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PROJECT NO. 56966

GOAL FOR REDUCING AVERAGE TOTAL RESIDENTIAL LOAD IN THE ERCOT REGION	**§ § §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

COMMENTS OF ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.

Electric Reliability Council of Texas, Inc. (ERCOT) submits these comments in response to the Public Utility Commission of Texas's (Commission) proposed new 16 Texas Administrative Code (TAC) § 25.186, relating to Goal for Reducing Average Total Residential Load in the ERCOT Region, which will implement Public Utility Regulatory Act (PURA) § 39.919, as enacted by Senate Bill (SB) 1699, Section 5, during the Texas 88th Regular Legislative Session. These comments provide additional background information that may inform the Commission's determination of the appropriate method for evaluating demand response performance. ERCOT also recommends some revisions to the proposed rule language.

Historical Residential Demand Response Performance

Consistent with PURA § 39.919(c), the proposed rule establishes a residential load reduction goal that is calculated as the ratio of the reduction in load of all consumers participating in responsive device programs to the total load of those consumers.[1] The proposed load reduction goal is 0.25.[2] Based on ERCOT's analysis of load reduction historically observed by residential customers participating in demand response programs, ERCOT notes that this goal appears to exceed historically observed values for at least some days.[3] ERCOT pulled data for the four days in summer 2023 with the highest hourly peak net load value in each month—June 20, July 31, August 25, and September 6—for the roughly 30,000 customers that ERCOT knows to be enrolled in a Retail Electric Provider (REP)-administered demand response program based

[1] *See* 16 TAC § 25.186(d)(3)(A) (proposed)

[2] *See* 16 TAC § 25.186(d)(3) (proposed).

[3] See attached spreadsheet filed natively, *Underlying Data for June 20, July 31, August 25, and September 6 2023.*

on ERCOT's annual demand response survey.[4] ERCOT determined baseline and actual load reduction values for each customer for each 15-minute interval for each of the four days. The baseline load values were estimated by applying ERCOT's Demand Response Baseline Methodologies, which ERCOT uses for purposes of calculating demand reduction for a variety of demand response programs.[5] The difference between the baseline and actual interval demand values represents ERCOT's estimate of the change in load attributable to the REP's deployment of responsive devices, which are typically thermostats. For these four days in 2023, the average premise-level load reduced by these customers during the peak net load hour for each day ranged from -0.48 kW to 1.25 kW. Using the calculation prescribed by the proposed rule, the resulting load-reduction ratio would therefore range from -0.029 to 0.0806. In some cases, the ratios were negative because some REP deployments ended at or near the beginning of the peak net load hour, which allowed the customers' thermostats to revert to the previous lower thermostat setting, causing those customers' actual load in those hours to be *higher* than their baseline during the hour of peak net load.

While this analysis is based on a limited data set from only four observations in a single year, it does suggest that a program goal of 0.25 might be difficult to meet for every peak net load hour because participation in REP-administered programs does not necessarily guarantee that deployment will occur during the highest net peak load hours or for the entirety of those hours. This can be true for many reasons, including that program terms may not require curtailment or may allow customers to cease curtailment after a specified time, imperfect correlation between high prices and net peak load for the full hour of peak net load, imprecision in the REP's estimate of high-priced intervals, hedge positions that may reduce the REP's incentives for curtailment during a given peak load hours, among many other possible factors. However, over time, as more customers participate and as REPs become more sophisticated with targeting demand reductions during intervals with high prices, the ratio could rise. Based on continued experience with REP deployment under this rule, the ratio of 0.25 may well be

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[4] ERCOT conducts this survey pursuant to ERCOT Protocol § 3.10.7.2.2 under the authority of 16 TAC § 25.505(c)(5).

[5] ERCOT Demand Response Baseline Methodologies, August 2024, https://www.ercot.com/files/docs/2024/09/09/demand_response_baseline_methodologies_sep-9-2024.docx

appropriate and achievable. Experience and additional data will guide whether the ratio should be modified in the future.

Comments and Recommended Revisions

ERCOT suggests a few revisions to the proposed rule language, which are reflected in *ERCOT Proposed Revisions*, below. First, ERCOT suggests clarifying subsection (d)(2) to describe how ESI IDs with behind-the-meter photovoltaic (PV) generation are accounted for in the calculation of the load reduction values ERCOT is required to file with the Commission. ERCOT recommends that the load reduction from customers with PV be based on the reduction in their actual energy consumption at the premise rather than a reduction in metered load, since PV power production would offset consumption and in fact could result in an export to the grid during peak net load hours. For these customers, the load reduction can be manifested as a decrease in consumption from the grid, an increase in export to the grid, or both. Calculating the load value for a premise with PV as the sum of the customer's metered energy consumption plus its PV generation less PV export would allow this more accurate calculation of load reduction for these customers. A significant number of participants in existing REP programs have PV, and a 1 kW reduction in their load would have the same benefit to the grid as a 1 kW load reduction by a customer without PV. ERCOT has included clarifying language in new (d)(2)(C).

ERCOT also proposes revisions to the reporting requirements in subsection (d)(2)(B) to provide that ERCOT's filing should specify not only the load-reduction values and metered-load values for all customers in a responsive device program but also those values for the specific subset of those customers that were directed to deploy during a peak demand period or energy emergency alert, since not all REP responsive device programs may have been deployed in each instance. Because ERCOT would intend to provide this information in its filing, ERCOT believes it would serve the interests of transparency to include this in the rule language.

Next, ERCOT recommends removing proposed subsection (c)(1)(D). ERCOT believes it is unnecessary to prohibit recipients of smart devices from participating in other demand response programs. Allowing such customers to participate in these programs could facilitate growth of demand response.

ERCOT also suggests revising the definition of "ERCOT peak demand period" in subsection (c)(3) to clarify that only ERCOT-registered wind and solar generation should be

included, since ERCOT does not have any way to account for unregistered wind and solar generation output. For clarity, ERCOT also recommends defining "gross load" to align with the value ERCOT uses to determine load for purposes of determining four coincident peak (4CP) intervals.

Furthermore, ERCOT assumes that the information due each March 31st from ERCOT to the Commission should be publicly available, in which case ERCOT recommends that the rule be clarified that ERCOT must publicly file the information.

ERCOT also notes that, as currently proposed, the rule requires ERCOT to determine and submit data for each daily ERCOT peak demand period. To maximize the value of this reporting requirement, ERCOT recommends that the load reduction reporting be limited to days with one or more REP-reported deployment events. ERCOT notes that, during the summer of 2023, one or more REPs deployed their responsive device programs on only 33 different days. If the calculation were not limited to days during which a REP deployment occurred, the vast majority of data provided would show little meaningful information, because the calculated load reduction values on most days would likely be very small or zero.

Additionally, ERCOT recommends that subsection (d)(3) should be revised to clarify how achievement of the "average total residential load reduction goal of 0.25" will be determined. Consistent with ERCOT's proposed revisions to subsection (d)(2)(B), ERCOT recommends that the assessment of whether the goal has been met should be limited to those peak demand periods in which a REP deployment occurred. The Commission may wish to further consider whether achievement of the goal should be based on an average of multiple peak demand periods during a reporting year, such as all of the peak demand periods in which a deployment occurred, or just the peak demand periods during a summer or winter month in which a deployment occurred.

Finally, ERCOT has also included several minor clarifications in the attached revisions.

ERCOT appreciates the Commission's consideration of these comments and would be pleased to provide the Commission any information that may be useful to its evaluation of the policy issues in this proceeding.

Respectfully submitted,

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ATTORNEYS FOR ELECTRIC
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ERCOT Proposed Revisions

§25.186 Goal for Average Total Residential Load Reduction

(a) **Application.** This section applies to the independent organization certified under PURA §39.151 for the Electric Reliability Council of Texas (ERCOT) region, a transmission and distribution utility (TDU), and a retail electric provider (REP) providing demand response using a responsive device program to residential customers.

(b) **Definition.** When used in this section, the term "smart responsive appliance or device" has the following meaning unless the context indicates otherwise: An appliance or device that may be enabled to allow its electric usage or electric usage of connected appliances or devices to be adjusted remotely.

(c) **Responsive Device Program.** A REP may offer a responsive device program that offers an incentive to residential customers with smart responsive appliances or devices to reduce electricity consumption during an ERCOT peak demand period.

(1) A REP may contract with a demand response provider to provide a responsive device program.

(2) A responsive device program must:

(A) allow demand response participation by residential customers where reasonably available, including during the summer and winter seasons;

(B) be capable of responding to an ~~emergency~~ energy emergency alert issued by the independent organization certified under Public Utility Regulatory Act (PURA) §39.151 for the ERCOT region; and

(C) ensure that the program does not adversely impact the needs of a critical care residential customer or chronic condition residential customer as those terms are defined in §25.497 of this title, relating to Critical Load

Industrial Customers, Critical Load Public Safety Customers, Critical Care Residential Customers, and Chronic Condition Residential Customers~~; and~~

~~(D) provide that a residential customer is limited to participation in a single demand response program within the ERCOT region~~.

(3) For the purposes of this section, an ERCOT peak demand period is an hour with the highest value of peak net load, where peak net load is calculated as gross load minus total output from wind and solar generation resources registered with ERCOT~~wind and solar~~. For purposes of this section, gross load is calculated consistent with the calculation of 4CP demand under 16 TAC § 25.192(d).

(d) **Average total residential load reduction goal.**

(1) No later than 45 days following the end of each calendar quarter, a REP providing a responsive device program within the ERCOT region must submit to ERCOT, ~~on~~ in a form prescribed by ERCOT, the following information for each calendar month in the quarter:

(A) the electric service identifier (ESI ID) for each residential customer with smart appliances or devices enrolled in each demand response program offered by the REP; and

(B) the date of each demand response event, including each demand response event start time and stop time and the ESI IDs deployed for each event.

(2) No later than March 31 of each calendar year, for each daily ERCOT peak demand period and for each ERCOT energy emergency alert period, ERCOT must publicly ~~provide~~ file with ~~-~~the commission ~~with~~ the following information for the preceding twelve-month period ending on November 30 of the previous calendar year:

(A) the date and time of each period, the value of gross load, and the value of peak net load during those periods; and

(B) for each day for which ERCOT has received notice of a REP deployment and for each ERCOT energy emergency alert period:

i. the estimated hourly and 15-minute interval ~~total amount of~~ load reduction~~ed~~ by all residential customers enrolled in a responsive device program during the peak demand period or energy emergency alert period~~during those periods~~;

~~i.~~ii. the estimated hourly and 15-minute interval load reduction by all customers identified in subparagraph (i) that were deployed at any point during the peak demand period or energy emergency alert period;~~and~~

iii. ~~(C)~~ the ~~total~~ aggregated hourly and 15-minute interval actual metered load ~~amount of load~~ of all the residential customers enrolled in a responsive device program ~~during those periods~~;

iv. the aggregated hourly and 15-minute interval actual metered load of all customers identified in subparagraph (iii) that were deployed at any point during the peak demand period or energy emergency alert period; and

~~ii.~~v. the total number of customers deployed at any point during each interval.

(C) For purposes of this paragraph, the load associated with any premise with behind-the-meter photovoltaic (PV) generation will be calculated as the sum of the premise's import from the grid plus any PV generation less any export to the grid.

(3) The average total residential load reduction goal is 0.25, unless the commission adopts an updated goal under subparagraph (C) of this paragraph.

(A) The ratio of load reduced by all responsive device programs during an ERCOT peak demand period or energy emergency alert period in which one or more programs were deployed ~~and~~ to the total amount of demand

of all residential customers participating in the responsive device programs should meet or exceed the average total residential load reduction goal.

(B) On or before June 30 of each even-numbered year, commission staff will review the data received from ERCOT under subsection (d)(2) of this section to assess the effectiveness of the responsive device programs offered by REPs and whether the average total residential load reduction goal under subsection (d)(3) of this section is being achieved. Commission staff will file a recommendation in Project 56966 on whether the commission should adjust the goal.

(C) The commission will consider commission staff's recommendation under subsection (d)(3)(B) of this section and, if appropriate, issue a written order adopting an updated average total residential load reduction goal, effective December 1 of that calendar year.

(e) **Confidentiality.** ERCOT must treat the information submitted by a REP under subsection (d)(3) of this section as protected information as defined by the ERCOT protocols.

(f) **Funding.** A REP may receive funding for a responsive device program through an energy efficiency incentive program established under §25.181 of this title, relating to Energy Efficiency Goal, if the program complies with commission requirements related to the evaluation, measurement, and verification of demand response programs and if the smart ~~the~~ responsive appliances or devices meet the requirements of subsection (c) of this section. A transmission and distribution utility required to provide an energy efficiency incentive program under PURA § 39.905 may use up to 10 percent of the budgeted spending for responsive device programs offered by a REP under subsection (c) of this section.

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EXECUTIVE SUMMARY OF ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.'S COMMENTS

Electric Reliability Council of Texas, Inc. (ERCOT) makes the following observations and suggestions in response to the Questions for Comment in Project No. 56966, Goal for Reducing Average Total Residential Load in the ERCOT Region:

1) ERCOT's data from the peak hours of four days in summer 2023 suggest that a 0.25 load reduction goal ratio may be difficult to achieve—at least initially.
2) ERCOT recommends that the calculation of the load reduction for customers participating in a REP program who also have PV installed on their homes should be revised to account for the fact that such customers may not show an import from the grid.
3) ERCOT recommends that the ERCOT reporting requirements be revised to explicitly require reporting of information for the subset of participating customers that were subject to a REP deployment, to require reporting only for those days on which one or more REP deployments or for which an ERCOT energy emergency alert occurred, and to require public filing of the information.
4) ERCOT recommends revising the calculation of the goal ratio to include only those peak demand periods or energy emergency alert periods in which a REP deployment occurred.

The following files are not convertible:

Underlying Data for June 20, July 31, August 25, and September 6 2023.xlsx

Please see the ZIP file for this Filing on the PUC Interchange in order to access these files.

Contact centralrecords@puc.texas.gov if you have any questions.