



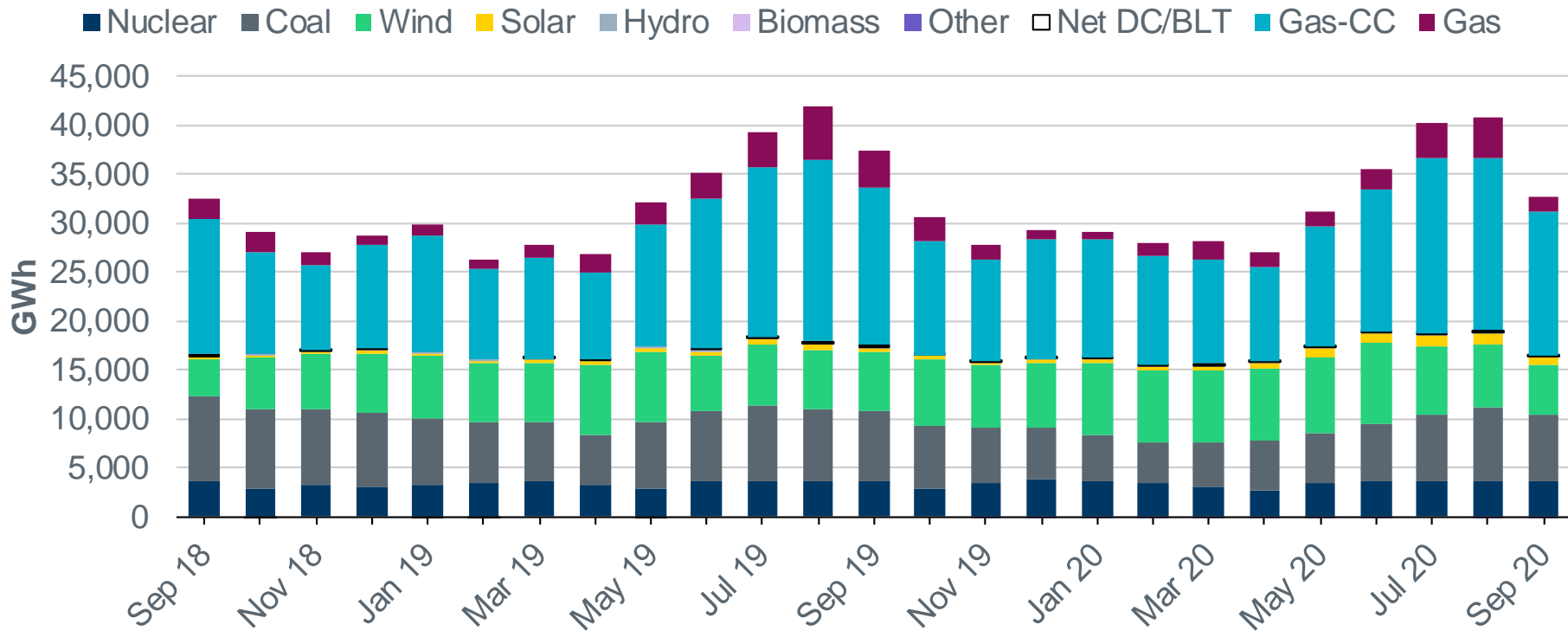
## ERCOT Monthly Operational Overview (September 2020)

ERCOT Public  
October 16, 2020

## Monthly Highlights

- ERCOT set a maximum peak demand of 64,795 MW\* in September 2020, which is 4,327 MW less than the September 2019 demand of 69,122 MW.
- ERCOT issued 8 notifications:
  - 1 OCN for Tropical Storm Beta probability of making landfall in the ERCOT Region
  - 1 Advisory for delay in clearing DAM and posting DAM solution
  - 1 Advisory for ERCOT's Voltage Security Assessment Tool unavailable
  - 2 Advisories for Physical Responsive Capability (PRC) < 3000 MW
  - 2 DC Tie Curtailment Notices for Laredo
  - 1 Transmission Emergency Notice issued for Rio Grande Valley

# Monthly energy generation decreased by 12% year-over-year to 32,777 GWh in September 2020, compared to 37,338 GWh in September 2019

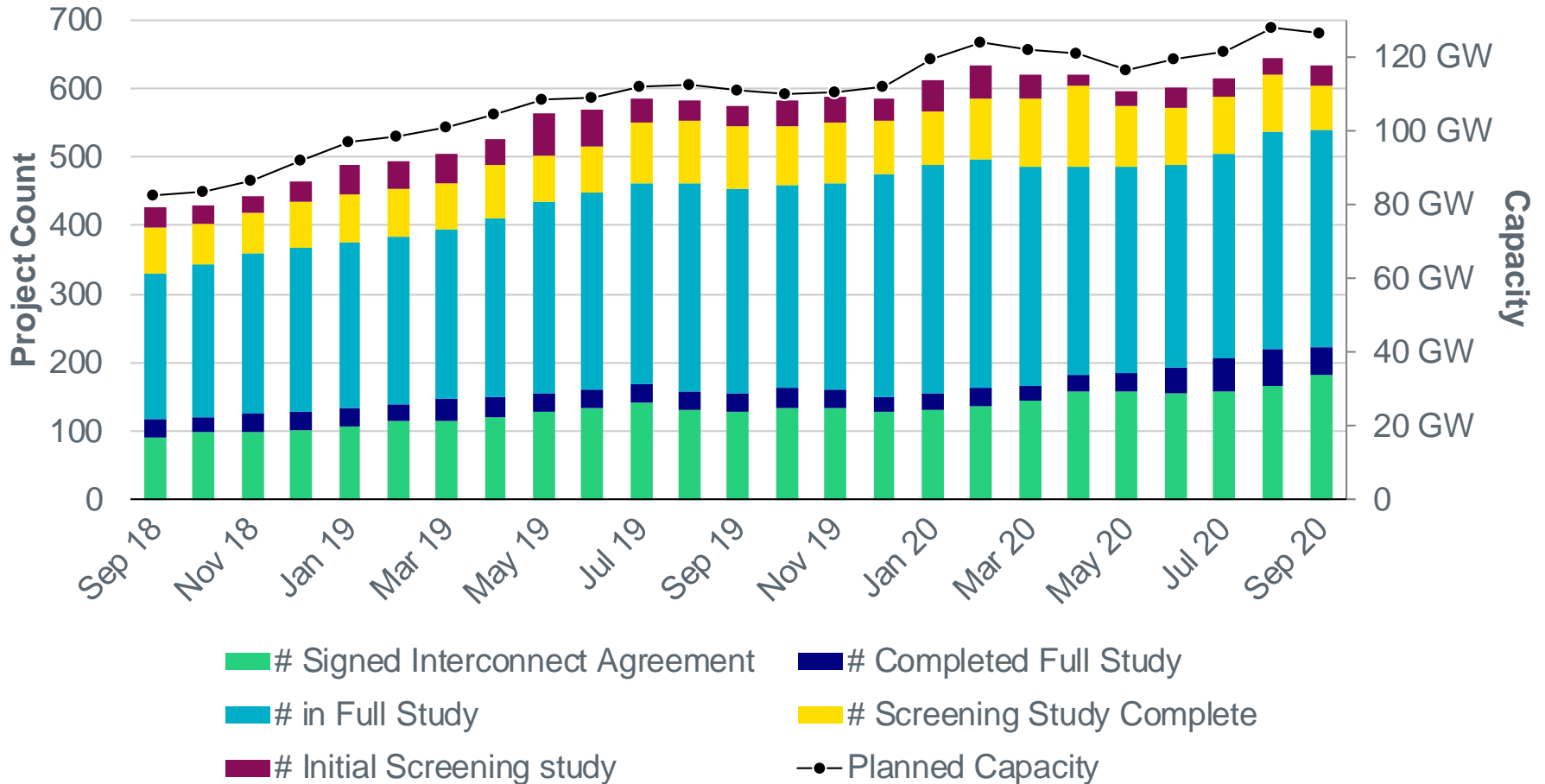


Data for latest two months are based on preliminary settlements.



# Generation Interconnection activity by project phase

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



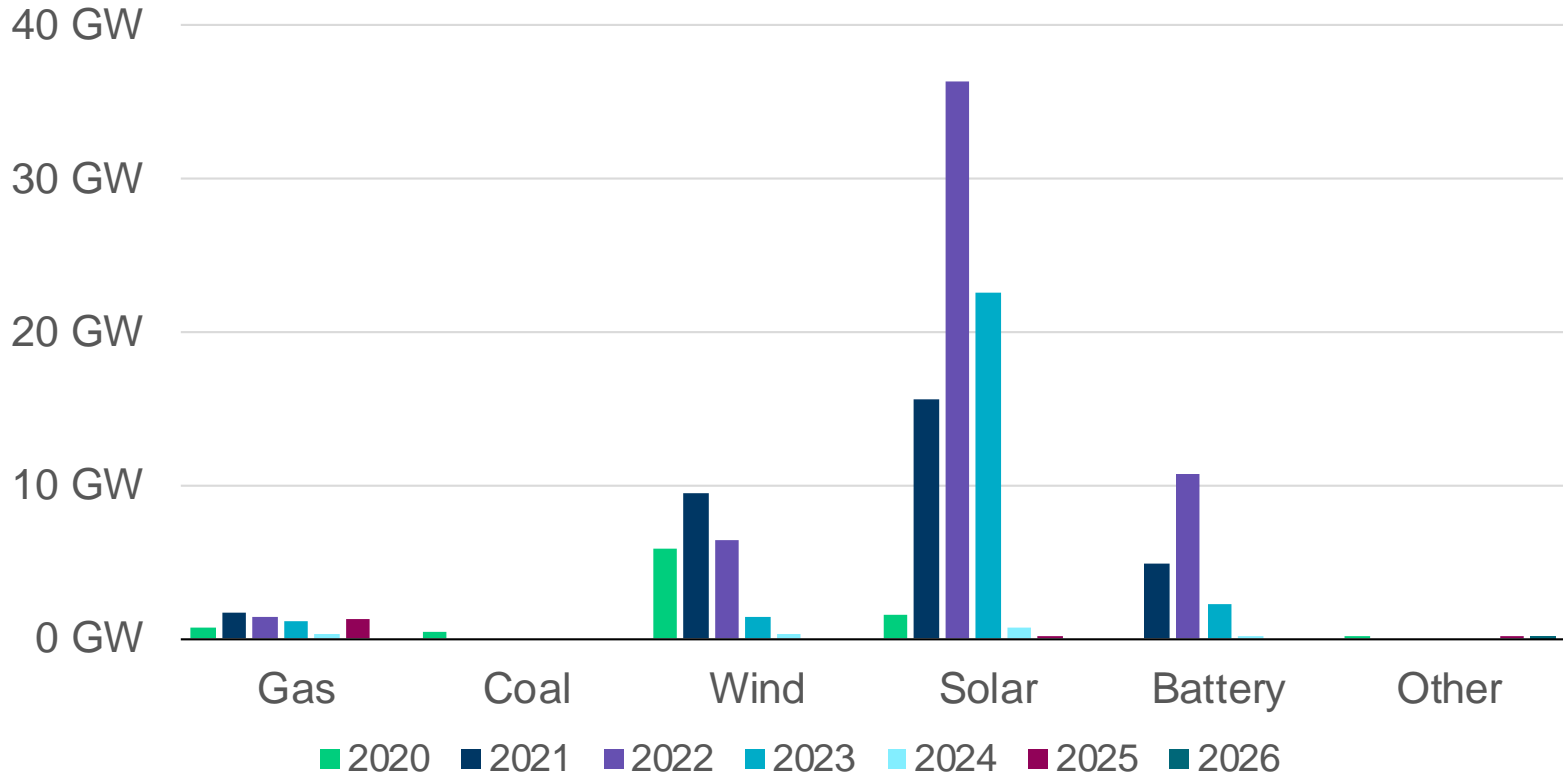
A break out by fuel type can be found in the monthly Generator Interconnection Status (GIS) reports available on the ERCOT Resource Adequacy Page: <http://www.ercot.com/gridinfo/resource>



# Interconnection Queue Capacity by Fuel Type

Queue totals: Solar 77 GW (60.9%), Wind 24 GW (18.7%), Gas 7 GW (5.4%), Battery 18 GW (14.3%), Coal 0.4 GW (0.3%)

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

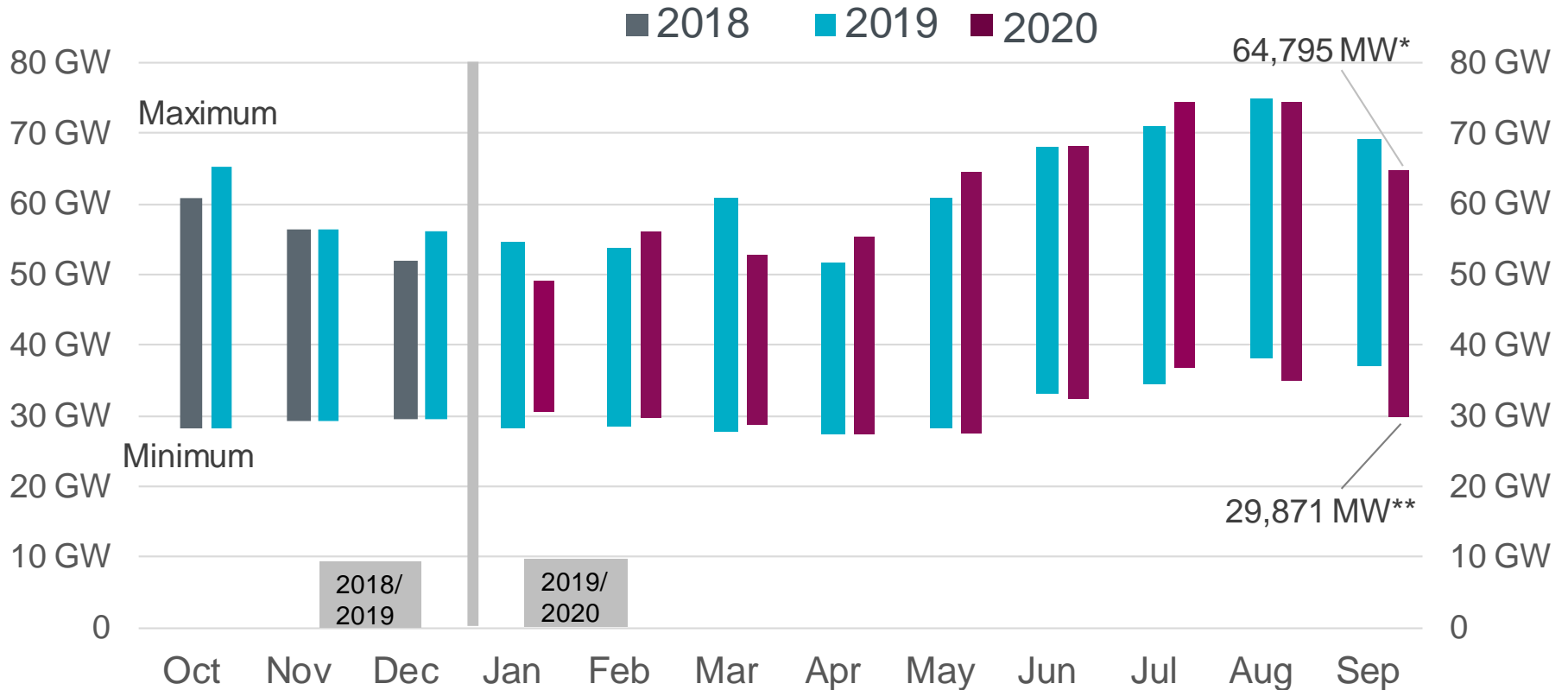


A break out by zone can be found in the monthly Generator Interconnection Status (GIS) reports available on the ERCOT Resource Adequacy Page: <http://www.ercot.com/gridinfo/resource>

# Planning Summary

- ERCOT is currently tracking 633 active generation interconnection requests totaling 126,464 MW. This includes 77,074 MW of solar, 23,679 MW of wind, 18,109 MW of battery, and 6,819 MW of gas projects as of September 30, 2020.
- ERCOT is currently reviewing proposed transmission improvements with a total estimated cost of \$1,057.3 Million as of September 30, 2020.
- Transmission Projects endorsed in 2020 total \$842.51 Million as of September 30, 2020.
- All projects (in engineering, routing, licensing and construction) total approximately \$7.26 Billion as of June 1, 2020.
- Transmission Projects energized in 2020 total about \$1.06 Billion as of June 1, 2020.

# ERCOT set a maximum peak demand of 64,795 MW\* in September 2020, which is 4,327 MW less than the September 2019 demand of 69,122 MW



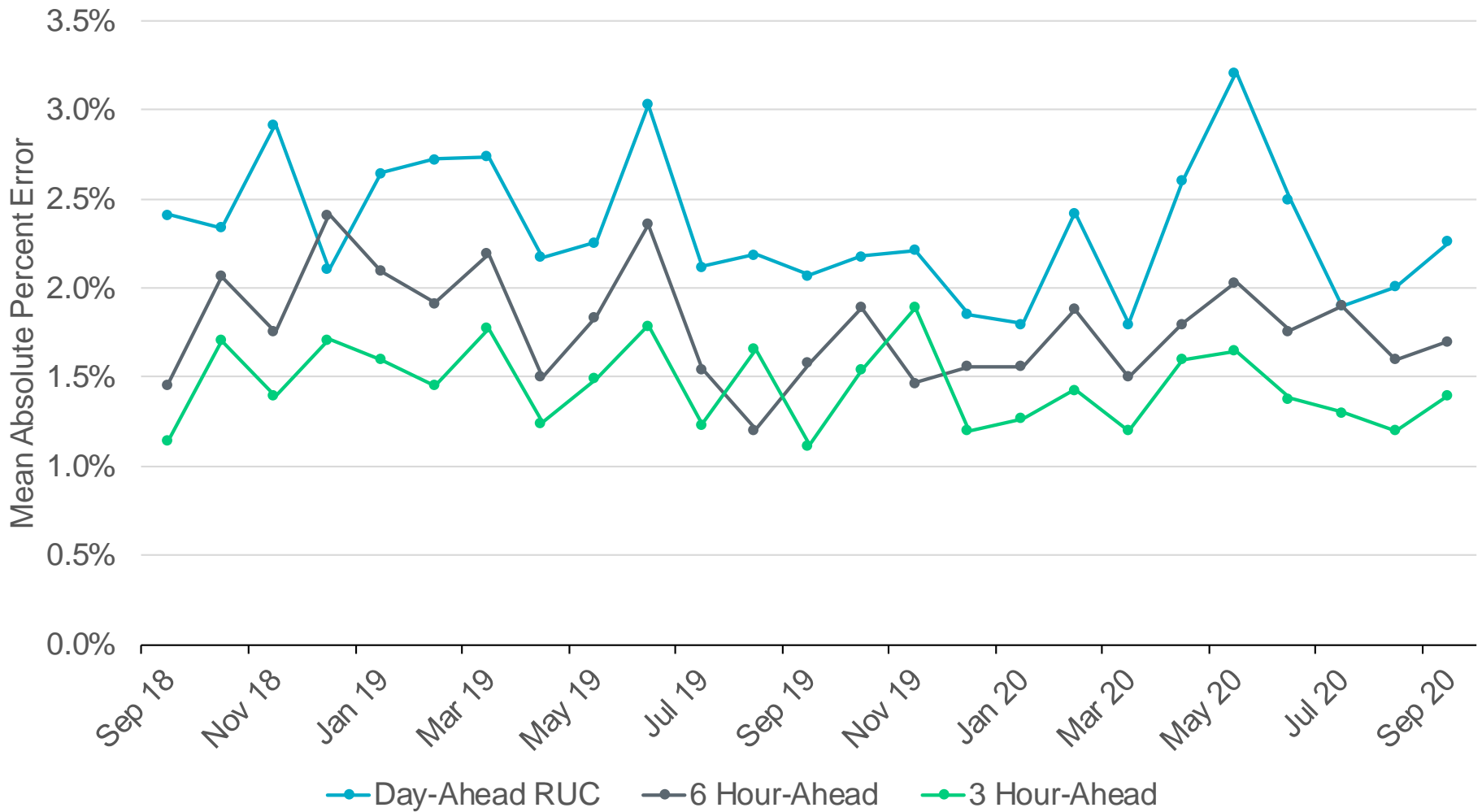
\*Based on the maximum net system hourly value from October release of Demand and Energy 2020 report.

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

Data for latest two months are based on preliminary settlements.



# Mid-Term Load Forecast Performance

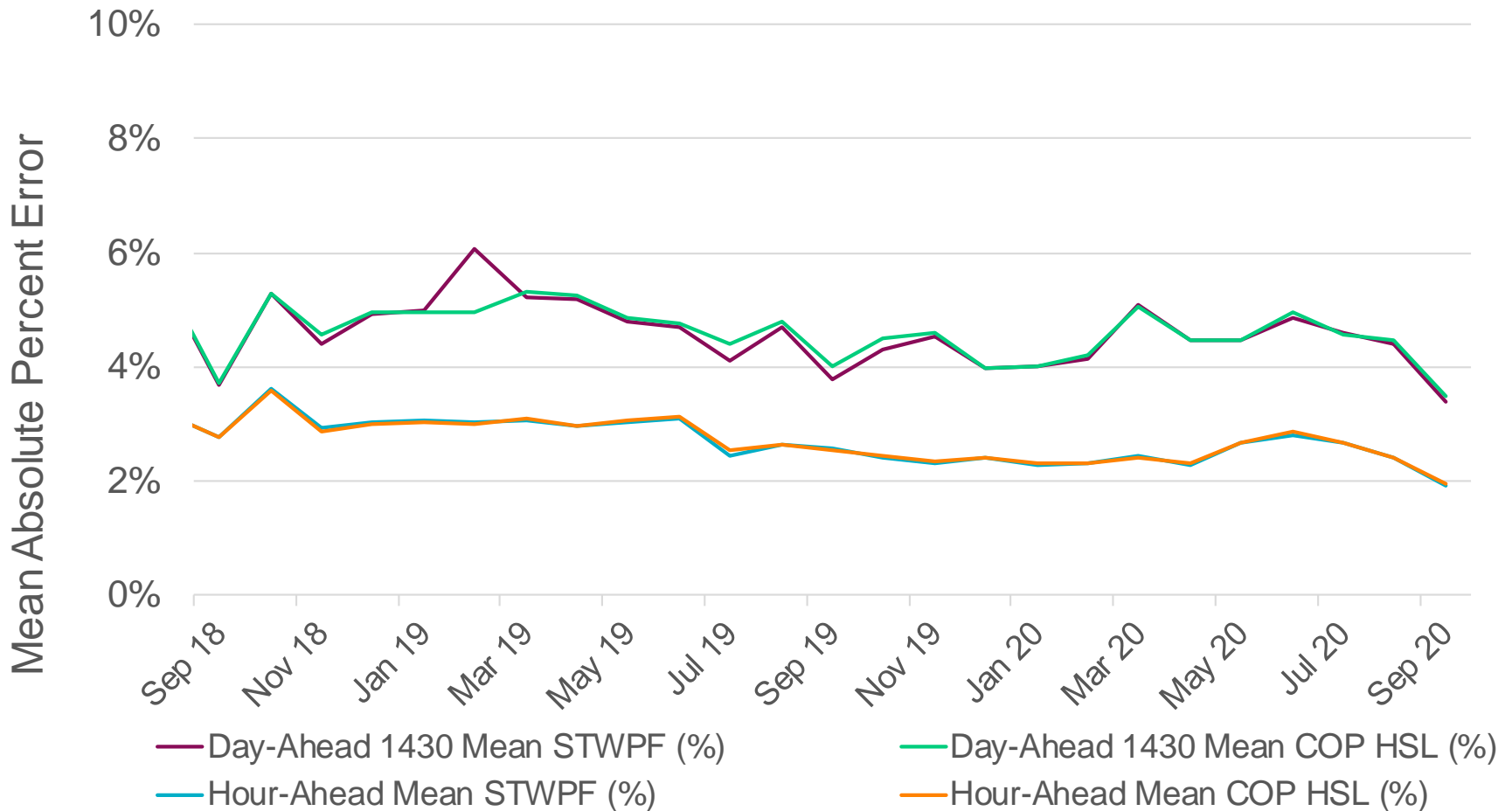


The Mid-Term Load Forecast is an hourly forecast that looks 7 days into the future





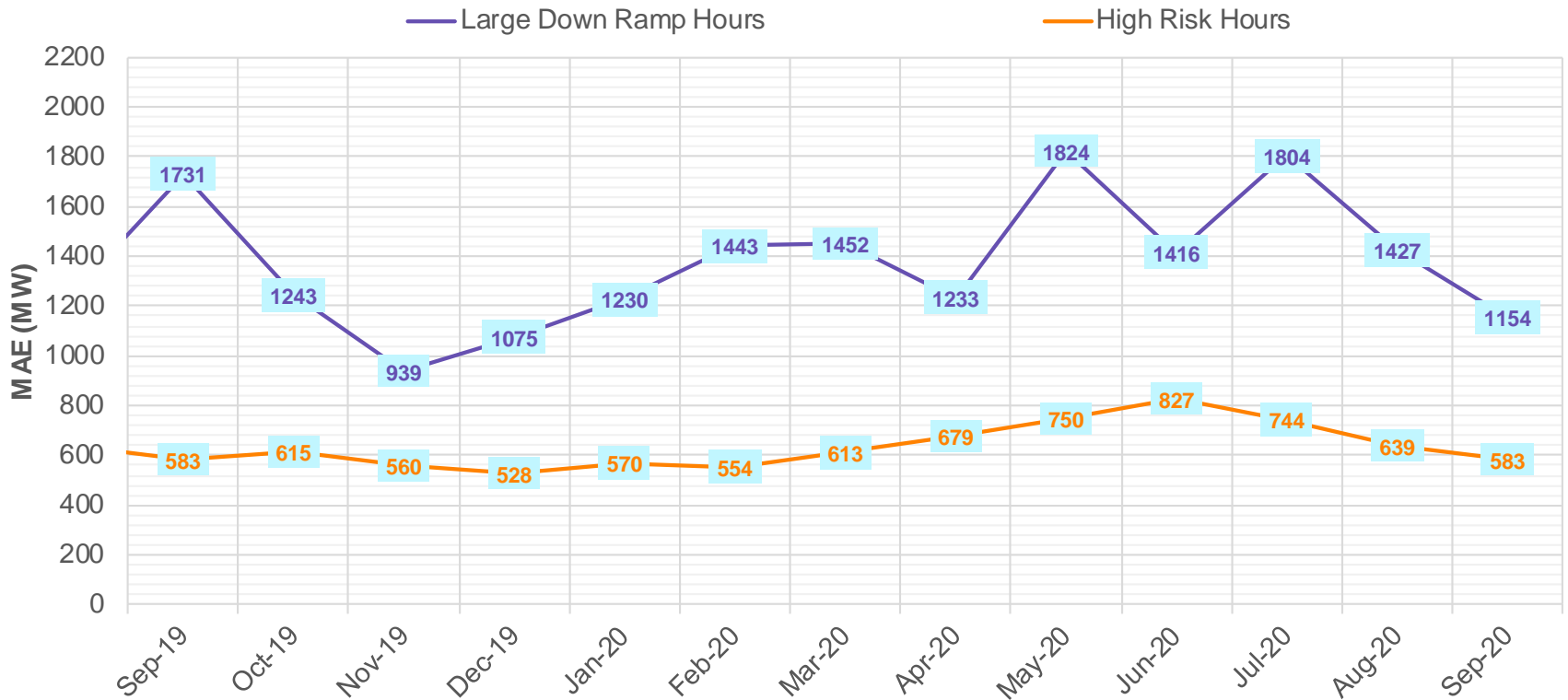
# Wind Forecast Performance



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\*

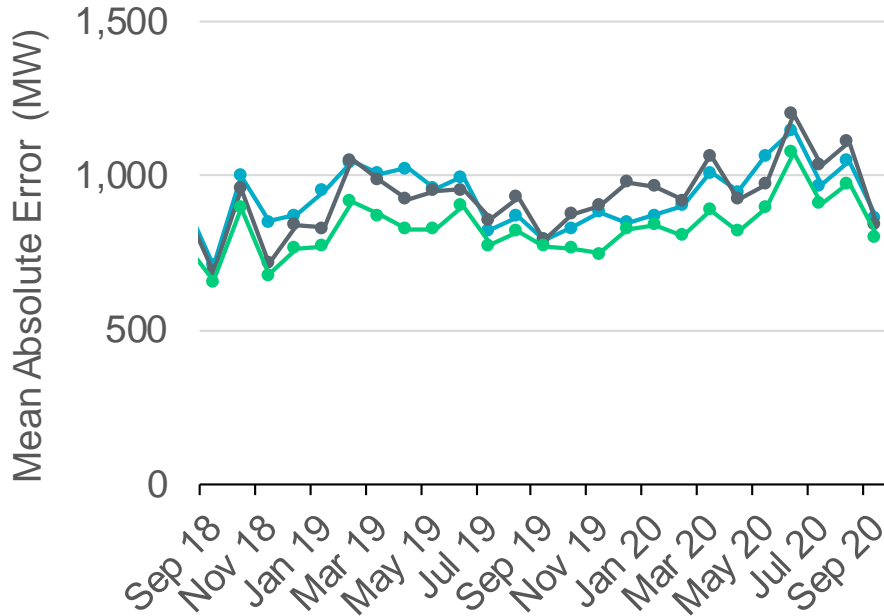


\*ERCOT's performance based payment structure for Wind Forecasts with both vendors incentivizes improvements in forecast performance during hours that are of more importance to operational reliability. This approach is a paradigm shift from the "traditional" methodology of measuring wind forecast performance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

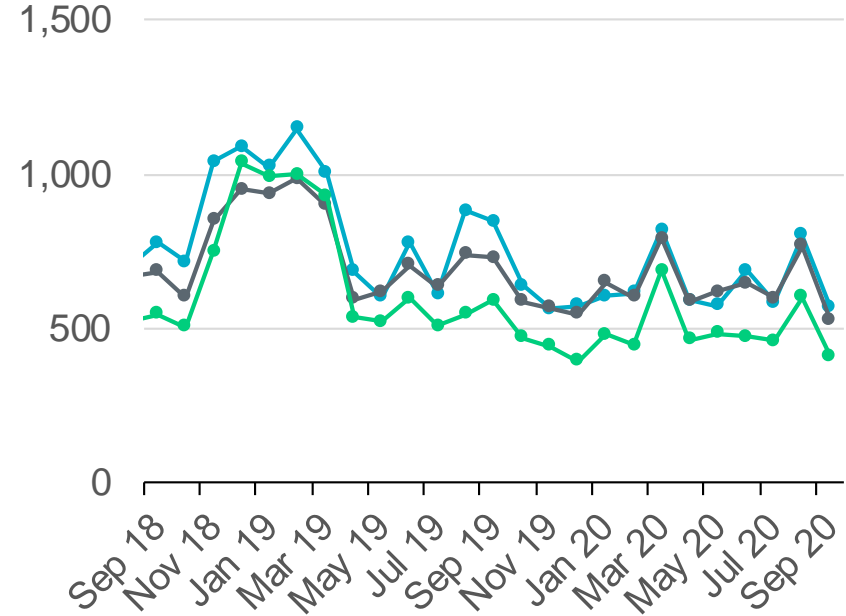
Forecast performance during large down ramp (wind ramp > 2000 MW) hours and high risk hours (historic risk of load ramping up and wind ramping down is high) is focused upon. Note that for the purposes of forecast performance measurement every hour in a month is classified as either a large down ramp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

Intermittent Renewable Resources (IRRs)



Non-IRRs

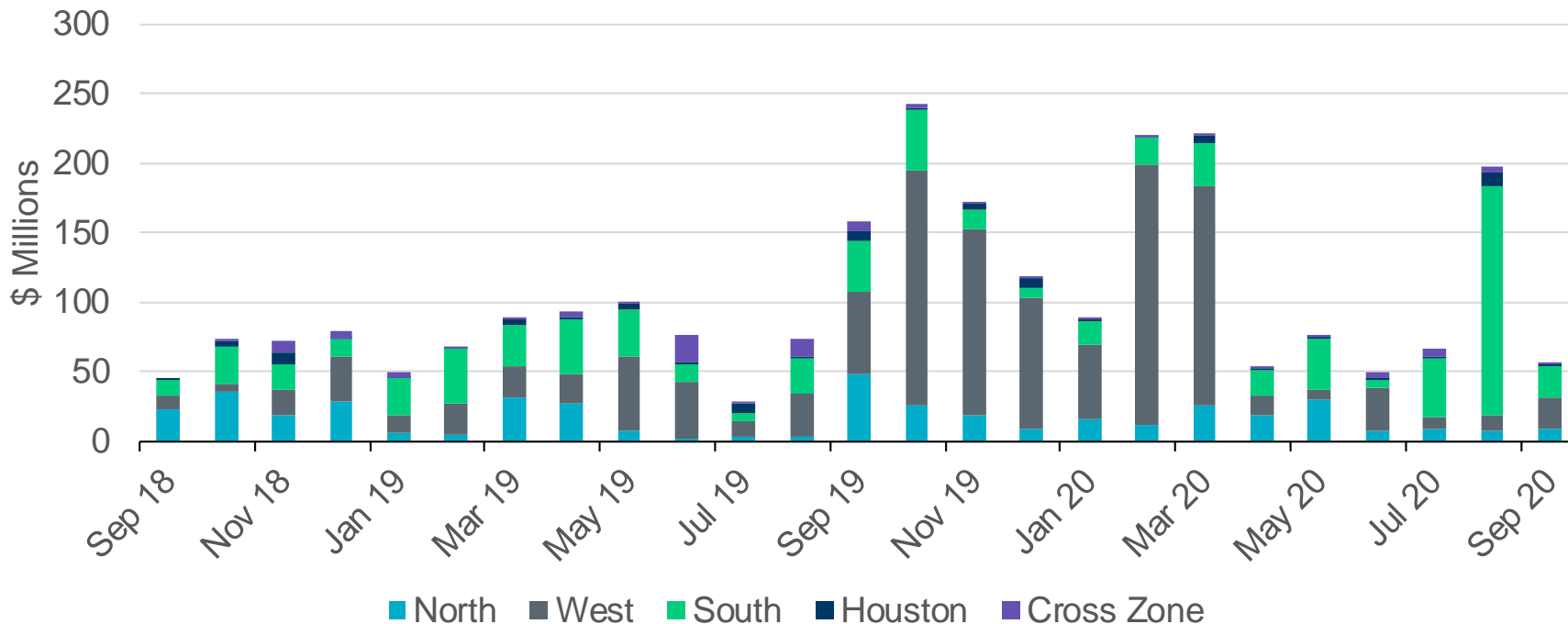


— Day-Ahead RUC    — 6 Hour-Ahead    — 3 Hour-Ahead

- 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 29,230 MW (as of September 30, 2020).
- The installed capacity of approved Solar Units is 4,149 MW (as of September 30, 2020).



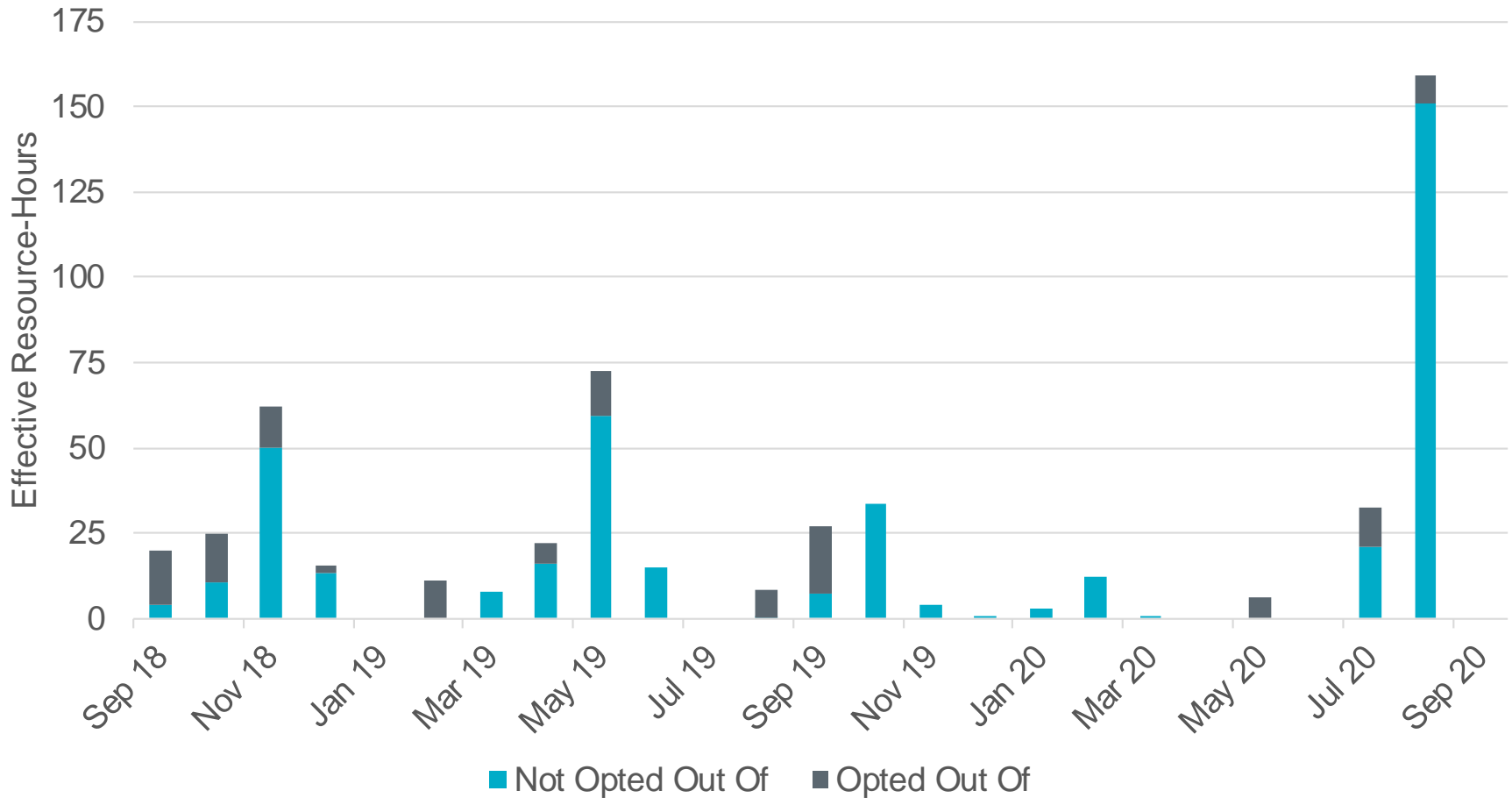
# Real-Time Congestion Rent by Zone



- The congestion rent for September significantly decreased in the South Zone compared to August. The most significant constraints for September are BASE CASE: PNHNDL in the West Zone and XNED258: NEDIN\_138H 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.

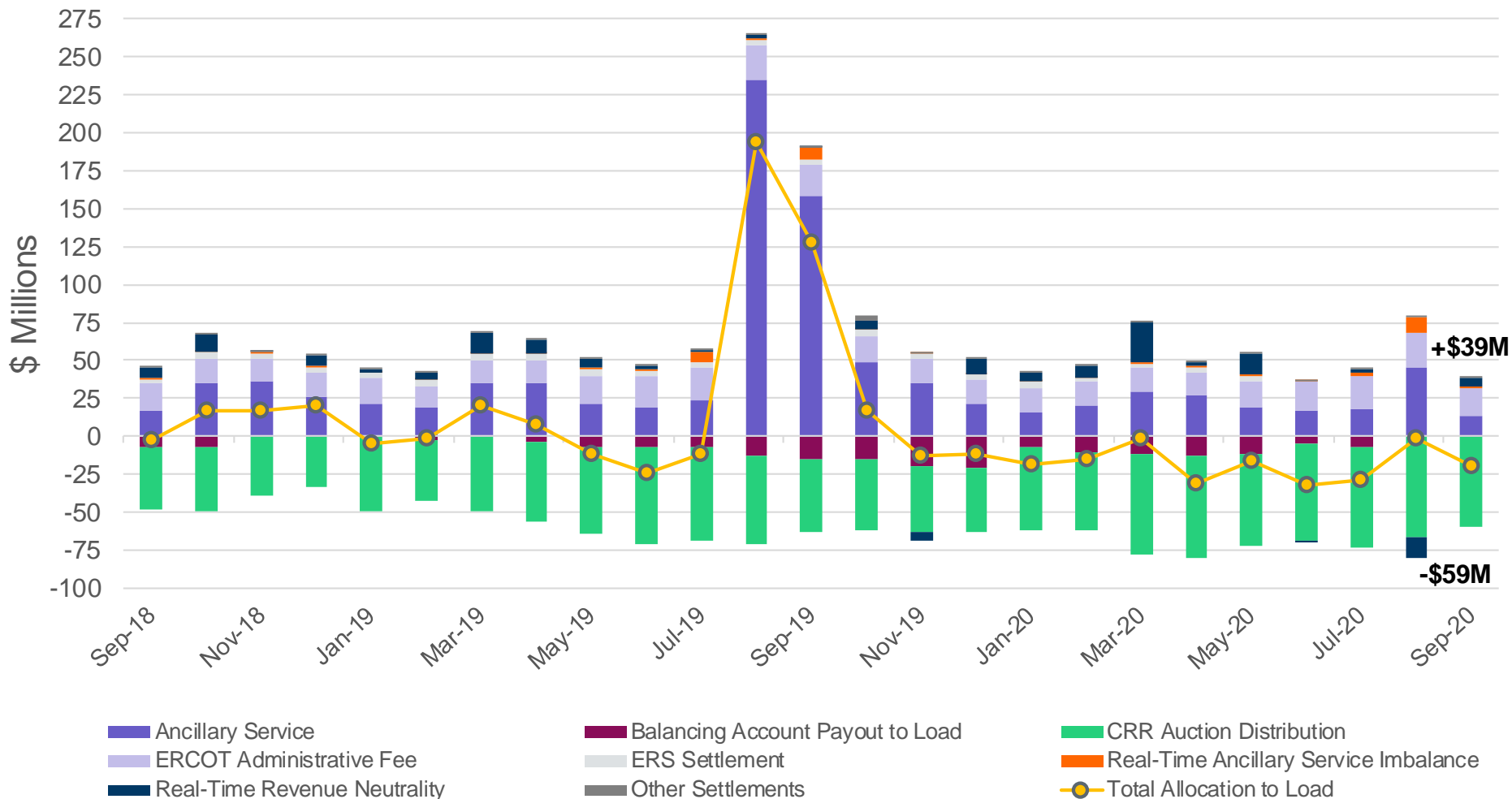


# Zero Resources Were Committed Through RUC in September



“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.

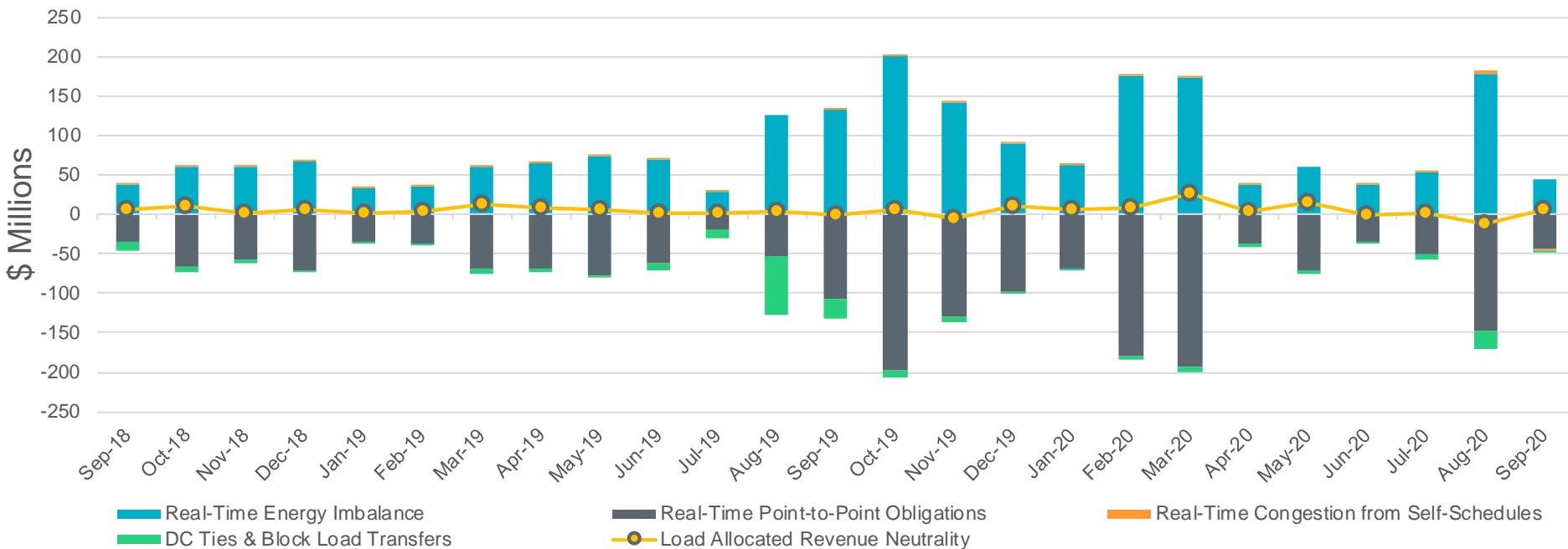
# Net Allocation to Load in September 2020 was \$-20.2 Million



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



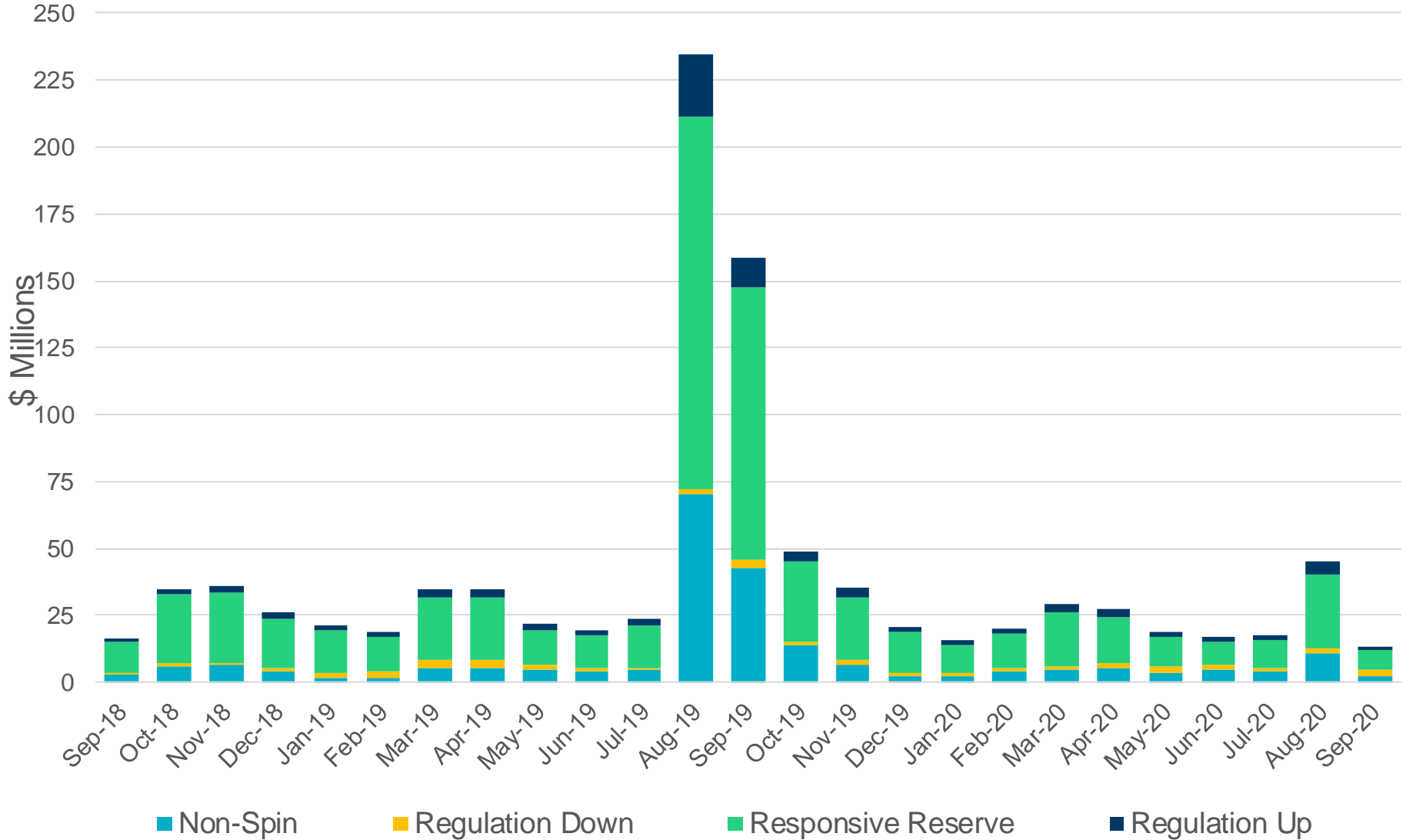
# Real-Time Revenue Neutrality Allocated to Load was \$5.45M for September 2020



September 2020 (\$M)	
Real-Time Energy Imbalance	\$43.69
Real-Time Point-to-Point Obligation	(\$44.84)
Real-Time Congestion from Self-Schedules	\$(0.38)
DC Tie & Block Load Transfer	(\$3.92)
<b>Load Allocated Revenue Neutrality</b>	<b>\$5.45</b>

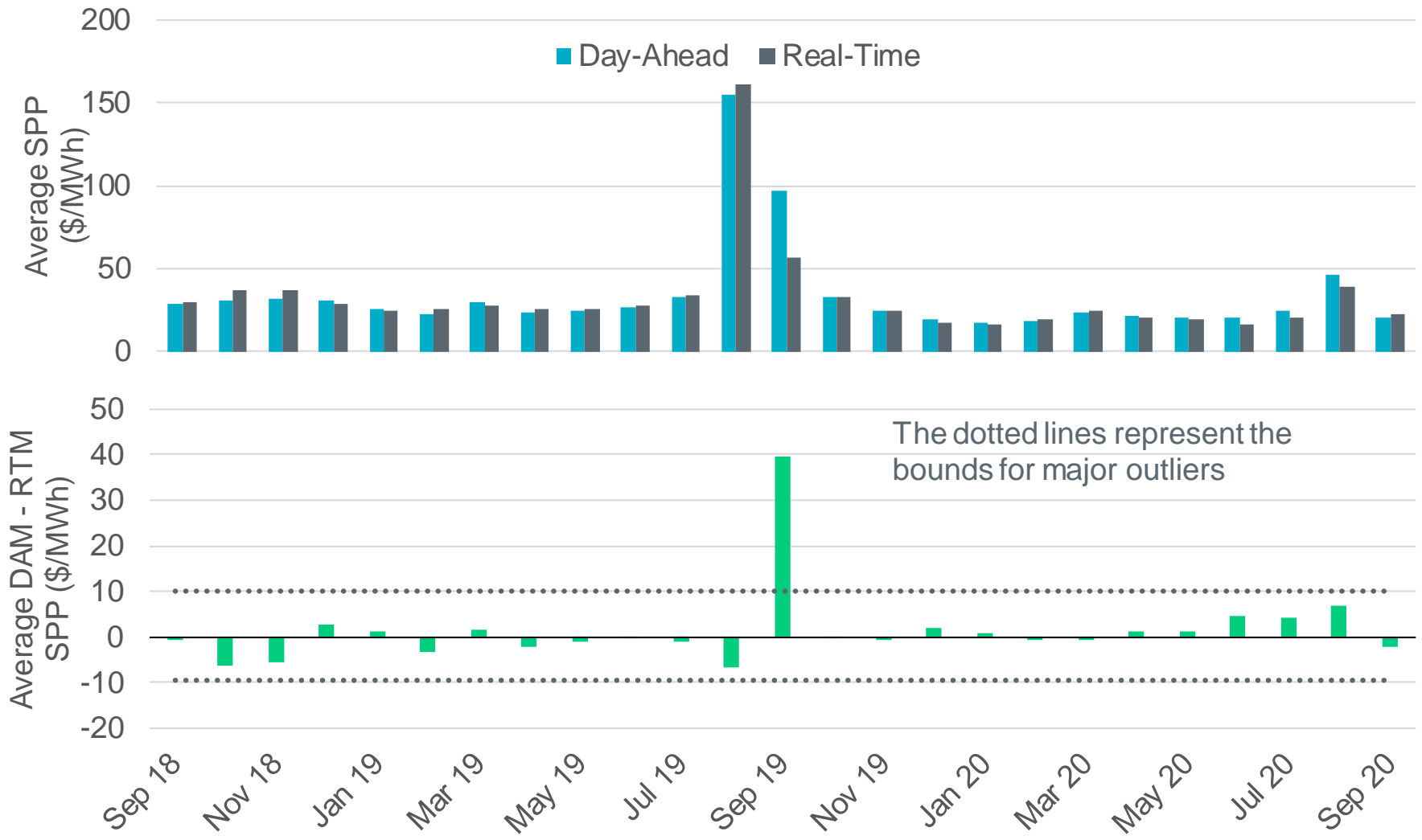


# Ancillary Services for September 2020 totaled \$13.45M





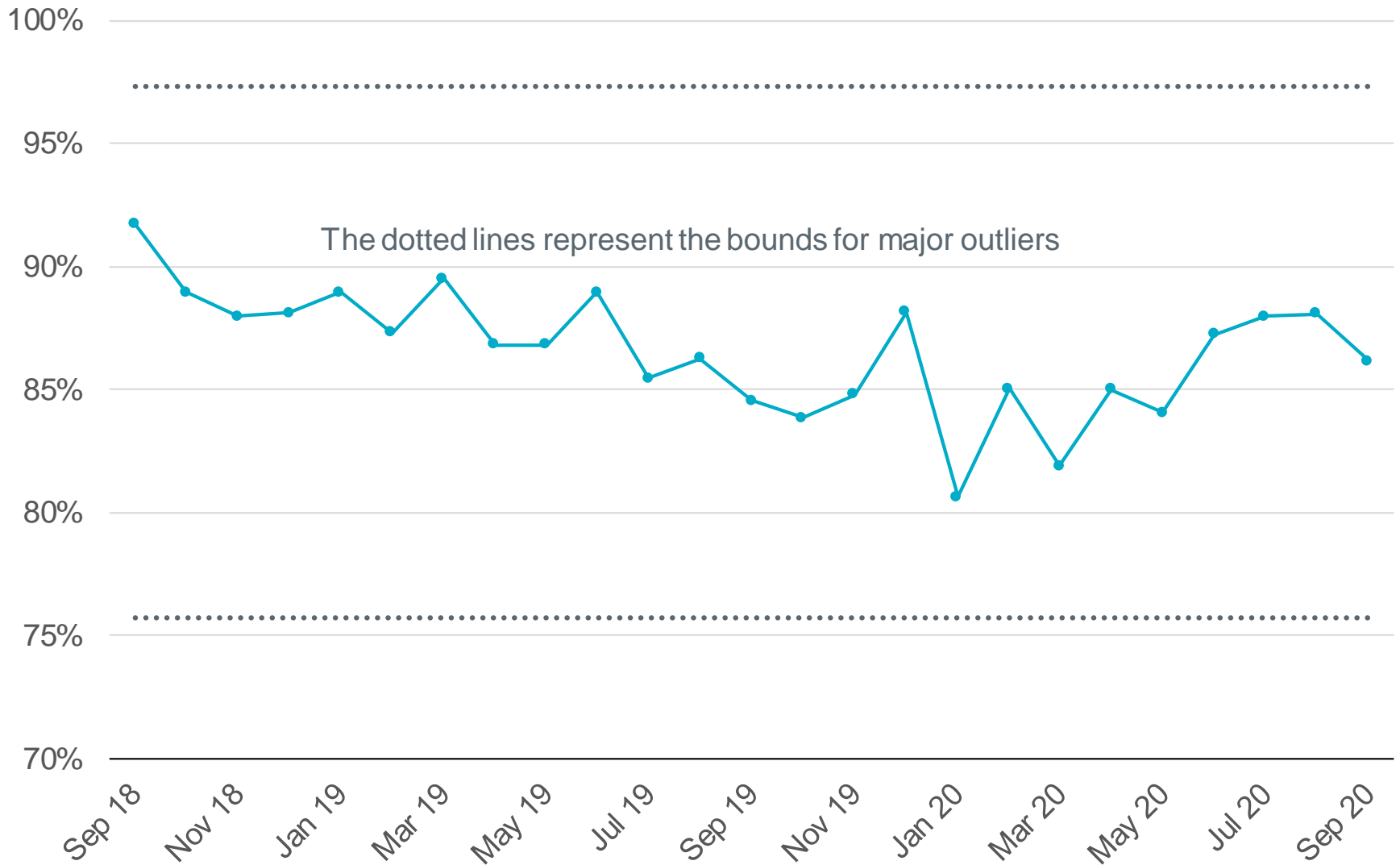
# Day-Ahead and Real-Time Market Price Differences



\*Averages are weighted by Real-Time Market Load



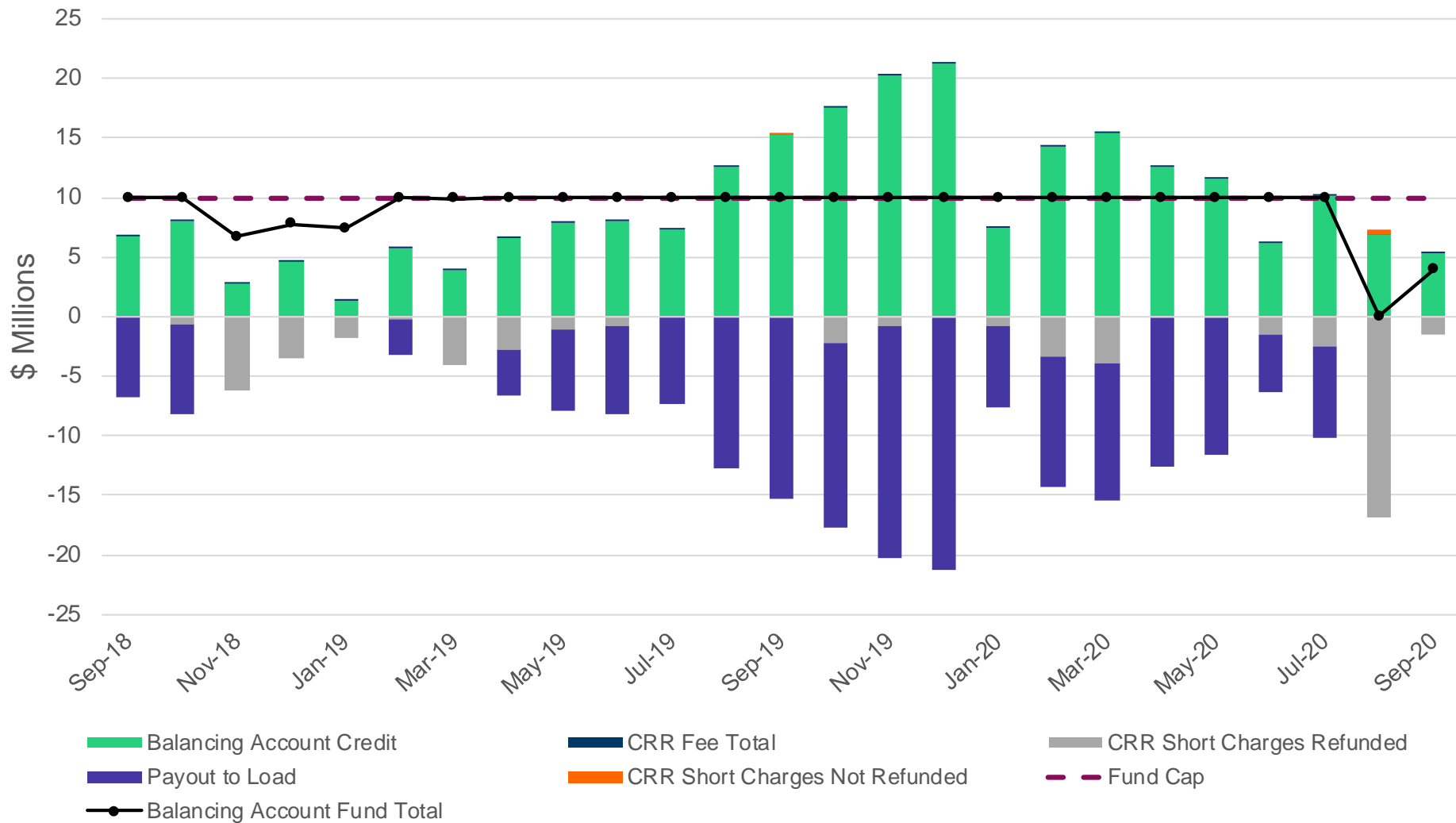
# Percentage of Real-Time Load Transacted in the Day-Ahead Market



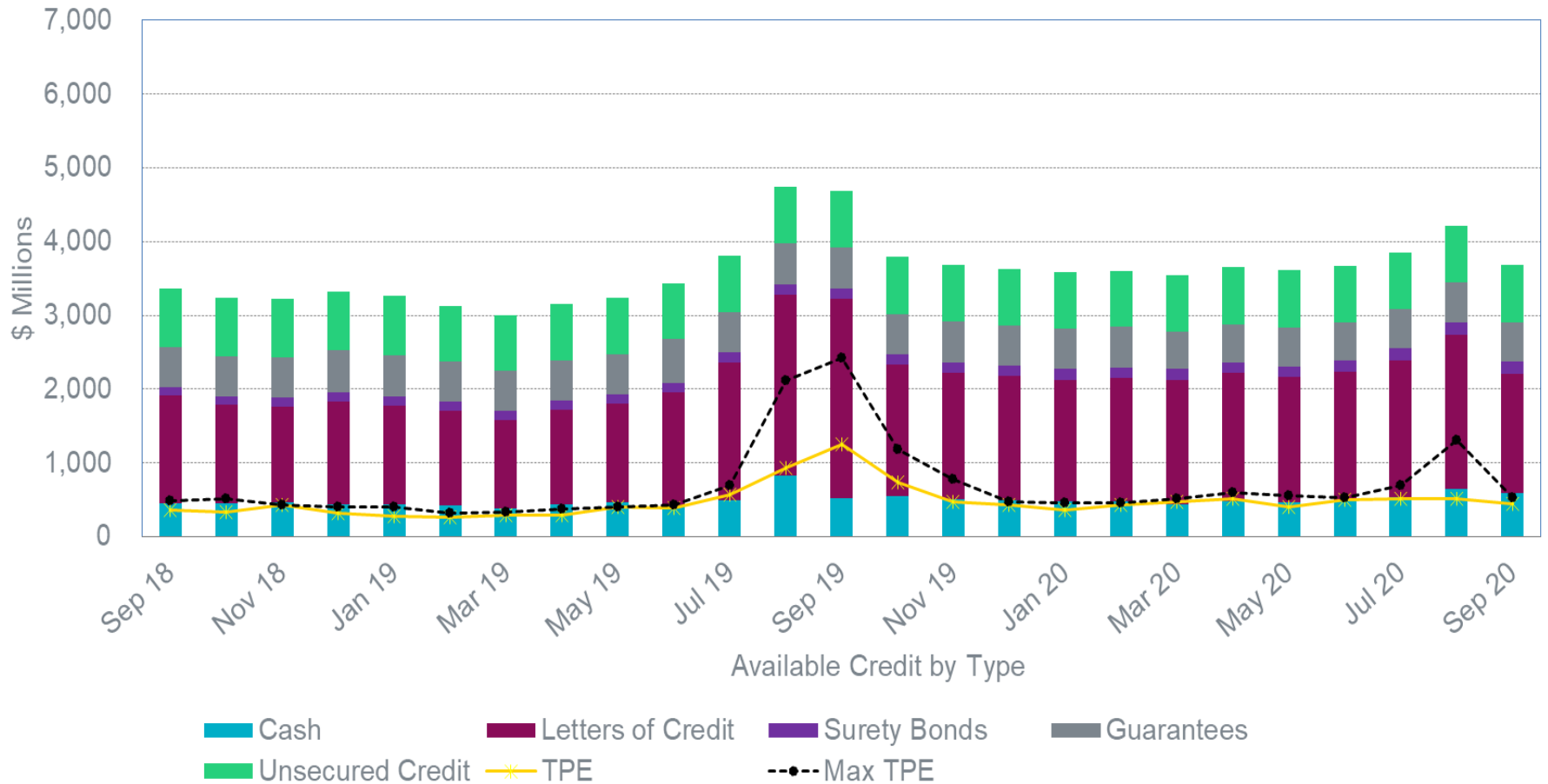
# CRR Value and Cost Differences



**Congestion Revenue Rights settlement payments were fully funded.  
No excess amounts remained to allocate to Load. The CRR Balancing Account fund balance is \$3.92M.**



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



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



# Retail Transaction Volumes – Summary – September 2020

Transaction Type	Year-To-Date		Transactions Received	
	September 2020	September 2019	September 2020	September 2019
Switches	885,742	1,080,975	81,951	104,974
Acquisition	0	0	0	0
Move - Ins	2,062,104	2,262,996	239,448	257,060
Move - Outs	1,003,372	1,051,578	115,383	117,123
Continuous Service Agreements (CSA)	369,531	740,085	27,974	32,062
Mass Transitions	0	0	0	0
<b>Total</b>	<b>4,320,749</b>	<b>5,135,634</b>	<b>464,756</b>	<b>511,219</b>