Next Steps for Demand Response: It’s Time to Remove Barriers and Promote Expansion

Texas individuals and businesses are reaping rewards from the use of demand response while doing their part to help reduce stress on the state’s electric grid. Demand response is an innovative energy management program that conserves energy during peak times on the electric grid, offsetting megawatts that don’t need to come from generators. Demand response not only empowers customers to manage their electricity use when the grid is most strained – usually during heat waves or cold spells – but also improves grid reliability, saves money and reduces environmental impact.

Demand response is underutilized in Texas, however. While demand response now shaves about 4 percent of energy use during peak demand periods in Texas, that number could reach as high as 15 percent if barriers to expanding demand response were removed, according to a 2012 report by the Brattle Group, a consulting firm retained by the Electric Reliability Council of Texas (ERCOT).

Development of demand response in Texas has been hampered by caps on how much demand response is procured, limitations on who can participate in the electricity market, and technical requirements that are based on how generators operate, rather than how loads – the homes and businesses that provide demand response – use energy.

Examples of barriers that prevent Texas from achieving its demand response potential include:

- Cap on the Emergency Response Service budget limits the amount of emergency demand response ERCOT can procure, regardless of reliability needs.
- Load participation in responsive reserves is limited to 50 percent of the total amount ERCOT procures.
- Required response rates are fast compared to other markets. Longer response times would allow more homes and businesses to participate without undermining the benefit to the electric grid of their reduced electricity demand.
- Third-party demand response providers are prohibited from participation in the energy market, even though in other markets these entities bring to market the majority of demand response.
- Energy market rules allow participation only by loads that are capable of increasing or decreasing energy consumption every five minutes. This eliminates participation for many customers, especially those that are “blocky” in nature or that have additional constraints.
- Options for loads to provide services to the electric grid are limited, and more opportunities could be developed.
- Telemetry requirements could be more flexible without undermining ERCOT’s need to receive the information that measures and verifies performance by demand response participants.
The Brattle Group has warned that substantial development of demand response is critical to the success of the ERCOT energy market design; yet, if demand response is forced to participate exactly like generation, demand response will not develop.

According to the 2012 Brattle Group report:

"The energy-only market will not dependably support ERCOT’s current reliability target until sufficient demand response penetration is achieved..." (page 4)

"The most rigorous but narrow approach would treat load like generation. Load offers would have to have real-time telemetry, nodal dispatch and settlement, and probably continuous controllability." (page 97)

"If all of these requirements were imposed on DR resources to qualify for participation in SCED, many end users may not bother to participate after considering the setup costs and any consequences for not performing when dispatched." (page 96)

"Our understanding is that a zonal version of Load in SCED, called ‘Balancing Up Load,’ failed to attract participants for these reasons, among others." (page 98)

The Texas Legislature should pass legislation that promotes the widespread deployment of demand response in Texas and eliminates constraints that impede its growth.

Greater use of demand response in Texas will result in a more economically efficient, reliable and competitive electricity market, while promoting a strong state economy and lower power costs for individuals and businesses.

AEMA advocates legislation that would require the Public Utility Commission of Texas to adopt rules to:

• Require ERCOT to periodically study and report on the demand response opportunity and the amount of demand response participating in the market.
• Promote the development of demand response participation in electricity markets for all customers and remove regulatory barriers.
• Ensure that all customers can contract with retail electric providers, demand response providers and ERCOT for demand response programs.

About AEMA:
The Advanced Energy Management Alliance (AEMA) is an association of providers and supporters of demand response united to overcome barriers to the use of demand response in Texas and nationwide. AEMA advocates policies that empower and compensate customers to manage their energy usage and make the electric grid more efficient, more reliable, more environmentally friendly and less expensive. For more information visit http://aem-alliance.org.

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