ERCOT MONTHLY

November 2025

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

Contents

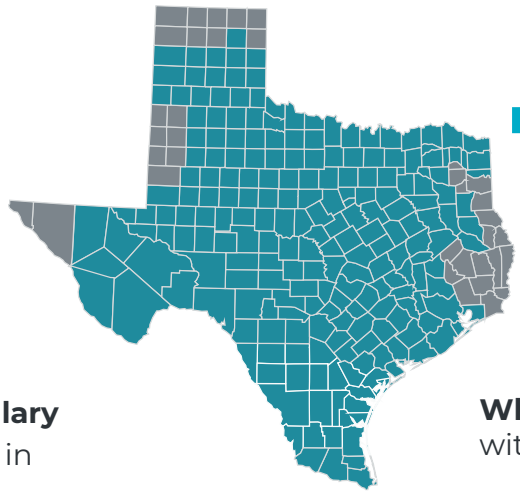
October 2025

Look Back

75,889* MW

new October peak demand record

(October 2, 2025)



72,550 MW

October 2024 peak for comparison

ERCOT procured **$10.91** million in **Ancillary Services** for grid reliability in October 2025

Wholesale pricing was in line with this time last year

*unofficial until final settlements

28,496 MW

October solar generation peak

25,431 MW

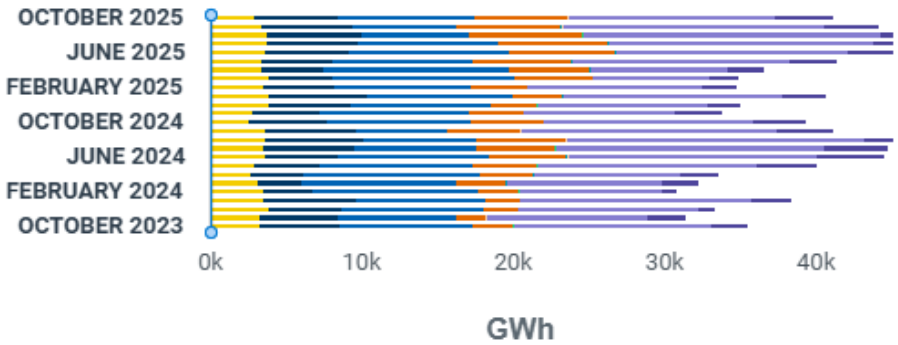
October wind generation peak

8,714 MW

October discharge record

(1st time over 8,000)

October 2025 vs. 2024 Energy Generation Comparison



	October 2024	October 2025
Nuclear	2,521	2,838
Coal	5,105	5,558
Wind	9,479	8,968
Solar	4,874	6,172
Hydro	17	12
Biomass	19	35
Other	-60	-117
Net DC/BLT	-41	36
Gas-CC	13,781	13,670
Gas	3,533	3,777

Winter Outlook

Key Winter Takeaways

- Generation capacity in ERCOT has grown by more than 11,000 MW since last winter.
- ERCOT's Weatherization and Inspection team enters its fifth season of winter weatherization.
- For the majority of the day, ERCOT has little to no risk of declaring an EEA.

December & January Monthly Outlook for Resource Adequacy

For our Winter preview, we look at both the December and January Monthly Outlook for Resource Adequacy (MORA) reports. Probabilistic modeling results indicate a low risk of having to declare an Energy Emergency Alert (EEA).

- In December 2025, the probabilistic modeling supporting the December MORA report shows a less than 1% chance of having to declare an EEA. (Last winter, December EEA probabilities peaked at 4.9% for the 7-8 a.m. hour.)
- Shown at right, in January 2026, the probabilistic modeling supporting the January MORA report shows a 1.4% chance of having to declare an EEA. (Last year, January EEA probabilities peaked at 8.51% for the 7-8 a.m. hour.)

In the winter months, reserve shortage risks shift to include the morning hours and are highest from 6 a.m. through 9 a.m. Central Standard Time (CST) and evening hours from 6 p.m. through 9 p.m. CST. These morning and evening risk periods correspond to hours with the highest loads and low or no solar production. Under typical grid conditions, the deterministic scenario indicates that there should be sufficient generating capacity available. The full reports can be found on the Resource Adequacy page of ERCOT's website.

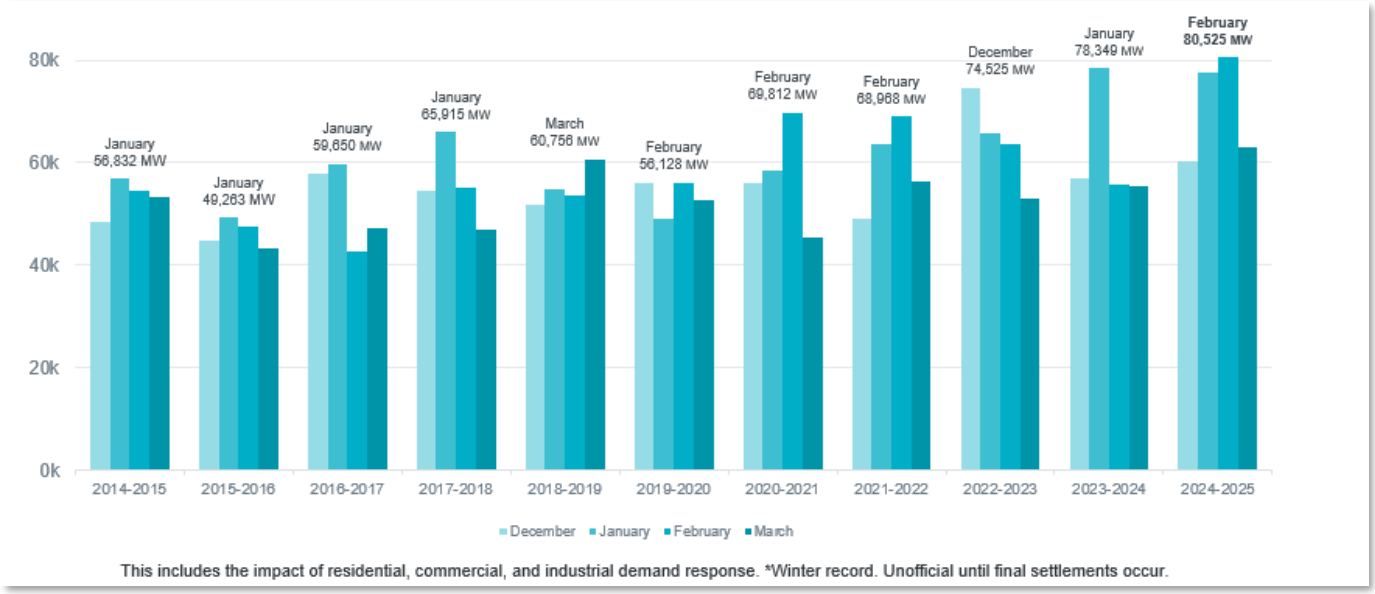
January 2026 MORA

Hour Ending (CST)	Chance of Normal System Conditions	EMERGENCY LEVEL	
		Chance of an Energy Emergency Alert	Chance of Ordering Controlled Outages
	Probability of CAFOR being above 3,000 MW	Probability of CAFOR being less than 2,500 MW	Probability of CAFOR being less than 1,500 MW
1 a.m.	99.66%	0.15%	0.12%
2 a.m.	99.58%	0.25%	0.18%
3 a.m.	99.65%	0.19%	0.14%
4 a.m.	99.68%	0.16%	0.08%
5 a.m.	99.69%	0.14%	0.10%
6 a.m.	99.50%	0.31%	0.27%
7 a.m.	99.19%	[illegible]	0.41%
8 a.m.	97.79%	1.40%	1.18%
9 a.m.	98.80%	[illegible]	0.60%
10 a.m.	99.71%	0.16%	0.11%
11 a.m.	99.94%	0.04%	0.04%
12 p.m.	99.95%	0.03%	0.03%
1 p.m.	100.00%	0.00%	0.00%
2 p.m.	100.00%	0.00%	0.00%
3 p.m.	100.00%	0.00%	0.00%
4 p.m.	100.00%	0.00%	0.00%
5 p.m.	99.99%	0.00%	0.00%
6 p.m.	99.98%	0.00%	0.00%
7 p.m.	99.59%	0.27%	0.20%
8 p.m.	99.62%	0.28%	0.23%
9 p.m.	99.44%	0.34%	0.30%
10 p.m.	99.60%	0.22%	0.18%
11 p.m.	99.68%	0.20%	0.14%
12 a.m.	99.75%	0.13%	0.06%

Note: Probabilities are not additive.

Winter Demand Growth Over Last 10 Years

- In the last 10 years, winter peak demand has grown approximately 30,000 MW.
- ERCOT has set winter peak demand records the last three winters.
  - 80,525 MW set February 20, 2025, during Winter Storm (W.S.) Kingston.
  - 78,349 MW set January 16, 2024, during W.S. Heather.
  - 74,525 MW set December 23, 2022, during W.S. Elliott.



New Capacity Added Since Last Winter (March 1 – November 1)

The ERCOT grid has seen the addition of more than 11,000 MW of new generation resources since last winter. Note that energy storage (batteries) has limited-duration run time, so the available energy during periods when they are most needed—the highest demand hours, which typically occur early morning pre-sunrise, and evening during and immediately after sunset—depends on the extent that they can be recharged prior to those periods.

Generation Type Comparison Using 100 MW Example

As shown below, there are significant differences in the load carrying capabilities of differing resources at peaks in the winter and summer based on their variability. The various generation types that make up the ERCOT grid have many different characteristics.

To show their range of impact, the graphic below demonstrates what 100 MW can power in terms of customers in the winter versus summer. It is important to note that the variability of both generation and load in winter is much greater than in summer. Some of the drivers of that variability include:

- The timing of winter storm fronts moving across the system creates large changes in load patterns.
- Wind chill during winter storms affects both load and generation.
- The wind speed on the forward and back sides of a moving winter storm creates rapid changes in wind generation output.
- Solar is not available during the early morning and evening hours, creating large and rapid changes in net load.
- Batteries will help the grid; however, their limited duration will limit their usefulness if there are extended periods of scarcity conditions.

	Summer Peak Capacity Availability	Summer Homes Powered	Winter Homes Powered	Winter Peak Capacity Availability
Modular Nuclear Plant	94%	23,601	24,455	98%
Gas Turbine (Peaking)	83%	20,750	22,000	88%
Wind Turbine (West Texas)	22%	5,500	7,000	28%
Solar Plant (West Texas)	76%	19,000	7,000	17%
Energy Storage (one hour)	37%	9,188	7,000	30%

It is important to note that winter has greater variability.

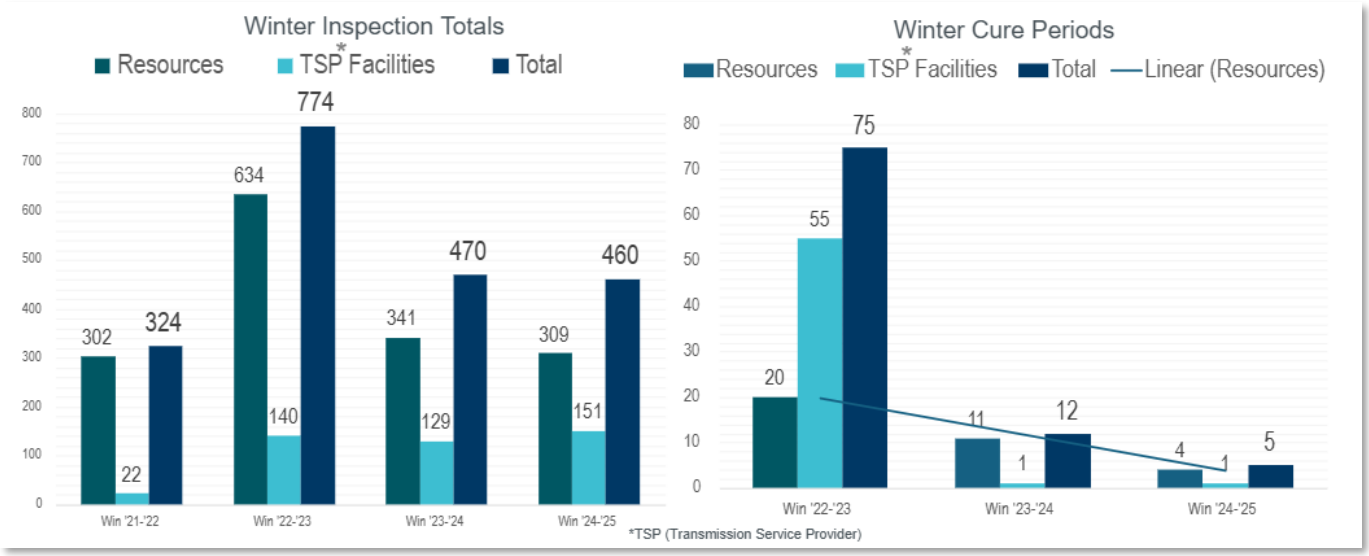
1 MW serves about 250 homes during peak demand.

Weatherization Program

- Since the inception of the Weatherization Inspection Program in December 2021, ERCOT has completed 4,079 weatherization inspections of generation and transmission facilities.
- The program inspects facilities for various preparation measures intended to reasonably ensure sustained operation at weather zone-specific cold and hot conditions.
- The ERCOT winter weatherization workshop was held in late October and attended by more than 200 people in person or virtually. The workshop highlighted best practices presentations from three Market Participants.
- Other Market Participant Outreach by the Weatherization and Inspection Team:
  - Winter 2025-2026 inspections started December 2. During the first week of December, 13 TSP facility and 21 Generation Resource weatherization inspections were scheduled. We plan for a minimum of 450 inspections this winter.
- Other Related Reliability Services:
  - The Weatherization and Inspection team provided onsite witnessing of Black Start testing for 25 generation units at 13 sites in 2025.
  - The Weatherization and Inspection team provided onsite reviews of Firm Fuel Supply Service (FFSS) levels and equipment operability checks at 11 sites covering 32 FFSS contracted generation units.

Increasing Compliance Levels Evidenced in a Reduction in Cure Periods

The number of these "cure periods" is a measure of found instances of significant non-compliance with the rule, and it has dropped dramatically over time. Levels dropped from 75 cure periods in the Winter of 2022-2023, to five in the most recent Winter of 2024-2025. Summer cure periods, not shown below, have dropped from 15 in 2023 to three in 2025.



NERC Winter Reliability Assessment

North American Electric Reliability Corporation's (NERC's) 2025-2026 Winter Reliability Assessment report, published mid-November, highlights many of the same items that ERCOT has been addressing:

- Peaks are before sunrise and after sunset "with the unavailability of solar generation making the system dependent on wind generation and dispatchable resources."
- Large Load growth adds high demand to the grid – "Data centers are altering the daily load shape due to their round-the-clock operating pattern, lengthening peak demand periods."
- Increases in thermal outages and low renewable generation create risk.
- Batteries maintaining State of Charge will be very important, especially for multi-day winter storms.

> For the ERCOT System, "additional battery storage and demand-response resources since last winter help mitigate shortfall risks."
>
> — 2025-2026 NERC Winter Reliability Assessment

Additional Items of Note

ERCOT Partners with Texas A&M to Research Big Energy Users

As part of ERCOT's Grid Research, Innovation, and Transformation (GRIT) program, ERCOT is partnering with the Texas A&M Engineering Experiment Station (TEES) to study large energy users, such as data centers and cryptocurrency operations. These large users significantly impact the stability of the power grid, particularly during times of stress, like power outages.

Large energy users rely on advanced technology, which represents a shift similar to the transition from conventional generation to inverter-based generation, but on a much larger scale. This introduces new challenges and opportunities for the grid. As the number of these large energy users increases, ERCOT and TEES are developing detailed models to better understand how these users behave during power disturbances. These models will help improve grid planning and operations.

Accurately predicting the behavior of large energy users during grid disruptions is crucial. The new models developed in this partnership are among the first open-source tools available and are vital for enhancing the understanding of data center impacts.

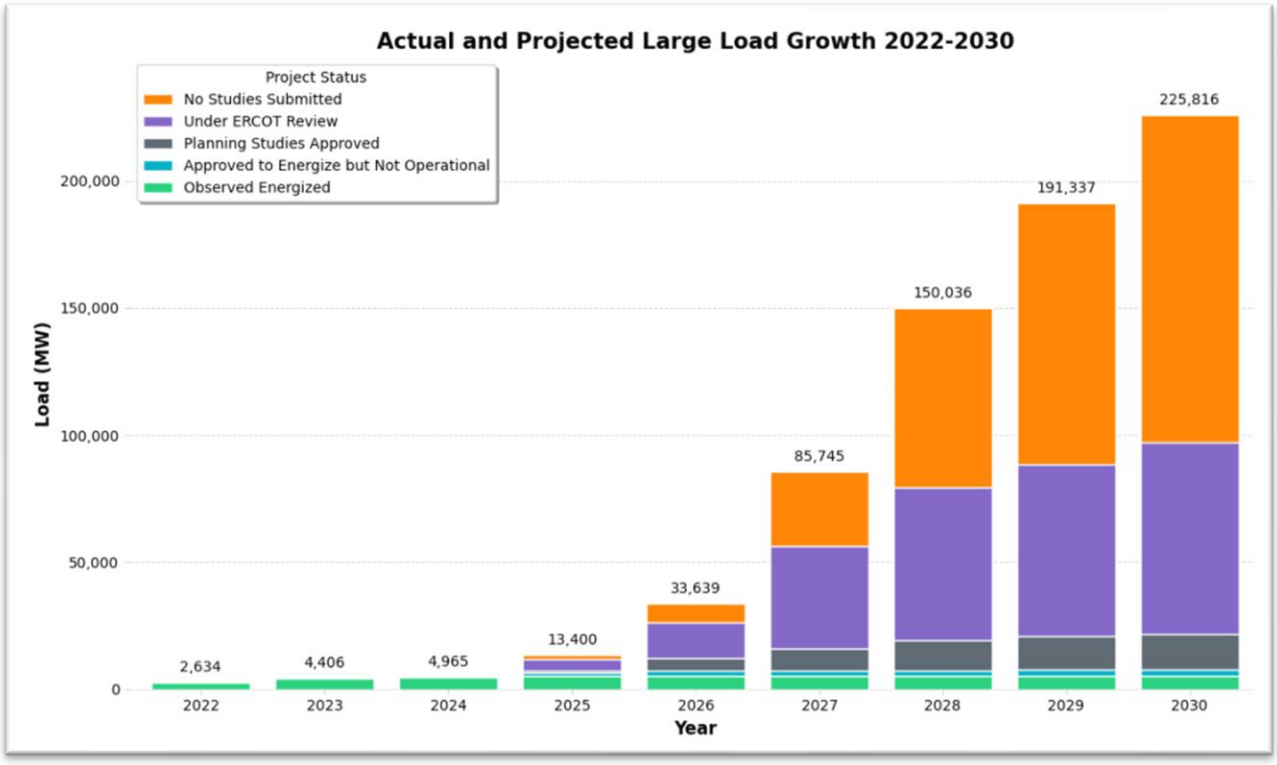
Texas A&M University electrical and computer engineering faculty members Dr. Prasad Enjeti and Dr. Xin Chen are co-leading this research initiative, bringing power electronics hardware and power systems modeling expertise together to help develop these dynamic models.

The successful completion of this work will enable more accurate grid study assumptions and recommendations for desirable large load characteristics, which will help solve growing concern about grid stability. Fundamentally, this work will support ongoing conversation about industry needs.

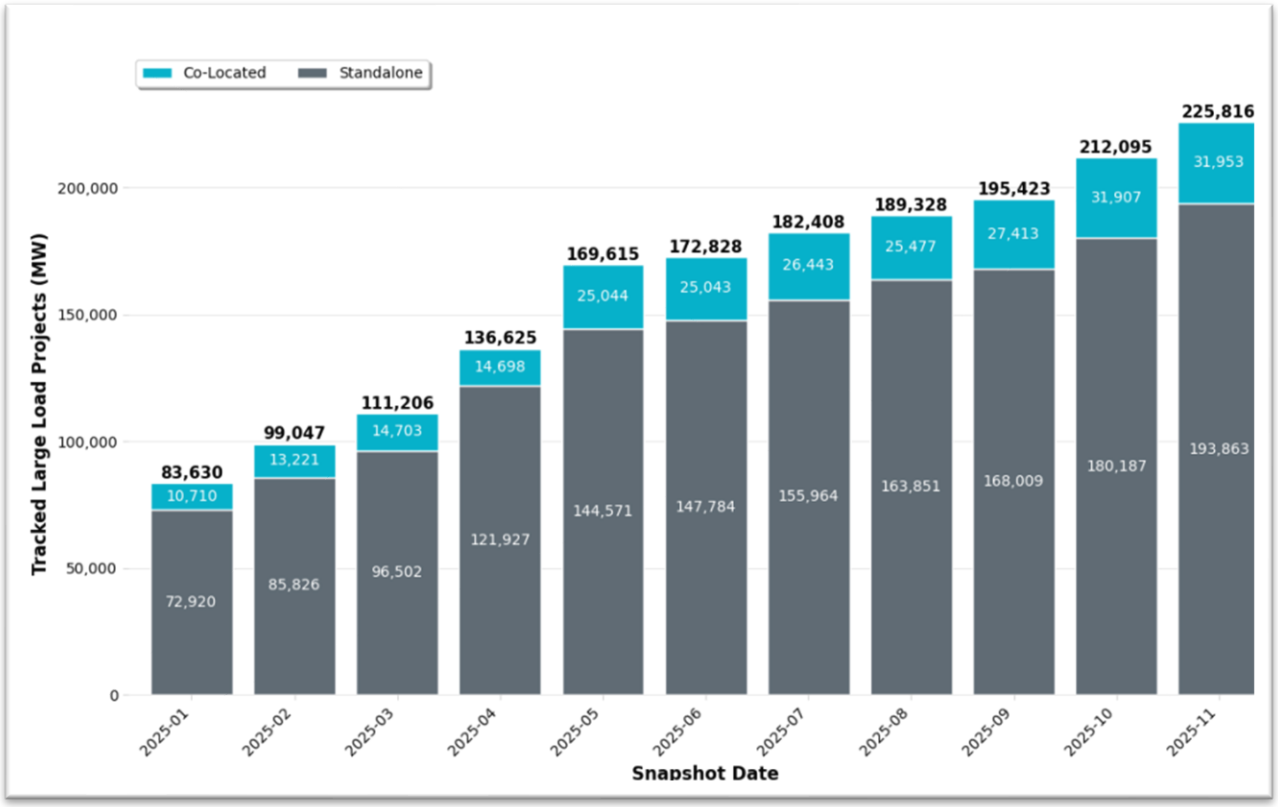
Large Load Interconnection Requests Update

As of November 18, 2025, ERCOT is tracking approximately 226,000 MW of large loads seeking interconnection to the system. For reference, in December 2024, there were 63,000 MW of Large Load interconnection requests. Approximately 128,000 MW of the 226,000 MW have not yet submitted their Planning Studies for review. A Large Load is considered any load of 75 MW or greater at a single point of interconnection.

As of now, approximately 7,500 MW of Large Loads have been approved to energize, with 5,300 MW having been observed energized and an additional 2,200 MW having been approved to energize, but not yet operational.



As shown in the chart below, the growth of Large Load Interconnection Requests has continued to consistently grow over the past year, with steady increases in the volume of projects and associated megawatts seeking interconnection.



Dispatchable Reliability Reserve Service (DRRS) Update

ERCOT recently presented findings from an Aurora Energy Research report assessing the impact of market design changes on future resource adequacy.

The comprehensive analysis examined multiple alternative market designs under moderate and high load growth scenarios and took into consideration the multiple reliability tools provided by Senate Bill 6 of the 89th Legislative Session.

The report found that large electronic load curtailment has the potential to partially mitigate future outages and system costs. However, only under a scenario with high demand growth would data center flexibility fully alleviate potential reliability concerns. Under a moderate load growth scenario, data center flexibility would only partially mitigate the potential for load shed events. This is because under the high load growth scenario there are more large electronic loads to curtail as compared to the moderate load growth scenario.

Compared to other evaluated options, including the statutory DRRS design and modifications to the Operating Reserve Demand Curve (ORDC), the contemplated "Ancillary Service Plus" model delivers the greatest reliability benefits at the lowest net system cost. Specifically, the DRRS Ancillary Service Plus design incentivizes the development of long-duration dispatchable generation, which is critical for mitigating outage risks during extreme winter storms and summer heat waves.

The report concludes that neither generation market improvements nor load solutions can stand alone. To effectively mitigate potential future involuntary load shedding, a combination of the DRRS Ancillary Service Plus design and large electronic load curtailment (such as increased flexibility from data centers) is required.

In response to these findings, ERCOT staff has submitted two Nodal Protocol Revision Requests (NPRRs) to the stakeholder process:

- NPRR 1309 establishes DRRS consistent with House Bill 1500 as a standalone ancillary service. The ERCOT Board of Directors has designated NPRR 1309 with Urgent Status, with the intent for this NPRR to go through the ERCOT stakeholder process and return back to the Board by June 2026.

- NPRR 1310 builds on NPRR 1309 to include the optionality for the Ancillary Service Plus design and additionally establishes a mechanism for energy storage resource participation in DRRS.

If NPRR 1310 does advance through the stakeholder process, ERCOT has clarified that the Release Factor and the inclusion of energy storage resources will only be activated upon specific direction from the Public Utility Commission of Texas (PUCT).