power outages were attributed to numerous factors including generation failures across all resource types, sustained extremely high demand, and various failures associated with the natural gas system; all of which were related to the state-wide severe winter weather conditions.<sup>2</sup> In light of these findings, outcomes of this market design

---

<sup>2</sup> The University of Texas at Austin Energy Institute, *The Timeline and Events of the February 2021 Texas Electric Grid Blackouts*, July 2021, pp. 7-9. Accessible here: <https://energy.utexas.edu/sites/default/files/UTAustin%20%282021%29%20EventsFebruary2021TexasBlackout%2020210714.pdf>.

review should complement the electric weatherization standards for generators currently under consideration in Project No. 51840 and in coordination with the Texas Railroad Commission to help ensure adequate gas supply during extreme weather conditions.

Austin Energy's responses to these initial questions provide high-level considerations for the Commission to help guide further discussion as stakeholders bring forward specific proposals. While we understand the sense of urgency on these matters, we also encourage the Commission to provide sufficient time to vet stakeholder proposals. This should include providing an opportunity for analysis of the impacts by ERCOT and the Independent Market Monitor (IMM) when appropriate to ensure that the outcome balances reliability with affordability for all ERCOT consumers.

### **III. Responses to 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 scarcity pricing mechanism has generally achieved efficient market outcomes while providing a strong incentive for generators to perform during predictable short-run scarcity conditions, especially during peak summer conditions when generators expect high prices due to peak demand on the system. This mechanism also inherently rewards the relative value of different generation resources with regard to their availability during such scarcity conditions. The ORDC mechanism falls short, however, in providing incentives to ensure performance during rare, long duration events like Winter Storm Uri, and it has arguably failed to allow dispatchable generators to recover fixed costs over time to drive new investment in generation that requires high capital costs. If the Commission's sole objective in this review is to refine the existing market design to help mitigate future extreme weather events, adjusting the ORDC is not likely to achieve that result. Instead, the Commission should focus its efforts on reviewing ERCOT's existing and planned suite of ancillary service and reliability products to determine what adjustments are needed to meet the Commission's desired level of reliability during extreme weather events.

If the Commission has other objectives to meet in this review, modifying the ORDC may provide a solution. For example, if the Commission is concerned that the current system-wide offer

cap of \$9,000/MWh is too high given the risk of extended duration scarcity events, and the forthcoming emergency pricing program is insufficient to address this risk, it could consider lowering the price cap and modifying the curve to ensure similar pricing outcomes are achieved during scarcity conditions. Smoothing and extending the curve would allow generators to receive more frequent scarcity payments while reducing price spikes. The modified curve could be designed to include a risk margin that recognizes the value of providing generation not only during periods of scarcity where there is a measurable probability of loss of load, but also during near scarcity conditions. This could provide improved financial stability for generators operating on the margin and provide increased revenues to generators for capital investments needed to meet new weatherization standards currently under development in Project No. 51840. This may also incentivize quicker adoption of certain types of technologies that tend to be available during near scarcity conditions.

Austin Energy recommends that any changes to the price cap or the curve, however, be supported by a third-party analysis of the impacts and resulting benefits, possibly by conducting a backcast analysis of what prices would have been under the modified curve compared to the existing curve. It is important that the Commission ensure that any changes made to the ORDC are done in a manner that appropriately balances the need to maintain affordable electric rates with reliability.

Austin Energy does not see any benefit in restricting scarcity payments to only those resources that commit in the day-ahead market (DAM) and addresses this issue further in response to question 2 below. Scarcity payments are already applicable to only those resources that are online and available in real-time.

Austin Energy interprets the last part of this question as whether the ORDC should be adjusted based on seasonal needs. There is no need to adjust the ORDC on a seasonal basis because seasonal variation is already accounted for in this design (i.e., if demand is higher in the summer than the winter, the ORDC payments will be higher in the summer, assuming similar levels of supply are available in each season). If the Commission wishes to provide scarcity pricing payments more frequently throughout the year, including increased payments during winter months, then extending the curve to account for near scarcity conditions is one possible solution as described above.

**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?**

While a minimum commitment in the DAM may provide ERCOT with better visibility of the expected resource availability for the next operating day, it is unclear that this would provide any increased reliability value in real-time, particularly during an extreme weather event when generator performance may be uncertain. The DAM is a voluntary financial market that provides the opportunity for load serving entities to hedge against the potential for high spot prices in the real-time market (RTM). Conversely, the DAM provides the opportunity for generation resources to offer capacity into the market and hedge against the potential for lower spot prices in the RTM. Establishing a minimum commitment in the DAM will not change this fact and thus should not be a precondition for participating in the ERCOT wholesale market. Further, establishing a minimum commitment in the DAM implies that a target procurement level will be established similar to the existing procurement of ancillary services in the DAM. This would essentially add a risk premium to the cost of the DAM obligation, increasing costs to electricity customers without necessarily providing additional value. It could also reduce liquidity and create greater divergence in prices in the DAM and RTM. Load serving entities already have an incentive to hedge prior to the DAM and thus it is unclear if this would have any commensurate benefits.

In summation, the current DAM design has been effective at providing an opportunity for market participants to manage risk, including the potential volatility in spot energy prices. It is unclear that a minimum commitment in the DAM would provide any enhanced value, but Austin Energy recognizes that upcoming work session discussion and stakeholder responses to these questions may shed further insight on the intent and any potential benefits of this proposal. We look forward to reviewing any additional details on this concept provided by the Commission or through stakeholder proposals to further consider possible refinements to our position.

**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?**

Ancillary services are a valuable tool to ensure system reliability throughout the year and under a wide range of potential operating conditions. Compensation is provided for resources that have certain unique attributes needed to reliably operate the system beyond just having sufficient generation to meet peak demand. This includes anticipating specific types of events that may cause cascading failures that could result in ERCOT-directed load shed or even worse outcomes. ERCOT's existing suite of ancillary service products addresses specific potential operating conditions such as a sudden loss of generation (responsive reserve), forecast uncertainty (non-spinning reserves), and ensuring a constant balance of supply and demand that maintains the desired range of frequency on the system (regulation).

Austin Energy supports the Commission using this opportunity to re-evaluate the existing suite of ancillary service and reliability products to determine what changes should be made to procurement levels of existing products and consider additional products to meet emerging needs. Given that ERCOT has already used its discretion to significantly increase responsive and non-spinning reserves procured this summer, this project is an ideal venue to develop a transparent and objective methodology to determine the appropriate procurement levels while weighing reliability with affordability. This will provide greater market certainty for both resources and load serving entities and may stimulate new investment in resources that can meet the qualification criteria of these products. One benefit of leveraging these existing products is that any changes in procurement levels should not require significant system changes to implement.

Austin Energy also encourages considering additional ancillary service products or reliability services for extreme weather conditions and the emerging reliability needs of the ERCOT system. Commission staff has already suggested one potential new reliability product in Project No. 51840 that would be tied to meeting a higher weatherization standard to provide "enhanced weather reliability service." Austin Energy agrees this concept is worth exploring but will require further analysis to ensure that this enhanced service would provide incremental value to grid reliability while maintaining affordability. Other concepts that Austin Energy thinks are



worth exploring include procuring dual fuel service and on-site fuel storage to help mitigate gas fuel supply risk and a ramping product to address expected increases in the need for flexible resources that can be quickly ramped up and down to address net load variability:

- Dual Fuel Service and On-Site Fuel Storage: To ensure supply during extreme events, ERCOT could provide additional compensation to units with dual fuel capabilities or on-site fuel storage in a manner similar to the procurement mechanism used today for black start units well in advance of the DAM and RTM. The amount of resources procured with these attributes could be based on the amount of gas generation needed to avoid loss of load during winter peak demand conditions and applying a risk factor for gas supply unavailability. Costs should be uplifted to load similarly to how emergency response service and black start service is settled today, as all load benefits from this reliability service.
- Ramping Product: To address increased net load variability (load less wind and solar), a ramping product could be developed to compensate resources that can quickly ramp up and down when needed. This could be based on evaluating the greatest forecasted ramping need over a defined time period. Developing a ramping product could supplement or replace the need to procure additional non-spinning reserves if ERCOT's recent increased procurement of non-spinning reserves is intended to meet the same objective. The procurement obligation for this ancillary service should be assigned to load in the same manner as other ancillary service products procured or self-arranged through the ancillary service market.

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

Austin Energy does not have a specific response to this question as it pertains specifically to REP programs. It is worth noting, however, that Austin Energy offers a broad suite of green building, energy efficiency, and demand response programs to residential and commercial customers.

**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?**

ERCOT's emergency response service (ERS) program is a safety net, or last resort, that is deployed during the early stages of an ERCOT emergency event to avoid progressing into a firm load shed event. The amount of resources procured under this program is constrained by the \$50 million maximum authorized under § 25.507 of the Commission's rules. ERS was not envisioned for use during a prolonged firm load shed event such as Winter Storm Uri. Rather than focusing on the ERS program as an opportunity to encourage additional demand-side participation, either through load reduction or on-site generation, the Commission could consider increasing opportunities for load resources to participate in the ERCOT market, possibly through enhanced ancillary service products.

**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?**

Austin Energy recognizes that due to the changing resource mix in the ERCOT system, there may be future challenges in meeting minimum reliability criteria for inertia, voltage support, and frequency. This is a complex issue that would benefit from further study to determine what the forecasted needs will be under various future scenarios and whether additional ancillary service products or other solutions are needed. Some preliminary considerations are provided below, and we look forward to reviewing other stakeholder proposals on this topic.

With regard to inertia and frequency, ERCOT's existing methodology for procuring responsive reserves can continue to be leveraged to ensure sufficient procurement of resources that provide these reliability attributes.

Voltage support is unique in that, unlike frequency, voltage varies across the electric grid. However, similar to frequency, voltage levels must be maintained at acceptable levels to maintain system reliability. Reactive power provided by generation resources is the primary source of voltage support. Generators are not currently compensated for providing reactive power support unless they are required to reduce output to comply with instructions from ERCOT to dispatch outside the standard range of operating conditions. If further study from ERCOT demonstrates a need for increased voltage support, we would support considering market mechanisms that

compensate reactive support from generation units or external dynamic reactive sources installed at generation facilities.

#### **IV. Conclusion**

Austin Energy appreciates the opportunity to submit these comments in response to Commission staff's questions regarding the ERCOT market design. We look forward to reviewing other stakeholder proposals and working with the Commission, its staff, and the stakeholders on this important topic in the coming months.

Dated: August 16, 2021

Respectfully submitted,

**CITY OF AUSTIN D/B/A AUSTIN ENERGY**

By: /s/Tammy Cooper

Tammy Cooper

Senior Vice President & Chief Communications and  
Compliance Officer

Telephone: (512) 505-3901

Email: [tammy.cooper@austinenergy.com](mailto:tammy.cooper@austinenergy.com)