



July 31, 2026

## Can ERCOT's Energy Supply Keep Pace with Soaring Demand Appetite?

ERCOT has experienced an unusually stable price period following the extreme volatility seen during summer 2023. However, that stability is likely to end quickly. With functionally infinite load appetite creating an acute need for capacity in ERCOT, the lack of stable capacity revenues complicates project finance and is driving a movement toward BTM generation for large loads. Adequately addressing these new-entry and load-growth challenges will require market reform, though it remains to be seen how ERCOT will do so while providing durable investment signals for new generation.

In a recent webinar previewing Ascend's latest ERCOT market outlook, Dr. Brent Nelson, Senior Managing Director of Market Intelligence for Ascend Analytics, was joined by Robert LaFaso, Director of Market Intelligence, to discuss why ERCOT's boom/bust revenue cycle persists, why forward markets have been so disconnected from spot reality, and what unintended consequences may result from ERCOT's efforts to resolve its capacity revenue problems.

### Key Takeaways

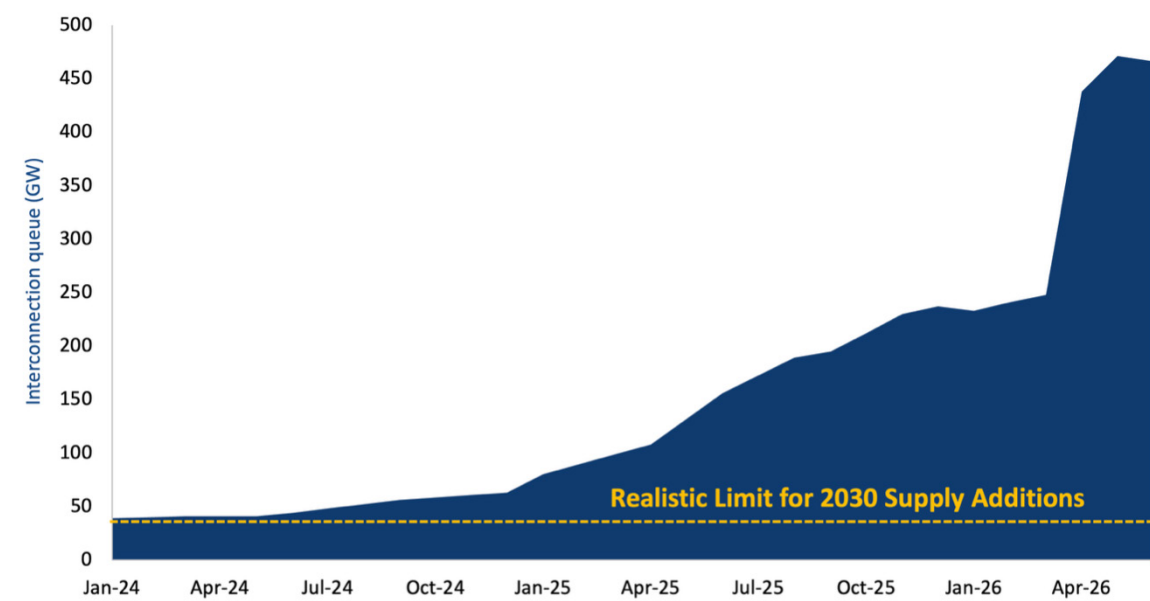
- Data center-driven demand appetite in ERCOT is functionally infinite, with load additions ultimately constrained by the pace of supply additions, leading to sustained market tightness and scarcity potential. Current generation queues are positioned to support under 40 GW out of the 450+ GW large load backlog.
- ERCOT is currently designed to incentivize new entry via unstable scarcity revenues well above what marginal-cost pricing systems would produce, which are needed to supplement energy market revenues that would otherwise be insufficient to support new entry. With scarcity revenues highly variable from year-to-year, however, markets can alternate between signaling a need for new capacity to signaling stability or retirements before earlier investments are paid off. This unstable market structure creates unclear market signals and undermines project finance.
- Forward power markets continue to price in significantly more scarcity than market fundamentals support. This is likely driven by limited forward market participation by solar and storage resources, which have increased reserve margins but carry higher risk than thermal generation in the forward markets.
- Market reforms to manage affordability while supporting new entry would require both bifurcating funding for new entry from existing supply as well as ensuring long-term contracted revenues. Market mechanisms such as RTC+B and the Texas Energy Fund have not resolved the underlying issues related to incentivizing new entry. A 'bring-your-own-new-generation' requirement currently being considered by ERCOT could risk undercutting revenues for currently operating generation.

- Leveraging analysis from the Ascend Market Intelligence™ [Enhanced Opportunity Cost Forecasting Framework](#), the webinar, which is available for on-demand viewing in the PowerVAL™ platform, offers additional insights related to opportunities and risks in ERCOT for developers, investors, and load-serving entities.

## Why is ERCOT Expected to Return to Tighter Supply-Demand Conditions?

Since 2023, ERCOT has experienced a relatively stable period, with low volatility and ample reserve margins. That stability, however, reflects the combination of mild weather, delayed load growth, and recent supply additions rather than a fundamental shift in market dynamics. Rapid deployment of solar, wind, and battery storage has temporarily outpaced realized load growth, increasing reserve margins and reducing the frequency of scarcity events.

However, the market faces significantly more demand appetite than new generation can realistically satisfy. As seen in **Figure 1**, ERCOT's large load interconnection queue has grown to approximately 450 GW, while roughly 40 GW of new generation can realistically be added by 2030. As additional supply comes online, enough new load is expected to materialize to absorb it, returning the system to tighter operating conditions. In practical terms, demand growth is expected to far outpace the amount of new supply that can be deployed, increasing the likelihood that scarcity pricing will become more frequent in ERCOT.



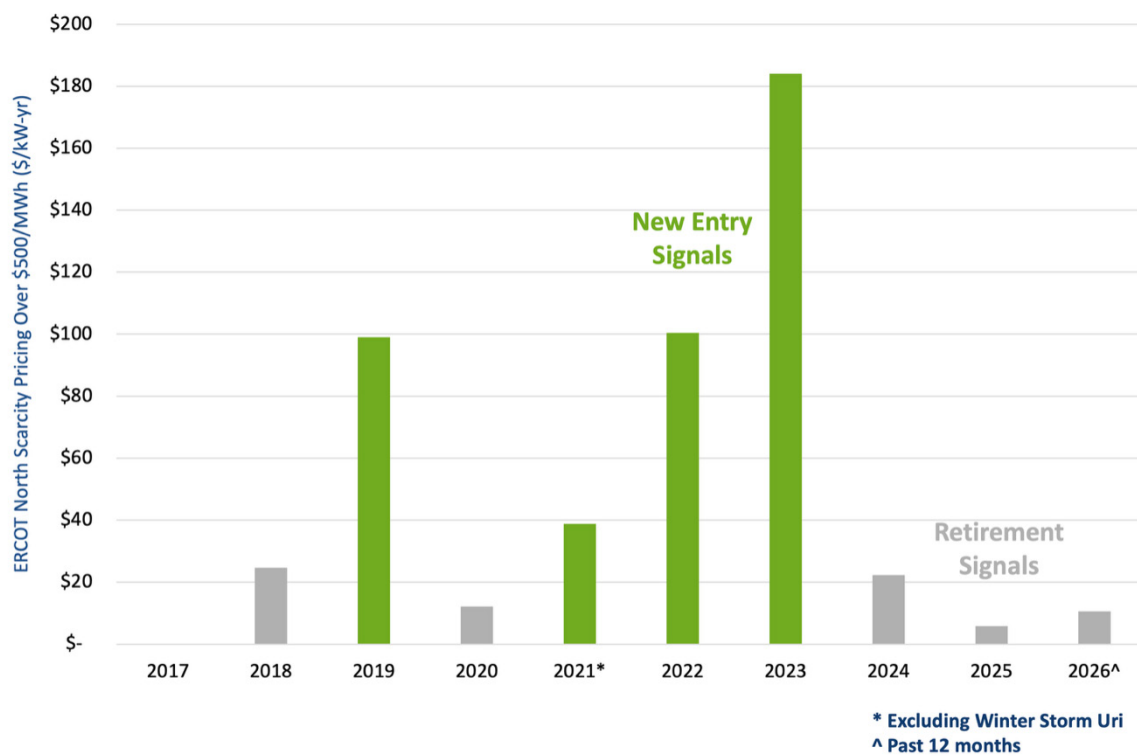
**Figure 1.** ERCOT Large Load Interconnection Queue (GW)

## Why Does ERCOT's Energy-Only Market Create Unstable Investment Signals for New Generation?

Unlike most US power markets, ERCOT does not rely on a capacity market or procurement mandates to incentivize new generation. Instead, the market depends on periods of scarcity, when tight supply-demand conditions allow energy and ancillary service prices to rise high enough to incentivize new entry. This dynamic is essential to encouraging new investment and ensuring long-term resource adequacy. However, it also depends on uncertain combinations of weather, load, generator outages, and renewable output. As a result, the revenues available to repay investment in new generation can vary dramatically from one year to the next.

That inconsistency has become increasingly problematic as ERCOT enters a period of rapid load growth. Developers must make long-term investment decisions at the very moment market revenues have become less predictable, complicating project finance and making it more difficult to underwrite the generation needed to serve future demand. At the same time, some large electricity consumers are increasingly exploring behind-the-meter generation as an alternative to relying solely on grid, adding to the uncertainty in the load growth that the system will see.

ERCOT's recent history illustrates this challenge. Scarcity pricing (defined here as prices above \$500/MWh) exceeded \$180/kW-year in 2023 before falling to single-digit levels by 2025 as mild weather and rapid additions of renewable generation and battery storage left the system comfortably supplied, as shown in **Figure 2**. These swings can simultaneously encourage new investment during one period and signal retirements shortly thereafter, despite a long-term outlook that points toward growing capacity needs.



**Figure 2.** ERCOT North Scarcity Pricing Over \$500/MWh (\$/kW-yr)

The recent decline in scarcity revenues should therefore not be interpreted as evidence that ERCOT's long-term capacity challenge has been solved. Instead, it reflects the inherent boom-and-bust dynamics of an energy-only market that must right-size, finance, and install the correct quantity while providing a sufficient mix of revenues without the guiding and stabilizing hand of a capacity market.

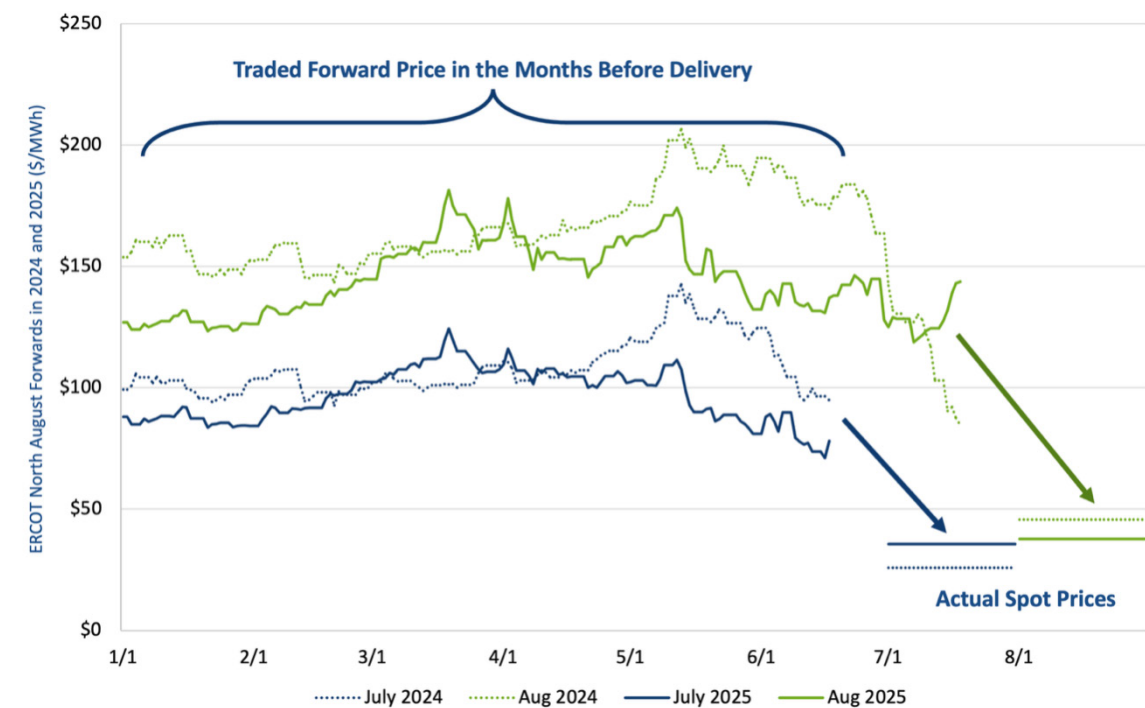
## Why Are ERCOT Forward Power Markets Pricing More Scarcity Than Market Fundamentals Suggest?

Rapid deployment of solar, wind, and battery storage has fundamentally changed the relationship between operating conditions and forward price formation. Solar generation has shifted scarcity away from only occurring during traditional summer afternoon peaks. Wind generation has reduced overnight pricing, but only during days with strong wind production. Battery storage has enough duration to meaningfully cover a portion of the remaining summer sunset peak, but struggles to respond to long-duration reliability events.

Together, these changes have reshaped where and when scarcity occurs across the system. Future scarcity revenues will be derived from being available when other resources are not, rather than generating alongside the full fleet during cross-load peaks.

As the grid becomes increasingly saturated with renewables and concentrated load growth, accurately forecasting when scarcity will occur, and which resources will be needed to meet it, requires a more granular view of the interactions between weather, renewable availability, and load. Reliability is increasingly dependent on renewable performance, making price formation more sensitive to outlier weather conditions and the availability of renewable generation. At the same time, planning around extreme conditions can materially influence pricing in more typical conditions, while responsive loads can both create and relieve volatility.

The result is a market in which neither traditional thermal generators, renewables, nor storage are able to guarantee they can physically cover a power forward during outlier weather conditions, helping explain why ERCOT forward prices have remained persistently disconnected from spot market outcomes. During both 2024 and 2025, summer forward prices traded at two to three times realized spot prices, even within weeks of delivery, as shown in **Figure 3**.



**Figure 3.** ERCOT North August Forwards in 2024 and 2025 (\$/MWh)

Although forward prices have declined significantly since the beginning of 2026, much of that movement has been driven by lower natural gas prices rather than a reassessment of scarcity risk. Implied heat rates remain elevated relative to observed operating conditions, suggesting forward markets continue to embed scarcity premiums that current reserve margins do not fully support.

## How Could ERCOT Market Reforms Change Investment Signals for New Generation?

ERCOT is increasingly focused on making its market more efficient and affordable, but many of the reforms that have been implemented (or are being discussed) risk removing the very market inefficiencies that have traditionally incentivized new investment. Historically, scarcity pricing provided the revenues needed to justify new entry, particularly during periods when supply was tight. The transition to RTC+B, however, has reduced scarcity pricing for a given set of underlying supply conditions by changing how ancillary services are procured.

Other current programs also do little to resolve ERCOT's underlying issue of how to affordably fund new entry without undermining the market signals that make it possible. The Texas Energy Fund (TEF), for instance, lends money to new gas projects at below market rates, yet does not address the

revenue instability and revenue gap those projects still face once built. Given this capacity revenue instability and insufficiency, it is unclear – unlikely, even – that the TEF fully recognizes the default risk on these loans, which was already inhibiting lending from private financial institutions.

Scarcity pricing and proposed reforms like DRRS+ function as ‘just-in-time’ capacity markets: if revenues run high enough to support new entry, they get paid across the entire existing supply stack, not just to new generation, recreating the affordability backlash already playing out in PJM.

Efforts to shield Texas ratepayers from data center infrastructure costs have put a more disruptive option on the table. ERCOT is considering a requirement that new large loads bring their own new generation (BYONG). Such an approach could ensure that new generation is paid for by new load, but doing so would eliminate the scarcity conditions that many existing generators were planning on in their revenue projections. How broadly these requirements are applied could significantly influence both future resource adequacy and market economics

## Interested in Learning More?

Access the full webinar recording in the PowerVAL™ platform, which offers additional insights related to ERCOT power prices, resource mixes, capacity revenue projections, and volatility, as well as opportunities for where and when to invest in energy projects in ERCOT.

AscendMI™ (Ascend Market Intelligence) delivers proprietary power market forecasts that have been trusted in hundreds of projects and resource planning activities, supporting over \$50 billion in project financing assessments. Contact us to learn more.

Ascend Analytics is the leading provider of market intelligence and analytics solutions for the power industry.

The company's offerings enable decision makers in power development and supply procurement to maximize the value of planning, operating, and managing risk for renewable, storage, and other assets. From real-time to 30-year horizons, their forecasts and insights are at the foundation of over \$50 billion in project financing assessments.

Ascend provides energy market stakeholders with the clarity and confidence to successfully navigate the rapidly shifting energy landscape. Visit us at [ascendanalytics.com](https://ascendanalytics.com)