



2024



ERCOT MONTHLY

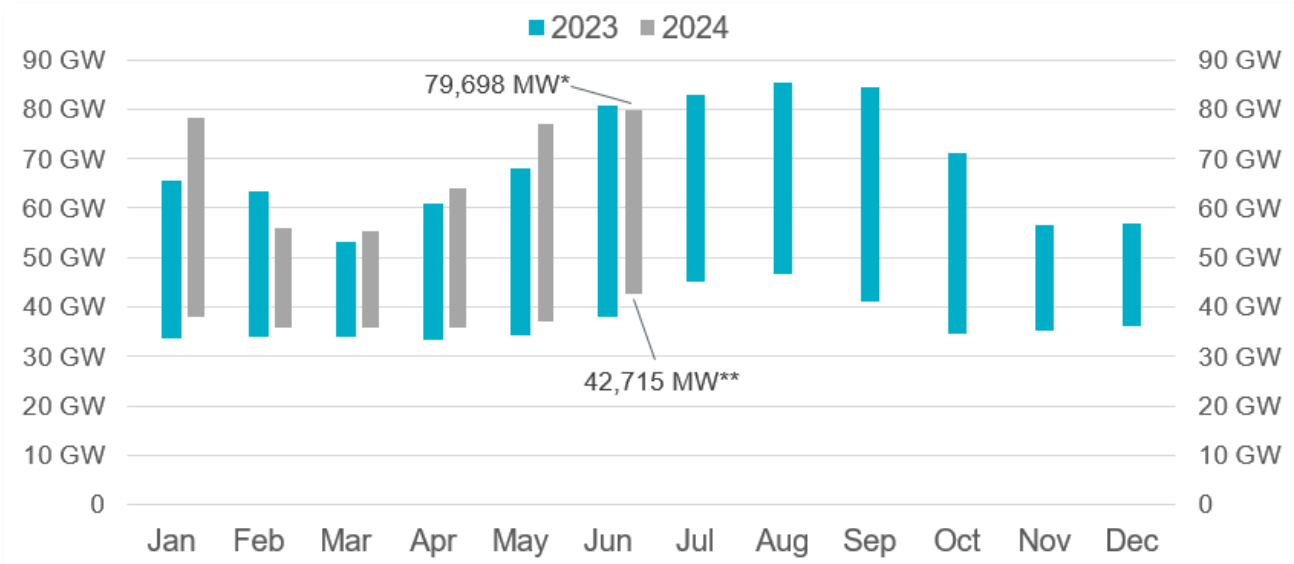
Issued July 2024

June 2024 Look Back

GRID OVERVIEW

June Peak Demand

The June peak demand of 79,698 MW was 1,228 MW lower than the 2023 June peak demand of 80,826 MW, which remains the June record.



*Based on the maximum net system hourly value from the 2024 June Demand and Energy report.

**Based on the minimum net system 15-minute interval value from the 2024 June Demand and Energy report.

Data for latest two months is based on preliminary settlements.

Recent June Peaks

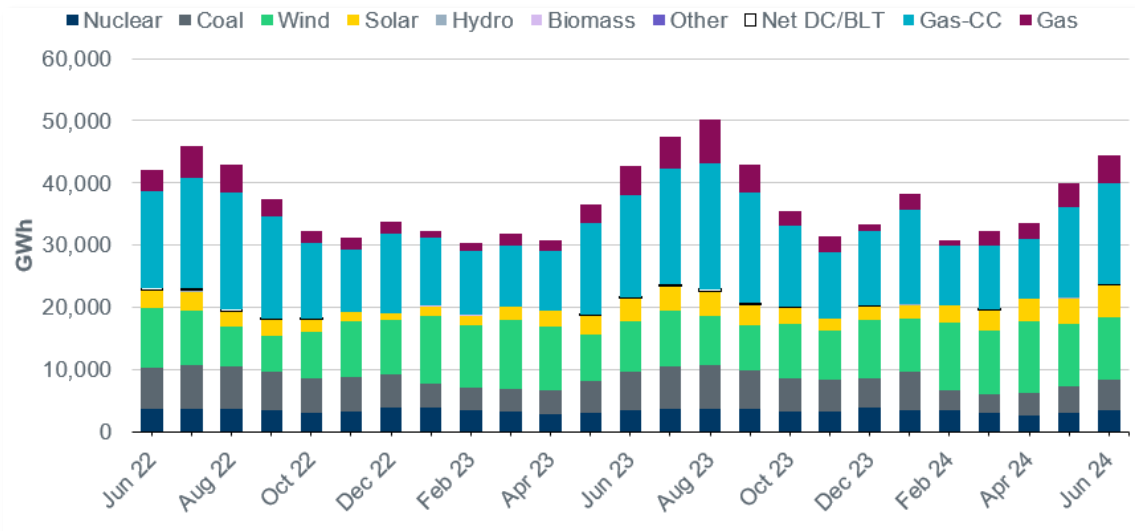
- 2022 peak demand: 76,718 in the 4-5 p.m. hour on June 23
- 2021 peak demand: 70,257 MW in the 4-5 p.m. hour on June 23
- 2020 peak demand: 66,146 MW in the 5-6 p.m. hour on June 8
- View ERCOT's [peak demand records](#).

Solar and Wind Records

- Wind generation record: 27,881 MW June 17 at 9:15 p.m. Penetration at record generation time was 40.16%.
- Renewable generation record: 37,897 MW June 18 at 3:49 p.m.
- Solar generation record: 19,395 MW June 22 at 1:15 p.m.
- These records and other grid facts can be found on the ERCOT [Fact Sheet](#).

MONTHLY ENERGY GENERATION MIX

The monthly energy generation increased by 4.1% year-over-year to 44,378 GWh in June 2024, compared to 42,649 GWh in June 2023. The chart below shows the generation type powering the grid each month.

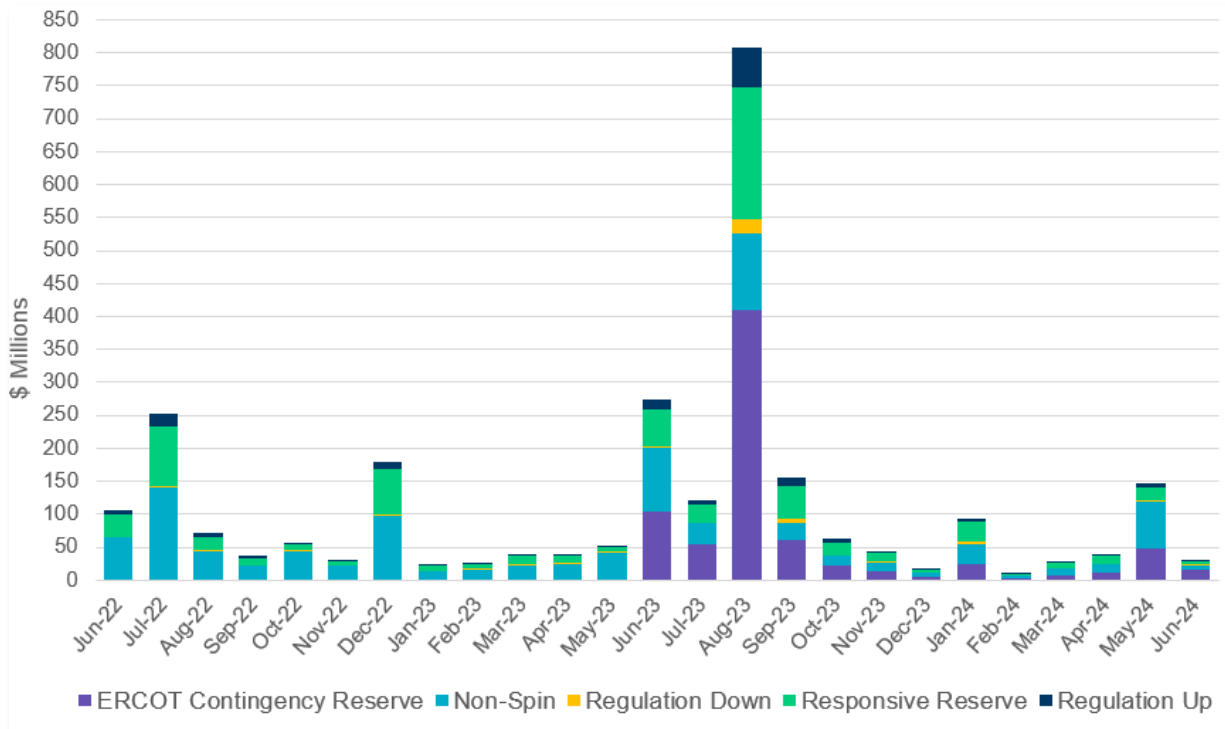


Data for the last two months is based on preliminary settlements.

ANCILLARY SERVICES

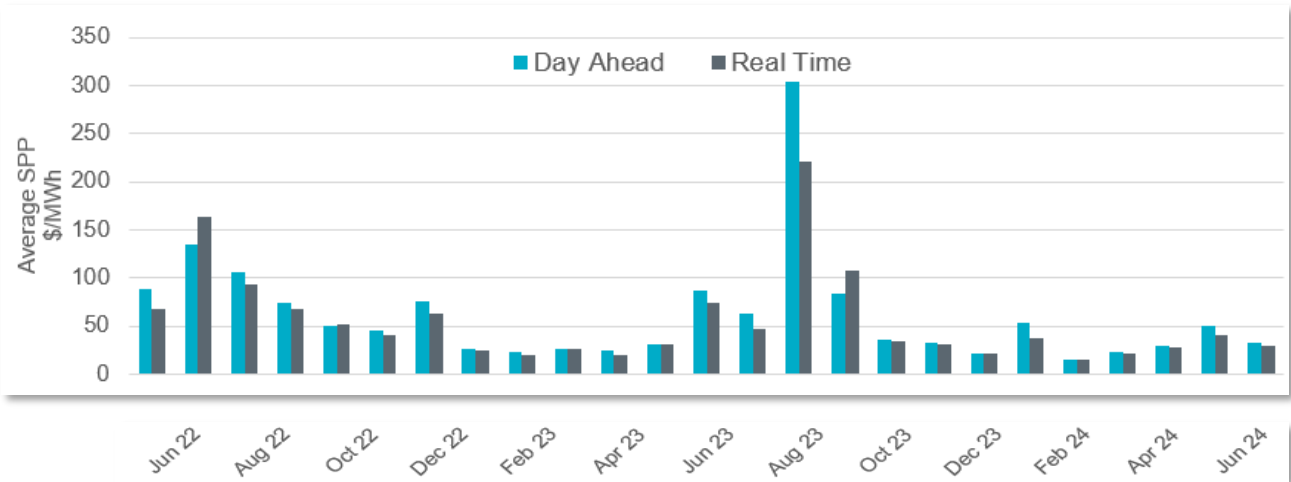
ERCOT uses [Ancillary Services \(AS\)](#) to balance the next day's supply and demand of electricity on the grid and mitigate Real-Time operational issues. Real-Time AS deployment is viewable on our [dashboards](#).

ERCOT procured \$30.07 million in Ancillary Services for grid reliability in June 2024.



WHOLESALE PRICES

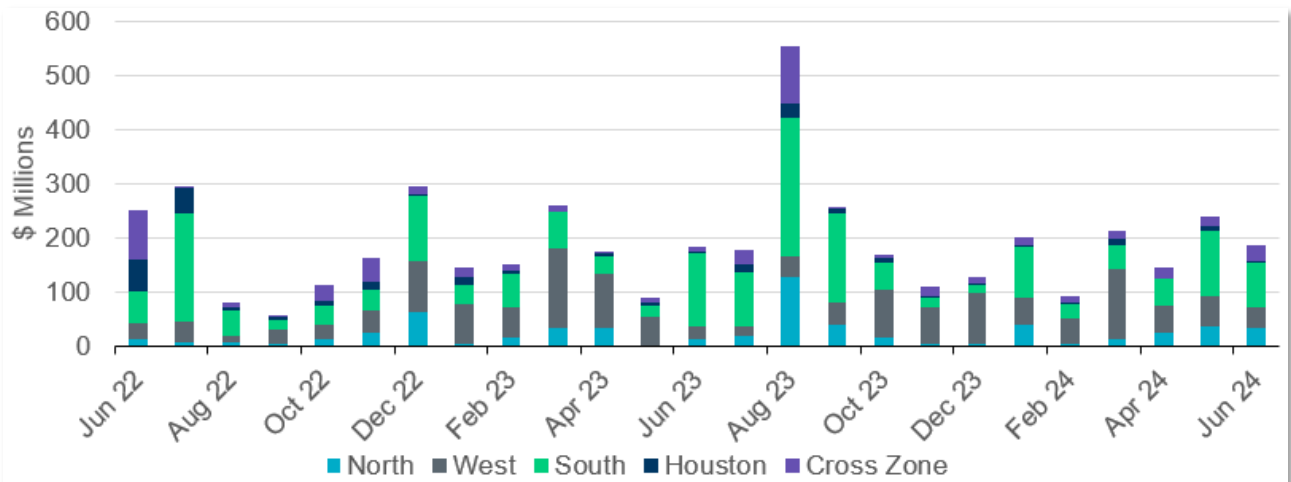
Average energy prices in the Day-Ahead and Real-Time Market for June were generally mild. Despite warmer weather moving into the summer months, the system saw significant levels of generation relative to electric demand.



*Averages are weighted by Real-Time Market Load.

TRANSMISSION CONGESTION COSTS

Total Real-Time congestion rent decreased in June compared to May with the highest congestion rent in the South and West Zones.

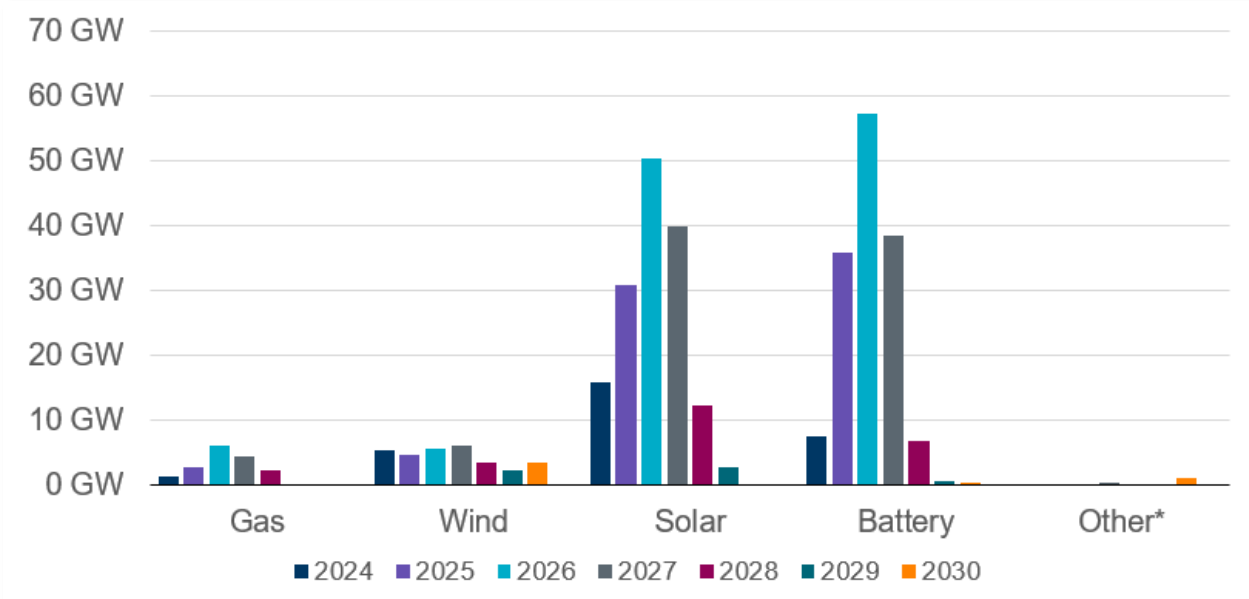


*Averages are weighted by Real-Time Market Load.

**Security Constrained Economic Dispatch (SCED) is the Real-Time market evaluation of offers to produce a least-cost dispatch of online resources. SCED calculates Locational Marginal Prices (LMPs) using a two-step methodology that applies mitigation to resolve non-competitive constraints. More information is on our [website](#).

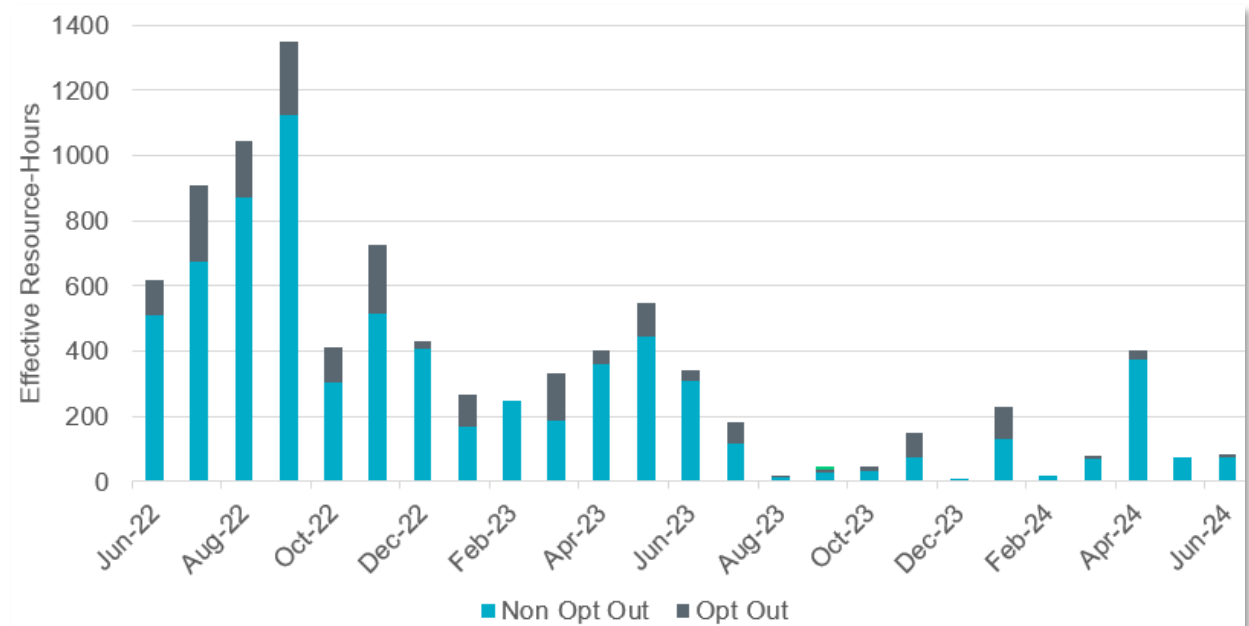
GENERATION INTERCONNECTION QUEUE BY FUEL TYPE

As of June 30, ERCOT was tracking 1,812 active generation interconnection requests totaling 351,050 MW. This includes 152,433 MW of solar (43.4%), 31,452 MW of wind (9%), 147,743 MW of battery (42.1%), and 17,089 MW of gas projects (4.9%). Not all of these projects will likely be built, but it shows where market interest lies at this time.



RELIABILITY UNIT COMMITMENT

Reliability Unit Commitment (RUC) activity for June included eight Resources committed due to capacity or congestion. This June is lower than last June due to a variety of factors, including more supply availability and more self-commitment reducing the need for RUC.



“Effective Resource-Hours” excludes any period during a Reliability Unit Commitment hour when the RUC-committed Resource was starting up, shutting down, off-line, or otherwise not available for dispatch by SCED.

August Outlook

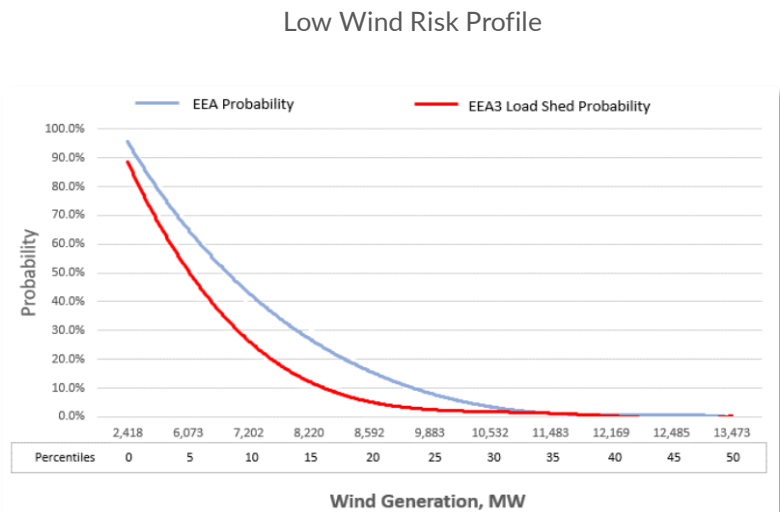
August Monthly Outlook for Resource Adequacy (MORA) Scenarios

Under typical grid conditions, the deterministic scenario indicates that there should be sufficient generating capacity available to serve the expected peak load. Probabilistic modeling results indicate an elevated risk—a 16% probability—of ERCOT having to declare an Energy Emergency Alert (EEA) in August during the peak load day. The 7 p.m. to 9 p.m. (hour ending) period, when daily loads are typically near their highest levels and solar production is ramping down, has the greatest risk of declaring an EEA. The highest risk hour is 8-9 p.m.

The possibility of low wind production remains a significant risk for maintaining adequate reserves for the August peak demand day. Probabilistic analysis of low wind risk for the 8-9 p.m. hour is included in the "Low Wind Risk Profile" graph below right. The model accounts for the risk of coastal wind curtailment needed to avoid overloads on lines that make up the South Texas export interface. (Please note, the MORA probabilistic assessment is not intended to forecast expected grid conditions or predict specific capacity reserve outcomes.) The full August MORA is available in [PDF](#) and [Excel](#) form.

Hour Ending (CDT)	EMERGENCY LEVEL		
	Chance of Normal System Conditions	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.	100.00%	0.00%	0.00%
2 a.m.	100.00%	0.00%	0.00%
3 a.m.	100.00%	0.00%	0.00%
4 a.m.	100.00%	0.00%	0.00%
5 a.m.	100.00%	0.00%	0.00%
6 a.m.	100.00%	0.00%	0.00%
7 a.m.	100.00%	0.00%	0.00%
8 a.m.	100.00%	0.00%	0.00%
9 a.m.	100.00%	0.00%	0.00%
10 a.m.	100.00%	0.00%	0.00%
11 a.m.	100.00%	0.00%	0.00%
12 p.m.	100.00%	0.00%	0.00%
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.	99.97%	0.00%	0.00%
6 p.m.	99.94%	0.02%	0.01%
7 p.m.	99.67%	0.04%	0.02%
8 p.m.	88.19%	4.68%	2.88%
9 p.m.	72.01%	16.33%	12.02%
10 p.m.	88.73%	4.58%	2.54%
11 p.m.	99.16%	0.06%	0.00%
12 a.m.	100.00%	0.00%	0.00%

Note: Probabilities are not additive.



Installed Capacity Increase July 1 to August 1

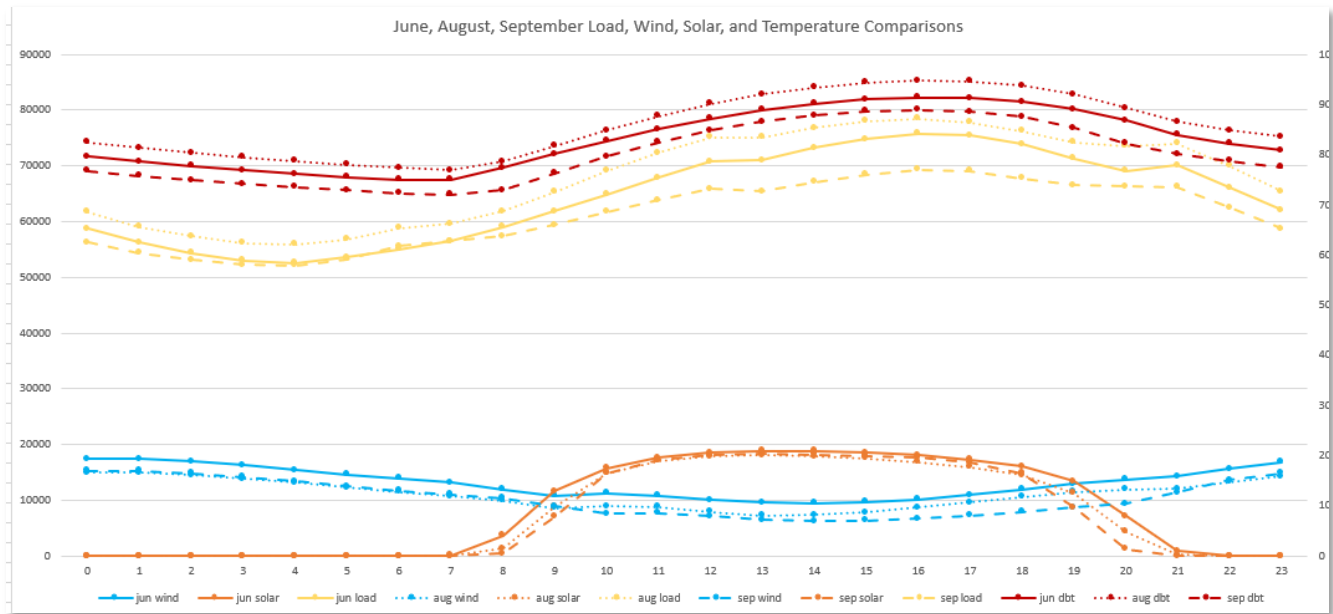
As shown in the August MORA, ERCOT expects installed capacity to increase by 1,552 MW from July 1 to August 1. Increases by generation type include 1,080 MW of solar, 453 MW of wind, 141 MW of battery storage, and 10 MW of diesel. There was a 132 MW net decrease in gas-fired sources due to updated ratings for resources that were recently synchronized to the ERCOT grid.

August/September High Load, Shorter Solar Day, More Thermal & Batteries at Peak

August and September typically see Texas' hottest summer temperatures leading to ERCOT's highest demand. The tightest time on the grid during summer used to be between 4 p.m. and 7 p.m. period. Now, with the ramp down of solar generation in the evenings, the 7 – 10 p.m. CDT becomes the tightest time to manage the grid. The key variables are:

- Solar generation ramps down in the evening sharper in August and September compared to June.
- Wind is typically increasing during the solar down ramp but at a significantly slower rate (while temperatures and load decrease at a slower rate than solar decreases). Overall, August wind capacity trends lower.
- Heat doesn't dissipate as fast in August as it does in June.

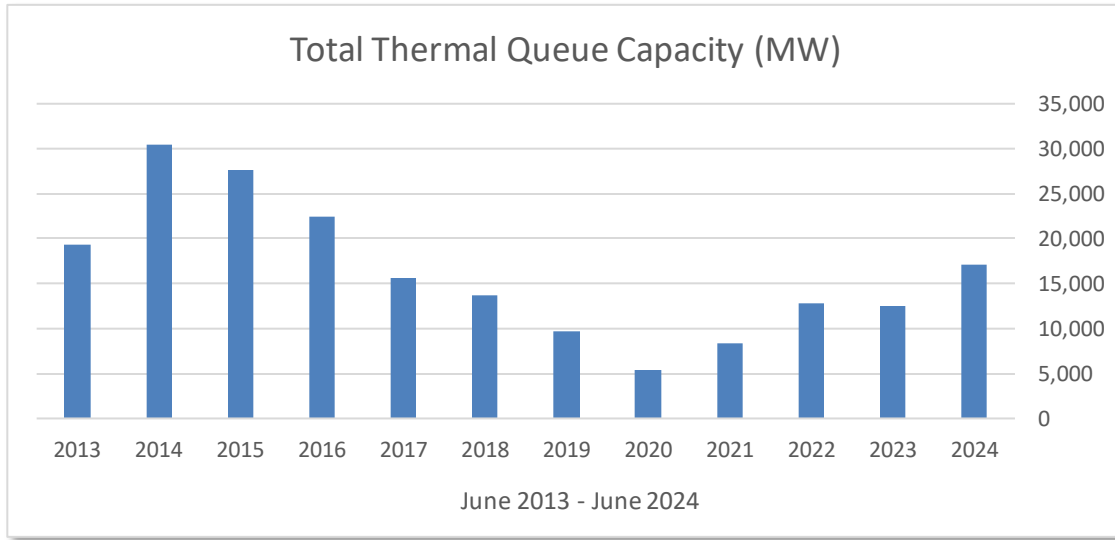
With this sharper decline in solar generation, additional thermal generation as well as batteries tend to be deployed earlier in August and September to help cover the solar ramp down in the evening. [Ancillary Services](#) help ERCOT reliably manage the grid during these tighter times. The graph below shows the comparison of June, August, and September load, wind, solar, and temperatures.



DBT = dry bulb temperature

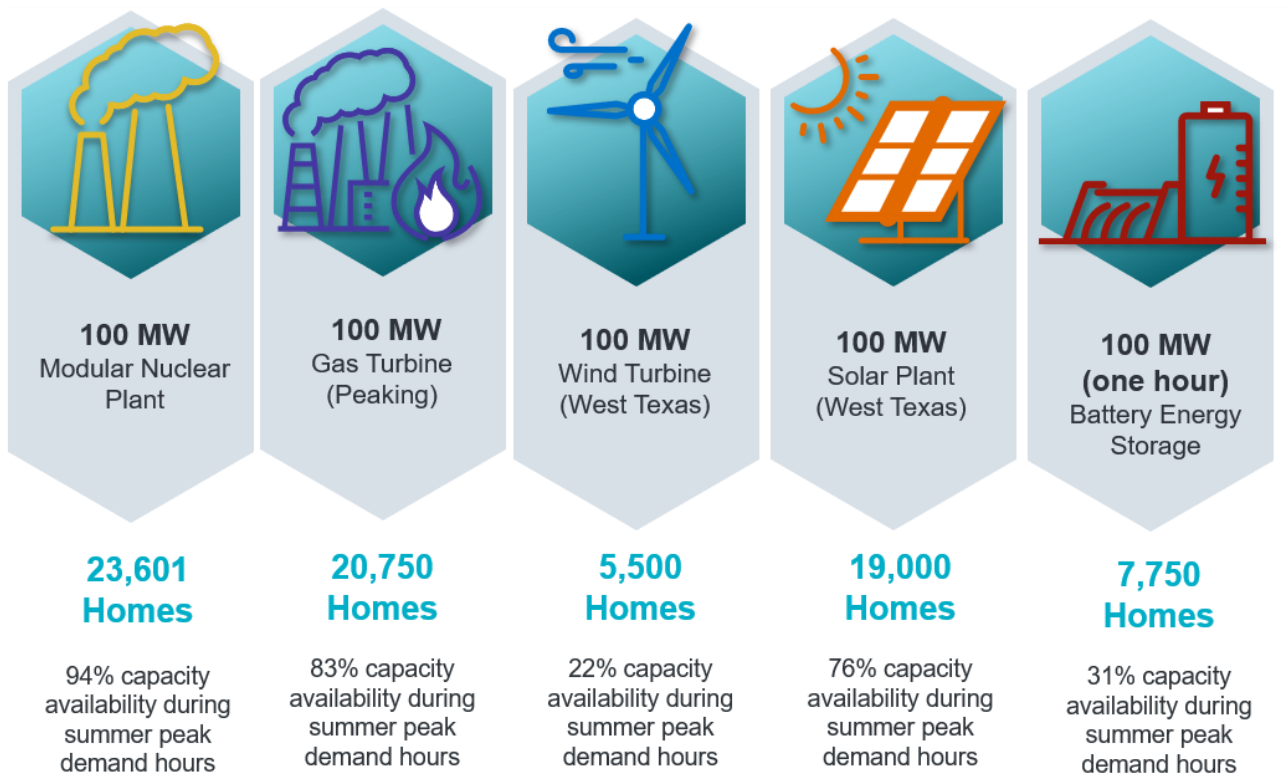
Thermal Generation Interconnection Queue Snapshot

ERCOT has seen a slight increase in the thermal generation projects in the Interconnection Queue. The Queue capacity shown reflects the capacity for the month of June for each year.



Summer Generation Comparison Snapshot

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 summer. These numbers will differ for winter. Note: 1 MW serves approximately 250 residential customers during peak demand.



Additional Items of Note

Permian Basin Plan Reliability Plan Filed with the PUCT

In 2023, the Texas Legislature enacted House Bill (HB) 5066, which required ERCOT to develop a reliability plan for the Permian Basin region. The plan for the Permian Basin must:

- Address extending transmission service to areas where mineral resources are found;
- Address increasing available capacity to meet forecasted load; and
- Provide available infrastructure to reduce interconnection times in areas without access to transmission service.

ERCOT began development of the Permian Basin Reliability Plan in January 2024. ERCOT conducted extensive engineering analysis and obtained substantial review and input from Transmission and Distribution Service Providers (TDSPs) and other stakeholders in the ERCOT region through the Regional Planning Group (RPG). As a culmination of these efforts, ERCOT has produced this [Reliability Plan](#) to identify the transmission needs of the Permian Basin region and the transmission upgrades required to meet the forecasted electric demand in the region. A [summary](#) of the Reliability Plan can be found in our Trending Topics.

Load Growth in the Permian Basin Region

Increased oil and gas development in the Permian Basin has resulted in a marked increase in transmission needs in recent years. ERCOT's historical data show that demand in the Far West Weather Zone—which includes a significant portion of the Permian Basin—has experienced an average annual peak demand growth rate of approximately 11% for the last decade due to increased development activity associated with the oil and gas industry. This growth rate is the highest of any weather zone in the ERCOT region. Data provided by TDSPs indicates the demand will continue to grow over the next 15 years.

TDSPs have also provided demand projections indicating an exponential increase in the number of non-oil and gas loads in the Permian Basin region. The majority of which primarily consist of demand related to cryptocurrency mining operations, data centers, and hydrogen electrolysis facilities.

Assessment of Transmission Needs

While ERCOT has evaluated transmission needs as far out as 2038 consistent with the projected increase in load shown in the S&P Global forecast, ERCOT has also chosen to identify transmission needs in 2030, consistent with ERCOT's traditional practice of evaluating needs using a maximum time horizon of six years. Even so, the S&P Global forecast suggests that almost 90% of the 2038 load will materialize by 2030. Because of this two-phased assessment, the transmission needs identified in 2030 are naturally a subset of those required for 2038.

In identifying these transmission needs, ERCOT divided the proposed upgrades into two categories: local transmission upgrades and import paths. Local transmission upgrades are transmission projects that are needed to interconnect and serve the projected load in the Permian Basin region assuming that power can be imported into the region. Import paths

are those transmission projects needed to transfer power from other regions into the Permian Basin region to serve the projected demand. ERCOT categorized the projects this way for two reasons.

First, ERCOT's identification of local needs explicitly fulfills the PUCT's directive to "address extending transmission service to areas where mineral resources have been found" and "provide available infrastructure to reduce interconnection times in areas without access to transmission service" while its separate identification of import paths explicitly meets its obligation to "address increasing available capacity to meet forecasted load," consistent with HB 5066.

Second, ERCOT's separate identification of import paths is appropriate because ERCOT has identified several materially different options for these import paths. Specifically, ERCOT has determined that the significant increase in forecasted load justifies consideration of the use of extra high voltage (EHV) transmission infrastructure—operated at 500-kV or 765-kV—for the import path options, given that EHV facilities are generally known to provide benefits such as reducing losses for long-distance power transportation, increasing short circuit strength, and improving voltage stability compared with transmission facilities operating at 345-kV, which is the maximum voltage currently used on the ERCOT System. Thus, for local upgrades, ERCOT considered only 345-kV and lower facilities while for the import paths, ERCOT evaluated three mutually exclusive options: 345-kV, 500-kV, and 765-kV.

Hurricane Beryl Provides Important Data to ERCOT

Hurricane Beryl made landfall near Matagorda at approximately 4:00 a.m. on Monday, July 8, as a Category 1 hurricane. ERCOT issued an Emergency Notice due to Hurricane Beryl having an adverse impact on the ERCOT transmission system. While the storm brought heavy rain and damaging winds that impacted both Generation and Transmission Resources in coastal and eastern counties, Hurricane Beryl did not create a situation where there was inadequate generation supply or transmission infrastructure to serve customers that could receive electric service. Hurricane Beryl was a local transmission and distribution utility impacting storm. At its peak, Hurricane Beryl impacted:

- **Transmission:** Over 125 circuits, including 5 345 kV, 80 138 kV, and 42 69 kV segments. All transmission outages related to Hurricane Beryl have been returned to service.
- **Generation:** 5 thermal Resources and 1 Energy Storage Resource were forced out. One thermal Generation Resource impacted by Beryl remains on outage.

Hurricane Beryl provided useful data that will be included in ongoing studies ERCOT is conducting with National Labs to judge the impact a hurricane can have. ERCOT can use real-world data from Hurricane Beryl to inform and validate computer simulation models. This information will be illustrated in ERCOT's Resiliency Plan being published at the end of 2024.

ERCOT Annual Severe Weather Drill

ERCOT will be conducting its annual Severe Weather Drill in late August with Market Participants. All Qualified Scheduling Entities (QSEs) that represent Generation Resources and all Transmission Operators (TOs) are required to participate in the Severe Weather Drill. The 2024 Severe Weather Drill is primarily focused on emergency communications between Market Participants and ERCOT.

ERCOT Issues RFP Seeking Must-Run Alternatives

In March, ERCOT received three Notifications of Suspension of Operations (NSO) from CPS Energy for its Braunig generation sources. The NSOs indicate that, as of March 31, 2025, the generation resources will indefinitely suspend operations. When an NSO is received, ERCOT implements a defined protocol analysis, called Reliability Must Run (RMR).

ERCOT had 60 days after receiving the notice to complete its evaluation, and Market Participants can comment on the need for the resource in question. If a resource is needed, ERCOT must issue a request for proposal (RFP) for a more cost-effective alternative (referred to as a must-run alternative or MRA) to meet that need. Visit ERCOT's [RMR process one-pager](#) for more information.

ERCOT has determined that the Braunig Resources are needed to support ERCOT system reliability after the proposed March 31, 2025, suspension date because their unavailability would have a material impact on regional transmission reliability.

On July 25, ERCOT issued an [MRA RFP](#) seeking proposals from QSEs to provide one or more MRA Resources that would address the identified ERCOT system performance deficiencies in a more cost-effective way than committing one or more of the Braunig Resources through an RMR contract. Under the RFP, QSEs may offer MRA Resources for any one or more seasons during the period of April 1, 2025, through March 31, 2027. The RFP identifies different hours in which an offered MRA Resource must be available each season. Resources eligible to be considered as an MRA Resource include various types of generation, storage, and demand response as further described in the RFP.

NPRR1224 ECRS Manual Deployment Triggers Not Approved

At the July 25 PUCT Open Meeting, the Commission voted to reject [NPRR1224](#), ERCOT Contingency Reserve Service (ECRS) Manual Deployment Triggers, which would have introduced a trigger allowing ERCOT to manually release ECRS from Security Constrained Economic Dispatch (SCED)-dispatchable Resources under certain conditions at a price floor of no less than \$750 per MWh. In the discussion before rejecting the proposal, the Commissioners raised concerns with the proposed \$750 per MWh floor and potential cost impacts.

The Commission did however express support for ERCOT using its discretion to implement operations procedures to utilize the 40 MW SCED under generation deployment trigger outlined in NPRR 1224 and preserving the reliability capability needed in ECRS. ERCOT is implementing operations procedures to utilize the deployment trigger. The Commissioners noted that this would provide a reasonable balance between reliability and consumer costs.

Information regarding the revision request process is available on the Market Rules section of the ERCOT [website](#).

Moody's Ratings Upgrades ERCOT to Aa3, Outlook Stable

Earlier this month, Moody's Ratings (Moody's) upgraded ERCOT's Issuer Rating to Aa3 from A1. The outlook is stable. "Reforms implemented over the past three years have strengthened ERCOT's governance, operations, and public relations, reducing business risk and improving credit quality," said Toby Shea, VP – Sr. Credit Analyst. "Specifically, these reforms include, but are not limited to, a new board selection process, market design initiatives that bolster electric supply, and resilience measures, such as system weatherization inspections," added Shea. These developments have reduced the likelihood that ERCOT will experience the degree of criticism and heightened reputational and regulatory risk that followed Winter Storm Uri in February 2021.

Moody's considers this rating action to be driven by ESG factors because ERCOT's social risks have decreased while its governance provisions have been enhanced, resulting in an improvement in the company's social and governance issuer profile scores (S-4 to S-2 and G-3 to G-2, respectively). The rating upgrade has also coincided with a change in the company's credit impact score to CIS-2, up from CIS-4 previously. ERCOT's strong and resilient credit profile reflects its essential role as the overseer and coordinator of critical energy infrastructure in the state of Texas. Its financial stability is critical to the proper functioning of the power grid, as ERCOT is the central counterparty to all Market Participants.

ERCOT Names Gilbert Hughes as New Vice President of Public Affairs



Gilbert Hughes has been named ERCOT Vice President of Public Affairs responsible for external communications, government affairs, and customer support. He brings four decades of electric utility industry experience with a focus on Texas public policy. Prior to joining ERCOT, he served as Vice President of External Affairs at American Electric Power (AEP) Texas. Hughes has a bachelor's degree in business administration from Laredo State University. The full news release is available [here](#).

Upcoming Activities

BOARD OF DIRECTORS MEETINGS*

ERCOT [Board of Directors](#) meetings are live streamed on [ercot.com](#), where you can also find links, additional information, agendas, and supporting documents.

August 20

October 10

December 3

RELIABILITY & MARKETS (R&M) COMMITTEE MEETINGS*

ERCOT [Reliability & Markets \(R&M\)](#) meetings are live streamed on [ercot.com](#), where you can also find links, additional information, agendas, and supporting documents.

August 19

October 9

December 2

TECHNICAL ADVISORY COMMITTEE (TAC) MEETINGS*

ERCOT [Technical Advisory Committee \(TAC\)](#) meetings are live streamed on [ercot.com](#), where you can also find links, additional information, agendas, and supporting documents.

July 31

August 28

September 25

October 30

November 20

ERCOT has additional working groups and committees.

*Meetings dates are subject to change, so please check the meetings [page](#) for the latest information and for more on the various groups, committees, dates, agendas, and meeting materials.