



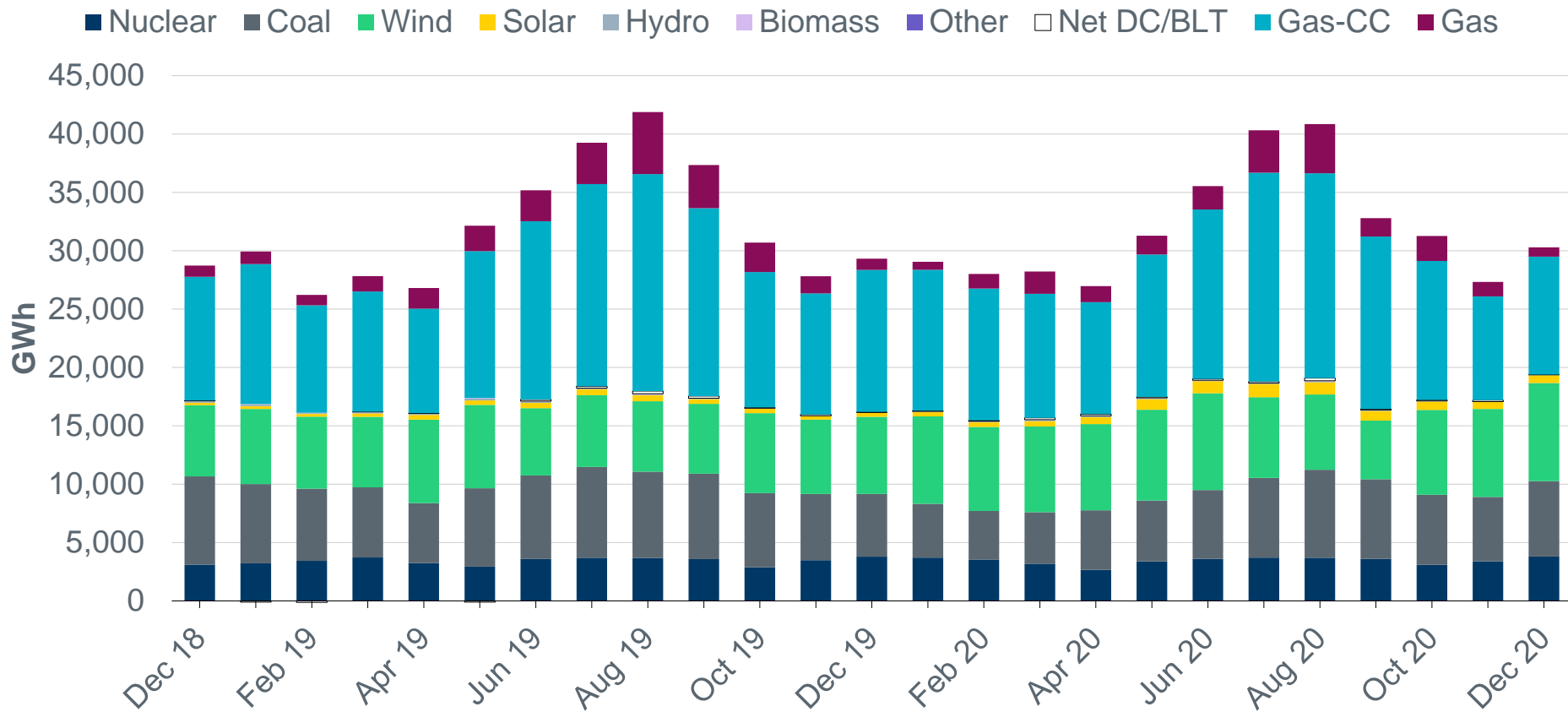
ERCOT Monthly Operational Overview (December 2020)

ERCOT Public
January 19, 2021

Monthly Highlights

- ERCOT set a maximum peak demand of 55,904 MW* in December 2020, which is 176 MW less than the December 2019 demand of 56,080 MW.
- ERCOT issued 1 notification:
 - 1 OCN due to predicted freezing precipitation event for the Panhandle, North and West areas.

Monthly energy generation increased by 3.3% year-over-year to 30,292 GWh in December 2020, compared to 29,323 GWh in December 2019

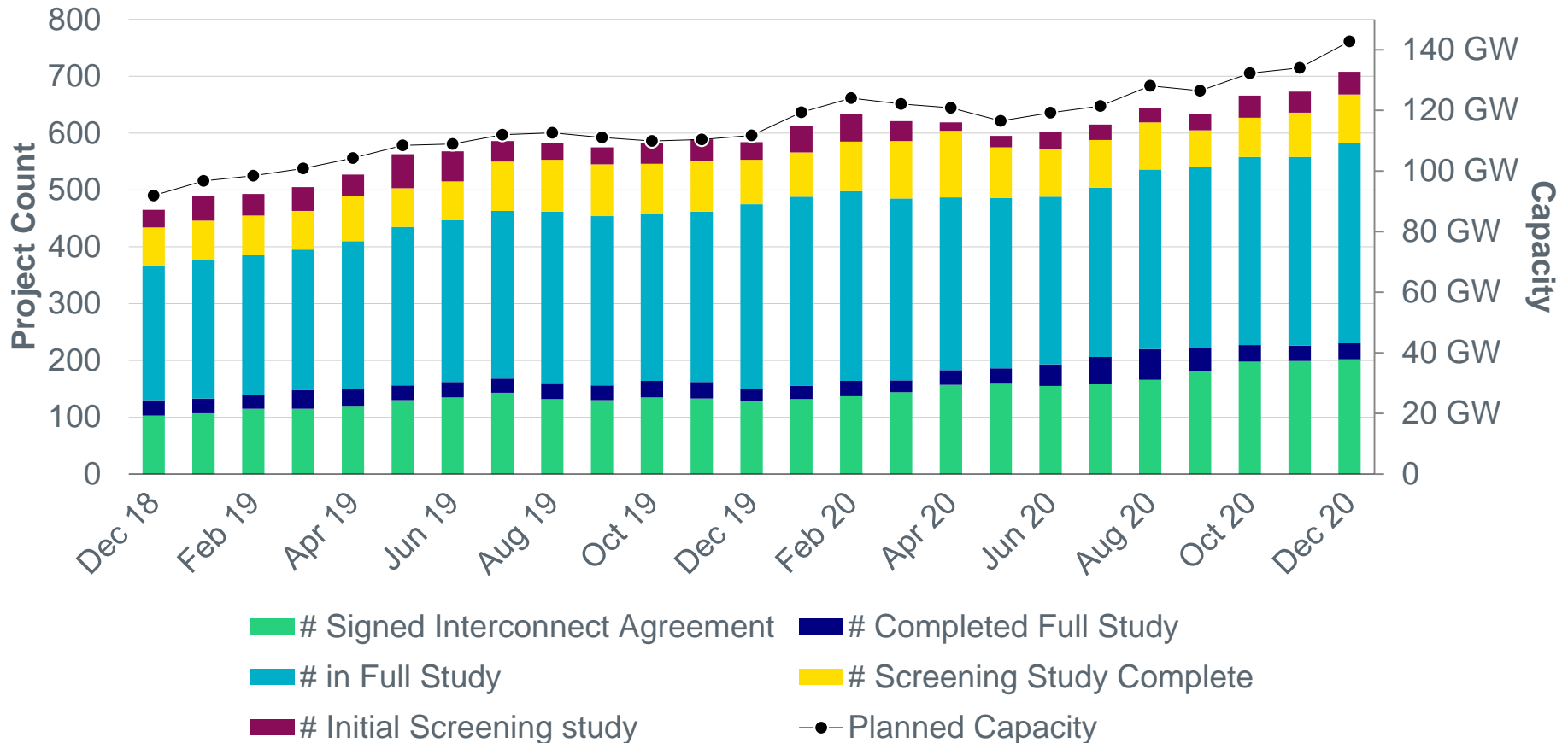


Data for latest two months are based on preliminary settlements.



Generation Interconnection activity by project phase

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

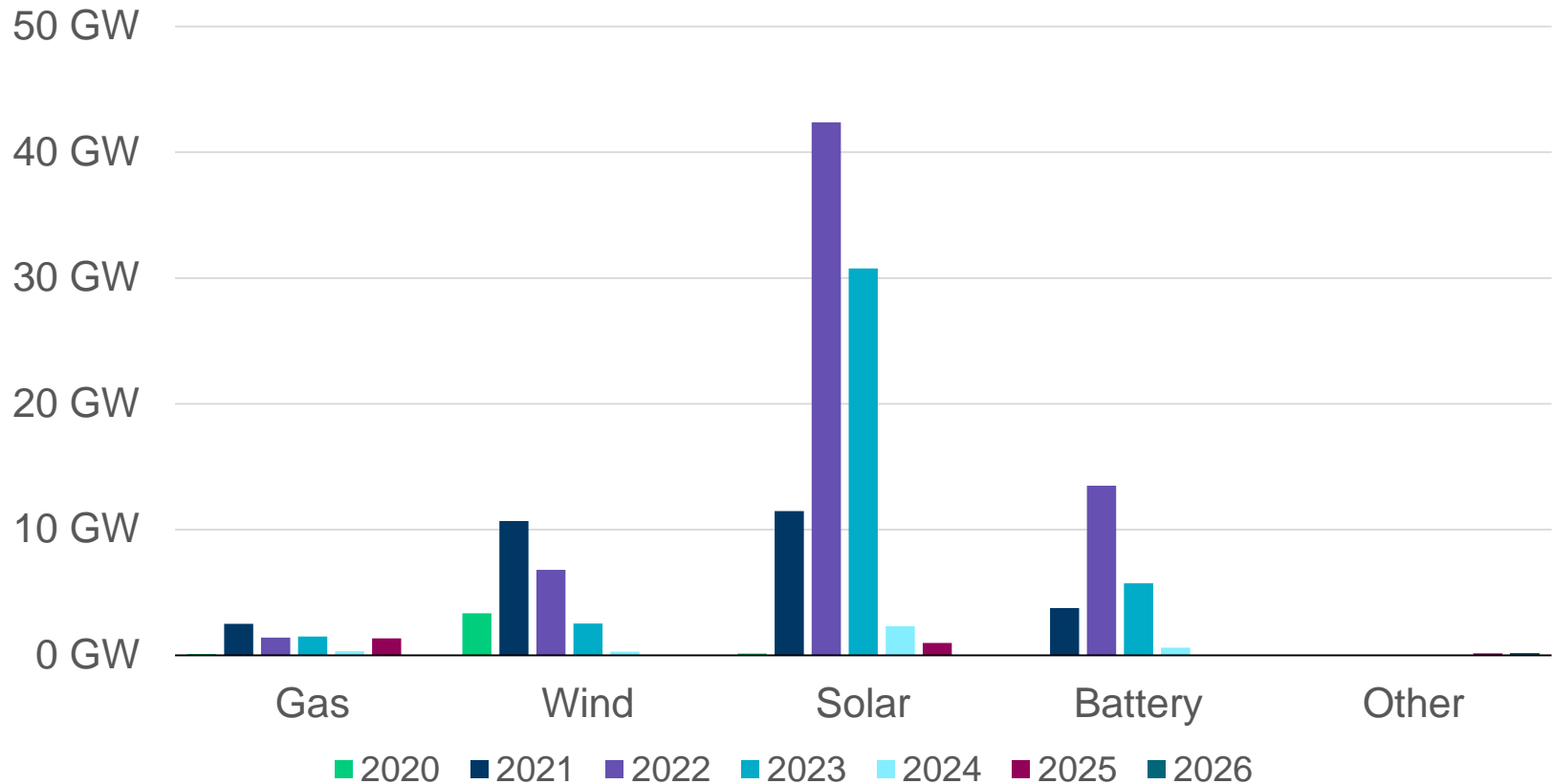


A break-out by fuel type can be found in the monthly Generator Interconnection Status (GIS) reports available on the ERCOT Resource Adequacy Page: <http://www.ercot.com/gridinfo/resource>



Interconnection Queue Capacity by Fuel Type

Queue totals: Solar 88 GW (61.7%), Wind 24 GW (16.5%), Gas 7 GW (5.0%), Battery 24 GW (16.5%)
(Excludes capacity associated with Projects designated as Inactive per Planning Guide Section 5.7.6)

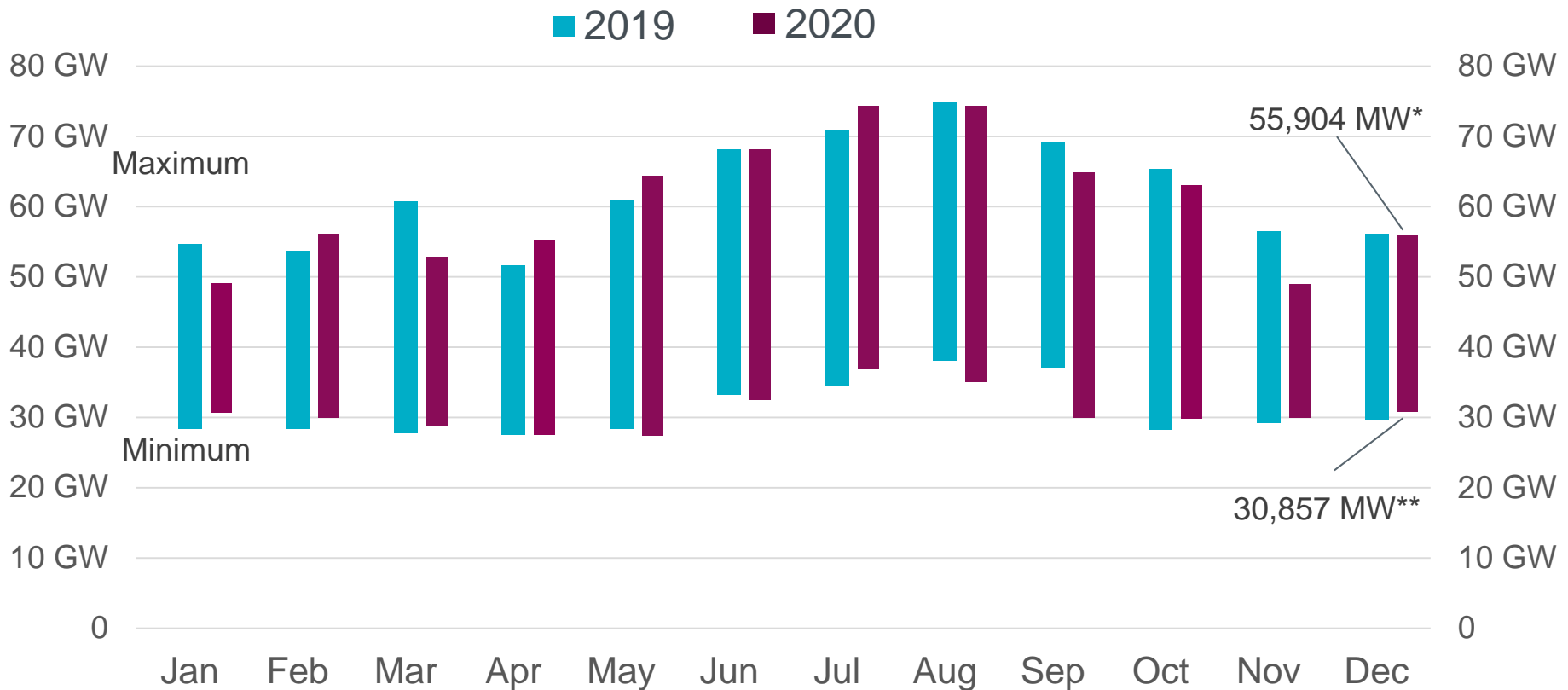


A break-out by zone can be found in the monthly Generator Interconnection Status (GIS) reports available on the ERCOT Resource Adequacy Page: <http://www.ercot.com/gridinfo/resource>

Planning Summary

- ERCOT is currently tracking 708 active generation interconnection requests totaling 142,743 MW. This includes 88,032 MW of solar, 23,620 MW of wind, 23,550 MW of battery, and 7,179 MW of gas projects as of December 31, 2020.
- ERCOT is currently reviewing proposed transmission improvements with a total estimated cost of \$1,112.96 Million as of December 31, 2020.
- Transmission Projects endorsed in 2020 total \$1,043.29 Million as of December 31, 2020.
- 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 55,904 MW* in December 2020, which is 176 MW less than the December 2019 demand of 56,080 MW



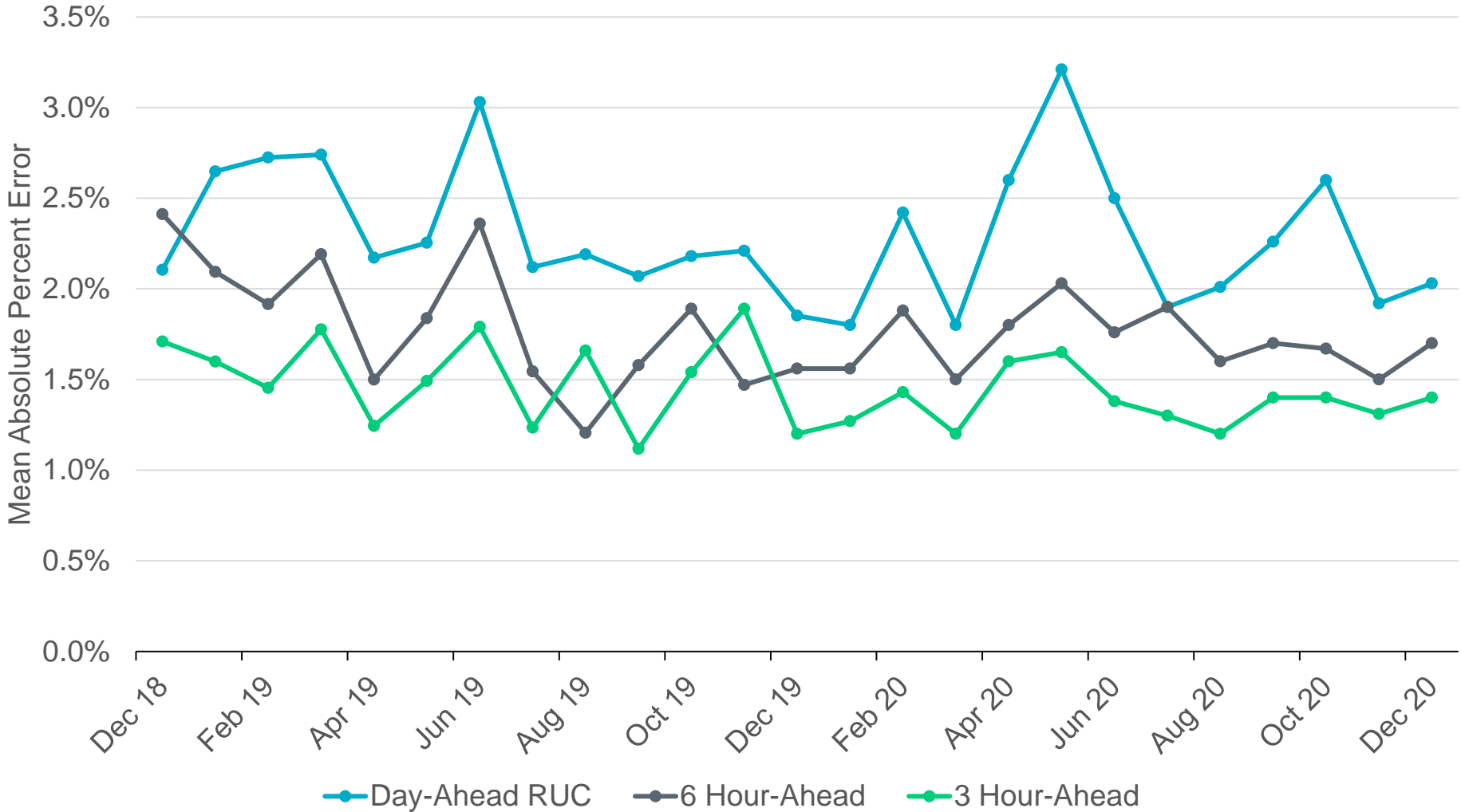
*Based on the maximum net system hourly value from January release of Demand and Energy 2020 report.

**Based on the minimum net system 15-minute interval value from January release of Demand and Energy 2020 report.

Data for latest two months are based on preliminary settlements.



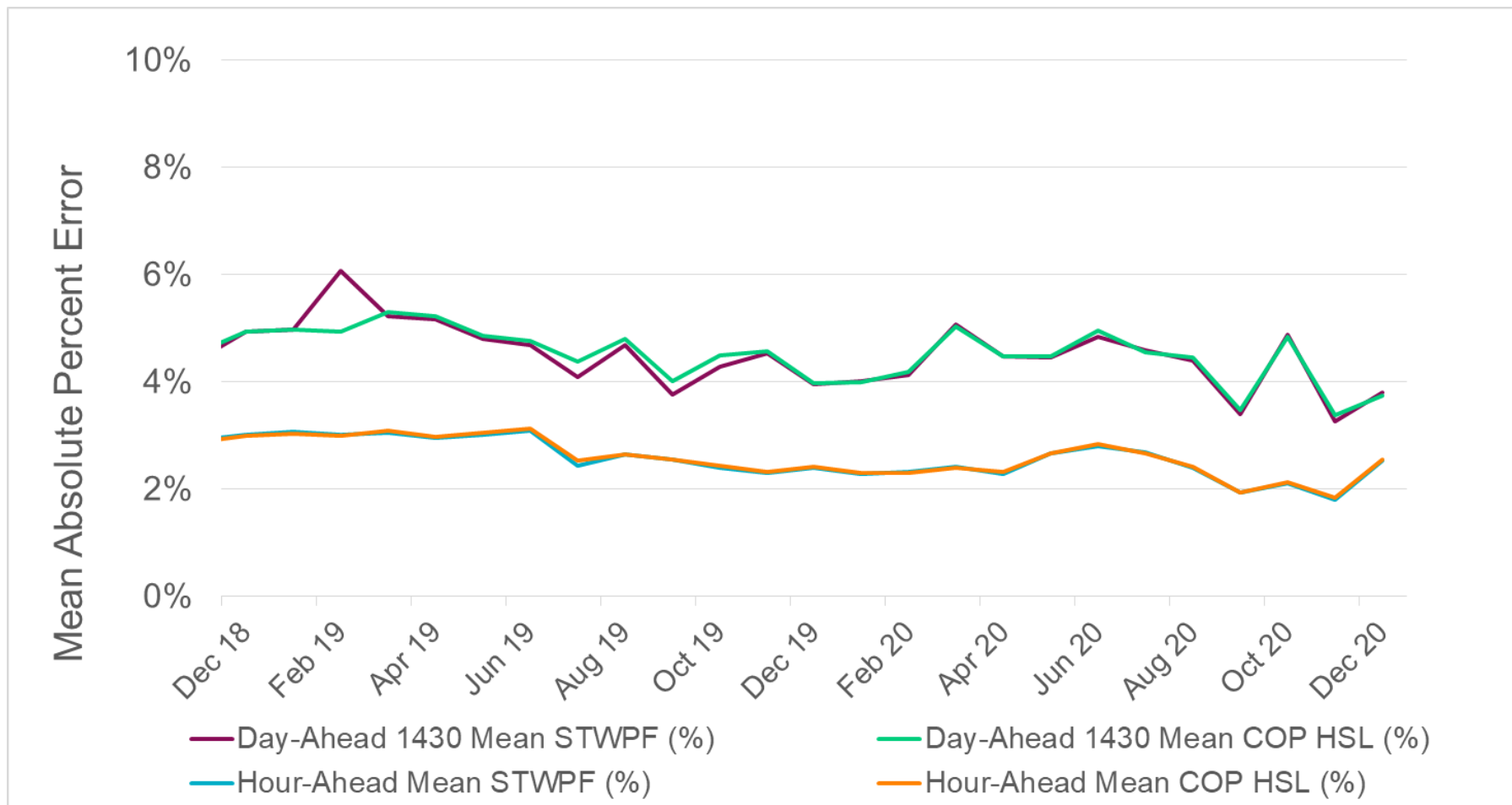
Mid-Term Load Forecast Performance



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



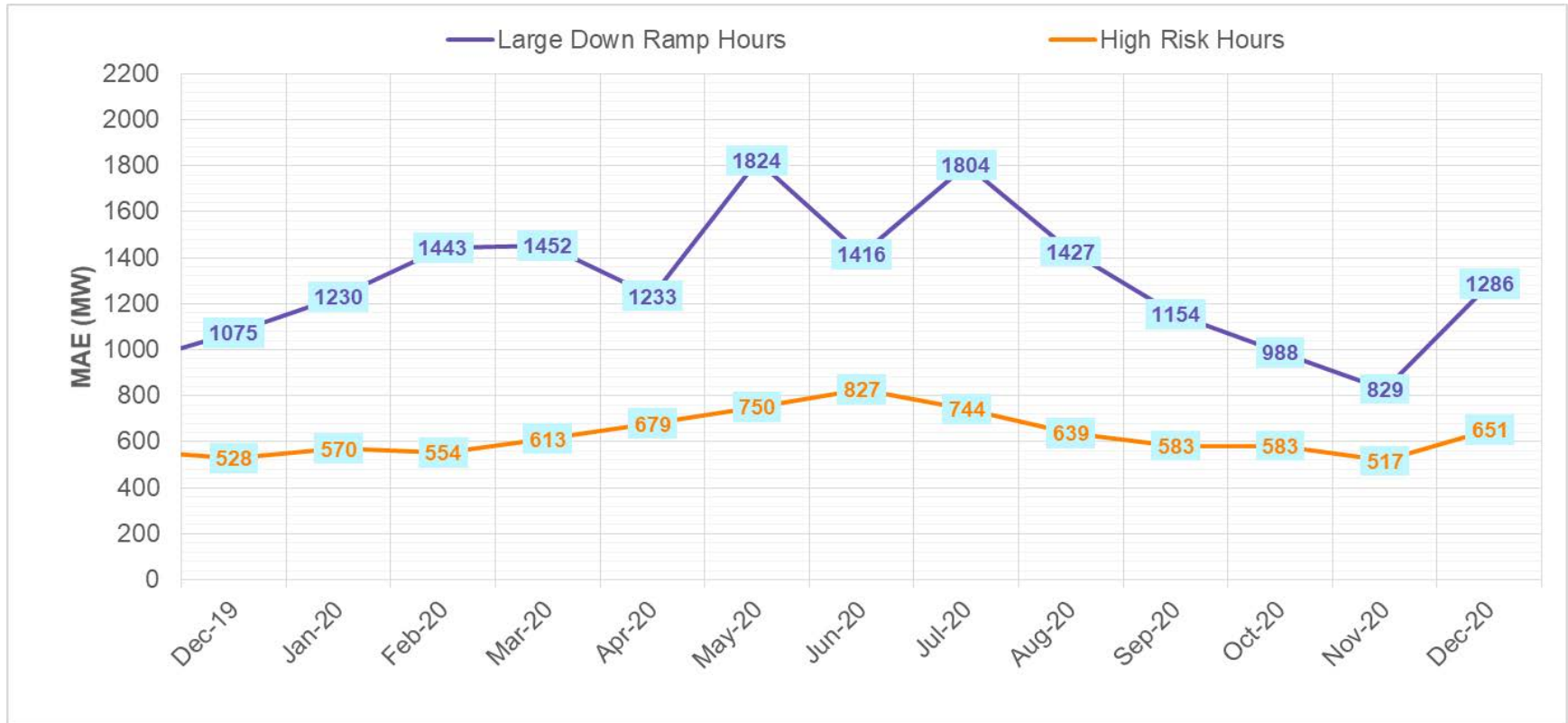
Wind Forecast Performance



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

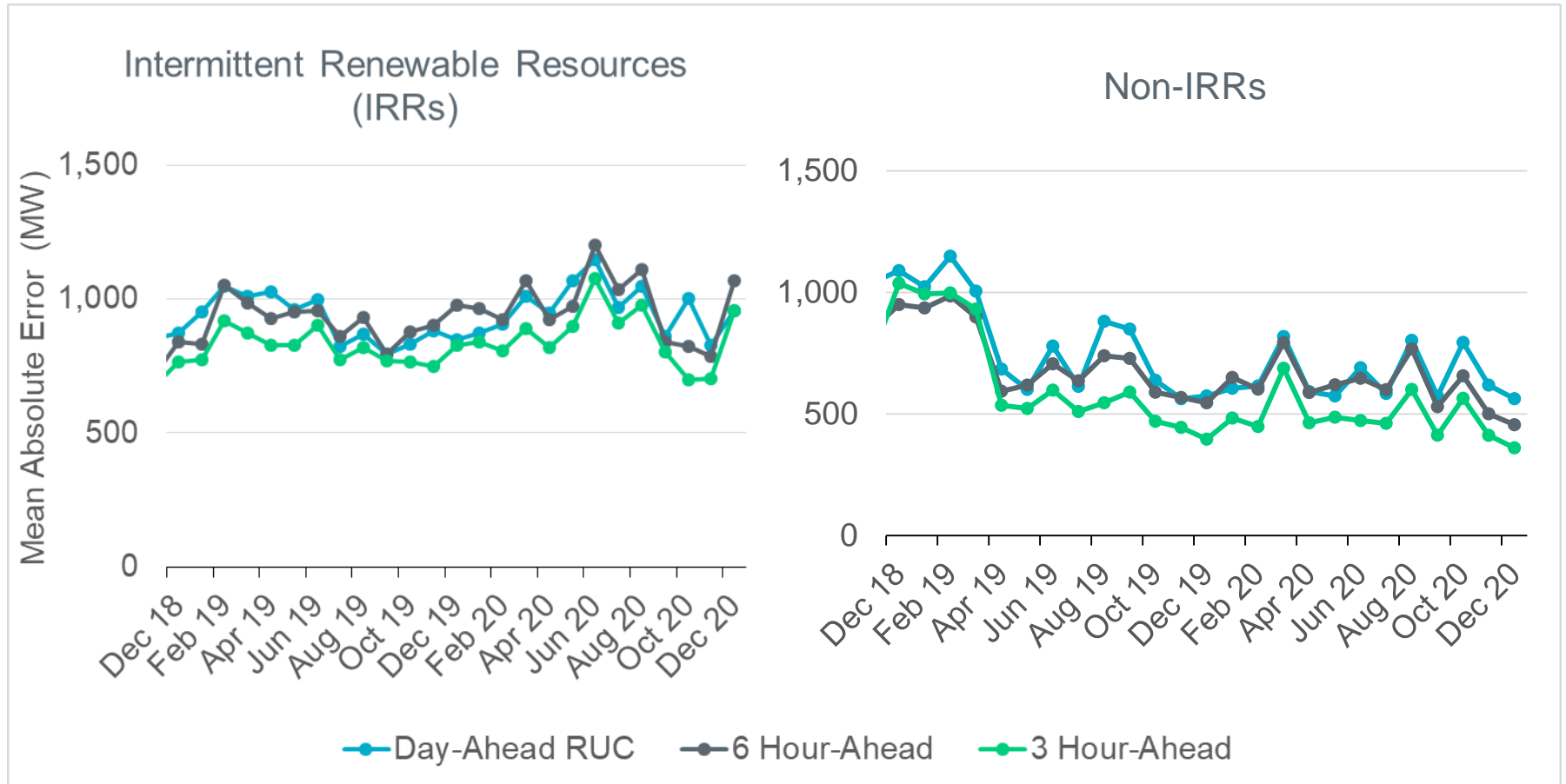
Hour-Ahead Mean Absolute Error (MAE) During Large Down Ramp (> 2000 MW) and High Risk Hours*



*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.

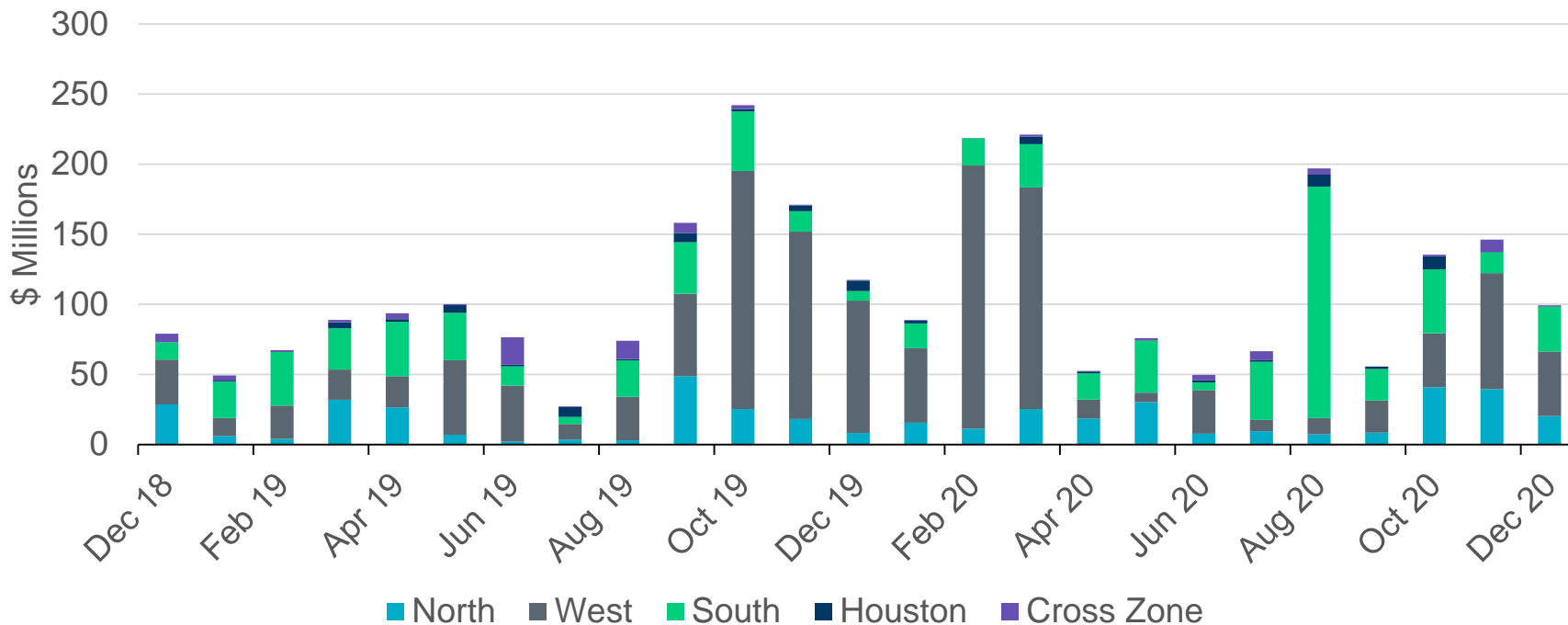
Forecast performance during large down ramp (wind ramp > 2000 MW) hours and high risk hours (historic risk of load ramping up and wind ramping down is high) is focused upon. Note that for the purposes of forecast performance measurement every hour in a month is classified as either a large down ramp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



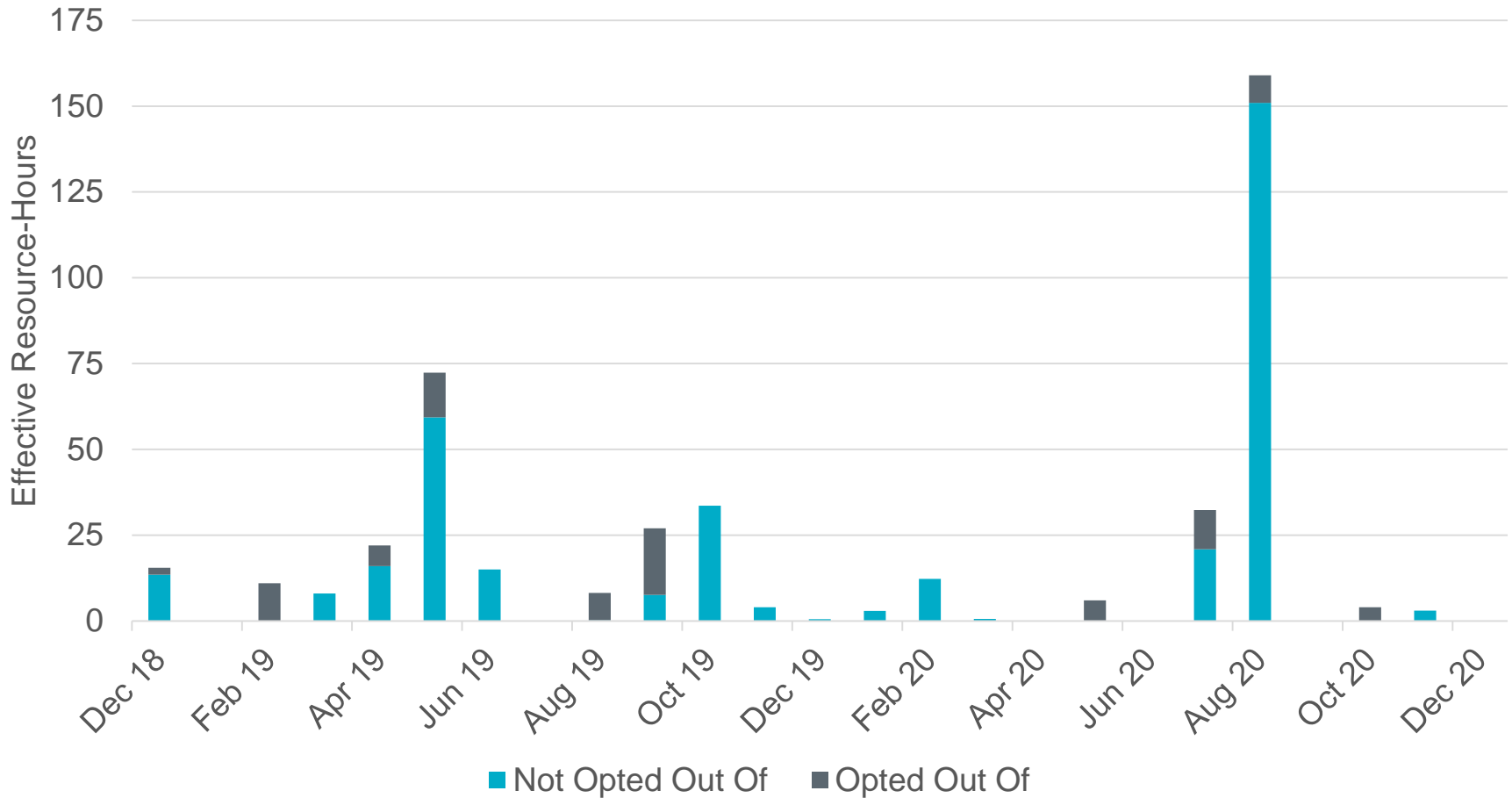
- The installed capacity of approved Wind Units is 31,090 MW (as of December 31, 2020).
- The installed capacity of approved Solar Units is 5649 MW (as of December 31, 2020).

Real-Time Congestion Rent by Zone



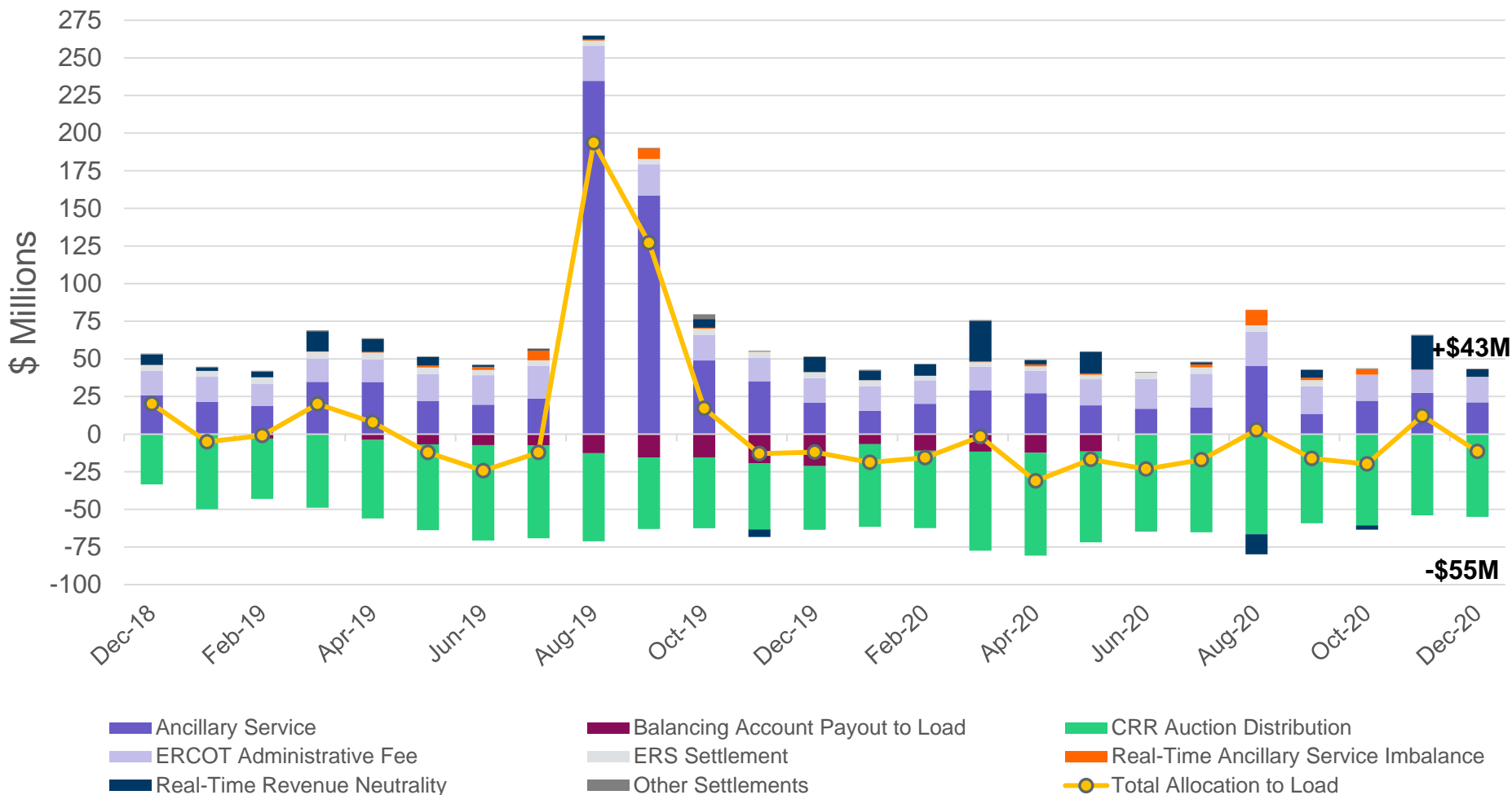
- The congestion rent for December decreased in the North Zone and West Zone and increased in the South Zone when compared to November. The most significant constraints for December are SHACPB38:LYNX_TOMBST1_1 and BASE CASE:PNHNDL in the West Zone and DCRLLSW5:588_A_1 in the North Zone.
- Congestion 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.

Zero Resources Were Committed Through RUC in December



“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.

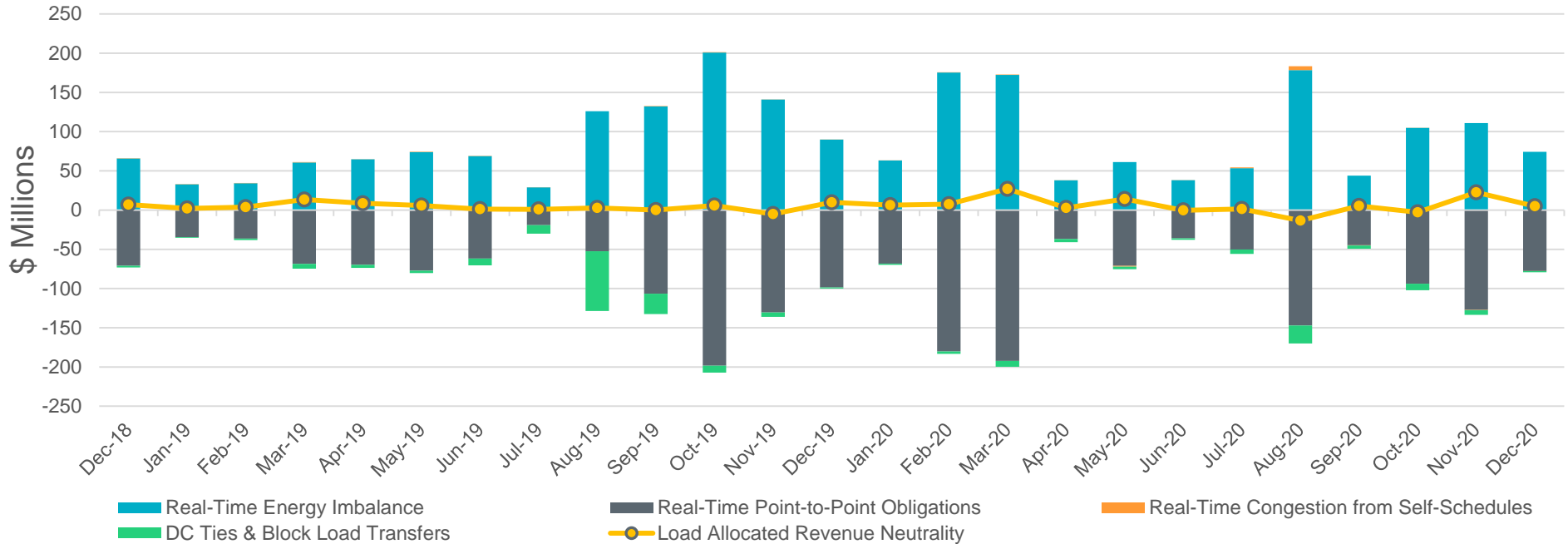
Net Allocation to Load in December 2020 was (\$11.5) million



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



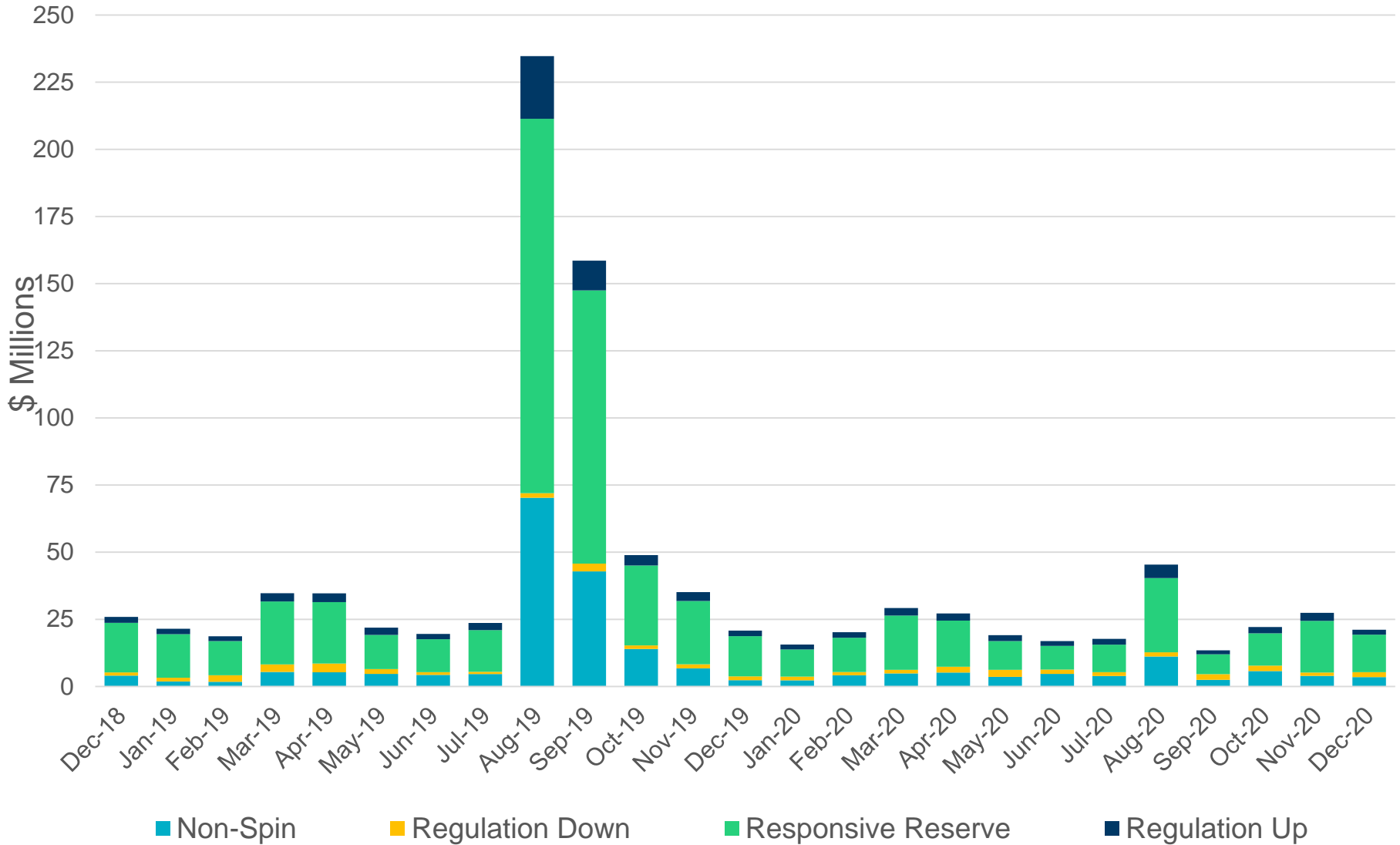
Real-Time Revenue Neutrality Allocated to Load was \$4.95M for December 2020



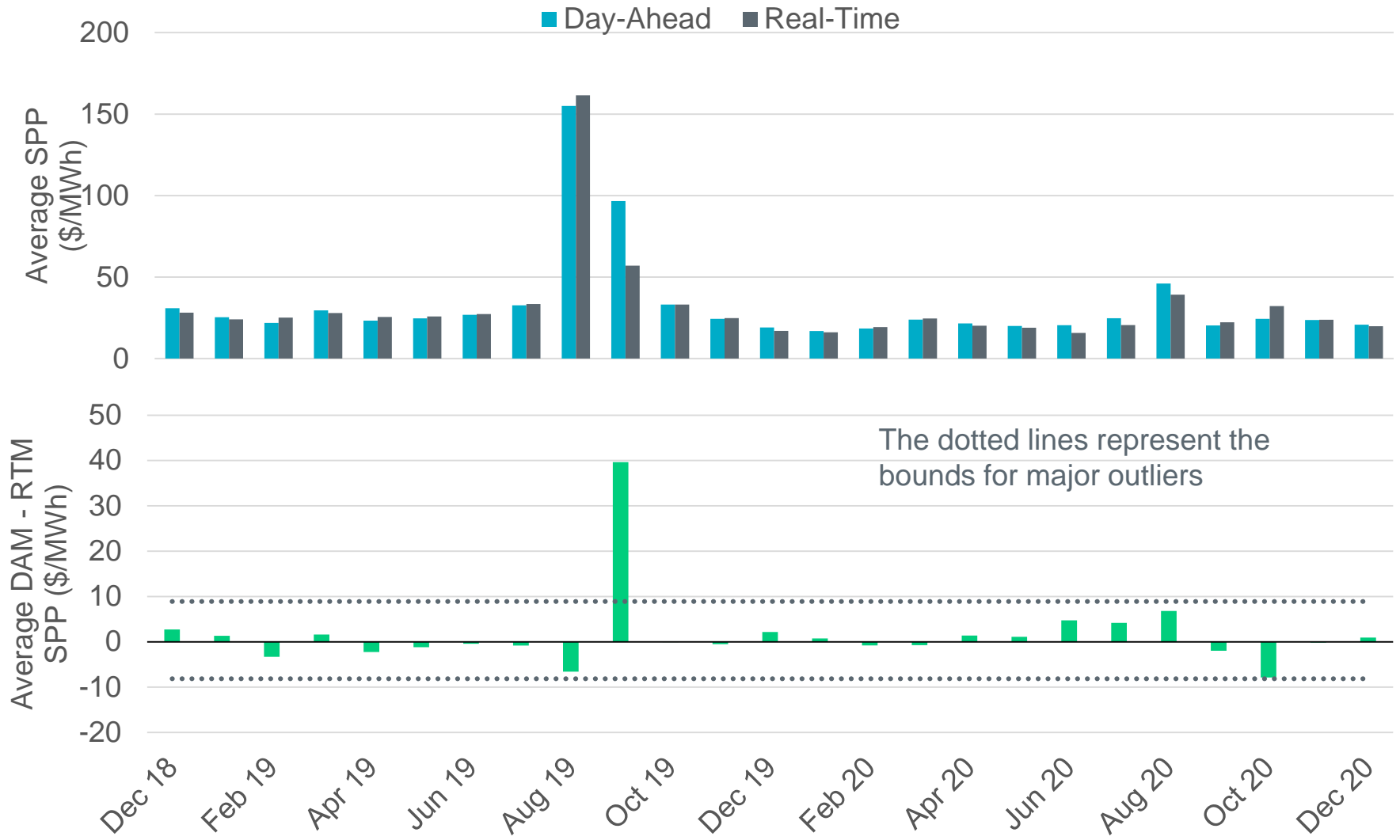
December 2020 (\$M)	
Real-Time Energy Imbalance	\$74.35
Real-Time Point-to-Point Obligation	(\$77.69)
Real-Time Congestion from Self-Schedules	(\$0.08)
DC Tie & Block Load Transfer	(\$1.54)
Load Allocated Revenue Neutrality	\$4.95



Ancillary Services for December 2020 totaled \$21.14M



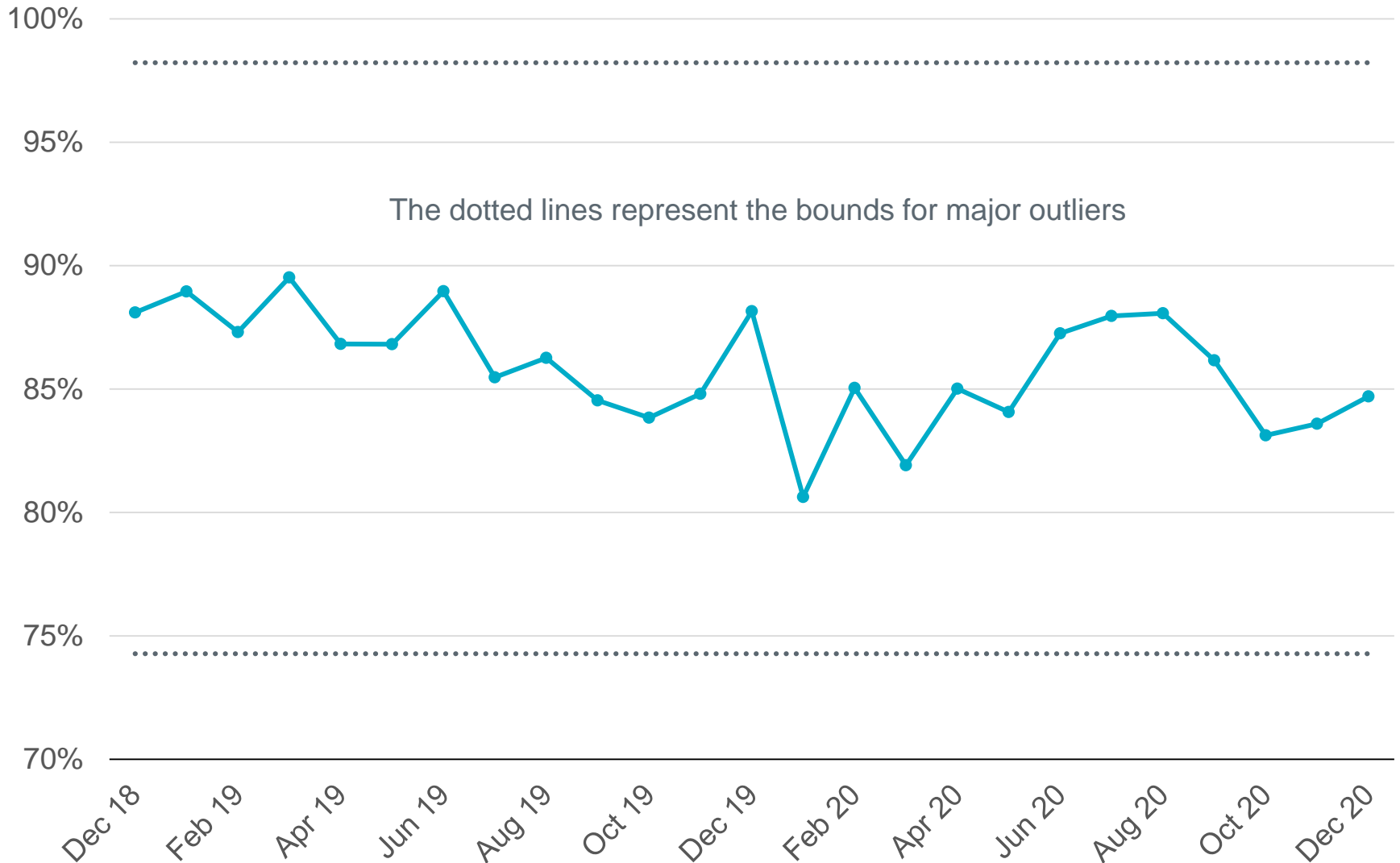
Day-Ahead and Real-Time Market Price Differences



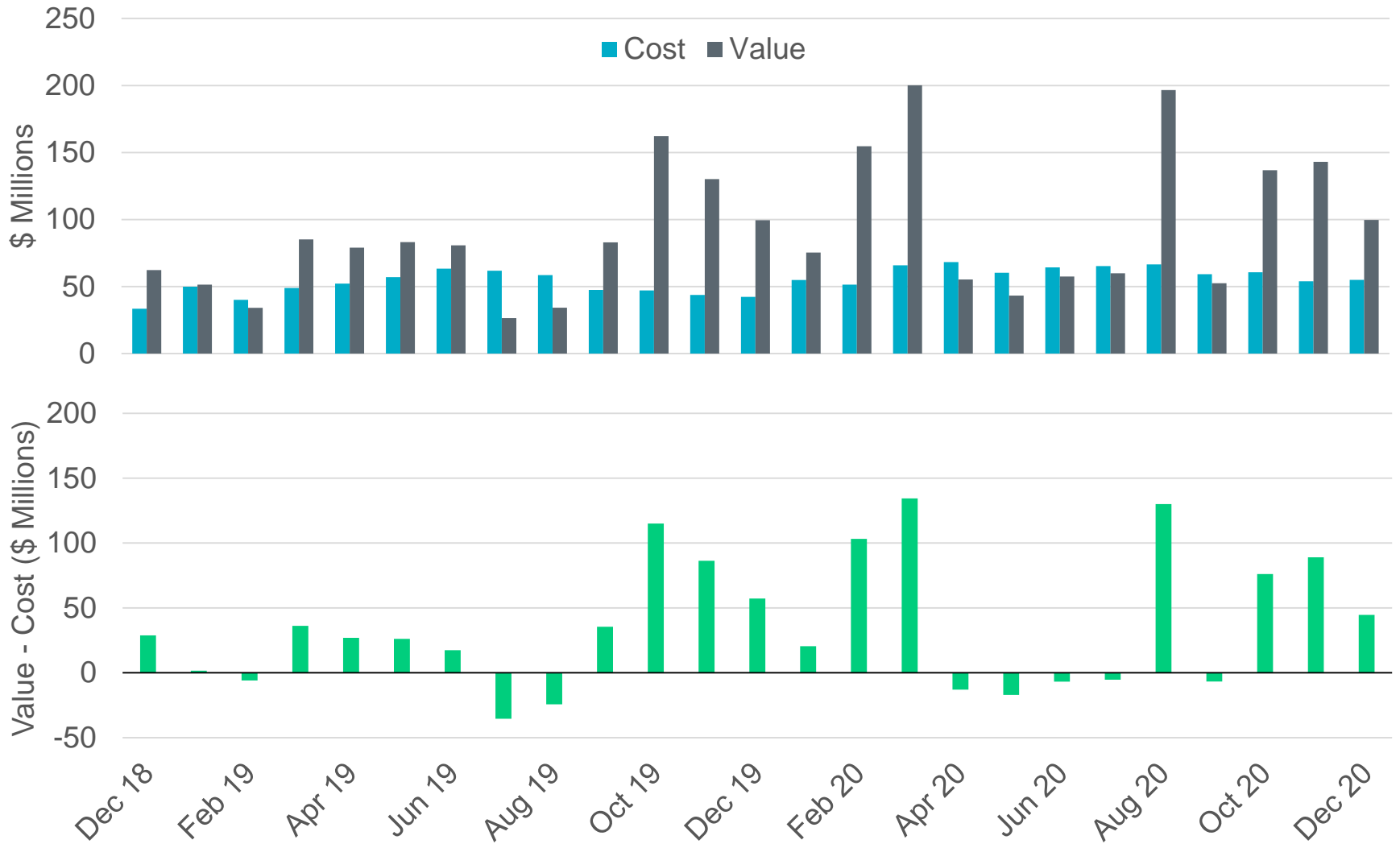
*Averages are weighted by Real-Time Market Load



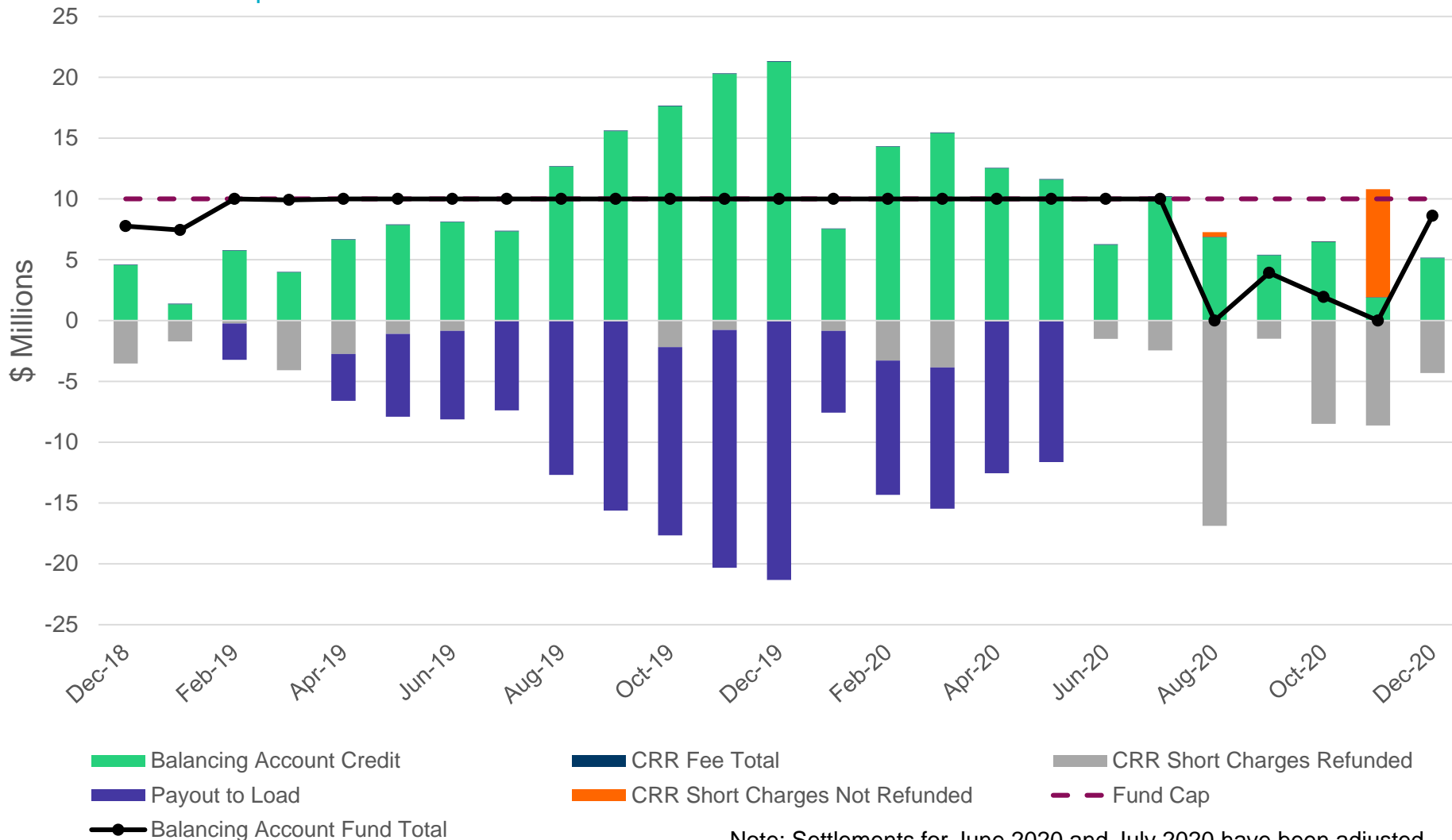
Percentage of Real-Time Load Transacted in the Day-Ahead Market



CRR Value and Cost Differences



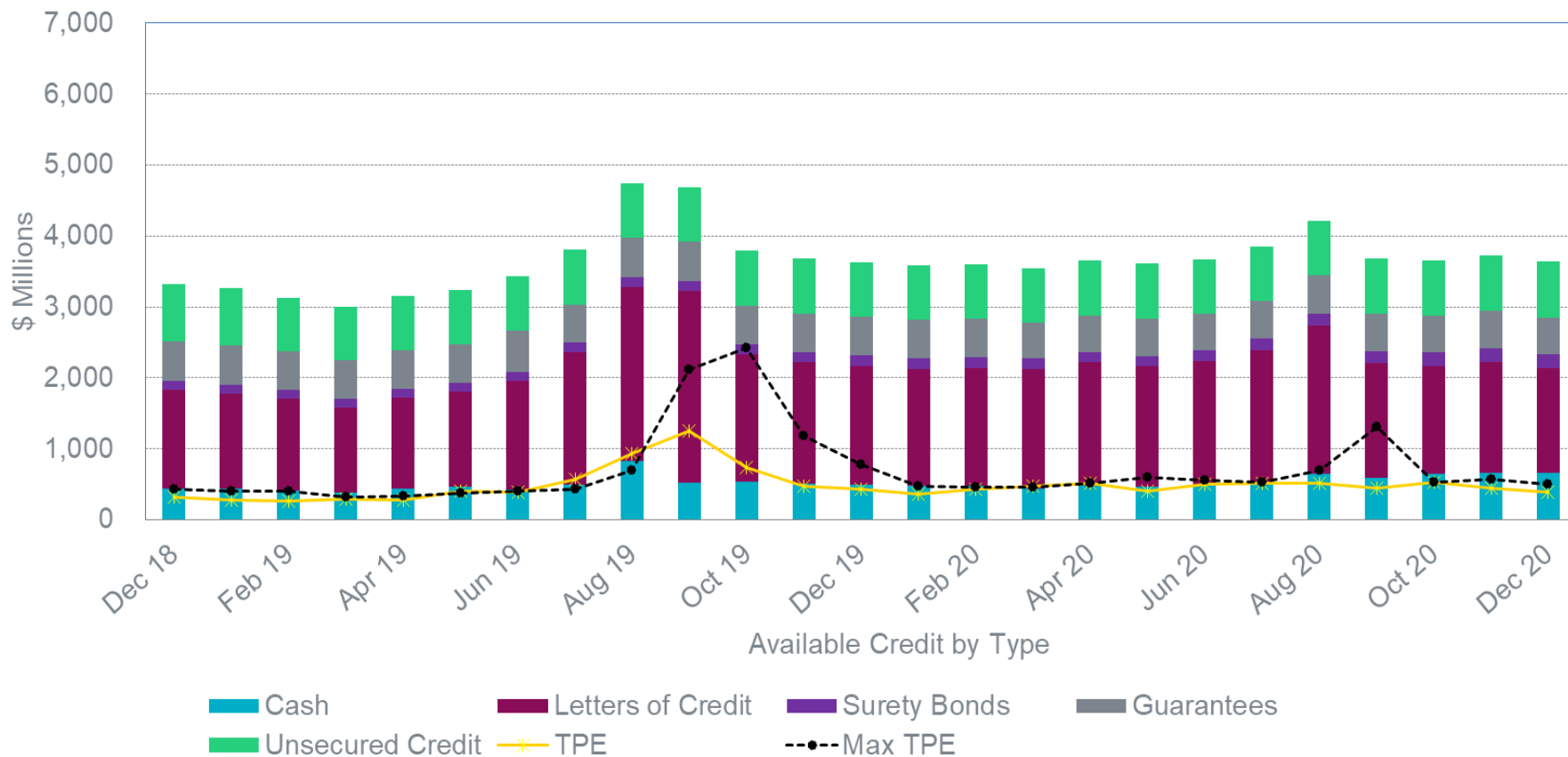
Congestion Revenue Rights settlement payments were fully funded. No excess amounts remained to allocate to Load. The CRR Balancing Account fund balance is \$8.61M.



Note: Settlements for June 2020 and July 2020 have been adjusted due to DAM price corrections. Settlements for August 2020 will change as they are resettled 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 – December 2020

Transaction Type	Year-To-Date		Transactions Received	
	December 2020	December 2019	December 2020	December 2019
Switches	1,246,924	1,322,647	118,401	74,363
Acquisitions	0	0	0	0
Move - Ins	2,754,421	2,944,372	232,338	210,921
Move - Outs	1,320,147	1,374,753	104,805	102,744
Continuous Service Agreements (CSA)	515,959	831,238	55,275	36,030
Mass Transitions	0	0	0	0
Total	5,837,451	6,473,010	510,819	424,058