April 14, 2025

Testimony in Support of HB 3356
Before the Texas House State Affairs Committee
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Chairman King and Members of the Committee,

Thank you for the opportunity to testify in support of HB 3356. 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 causing nearly $2 billion in excess energy costs every year,[1] and those costs will rise as more wind and solar are added. By setting a reliability standard for all generators—not just new generators as current law dictates—HB 3356 will give the Public Utility Commission the tools they need to solve this problem.

While the reliability standard for new generators established by HB 1500 is a good first step, it will not address the billions of dollars of costs being imposed by existing variable generators. A uniform reliability standard with appropriate penalties and incentives for *all* generators is necessary for the following reasons:

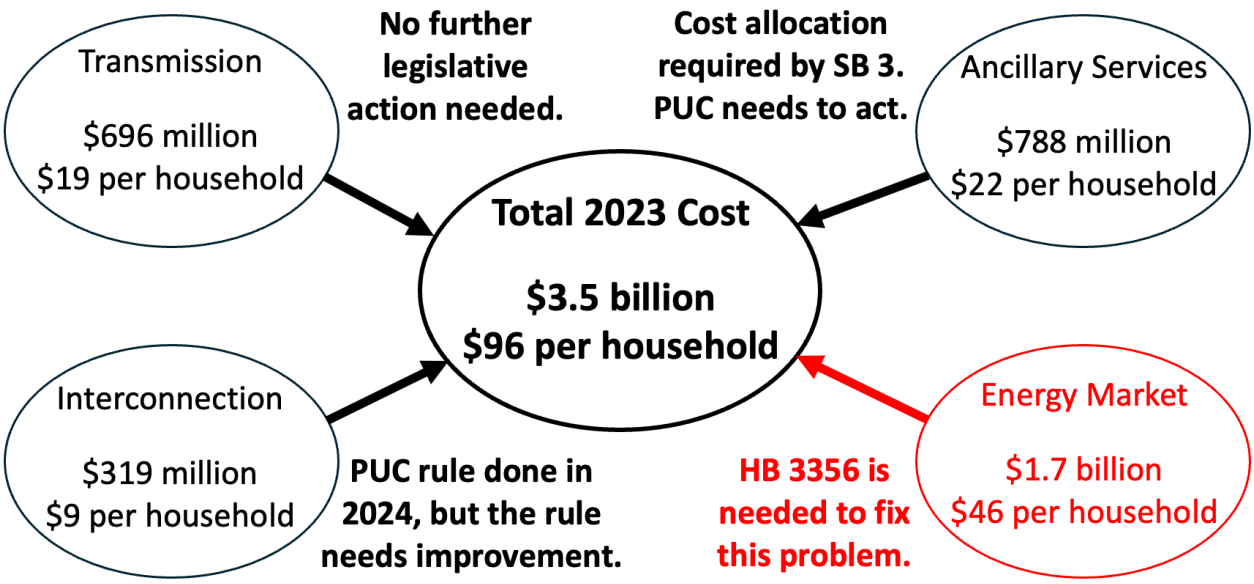
1. At least 90 GW of wind and solar will be in place at the end of 2026, all of which will be exempted from the reliability standard established by HB 1500. The standard will only apply to the roughly 15 GW of generation that is being added each year.
2. HB 3356 will allow existing generators to receive incentives, which is not possible under the current law. A key outcome of this program should be preventing premature retirements.
3. The Legislature did not hesitate to adopt weatherization standards after Winter Storm Uri because it was an urgent problem affecting the entire generation fleet. Supply volatility is no different. Those standards were adopted in phases to ensure everyone had adequate opportunity to comply, and this reliability standard can also be adopted in phases.

Figure 1 shows the imposed costs on wind and solar on ratepayers in 2023 and what has been done so far to address those costs. While 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 capping the interconnection costs that can be uplifted to ratepayers. SB 3 in 2021 required the allocation of ancillary services costs according to “cost-causation” principles, but the PUC still needs to act on that mandate.

[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

Figure 1

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. As shown in **Figure 2**, wind and solar have increased hourly volatility by 30% in ERCOT, and the cost of this volatility, which we estimate to be nearly $2 billion per year, is approximately equal to the cost of the other three categories in **Figure 1** 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.

Figure 2

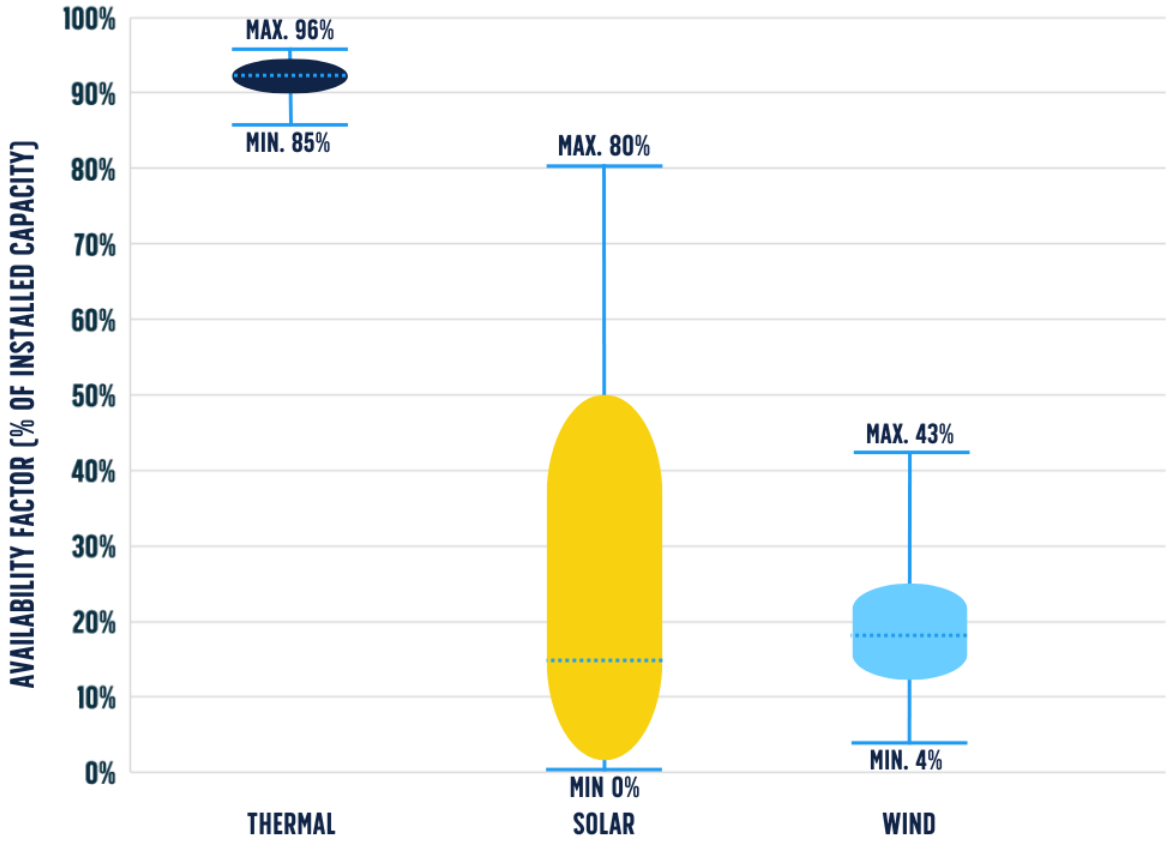
2023 and 2024 Total Hourly Volatility of the ERCOT Grid Attributed to Demand, Wind, and Solar Volatility, Gigawatt-hours

	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%

Another key piece of HB 3356 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 2023, and enough funds had been directed to dispatchable generation to ensure an extra 2 GW of capacity was available in 2023, the entirety of the $1.7 billion in excess energy costs from wind and solar volatility would have been eliminated. HB 3356 would not only benefit ratepayers by stopping the overpayment of wind and solar, but it could also reduce energy costs by supporting more dispatchable capacity in the market.

Wind and solar volatility imposes such a steep cost because it creates more uncertainty in how much dispatchable capacity is needed to keep the system running and when that capacity must be dispatched. 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, that is, the hours when demand was high and wind and solar output were low. 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



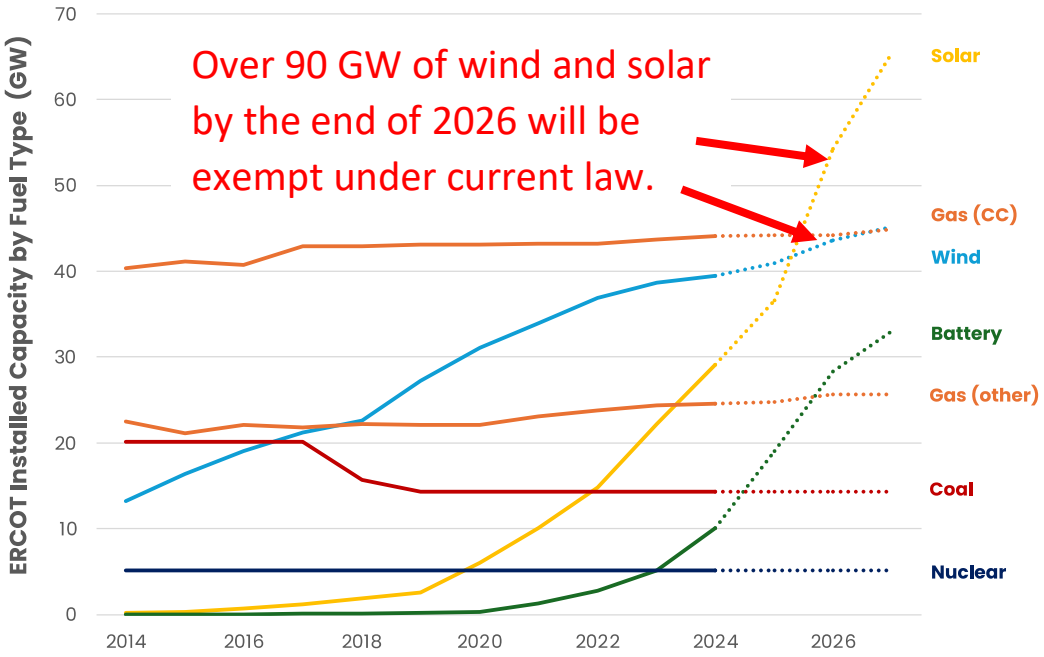
Thermal units averaged 92% of their installed capacity during these key hours in 2024, and their minimum availability was 85%. The average output of wind during these hours was 18% of installed capacity, compared to a minimum of 4%, and solar averaged 13% of installed capacity against a minimum of 0%. 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 bottom line is that the single market clearing price for energy in ERCOT fails to account for the variability of wind and solar relative to thermal generation. 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.

Figure 4

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



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, as proposed by HB 3356, is a necessary step to solving this problem.

Sincerely,
Brent Bennett, Ph.D.
Policy Director, Life:Powered
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