



Filing Receipt

Received - 2021-09-09 02:24:44 PM
Control Number - 52373
ItemNumber - 99

PROJECT NO. 52373

**REVIEW OF WHOLESALE
ELECTRIC MARKET DESIGN**

§
§

**PUBLIC UTILITY COMMISSION
OF TEXAS**

**COMMENTS OF ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC. IN
RESPONSE TO COMMISSION STAFF'S QUESTIONS**

Electric Reliability Council of Texas, Inc. (ERCOT) respectfully submits these comments in response to Public Utility Commission of Texas (PUC) Staff's September 2, 2021 questions regarding demand response. ERCOT's response addresses only question 5. ERCOT reserves the right to provide additional comments as appropriate.

COMMENTS

Question 5: What changes should be made to non-residential load-side products, programs, or what programs should be developed to support reliability in the future?

ERCOT Response:

PUC and ERCOT rules currently allow non-residential consumers to participate in ERCOT's markets in several ways. Consumer loads that are registered with ERCOT as Load Resources may participate in ERCOT's markets for ancillary services and real-time energy. Other loads may participate in ERCOT's Emergency Response Service (ERS) program, which compensates participants for being available to curtail during systemwide emergencies. In addition to these ERCOT-administered services and programs, ERCOT has observed that a significant and increasing number of non-residential consumers that are not registered with ERCOT reduce their consumption in apparent response to real-time energy prices. Because this load is not dispatched by ERCOT's security-constrained economic dispatch (SCED) application, this price-responsive behavior is often referred to as "passive" demand response.

ERCOT believes system reliability could be improved by requiring nodal pricing and dispatch of Load Resources participating in ERCOT's real-time energy market and also by requiring nodal pricing for large non-residential loads that are engaged in providing passive demand response, instead of pricing and dispatching these loads on a zonal basis. Requiring nodal pricing for loads that respond to real-time price signals—whether in response to an ERCOT instruction or passively—will help to align market incentives with operational reliability. Nodal

pricing is an essential element of SCED’s management of transmission congestion. Every five minutes, SCED’s algorithm identifies the sources of electricity supply that can meet the system load at the lowest total cost while maintaining transmission system reliability. Based on this calculation, SCED assigns and communicates to each Generation Resource and Energy Storage Resource (ESR) a specified dispatch level and a locational, or nodal, price. When congestion exists on the transmission system, the nodal price and dispatch level may change depending on whether the Generation Resource or ESR contributes to, or alleviates, the congestion. For Generation Resources or ESRs that contribute to transmission congestion, nodal prices and dispatch are lowered consistent with the Resource’s “shift factor”—i.e., its impact on each constrained element. For Generation Resources or ESRs that help to resolve that congestion, nodal prices and dispatch are increased consistent with the Resource’s shift factor. In this way, dispatching and pricing Generation Resources and ESRs on a nodal basis helps to ensure the reliability of the transmission system.

The benefits of nodal pricing do not currently extend to loads, including Load Resources. PUC rules require ERCOT to price loads using a load-zone price—i.e., a weighted average of the nodal prices at each electrical bus within each of the eight ERCOT load zones.¹ See 16 TAC § 25.501(h); ERCOT Protocols § 6.6.1.4. Zonal pricing impairs ERCOT’s ability to manage system reliability because a given load’s impact on a transmission constraint has no material effect on the wholesale energy price paid by the load. In this way, zonal pricing fails to provide consumers any meaningful incentive to adjust their consumption to resolve those constraints. The use of zonal shift factors to dispatch Load Resources likewise fails to account for the impacts of each load on specific transmission constraints. Load Resources that participate in the real-time energy market are dispatched by SCED using a Resource-specific bid curve and zonal shift factors. These shift factors are a weighted average of the shift factors at electric buses within each load zone with respect to each transmission constraint and are not specific to a given Load Resource and its location on the grid. Zonal shift factors thus do not accurately reflect the impact that a change in the Load Resource’s consumption would have on a specific transmission constraint. In fact, a Load Resource that is dispatched and priced on a zonal basis may even exacerbate the

¹ ERCOT notes that PUC rule 25.501(f) requires ERCOT to price “resources” using nodal prices. Arguably, this presents an ambiguity with respect to pricing in the case of Load Resources, which can reasonably be viewed as both “loads” and “resources.” However, because Load Resources are still fundamentally customer loads, ERCOT has historically interpreted rule 25.501 to require zonal pricing for Load Resources.

loading on a transmission constraint that it could have relieved if the Load Resource had been dispatched and priced on a nodal basis.

Given these concerns, ERCOT proposes that the Commission require Load Resources to be settled and dispatched using nodal energy prices and nodal shift factors, and that the Commission also require price-responsive non-residential loads above a certain MW threshold (e.g., 1 MW) to be settled using nodal energy prices. ERCOT acknowledges that there may be sound non-market policy reasons to continue using zonal pricing to settle individual residential and other smaller consumers. However, ERCOT suggests that, in the case of Load Resources and other large non-residential consumers, these justifications are outweighed by the reliability benefits of nodal settlement and dispatch. If the Commission agrees with ERCOT's proposal, ERCOT recommends that the Commission consider an appropriate transition period to allow affected consumers time to evaluate the impact of this change and to consider the potential benefits of hedging.

ERCOT appreciates the Commission's consideration of these comments and would be pleased to provide any additional information the Commission may request.

Respectfully submitted,

/s/ Nathan Bigbee
Chad V. Seely
Vice President and General Counsel
Texas Bar No. 24037466
(512) 225-7035
chad.seely@ercot.com

Nathan Bigbee
Assistant General Counsel
Texas Bar No. 24036224
(512) 225-7093
nathan.bigbee@ercot.com

ERCOT
7620 Metro Center Drive
Austin, Texas 78744

ATTORNEYS FOR ELECTRIC
RELIABILITY COUNCIL OF TEXAS,
INC.