TEXAS PUBLIC POLICY FOUNDATION
Testimony

April 8, 2021

HB 4466

Testimony in Support Before the House State Affairs Committee

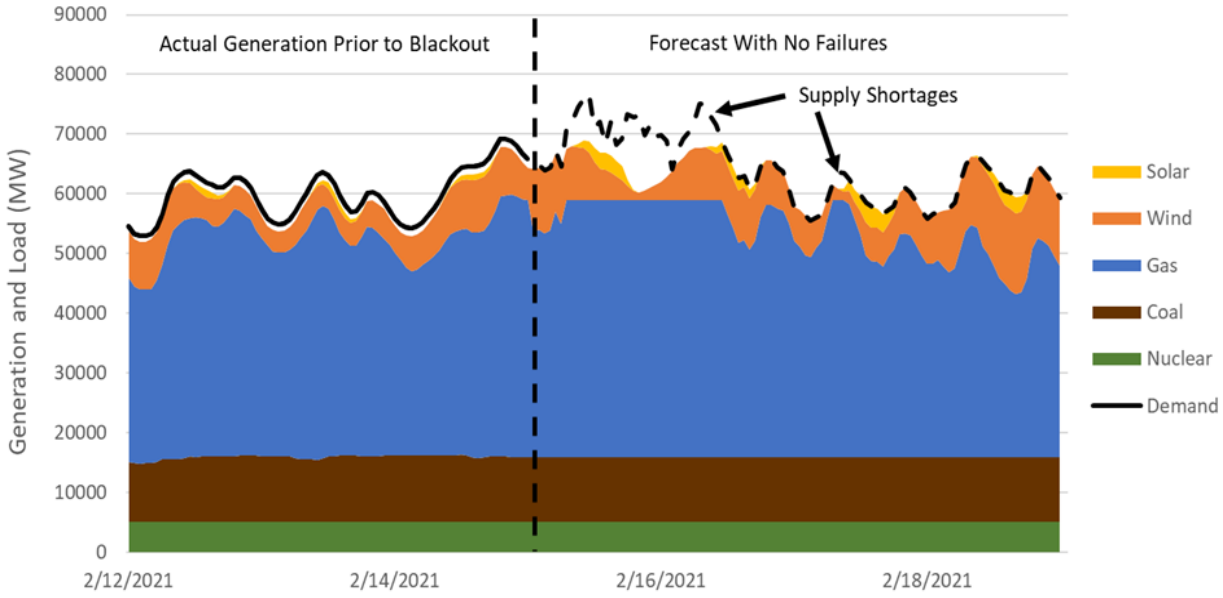
by Brent Bennett, PhD
Policy Director, Life:Powered

Chairman Paddie and Members of the Committee:

The Life:Powered team and the Texas Public Policy Foundation appreciate this committee's work to dissect the causes of February's tragedy and to find appropriate solutions. We support HB 4466 and want to emphasize a couple of reasons why the firming requirement proposed in this bill is a critical piece of the solution set for ensuring this does not happen again.

1. **Weatherization and improving the gas supply would have helped in February, but those measures alone would not have prevented the shortage. The Texas grid is short of reliable generating capacity, and absent market changes, that shortage will grow.**

   There must be one clear takeaway from the postmortem of this event: Even if *every* generator that was online the night of February 14 had continued operating throughout the event, we still would have had widespread and lasting outages. Based on ERCOT's demand forecast, the outages would have still lasted more than 24 hours and reached up to 10 GW in this optimal operating scenario. We should not expect to weather an event of this magnitude without any outages, but we must do better than this.



Source: EIA Hourly Grid Monitor

It has been frequently stated that ancillary services costs have not risen as more wind and solar have been added to the grid. This is true and is one of many signs that reliability is not being properly valued in this market. If Texas were properly accounting for the reliability costs of wind and solar, we would be paying more for ancillary services and other reliability measures. The fact that we are not paying has led to the absence of reliable generation that was needed to mitigate the shortage last month. If we continue to add wind and solar as projected and do nothing to improve their reliability, we will have more frequent and severe outages in the future. This bill is a step toward solving this problem.

continued

2. **There is not an adequate market mechanism to address the variability of wind and solar. Bringing the market into balance requires that reliability be properly valued.**

   The current market mechanisms of scarcity prices and limited ancillary services are designed to account for variations in load and small variations in thermal generation availability. These mechanisms are clearly not capable of accounting for the variability of renewable resources. Prices were near zero a week before the February event and negative just a day after it ended. That is not a sign of a healthy market. Just this week, wind generation has dropped from 26 GW to less than 6 GW as demand has grown, straining the grid at a time when generators are doing maintenance to prepare for the summer.

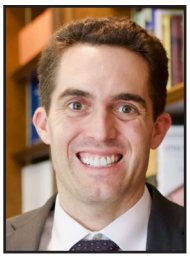
   An ideal market would properly price, in addition to energy generation, factors such as reliability, delivery, and environmental impact. The market would then determine an appropriate balance of resources depending on the relative value of each factor. The Texas market is very far from this ideal. Emissions reductions are overvalued because wind and solar are subsidized for their perceived emissions benefits, sometimes above $20/MWh for wind generators. Reliability, as we have seen recently, is undervalued, and delivery costs are socialized such that wind and solar do not have to pay more for requiring more transmission to reach their distant generating locations.

   The only way to bring the market closer to its proper equilibrium is to require variable generation to improve their reliability relative to thermal generators. A capacity market, or simply socializing the cost of added reliability through a flat fee on consumers outside the current market design, is not a good solution. Such a fee would impose the costs of intermittence on consumers and would not place the proper incentives on generators.

3. **Criteria for the size and duration of the ancillary service must be defined clearly in statute.**

   Both this bill and the similar requirement in SB 3 and SB 1278 need to be improved by establishing clear criteria for defining the size and duration of the ancillary service. Without such criteria, it is impossible to tell whether this legislation will solve a meaningful portion of the reliability problem and how much the solution will cost. The elected members of the Legislature, not the PUC, should set guidelines that weigh the costs and benefits of increasing electric reliability for all Texans. We stand ready to help this committee with this task.

ABOUT THE AUTHOR



Brent Bennett, PhD, is the policy director for Life:Powered, an initiative of the Texas Public Policy Foundation that reframes the national discussion on energy and the environment. As part of the Life:Powered team, Bennett regularly speaks with policymakers, energy experts, and industry associations across the country. He is responsible for fact-checking the team's work and spearheading many of the team's policy and regulatory initiatives. He has written extensively on how America has improved its environment while growing its energy use and on the physical limitations of renewable energy and energy storage.

Prior to joining the Foundation, Bennett worked for a startup company selling carbon nanotubes to battery manufacturers, and he continues to provide technology consulting to energy storage companies. His early years were spent in the oil country of Midland, Texas—the heart of the oil patch—where he has been a student of energy his entire life.

Bennett has an MSE and PhD in materials science and engineering from the University of Texas at Austin and a BS in physics from the University of Tulsa. His graduate research focused on advanced chemistries for utility-scale energy storage systems.

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