



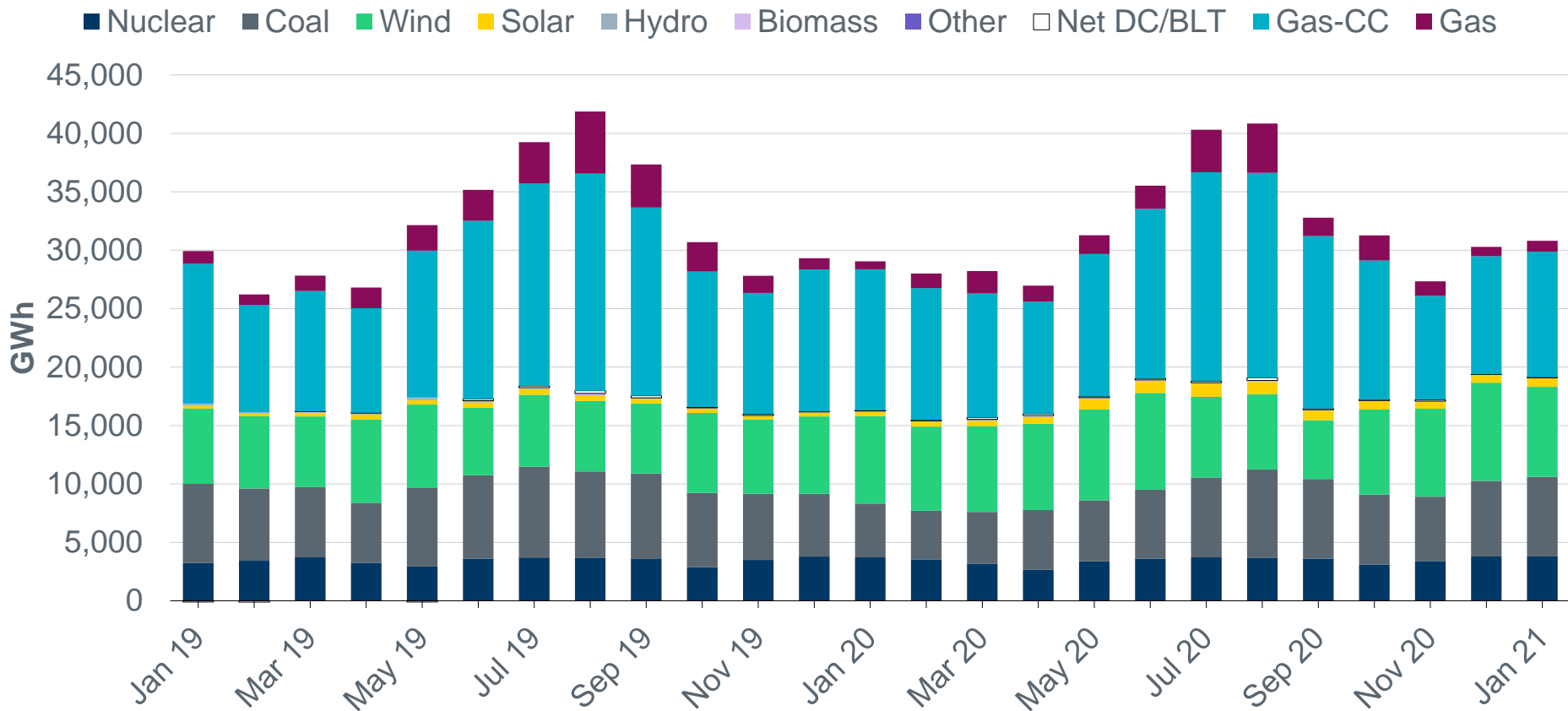
## ERCOT Monthly Operational Overview (January 2021)

ERCOT Public  
February 23, 2021

# Monthly Highlights

- ERCOT set a maximum peak demand of 58,598 MW\* in January 2021, which is 9,526 MW more than the January 2020 demand of 49,072 MW.
- ERCOT issued 3 notification:
  - 1 OCN for predicted freezing precipitation event for the Panhandle, West, North and Central areas of the ERCOT Region.
  - 1 OCN due to ERCOT modifying the PNHNDL Generic Transmission Constraint due to the current transmission outage topology.
  - 1 Advisory for delay in clearing DAM and posting of the DAM Solution.

# Monthly energy generation increased by 6.1% year-over-year to 30,808 GWh in January 2021, compared to 29,045 GWh in January 2020

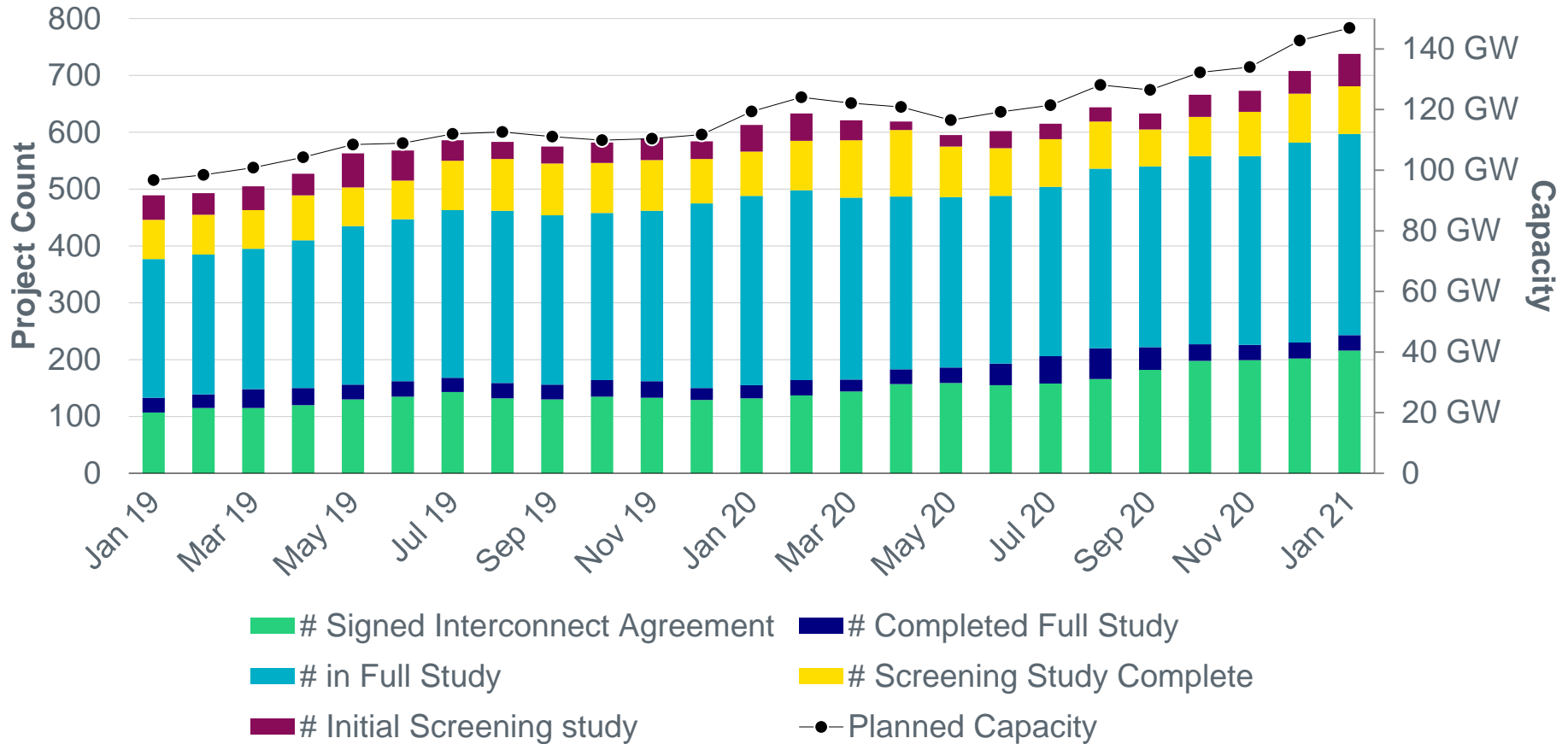


Data for latest two months are based on preliminary settlements.



# Generation Interconnection activity by project phase

(Excludes capacity associated with Projects designated as Inactive per Planning Guide Section 5.7.6)

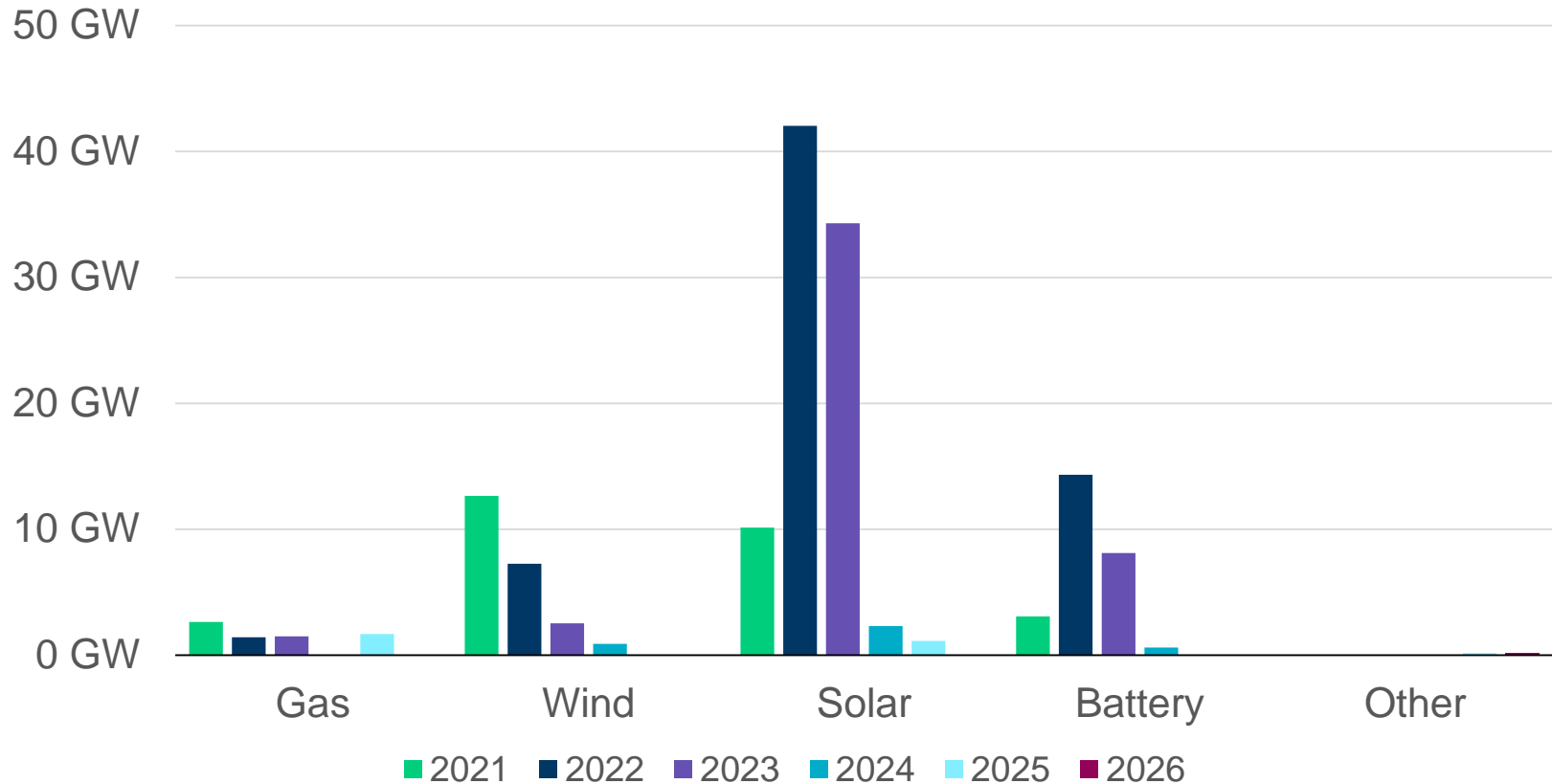


A break-out by fuel type can be found in the monthly Generator Interconnection Status (GIS) reports available on the ERCOT Resource Adequacy Page: <http://www.ercot.com/gridinfo/resource>



# Interconnection Queue Capacity by Fuel Type

Queue totals: Solar 90 GW (61.2%), Wind 23 GW (15.9%), Gas 7 GW (4.9%), Battery 26 GW (17.8%)  
(Excludes capacity associated with Projects designated as Inactive per Planning Guide Section 5.7.6)

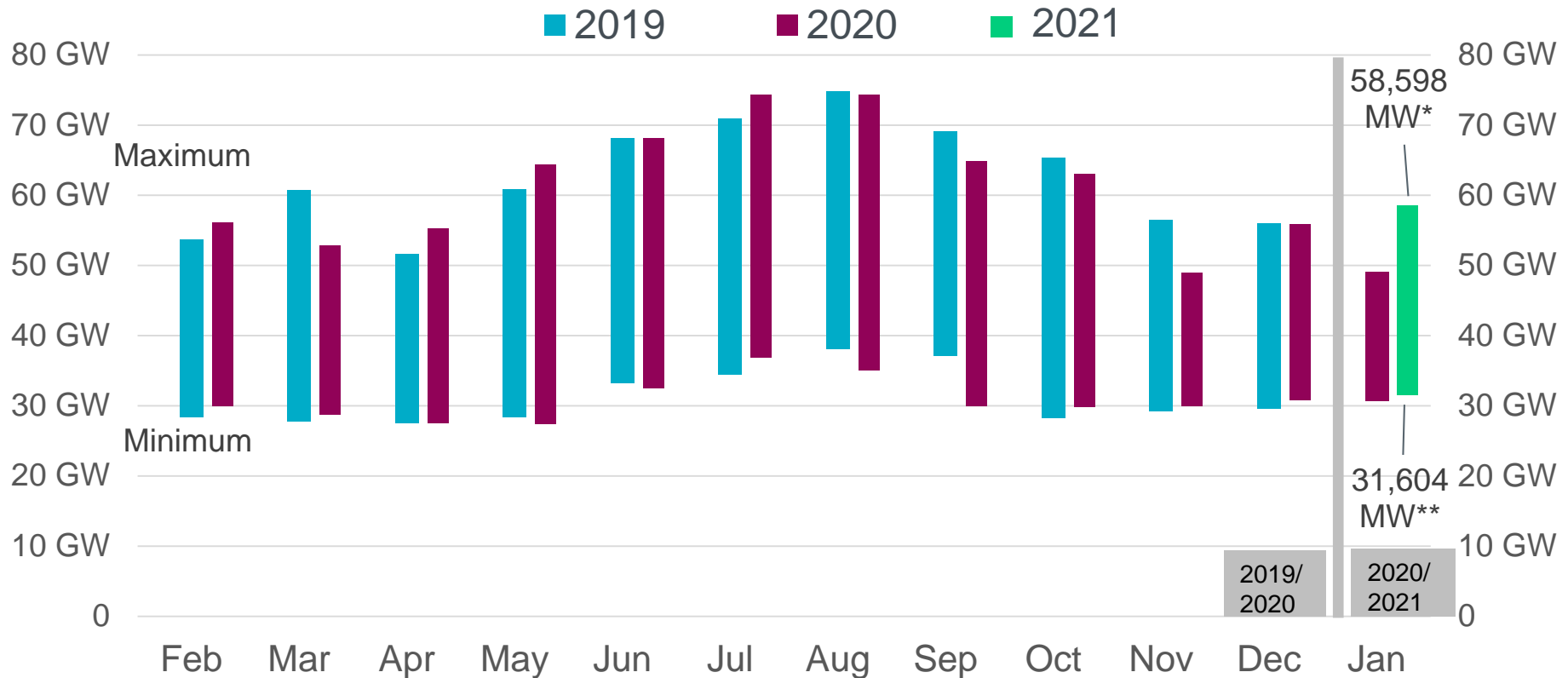


A break-out by zone can be found in the monthly Generator Interconnection Status (GIS) reports available on the ERCOT Resource Adequacy Page: <http://www.ercot.com/gridinfo/resource>

# Planning Summary

- ERCOT is currently tracking 738 active generation interconnection requests totaling 146,925 MW. This includes 89,896 MW of solar, 23,334 MW of wind, 26,107 MW of battery, and 7,224 MW of gas projects as of January 31, 2021.
- ERCOT is currently reviewing proposed transmission improvements with a total estimated cost of \$1,012.86 Million as of January 31, 2021.
- Transmission Projects endorsed in 2021 total \$106.1 Million as of January 31, 2021.
- All projects (in engineering, routing, licensing and construction) total approximately \$7.6 Billion as of October 1, 2020.
- Transmission Projects energized in 2020 total about \$1.20 Billion as of October 1, 2020.

# ERCOT set a maximum peak demand of 58,598 MW\* in January 2021, which is 9,526 MW more than the January 2020 demand of 49,072 MW



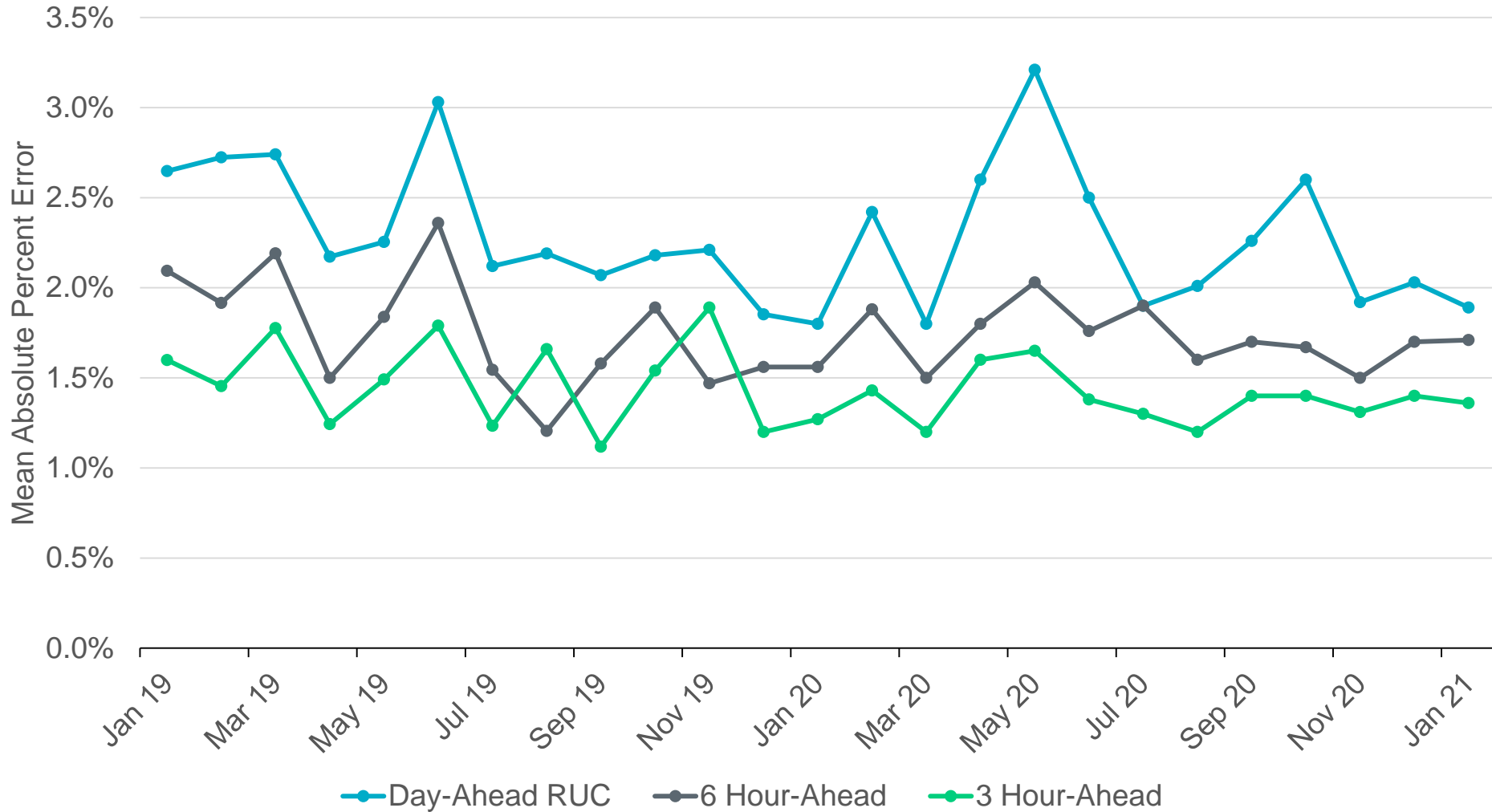
\*Based on the maximum net system hourly value from February release of Demand and Energy 2021 report.

\*\*Based on the minimum net system 15-minute interval value from February release of Demand and Energy 2021 report.

Data for latest two months are based on preliminary settlements.



# Mid-Term Load Forecast Performance

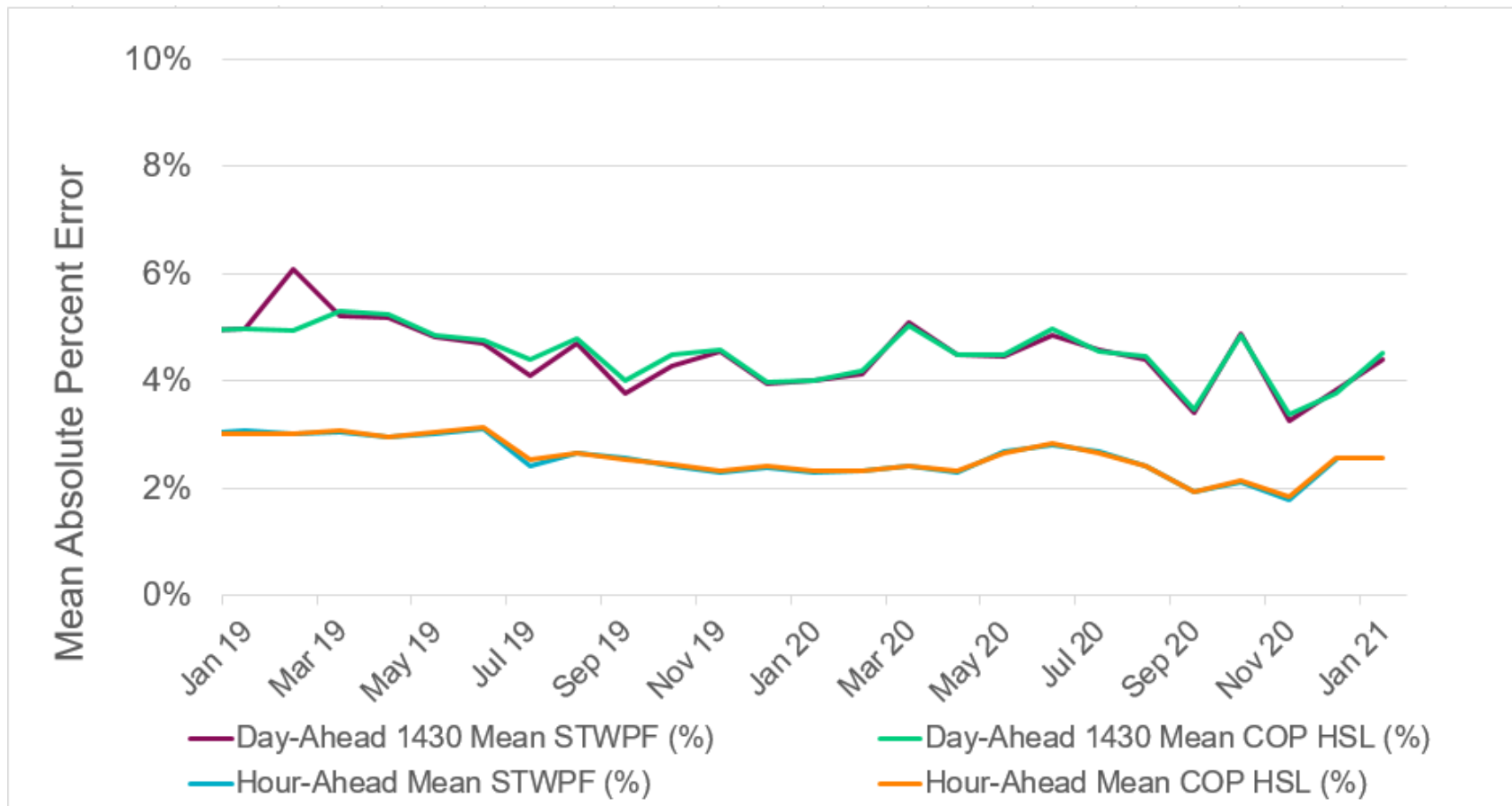


The Mid-Term Load Forecast is an hourly forecast that looks 7 days into the future





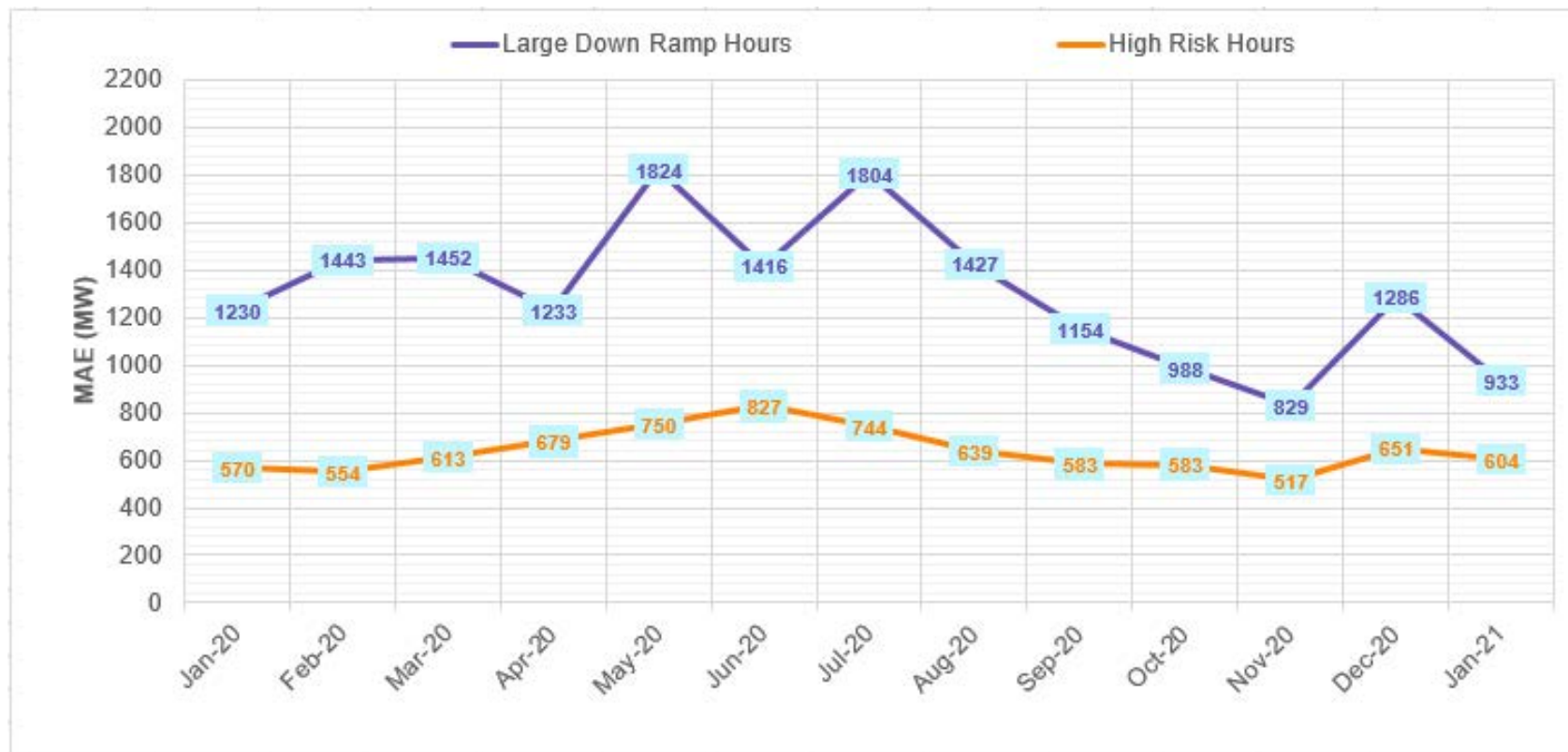
# Wind Forecast Performance



The Short-Term Wind Power Forecast (STWPF) is an ERCOT produced hourly 50% probability of exceedance forecast of the generation in MWh per hour from each Wind Generation Resource.

# Hour-Ahead Wind Forecast Performance

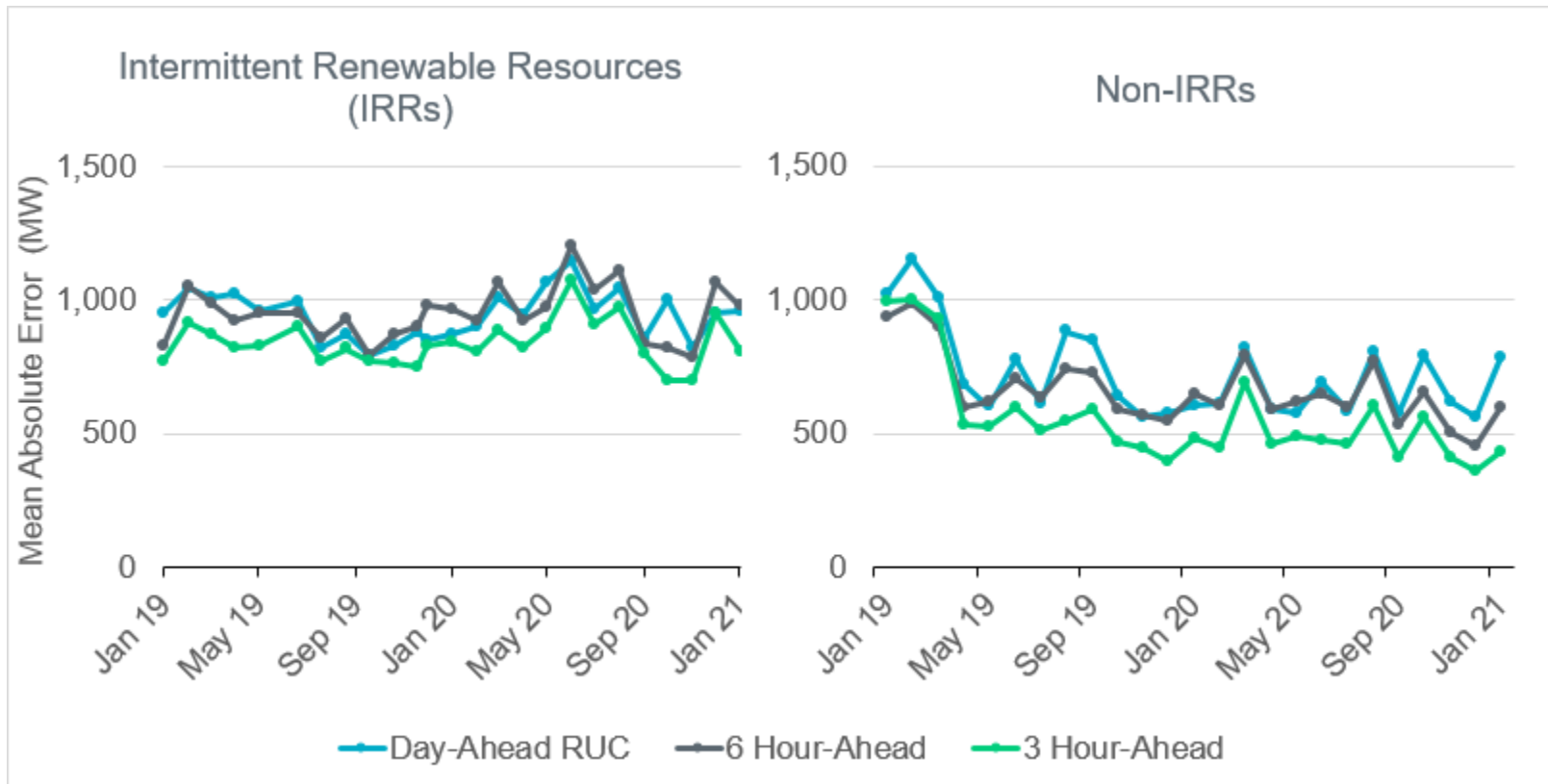
Hour-Ahead Mean Absolute Error (MAE) During Large Down Ramp (> 2000 MW) and High Risk Hours\*



\*ERCOT's performance based payment structure for Wind Forecasts with both vendors incentivizes improvements in forecast performance during hours that are of more importance to operational reliability. This approach is a paradigm shift from the "traditional" methodology of measuring wind forecast performance as a singular monthly average metric.

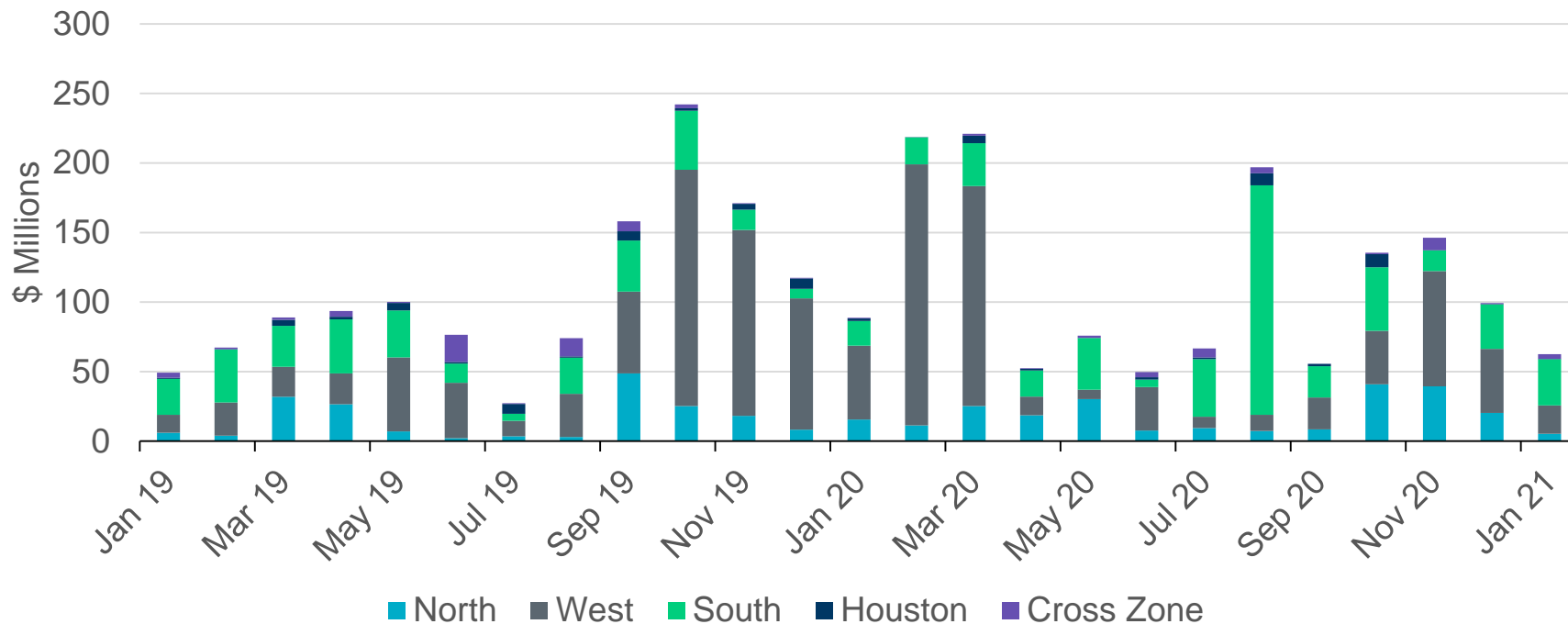
Forecast performance during large down ramp (wind ramp > 2000 MW) hours and high risk hours (historic risk of load ramping up and wind ramping down is high) is focused upon. Note that for the purposes of forecast performance measurement every hour in a month is classified as either a large down ramp hour or a high risk hour or something else. Any hour that is a high risk hour wherein a large down ramp was experienced will be tracked as a large down ramp hour.

# Current Operating Plan (COP) Performance



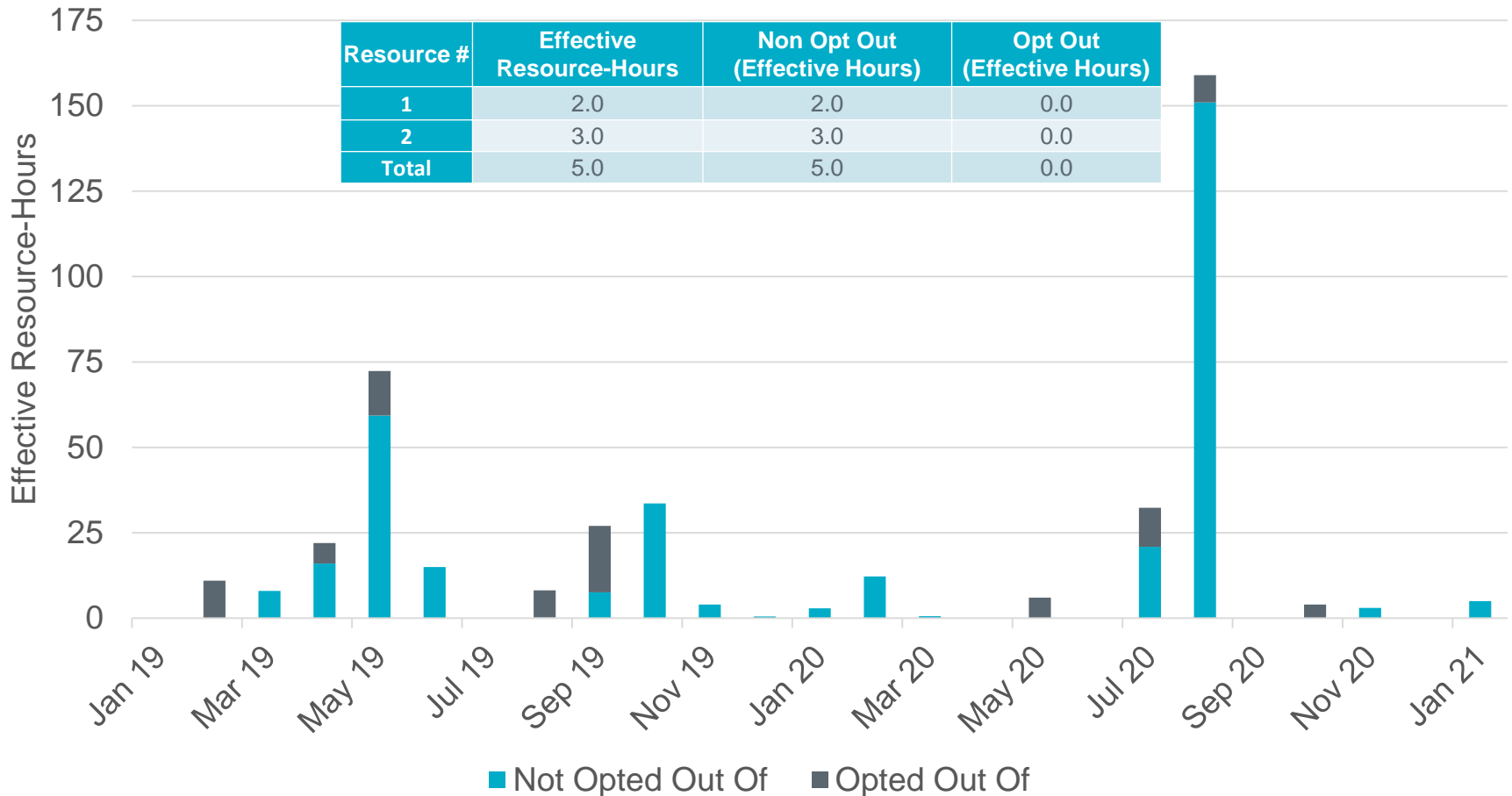
- COPs for IRRs are derived from wind and solar forecasts from ERCOT with any adjustments from Qualified Scheduling Entities.
- The installed capacity of approved Wind Units is 31,403 MW (as of January 31, 2021).
- The installed capacity of approved Solar Units is 6,035 MW (as of January 31, 2021).

# Real-Time Congestion Rent by Zone



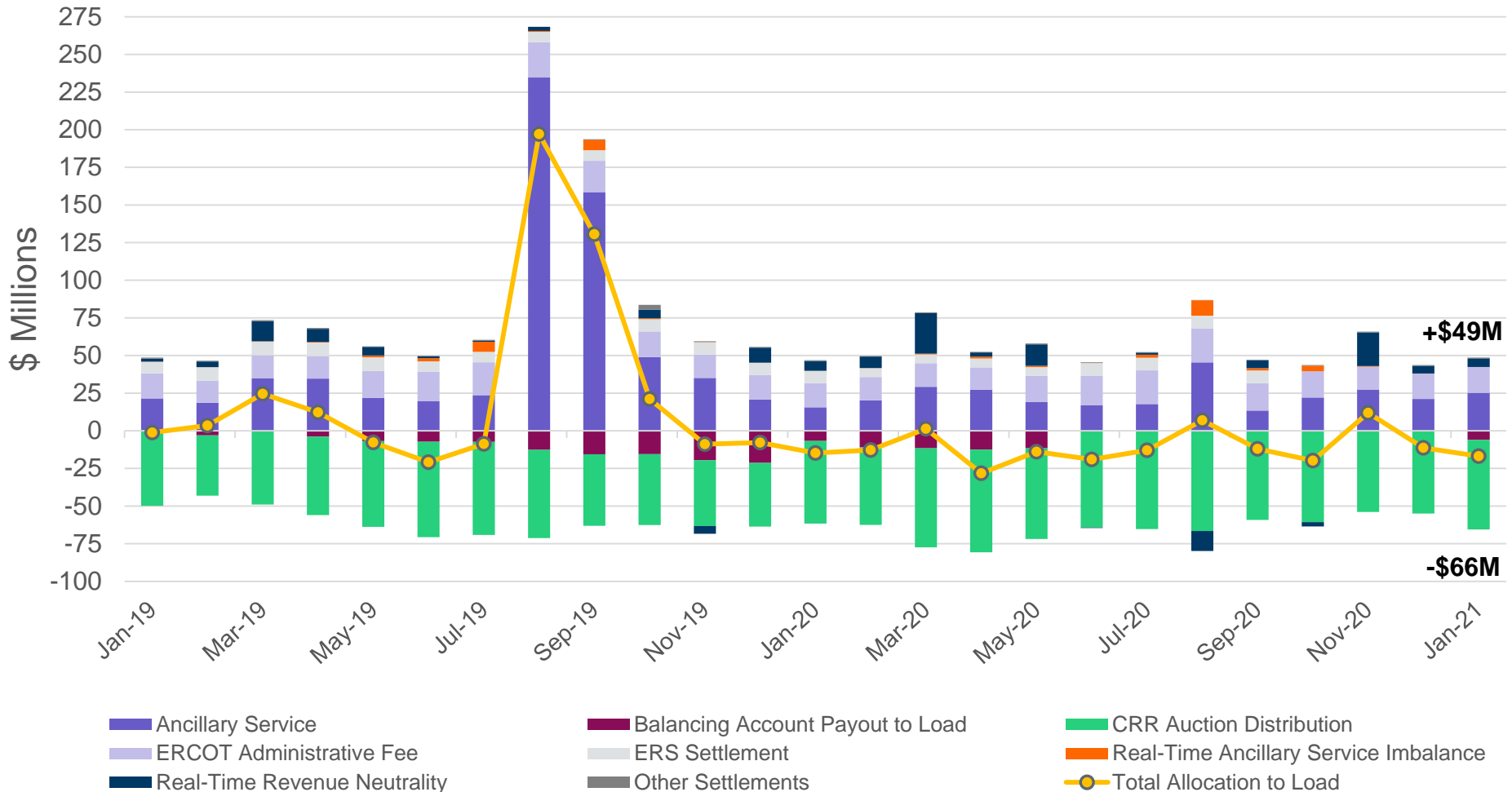
- The congestion rent for January decreased in the North Zone and West Zone when compared to December. The most significant constraints for January are BASE CASE:PNHNDL in the West Zone and DHILMAR5: 292T303\_1 in the South Zone.
- Congestion Rent is determined using the shadow prices and MW flows for individual constraints in SCED as well as the length in time of SCED intervals.
- The “Cross Zone” category consists of cases in which the substations on either end of the constraint are in different zones.

# Two Resources were Committed in January for Congestion



“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.

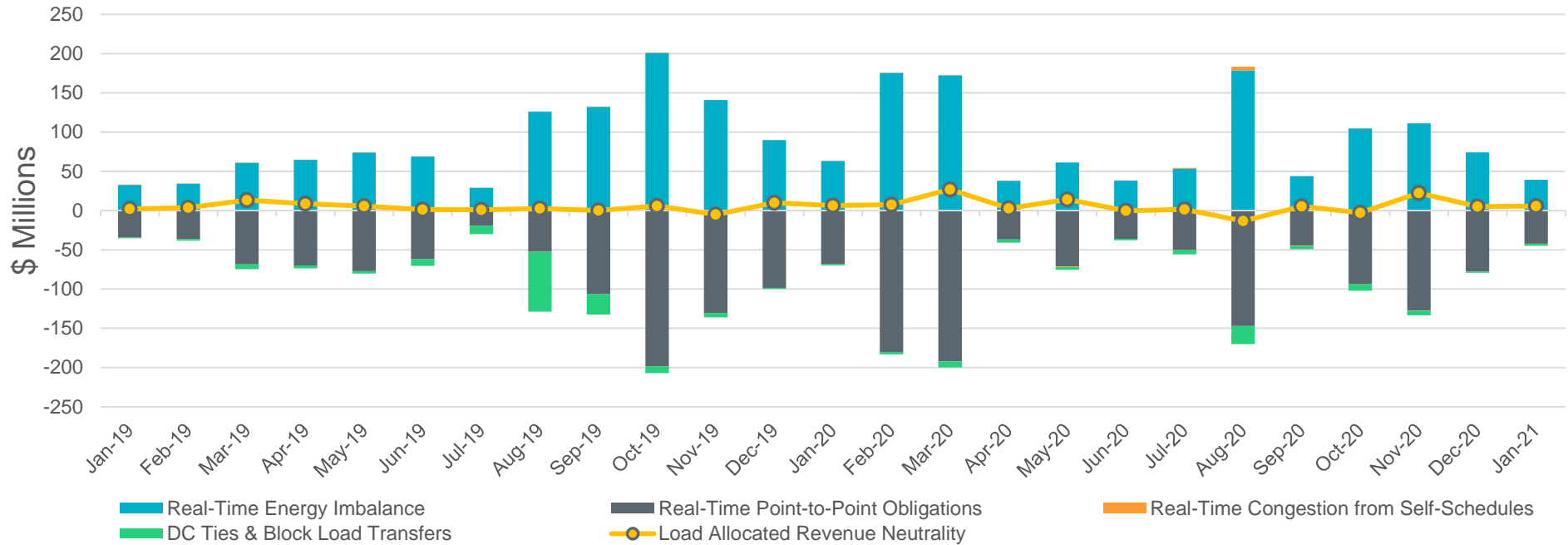
# Net Allocation to Load in January 2021 was (\$16.9) Million



This information is available in tabular form in the Settlement Stability Report presented quarterly to the [Wholesale Market Subcommittee](#)



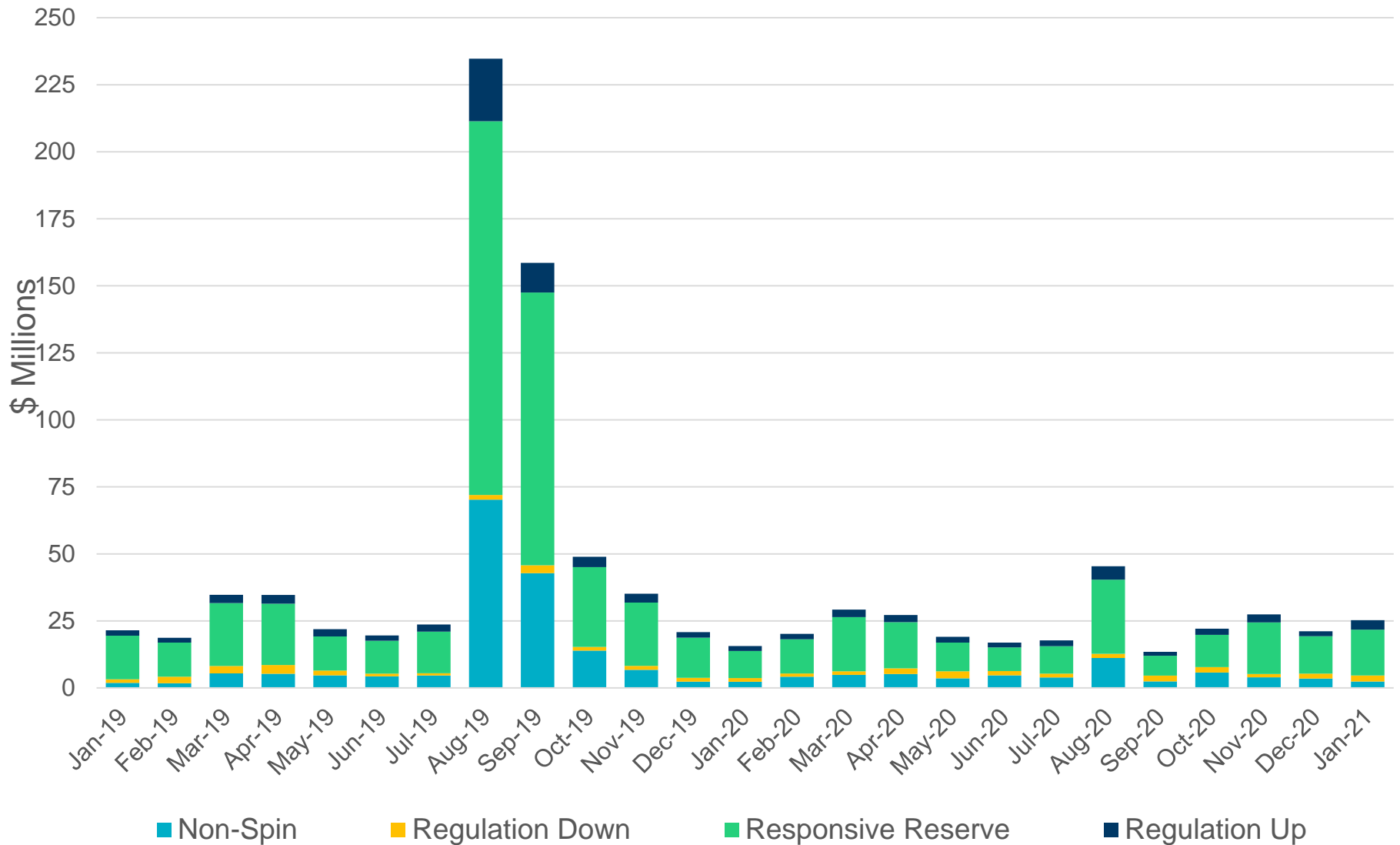
# Real-Time Revenue Neutrality Allocated to Load was \$5.68M for January 2021



January 2021 (\$M)	
Real-Time Energy Imbalance	\$39.31
Real-Time Point-to-Point Obligation	(\$42.21)
Real-Time Congestion from Self-Schedules	(\$0.15)
DC Tie & Block Load Transfer	(\$2.62)
<b>Load Allocated Revenue Neutrality</b>	<b>\$5.68</b>

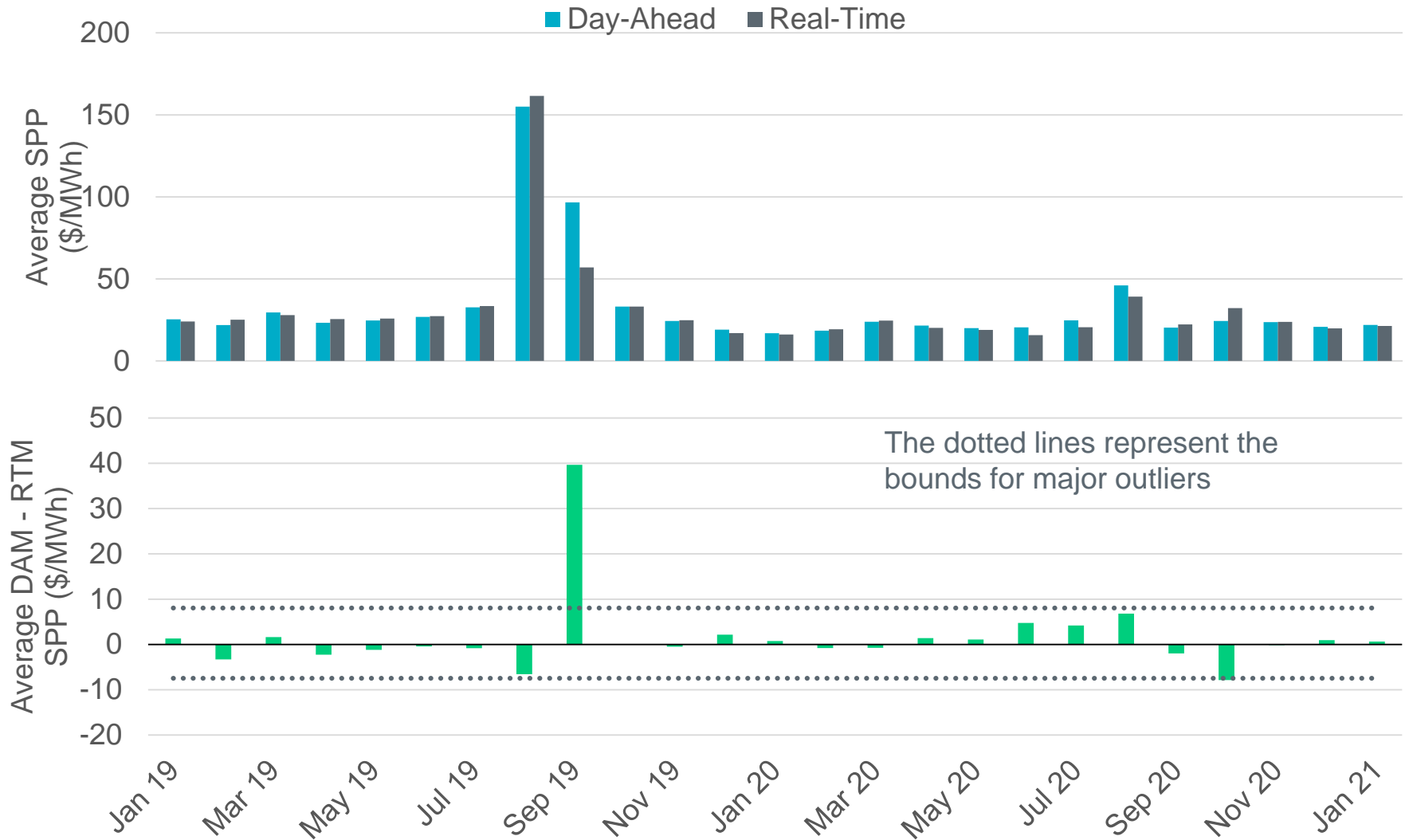


# Ancillary Services for January 2021 totaled \$25.26M





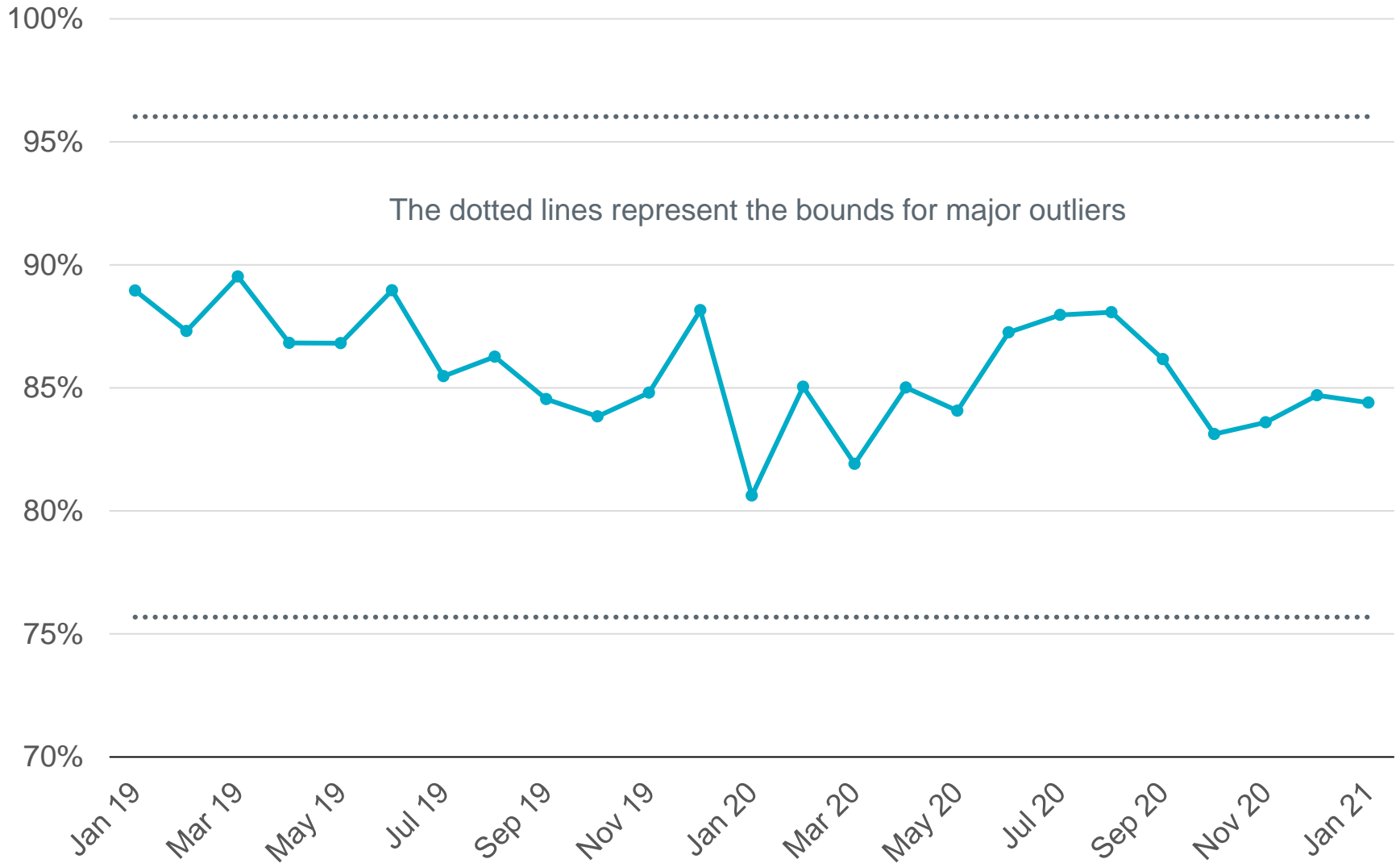
# Day-Ahead and Real-Time Market Price Differences



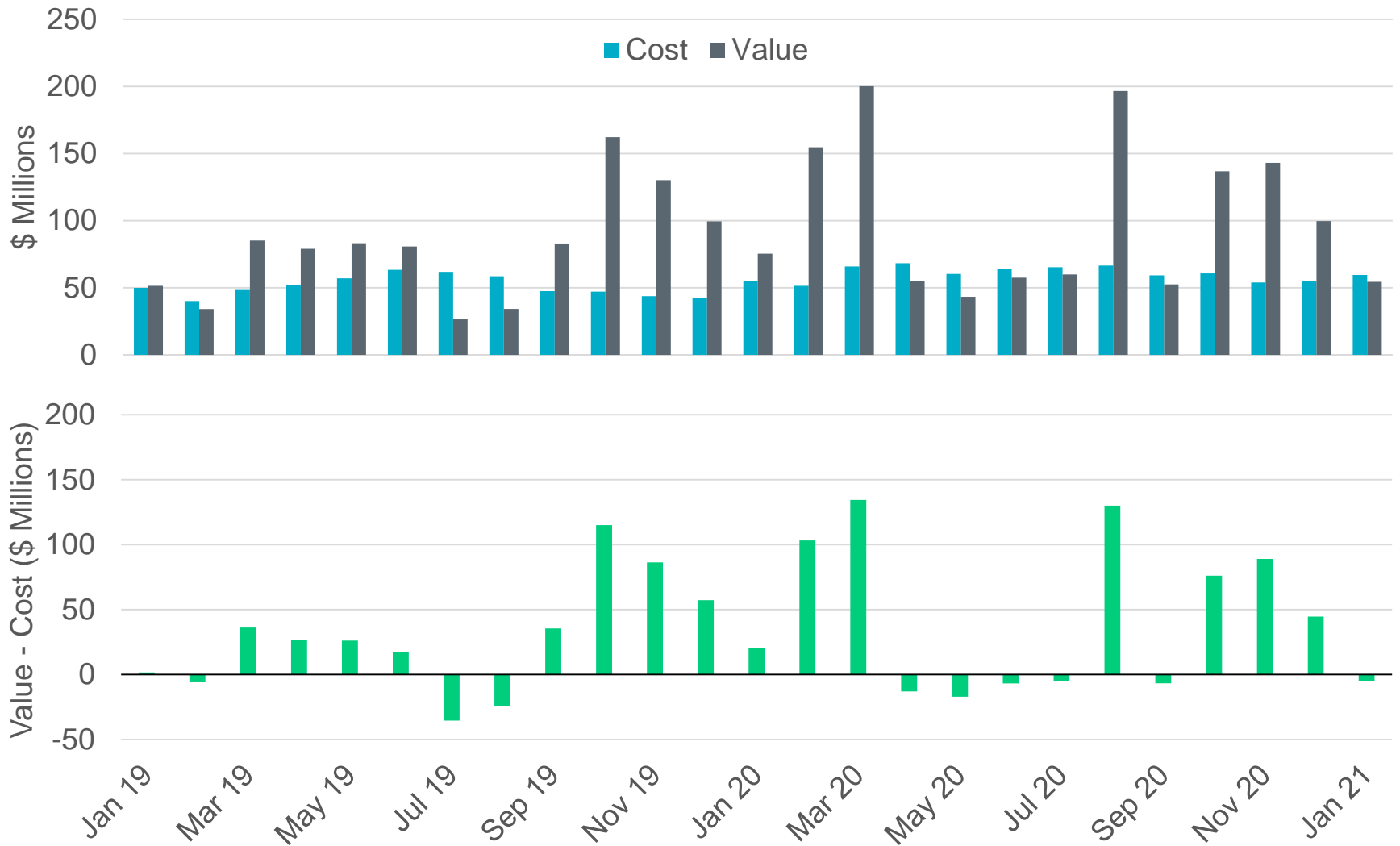
\*Averages are weighted by Real-Time Market Load



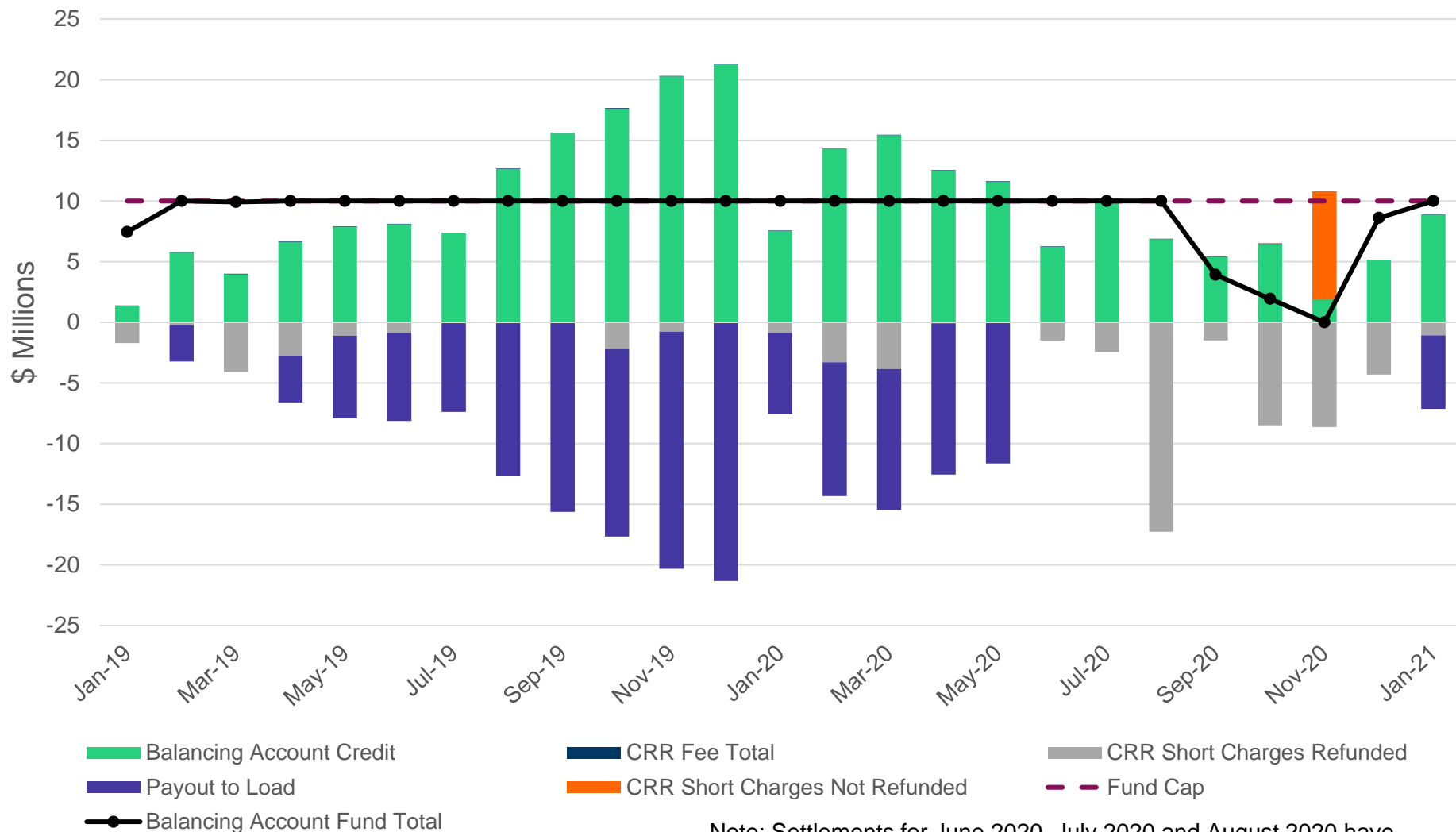
# Percentage of Real-Time Load Transacted in the Day-Ahead Market



# CRR Value and Cost Differences



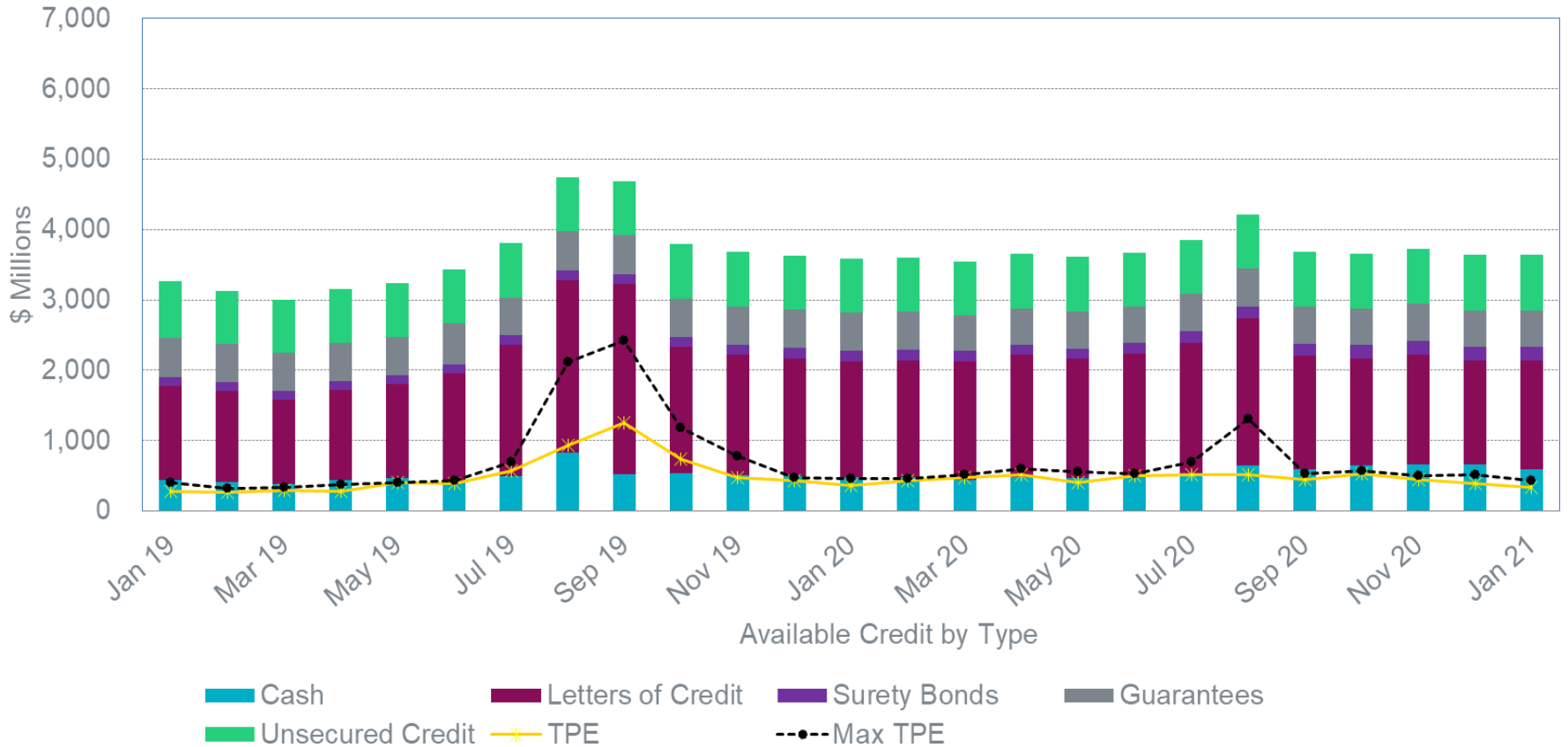
# The CRR Balancing Account was fully funded and excess amounts were allocated to Load



Note: Settlements for June 2020, July 2020 and August 2020 have been adjusted due to DAM price corrections.



# Available Credit by Type Compared to Total Potential Exposure (TPE)



\*Numbers are as of month end except for Max TPE



# Retail Transaction Volumes – Summary – January 2021

Transaction Type	Year-To-Date		Transactions Received	
	January 2021	January 2020	January 2021	January 2020
Switches	110,245	78,720	110,245	78,720
Acquisitions	0	0	0	0
Move - Ins	220,388	227,645	220,388	227,645
Move - Outs	100,157	106,727	100,157	106,727
Continuous Service Agreements (CSA)	22,021	60,894	22,021	60,894
Mass Transitions	0	0	0	0
<b>Total</b>	<b>452,811</b>	<b>473,986</b>	<b>452,811</b>	<b>473,986</b>