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The Texas Capacity Crunch – Obstacles and Opportunities

The historic drought of 2010-2011 has put our conventional power plants at risk, threatening a return of the rolling blackouts caused by extreme winter conditions just a year ago. State Climatologist, Perry appointee John Nielsen-Gammon says, "Statistically we are more likely to see a third year of drought." At the same time ERCOT faces a challenging capacity crunch, caused largely by "low natural gas prices, an influx of low marginal cost wind power, increased wholesale market efficiencies, low wholesale power prices, tight credit markets" and other issues according to TXU Energy. With limited ability to invest new capital given the current market conditions, and over 11,000 MW of power dependent on water sources at historically low levels Texas needs to tap into resources that require less capital, much less water and can be deployed rapidly.

Demand Response – Low Cost, Zero Water Resource

Fortunately Texas has ample resources to meet these needs in Demand Response (also called Load Management). Allowed to participate fully in Texas' energy markets as it does in other regions, Demand Response can benefit customers and increase grid reliability. Unfortunately Texas continues to lag behind other states and regions, which have seen market-competitive demand response grow rapidly as market barriers have been removed.

- Demand Response is: "end-use customers reducing their use of electricity in response to power grid needs or economic signals from a competitive wholesale market."
- The potential for cost competitive Demand Response is tremendous – according to the FERC Texas could add as much as 19 GW in capacity by 2019 if we open up our electric market to allow customers to compete alongside generators

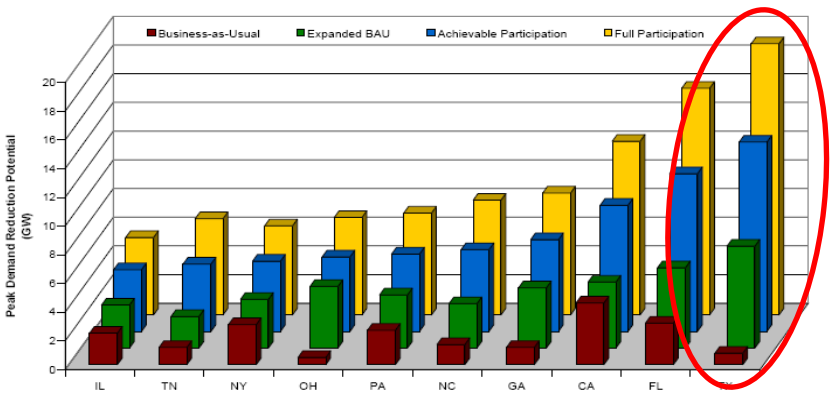


Figure 16: Top Ten States by Achievable Potential in 2019 (GW)

Texas currently is among the lowest states in terms of Load Management, despite having highest potential by far according FERC and the Brattle Group.[1] See reverse side for more information.

[1] http://www.ferc.gov/legal/staff-reports/06-09-demand-response.pdf

Why Does Texas Lag the Nation in Demand Response?

- In 2011 demand response amounted to **9%** of **PJM's** (a grid operator in the Mid-Atlantic/Midwest) system peak demand, greatly benefitting customers and improving reliability.
- In **ERCOT**, despite great potential demand response only amounted to just over **2%** of peak demand, limited by unnecessary market barriers.
- Texas leads the nation in smart meter deployment, intended by the legislature to "facilitate demand response initiatives." Why is ERCOT so far behind?

Market Barriers Prevent Customers from Competing in ERCOT

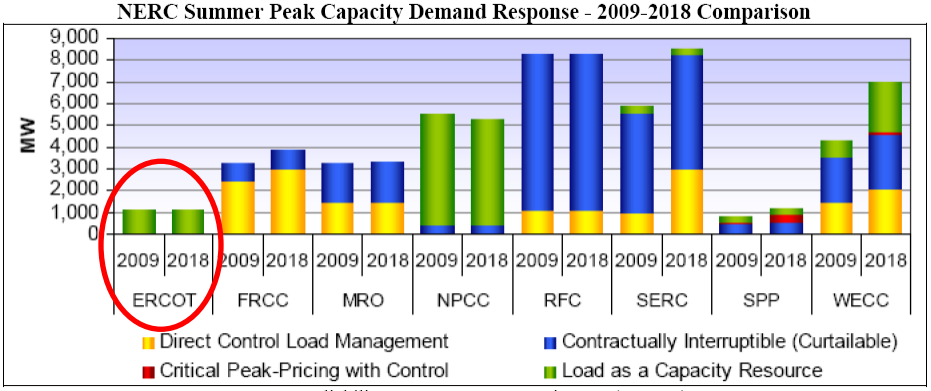
- ERCOT's legacy Demand Response program is capped at 1150 MW and is effectively limited to large industrials within Ancillary Services markets.
- ERCOT's Emergency Reliability Service is the only program in the market that allows any customer to participate if they qualify. The program is limited in scope (it can only be called on twice per year) and to date has been unable to reach the original goal of 500 MW.[2] Despite these limitations the program helped avoid rolling blackouts last summer.

Regulators are Focused on Building New Power Plants

- Instead of looking to all possible solutions, regulators seem focused only on how to get new power plants built.
- Other grid operators have successfully created programs for smaller commercial and residential customers to compete through aggregation. In Texas residential and small commercial customers have been put on the back burner.
- Despite the PUC's reluctance to act on other clean energy opportunities, such as the 500 MW non-wind RPS, or increasing the energy efficiency standards, it is clear that these programs have been successful in creating clean, "water-proof" power.
- In the midst of a capacity crunch caused by extreme drought and market structure problems, Demand Response provides an opportunity to address both by enabling cheaper, water-free capacity by simply opening markets to customers.

ERCOT is not Taking Advantage of Demand Response

Figure 4
NERC Summer Peak Capacity Demand Response - 2009-2018 Comparison



Source: NERC, Long-Term Reliability Assessment, 2009, Figure 7 (page 18).

[2] http://www.ercot.com/content/meetings/tac/keydocs/2011/0602/12._EILS_Annual_Report_to_TAC_2010.pdf