Life:Powered

TESTIMONY IN SUPPORT OF SB 715

Before the Texas Senate Business and Commerce Committee

BY **Brent Bennett, Ph.D.,** Life:Powered

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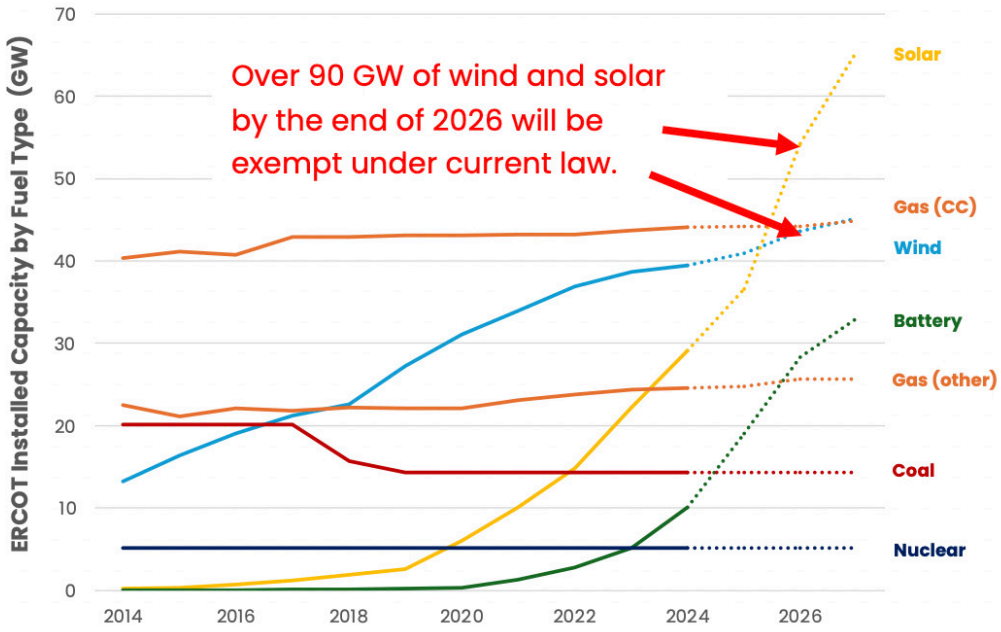
Chairman Schwertner and members of the Committee,

Thank you for the opportunity to testify in support of SB 715. The economic future of Texas depends on electricity being both affordable and reliable, and the unchecked variability of wind and solar is a major threat to our grid that must be addressed now. We estimate that wind and solar variability are already causing nearly $2 billion in excess energy costs every year,[1] and those costs will rise as more wind and solar are added. By requiring a reliability standard for all generators—not just new generators as current law dictates—SB 715 will give the Public Utility Commission the tools they need to solve this problem.

Figure 1

Installed Capacity of Wind, Solar, Combined Cycle Gas, Simple Cycle Gas, and Energy Storage From 2014 to 2024 and Forecasted Installations From 2025 to 2027

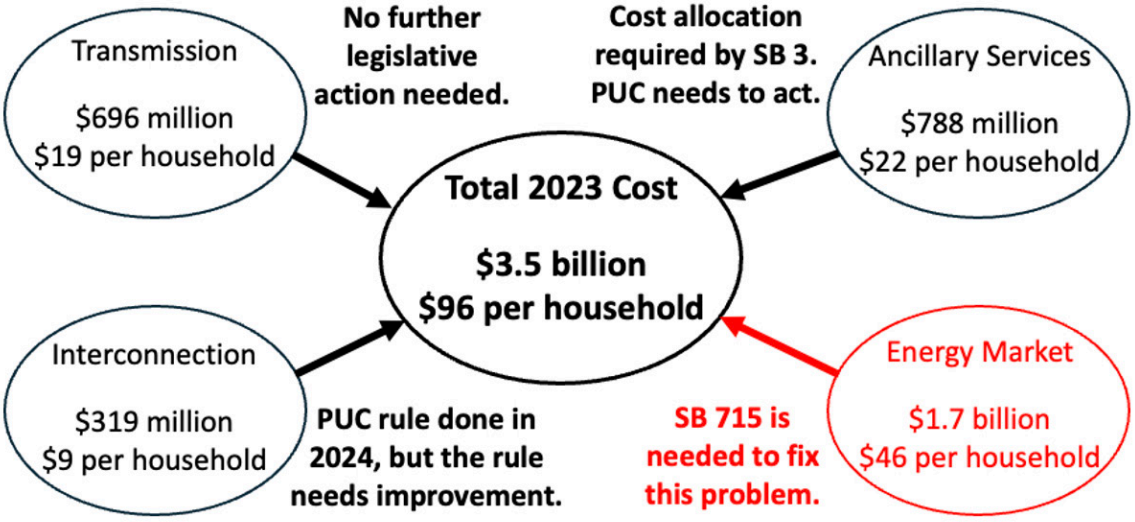


1 Bennett, B., & Reed, M. (2025). *The cost of wind and solar variability to Texas ratepayers*. Texas Public Policy Foundation. https://lifepowered.org/wp-content/uploads/2025/02/2025-02-LP-Cost-of-Wind-and-Solar-ReedBennett.pdf

HB 1500 (2023) only established a reliability standard for new generators beginning in 2027. While that is a good first step, **a reliability standard for new generators will not do anything to address the billions of dollars of costs being imposed by the 90 GW or more of wind and solar that will be in place at the end of 2026.** With roughly 15 GW of solar and wind being added each year, it will be well into the next decade before ratepayers see any meaningful benefit from the policy as it is.

Figure 2 shows the imposed costs on wind and solar on ratepayers in 2023. While the existing transmission and interconnection costs are sunk, the Legislature has taken steps to mitigate future costs by requiring new transmission to pass a consumer benefit test and by requiring new interconnection costs to be partially paid by developers. SB 3 in 2021 required the allocation of ancillary services costs according to "cost-causation" principles, and the PUC estimated that wind and solar accounted for 42% of the costs of ancillary services in 2023—nearly $800 million. The PUC still needs to initiate a rulemaking on this matter, but at least the law is already in place.

Figure 2
2023 Imposed Costs of Wind and Solar in ERCOT

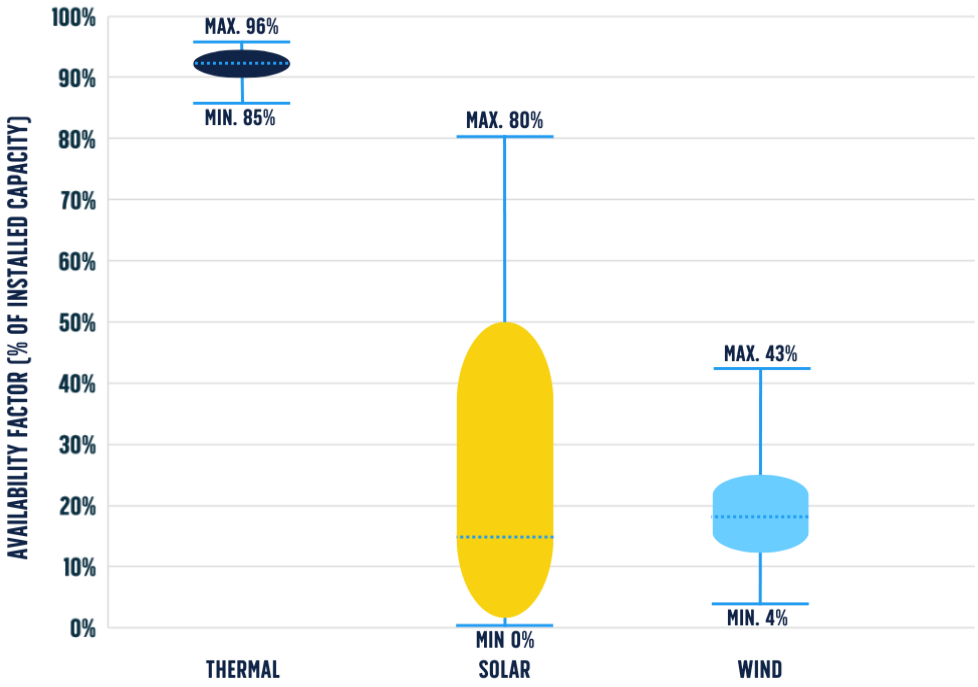


What the Legislature still needs to address is the cost of wind and solar volatility in the wholesale market. This cost, which we estimate to be nearly $2 billion per year, is approximately equal to the cost of the other three categories in **Figure 2** combined. Applying a reliability standard only to new generation will not solve this problem and will create a two-tiered system (one for new generation and one for old) that might put new, more efficient generation at a disadvantage.

The reason wind and solar volatility imposes such a steep cost is because it creates more uncertainty in how much dispatchable capacity is needed to keep the system running and in when those dispatchable units will be needed. Dispatchable generators must be paid more to run for fewer hours, which leads to more price spikes and more price uncertainty. **Figure 3** compares the availability of the combined wind and solar to the combined gas, coal, and nuclear fleet for the highest net peak load hours in 2024. These are the hours when high demand correlates with low wind and solar output, and these hours determine how much dispatchable capacity is needed on the system and how high prices must be to incent new generation to come online.

Figure 3

Maximum Available Output of Wind, Solar, and Thermal Generators in ERCOT During the 100 Highest Net Peak Load Hours, 2024



Thermal units averaged 92% of their installed capacity during these key hours in 2024, and their minimum availability was 85%. For wind and solar units to be as reliable as thermal units during these key hours, they would need to guarantee their output up to at least 90% of their average. The average output of wind during these hours was 18% of installed capacity, so they would be expected to guarantee 16% (90% of 18%) of their installed capacity. The minimum output for wind over these hours was 4% of installed capacity, so wind would need to add 12% of firm capacity, about 4.5 GW, to meet their requirement. Solar would need to add 13% of installed capacity, or about 3.6 GW.

Another key piece of SB 715 is that it will allow existing generators to be eligible for incentives, which will help them offset the extra costs stemming from wind and solar volatility and help prevent premature retirements. If the reliability standard had been in place prior to 2024, and enough funds had been directed to dispatchable generation to ensure an extra 2 GW of capacity was available in 2024, the entirety of the $1.7 billion in excess energy costs from wind and solar volatility would have been eliminated. SB 715 would not only benefit ratepayers but stopping the overpayment of wind and solar, but it could also reduce energy costs by supporting more dispatchable capacity in the market.

Figure 4
2023 and 2024 Total Hourly Volatility of the ERCOT Grid Attributed to Demand, Wind, and Solar Volatility, Gigawatt-hours

	2023 Volatility	% Change	2024 Volatility	% Change
Demand	13,281,622		13,219,396	
+ Wind	16,743,412	26%	16,716,395	26%
+ Solar	14,586,290	10%	16,952,599	28%
+ Both	15,544,008	17%	17,199,230	30%

The bottom line is that the single market clearing price for energy in ERCOT, treating all energy as the same, fails to account for the variability of wind and solar relative to thermal generation. Wind and solar have increased hourly volatility by 30% in ERCOT and this volatility has a cost. It is as if Texas is paying the same price for a car that works 50% of the time as it does for a car that works 100% of the time simply because the 50% car comes with free fuel. The 50% car is great when it works, but when it doesn't, you have to call a taxi and pay a lot more than if you simply used the 100% car. Add in the outsized federal subsidies for wind and solar,[2] and the result is that the system is failing to find the right balance of cost and affordability for ratepayers.

It is imperative that the Texas Legislature and the PUC act now to protect consumers from the rising cost of volatility in ERCOT. Electricity prices in Texas are increasing faster than in our neighboring states,[3] and there is serious risk of further price escalation over the next decade if nothing changes. Asking Texans to pour more money into subsidizing backup power—which California and Europe are doing to the detriment of their ratepayers—will lead to spiraling costs as dispatchable power will need to be paid more and more to close a growing reliability deficit. Establishing a reliability standard for **all** generators in ERCOT is a necessary step to solving this problem, and the Life:Powered team is ready to help the Legislature and the PUC use the reliability standard created by SB 715 to provide meaningful benefits to Texas ratepayers.

Sincerely,

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Texas Public Policy Foundation

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2 Bennett, B. (2024). *The siren song that never ends: Federal energy subsidies and support from 2010 to 2023*. Texas Public Policy Foundation. https://lifepowered.org/wp-content/uploads/2024/10/2024-10-LP-Federal-Energy-Subsidies-BrentBennett_FINAL-1.pdf

3 U.S. Energy Information Administration. (n.d.). *Electricity data browser: Average retail price of electricity, annual*. Retrieved March 23, 2025, from https://www.eia.gov/electricity/data/browser/#/topic/7?agg=0,1&geo=vvvvvvvvvvvo&freq=A