

Winter Storm 2021 and the Power System

What the Heck Just Happened to Us?

Presented to the **Texas Conference of Urban Counties Education & Policy
Conference**

March 4, 2021

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**Review of February 2021 Extreme Cold
Weather Event – ERCOT Presentation**

Bill Magness
President & Chief Executive Officer
ERCOT

Urgent Board of Directors Meeting

ERCOT Public
February 24, 2021

Disclaimer

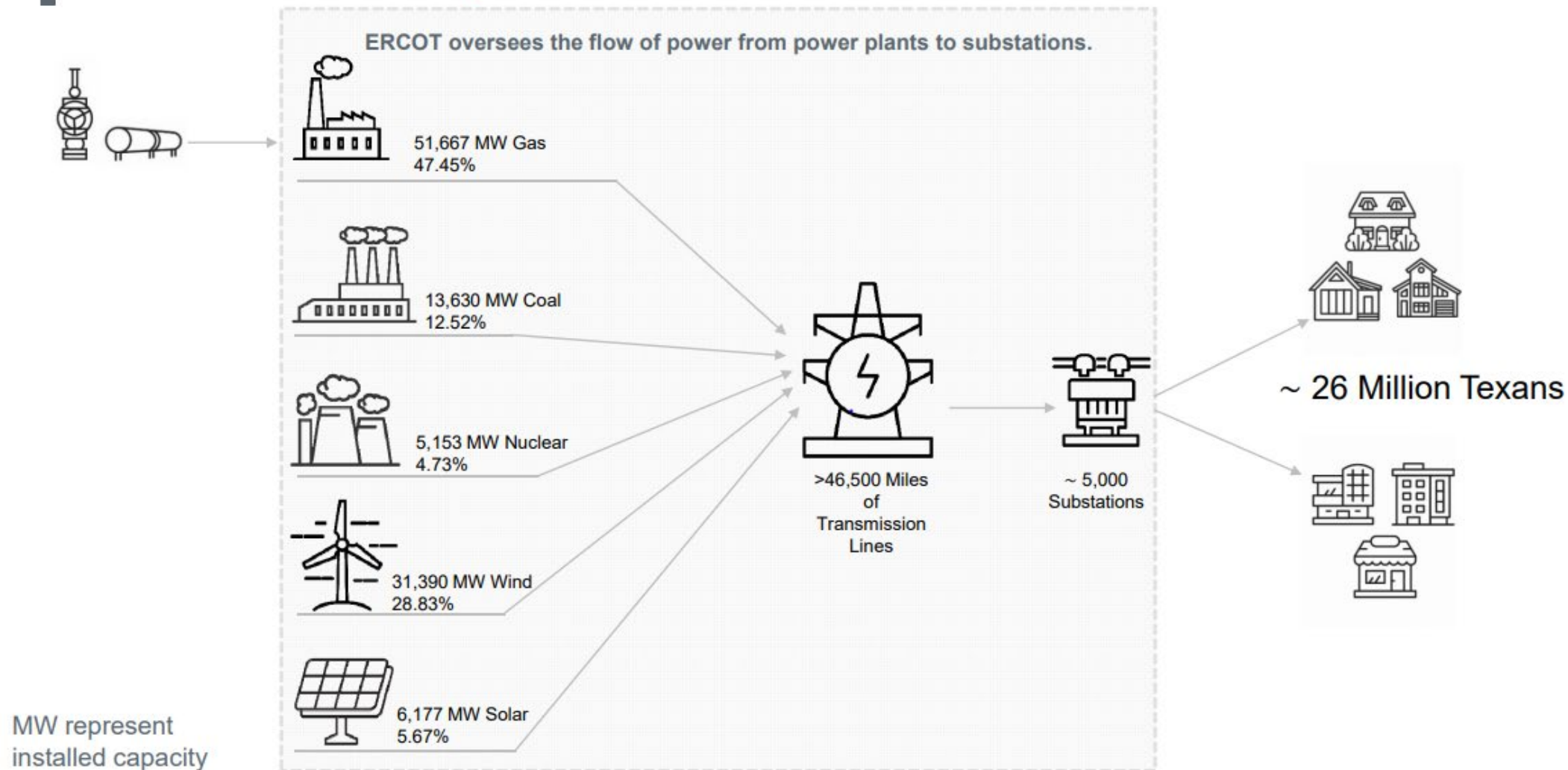
Information in this presentation is preliminary and represents the best available data at the time it was created.

Most of this presentation is taken from the ERCOT presentation made to its Board of Directors on Feb 24, and testified to Texas House and Senate Committees on Feb 25

The entire presentation and lots of other information regarding the event is available here:

[February 2021 Extreme Weather Event \(ercot.com\)](https://www.ercot.com/newsroom/2021/02/24/ercot-reviews-february-2021-extreme-cold-weather-event)

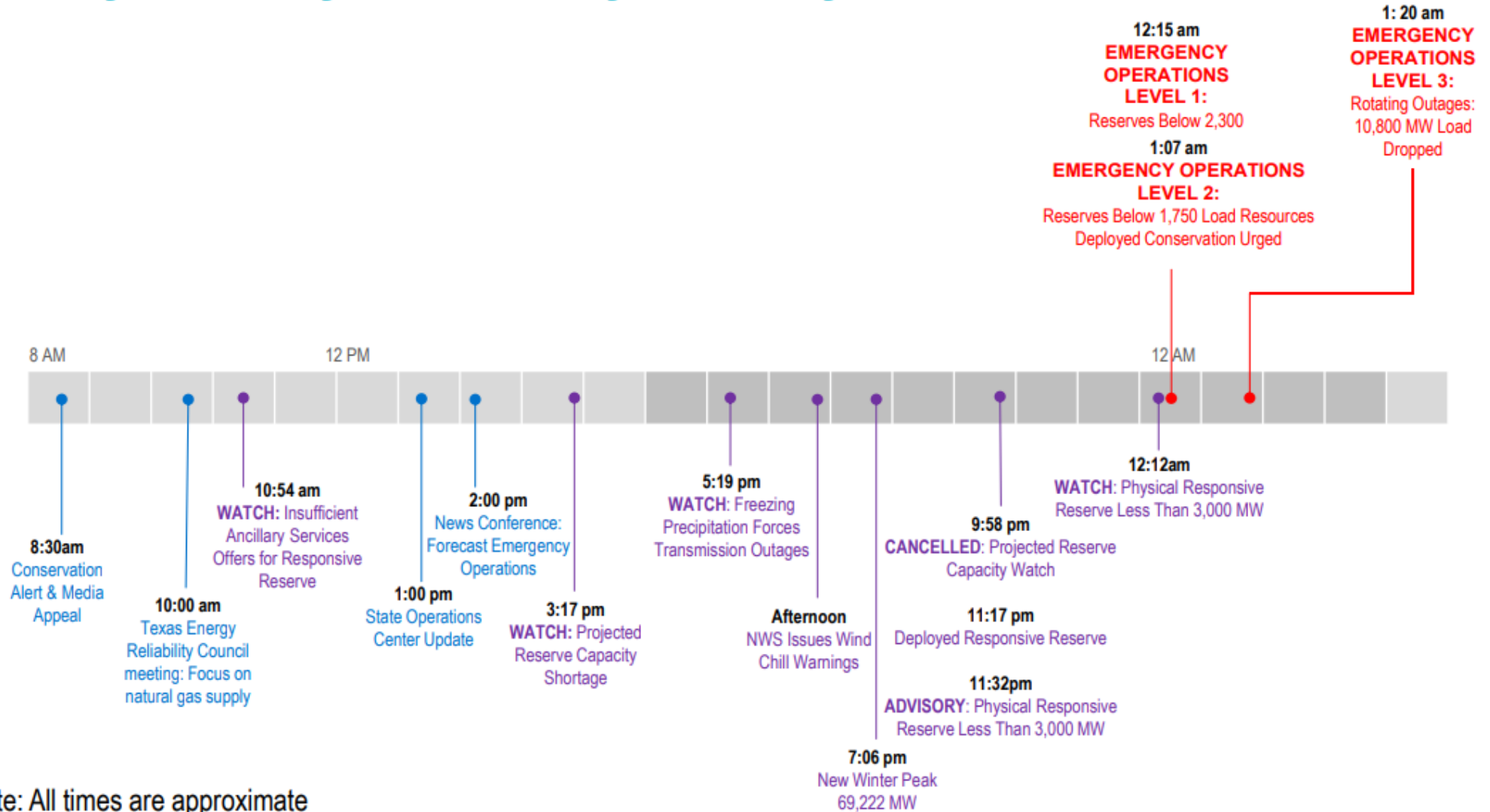
Electric Generation, Transmission & Distribution Overview



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Sunday, February 14 – Monday, February 15

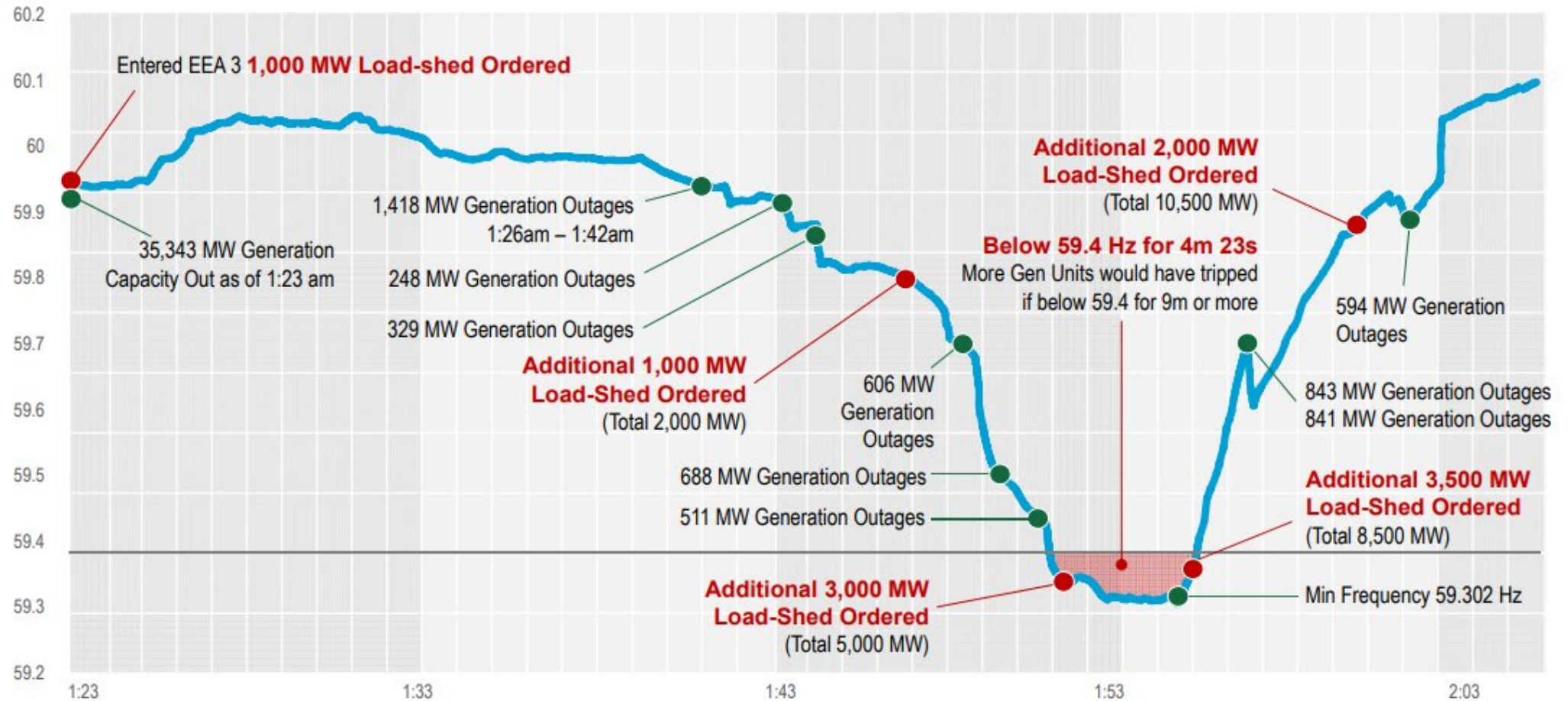


Note: All times are approximate

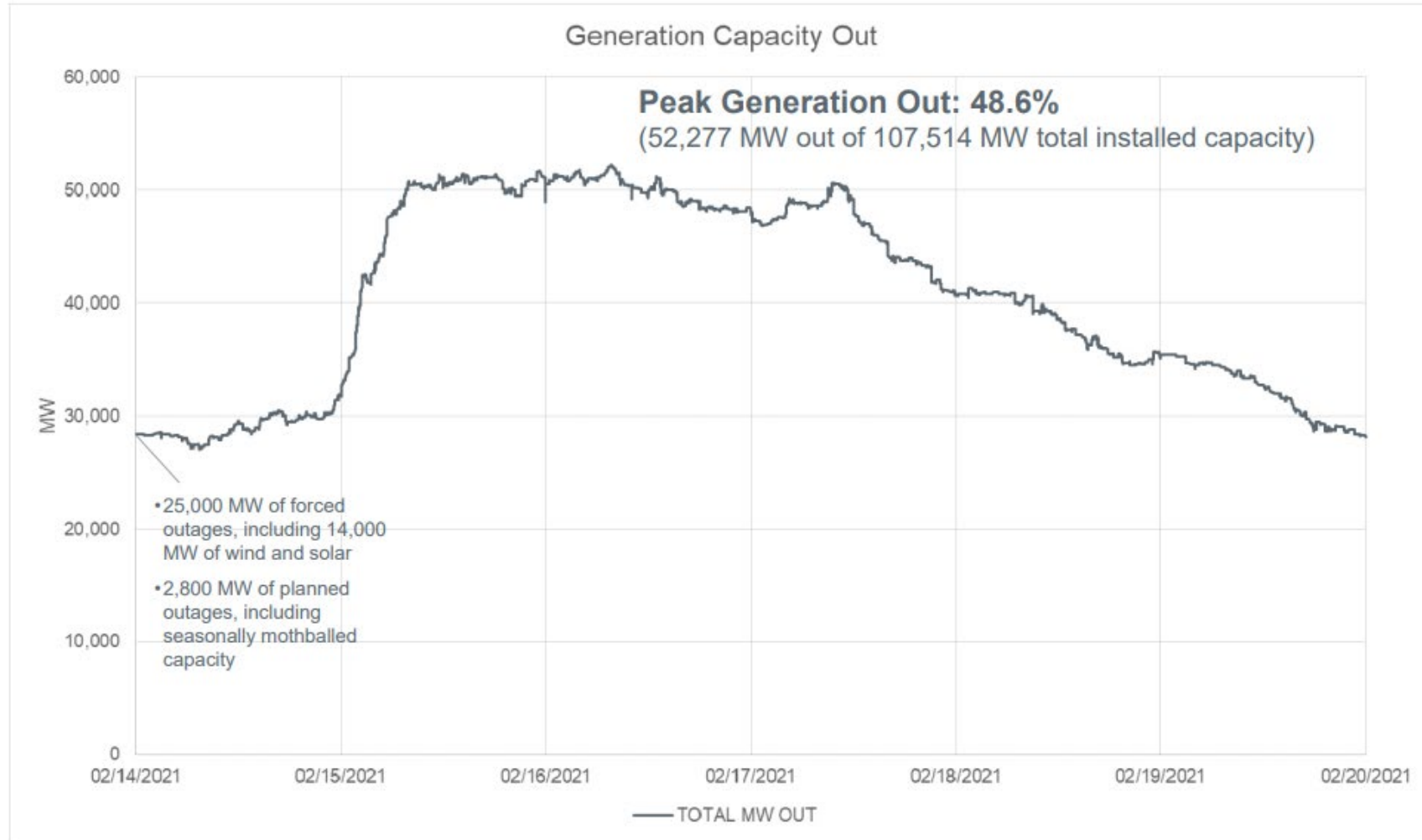


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Rapid Decrease in Generation Causes Frequency Drop



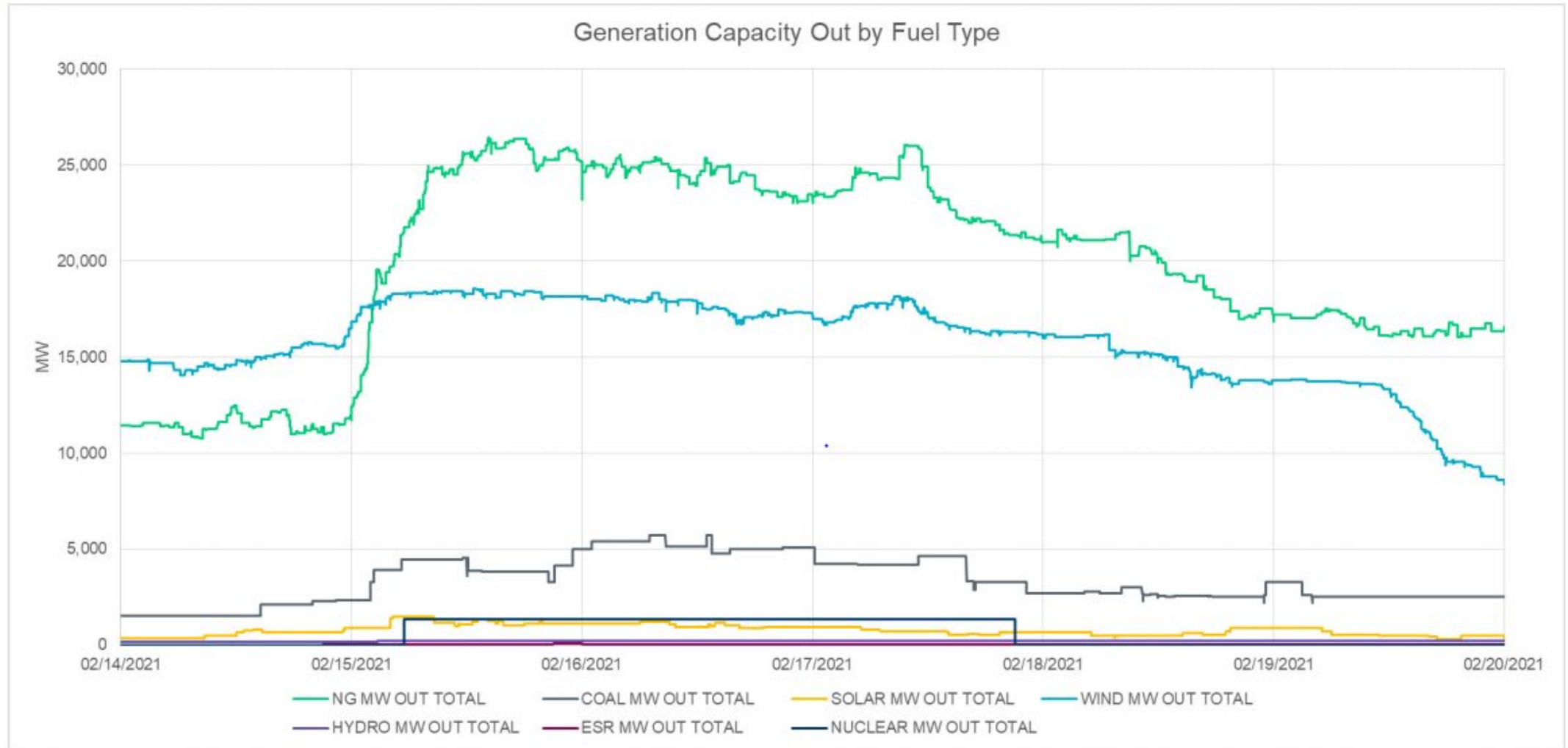
Generation Capacity Out February 14 – 19, 2021



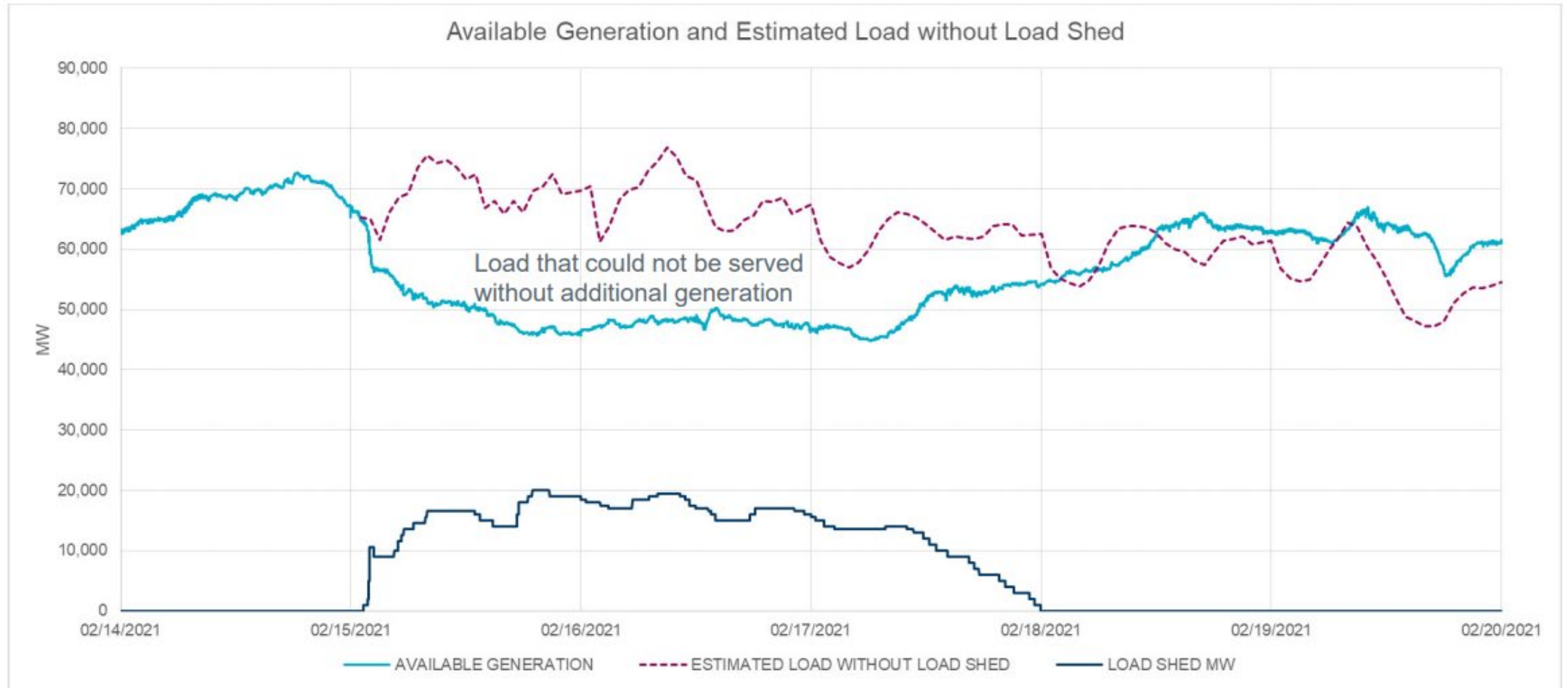
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Generation Capacity Out by Fuel Type



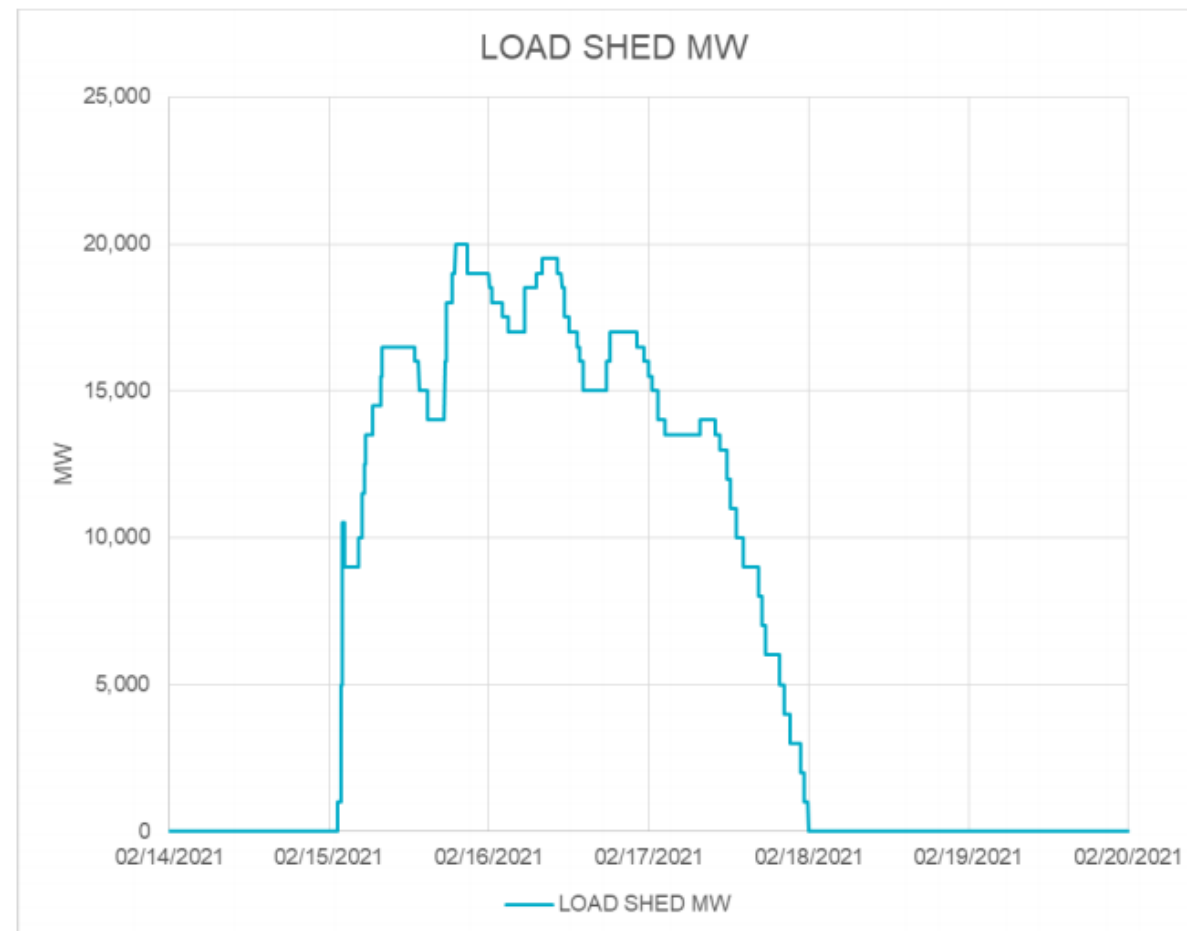
Available Generation and Estimated Load Without Load Shed



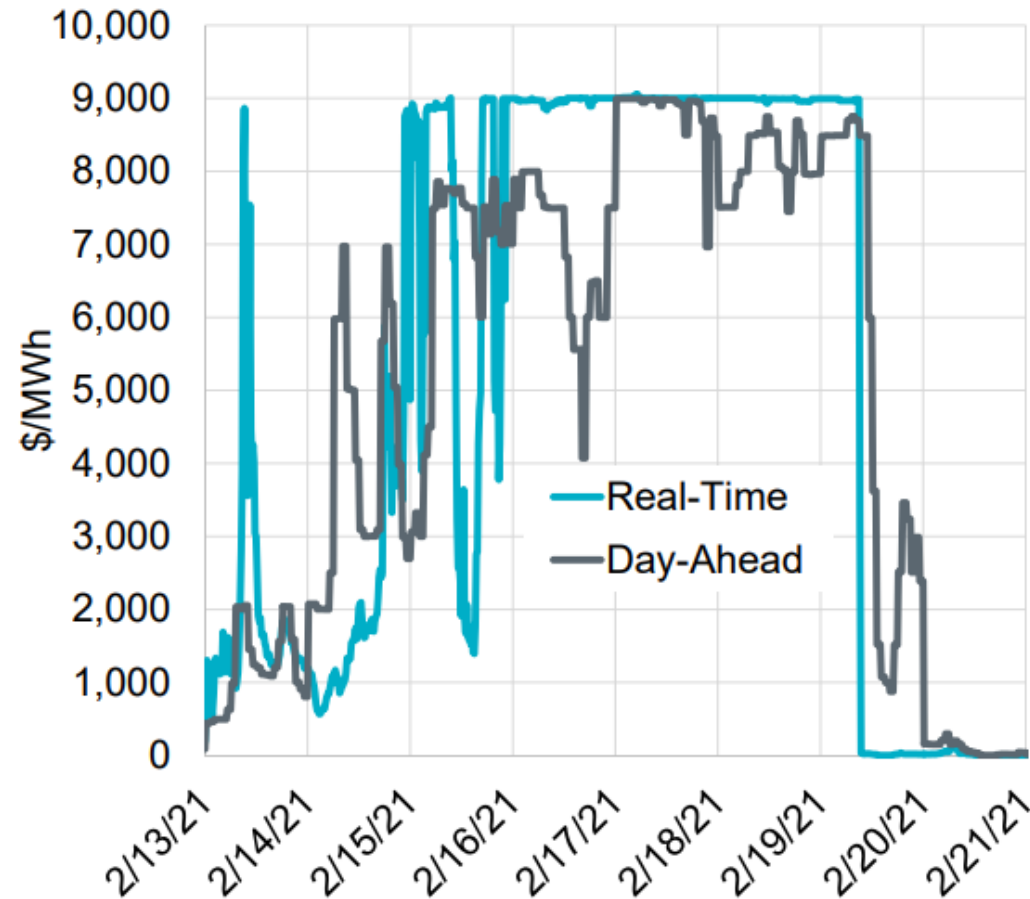
Available Generation shown is the total HSL of Online Resources, including Quick Starts in OFFQS. The total uses the current MW for Resources in Start-up, Shut-Down, and ONTEST.

Load Shed Ordered By Transmission Owner

Transmission Operator	% of MW
AEP Texas Central Company	8.7
Brazos Electric Power Cooperative Inc.	4.95
Brownsville Public Utilities Board	0.37
Bryan Texas Utilities	0.51
CenterPoint Energy Houston Electric LLC	24.83
City of Austin DBA Austin Energy	3.71
City of College Station	0.28
City of Garland	0.75
CPS Energy (San Antonio)	6.79
Denton Municipal Electric	0.48
GEUS (Greenville)	0.15
Lamar County Electric Cooperative Inc*	0.07
LCRA Transmission Services Corporation	5.96
Oncor Electric Delivery Company LLC	36.01
Rayburn Country Electric Cooperative Inc.	1.3
South Texas Electric Cooperative Inc.	2.52
Texas-New Mexico Power Company	2.62
ERCOT Total	100.00



Real-Time and Day-Ahead System-Wide Pricing



Average system-wide pricing
around the event relative to other
historical periods (in \$/MWh)

Date Range	Real-Time	Day-Ahead
2/14/21 2/19/21	\$6,579.59	\$6,612.23
January '21	\$20.79	\$21.36
February '20	\$18.27	\$17.74

This data is using the ERCOT Hub Average 345-kV Hub prices



