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TEXAS
ADVANCED ENERGY
BUSINESS ALLIANCE

PROJECT NO. 56517

REVIEW OF ENERGY EFFICIENCY PLANNING	**§ § §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

COMMENTS OF TEXAS ADVANCED ENERGY BUSINESS ALLIANCE

Texas Advanced Energy Business Alliance (TAEBA) submits these comments in response to the questions posed on April 23, 2024 in Project No. 56517, Review of Energy Efficiency Planning.

TAEBA includes local and national advanced energy companies. Advanced energy technologies include energy efficiency (EE), energy storage, distributed generation, microgrids, demand response (DR), electric vehicles (EV), and generation based on solar, wind, hydro, and nuclear resources. The businesses TAEBA represents are lowering consumer costs, creating thousands of new jobs, and providing the full range of clean, efficient, and reliable energy.

1. ***Should certain hours of the day be considered more valuable within the design of standard offer or targeted market-transformation programs offered by utilities? Please discuss your rationale in detail.***

Yes, utility programs incentivizing EE should recognize that EE is more valuable during certain hours of the day. In addition to traditional peak periods of demand, EE should also be accorded higher value during other times and seasons where the grid experiences stress. Just as traditional large-scale generation has value that varies depending on hour and season, so does EE. EE should also be valued based on location. EE programs can be geotargeted to address local congestion "hot spots" and distribution constraints throughout the year, while also addressing reliability of the bulk system. EE incentives targeting areas of the grid where capacity is limited can deliver greater benefits relative to other areas.

2. ***What metrics should be used to track the success of low-income and hard-to-reach programs under 16 Texas Administrative Code (TAC) §25.181?***

More than one metric can be used to track the success of low-income and hard-to-reach programs under 16 TAC §25.181. Tracking the number of households that fall into these categories is a simple starting point. Beyond that, it is important to evaluate how many homes were offered EE programs prior to service disconnection. Such an inquiry could be a step toward standardizing energy assessments as part of disconnection avoidance strategies. Utilizing some of the funds from the Inflation Reduction Act (IRA) to provide low-cost or no-cost EE improvements for low-income customers can significantly enhance the effectiveness of these programs. Additionally, tracking metrics that demonstrate the life-saving potential of EE during extreme weather events, like Winter Storm Uri, should be considered to underline the passive survivability benefits.

For those low-income and hard-to-reach households that receive EE program benefits, bill savings and/or declines in energy consumption associated with particular EE investments could also be identified. Such information could be used to determine which types of investments deliver the greatest benefit to customers. For example, tracking the energy savings and bill reductions achieved through the installation of energy-efficient HVAC systems versus other EE measures like improved insulation or energy-efficient lighting can help identify which investments are most effective. This data could help inform future EE program options and design, ensuring that resources are directed towards the measures that provide the most significant benefits.

3. ***Avoided Cost of Capacity and Energy:***
    a. ***Existing 16 TAC §25.181(d)(2) calculates the avoided cost of capacity. Should this calculation be revised in a future energy efficiency rulemaking? If so, how? Please discuss your rationale in detail.***
    b. ***Existing 16 TAC §25.181(d)(3) calculates the avoided cost of energy. Should this calculation be revised in a future energy efficiency rulemaking? If so, how? Please discuss your rationale in detail.***

It is generally appropriate to review the calculation of avoided costs periodically because the value of the inputs changes over time. More specifically, both the current metrics for calculating the avoided cost of capacity and energy should be revised to reflect more accurate, real-time values that consider the specific benefits energy efficiency brings to transmission and distribution (T&D) system savings.

Presently, the metrics for calculating avoided costs reflect an annual average and do not capture hourly and seasonal variations. The outdated values of $80 per KW for capacity and $85 per MWh for energy do not align with current market conditions. Incorporating a TSB-like (Total System Benefit) approach would capture the multiple value streams associated with a single measure, such as the combined EE and DR value of a heat pump. The TSB methodology provides a more precise valuation that recognizes the variable benefits of energy savings at different times and locations within the grid.

For the avoided cost of energy, this revised calculation should consider the higher value of energy savings during times of peak demand or when generation is low, thus reflecting real-time market conditions. This dynamic approach would also account for the broader system reliability benefits that distributed energy resources (DERs) offer, encouraging utilities to adopt strategies that align with state-wide goals.

Additionally, the new method should account for the real-time operational flexibility provided by emerging technologies like VPPs (Virtual Power Plants) and smart grid-compatible devices, capturing their ability to respond to grid demands instantaneously and thus offering a more dynamic and accurate measure of their economic value. The cost calculation should reflect the benefits of reduced peak loads, improved grid stability, and the ability to leverage DERs like EV batteries and home energy storage systems, potentially through V2G (Vehicle-to-Grid) technologies.

Overall, this updated framework, moving beyond a flat per MWh rate and towards a dynamic valuation method, would be a more accurate and effective tool for planning and incentivizing DER measures that provide multiple benefits to the electricity system.

4. ***Existing 16 TAC §25.182 calculates utility performance bonuses. Should this calculation be revised in a future energy efficiency rulemaking? If so, how? Please discuss your rationale in detail.***

Revising the structure of performance bonuses to better align with the goals of energy savings and peak demand reduction is critical. Tying bonuses to demand management achievements, particularly through demand response-capable thermostats, and ensuring that bonuses do not exceed a certain percentage of the budget are steps forward. A new performance structure might consider separating EE and DR bonuses and rewarding utilities for enrolling new households, particularly focusing on low-income demographics, to avoid the repetition of benefits to the same customers.

5. ***Existing 16 TAC §25.181 addresses energy savings and demand reduction goals. Should these existing goals be revised in a future energy efficiency rulemaking? If so, how? Please discuss your rationale in detail.***

The existing goals should be more ambitious, aiming to match the potential identified in retrofitting homes—14.8 GW in summer and 25.3 GW in winter peak demand reductions.[1] Encouraging energy-saving upgrades and off-peak energy use can reduce peak demand and improve grid reliability more cost-effectively than building new power plants. Setting progressive, achievable targets with intermediate milestones can drive systematic and sustained efforts.

TAEBA recommends that the Commission set ambitious, quantifiable targets. At a minimum, it should double the current program goals, which has been proven as both reasonable and achievable.[2] This approach would encourage a broader and more strategic view of energy efficiency and demand response initiatives across Texas.

[1] ACEEE, "Energy Efficiency and Demand-Response: Tools to Address Texas' Reliability Challenges," August 16, 2023, https://www.aceee.org/sites/default/files/pdfs/energy_efficiency_and_demand_response_-_tools_to_address_texass_energy_reliability_problems_-_encrypt.pdf.

[2] Texas Advanced Energy Business Alliance, "Future Proofing the Texas Grid with Distributed Energy Resources," prepared by Converge Strategies, LLC, and Synapse Energy Economics, June 15, 2022, https://info.aee.net/hubfs/Future%20Proofing%20the%20Texas%20Grid.pdf

6. ***In the upcoming rulemaking to implement SB 1699, what other issues should be considered? Should the existing energy efficiency rules be restructured? Please discuss your rationale in detail.***

We recommend integrating TSB metrics into the SB 1699 rulemaking to quantify the broader impacts of energy efficiency and DERs accurately. Such metrics will streamline the evaluation process and highlight the multifaceted value of these resources, from reducing grid congestion to enhancing reliability.

Moreover, the rulemaking should facilitate the development and integration of innovative technologies, including heat pumps, smart thermostats, and particularly VPPs and EV VPPs. These technologies are crucial for boosting the effectiveness of DR programs by providing additional grid flexibility and capacity. Emphasizing the integration of VPPs and EV VPPs not only aligns with SB 1699's objectives but also supports Texas in achieving its energy efficiency goals and improving grid reliability.

Encouraging the adoption of these advanced technologies will require restructuring existing rules to create a supportive regulatory environment that can accommodate the rapid evolution of energy resources. This restructuring should ensure that all stakeholders, from utility providers to end-users, have the necessary tools and incentives to contribute effectively to Texas's energy resilience and reliability.

Overall, the implementation of SB 1699 presents an opportunity to significantly advance Texas's energy framework, promoting more efficient and flexible energy usage and ensuring that the state remains at the forefront of innovative energy management.

7. ***What activities should the Energy Efficiency division prioritize over the next twelve months?***

Over the next twelve months, the Energy Efficiency Division should focus on several strategic initiatives to enhance grid management and reliability. First, integrating TSB metrics into program planning is essential. This integration will ensure comprehensive valuation of energy savings and efficiency improvements across various grid conditions. Additionally, the division should expand the role of VPPs and aggregated distributed energy resources (ADERs)

within the Texas energy market. These technologies, which aggregate various DERs, are critical for enhancing grid flexibility and reliability.

Further, it is crucial to develop supportive policies that facilitate the integration of bidirectional charging infrastructure and Vehicle-to-Grid (V2G) technologies. Such policies would transform EVs and other smart appliances into active grid support tools, leveraging their potential to store and dispatch energy as needed. These systems optimize the operation of DERs in real-time, crucial for maximizing grid benefits. These focused efforts will not only facilitate greater participation in DR programs but also enhance overall grid efficiency and resilience. Additionally, revisiting cost caps on residential and commercial programs may be necessary to prevent utilities from hitting these caps prematurely, thereby stifling innovation and program expansion.

We thank the Commission and commend its progress on this important issue.

Respectfully submitted,

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COMMENTS OF TEXAS ADVANCED ENERGY BUSINESS ALLIANCE

EXECUTIVE SUMMARY

The Texas Advanced Energy Business Alliance (TAEBA) presents the following key recommendations in response to the questions posed by the Commission regarding Project No. 56517, Review of Energy Efficiency Planning:

1. **Valuing Certain Hours in Energy Efficiency Programs:**
   - **Recommendation**: Energy efficiency (EE) should be valued more highly during peak demand periods, and additional times of grid stress, to maximize benefits. This valuation should also be location-specific to address local congestion and distribution constraints.

2. **Metrics for Low-Income and Hard-to-Reach Programs:**
   - **Recommendation**: Implement multiple metrics, including the number of households served, bill savings, and reductions in energy consumption. Track the effectiveness of EE during extreme weather events to highlight passive survivability benefits.

3. **Revising Avoided Cost Calculations:**
   - **Recommendation**: Update the calculations for avoided costs of capacity and energy to reflect real-time, market-based values. Incorporate a Total System Benefit (TSB) approach to capture the multiple value streams and the dynamic benefits of EE measures.

4. **Utility Performance Bonuses:**

- **Recommendation**: Revise performance bonuses to align better with energy savings and demand reduction goals. Consider separate bonuses for EE and demand response (DR), and prioritize enrolling new, particularly low-income, households.

5. **Ambitious Energy Savings and Demand Reduction Goals:**
   - **Recommendation**: Set more ambitious and progressive targets for energy savings and demand reduction. Aim to match identified potentials, with intermediate milestones to drive systematic and sustained efforts.

6. **Implementing SB 1699:**
   - **Recommendation**: Integrate TSB metrics into the SB 1699 rulemaking to accurately quantify the impacts of EE and DERs. Promote the development and integration of advanced technologies like VPPs and EV VPPs to enhance grid flexibility and reliability.

7. **Priority Activities for the Energy Efficiency Division:**
   - **Recommendation**: Focus on integrating TSB metrics, expanding the role of VPPs and aggregated DERs, developing policies for bidirectional charging infrastructure and V2G technologies, and revisiting cost caps on residential and commercial programs to foster innovation and program expansion.

These recommendations are aimed at maximizing the effectiveness of energy efficiency programs, addressing grid reliability, and promoting innovative energy solutions in Texas. We appreciate the Commission's efforts in advancing energy efficiency and look forward to continued collaboration.