

ERCOT MONTHLY

FEBRUARY 2025

A RECAP OF KEY INFORMATION FROM THE PREVIOUS MONTH, A LOOK AT THE UPCOMING MONTH, AND A SNAPSHOT OF ADDITIONAL KEY ITEMS

Contents

January Look Back.....	2
Winter Storm Kingston Recap.....	3
March Outlook.....	5
Additional Items of Note	5
Capacity, Demand and Reserves Report.....	5
Load Forecasting	6
Large Load Scenarios	6
Reliability Standard Update	7
Board of Directors Meetings Recap.....	7
Legislative Update.....	8

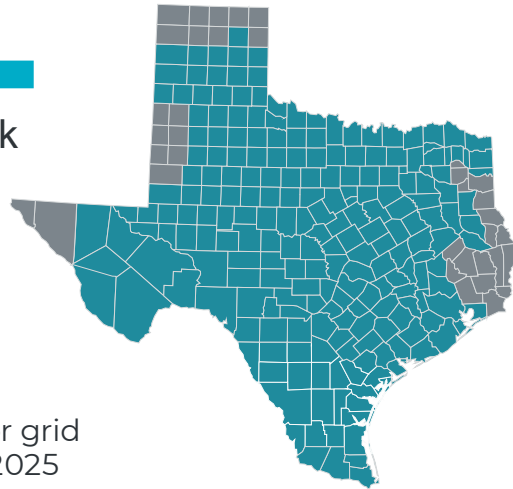


January 2025 Look Back

77,478* MW

January 2025 peak demand

ERCOT procured **\$9.65** million in **Ancillary Services** for grid reliability in January 2025



78,349 MW

January 2024 for comparison: Winter & January record during Winter Storm Heather

Wholesale pricing was slightly **lower** than this time last year

*unofficial until final settlements



22,092 MW

max January solar generation
January 24



28,373 MW

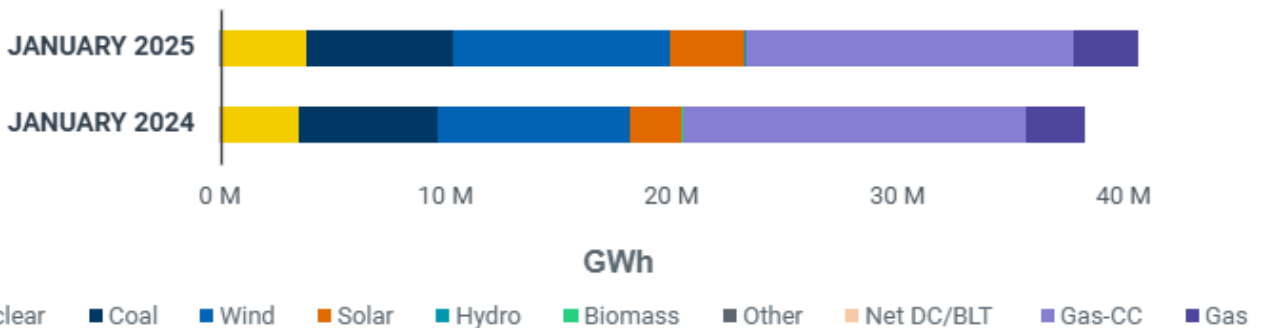
Wind generation record
January 4 at 7:35 p.m.



4,288 MW

max January battery generation
January 1

January Energy Generation Comparison 2024 vs. 2025



February Winter Storm Kingston Recap

The ERCOT grid operated reliably during Winter Storm (W.S.) Kingston with adequate supply to meet demand. ERCOT issued a TXANS Weather Watch but did not call for conservation and did not enter emergency operations. **ERCOT set a new all-time winter and two new February peak demand records.**

- On February 19, ERCOT set a new unofficial February peak demand of 76,725* MW, surpassing the previous February record of 69,812 MW set on February 14, 2021, in the 7-8 p.m. hour, during W.S. Uri. On February 20, ERCOT set a new unofficial all-time winter and February peak demand of 80,1545* MW. The previous all-time winter record was 78,349 MW set January 16, 2024, in the 7-8 a.m. hour, during W.S. Heather. *A record is unofficial until final settlements occur, which can take several months.

Leading up to this storm, ERCOT took steps to coordinate with Market Participants and other state agencies in preparation for the coming weather. Some of those actions included:

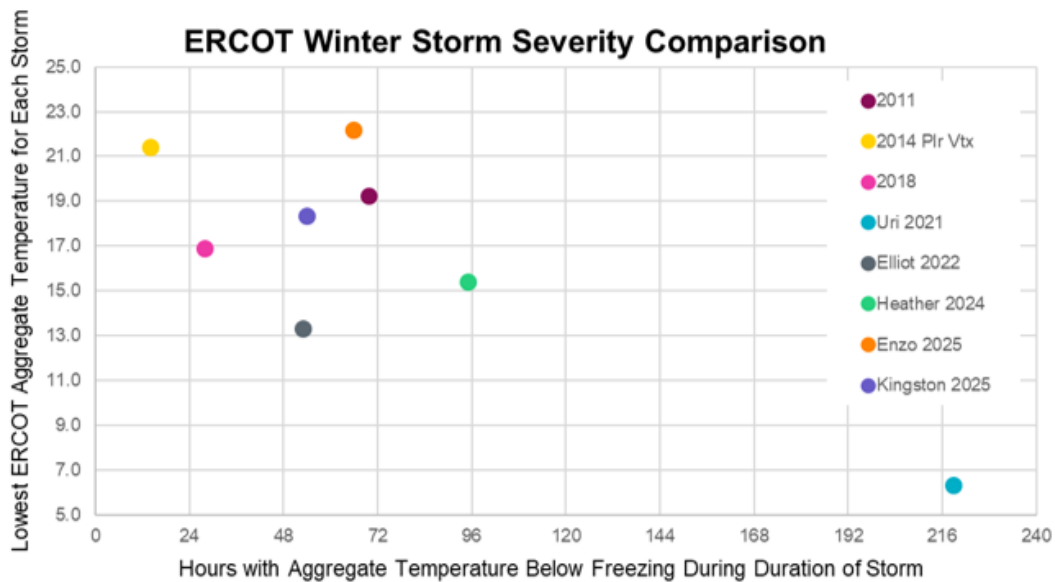
- **Operations Notices.** ERCOT issued several notices to the market due to conditions meeting Protocol levels for issuing notices.
- **Texas Commission on Environmental Quality (TCEQ) Enforcement Discretion.** ERCOT obtained TCEQ enforcement discretion, which allows a generator to exceed its emission limits to help meet demand and maintain grid reliability.
- **Texas Division of Emergency Management (TDEM) State Operations Center (SOC).** ERCOT was active at the TDEM SOC, and ERCOT President and CEO Pablo Vegas joined Governor Abbott, TDEM Chief Nim Kidd, and Public Utility Commission of Texas (PUCT) Chairman Thomas Gleeson for a news conference. ERCOT also engaged with other agencies and stakeholder groups through the Texas Energy Reliability Council (TERC).
- **Weatherization.** This program has had significant impact for generating resources to have availability to perform during significant weather events.
 - Since inception of the Weatherization Inspection Program in December 2021, ERCOT has completed 3,222 weatherization inspections of generation and transmission facilities:
 - The ERCOT Weatherization Inspection Program wrapped up the Winter 2024-25 inspection season.
 - Through the end of inspection season, 460 inspections of generation and transmission facilities were conducted.
 - ERCOT completed 142 inspections in February.

During the storm, ERCOT took many actions to operate the grid reliably, including use of the following tools:

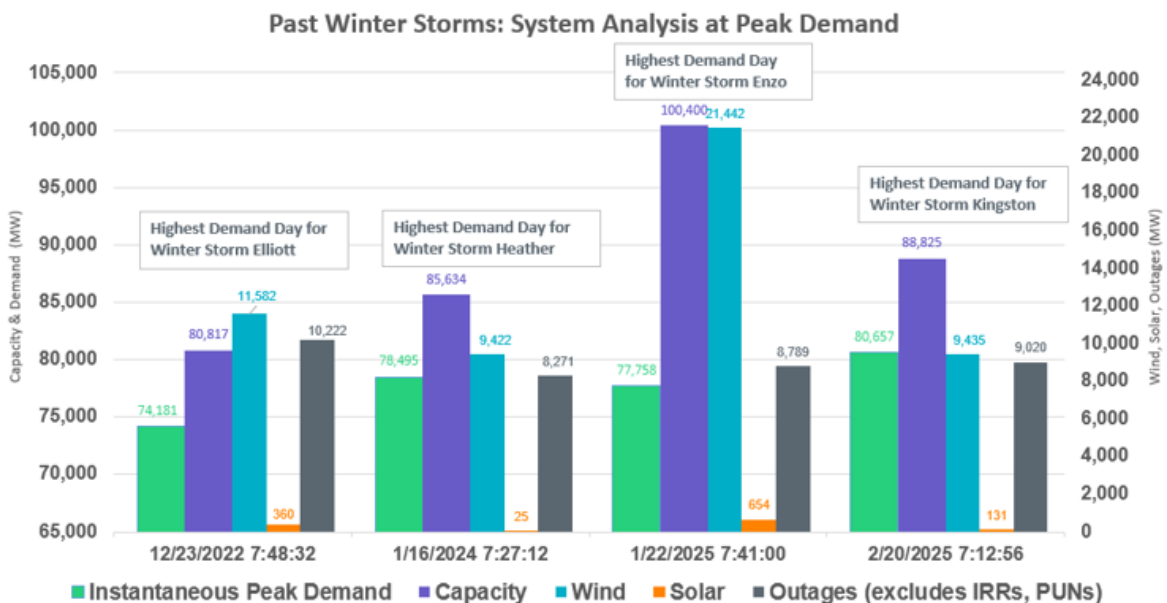
- **Firm Fuel Supply Service (FFSS).** Approximately 600 MW of FFSS was deployed. FFSS is an additional source of onsite fuel for some generators should there be natural gas limitations. FFSS has been utilized three times since its implementation in 2022.

- Switchable Generation.** ERCOT also has over 4,000 MW of generation that can switch between ERCOT and the Eastern Interconnection and effectively transfer that much capacity between ERCOT and SPP/MISO. ERCOT coordinated with SPP and MISO to allow these units to be switched between regions, as needed, to support reliability.

W.S. Kingston was less severe than several historical storms that have impacted the ERCOT region; however, it was the most severe storm this winter. The following graph shows where it falls in comparison to previous winter storms.



The graph below shows analysis at peak demand during some of the recent winter storms.



March Outlook

March Monthly Outlook for Resource Adequacy (MORA)

For the [March](#) MORA report, probabilistic modeling results indicate a low risk of having to declare an Energy Emergency Alert (EEA). Hourly probabilities peak at 6.31% for the 6-7 p.m. CST hour. There is some EEA risk throughout the nighttime and early morning hours, influenced by recent and forecasted additions of large loads, such as data centers, expected to operate on a continuous 24/7 basis and, thereby, flatten the hourly load pattern from what is seen historically for the spring months.

During the first half of March, the risk of experiencing very low temperatures means that reserve shortage risks can be the highest during the morning hours, particularly during the expected 8 a.m. peak load hour, under such weather conditions. For the second half of the month, with temperatures transitioning to spring-like levels, the reserve shortage risks are the highest during the early evening hours when daily loads are typically at or near their highest and solar production begins to ramp down. The full report can be found on the [Resource Adequacy](#) page.

Hour Ending (CST)	Chance of Normal System Conditions Probability of CAFOR being above 3,000 MW	EMERGENCY LEVEL	
		Chance of an Energy Emergency Alert Probability of CAFOR being less than 2,500 MW	Chance of Ordering Controlled Outages Probability of CAFOR being less than 1,500 MW
1 a.m.	99.33%	0.26%	0.19%
2 a.m.	99.16%	0.31%	0.15%
3 a.m.	99.18%	0.31%	0.19%
4 a.m.	99.38%	0.21%	0.13%
5 a.m.	98.79%	0.54%	0.40%
6 a.m.	98.23%	0.73%	0.57%
7 a.m.	95.97%	2.25%	1.75%
8 a.m.	95.56%	2.61%	1.97%
9 a.m.	98.49%	0.83%	0.57%
10 a.m.	99.57%	0.19%	0.15%
11 a.m.	99.95%	0.03%	0.00%
12 p.m.	99.92%	0.03%	0.02%
1 p.m.	99.89%	0.04%	0.03%
2 p.m.	99.88%	0.04%	0.04%
3 p.m.	99.77%	0.11%	0.07%
4 p.m.	99.47%	0.27%	0.23%
5 p.m.	99.35%	0.30%	0.20%
6 p.m.	98.31%	0.82%	0.59%
7 p.m.	90.18%	6.31%	5.42%
8 p.m.	90.73%	6.21%	5.30%
9 p.m.	94.62%	3.34%	2.73%
10 p.m.	97.47%	1.44%	1.12%
11 p.m.	99.59%	0.11%	0.08%
12 a.m.	99.75%	0.04%	0.00%

Note: Probabilities are not additive.

Additional Items of Note

Capacity, Demand and Reserves (CDR) Report

ERCOT released the [CDR report](#) February 13. The [CDR](#) is a snapshot view of ERCOT’s planning reserve margins over the next five years (2025 – 2029). This CDR report differs from previous CDR reporting years due to a variety of report parameter changes, including:

- Using the new load forecast noted previously,
- Using Effective Load Carrying Capabilities (ELCCs) to measure the reliability contributions of wind, solar, and battery energy storage, and
- Illustrating both peak and peak net reserve margins, including demand-side resources such as demand response programs.

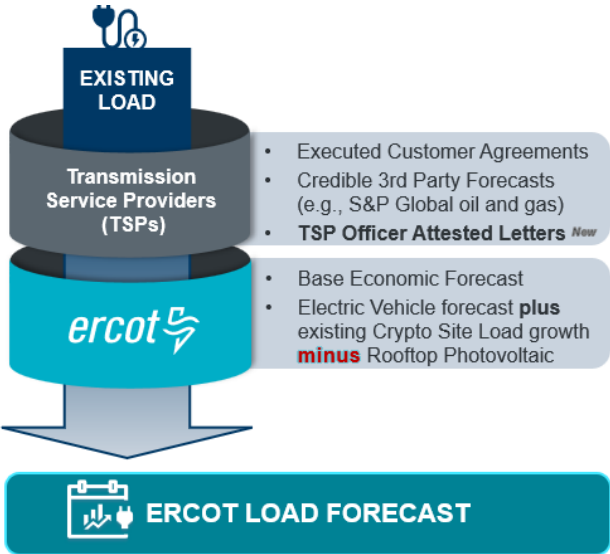
More explanation of each of these changes is included in the full report. Additionally, the majority of Texas Energy Fund (TEF) generation did not meet the rules for inclusion in the base CDR scenario; however, additional scenarios did include the full TEF generation portfolio to show their potential impact on planning reserve margins.

Potential short-term solutions include expanding demand response capabilities with a focus on residential customers, broadening the scope of the FFSS program, and continuing to support the TEF generation projects in the interconnection process. Additionally, there are opportunities to further enhance battery optimization and to work with large loads, like data centers, on flexibility capabilities.

Load Forecasting

After the passage of House Bill (HB) 5066, there have been changes to the way ERCOT produces its load forecast and how it is used for system planning purposes. Under HB 5066, Transmission Service Providers (TSPs) have increased the amount of load that they deem reasonable to study. The key change due to HB 5066 is that ERCOT must now accept *TSP Officer Attested Letters* in the load forecast.

The forecasting process begins with the amount of existing load seen on the system and then incorporates information from the TSPs, such as executed customer agreements, credible third-party studies, and the newly required officer attested letters.



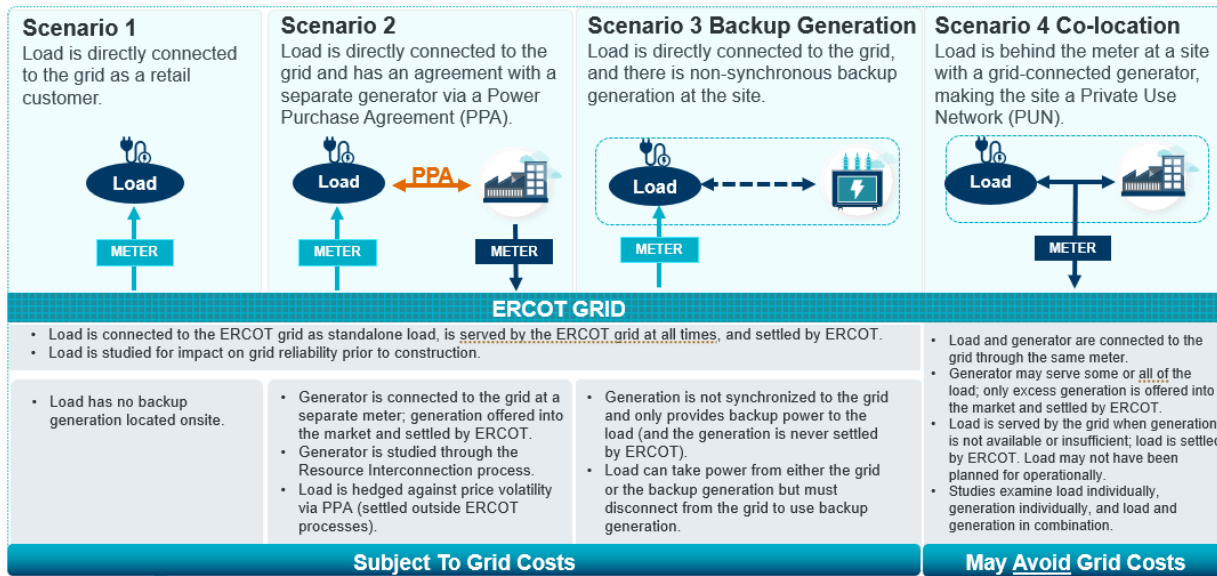
ERCOT then incorporates economic growth trends, electric vehicle adoption, and crypto site forecasts, while factoring in rooftop solar generation. These changes impact how future electricity demand is assessed and incorporated into ERCOT’s load forecast, influencing grid planning and infrastructure investment.

Large Load Scenarios at Transmission Level

Large electricity consumers typically connect to the ERCOT grid in different ways, each with varying operational and potential market impacts. The diagram below provides a visual explanation to assist with understanding the most common scenarios for interacting with the ERCOT grid.

Some large loads connect directly as retail customers, paying standard grid costs (Scenario 1); while others purchase power through contracts with separate generators with load and the generator both remaining fully grid-connected (Scenario 2).

Some grid-connected loads install onsite backup generation that operates only during outages but does not interact with the ERCOT grid (Scenario 3). In contrast, co-location arrangements, sometimes referred to as being “behind the meter” (Scenario 4), are arrangements where a load directly utilizes power from a grid connected generator, with any excess power from the generator used to serve the ERCOT grid.



Grid costs include system admin fee, transmission, and Ancillary Service costs and are typically based on net consumption. Large Loads include crypto mining, hydrogen and hydrogen-related manufacturing, data centers, and electrification.

Reliability Standard

On February 6, 2025, ERCOT filed with the PUCT its *Report on Reliability Standard Magnitude Methodology* recommending that the magnitude criterion of the reliability standard for the ERCOT Region be 20% of the forecasted winter base load using the 75th percentile forecast. This would result in a magnitude of 16,000 MW for 2024-2025. ERCOT made this recommendation following extensive consultation with PUCT Staff and Transmission Operators (TOs) and after reviewing TOs' responses to two Requests for Information (RFI) that helped to determine load shed rotation capability across the ERCOT System. Note that the magnitude is the one criterion from the reliability standard that varies annually, which the PUCT decided was appropriate to account for changes in system load and the potential for technology or system changes that facilitate different levels of load shed rotation.

On February 7, PUCT Staff filed a memorandum agreeing with ERCOT's recommended magnitude methodology. At the February 13 Open Meeting, the PUCT agreed with ERCOT's recommendation and confirmed that ERCOT should apply this magnitude methodology going forward.

The PUCT's reliability standard rule, 16 Texas Administrative Code § 25.508(b)(3), requires ERCOT to file the updated magnitude value each year by December 1. ERCOT will consult with PUCT Staff and TOs in advance of this filing deadline to determine whether any changes to the magnitude methodology are necessary or appropriate. Following such consultation, ERCOT will apply the methodology to the load forecast for winter 2025-2026 to determine the next magnitude value. It is anticipated that the applicable winter load forecast will be included in the CDR Report that ERCOT will post in May. The next magnitude value determined by December 1, 2025, will be used in ERCOT's performance of the first triennial reliability assessment in 2026 to evaluate whether the reliability standard is being met in the ERCOT Region.

Board of Directors Meetings Highlights

February 4 Board of Directors Meeting

- The Board of Directors approved 11 revisions to the ERCOT Nodal Protocols along with two revisions to the Nodal Operating Guide, two revisions to the Planning Guide, a System Change Request, and a revision to the Other Binding Documents. These revision requests were all unopposed and recommended for approval by the Technical Advisory Committee (TAC).

The revisions are now pending final approval at the PUCT for consideration at the March 13, 2025, Open Meeting. Information regarding recently approved rules and the revision request process is available on the Market Rules section of the ERCOT [website](#).

- The ERCOT Board voted to approve three Tier 1 transmission projects.

The Oncor Electric Delivery Company LLC (Oncor) Forney 345/138-kV Switch Regional Planning Group (RPG) Project is a \$100.4 million project with an expected December 2025 in-service date. The project will support reliability requirements for the ERCOT System and address a thermal overload in Kaufman County in the North Central Weather Zone through the installation of new breakers and autotransformers along with improvements to existing facilities.

The Oncor Venus Switch to Sam Switch 345-kV Line RPG Project is a \$118.9 million project with an expected May 2026 in-service date. The project will support reliability requirements for the ERCOT System and address thermal overloads on 345-kV transmission lines in Ellis and Hill Counties in the North Central Weather Zone. Over 76 miles of 345-kV transmission lines will be rebuilt with normal and emergency ratings.

The Oncor Wilmer 345/138-kV Switch Regional Planning Group (RPG) Project is a \$158.2 million project with an expected May 2026 in-service date. The project will support reliability requirements for the ERCOT System and address thermal overloads on 345/138-kV transformers, 138-kV and 69-kV transmission lines, as well as voltage violations and unsolved power flows in Dallas, Kaufman, and Ellis Counties in the North Central Weather Zone. Over 14 miles of transmission lines will be constructed or rebuilt along with the establishment of a new 345/138-kV switchyard. This project will require PUCT approval of a Certificate of Convenience and Necessity (CCN).

- Keith Collins, ERCOT Vice President of Commercial Operations, presented a “2024 Market Year-in-Review” at the Reliability and Markets Committee. The [presentation](#) highlighted key market observations, including:
 - 2024 Real-Time Hub Average Price (\$28.84/MWh) was 54% lower than the 2023 Real-Time Hub Average Price (\$62.79/MWh), mainly due to higher supply and lower temperatures during the summer months.
 - In line with trends in energy prices, generally higher available capacity and increased Energy Storage Resource (ESR) participation meant that prices for all Ancillary Services were lower in 2024 than in the previous two years.

- ◆ Reliability Unit Commitment (RUC) levels were lower in 2024 than the previous two years. However, we saw an increase in RUC to manage congestion in 2024 when compared to 2023.
 - ◆ Total generation installation capacity increased by over 13 GW in 2024. Most of the new capacity additions are from solar and ESRs.
 - ◆ Peak load and peak net load in 2024 are generally close to or lower than 2023 during summer months, and higher during other months.
- Dan Woodfin, ERCOT Vice President of System Operations, presented a “January 2025 Winter Storms Review” at the Reliability and Markets Committee. The [presentation](#) provided an overview of the impacts of W.S. Cora and W.S. Enzo to the ERCOT Region in comparison to recent historical winter storms. During the two weather events in January 2025, online reserves remained high; and while Enzo resulted in transmission outages in Southeast Texas, there were no impacts to ERCOT System reliability.
 - The Board’s Technology and Security Committee received an overview on “AI for Power Systems: Concepts and Transformative Applications” from Pascal Van Hentenryck. The [presentation](#) continued a series of emerging technology speakers at the committee that launched last year.

Mr. Van Hentenryck is the Director of NSF AI Institute for Advances in Optimization as well as the Director of Tech AI at the AI Hub of Georgia Tech, where his research focuses on AI for engineering with applications, including energy systems, supply chains, and manufacturing. Mr. Van Hentenryck highlighted the challenges for AI in engineering, including the complex infrastructure and the benefits of AI optimization. While academic work and research continues, industrial operations partners, such as Southern Company and MISO, are helping move AI for critical power system applications forward through parallel deployment with existing systems to help validate the technology.

Special Board of Directors Meeting

On February 25, ERCOT held a special meeting of the Board of Directors to discuss ERCOT staff [recommendations](#) regarding Reliability Must-Run (RMR) Agreements for CPS Braunig Units 1 and 2 or an Alternative Solution of Life Cycle Power (LCP) Mobile Generation. Under the LCP solution, CenterPoint would voluntarily release its right to use the 15 ~30-MW LCP mobile generators currently under lease for a term of up to two years in the Houston area. Once relocated to the San Antonio area, ERCOT would deploy the units during actual or anticipated emergency conditions.

The ERCOT Board ultimately agreed with the recommendation to move forward with the LCP solution after hearing analysis showing that the operation of the LCP mobile generators to mitigate the relevant reliability risks will be more cost effective than committing Braunig Units 1 and 2 through RMR Agreements. The total cost of the LCP solution is projected to be ~\$54 million. ERCOT will work with LCP and the TCEQ to identify a suitable approach to air emissions permitting issues and request good-cause exceptions to various PUCT rules to allow timely implementation. The Board authorized ERCOT to enter RMR Agreements for Braunig Units 1 and 2 in the event ERCOT is unable to contract with LCP for any reason, including material changes in cost-effectiveness. ERCOT will issue a Market Notice informing stakeholders of the final solution.

The Board also heard [preliminary strategies](#) for exiting the RMR Agreements or alternative agreements, including the potential acceleration of the San Antonio South Reliability II Transmission Project. The approximate \$435 million project was endorsed by the Board in April 2024 with a projected completion date in 2029. Preliminary analysis shows that accelerating the project by about two years may allow for ERCOT to exit the agreements as well as reduce the impact of the South Texas Generic Transmission Constraint (GTC). ERCOT will finalize its RMR exit strategy analysis and provide a final report to the Board with a list of feasible alternatives to continued renewal of an RMR or alternative solution at its April meeting.

Legislative Update

On February 4, ERCOT Sr. Vice President and Chief Operating Officer Woody Rickerson testified before the Senate Business and Commerce Committee, discussing topics including load growth, data centers, the potential utilization of backup generation for large loads during scarce grid conditions, and transmission system planning.

As the 89th Legislative Session progresses, ERCOT will continue to serve as a resource to the legislature to provide insight and testimony for House and Senate Committees.

Additionally, ERCOT continues to implement the various legislative provisions from previous legislative sessions. A full listing of the of legislative provisions currently undergoing the implementation process can be found in the most recent edition of the [ERCOT Legislative Status Report](#).

For any questions you may have, the ERCOT Governmental Relations team can be reached at GovernmentRelations@ercot.com.