2019-20

LEGISLATOR'S GUIDE to the Issues

Capacity Market

The Issue

Texas has the most competitive electricity market in the country. Nevertheless, there has been an ongoing debate at the Public Utility Commission of Texas on whether Texas' current energy-only market should be changed to make it operate more like a centralized capacity market, such as those that operate in the East and Midwest. Making such a change would re-regulate the market unnecessarily and shift the costs (and risks) of new investments to consumers.

A capacity market operates by giving electricity generators yearly subsidies in exchange for a promise that they will use the guaranteed revenue to invest in new capacity. These payments are not for the electricity that generators produce, but for the amount of electricity that they could theoretically produce if their operations were running at peak efficiency and, most important, were that energy needed.

Mimicking a capacity market would be a very expensive way to meet Texas' energy needs. Studies repeatedly show that the capacity payments alone would cost Texas consumers somewhere between $3 billion and $5 billion per year—an assessment that does not include design, implementation, and litigation expenses.

There is no evidence that a centralized capacity market boosts a region's energy capacity, much less helps avoid future blackouts. Capacity payments in PJM—the regional transmission organization serving the mid-Atlantic—yielded less investment in new generation than Texas' energy-only market, not only in terms of sheer megawatts but also as a percentage of the region's installed capacity, despite costing PJM consumers over $50 billion during that timeframe.

One reason for this lackluster result is that most of the funds never went to finance new generation but instead found their way into subsidizing the operational costs of existing resources. For example, more than 93% of the money paid by PJM customers went to existing generation; only 1.8% found its way to new or "reactivated" generation sources. Additionally, the bulk of capacity payments subsidized base load generation plants even though there was no shortage of investment in base load generation and even though those plants can recoup their fixed costs from energy sales alone.

Finally, capacity markets suffer from a severe design flaw that damages the grid's overall reliability and may make the market more prone to blackouts. Capacity markets interpret reliability as being dependent on the amount of capacity alone. They, therefore, offer all generators uniform payments regardless of the plant's efficiency and ignore those characteristics that ensure that grid operators can convert and transport installed capacity to consumers. This has the consequence of eliminating price signals and discouraging investors from building plants where and when they are needed most—a perverse incentive that hurts ERCOT's overall operational reliability.

Today, the debate in Texas is not whether we should adopt a full-blown capacity market, it is whether we should adopt operational procedures and protocols being used in capacity markets. Proposals under discussion at the PUC such as updating the Operational Reserve Demand Curve (ORDC), using locational reserves, and adding real-time optimization are all examples of this. These proposals are being pushed by generators who want to increase electricity prices to increase their profits. Texas should stay with its energy-only market and remove current regulations to make the market more efficient rather than import ideas from expensive East Coast electricity markets.

The Facts

- Numerous studies predict that a capacity market will cost Texas consumers an additional $3 billion to $5 billion per year, not including the market's design, implementation, and litigation expenses. The most recent Brattle Report estimated that these hard costs would come to an annual $3.2 billion.
- The Brattle Report claims that, even assuming the optimal scenario, where a Texas capacity market delivers on its promises and offsets some of its hard costs, capacity payments would have an annual net cost of at least $400 million.
- PJM spent $50 billion in capacity payments between 2007 and 2011 and added 7,000 megawatts of new generation, about 4% of its total install capacity. During that same period, Texas' energy-only market added 10,000 megawatts of new generation, about 12% of its installed capacity, with zero extra cost to consumers.
- In September 2013, PJM suffered a series of rolling blackouts due to unusually high temperatures in combination with mechanical issues and plants being taken offline for season maintenance. The blackouts occurred despite a fully mature capacity market and over $54 billion spent in capacity payments.

Recommendations

- Preserve Texas' energy-only electricity market by reducing current regulations on the market.
- Reject proposals that seek to turn Texas' energy-only market into a capacity market-lite version of other less competitive markets.
- Do not adopt a mandatory reserve margin.

Resources

Capacity Markets Represent a Bad Bargain for Texas Consumers by Kathleen Hunker, Texas Public Policy Foundation (Oct. 2013).

A Texas Capacity Market: The Push for Subsidies by Kathleen Hunker, Texas Public Policy Foundation (Sept. 2013).

Reforming Texas Electricity Markets: If You Buy the Power, Why Pay for the Power Plant? by Andrew N. Kleit and Robert J. Michaels (Summer 2013).