

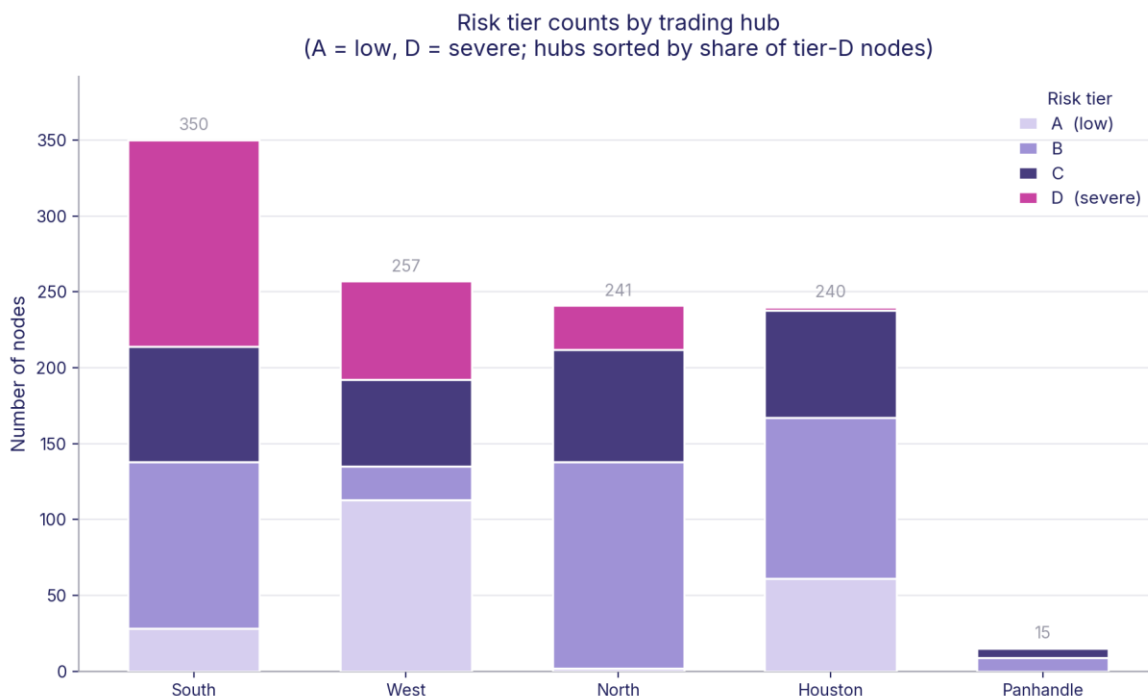
The Texas Power Boom

New forecasts for power price volatility and project financing in ERCOT

Texas just might pull off a data center boom

Key Implications

- Financing activity for ERCOT renewable energy and battery storage projects is set to accelerate further into the end of the decade, Noreva data indicates.
- The combination of changes to clean energy tax credits and shifts in Texas power market regulations are smoothing the path to growth for ERCOT markets.
- Power price volatility will persist across the South and West, but Noreva forecasts indicate this is unlikely to grow more extreme.
- Noreva examined 205 million node hours across 1,113 nodes in ERCOT to model forward basis risk for renewable energy projects, matching increased planned load to accelerated renewable energy deployment to illustrate likely points of extreme congestion and curtailment.
- Tax equity financing activity for ERCOT clean power projects may accelerate by a further \$2-4 billion per year through 2030 as developers and investors rush to complete interconnection and qualify for "legacy" credits.
- The spread between anticipated headline load growth and qualified renewable energy nameplate additions through 2030 may be about 38GW. That is still extremely significant in historical terms, but much lower than competing forecasts imply.



Frontloading clean power for AI

While load growth data center interconnection demand has been frontloaded in ERCOT, so have renewable power additions.

Matching more intermittent clean power and fast cycling battery energy storage with highly concentrated and price-insensitive demand for power to fuel AI workflows will have impacts on volatility in ERCOT power pricing.

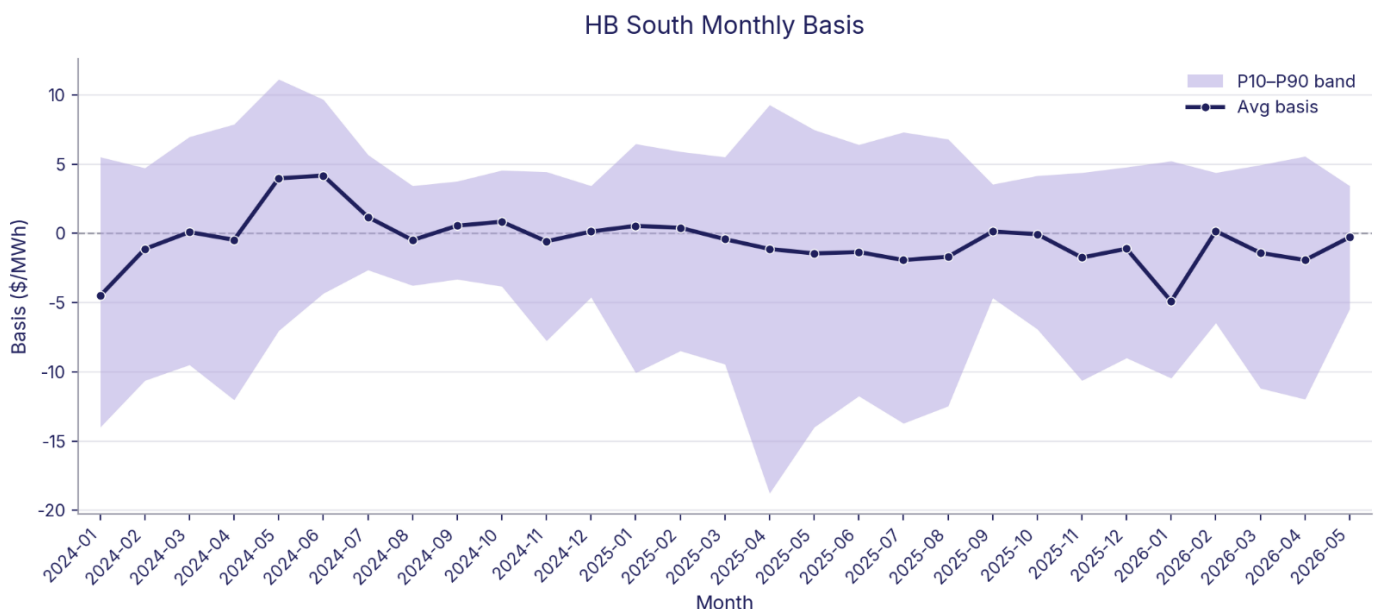
Improperly managed, a rush to build power and a rush to build data centers would likely trigger greater congestion across the already-strained ERCOT transmission grid and bring back the kind of extreme basis risk between nodes and hubs that characterized ERCOT during the initial years of its renewables buildout.

Noreva models indicate a return to the “bad old days” of extreme congestion and basis risk is unlikely. In recent years basis volatility has remained a factor in the western and southern hubs of ERCOT, even as it has fallen to de minimis levels across the rest of the state.

A review of 205 million node hours across 1,113 nodes in the state, mapped across planned and financed renewables generation and large load, suggest that ERCOT market participants have gotten smart about using trapped renewables that would otherwise be curtailed by transmission interconnection as a source of power for their large load customers.

The “Batch Zero” process being run in ERCOT by the Texas PUC to match large load to available generation and transmission interconnection is emblematic of efforts already underway by developers of data centers and power to sync across location, project timeline and even contracting cycles to improve the likelihood of power availability on accelerated timelines.

“Batch Zero,” triggered by a widely discussed but little understood Texas law called SB6, is being closely watched by the industry to see both how much of the 128 GW of proposed data center load in ERCOT by 2030 actually qualifies for matching to power and wire, but also for its locational impacts on congestion, likely curtailment, and basis risk.



Why ERCOT may not be short prompt power

An inadvertent effect of the Trump administration's changes to clean energy tax credits under the OBBBA, combined with increased foreign ownership and participation oversight for the IRA's "tech neutral" tax credits and a sudden lurch higher in realized power purchase agreement pricing have combined to "bring forward" roughly 90GW of renewable energy and battery storage projects in Texas.

That additional generation is highly motivated to interconnect by 2030 to earn out on the "legacy" tech specific tax credits developers and investors have planned on. The legacy credits are not subject to the same additional FEOC (foreign entity of concern) review that the tech neutral credits are, and a rush to initiate and then hit meaningful progress on construction to hit successive cutoffs for legacy credits has run ahead of the anticipated project completion date.

More clean electrons will come online through the end of the decade to successfully obtain legacy tax credits and comply with or strategically avoid incurring new OBBBA rules than previous models indicated.

The boost to tax equity market volume from accelerated ERCOT projects could run to as much as \$2-4 billion each year of additional credit supply through 2030. That represents 10-20% of a "normal" clean energy tax credit year nationally, though with the incentive to accelerate projects in place across the country the

While the prototypical ERCOT data center project has been most highly geared to natural gas generation, much of it behind the meter, actual projects that are energizing remain mostly exposed to front of the meter power. In ERCOT, that power is largely solar and wind, coordinated and cushioned with grid-connect BESS and gas.

While behind the meter gas enhancement or use of gas reciprocating generation as a bridge to grid interconnection will likely remain a popular strategy in a state where natural gas prices are at a sharp discount to national benchmarks, the volume of power required and the relatively low cost of grid power continue to make wires and cross-ERCOT coordination vital to the data center boom.

A quartet of 765kv transmission lines have been proposed to run across the state and address exactly the kind of congestion and curtailment problems that have dogged ERCOT price discovery in the past. The massive projects have begun to be approved by the Texas PUC but have run into political headwinds stemming from their cost and the impact on landowners, with lawsuits against the Bell County East to Big Hill line attracting amicus briefs from Texas House members just this month. The ERCOT grid's primary long-distance transmission backbone currently operates at 345 kV.

A word about wind in Texas

Not every node in Texas faces such a sanguine future.

Some of the same areas targeted by data center developers for their anticipated volumes of available wind power being built using tax credits could face not only sustained congestion in line with recent basis blowouts, but see conditions worsen significantly.

Accelerated local interconnection projects are designed to ease curtailment in some of these areas, but the problem is far from solved, even by the "Batch Zero" process.

Nodal congestion and resulting extreme basis differentials that result in volatile performance by curtailed renewable generation are linked to both solar and wind in the south and west ERCOT hubs, but wind heavy hubs show the most extreme forward basis risk.

If this apparent basis risk threatens the financial outlook of some of the projects currently qualifying for tax credits and planning to service data center load, the lack of an ERCOT capacity pricing structure may become an evident headwind for project finance in the state.

Wind projects that contend with variability and congestion in other regions can rely on capacity revenues or co-locate with highly accredited battery energy storage to minimize the impact of the basis risk that some of the outlier nodes in ERCOT face.

For now, some projects are relying on the PPA negotiation process to drive enhanced returns and implement risk sharing strategies that cover for the likelihood of sustained basis risk.

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The Noreva logo, featuring the word "noreva" in a white, lowercase, sans-serif font. A small blue square is positioned to the left of the letter "n".

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