Texas regulators to mull utilities’ role in energy storage

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The Public Utility Commission of Texas must address several important issues if it decides to let Electric Reliability Council Of Texas utilities own batteries for energy storage, stakeholders said ahead of an upcoming Nov. 17 open meeting.

Deployment of batteries by transmission and distribution utilities could have big market implications, especially for generators in the ERCOT market, which is facing record tight supply conditions.

"Batteries are great at dampening volatility and also driving down demand for the services they produce," said Joshua Rhodes, University of Texas Energy Institute research associate, in an email. "The large [Tesla Inc.] battery in Australia has already consumed the majority of the ancillary services market there, so in a market like ERCOT, where you can only make money in energy and ancillary services (no capacity market), batteries would tend to reduce revenues in both."

As the ERCOT market was structured to separate market-compensated electric generators from transmission businesses that are granted a regulated rate of return, allowing energy storage to be built by those utilities raises questions about whether generators can effectively compete. Conversely, prohibiting energy storage from being built by transmission providers could lead to unnecessary transmission investments.

Travis Whalen, an S&P Global Platts Analytics power market analyst, said that if utility-owned batteries are only used to ease constraints during line outages, "then you should see limited and localized reduction in volatility and risk of load shedding. If we’re talking about basically any other application, then you should see a flattening of peak [locational marginal prices] or ancillary service pricing and a modest uptick in off-peak pricing," Whalen said in an email.

Points to be decided

A number of key questions must still be decided according to a recent PUC Staff memo. Among them are whether state law allows ERCOT’s transmission and distribution utilities to own energy storage devices, how to account financially for such storage devices’ power inflows and outflows, whether and how to exempt storage load from retail charges and how “the impending electrification of transportation” might affect or be affected by utility-owned battery storage.

The memo noted that in the PUC’s 2019 Scope of Competition in Electric Markets report to the Texas Legislature, which opened on January 8, the PUC stated that “further legislative direction regarding the ownership and operation of energy storage devices by TDUs may be appropriate.”

However, PUC staff is prepared to move forward and recommends that a workshop be held to further develop issues discussed in the comments,” the memo stated.

Platts Analytics’ Whalen said the law appears to have “enough ambiguity” that if the PUCT acts without legislative guidance, market participants could “presumably take it to court, if necessary, so it makes sense that the PUC would call for additional legislative guidance.”

Carey King, UT Energy Institute assistant director, said batteries clearly can “provide multiple types of services.”

“We have reached a time in history in which there are so many laws, that they increasingly become contradictory,” King said in an email ahead of the meeting. “If the PUCT can’t figure this out and help to amend [state law], it is a problem with our legal system.”

Challenging for generators

Timothy Fox, vice president and research analyst at the ClearView Energy Partners consultancy, said the memo shows that “a plurality [of commenters] favors allowing transmission and distribution utilities to contract with a third-party provider for the use [of] non-traditional technologies to meet certain identified reliability needs.”

“Despite some objections to this approach from power generators, procurement could avoid the prohibition of T&D utility ownership of generation assets and would alleviate the state regulators’ concerns about how to account for the energy associated with storage systems within the constraints of existing law,” Fox said in an email. “Policymakers may see the tightening of the market as a catalyst for allowing T&D utilities to deploy energy storage systems.”
Gurcan Gulen, former senior energy economist at the UT Bureau of Economic Geology’s Center for Energy Economics, said that “the devil is in the details.”

“If utilities will use storage for grid services such as voltage regulation, that may not be as big of an issue,” Gulen said in an email. “If storage is built to manage net load and net load ramps, that is a challenge for other generators. This is happening in parts of [California].”

With most estimates of solar-plus-storage ranging above $100/MWh, Gulen said he “cannot see how the industry can scale up fast enough without major subsidies or increasing the cost of electricity.”

“Competitive markets have been struggling; no need to add yet another out-of-market technology,” said Gulen, who now works as a Boston, Massachusetts-area consultant. (Project No. 48023)

Mark Watson is a reporter for S&P Global Platts, which, like S&P Global Market Intelligence, is owned by S&P Global Inc.