Testimony of Brent Bennett, Ph.D.
Policy Director, Life:Powered
Texas Public Policy Foundation
Before the House State Affairs Committee

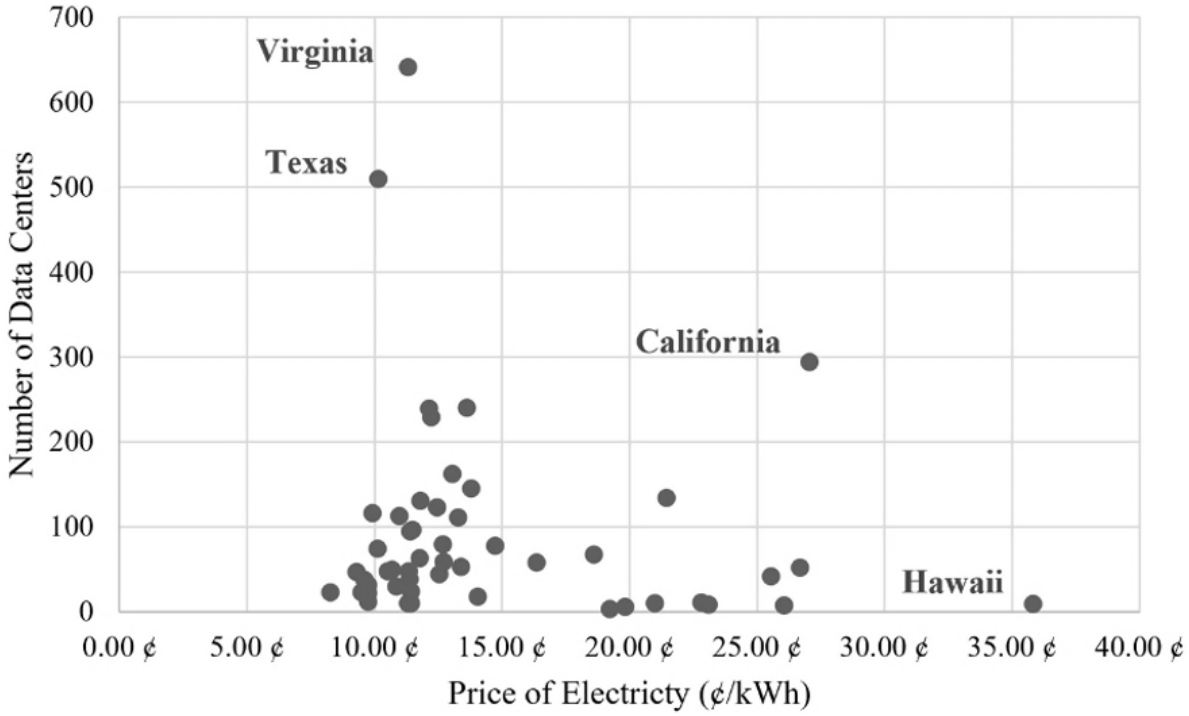
August 19, 2026

Chairman King and Members of the Committee:

Thank you for this opportunity to testify about the important challenges facing the Texas electric grid and specifically the challenges and opportunities being presented by data centers. The most important question to ask about data centers is: what are they bringing to the grid? We all agree that Texas needs more reliable energy generation. Data centers, with their demonstrated willingness to pay for reliable electricity, can provide the revenue to support the grid infrastructure the state needs. **The problem is not the data centers but rather the ERCOT market design fails to properly value reliable, energy-dense generation and subsidizes intermittent generation with socialized transmission building.**

Demand growth by itself does not automatically lead to higher electricity rates, and in the long run, a larger grid should lower costs to all consumers. **Figure 1** shows that data centers can be added at scale while keeping rates stable. State electricity and environmental policies are the largest determinant of electricity rates, and states with the slowest growth tend to have higher rates.

Figure 1
Data Center Growth and Affordable Power Can Go Hand in Hand



Note: Data from Blue States, High Rates, T. Pyle, K. Stein, & A. Stevens, Institute for Energy Research, 2025 (https://www.instituteforenergyresearch.org/the-grid/blue-states-high-rates/); USA Data Centers, Data Center Map, 2026 (https://www.datacentermap.com/usa/); and author's calculations

It is also important to recognize why data centers have very high reliability needs and what those needs are. The processors in AI data centers are extremely expensive and delicate, so they must be managed very carefully. The chips alone constitute nearly half of the total cost of a typical data center, whereas the power infrastructure is only about 15% of the cost. Current estimates suggest that AI data centers generate anywhere from $2,000 of revenue per MWh of electricity consumed for low-level training to over $70,000 per MWh for high level inference, which means their value of lost load is much higher than many other industrial consumers. Thermal management is critical due to the very high heat output of the large processors. A temporary loss of cooling while the chips are powered on can cause them to overheat and melt. Similarly, a power surge or other power quality issues can cause the chips to short out. In other words, the cost of power for these facilities is far less important than power quality and 24/7 uptime.

Despite these high reliability and uptime requirements for AI data centers, it is still possible for computing loads to flex their consumption in concert with the needs of the grid. According to Lawrence Berkley National Laboratory, AI accounted for roughly 20% of all data center electricity consumption 2024. As AI integration grows among both individual and corporate users, this share is projected to rise to nearly 60% by 2030, but some of the remaining 40% of computing loads might be flexible, depending on each company's needs. Within each AI data center, it is possible to shift training loads, which are less valuable than inference, to different time periods. And, most importantly, on-site generation and hybrid arrangements can be leveraged to feed power back into the grid or to reduce the data center's demand on the grid, rather than relying on strict curtailment procedures.

However, the fact that data centers themselves have high reliability needs does not automatically translate to adequate reliable energy on the grid. Under current generation trends, a 1-in-10-year winter storm in 2030, even in a system with adequate new transmission, will result in nearly 3 days of outages and cost tens of billions of dollars. TPPF's research has demonstrated how the combination of socialized reliability and transmission costs being imposed by wind and solar generation is falling primarily on Texas residential consumers, who have seen their average prices rise by more than 30% since 2020 (see **Figure 2**). Texas has the fourth best industrial electricity rates among U.S. states, but its residential rates rank 28th. The spread between residential, commercial, and industrial rates has widened since 2020 with the latter two categories appearing to reap the benefits of historically low fuel costs while residential consumers see consistent price increases.

[1]*Brown, E., Gary, M., Koren, K., and Luck, P. (2026, May 14). The impact of tariffs on the AI data center buildout: Balancing supply chain security and AI infrastructure leadership. Center for Strategic and International Studies. https://www.csis.org/analysis/impact-tariffs-ai-data-center-buildout-balancing-supply-chain-security-and-ai*

[2]*Royal, H. (2026). The compute heat rate: Quantifying AI-driven electricity price tolerance and its implications for wholesale market repricing. SSRN. p. 8. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=6322318*

[3]*Smith, S. J., et al. (2026, June). United States Data Center Energy Usage Report: 2025 Update. p. 27. https://escholarship.org/uc/item/33m6w3x0*

[4]*Reed, M. & Bennett, B. Forecasting the Future of the ERCOT Grid, Part 1: The Ongoing Winter Reliability Challenge. Texas Public Policy Foundation. p. 3. https://www.texaspolicy.com/wp-content/uploads/2026/06/2026-05-LP-Future-ERCOT-Grid-Part1-ReedBennett-1.pdf*

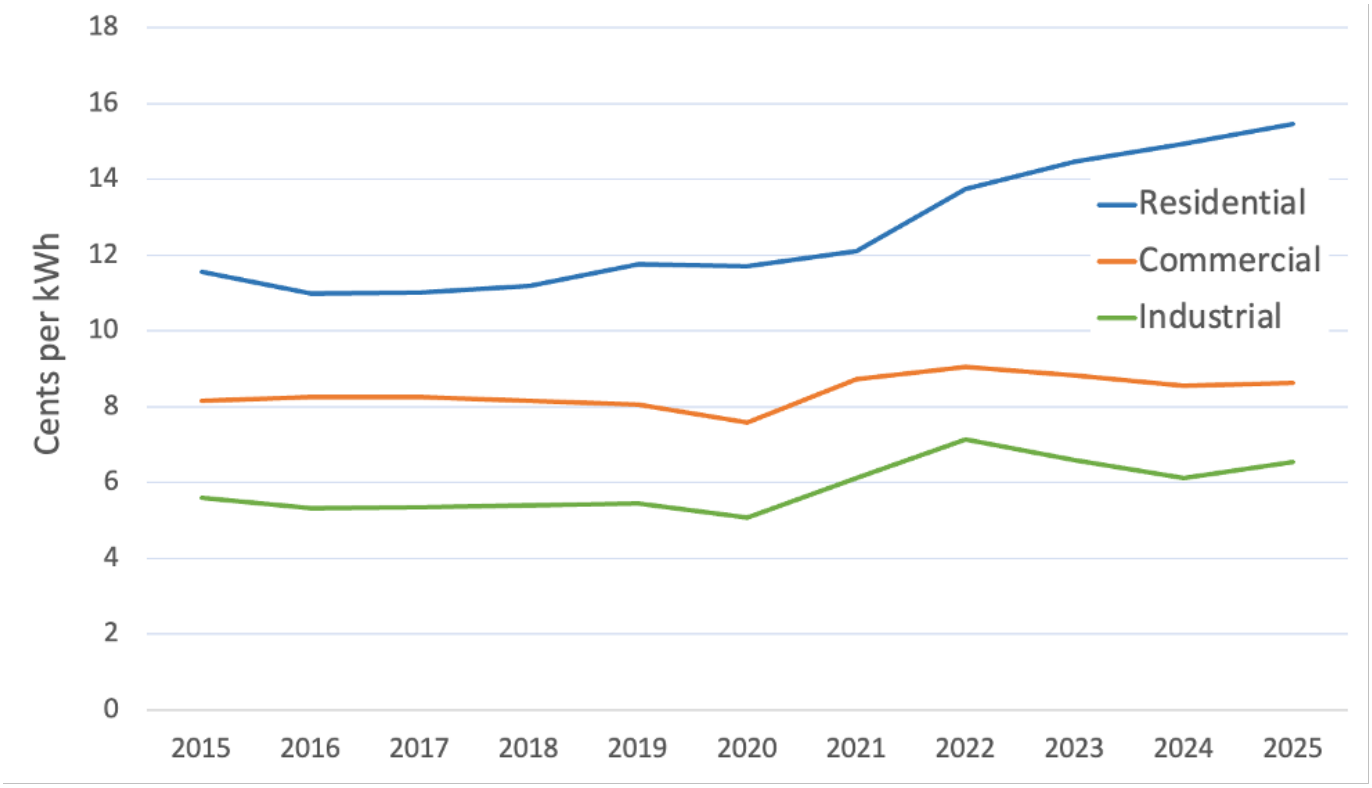
[5]*Reed, M. & Bennett, B. (2025, February). The cost of wind and solar variability to Texas ratepayers. Texas Public Policy Foundation. https://lifepowered.org/wp-content/uploads/2025/02/2025-02-LP-Cost-of-Wind-and-Solar-ReedBennett.pdf*

[6]*Bennett, B. and Piracci, J. (2026, January). The Explosion of Transmission Costs in ERCOT: Causes, Forecasts, and Policy Solutions. Texas Public Policy Foundation. p. 10. https://www.texaspolicy.com/wp-content/uploads/2026/01/2026-01-LP-Transmission-Costs-BennettPiracci-updated6-2026.pdf*

[7]*U.S. Energy Information Administration (EIA). (n.d.). Electricity data browser: Average retail price of electricity. Retrieved August 14, 2026 from https://www.eia.gov/electricity/data/browser/#/topic/7.*

Figure 2

Average Residential, Commercial, and Industrial Electricity Rates in Texas, 2015-2025



Note: Data from Electricity Data Browser: Average Retail Price of Electricity, U.S. Energy Information Administration, Retrieved August 14, 2026, (https://www.eia.gov/electricity/data/browser/#/topic/7).

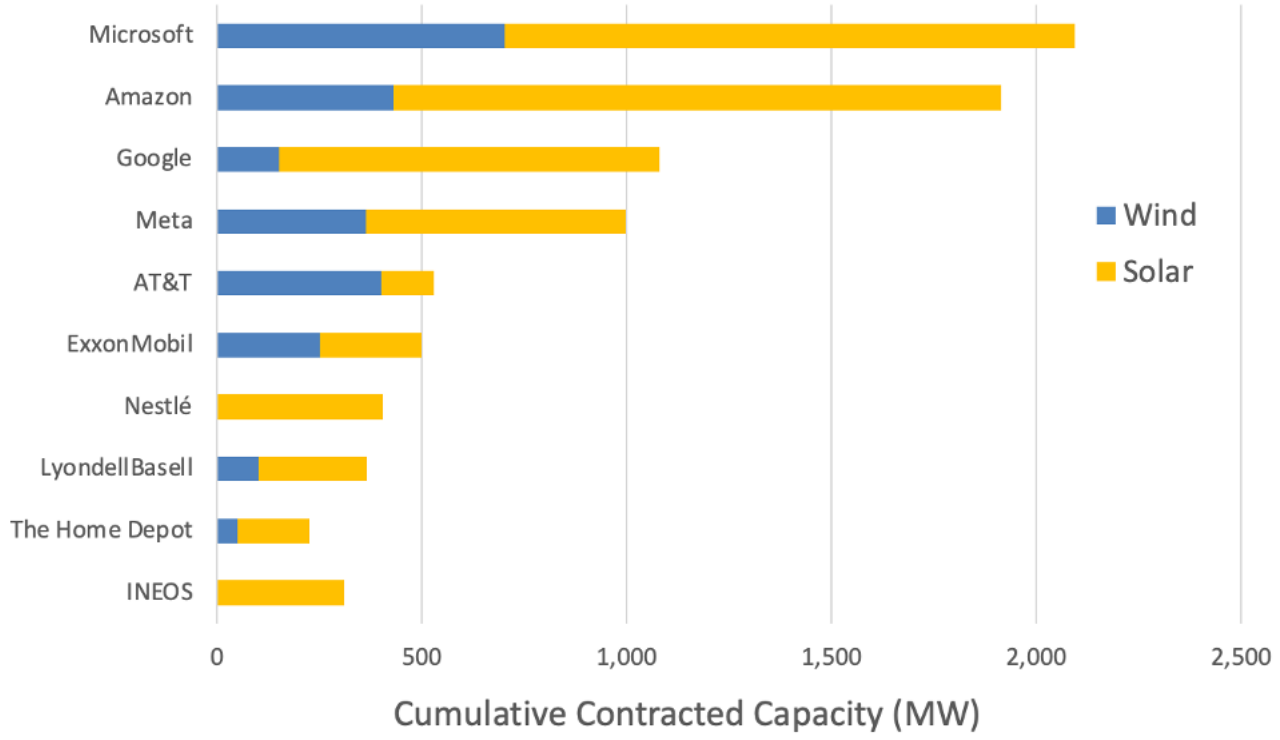
For data centers to make the ERCOT grid more reliable and affordable, the generation mix needs to immediately shift away from intermittent, short-duration resources and toward reliable, energy-dense generation. If data centers induce more intermittent generation to come into the ERCOT grid instead of dispatchable generation, they will degrade the reliability of the grid. Although more gas generation has entered the queue over the past couple years in anticipation of data center demand growth, the current ERCOT interconnection queue is still over 70% solar and energy storage. This situation needs to change.

Unfortunately, the net-zero emissions goals of many of the owners and customers of data centers could make this problem worse by increasing the demand for wind and solar beyond what the ERCOT market is already supporting. As shown in **Figure 3**, the four largest direct purchasers of wind and solar generation in ERCOT are the same companies that are pouring billions of dollars into new data centers in Texas—Microsoft, Amazon, Google, and Meta. All these companies have corporate emissions targets, and if they continue with their current practices, they could easily multiply their current wind and solar purchases many times over to meet their future demand. These companies will also have a strong financial incentive to fight attempts to directly allocate reliability costs to wind and solar, instead of socializing those costs to other ratepayers as the current market design allows.

[8]Electric Reliability Council of Texas (ERCOT). (n.d.-a). GIS_Report_July2026 in GIS report (webpage). Retrieved August 12, 2026, from https://www.ercot.com/mp/data-products/data-product-details?id=pg7-200-er

Figure 3

Wind, Solar, And Storage Capacity Contracted by Corporations in ERCOT through July 2026



Note: Data from PPA Counterparty Export, S&P Global Market Intelligence. Projects are de-duplicated using EIA site codes from Form EIA-860 detailed data with previous form data (EIA-860A/860B): 2025 (early release), U.S. Energy Information Administration, June 9, 2026 (https://www.eia.gov/electricity/data/eia860/). Data includes corporate off-takers only – municipal utilities, electric cooperatives, investor-owned utilities, power marketers/traders, and undisclosed buyers excluded. Subsidiaries are rolled to the parent company.

The first step to solving this problem is to fix the single-market clearing price for energy in the ERCOT wholesale market. Resources are paid for what they produce at any point in time regardless of their ability to produce that amount in the future. When the entire resource mix in ERCOT consisted of thermal, dispatchable generation, the system worked well by dispatching the most efficient units first. The difference in reliability between most gas, coal, and nuclear resources was negligible, so the market did not need to differentiate between them.

Now, the environment in the ERCOT region is very different. Because wind and solar depend on the weather and cannot be dispatched to match demand, their output is 5 to 10 times more variable than gas, coal, and nuclear units. Paying them the same price as reliable generators at all points in time assumes that they will be available when the same conditions arise in the future, when in fact they might produce only a fraction of the electricity the next time.

Batteries suffer from a similar problem because of their limited capacity. They can perform every day in the summer when they have plenty of time during the night and morning to recharge, but they cannot recharge during a long-duration winter storm. Their capacity will be exhausted as soon as the grid gets tight and won't be available again until the weather

warms or the sun comes out, compared to a natural gas power plant that can run flat out the entire time. **Paying wind, solar, and storage the same market price as gas, coal, and nuclear units disconnects the economics of the ERCOT market from the physics underlying the grid. Eventually, this disconnect will break the system.**

This committee debated this market problem during the legislative session last year and passed a bill, HB 3356 by Chairman Patterson, that would go a long way toward fixing this problem. The PUC has a rule in place to implement a reliability standard for new generation starting next year, per the directive of HB 1500 in 2023. However, the PUC's rule needs to be improved significantly if it is going to have any meaningful reliability benefits and it needs to be applied to all generation, as HB 3356 proposed to do, not just to new generation. TPPF began advocating for this reliability standard before Winter Storm Uri in 2021, and we continue to believe that this is the first and most important reform that needs to be undertaken to make our grid affordable and reliable again.

The second major problem in the ERCOT market, which data centers will exacerbate if not corrected, is the way transmission is currently planned and the way transmission costs are socialized across all ratepayers. The existing system was designed to support bringing dispatchable generation to demand centers, primarily the major cities. There was little difference between different types of generators, and long-distance transmission benefitted all types of consumers to some degree. This "common good" understanding of the transmission system justified socializing the costs across all ratepayers since all ratepayers benefited somewhat equally.

In recent years, the need for new transmission is increasingly driven by the need to move diffuse wind and solar hundreds of miles across the state to load centers, at the expense of Texas residential ratepayers and landowners. Data centers can help reduce this problem by helping to finance co-located dispatchable generation, whether grid-connected or off-grid, if policies are changed to enable more of these arrangements to benefit the entire grid. **Figure 4** shows that transmission costs to support new generation have been about 25% of overall transmission costs in recent years. ERCOT developed the Permian Basin Reliability Plan (PBRP) and the 765-kV Strategic Transmission Expansion Plan (STEP) under the assumption that about 90% of new capacity in the coming decade would be wind, solar, and storage, perpetuating the existing imbalances caused by subsidizing the transmission of diffuse wind and solar across the state to demand centers.

This committee will hear from many parties about the risks of delaying the 765-kV transmission buildout, but the risks of continuing to build transmission while not reforming the wholesale market to better value reliable generation are even greater. Further increasing the proportion of wind and solar in the ERCOT grid, which the 765-kV lines are likely to do, will increase the risk of outages during winter storms. There is also the risk of building so much transmission at one time and uplifting the entirety of those costs into the rate base. TPPF estimates that if the 765-kV STEP is fully implemented, the lifetime cost to ratepayers will approach $100 billion, or about $3 billion per year. Even under optimistic projections with the proposed 12CP method ratepayers will likely see an increase of $100 per year or more due to new transmission.

[9]HB 3356. House Committee Report. 89th Texas Legislature. Regular. (2029). https://capitol.texas.gov/BillLookup/History.aspx?LegSess=89R&Bill=HB3356

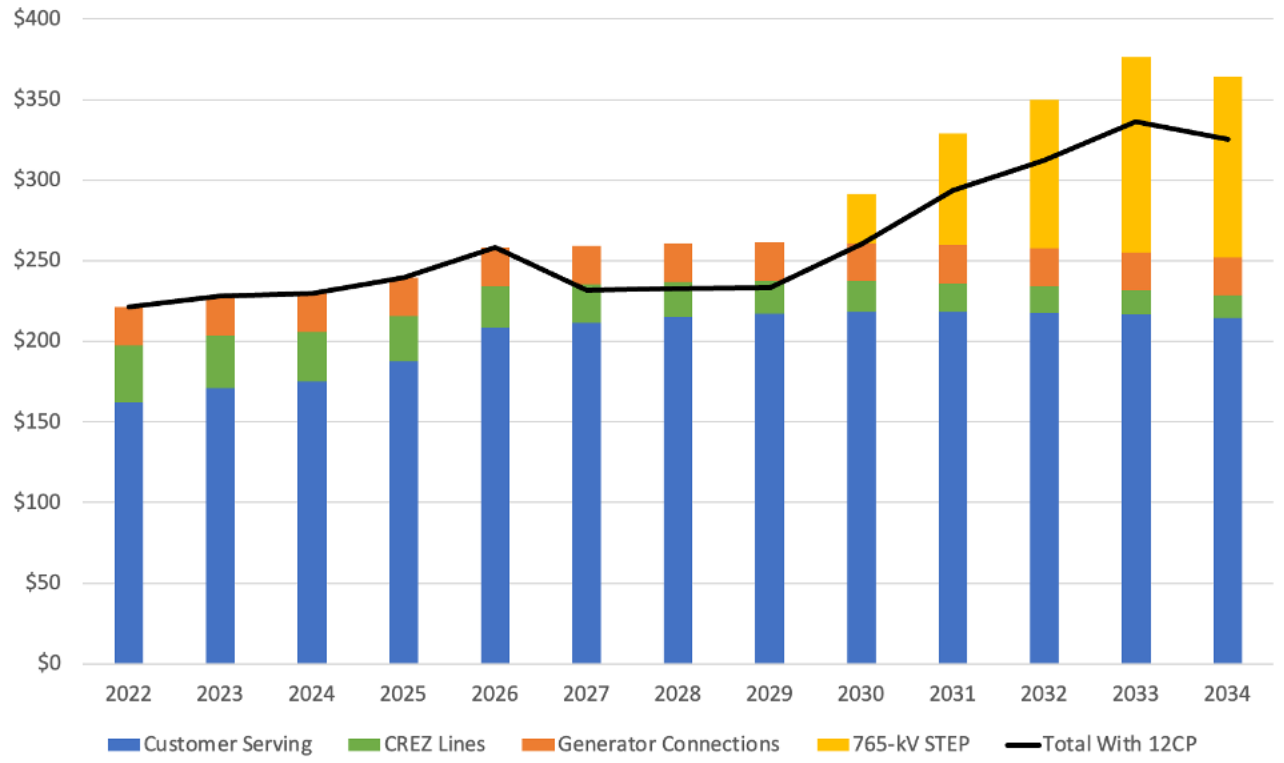
[10]HB 1500. Enrolled. 88th Texas Legislature. Regular. (2023). https://capitol.texas.gov/tlodocs/88R/billtext/pdf/HB01500F.pdf

[11]Electric Reliability Council of Texas (ERCOT). (2024, July). ERCOT Permian Basin Reliability Plan Study. pp. 5-6, 55-57. https://interchange.puc.texas.gov/Documents/55718_17_1414013.PDF

[12]Bennett and Piracci, 2026, p. 10.

Figure 4

Annual Transmission Cost of Service Uplift to an Average Residential Ratepayer, Actual 2022-2024 and Estimated 2025-2034 (With Line Showing 12CP Adjustment Beginning in 2027)



Note: The numbers in this figure were derived by normalizing the annual TCOS uplift by annual system load (both historical and projected with a 5% annual increase), multiplying by the average annual residential consumption of 15 MWh, and then multiplying again by 1.4 to account for the fact that residential consumers account for about 34% of load but pay about 47% of TCOS under the 4CP method. The factor is decreased to 1.25 in 2027 to account for the residential share dropping to 43% under 12CP, per the PUC's forecast.[13]

TPPF fully supports building more local transmission to meet demand growth with reliable, energy-dense generation, especially in the Permian Basin. More growth is what our grid needs to bring on more reliable generation to build our way out of the problems created by nearly two decades of overbuilding subsidized wind and solar. But that growth cannot be properly accommodated under the current market design. New transmission and added demand from data centers must be accompanied by market reforms to better value reliability, or the current trend to overbuild unreliable generation will continue.

Data centers can be the asset Texas needs to remake its grid for the next 50 years of growth, but the current policy environment much change. In summary, TPPF proposes the following reforms to ensure that the Texas grid can benefit from the data center boom.

[13]Public Utility Commission of Texas (PUC). (2026, March 16). Evaluation of transmission cost recovery (draft) in Project No. 58484. p. 32. https://interchange.puc.texas.gov/Documents/58484_77_1603622.PDF

1. Pay for firmness: Compensate dispatchable generation adequately; require reliable power alongside any wind/solar purchases.
2. Forecast honestly: Refine load forecasting to avoid overbuilding while planning for full utilization of what does get built.
3. User pays: Assign large-load transmission costs directly to the customers that cause them.
4. Make load a resource: Let on-site generation, storage, and schedulable workloads return firm capacity instead of relying on curtailment.
5. Preserve both paths: Interconnection and private grids each add value - don't foreclose either option through legislation or regulation.

Most of these reforms are advancing in some fashion except the first one. The current firming rule for new generation, as promulgated by the PUC, is inadequate to ensure that new firm capacity is added, and it must be applied to existing generation in order to work properly and to have sufficient impact. Texas must fix the ERCOT wholesale market now to properly value reliability, and TPPF stands ready to help with that effort.

Brent Bennett, Ph.D.
Policy Director, Life:Powered
Texas Public Policy Foundation