

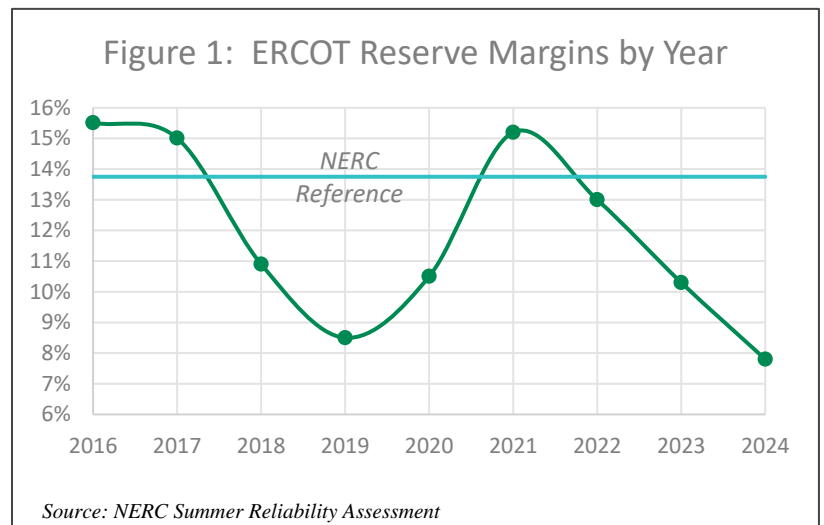
ERCOT Summer Reserve Margin Below Reference Level for Second Year

Key Findings

- For the second year in a row, ERCOT is the only North American Electric Reliability (NERC) planning region with a reserve margin below its reference margin level (13.75%).
- ERCOT's summer reserve margin fell from 9.3 percent in 2018 to 8.6 percent in 2019, as forecasted peak demand increased by 1.3 GW and demand response availability fell by 3.2 percent.
- According to ERCOT's Seasonal Assessment of Resource Adequacy report, any of four studied contingencies could trigger Energy Emergency Alert status at peak load or extreme peak load.

What has changed?

As other regions experience flat or declining load growth, the Electric Reliability Council of Texas (ERCOT) has seen demand increase 2.9 percent since 2018,¹ with this growth expected to continue at a rate of 2 to 3 percent per year through 2024.² (See Figure 1.) This increase in demand, coupled with the mothballing of a 470 MW coal unit and delays in other generation projects, has led to a record low 8.6 percent reserve margin for the summer of 2019.³ For the second consecutive year, this makes ERCOT the only NERC planning region with a reserve margin below its reference margin level (13.75%), a trend that is expected to continue through 2021.



While some Independent System Operators and Regional Transmission Organizations (ISOs/RTOs) use capacity markets to ensure adequate reserves, ERCOT encourages investment and incentivizes performance by allowing very high prices when the system is stressed, up to a \$9,000/MWh cap. In July of last year, real-

¹ NERC. "Summer Reliability Assessment." June 2019. Available at:

https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_SRA_2019.pdf.

² ERCOT. "Capacity, Demand, and Reserves Report." May 8, 2019. Available at:

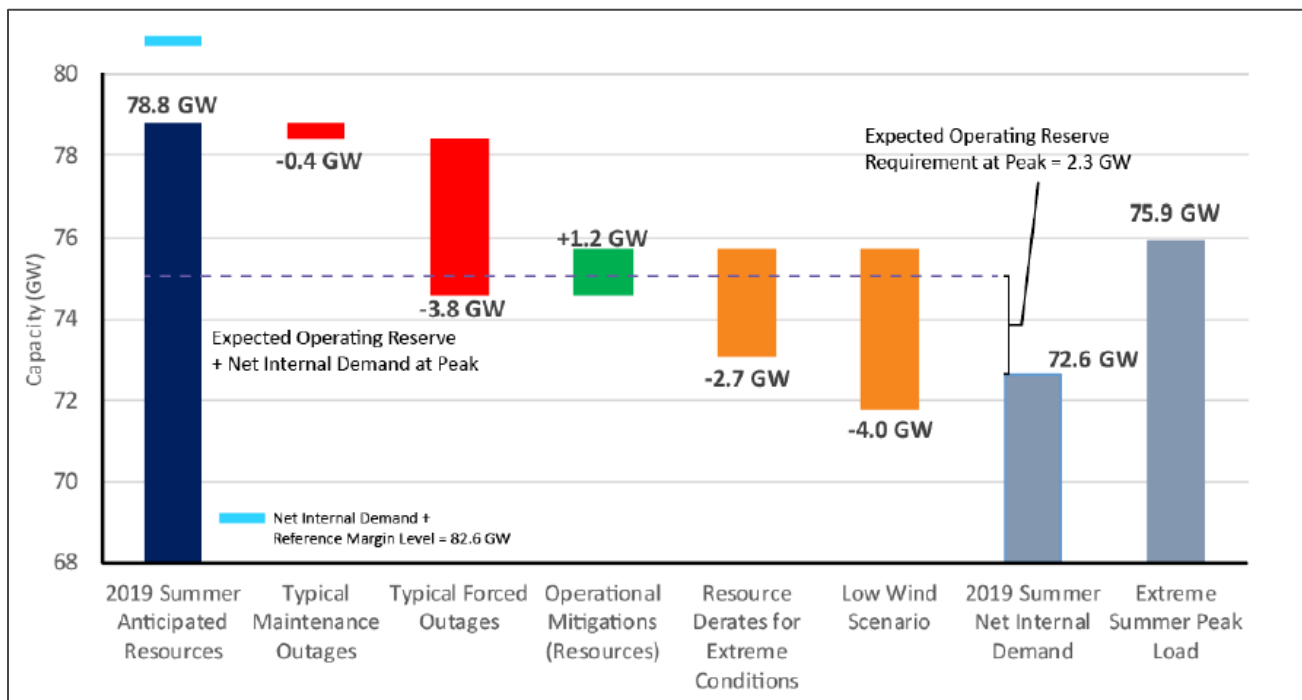
<http://www.ercot.com/content/wcm/lists/167023/CapacityDemandandReserveReport-May2019.xlsx>.

³ ERCOT. "ERCOT Expects Record Electric Use, Increased Chance of Energy Alerts." May 8, 2019. Available at:

<http://www.ercot.com/news/releases/show/181248>.

time prices peaked at approximately \$2,160/MWh, as peak load reached a record-breaking 73,259 MW.⁴ Despite this challenge, ERCOT was able to maintain reliability without widespread outages. This summer, however, peak demand is forecasted to exceed the previous record by 1.3 GW, for a peak demand of 74,853 MW. This is met with 78,929 MW of generation capacity, for total reserves of only 4,076 MW.

In its Seasonal Assessment of Resource Adequacy (SARA) report, ERCOT evaluated four contingencies, three of which assumed peak load alongside typical generation outages, extreme generation outages, and low wind output; and one of which assumed extreme peak load with typical generation outages. In all four scenarios, the results indicated a potential need to declare Energy Emergency Alert (EEA) status, where additional energy imports, voluntary load reduction, and other emergency measures may become necessary.⁵ NERC summarizes these scenarios as follows:⁶



Despite these projections, ERCOT is confident that it has the “tools and procedures” to maintain system reliability.⁷ In addition to 79 GW of generation capacity, ERCOT has significant non-generating resources, including 2.2 GW of load-control capacity, contracted emergency response service capacity, and the potential for increased imports from Mexico and the Southwest Power Pool (SPP).

What is the impact on cooperatives?

ERCOT’s membership includes 33 distribution cooperatives and five generation and transmission cooperatives (G&Ts) that provide service to approximately 1.6 million member-consumers. When reserves

⁴ EIA. “Electric Reliability Council of Texas Surpassed All-Time Peak Hourly Load in July.” *Today in Energy*. July 31, 2018. Available at: <https://www.eia.gov/todayinenergy/detail.php?id=36775&src=email>.

⁵ ERCOT. “Seasonal Assessment of Resource Adequacy.” May 8, 2019. Available at: <http://www.ercot.com/content/wcm/lists/167022/SARA-FinalSummer2019.xlsx>.

⁶ See Note 1

⁷ See Note 3

fall below 2,000 MW, the price cap is triggered, which can increase wholesale energy prices and, by extension, retail prices for consumers.

What do cooperatives need to know or do about it?

With only 2,000 MW of gas-fired generation in the queue, summer reliability challenges are unlikely to go away. As shown in Figure 1, margins are expected to increase through 2021 as more renewables come online, only to fall to a new historic low again by 2024 as fossil units retire. To this end, cooperatives should continue to contribute to system stability through demand response programs, while also considering whether building new generation would be an appropriate means of mitigating risk from low margins and potentially high prices.

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