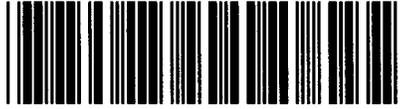


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PROJECT NO. 40000

**COMMISSION PROCEEDING TO ENSURE §
RESOURCE ADEQUACY IN TEXAS §
§**

**PUBLIC UTILITY COMMISSION
OF TEXAS**

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REPLY COMMENTS OF THE TEXAS DEMAND RESPONSE COALITION

The Texas Demand Response Coalition¹ is pleased to provide these reply comments in response to the Public Utility Commission's ("Commission") November 22, 2013 Request for Comments in this proceeding. The members of the Coalition already have filed comments as part of the Texas Reliability Assurance Market ("TRAM") Advocates in this proceeding. As indicated therein, the Coalition supports the Commission implementation of an energy and capacity market in order to ensure resource adequacy in ERCOT.² We are filing these reply comments separately to address the following issues specifically related to demand response which were raised by various parties in their initial comments in this proceeding.

The Coalition highlights the following key points in these comments:

- Demand response is critical to the success of this market, yet currently falls well short of its market potential. Demand response could provide as much as 7 GW of capacity in the ERCOT market.
- Fair rules regarding performance standards and penalties will be key to the successful development of demand response and energy efficiency resources. If the rules require demand response to perform identical to generation, very little demand response will develop.
- Demand response and energy efficiency can play a significant role during the transition to and in an energy plus capacity market because they are faster to market and lower cost than new generation. Rules should encourage development

¹ The following companies in the Demand Response Coalition, which consists of the leading national demand response service providers and technology companies and represents most of the U.S. demand response industry, are sponsoring these comments: Comverge, Consert, EnerNOC, Inc., Johnson Controls, Inc., and Opower.

² In the event the Commission decides not to implement an energy plus capacity market, the Coalition would support the Commission adopting Environmental Defense Fund's recommendation that the Commission expand and improve ERCOT's existing demand response programs and improve Loads in SCED as described in EDF's comments to address resource adequacy concerns.

of demand response and energy efficiency rather than imposing barriers to hold back their development to allow longer lead time resources the ability to “catch up.”

- Transparency and liquidity of the capacity auction should be a key principle to guide the Commission’s rulemaking. It will be important to get the rules right relating to opt-out, self-supply, and bilateral contracting in order to ensure that transparency and liquidity are not compromised. Rules should incentivize participation in the auctions.
- Relying on a redesign of the ancillary services is not a solution to resource adequacy.
- The Commission should review the System Wide Offer Cap (SWOC) as part of its development of rules relating to an energy plus capacity market design.

Demand Response is Critical to the Success of the Market

The Coalition already has submitted extensive comments on the important role of demand response in addressing ERCOT’s resource adequacy issues.³ In Project No. 40000, both

³ The Coalition has filed the extensive comments on demand response in both this Project and other projects related to demand response and resource adequacy. The Coalition believes that these comments create a robust record for the Commission to continue to develop ERCOT’s demand response resources as part of the solution for ensuring resource adequacy.

Project 40268, *Rulemaking Relating to Resource and Reserve Adequacy and Shortage Pricing*, Texas Demand Response Coalition Comments (June 15, 2012).

Project 40480, *PUC Proceeding Regarding Policy Options on Resource Adequacy*, Texas Demand Response Coalition Comments (July 11, 2012).

Project 40000, *Commission Proceeding to Ensure Resource Adequacy in Texas*:

- August 30, 2012: Comments of the Texas Demand Response Coalition on Resource Adequacy Policy Options.
- October 23, 2012: Comments of the Texas Demand Response Coalition on “Composite” Resource Adequacy Policy Options
- September 23, 2013: Comments of the Demand Response Coalition in Response to Questions Posed by the Commission in the August 29th Open Meeting.
- October 11, 2013: Comments of the Texas Demand Response Coalition Concerning the Development of an Operating Reserves Demand Curve.
- November 4, 2013: Supplemental Comments of the Texas Demand Response Coalition Concerning the Development of the ORDC.

Project 41061:

- February 15, 2013; Comments of the Demand Response Coalition.

the Brattle Group and the Coalition have provided projections showing that there is significant untapped demand response potential in the ERCOT market:

- The Brattle Group: Total achievable estimated potential of 8-15% of peak load reductions: ~5,200 – 9,750 MW⁴
- Sam Newell, The Brattle Group: Three-year Realistic Incremental DR Potential: 1,803 – 6,177 MW⁵
- Demand Response Coalition: 7,039 MW⁶

It is clear that demand response is well suited to address ERCOT's resource adequacy issues because:

- **Demand response can be quickly developed:** Given the right set of incentives, customers have proven willing to enroll in demand response programs. In PJM, for example, curtailment service providers that include members of the Coalition have enrolled more than 5000 MW in less than five years.
- **The load shape of critical resource adequacy periods matches customers' energy usage patterns:** ERCOT CEO Trip Doggett and staff repeatedly have shown data demonstrating that ERCOT's summer energy usage is driven primarily by increases in energy consumption by residential and commercial customers who currently have limited options to participate in demand response.⁷

While ERCOT has a large untapped resource in demand response that could address ERCOT's resource adequacy needs, the Coalition believes an energy plus capacity market is a proven way to develop demand response participation in ERCOT and that demand response is a necessary component to any effective, long term resource adequacy policy option that the Commission may choose.

With the right market design, significant levels of demand response in ERCOT should be

⁴ The Brattle Group, *ERCOT Investment Incentives and Resource Adequacy* (June 1, 2012)

⁵ S. Newell, *Estimate of DR Potential*, (Oct. 25, 2012) at 2 (Presented at Project 40000 Workshop on Oct. 25, 2012).

⁶ Comments of the Texas Demand Response Coalition on "Composite" Resource Adequacy Policy Options (filed in Project No. 40000) (Oct. 23, 2012) at Appendix A.

⁷ See e.g., Tripp Doggett, Presentation to the American Institute of Chemical Engineers South Texas Section. Available at <http://ercot.com/news/presentations/index>.

achievable since they already have been reached in other wholesale electricity markets. In PJM, for example, curtailment service providers, including those companies filing these comments, have increased demand response penetration from 1% of peak load in 2006/07 to 10% for 2015/16.⁸

**Fair Rules Regarding Performance Standards and Penalties Will be Key
to the Successful Development of Demand Response and
Energy Efficiency Resources**

The Coalition believes that the Commission should establish performance standards that allow all types of resources to participate in the market. At the same time, the Commission should recognize that various types of resources, whether traditional generation, demand response, energy efficiency or renewables, all have different characteristics and that these characteristics must be reflected in the performance standards adopted by the Commission. Rather than adopt “generation-centric” performance criteria, a well-functioning energy plus capacity market needs to have flexible performance standards so that many resource types can participate.

There are at least two areas where the Commission should apply the “comparability” standard in implementing an energy plus capacity market. First, the Commission should tailor its product design to address resource adequacy issues and then design products that allow participation for resources that are capable of addressing the resource need. Second, performance measurements should be tailored to fit the unique capabilities of the resources participating in the energy and capacity market.

⁸ Brattle Report at 91.

As to the first principle, ERCOT should apply its seasonal risk assessment to focus the energy plus capacity market on acquiring capacity market resources at those times when the risk of outage is the highest. For example, as the Commission has discussed, ERCOT resource adequacy issues primarily involve summer peak demand and, as Commissioner Anderson has pointed out, ERCOT's primary resource adequacy needs are concentrated in weekday summer afternoons during eight weeks of the summer.⁹

The Coalition believes that ERCOT should develop capacity market products that are aligned with ERCOT's seasonal risk assessment. If the primary risk is weekday summer afternoon, then ERCOT should target products to address this need. For example, ERCOT could develop a demand response product similar to PJM's limited DR product which focuses on summer peak periods and is specifically tailored to meet PJM's resource adequacy risk assessment.¹⁰

In our comments as part of the TRAM Advocates, we noted the necessity for Texas to develop a reliability mechanism suited to the unique needs of the state and avoid "forklifting" a mechanism from another market in its entirety, however, certain characteristics of existing markets may provide useful guidelines for the treatment of certain resources. Accordingly, the Coalition recommends that ERCOT consider an approach similar to that taken by PJM and tailor its products to meet ERCOT's core resource adequacy needs, providing peak needs during the summer, and then develop tailored products that allow broad participation.

⁹ Kenneth W. Anderson, "Resource adequacy in ERCOT" Analysis Of ERCOT's Capacity Reserve Margin Based On ERCOT's Capacity, Demand And Reserves Report, Winter 2012. Available at <http://www.puc.texas.gov/agency/about/commissioners/anderson/Default.aspx>.

¹⁰ While PJM has three DR products, most CSPs participate in the limited DR product which is targeted to meet PJM's summer resource needs. For a description of these products, see PJM Pricing Model Training (Oct. 2013) at 68.

Second, the Commission should recognize that resource comparability does not mean that all resources must slavishly follow the same exact set of performance standards. Loads should not be forced to duplicate the capabilities of generation, but rather should have equivalent market rules that recognize the limitations on the ability of end users to provide demand response and are designed to encourage, rather than limit, their participation.

Therefore, comparability requires that different performance requirements should be developed which are aligned to each resource's particular capabilities, a need that has been recognized by commenters in this proceeding.¹¹ In PJM, for example, the market contains different performance requirements for generation and load which are tailored to their capabilities. Generation performance obligations are based on historical availability, with penalties imposed when availability is less than the historical level. The PJM generation performance standards focus on availability rather than event performance to address generation owner concerns that it would be difficult to hedge the risk of a forced outage during an emergency event. On the other hand, PJM's performance standards for demand response are aligned with DR's capabilities. Demand response performance standards focus on event performance, rather than availability. Unlike the historical availability standard applied to generation, demand response must perform in every event, with very steep penalties (at least 50% of the annual payment) for failure to perform during an event. In this sense, PJM actually has developed stricter performance standards for demand response which are based on actual performance rather than historic availability.

¹¹ Steel Mills at 3 and 4; Frontier at 2 and 3; TRAM at 21.

Finally, the Commission should avoid adopting certain recommendations made by various parties that favor generation resources. For example, annual availability metrics will inappropriately favor generators because generators can operate during all times of the year while end users are only able to provide demand response when they are consuming energy. Their availability varies from end user to end user. The comparability principle requires that the Commission tailor performance to each type of resource.

Similarly, the Commission should not adopt proposals for “must offer” requirements or a requirement that loads participate in Security Constrained Economic Dispatch (SCED) in order to be eligible to offer into the capacity market. A “must offer” requirement is problematic for loads since they do not have a marginal cost in the same sense as a generation unit and their bids will be at high prices to reflect their value of lost load. Such bidding may raise enforcement jeopardy when market monitors normally police against bidding that is above a participant’s marginal cost. Finally, a requirement that a resource must participate in SCED discriminates against load when SCED itself is unable to accept “blocky” loads that are not able to be dispatched at incremental levels every five minutes or reduce and/or recover their load with five minute notice. Moreover, this requirement is discriminatory against aggregated loads when SCED is unable to accept bids from third party aggregated loads. These types of requirements are not designed to ensure performance for the benefit of the grid, but rather to create barriers to entry that make it difficult for load participation.

Demand Response and Energy Efficiency Have Key Roles in the Transition

Regarding potential transition mechanisms, some parties are proposing two options: 1) one-time auctions for quicker delivery, or 2) procuring capacity at a lower reserve margin requirement.¹² The first option is far superior to the second. Holding transition period auctions for near-term needs will allow those resources that do not need a full three years for development to provide the capacity required to fill the shortfall. As Dr. Hieronymus states in the NRG-sponsored comments:

There are resources that can be made available within a one year period even if the minimum time to build new generating capacity is two or more years. Candidates include de-mothballing, uprates to existing facilities, repowering existing capacity, or increasing major maintenance expenditures to enhance the plants' available. ***Additionally, experience elsewhere suggests that a significant amount of DR can enter the market as new capacity resources in a relatively short period of time. Indeed the backlog of DR that would become economic with a capacity market could quite possibly fill all of the needs prior to needing to nominate new generation in a three year auction.*** (emphasis added)¹³

In contrast, the second option – deferring application of the Commission-determined reserve margin – would mean that customers would be subjected to lower reliability standards during the transition period. There is no need to defer reliability to later years, however. Instead, as noted previously, demand response, energy efficiency, and the other shorter lead-time options can fill the gap at the lowest cost to the market. Further, this second transition option essentially would have the effect of keeping out of the market those resources that can come to market in a short time (by removing the market opportunity) until the other, longer lead-time resources can “catch up.” There is no debate as to the importance of demand response to the efficient functioning of energy markets, regardless of market design, so if

¹² Luminant at 15-16, NRG at 16-17.

¹³ NRG at 17.

anything, more effort should be made to promote development of demand response during the transition period rather than postponing its development until longer lead time resources develop.

Luminant also proposed to erect barriers to lower cost, quicker-to-market resources by arguing that energy efficiency and certain demand response not be allowed to participate in the energy and capacity market at all at the outset.¹⁴ The Coalition objects to this proposal. Luminant claims that it will be too complex to allow energy efficiency to participate in the energy and capacity market because of the measurement and verification rules that would have to be developed. This argument is a red herring, however. Years of operational experience in the PJM and ISO-NE demonstrate that energy efficiency can participate fully as a capacity resource and can provide predictable, reliable, and verifiable reductions of peak load. As Opower noted in its initial comments, PJM procured more than 1100 MW of energy efficiency in its most recent Reliability Pricing Model (RPM) auction.¹⁵ The PJM rules for including energy efficiency and demand response are working today and would provide a useful start in developing rules for a Texas energy and capacity market. Texas has the opportunity to establish its own unique parameters that allow for a liquid, efficient marketplace that avoids potential disruptions. Methods for energy efficiency measurement and verification are well-developed and can be applied in the capacity market here upon initial implementation. Members of the Coalition are providing these services in other markets and can do so in ERCOT as well.

¹⁴ Luminant at 7.

¹⁵ Opower at 4.

Luminant further proposes to exclude from the energy and capacity market any demand response resources that have longer lead times to interrupt or with limitations with respect to duration or frequency of interruption. However, because Luminant does not specify what the lead times, duration or frequency of interruption that they would consider as "standard" for purposes of allowing demand response to participate in the initial implementation of the market, this proposal potentially prohibits most demand response from participating. The Coalition strongly disagrees with this prohibition. Such a prohibition would run afoul of the statutory requirement that the Commission shall not "discriminate against any participant or type of participant during the transition to a competitive market and in the competitive market."¹⁶

In its proposal to exclude energy efficiency from the energy and capacity market, Luminant argues that energy efficiency should continue to rely on transmission and distribution utility (TDU) efficiency programs for funding.¹⁷ Luminant fails to recognize that energy efficiency resources also can be developed independent of the existing utility energy efficiency programs. The Coalition disagrees with Luminant's broad position that would exclude energy efficiency developed independent of the utility energy efficiency programs from an energy and capacity market. In its comments, the Sierra Club, while not supporting a capacity market, supports the Commission allowing TDUs to spend more money on their efficiency programs.¹⁸ The Coalition agrees that the existing utility efficiency programs are effective in reducing peak demand and already support overall system reliability. These programs are working well today

¹⁶ PURA § 39.001(c).

¹⁷ Luminant at 7.

¹⁸ Sierra Club at 5.

and should be retained – and potentially expanded – throughout the transition period and beyond. The existence of these programs, however, should not be viewed as a substitute for allowing demand response and innovative non-utility energy efficiency resources a full and fair opportunity to participate in a broader energy and capacity market design.

Transparency and Liquidity Should be Key Objectives in the Capacity Auction

Some commenters' discussions of bilateral contracting, self-supply, and opt-out provisions,¹⁹ highlight an important principle that the Commission will need to consider. Specifically, it will be critical that the Commission make transparency and liquidity in the capacity auctions key objectives in its development of rules for an energy and capacity market. A corollary to this principle is that the rules should incentivize participation in the capacity auctions. Opt-out provisions, self-supply, and bilateral contracting all can have a place within an energy and capacity market design, but the details of the rules will be critical to the success of the market.

Ancillary Services are Not the Resource Adequacy Solution

Several commenters proposed redesigning or adding new ancillary services to address resource adequacy concerns in ERCOT.²⁰ The Coalition opposes this approach, which limits the ability of demand response to compete with other resources to develop efficient market outcomes. As discussed earlier in these comments, there is a need to design products around

¹⁹ See, for example, Luminant at 19-20, NRG at 20-21, ERCOT Reliability Advocates at 41-42, and Equipower at 4.

²⁰ Regulatory Assistance Project and Sierra Club are two examples.

supply characteristics to compete in a common market. In a system with multiple interrelated, narrowly defined markets to meet specific reliability needs or product characteristics, the ability of a common market to find efficient outcomes among diverse resources is greatly reduced.

Furthermore, the Coalition disagrees with comments suggesting that this approach offers significant growth opportunity for demand response. While these markets may provide some opportunity for growth, that opportunity will be limited by the size and structure of the proposed markets. Currently, ancillary services represent a small fraction of the total ERCOT market, and demand response participation is limited within those services. While proposals to address resource adequacy through ancillary services may imply an expanded role for those services, it is highly unlikely that this approach will allow demand response to reach a level that would provide a significant competitor to traditional resources in ERCOT. The Coalition supports a central marketplace in which all resources can compete on a comparable basis. Such an approach provides a more transparent, liquid market in which demand respond can thrive.

A Review of the System Wide Offer Cap is Appropriate

Both Luminant and TEAM propose that, if the Commission adopts an energy plus capacity market, the Commission should review the level of the System Wide Offer Cap (SWOC), as it was set based on the energy-only market design.²¹ The Coalition agrees that it would be appropriate to review and potentially modify the SWOC, as it is but one element that

²¹ Luminant at 21-22, TEAM at 7.

must work in concert with the other elements in a comprehensive energy plus capacity market design.

Conclusion

An energy plus capacity market, if properly designed, holds the best promise for allowing all resources to compete to ensure resource adequacy in ERCOT, including new and existing generation, demand response, and energy efficiency. There is no dispute that demand-side resources are critical to the proper functioning of energy markets. Frontier states it well in their comments:

Indeed, the costs of ERCOT's existing demand side resources are considerably below the cost of traditional supply-side alternatives....The experiences of other markets also demonstrate that carefully-crafted capacity markets can foster demand response. Demand response is, in turn, essential to the proper functioning of energy markets, as this Commission has repeatedly recognized.²²

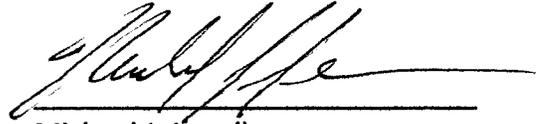
It will be critical that the Commission design the market rules in such a way that actually allows demand response and energy efficiency to compete. Otherwise, the Commission runs the risk of putting in place a market construct that fails to achieve its reliability objective or does so at a higher cost. We agree with Frontier's caution that the Commission should not rely solely on the stakeholder process to develop reasonable protocols, but must play an active role in developing detailed rules that balance all interests.²³ We look forward to working with the Commission and other market participants in developing rules that will result in an energy plus capacity market design that is economically efficient and provides reliability to customers, while

²² Frontier at 3.

²³ Frontier at 7.

allowing a fair opportunity to compete among all market participants, including demand response and energy efficiency.

Respectfully submitted,



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