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REVIEW OF WHOLESALE ELECTRIC MARKET DESIGN	**§ §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

COMMENTS OF the South central Partnership for Energy Efficiency as a Resource (SPEER)

COMES NOW SPEER and files these Comments in response to the Commission's Questions for Comment filed in this proceeding on September 9, 2021.

Executive Summary

Effective demand response programs reduce the need for peak electricity generation power plants, which are often the most expensive and polluting. In addition to demand response energy efficiency can help solve several of the largest problems facing the state right now which are resource adequacy, or grid reliability, and resilience during our summer heat waves or winter storms, as we recently experienced. Making energy efficiency and demand response a priority is economical, simple to implement, and necessary. Texas' average electricity consumption per home is roughly 26% higher than the national average, creating high energy bills for customers and even higher during peak times. The inefficiency of most Texas homes is a direct contributing factor to high energy peaks and high energy bills. In fact, residential and small commercial load represent 73% of the peak summer load that ERCOT strives to satisfy. This is due to the lack of building standards and ineffectiveness of current energy efficiency measures across the state.

Increasing focus on and implementing more energy efficiency measures, alongside demand response, can help ease demand on the ERCOT market. The PUC increased energy efficiency programs in 2010, over ten years ago, but most notable did so by its own authority *without*

legislative direction. Efficiency programs have not been increased since, yet our consumption has significantly increased as our state's population continues to rapidly grow. Texas sits dead last, ranked 29th out of 29 states with energy efficiency resource standard goals, spending $6.77 per capita with our neighbors in Oklahoma spending $17 and Arkansas at $22.

Efficiency, as opposed to demand response, includes the investment in equipment or building components or materials that have continuous or regular impacts on a load's energy profile, resulting in predictable reductions in peak load or total energy consumption in different but predictable ways throughout the day and year.

Introduction

The South-central Partnership for Energy Efficiency as a Resource (SPEER), is a 501(c)3 non-profit regional energy efficiency organization (REEO). We are one of six in the country that aims to accelerate the adoption of advanced building systems and energy efficient products and services throughout the nation. We work collaboratively to strengthen local economies, improve health and quality of life, and improve the environment.

Comments

1. Describe existing and potential mechanisms for residential demand response in the ERCOT market.

a. Are consumers being compensated (in cash, credit, rebates, etc.) for their demand response efforts in any existing programs today, and if not, what kind of

program would establish the most reliable and responsive residential demand response?

b. Do existing market mechanisms (e.g., financial cost of procuring real time energy in periods of scarcity) provide adequate incentives for residential load serving entities to establish demand response programs? If not, what changes should the Commission consider?

We support the PUCT's lead on examining demand response as a demand side solution in creating a more stable grid following February's energy crisis, and we urge the Commission to not forgot about other important aspects to aid in peak demand reduction especially during extreme weather. Demand response and energy efficiency complement each other and increasing energy efficiency goals and programs needs to be a priority. Consider energy efficiency as a nuclear plant, constantly reducing energy throughout the day and year. Demand response aids in meeting peak needs, saving energy and money that would otherwise go to adding supply. Much focus needs to be placed on residential load and energy efficiency measures such as more efficient HVAC systems, heat pumps, and proper insulation. Older inefficient and leaky homes that were built prior to Texas implementing a building code (nearly two-thirds of homes) were a large driver of the unexpected winter peak demand.

Unlike big businesses, residential customers don't get paid when they adjust their thermostats and lower their use in response to an ERCOT emergency call. Compensating homeowners and renters in the form of cash or bill credits is necessary to incentivize more demand response during peak hours. Peak time rebates or a subscription service for those choosing to participate are other avenues to consider.

2. What market design elements are required to ensure reliability of residential demand response programs?

a. What command/control and reporting mechanisms need to be in place to ensure residential demand response is committed for the purpose of a current operating plan (COP)?

b. Typically, how many days in advance can residential demand response commit to being available?

Communication between retail electric provides and utilities to their customers' needs to be address and increased. Many customers are not aware of where they need to go to find this information, if it exists at all. For utilities to maintain and grow their relationship with households and customers the utilities need to support their developing role in as both energy consumers and, more often now, producers. Many customer's don't have relations with their energy providers, nor do they know where one should go to seek out energy conservation programs and rebates that their providers might offer. There is a large communication barrier between local governments and utilities as well. We are underutilizing our counties and cities as a piece to the puzzle.

The California Energy Commission *Identifying Effective Demand Response Program Designs for Residential Customers* report found that "Energy engaged" customers or those with solar panels, plug-in electric vehicles, or automation devices had the greatest consumption reductions. Another takeaway was that offering a financial incentive for participation was critical to inducing consumption reductions, but customers did not respond strongly to changes in marginal

incentives. One mechanism we suggest to ensure effectiveness of innovative design strategies for residential demand response programs is using behind-the-meter customer engagement platforms. These programs are used to inform and encourage residential electricity customers to reduce or shift their energy consumption during tight supply events.

3. How should utilities' existing programs, such as those designed pursuant to 16 TAC §25.181, be modified to provide additional reliability benefits?

SPEER believes that in order to address peak demand issues in both the summer and winter, utilities need to be directed to expand their program offerings. In these offerings we need to consider demand response programs for air conditioning systems, water heaters, pool pumps and in the future EV charging and residential battery systems. While SPEER agrees that demand response needs to be increased in order to meet peak demand, utility efficiency programs also include load management equal to 250MW. Those energy efficiency programs were increased by the PUCT in 2010 and again in 2011 by the Texas Legislature after winter outages, but they have not be increased since then. This is a very economical way to reduce load. There is a lot we can do between demand response and energy efficiency programs that really complement each other. For example, ACEEE recommends pursuing integrated programs to capture benefits, fully capturing resources' value streams, more efficient program administration and a streamlined customer experience. They also recommend in their 2019 report[1] that reducing silos in utilities can support the implementation of such programs; examples of integrated programs include

[1] York, D., G. Relf, and C. Waters. 2019. *Integrated Energy Efficiency and Demand Response Programs.* https://www.aceee.org/research-report/u1906

smart thermostats, which can also be used to control efficient heat pumps, grid interactive water heaters, and efficient and controllable equipment for commercial and industrial customers.

3a. What current impediments or obstacles prevent these programs from reaching their full potential?

We need policy changes for investor-owned utility programs to be able to deliver on the promise of more energy efficiency and demand response as resources to the grid. Texas was the first state in the nation to enact a renewable portfolio standard (RPS) and an EERS, requiring investor-owned utilities (IOUs) to achieve a specified amount of efficiency annually. Since then we have been passed by 26 other states that have since succeeded in making much larger investments and they are achieving significantly higher energy savings. Achieving more utility administered energy efficiency savings will require revisions to current policies. Energy efficiency is the most cost effective resource available and can be quickly ramped up to meet the needs of the energy market. We recommend adopting a new and higher goal for energy efficiency programs to deliver higher savings; evaluate the impact and contribution of the loan management programs, and ways to engage these customers to meet our near-term resource adequacy challenges. Currently 21 other states have an EERS of 1% or higher, more than five times greater than Texas' savings. Texas spends $6.77 per captia on energy efficiency programs while states like Oklahoma spend $17 and Arkansas spend $22. We are currently last in energy efficiency programs with efficiency goal. Energy efficiency reduces demand for the benefit of all, which could have greatly reduced the outages in February, and increases the survivability of homes in extreme weather, which we continue to see throughout the year now in Texas.

Conclusion

SPEER 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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