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**REVIEW OF WHOLESALE
ELECTRIC MARKET DESIGN**

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**PUBLIC UTILITY COMMISSION
OF TEXAS**

**ERCOT STAKEHOLDERS RELIABILITY &
MARKET DESIGN IMPROVEMENT RECOMMENDATIONS**

This filing represents the combined effort of a diverse group of ERCOT market stakeholders and Texas-based organizations committed to the success of the Public Utility Commission's efforts to reform the ERCOT market to avoid future sustained load-shed of the kind seen during Winter Storm Uri. In this filing, we offer a few broadly applicable foundational principles that should guide market redesign efforts and recommendations regarding the timing and prioritization of those reforms most likely to prevent sustained load shed events.

The parties involved in this effort are not collectively endorsing or rejecting every specific proposal mentioned in this filing. Rather, our goal is to help the Commission organize and prioritize among the wide range of proposals offered on a variety of issues. While the signatories to this filing are broad and diverse, we welcome additional feedback from other stakeholders in this process as the Commission works to move expeditiously to address these critical issues affecting all Texans.

Submitted by:

- Advanced Energy Management Alliance (AEMA)
- Advanced Power Alliance (APA)
- Alison Silverstein Consulting
- American Council for an Energy-Efficient Economy (ACEEE)
- Centrica Business Solutions Optimize LLC
- Conservative Energy Network
- Conservative Texans for Energy Innovation
- CPower
- Enchanted Rock
- Environmental Defense Fund (EDF)
- Form Energy
- Hunt Energy Network
- Leap
- Octopus Energy
- OhmConnect
- Solar Energy Industries Association (SEIA)
- South-central Partnership for Energy Efficiency as a Resource (SPEER)
- Stem
- Sunrun
- Texas Advanced Energy Business Alliance (TAEBBA)
- Texas Electric Transportation Resources Alliance (TxETRA)
- Texas Land and Liberty Coalition
- Texas Consumers Association (TCA)
- Voltus

TEXAS RELIABILITY AND MARKET
DESIGN IMPROVEMENT
RECOMMENDATIONS
PUCT PROJECT 52373

ERCOT STAKEHOLDERS GROUP

OCTOBER 19, 2021

Guiding principles – Protect customers, foster competition, and promote high-quality infrastructure

- Address problems that caused and contributed to the February Uri disaster and prevent future such disasters by improving grid operability and resource adequacy relative to demand.
- Prioritize solutions that can be implemented quickly and deliver meaningful reliability results quickly.
- Ensure solutions are competitive, performance-based and technology-neutral, including allowing customers to be part of the solutions.
- Adopt layered, complementary solutions for market and reliability assurance.
- Don't adopt proposals without clear understanding of their impacts for reliability, competition and costs.

The challenge: Redesign ERCOT market to enhance supply adequacy and improve grid reliability at reasonable cost

Goals

- Stabilize costs, revenues and predictability for suppliers and consumers.
- Leverage diverse and evolving resource mix to achieve reliability with a reasonable combination of dispatchability, high performance and low cost.
- Increase system performance with greater flexibility and responsiveness to handle changing resource mix under a wide range of current and future conditions and threats.
- Effectively leverage both supply- and demand-side resources to increase dependable, predictable and controllable resources to effectively reduce risk of operational shortfall under wide range of system conditions.
- Use incentives and market solutions to motivate desired reliability solutions and outcomes rather than mandates or discriminatory treatment of certain classes of assets.

Practical Considerations

- Adopt well-understood, easy-to-implement proposals quickly for fast reliability impacts, and don't be rushed into adopting proposals that need more study and might have unintended consequences.
- Solution options are limited by available resources, ERCOT capabilities, RRC delays, regulatory process requirements, and potential market/asset investment reaction and construction times.

Recommendation – Take phased approach

PHASE 1 – ADOPT ASAP

ASAP, adopt “no regrets”, low-hanging fruit measures that can be implemented quickly and deliver improvements quickly

- Modify ORDC to shift revenue away from crises and deliver revenue to resources that respond to system needs
- Broaden parameters and requirements and increase amounts/goals for several current ancillary services (ERS, ECRS, FFR, non-spin, reg up, reg down, black-start)
- Incentivize power firming (technology-neutral)
- Remove barriers & limits to demand response, load management, distributed generation, storage and aggregators’ participation in AS delivery
- Aggressively increase TDU energy efficiency and demand response program funding & requirements, w/ strict focus on summer & winter peak reduction (per ACEEE); order EE-DR potential study
- Continue power plant & transmission winterization
- Accelerate transmission interconnection
- Improve ERCOT load and supply forecasting

PHASE 2A – BEGIN & DECIDE SOON

Start work on projects that enable new supplies and demand management options

- Evaluate new ancillary services & clean up exclusionary product requirements
- Fix distribution interconnection rules for distributed energy resources
- Improve & streamline ERCOT review & approval process for new transmission lines
- Why, when, & how of reliability events changing: Need analytical tools & all-hours data on ERCOT worst case scenarios & ops problems, asset performance to enable analysis & comparison of longer-term resource adequacy measures

PHASE 2B – STUDY NOW, DECIDE LATER

Why further study?

- Need further analysis and work re design, impacts and costs for major resource adequacy measures
- Can’t implement these fully before ERCOT EMS upgrade and co-optimization
- Most won’t work fully w/o gas system winterization &/or contract revisions

Start studies and analyses of longer-term market measures

- **Reliability Standard** (for ERCOT planning)
- **Standby reserve**
 - Strategic dispatchable standby reserve service (Vistra/LEI)
 - Contingent Reserve Service (NextEra)
- **Backup service**
 - Dispatchable Reliability Service (LCRA)
 - Backup Reliability Service (TIEC)
- **Load obligation**
 - LSE Reliability Obligation (Exelon/NRG/E3/Garza)
 - Forward Shortage Hedge (Patterson)

Rationale for these recommendations

- Get immediate no-regrets, foundational measures in place to improve operational responsiveness (expand ancillary services availability, participation and usefulness for operational flexibility) and revenue flows at known, moderate costs.
 - ERS expansion to take effect for Winter 2022
 - Broader mix of dispatchable ancillary service suppliers (aggregated DR, storage, generation and virtual power plants) can diversify and de-risk AS speed, duration and cost
 - These provide additional revenues that encourage supply asset investment for long-term resource adequacy
- Reduce supply-to-demand operational and resource adequacy concerns by expanding low-cost energy efficiency, demand response from residential and small commercial customers & storage to reduce peaks, net peaks and PV up- and down-ramps.
- Use low-cost EE and DR to buffer system and customer bills against unknown future costs of all the supply-side proposals and reduce financial consequences of supply-side failures.
- Send immediate signals to investors and public about thoughtful, effective, predictable actions and incentives for both supply and demand solutions.
- Don't make long-run policy commitments before the options, impacts and costs are better articulated, analyzed and shown likely to work.

Supporters for these recommendations

- Advanced Energy Management Alliance
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- American Council for an Energy-Efficient Economy (ACEEE)
- Centrica Business Solutions Optimize
- Conservative Energy Network
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