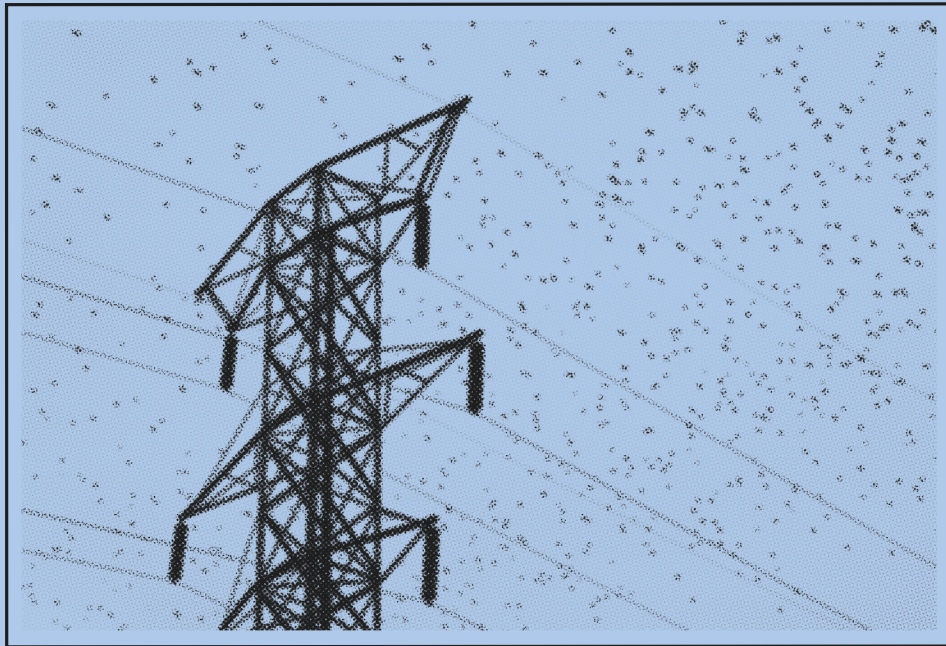


A CAPACITY MARKET WILL MAKE TEXAS ELECTRICITY MORE EXPENSIVE, NOT MORE RELIABLE

Prepared by Bill Peacock



May 2021

A Capacity Market Will Make Texas Electricity More Expensive, Not More Reliable

By Bill Peacock

May 2021

ENERGYALLIANCE

A Capacity Market Will Make Texas Electricity More Expensive, Not More Reliable

by Bill Peacock

- A “capacity” market is one in which generators get paid once just for existing—then get paid again when they sell electricity. This double dipping would increase the cost of electricity for Texas consumers.
- A shift to a capacity market would increase the cost of electricity for Texas consumers somewhere between \$4 billion to \$8 billion per year.
- Under a capacity market Texans will have an electricity grid that looks much like those of California and New York; no more reliable, but a lot more expensive.
- It should be emphasized that a capacity market is not an actual market, but an energy tax paid by consumers. However, unlike a regular tax, the capacity market payments bypass the government and go directly to generators.
- Looking around the country, there is no evidence that existing capacity markets operated in other states are any more reliable than the Texas market.
- Capacity markets are extremely expensive, and provide very little improvement in reliability.

Introduction

In 1999, a bipartisan coalition of Texas legislators bucked the interests of Texas public utilities to introduce what became the world’s most competitive electricity market. Though not without its flaws, the legislation passed that session set the stage for an unprecedented experiment in allowing markets—that is, buyers and sellers—to determine how much electricity Texas needs and how much it costs.

For most of the last 22 years, the Texas market has experienced some growing pains but overall has performed well. However, Texas’ winter historic freeze exposed what has been an increasing problem—distortions of market prices in the form of subsidies and uneven regulation.

An effort is now being made in the Texas Capitol to finish off the Texas electricity market. The push to exchange Texas’ “energy-only” market for a “capacity” market in which generators get paid just for existing—then get paid again when they sell electricity. This double dipping would increase the cost of electricity for Texas consumers somewhere between \$4 billion to \$8 billion per year. If successful, Texans will have an electricity grid that looks much like those of California and New York; no more reliable, but a lot more expensive.

Some People Do Not Like Competition

The most recent assault on Texas’ competitive electricity market began on day one of the February blackouts.

The blackouts had only been going on for about half a day when the February 15 edition of the Dallas Morning News ran a [Bloomberg Wire story](#) that blamed the blackouts on competition: “The extreme cold appears to have caught Texas’s highly decentralized electricity market by surprise.”

Soon after, state Rep. Chris Paddie, Rep. Craig Goldman, and House Speaker Dade Phelan called for a joint meeting of two committees on February 25 to “review the factors” that contributed to this “unacceptable” situation. While their language was ambiguous, subsequent legislation was filed that would effectively end Texas’ competitive “energy only” market in favor of an inefficient and costly “capacity market”.

This is nothing new, though. Since even before the Texas Legislature made its decision to move to competition in 1999, the market has been under attack. Most of the attacks have been successfully fought off. But three have continued to gain ground: anti-competitive regulations, renewable energy subsidies, and the push for a capacity market. What all three have in common is a dislike of competition.

Regulators dislike competitive markets because they cannot control the outcomes, which can make them very nervous. Proponents of government subsidies dislike competition because it exposes the inefficiencies of their business models. Many generators and Wall Street financiers dislike competition because their investments face much more risk in markets than in hybrid systems with returns guaranteed by the government.

The History of Capacity Market Politics in Texas

Once they got over the shock of being forced into competition, most generators embraced competition for the first few years of the revamped Texas electricity market. High natural gas prices led to high electricity prices that were generating record profits. Which in turn generated record investment in Texas.

Market prices started dropping within a year or so of the 2007 acquisition of TXU in a \$45 billion leveraged buyout by Kohlberg Kravis Roberts, Texas Pacific Group and Goldman Sachs Capital Partners. At that time, it was the largest leveraged buyout in history. When the prices dropped, so did profits. By 2011, it became obvious that a number of investments like that of KKR were heading toward bankruptcy as profit levels never returned to the heady days of the new market. It was that at this point that Texas generators began to sour on competition and seek profits through a capacity market.

What is a capacity market? As Kathleen Hunker [describes it](#), “In simple terms, a capacity market is a method of redistribution. It redistributes risk away from energy investors to consumers, and it redistributes power away from market participants to regulators.” She continues:

Capacity markets work by issuing a series of direct payments, or subsidies, to generators based on the amount of generating capacity they have. These payments are not for the amount of energy they have produced, but the amount of energy they could theoretically produce if their operations were running at peak efficiency and, most important, if that energy were needed. (Kleit and Michaels 2013b) Capacity markets treat the ability to produce energy, and the reliability this allegedly confers on the market, as a separate commodity. (Rose 2011) This means that consumers pay for it in addition to their monthly electricity use. It also means that generators get these payments regardless of how much electricity they actually produce and sell.

The previous push for capacity markets reached its peak in 2013 when the Public Utility Commission of Texas (PUC) was considering implementing it without legislative action. At the time—just like today, proponents of a capacity market use fear to bolster profits. They complained that the competitive market could not maintain adequate supplies of electricity to ensure a reliable system. This was effective with regulators and many policymakers who “did not want the lights to go out on their watch.”

However, the push for a capacity market died in early 2014 after the Texas Senate Natural Resources Committee, led by Sen. Troy Frazier, weighed in on the issue and made it clear that the PUC did not have the authority to implement a capacity market without legislative input. Unfortunately, the PUC was able to implement a capacity-market-lite in the Operating Reserve Demand Curve (ORDC), which artificially increases the price of electricity in times of market scarcity.

The Current Push for a Capacity Market

Generators have never given up on the idea of double dipping the system by getting paid for both capacity and energy. After years of receiving relatively small payments through the ORDC, they were able to get PUC commissioners to significantly increase the ORDC payments in January 2019. The commissioners were receptive in part because of the reliability challenges in the Texas market caused by the \$19.6 billion of renewable energy subsidies that have distorted the Texas market since 2006.

However, rather than dealing directly with the renewable energy subsidies, the PUC increased the ORDC, resulting in a \$3.6 billion electricity ‘tax’ on Texans in 2019. As noted, the ORDC had been in place for several years but was increased about \$2 billion by the PUC in 2019, and was increased again in 2020. The ORDC functions essentially as a capacity market. And like a full capacity market, the ORDC does not address the cause of reliability problems, market intervention through renewable energy subsidies, and other means.

Payments from the ORDC to generators are dependent on market conditions that can vary significantly from year to year. Thus today, generators, investors, and regulators are once again seeking to take advantage of the February blackouts to push for a full-blown capacity market. Ignoring the harm to reliability caused by renewable energy subsidies, excessive regulations, and the ORDC, some Texas lawmakers seem to be receptive.

HB 4378 by Rep. Chris Paddie, which received a public hearing in the House State Affairs Committee on April 8, [requires the PUC](#) to “adopt and enforce rules to promote adequacy of generation supply.” In order to accomplish this, the bill’s primary purpose is to institute a capacity market in Texas to guarantee increased revenue for generators. It does this by requiring the PUC’s rules to “ensure revenues sufficient to encourage construction and operation of dispatchable generation resources necessary to ensure reliable power supply.”

Problems with Capacity Markets

The siren song of the capacity market is that it would guarantee reliability by paying for additional capacity in order to ensure reliability. It also appears attractive to some because they see it as one way to paper over the harm caused by renewable energy subsidies without eliminating the subsidies themselves. However, this setup simply represents a windfall of additional payments to large scale generators and the added burden of costs to consumers while providing no evidence of guaranteed reliability.

Detractors of the Texas market blame the efficiency that competition has brought to our “fragile” grid. While competition is not to blame, what has happened is that the competitive structure of the Texas market has allowed renewable energy generators to take advantage of the billions of dollars of subsidies in Texas. Because of the subsidies, wind and solar can drastically reduce their prices, to the point of negative prices, in order to gain market share. The lower prices from renewable generators often lower prices—though not consumer costs—for all generators and reduce the profitability of thermal generators. This, in turn, has drastically reduced new investment in reliable generation. Over the last few years, the vast majority of investment in new generation in Texas has gone into renewables as companies chase the subsidies. Even though renewables have proven unable to keep the lights on for Texans.

It should be emphasized that a capacity market is not an actual market, but an energy tax paid by consumers. However, unlike a regular tax, the capacity market payments bypass the government and go directly to generators. It does little to incentivize new investment, but instead subsidizes old, inefficient power plants. A capacity market pays generators for simply existing, not for improving reliability.

This can be seen in that a capacity market would have done nothing to keep the lights from going out during the winter freeze. In fact, Texas has plenty of excess capacity, and did even during the winter storm. The problem was that the capacity did not turn into generation. The chart below shows that during the peak load—or maximum demand—during the Wednesday of the blackouts, wind generation was operating at about only 11 percent of capacity. A capacity market will not solve the reliability problems of Texas wind and solar generation.

ERCOT Grid Operations Wind Integration Report : 02/17/2021

Current Daily Values:

Installed Wind Capacity*	31,847 MW
Total Wind Capacity**	32,076 MW
Peak Load	49,252 MW
Peak Load Hour (HE)	21
Wind at Peak Load Hour	3,556 MW

Looking around the country, there is no evidence that existing capacity markets operated in other states are any more reliable than the Texas market. Rolling blackouts in the PJM capacity market—which serves many mid-Atlantic and Midwestern states, New York, and California bear witness to the failure of capacity markets to maintain reliability. [Michaels and Kleit](#) note the reason for this is “that prices in a capacity market are of necessity determined by those same administrative rules and may have little relation to actual scarcities in either the short run or the long.”

The Cost of a Capacity Market in Texas: \$4 Billion to \$8 Billion per Year

While differing market conditions each year make a precise forecast impossible, a capacity market will certainly cost Texans billions of dollars without improving reliability.

[Michaels and Kleit](#) estimated that “from the PJM capacity market’s 2007 inception through 2011, PJM retail customers paid over \$50 billion in capacity charges.” That works out to \$10 billion a year for the PJM capacity market a decade ago. Yet “93 percent of [the subsidies] went to owners of existing generation and only 1.8 percent to new and reactivated units.”

Hunker provided a summary of estimates for the cost of a Texas capacity market in 2013:

Rough estimates have put capacity payments in a capacity market somewhere between \$3 to \$5 billion per year. PUC Commissioner Ken Anderson, using PJM capacity pricing, estimated that imposing a centralized capacity market on ERCOT’s load would cost “north of \$3.6 billion [per year]. ... and that’s before anybody pays for energy.” (Anderson 2012) According to a study by Charles River Associates, and commissioned by NRG Energy, capacity payments would cost Texas ratepayers, at minimum, \$4.7 billion annually. (Plewes and Hieronymus 2013) Put another way, the capacity payments forfeited to generators, regardless of the energy those generators produced, and excluding design and implementation expenses, would amount to over \$180 per year for every man, woman, and child in Texas.

We can also see the potential cost of a capacity market in the cost of the ORDC, which cost Texas consumers \$3.6 billion in 2019.

Another way to estimate the cost of a Texas capacity market is to examine the recent proposal of Warren Buffett’s Berkshire Hathaway Energy to build 10 new natural gas power plants in Texas. They estimate the cost to be \$8 billion. Buffett thinks he can make money by building new generation in Texas. Unfortunately, like existing generators pushing for a capacity market, he doesn’t want to take any risk on his investment. Instead he wants Texans to bear all of the costs for the new generation through higher electricity bills that would all but guarantee his profits. The one good thing about Buffett’s proposal, unlike with a capacity market, is that it would result in 10 new power plants in Texas and would not go to existing powerplants. Spreading the payments out across all existing plants while still encouraging new investment would bring potential costs back to billions of dollars per year.

A capacity market would likely cost at least \$15 per megawatt hour (MWh) to make capacity payments to generators. At that rate, an industrial facility using 100 MW would pay an additional \$12 million per year. A large school district like Houston or Dallas would see costs increase by \$5 to \$8 million per year; the costs for smaller districts could be more than \$1 million. The rates for large retail stores could increase by \$70,000 or more per year. And the cost for the average retail consumer would be \$150 to \$200 per year.

As this analysis makes clear, capacity markets are extremely expensive, and provide very little improvement in reliability. Consumers pay for existing generation as well as any new generation. This makes capacity markets extremely inefficient. Adding to this are the endless rule changes in capacity markets attempting to keep up with changing conditions in the market. Ultimately, capacity markets force customers to pay for 20% to 30% excess capacity—whether it is needed or not. Overall, it is likely that capacity market costs will run from \$4 billion to \$8 billion a year.

Conclusion

Texas’ reliability challenges are not being caused by competition. Instead, renewable energy subsidies and excessive regulations have led to the problems we are facing today. Replacing competitive forces with multi-billion-dollar subsidies

for all generators—thermal and renewable alike—will not improve the situation. Eliminating renewable subsidies, stopping micro-management of the grid by regulators, and letting companies compete is the only successful policy for keeping the lights on in Texas.



Bill Peacock is the policy director of The Energy Alliance. He conducts research for the Alliance on issues related to energy policy. These include federal and state regulation of electricity markets, the Texas electricity market, renewable energy, federal, state, and local energy subsidies, and the relationship between free markets, regulatory policy, and economic prosperity.

The Energy Alliance is a project of the Texas Business Coalition to raise awareness of issues about the energy market that matter most to consumers: Reliability, Affordability, and Efficiency.

