ERCOT Monthly Operational Overview
(October 2019)

ERCOT Public
November 15, 2019

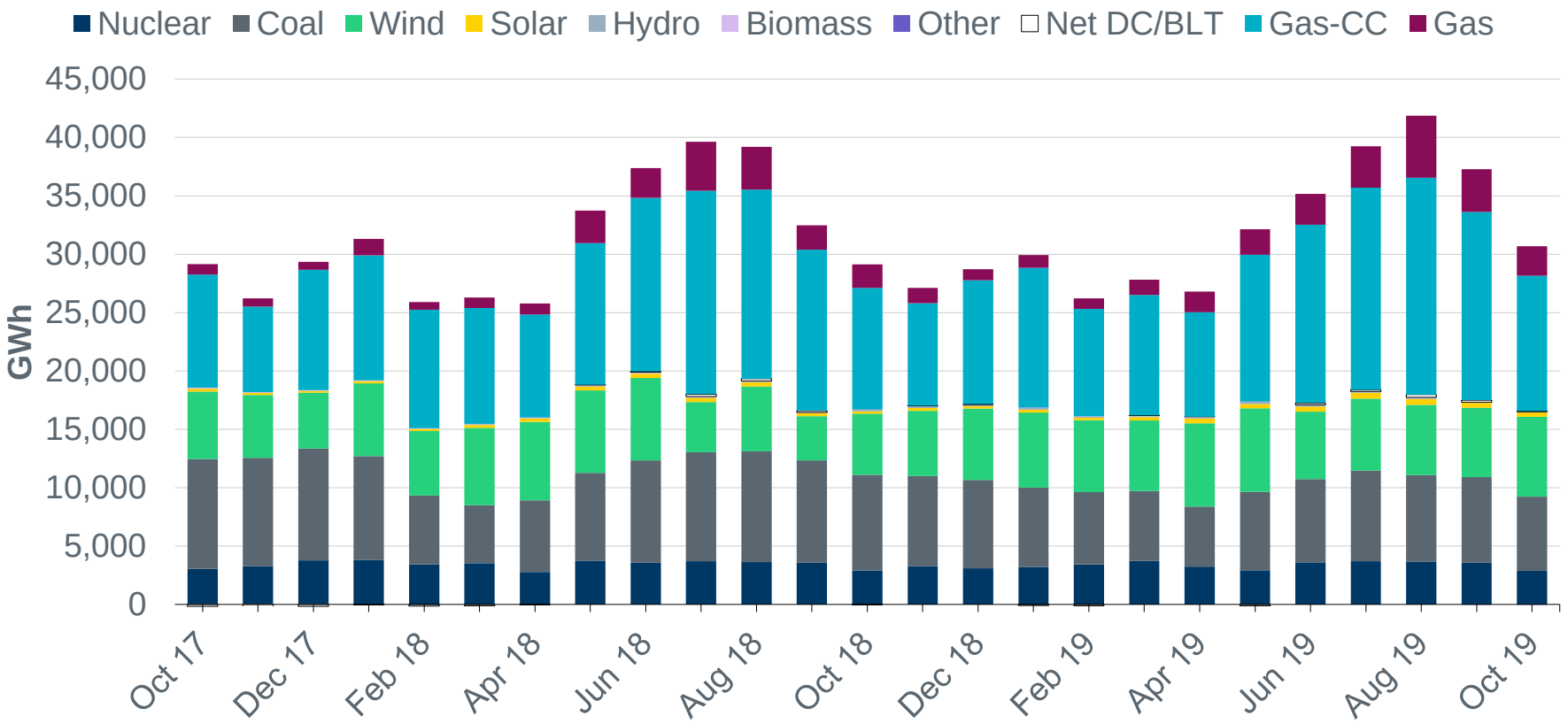
Monthly Highlights

- ERCOT set a maximum peak demand of 65,197 MW* in October 2019, which is 4,370 MW more than the October 2018 demand of 60,827 MW.

- ERCOT issued 3 notifications:
  - 3 Transmission Emergency Notices issued for Far West Texas.

* Preliminary value from October release of Demand and Energy 2019 report.

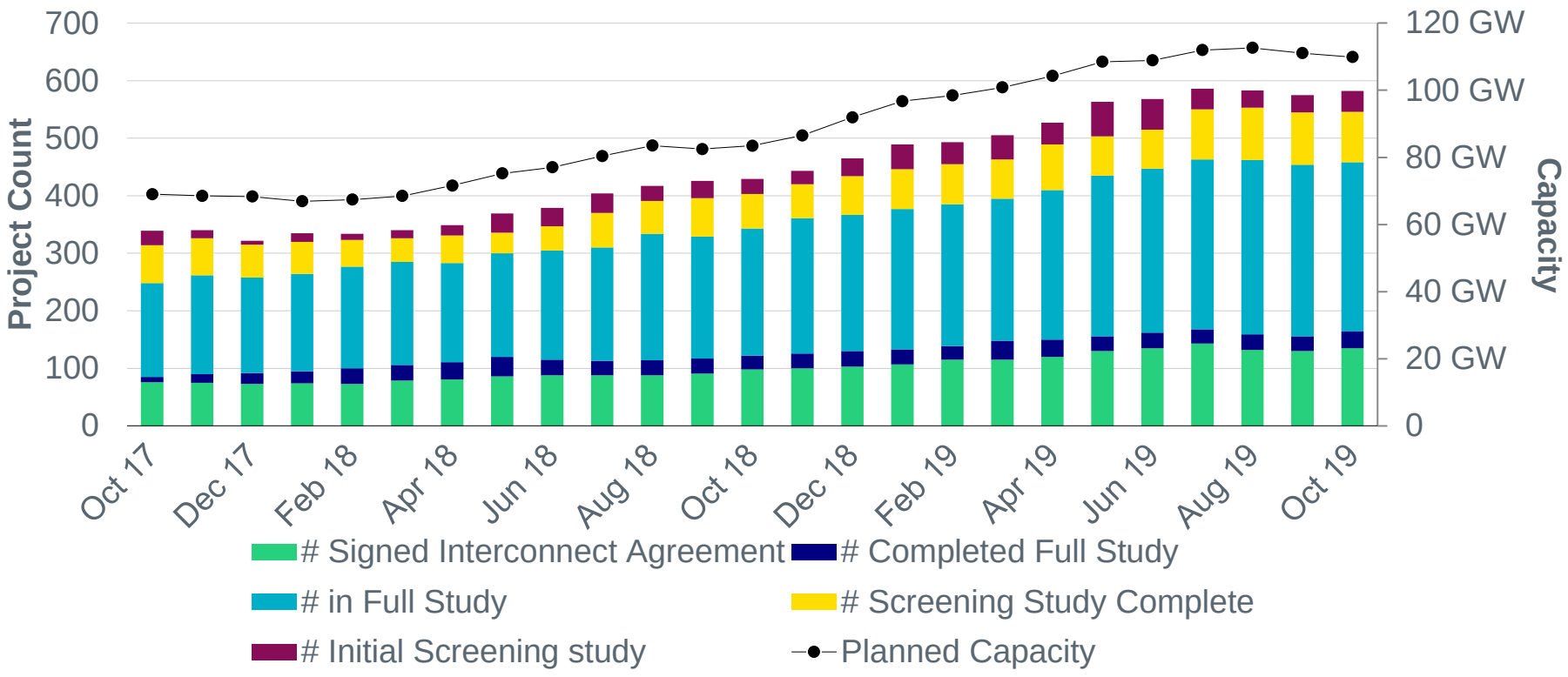
Monthly energy generation increased 5% year-over-year to 30,682 GWh in October 2019, compared to 29,136 GWh in October 2018



Data for latest two months are based on preliminary settlements.

Generation Interconnection activity by project phase

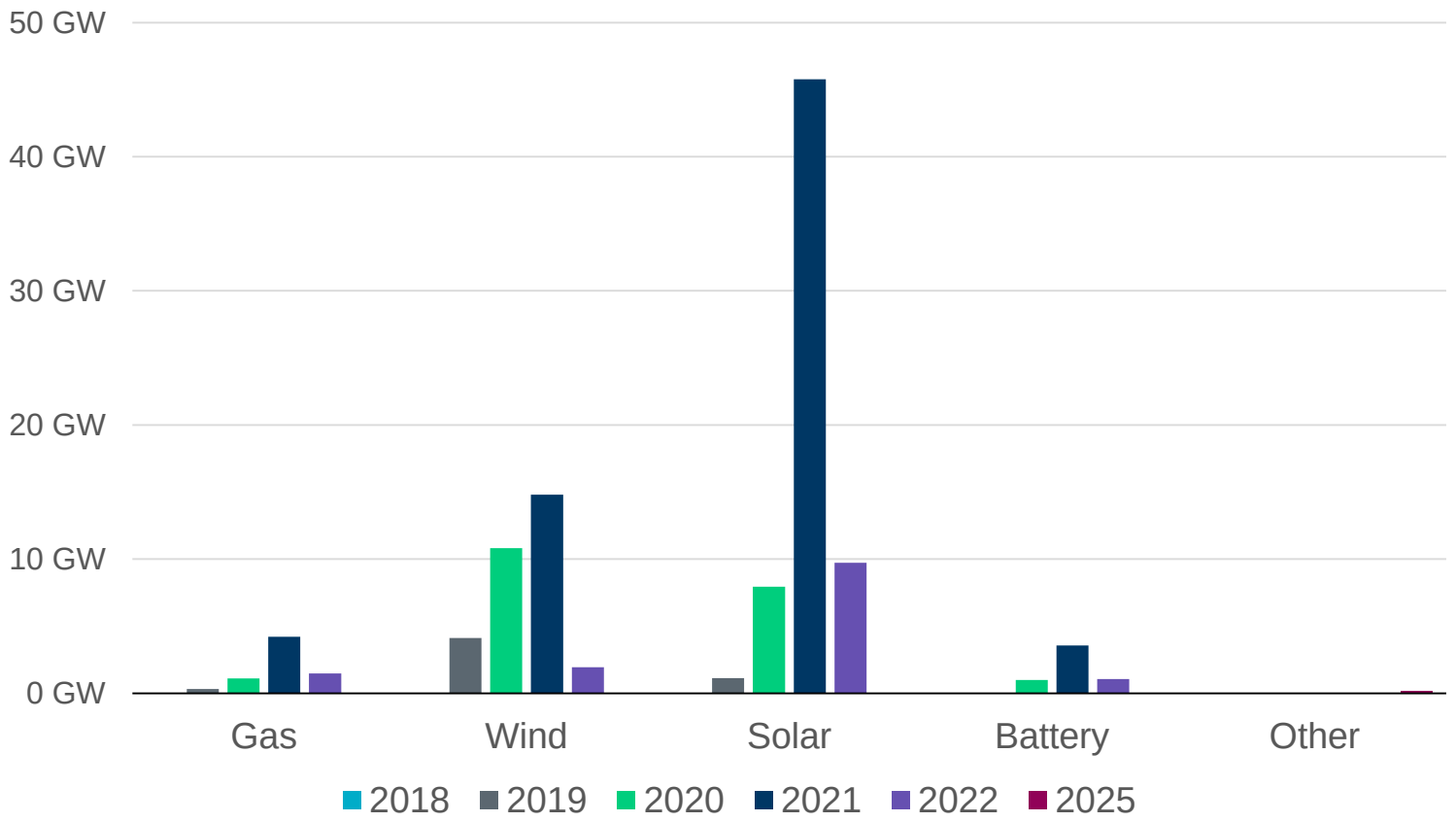
(excludes Inactive capacities due to PGRR066)



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 65 GW (59%), Wind 32 GW (29%), Gas 7 GW (7%), Battery 6 GW (5%) (excludes Inactive capacities due to PGRR066)



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 582 active generation interconnection requests totaling 109,909 MW. This includes 64,790 MW of solar, 31,683 MW of wind, and 5,627 MW of battery projects as of October 31, 2019.

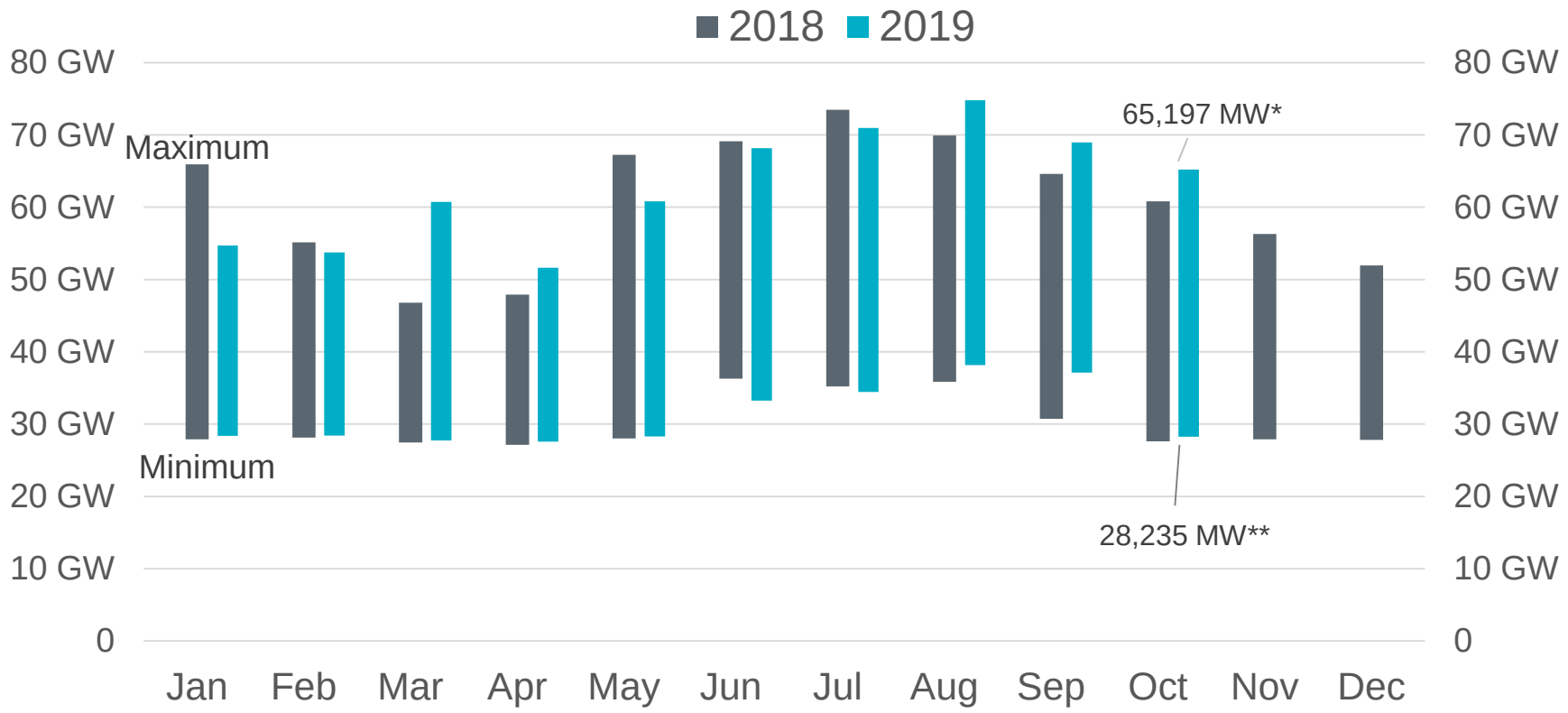
- ERCOT is currently reviewing proposed transmission improvements with a total estimated cost of $1,333.34 Million as of October 31, 2019.

- Transmission Projects endorsed in 2019 total $478.5 Million as of October 31, 2019.

- All projects (in engineering, routing, licensing and construction) total approximately $3.41 Billion as of October 1, 2019.

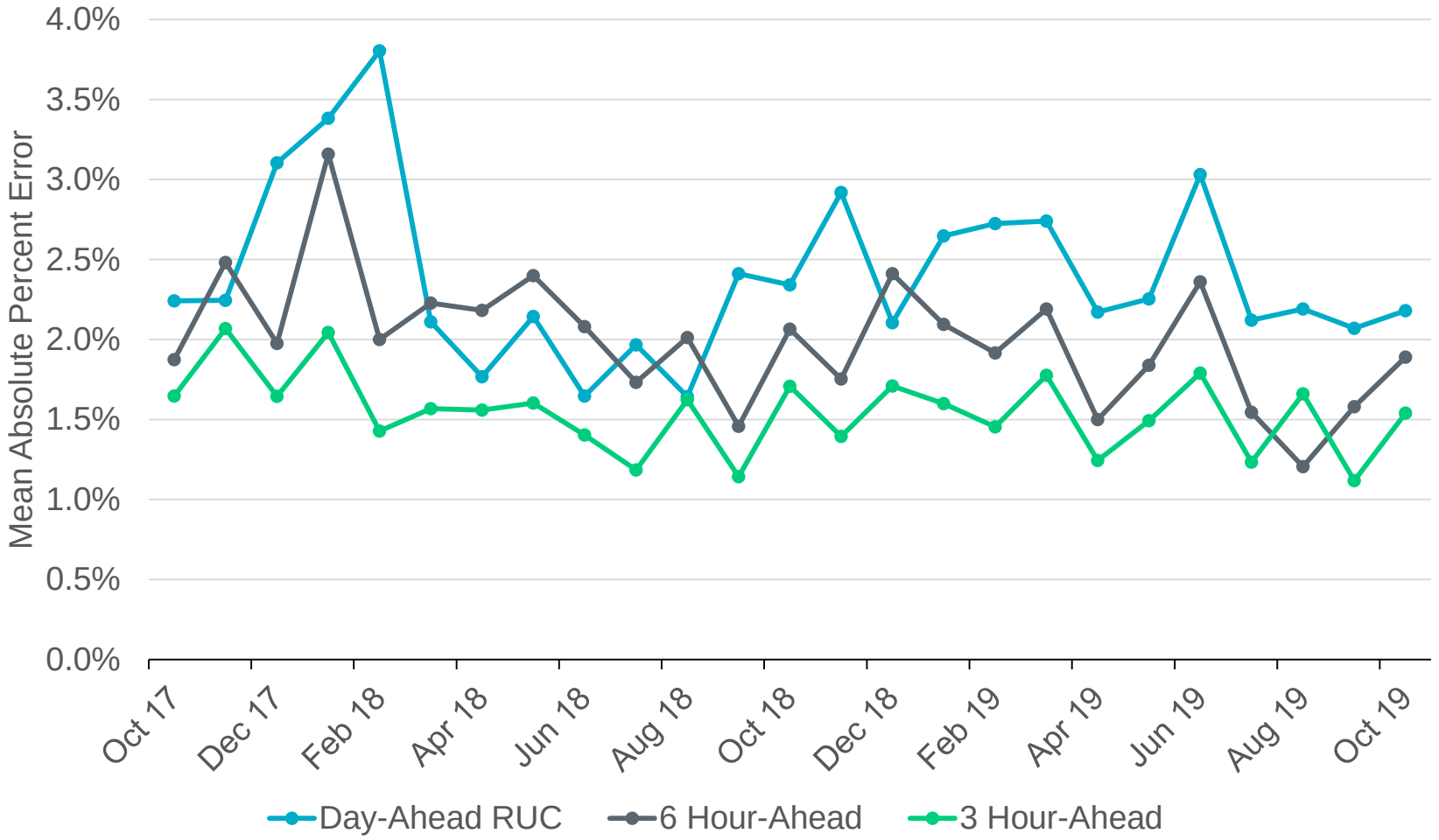
- Transmission Projects energized in 2019 total about $1.30 Billion as of October 1, 2019.

ERCOT set a maximum peak demand of 65,197 MW* in October 2019, which is 4,370 MW more than the October 2018 demand of 60,827 MW



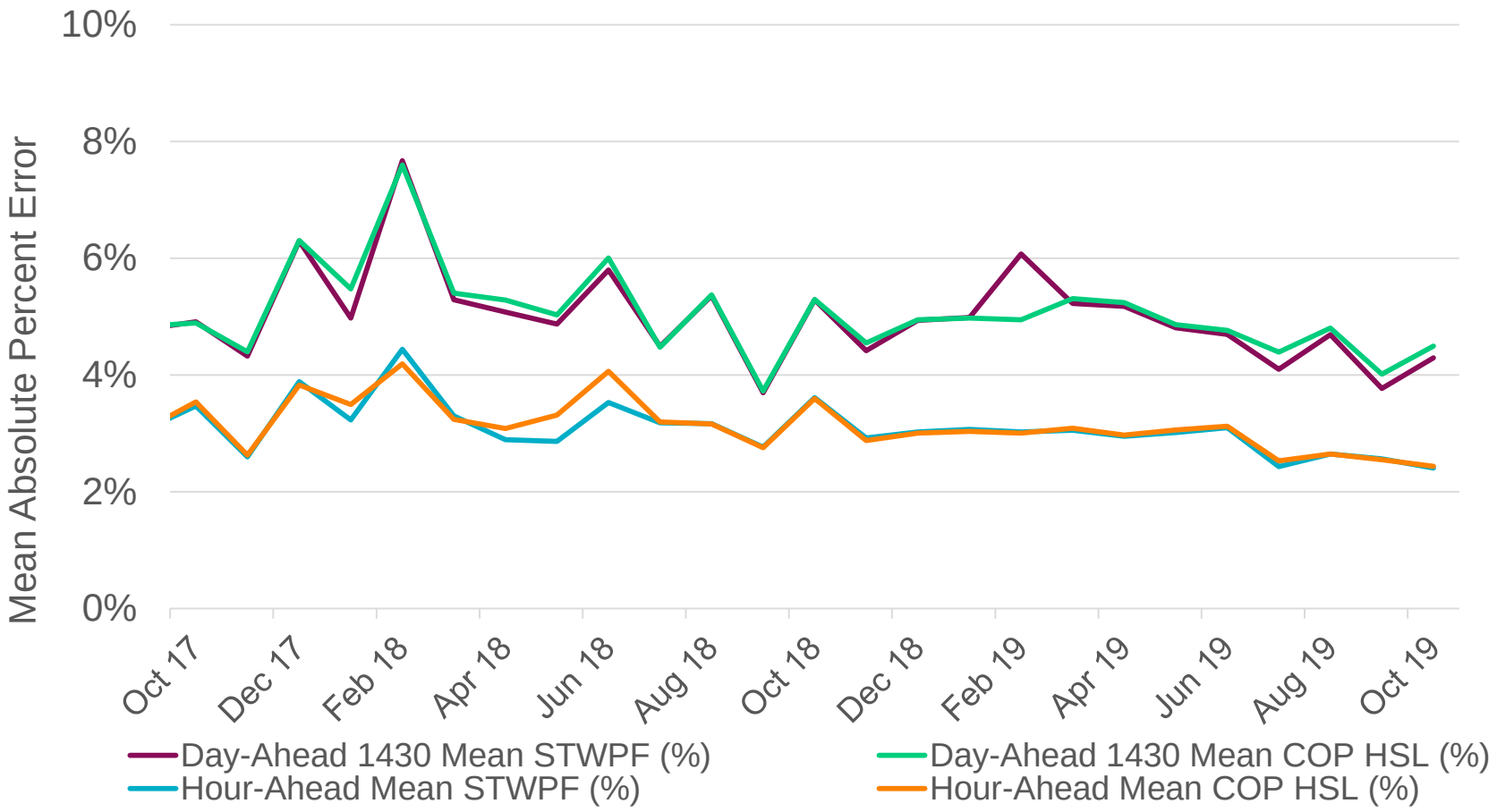
*Value based on net system hourly data from November release of Demand and Energy 2019 report.
**Value based on 15-minute metered data from November release of Demand and Energy 2019 report.
Data for latest two months are based on preliminary settlements.

Mid-Term Load Forecast Performance



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

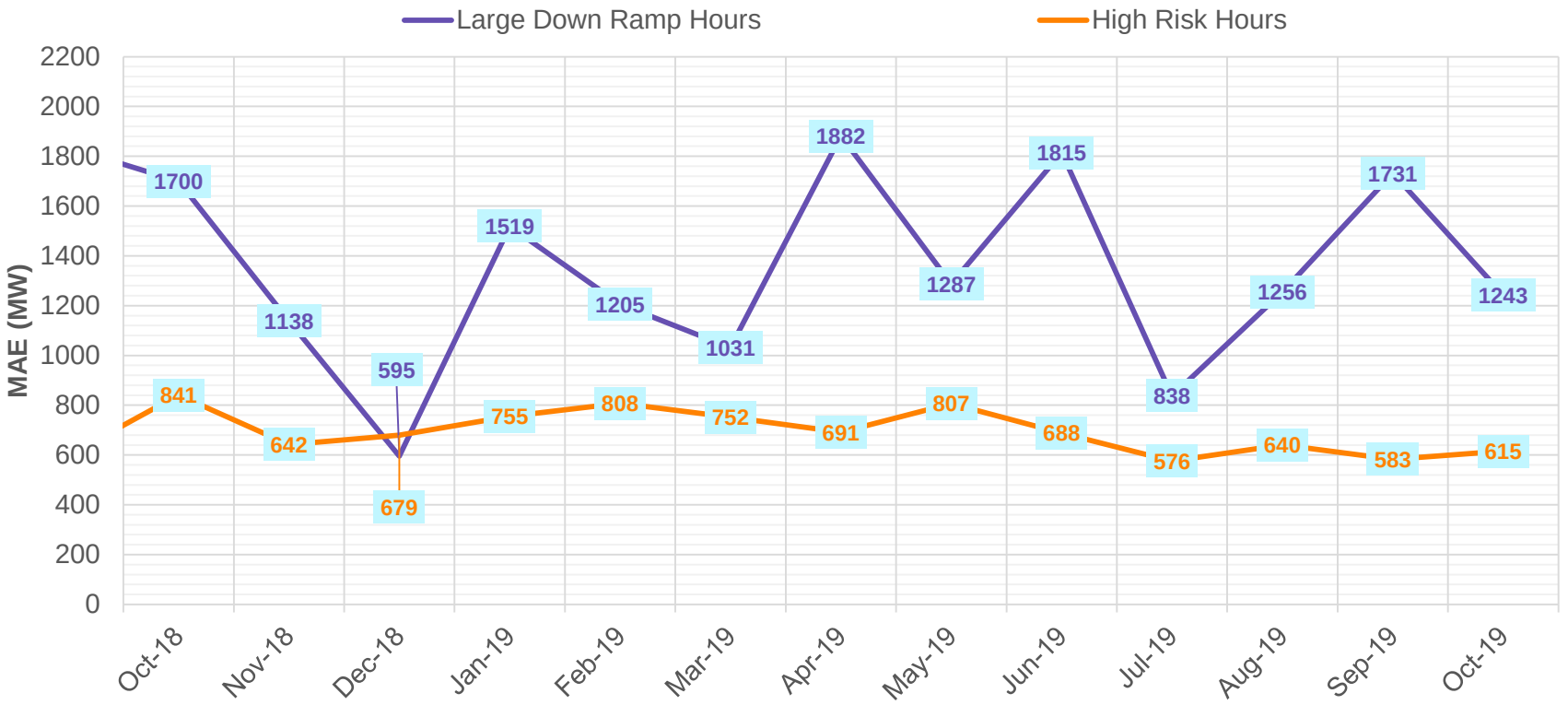
Wind Forecast Performance



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

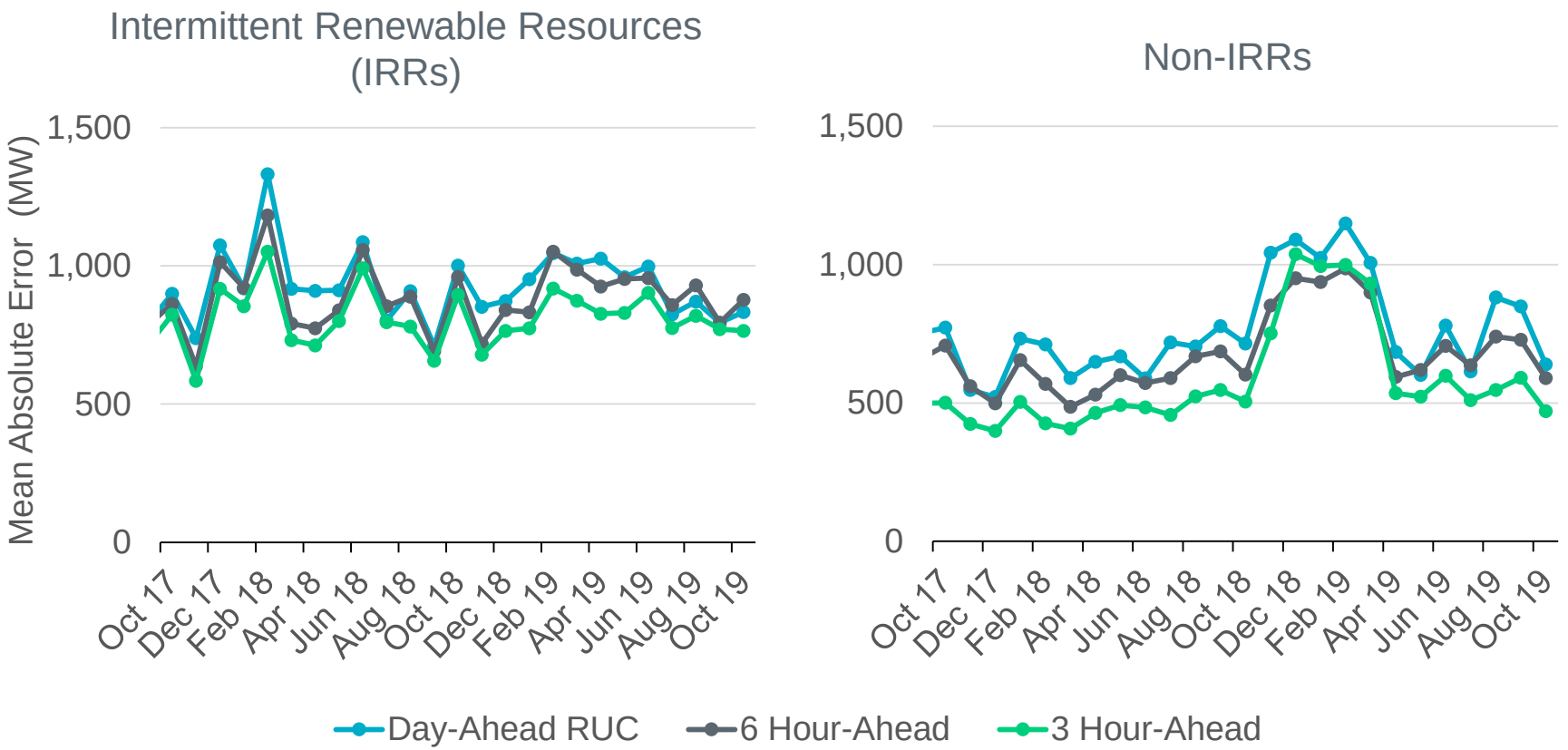
Hour-Ahead Mean Absolute Error (MAE) During Large Down Ramp (> 2000 MW) and High Risk Hours*



**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.*

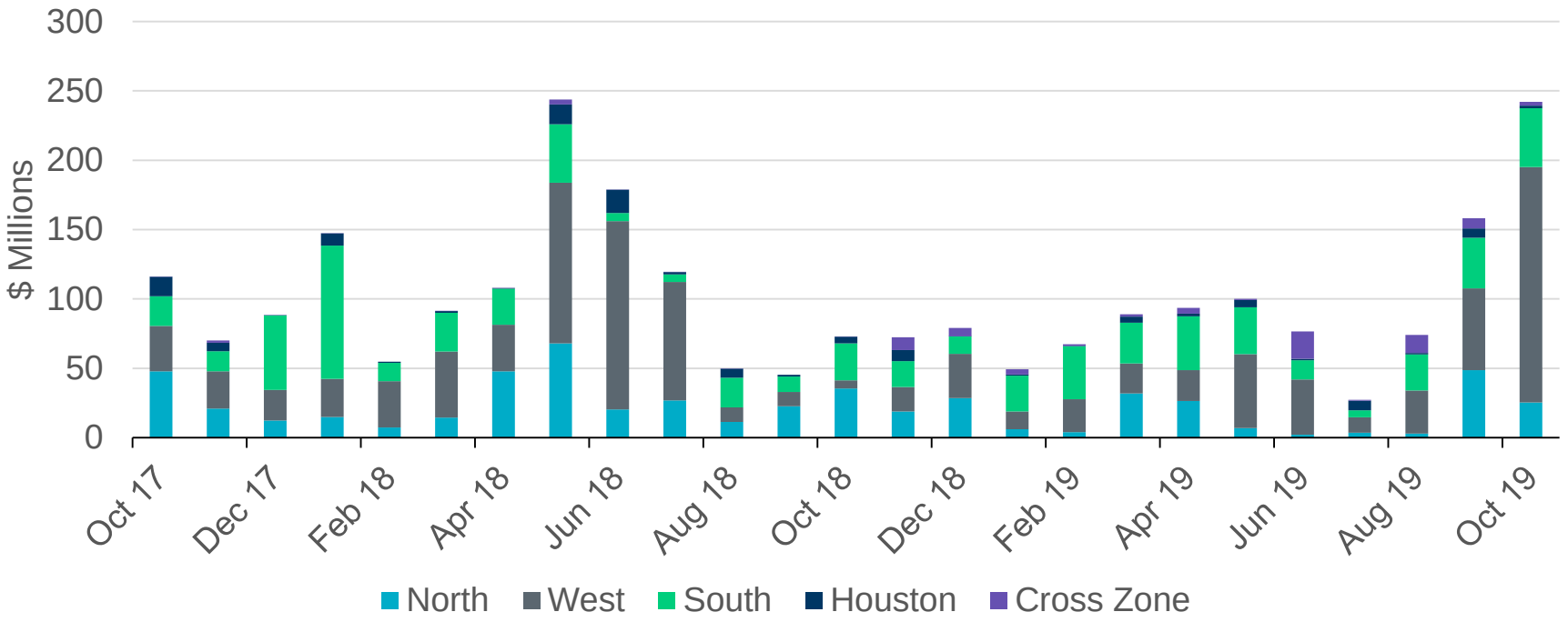
Forecast performance during large down ramp (wind ramp > 2000 MW) hours and high risk hours (historic risk of load ramping up and wind ramping down is high) is focused upon. Note that for the purposes of forecast performance measurement every hour in a month is classified as either a large down ramp 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 IRRs is 25,060 MW (as of October 31, 2019).

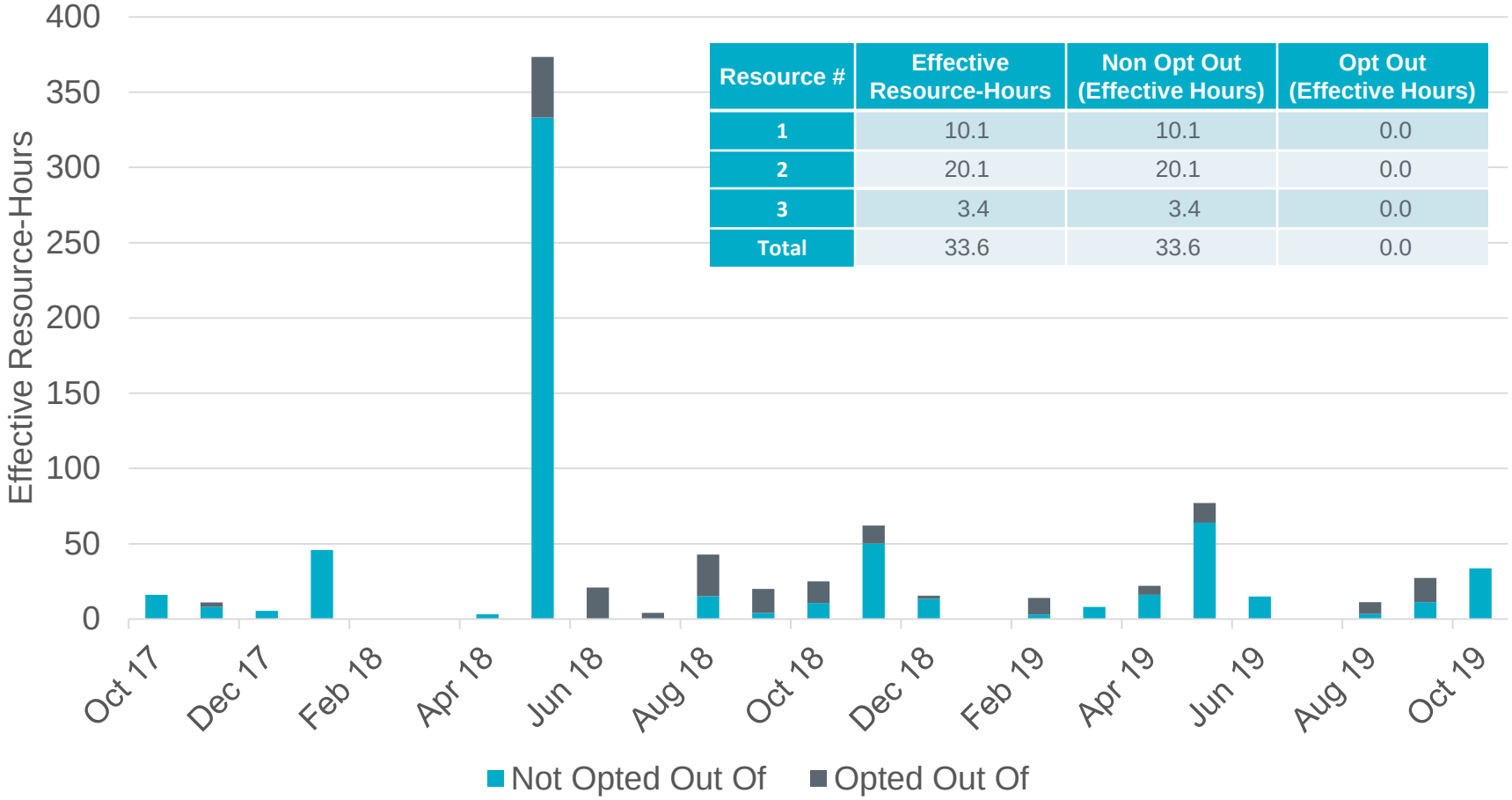
Real-Time Congestion Rent by Zone



- The congestion rent in the West zone increased significantly in October compared to September, in part due to planned transmission outages. The most significant West zone constraints for October include SECNMO28: 6100__F and XMDS58: 6475__C in the Odessa – Midland area and SHACPB38: RIOPEC_WOODW21_1 in Pecos County.
- 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.

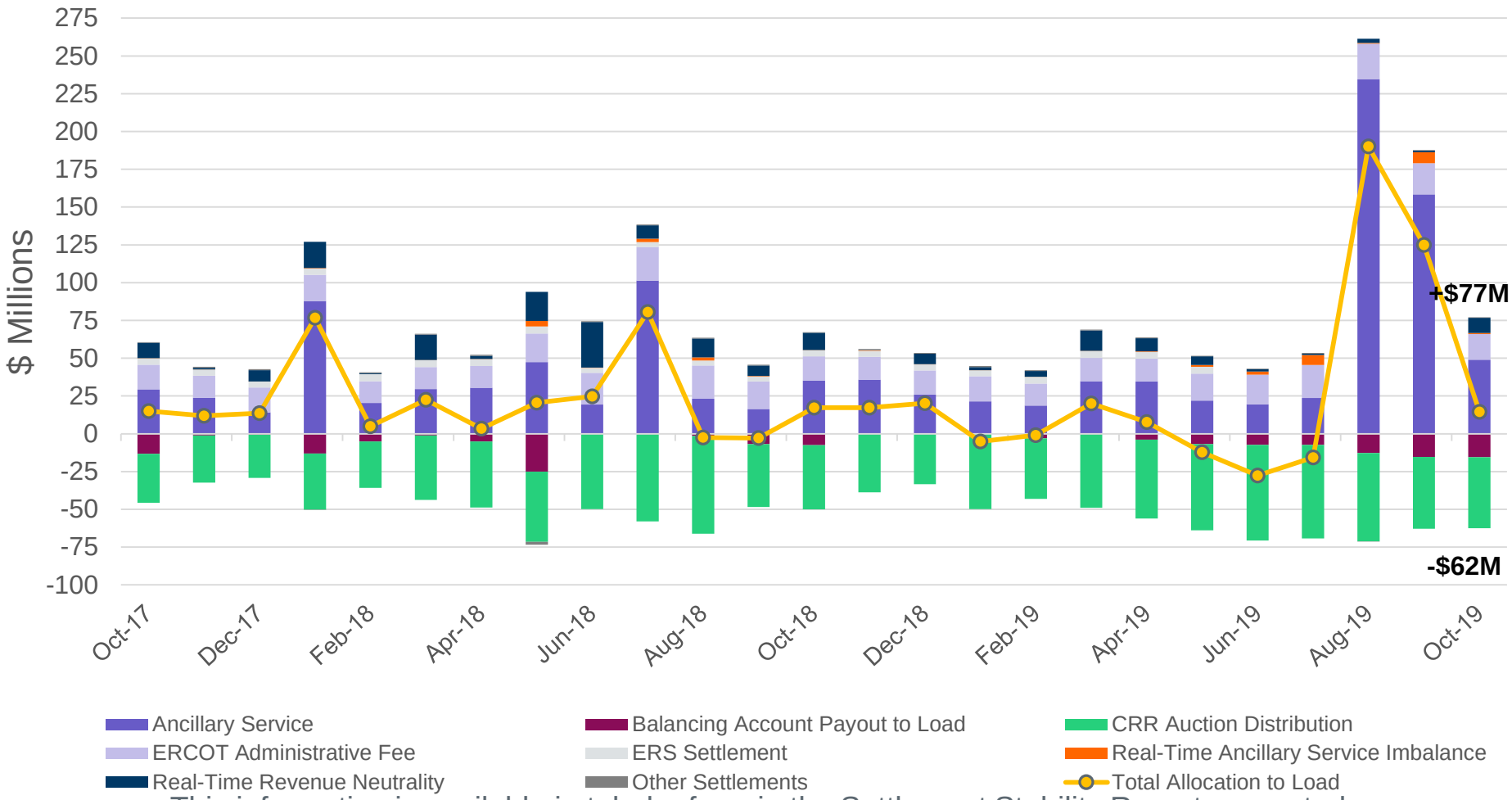
Three Resources were Committed for Congestion and One Resource was Decommitted for Congestion in October

Resource #	Effective Resource-Hours	Non Opt Out (Effective Hours)	Opt Out (Effective Hours)
1	10.1	10.1	0.0
2	20.1	20.1	0.0
3	3.4	3.4	0.0
Total	33.6	33.6	0.0



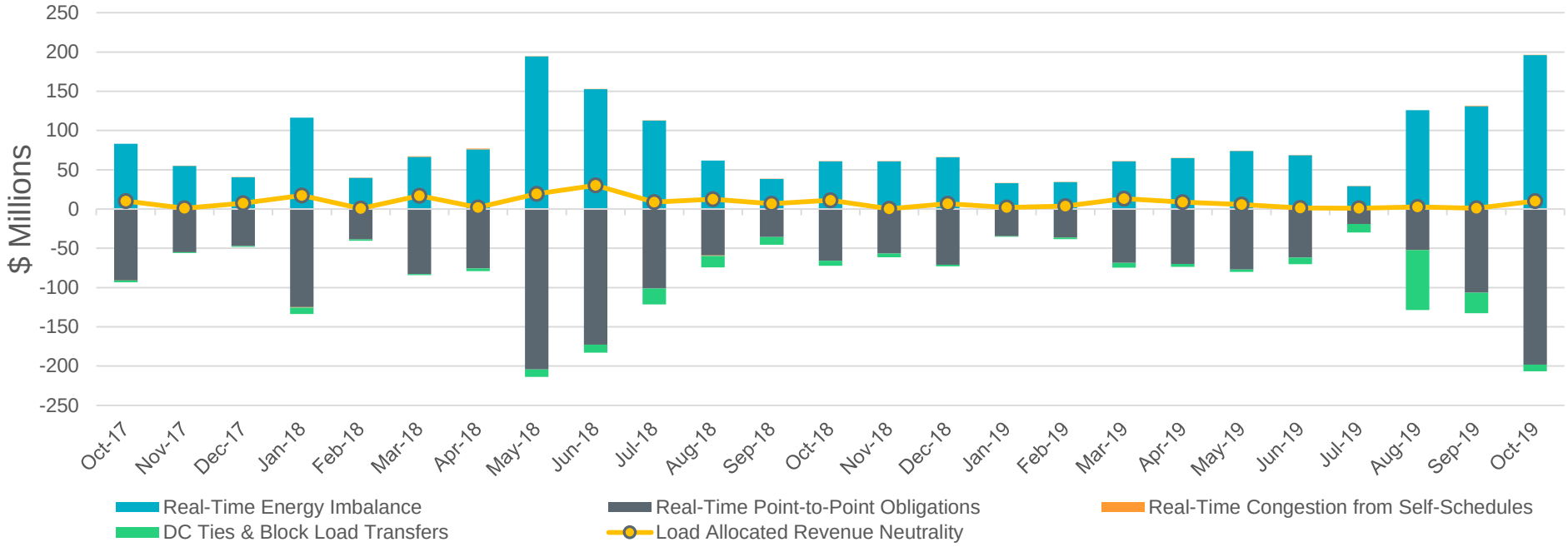
"Effective Resource-hours" excludes any period during a Reliability Unit Commitment hour when the RUC-committed Resource was starting up, shutting down, off-line, or otherwise not available for dispatch by SCED.

Net Allocation to Load in October 2019 was $15 Million



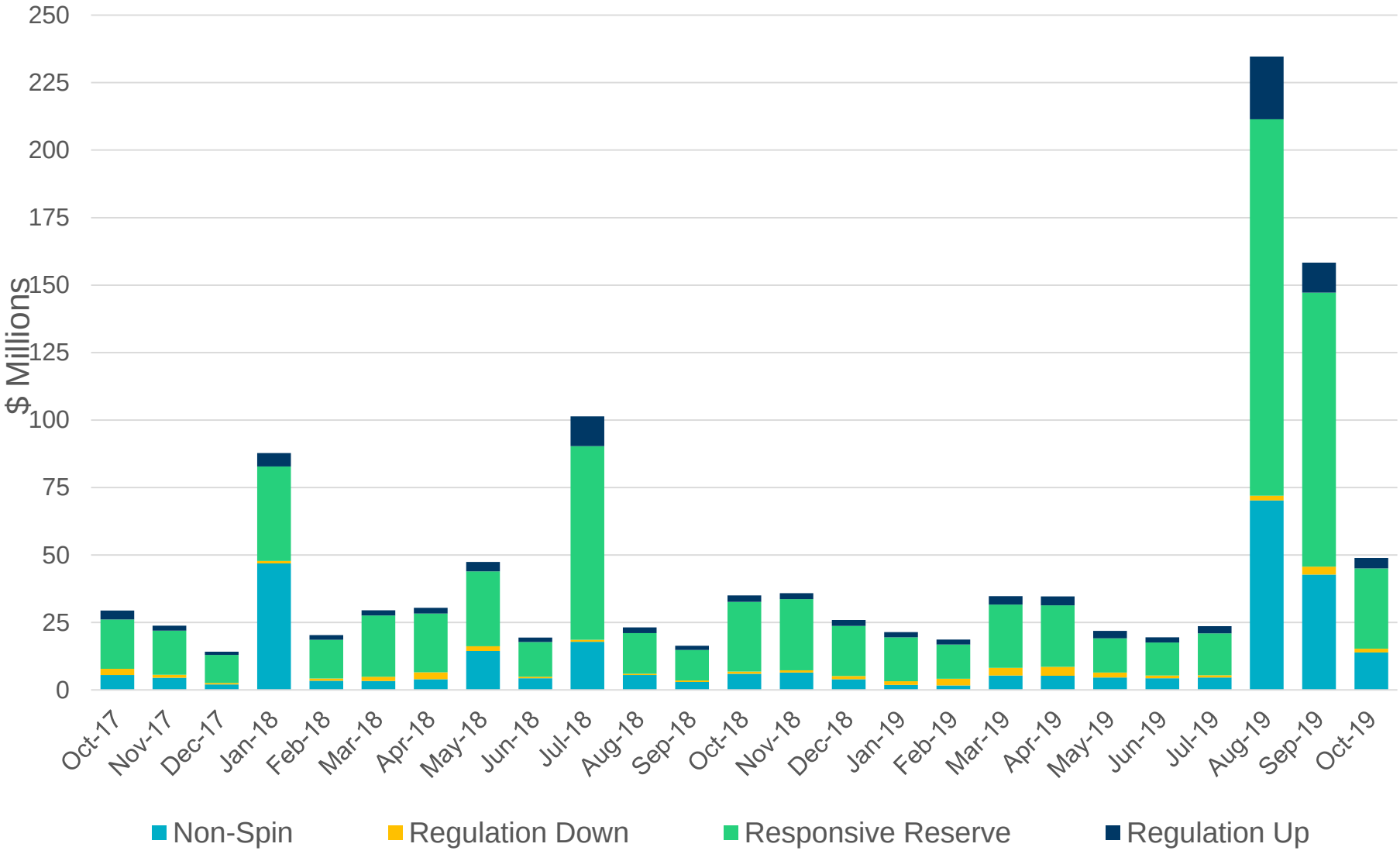
This information is available in tabular form in the Settlement Stability Report presented quarterly to the Market Settlement Working Group and Wholesale Market Subcommittee

Real-Time Revenue Neutrality Allocated to Load was $10.13M for October 2019

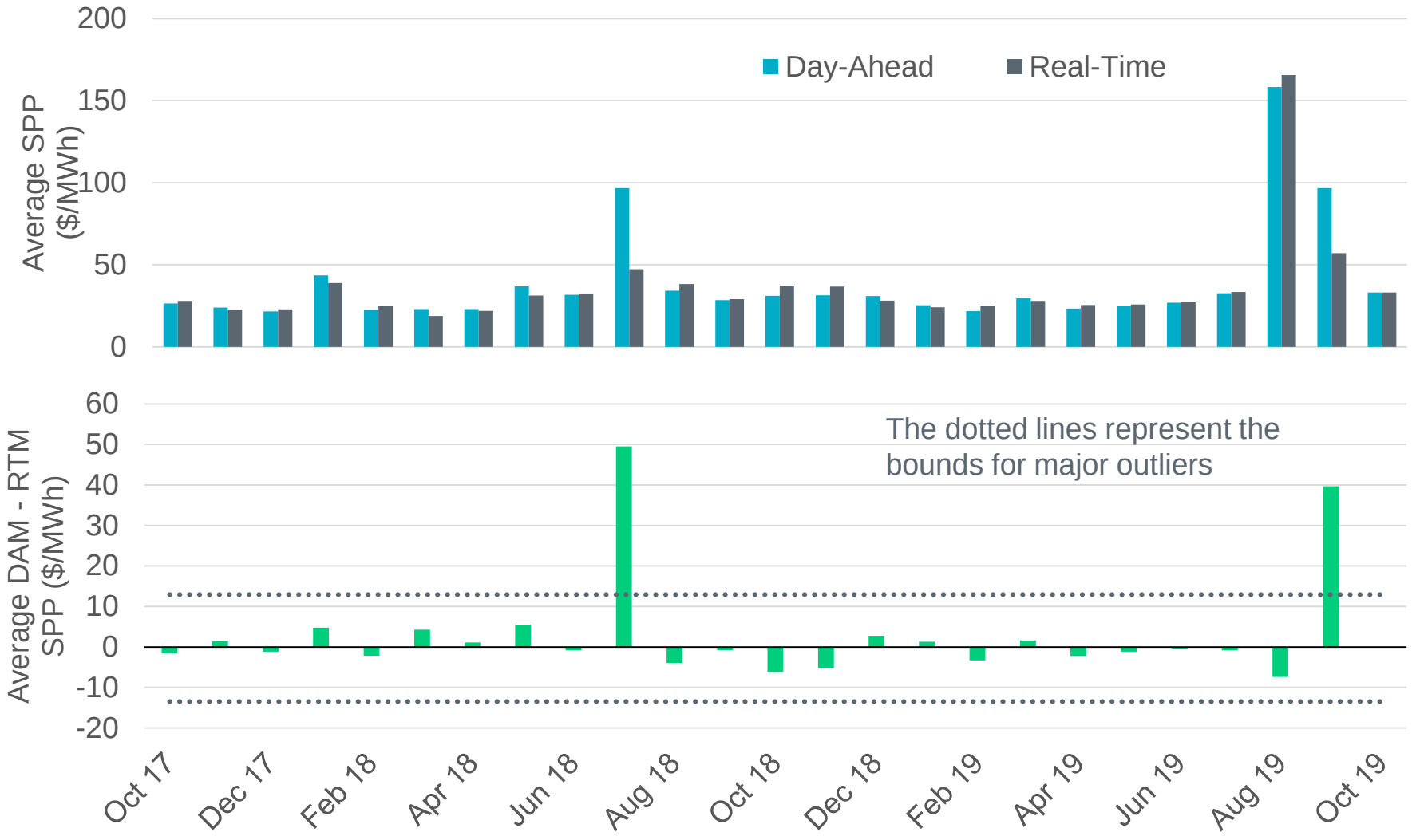


	October 2019 ($M)
Real-Time Energy Imbalance	$196.12
Real-Time Point-to-Point Obligation	($198.06)
Real-Time Congestion from Self-Schedules	$0.50
DC Tie & Block Load Transfer	($8.69)
Load Allocated Revenue Neutrality	**$10.13**

Ancillary Services for October 2019 totaled $48.9M

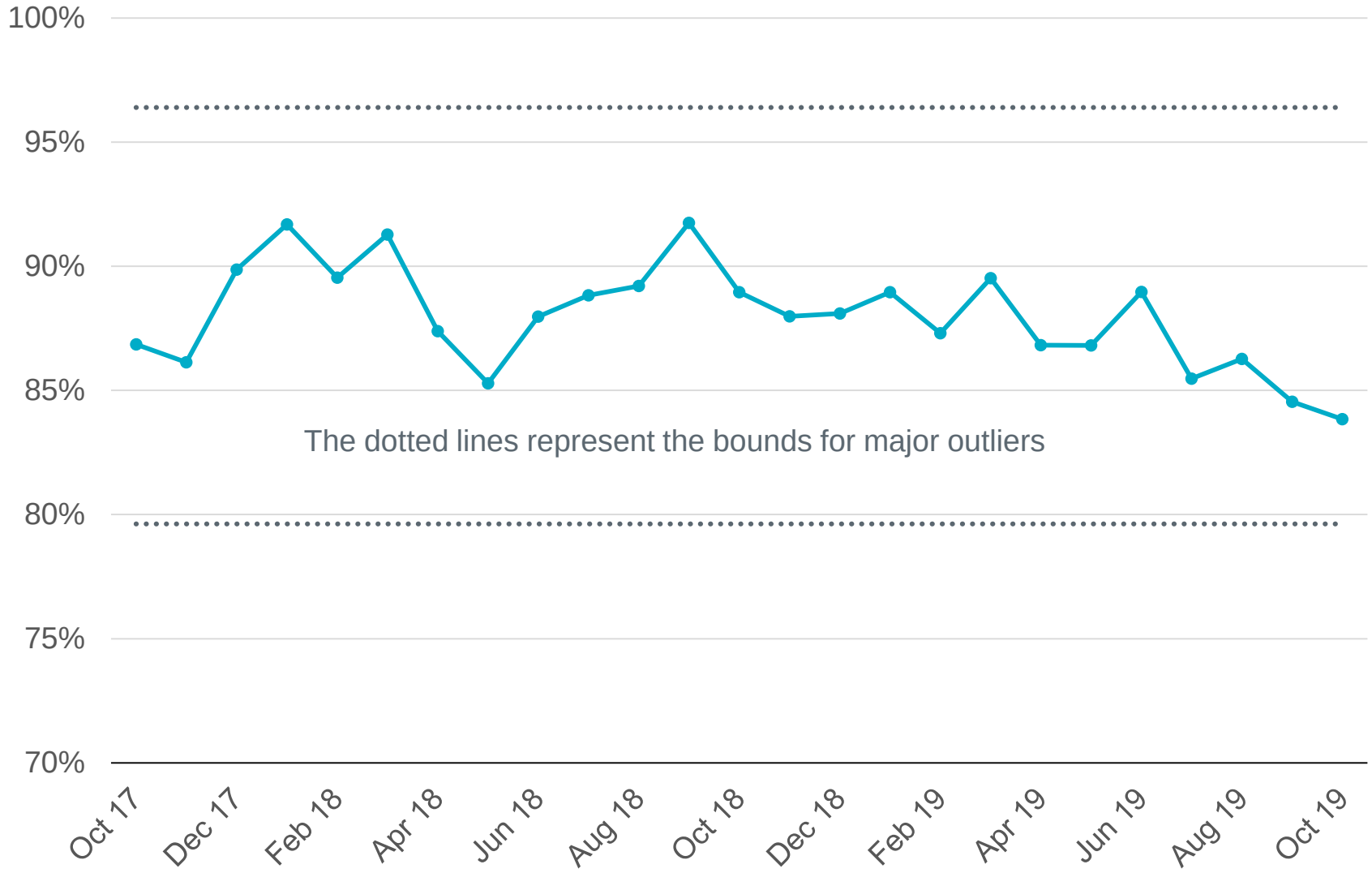


Day-Ahead and Real-Time Market Price Differences

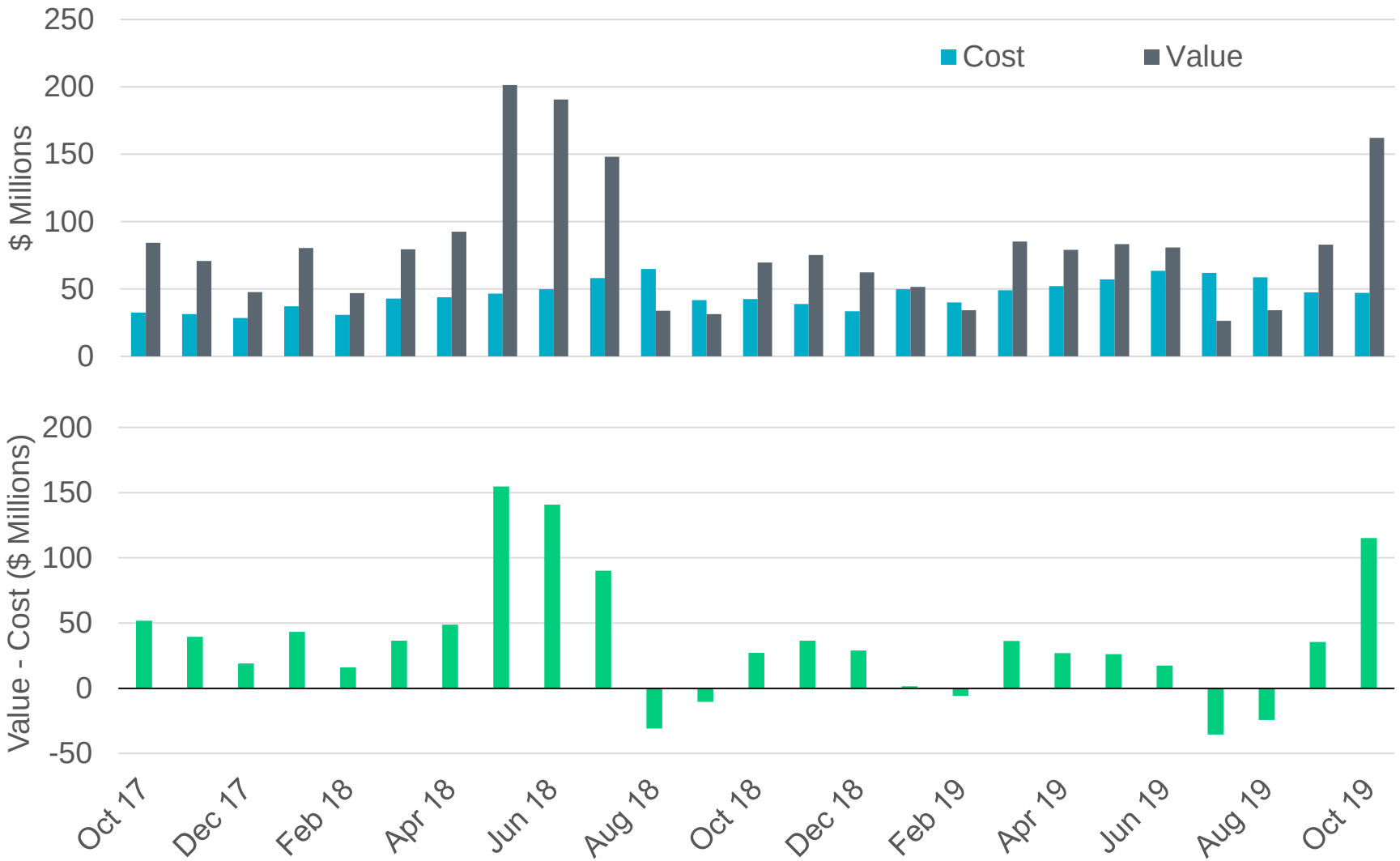


*Averages are weighted by Real-Time Market Load

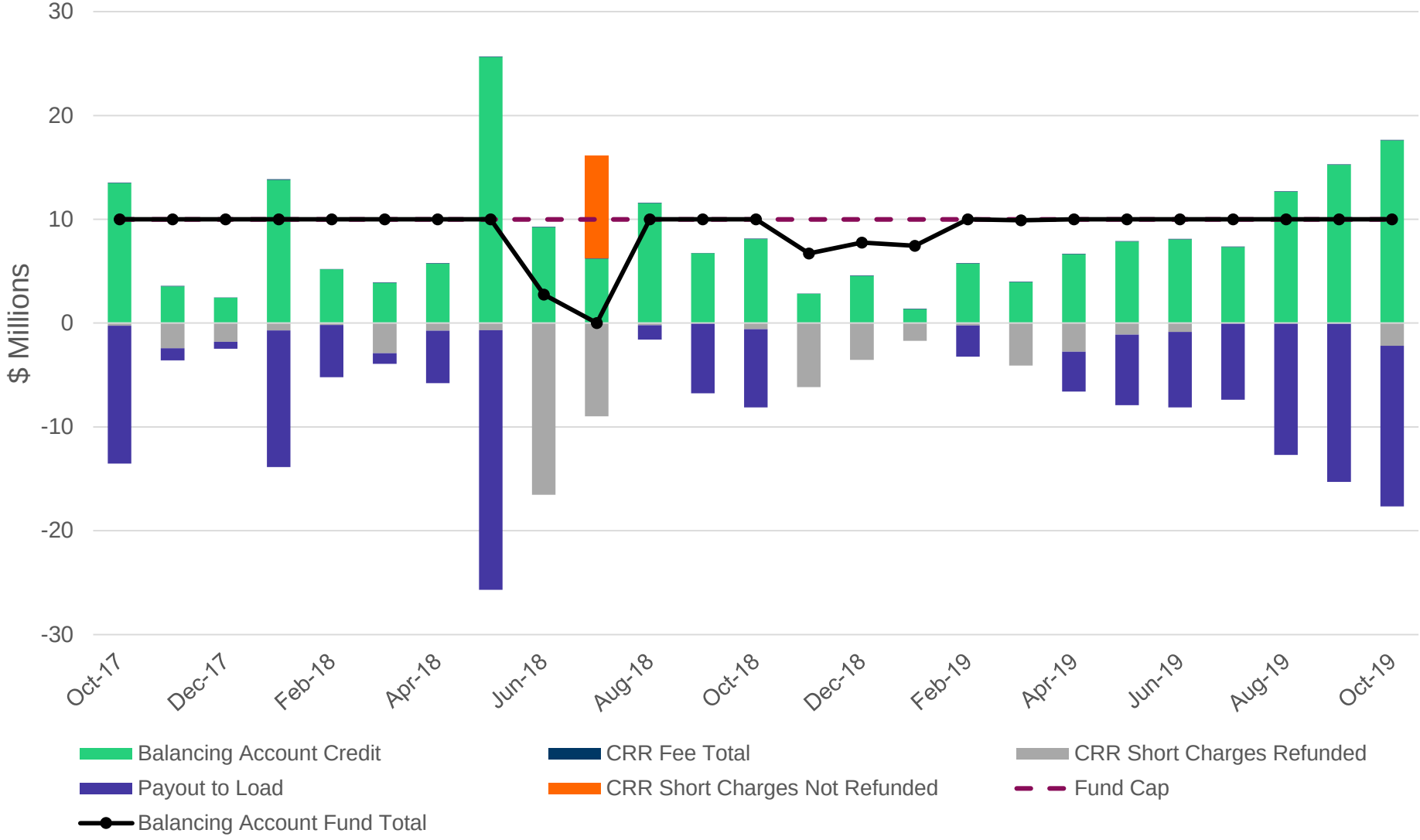
Percentage of Real-Time Load Transacted in the Day-Ahead Market



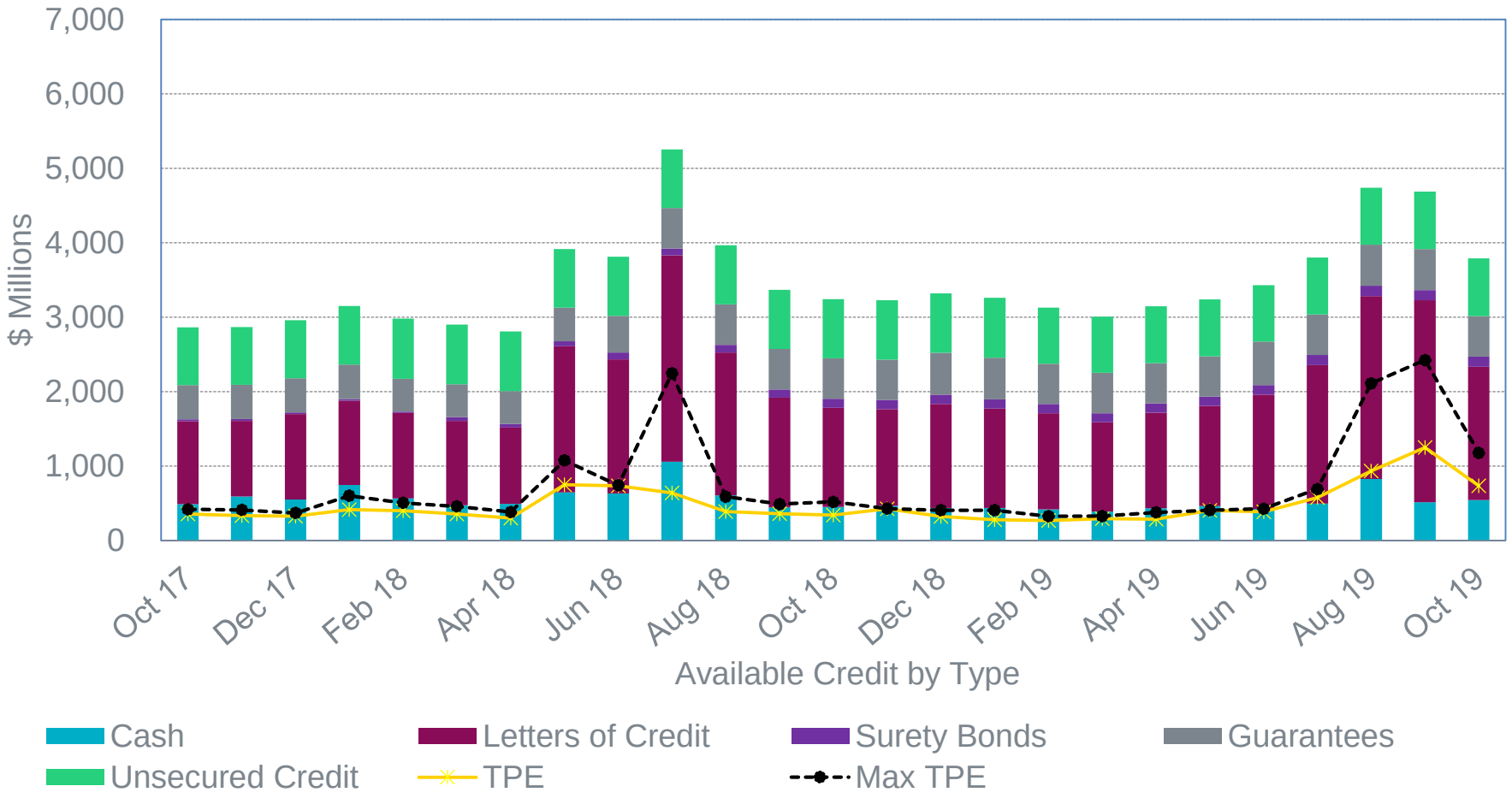
CRR Value and Cost Differences



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



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



*Numbers are as of month end except for Max TPE

Retail Transaction Volumes – Summary – October 2019

	Year-To-Date		Transactions Received	
Transaction Type	October 2019	October 2018	October 2019	October 2018
Switches	1,178,418	964,279	97,443	84,425
Acquisition	0	0	0	0
Move - Ins	2,522,658	2,431,279	259,662	245,672
Move - Outs	1,171,931	1,170,527	120,353	117,436
Continuous Service Agreements (CSA)	768,755	545,160	28,670	51,991
Mass Transitions	0	9,034	0	0
Total	5,641,762	5,120,279	506,128	499,524