



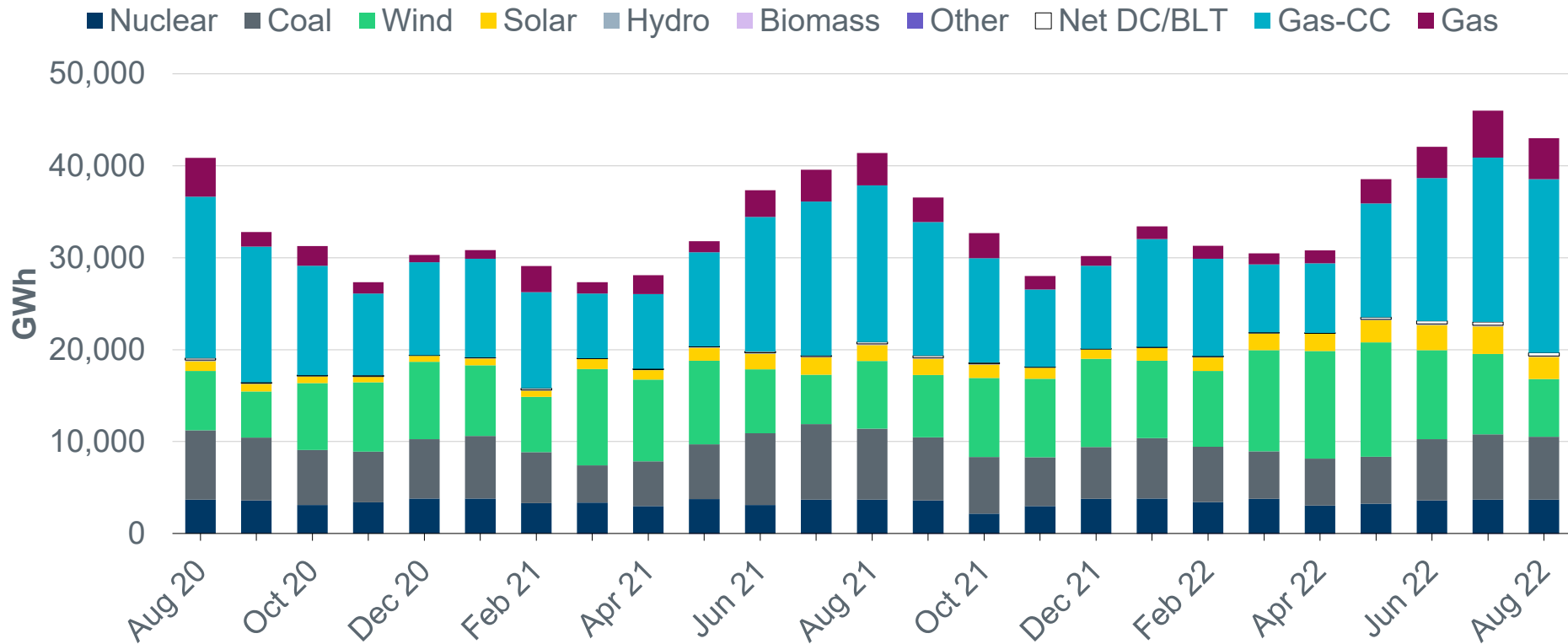
ERCOT Monthly Operational Overview (August 2022)

ERCOT Public
September 19, 2022

Highlights, Records and Notifications

- ERCOT set a new monthly all-time record of 78,465 MW* for the month of August on 8/2/2022; this was 3,645 MW more than the previous record of 74,820 MW set on 8/12/2019. This is 4,778 MW more than the August 2021 demand of 73,687 MW.
- ERCOT issued no notifications for the month of August.

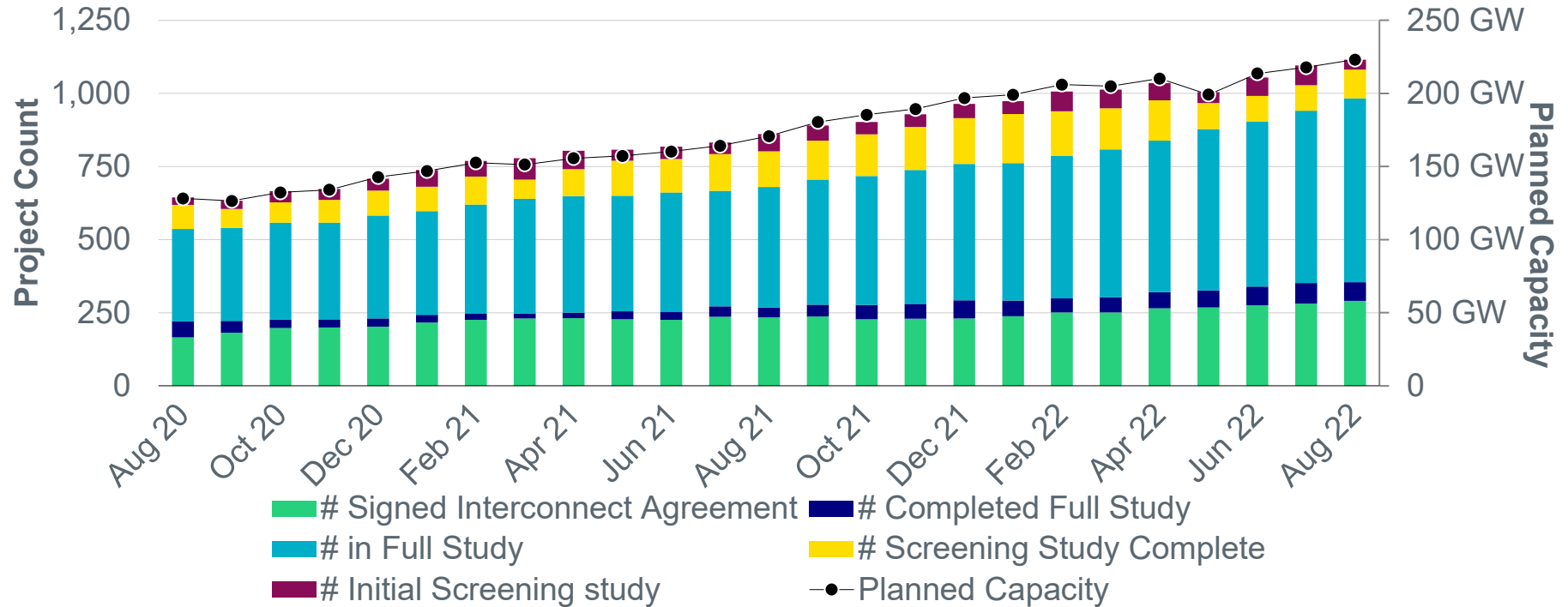
Monthly energy generation increased by 4% year-over-year to 42,990 GWh in August 2022, compared to 41,396 GWh in August 2021



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)

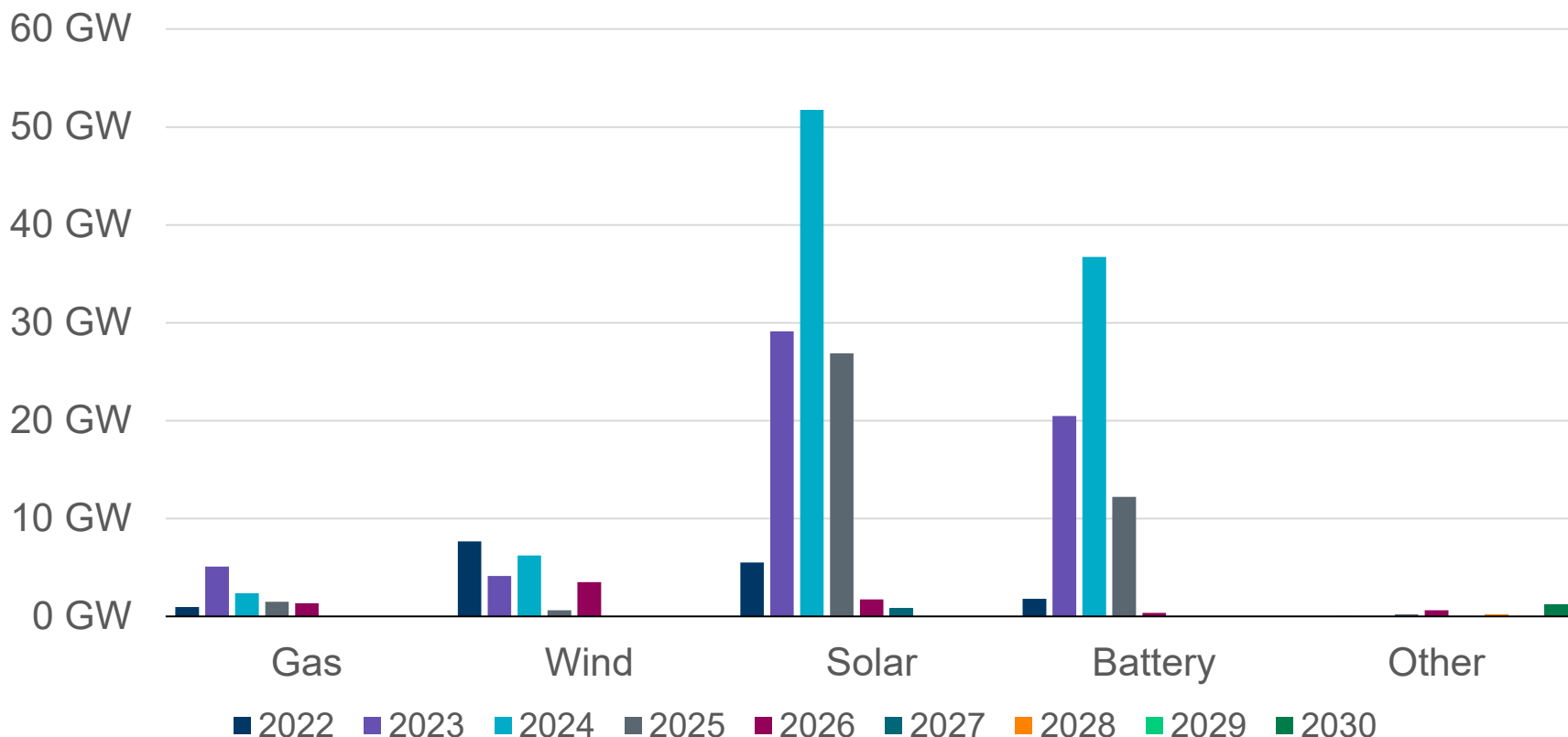


- There are an additional 4 “Small Generator” projects (37 MW) that are going through the simplified interconnection process.

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 116 GW (51.9%), Wind 22 GW (9.9%), Gas 11 GW (5.0%), Battery 72 GW (32.1%)
(Excludes capacity associated with projects designated as Inactive per Planning Guide Section 5.7.6)

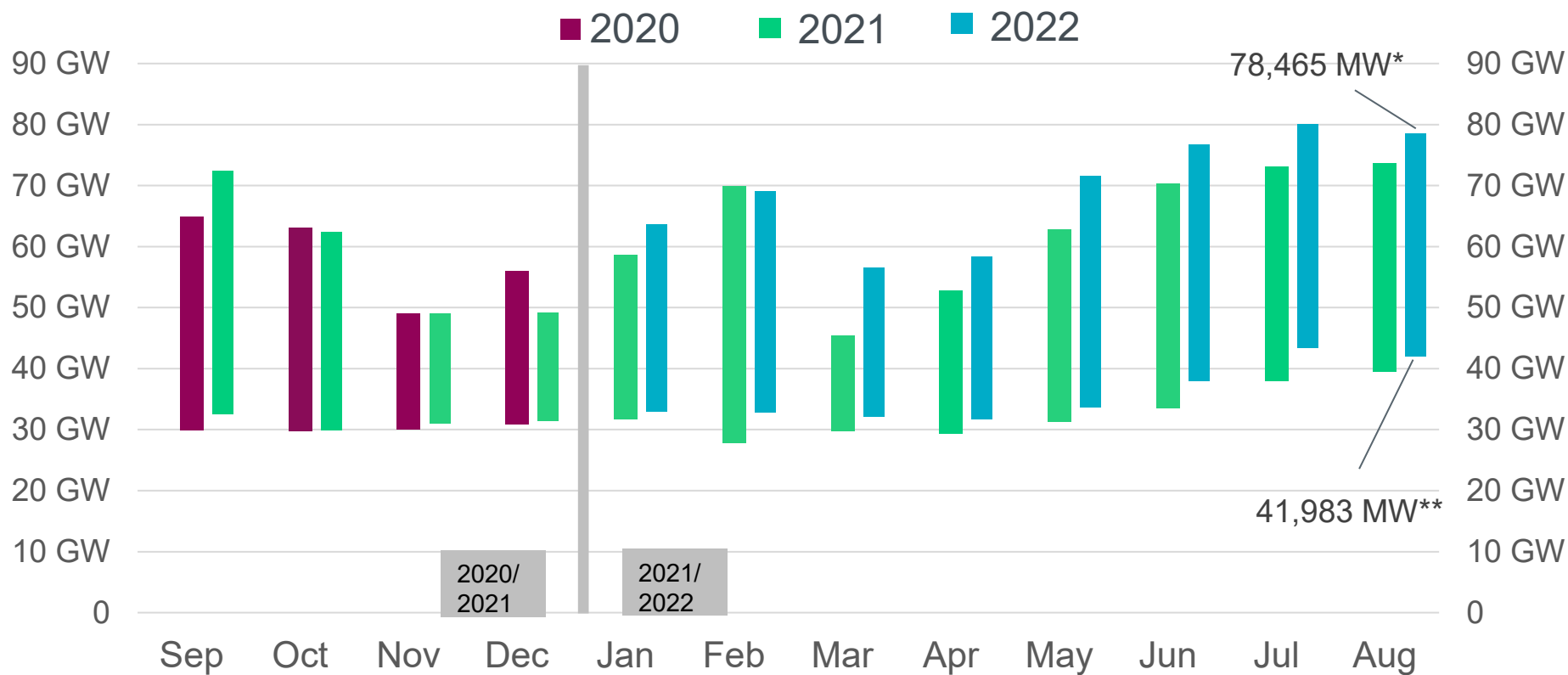


A break-out by zone can be found in the monthly Generator Interconnection Status (GIS) reports available on the ERCOT Resource Adequacy Page: <http://www.ercot.com/gridinfo/resource>

Planning Summary

- ERCOT is tracking 1,138 active generation interconnection requests totaling 223,040 MW as of August 31. This includes 115,799 MW of solar, 22,118 MW of wind, 71,580 MW of battery, and 11,255 MW of gas projects; 57 projects were categorized as inactive, up from 56 inactive projects in July 2022.
- ERCOT is currently reviewing proposed transmission improvements with a total estimated cost of \$394.49 Million as of August 31, 2022.
- Transmission Projects endorsed in 2022 total \$2.253 Billion as of August 31, 2022.
- All projects (in engineering, routing, licensing and construction) total approximately \$9.275 Billion as of June 1, 2022.
- Transmission Projects energized in 2022 total about \$1.523 Billion as of June 1, 2022.

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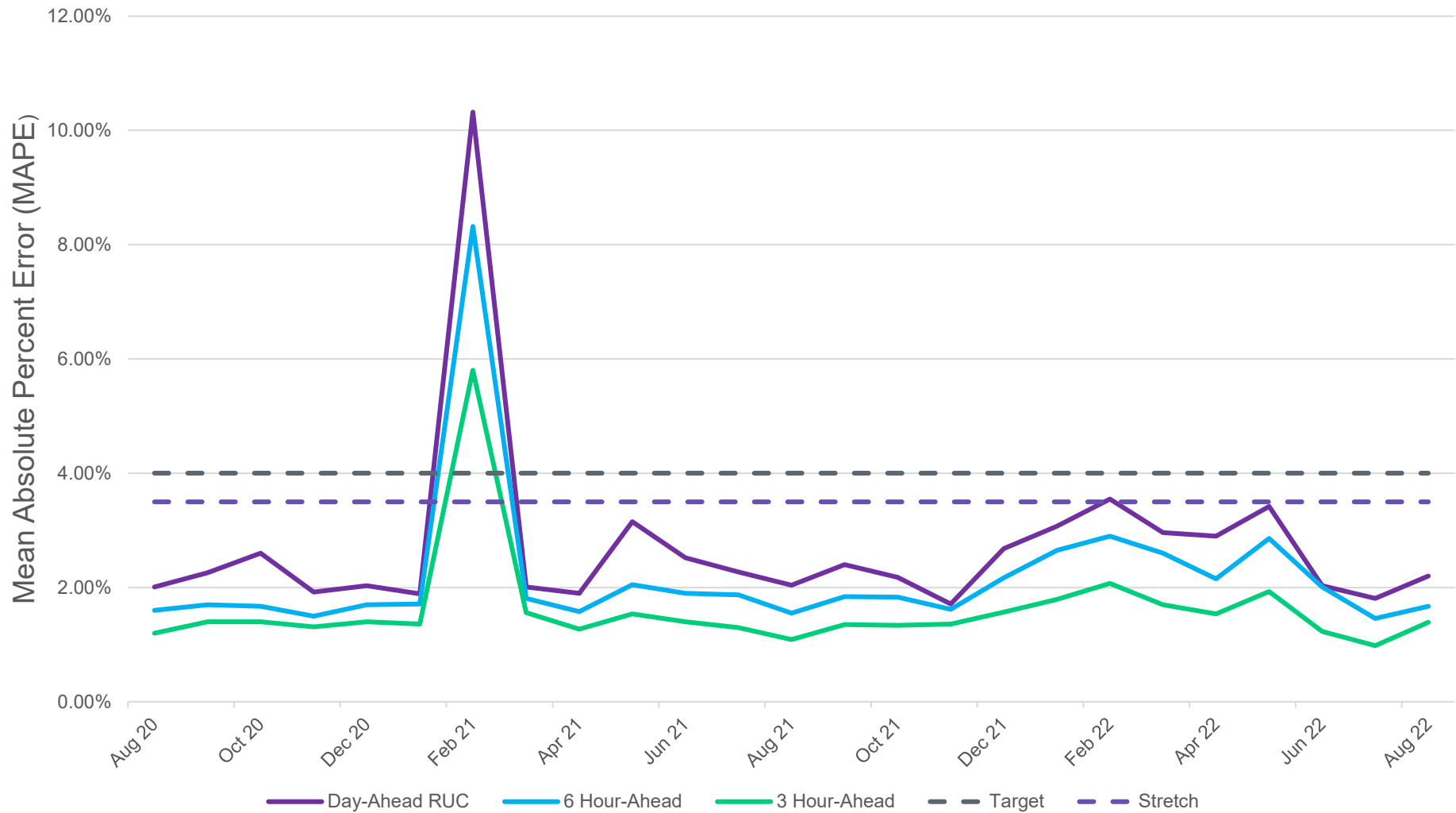


*Based on the maximum net system hourly value from July release of Demand and Energy 2022 report.

**Based on the minimum net system 15-minute interval value from July release of Demand and Energy 2022 report.

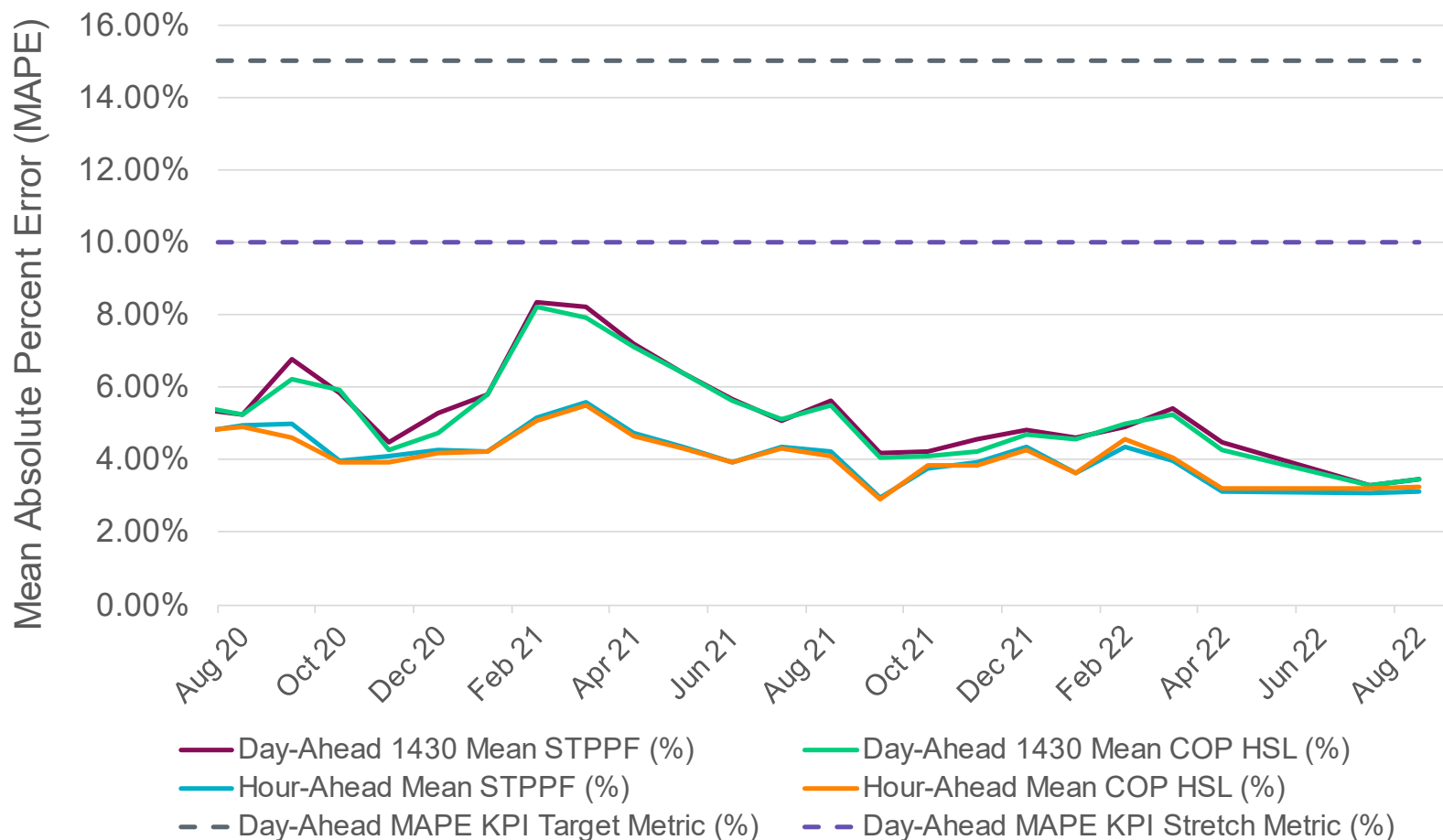
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Mid-Term Load Forecast Performance



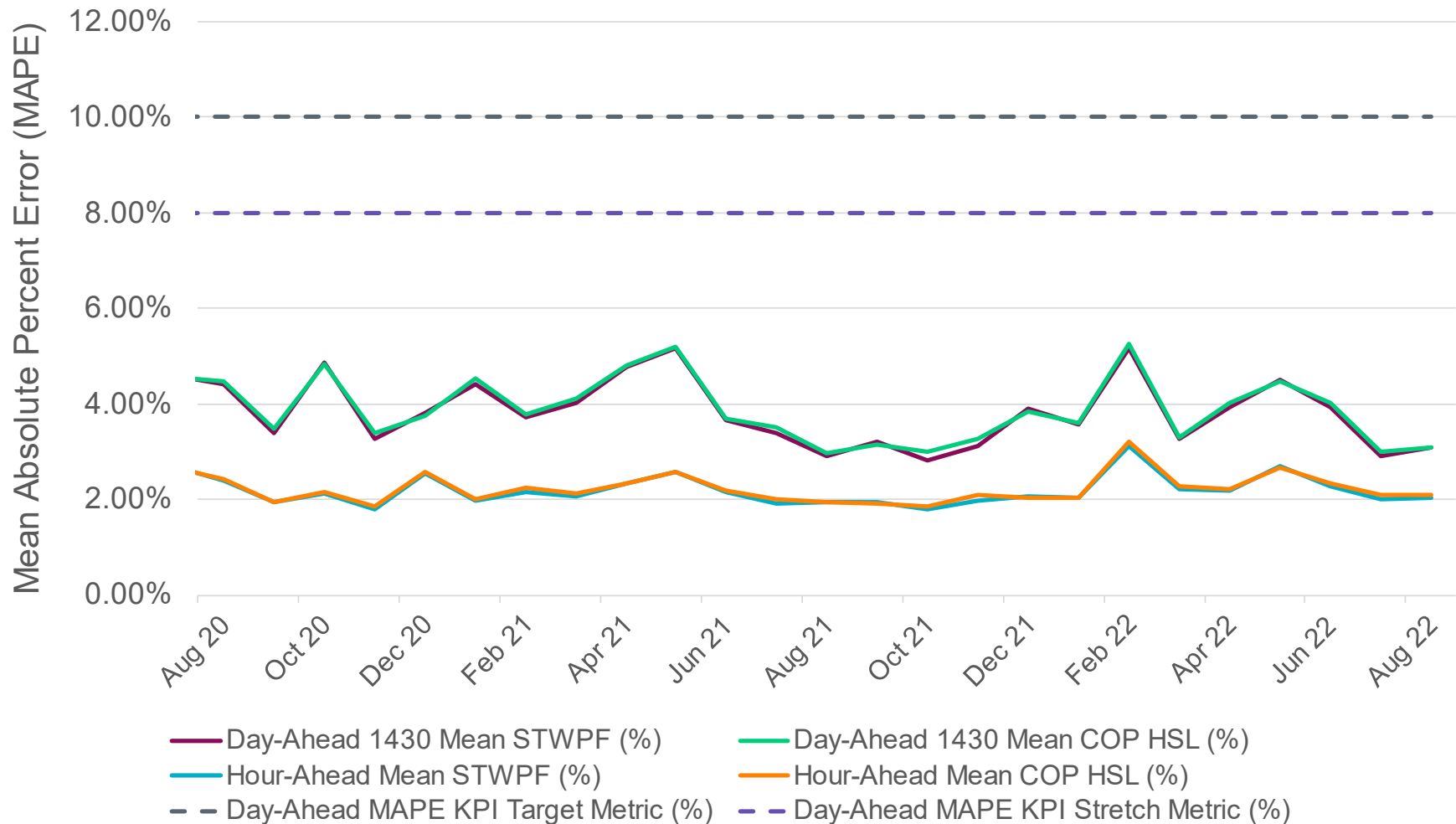
The Mid-Term Load Forecast is an hourly forecast that looks 7 days into the future

Solar Forecast Performance



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

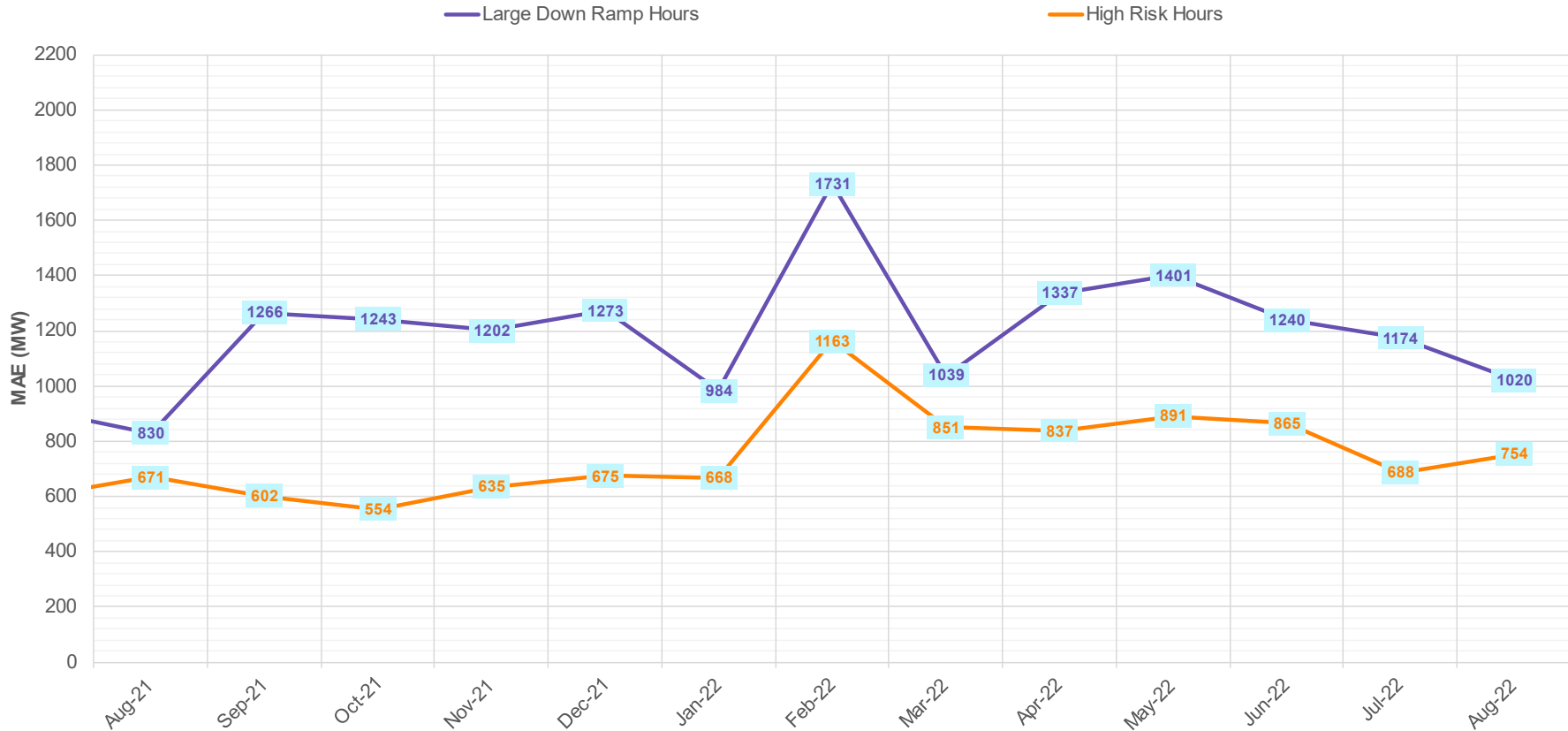
Wind Forecast Performance



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

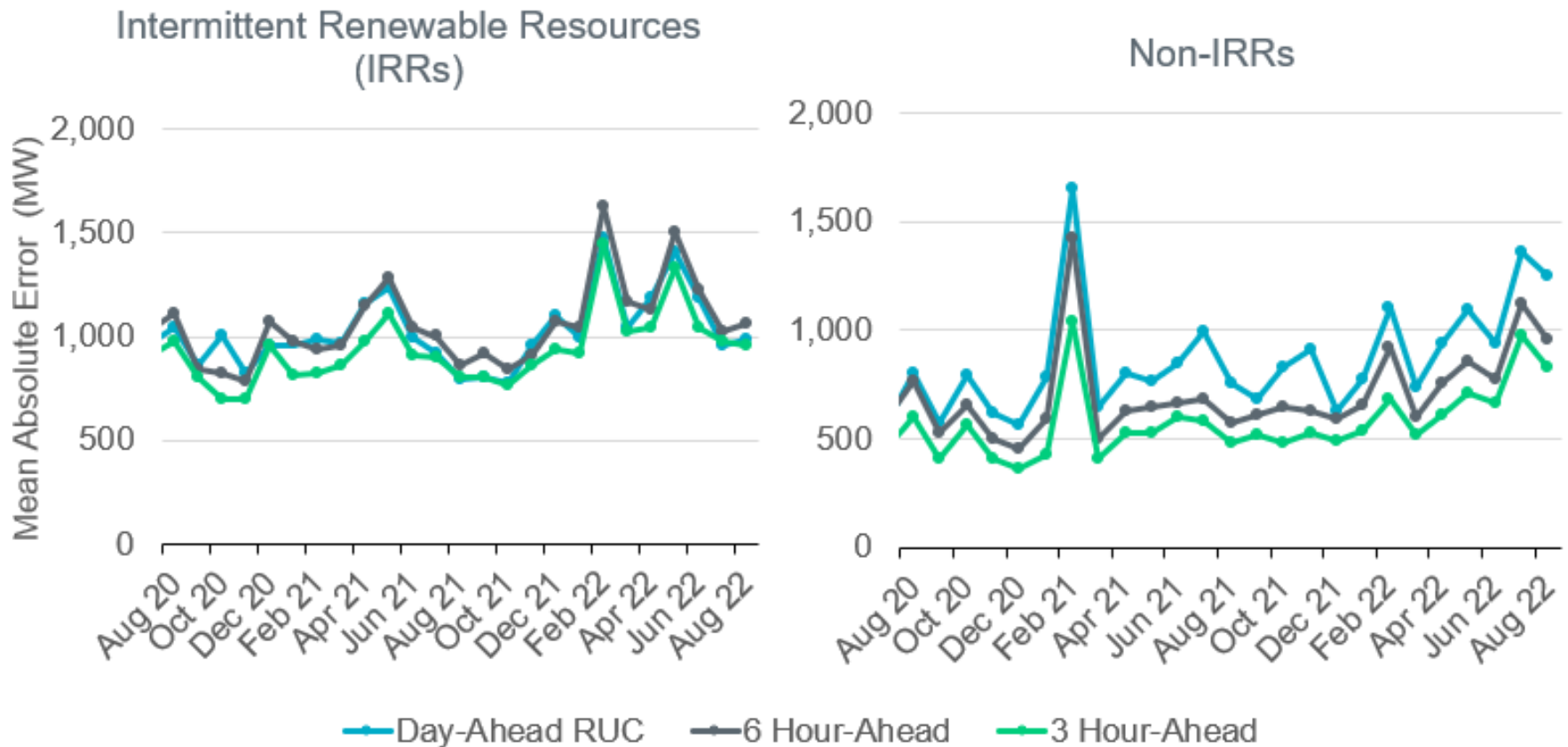
Hour-Ahead Mean Absolute Error (MAE) During Large Down Ramp (> 2000 MW) and High Risk Hours*



*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.

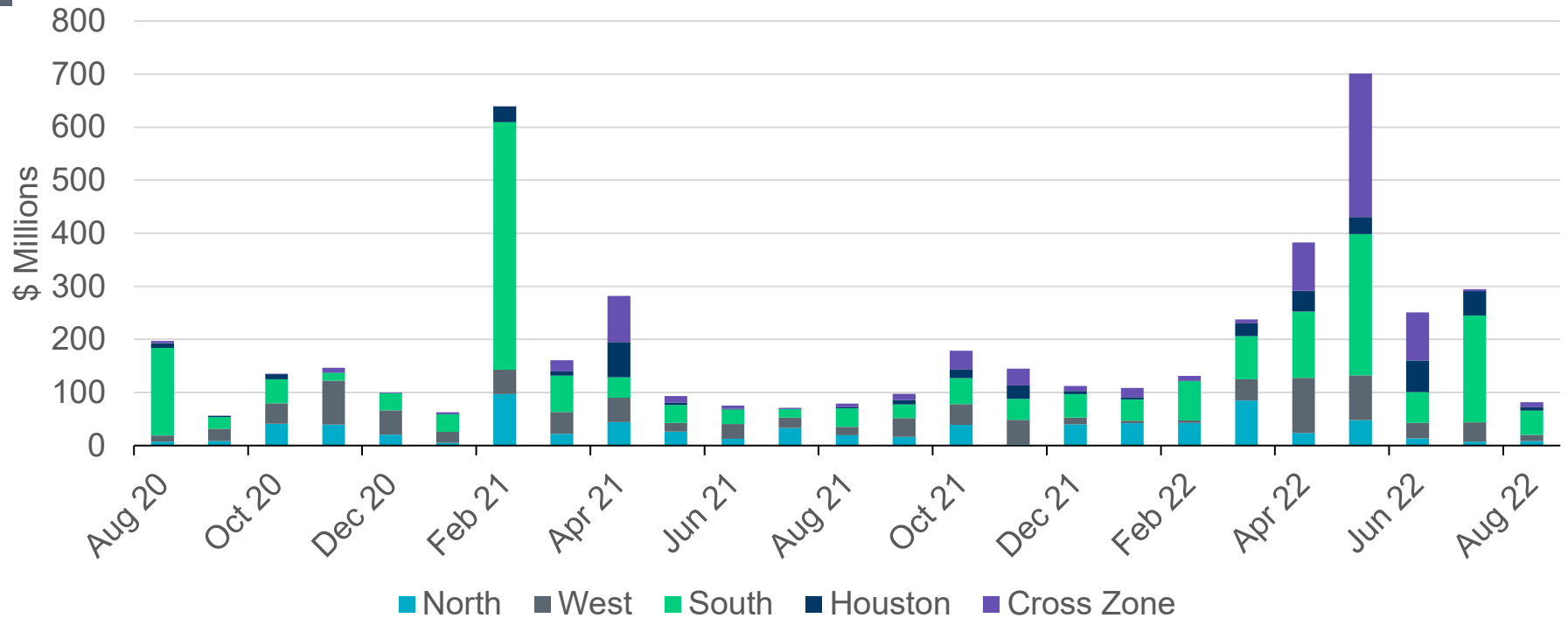
Forecast performance during large down ramp (wind ramp > 2000 MW) hours and high risk hours (historic risk of load ramping up and wind ramping down is high) is focused upon. Note that for the purposes of forecast performance measurement every hour in a month is classified as either a large down ramp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



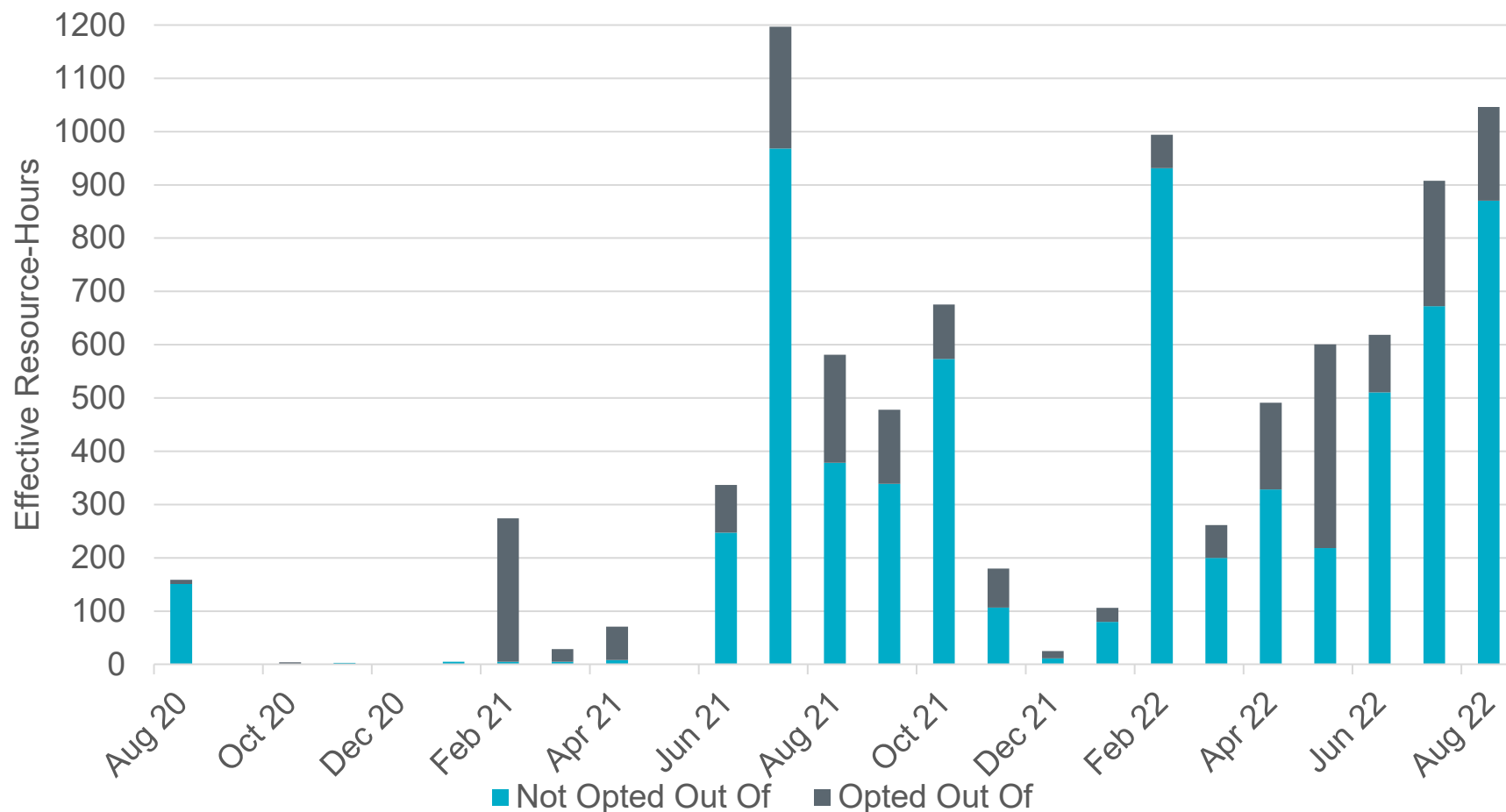
- COPs for IRRs are derived from wind and solar forecasts from ERCOT with any adjustments from Qualified Scheduling Entities.
- The installed capacity of approved Wind Units is 35,563 MW (as of August 31, 2022).
- The installed capacity of approved Solar Units is 12,287 MW (as of August 31, 2022).

Real-Time Congestion Rent by Zone



- Overall congestion rent was lower in August 2022 as compared to recent months.
- Congestion rent was highest for the South Zone and was primarily driven by the loss of double circuit 345 kV lines from Elmcreek to San Miguel Gen overloading the 345 kV line from Calaveras to Pawnee Switching Station.
- 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.

Twenty-Five Resources were Committed in August either for Capacity, Congestion or Minimum Run Time

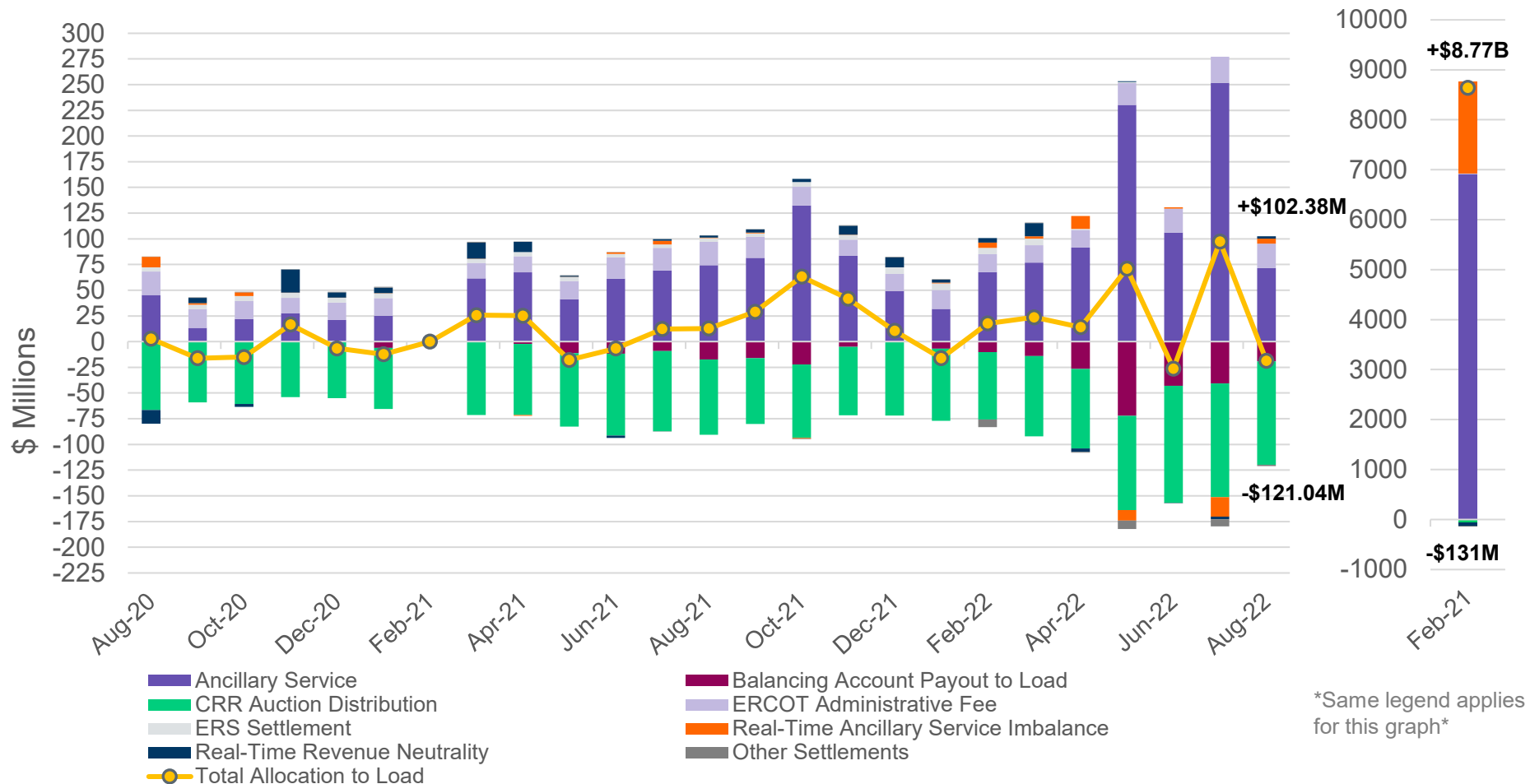


“Effective Resource-Hours” excludes any period during a Reliability Unit Commitment hour when the RUC-committed Resource was starting up, shutting down, off-line, or otherwise not available for dispatch by SCED.

Twenty-Five Resources were Committed in August either for Capacity, Congestion or Minimum Run Time

Resource #	Effective Resource-hours	Non Opt Out (Effective Hours)	Opt Out (Effective Hours)
1	47.0	37.0	10.0
2	2.2	0.0	2.2
3	17.0	17.0	0.0
4	19.7	19.7	0.0
5	18.8	18.8	0.0
6	18.8	18.8	0.0
7	5.8	5.8	0.0
8	124.2	124.2	0.0
9	105.8	105.8	0.0
10	50.8	40.8	10.0
11	30.0	30.0	0.0
12	21.8	21.8	0.0
13	12.0	4.0	8.0
14	39.0	35.0	4.0
15	132.2	12.9	119.3
16	7.0	7.0	0.0
17	7.9	7.9	0.0
18	17.9	17.9	0.0
19	47.0	44.0	3.0
20	151.7	132.2	19.6
21	26.8	26.8	0.0
22	10.0	10.0	0.0
23	10.0	10.0	0.0
24	114.9	114.9	0.0
25	8.0	8.0	0.0
Total	1,046.6	870.4	176.2

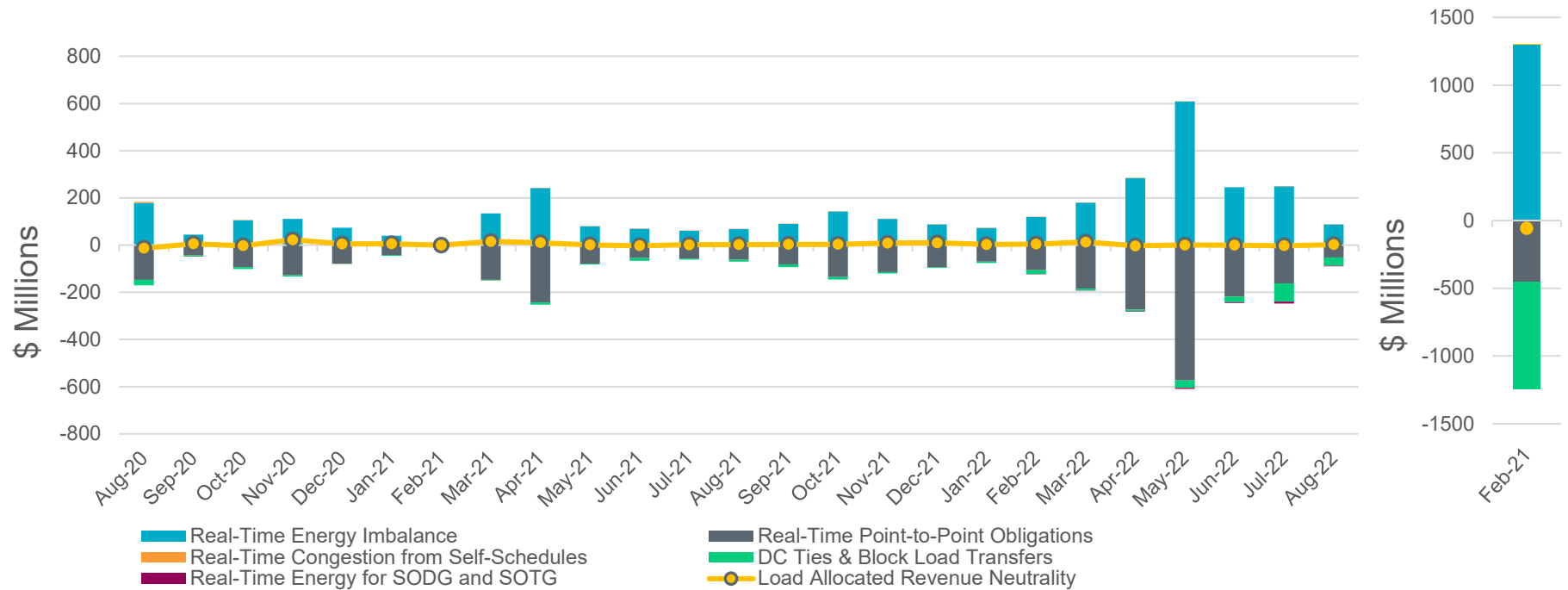
Net Allocation to Load in August 2022 was (\$18.66) Million



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

Note: For visual purposes, February 2021 has been separated into its own graph with different scaling. The legend applies for both graphs.

Real-Time Revenue Neutrality Allocated to Load was \$2.19M for August 2022

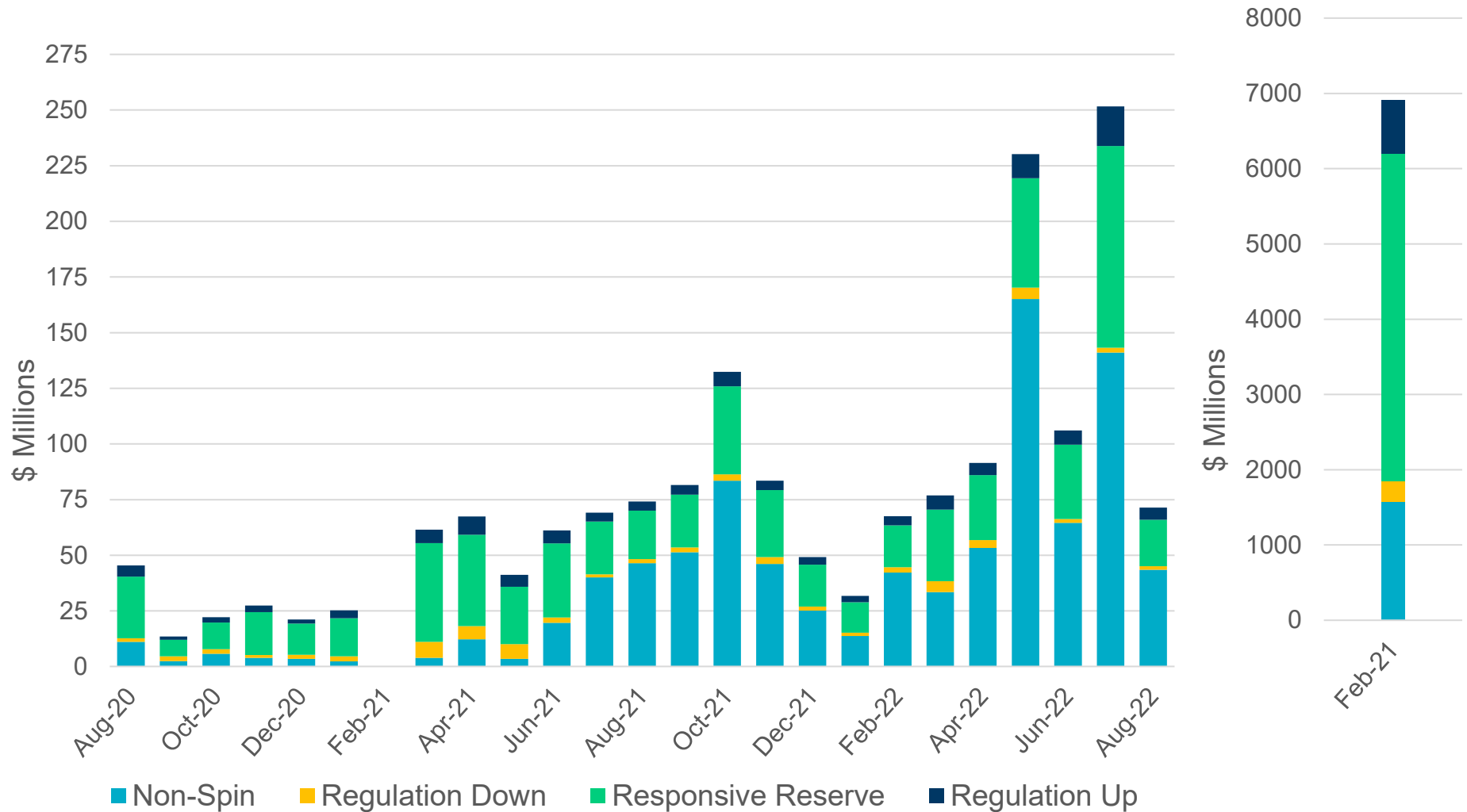


August 2022 (\$M)

Real-Time Energy Imbalance	\$87.91
Real-Time Point-to-Point Obligation	(\$52.59)
Real-Time Congestion from Self-Schedules	\$0.35
DC Tie & Block Load Transfer	(\$35.06)
Real-Time Energy for SODG and SOTG	(\$2.80)
Load Allocated Revenue Neutrality	\$2.19

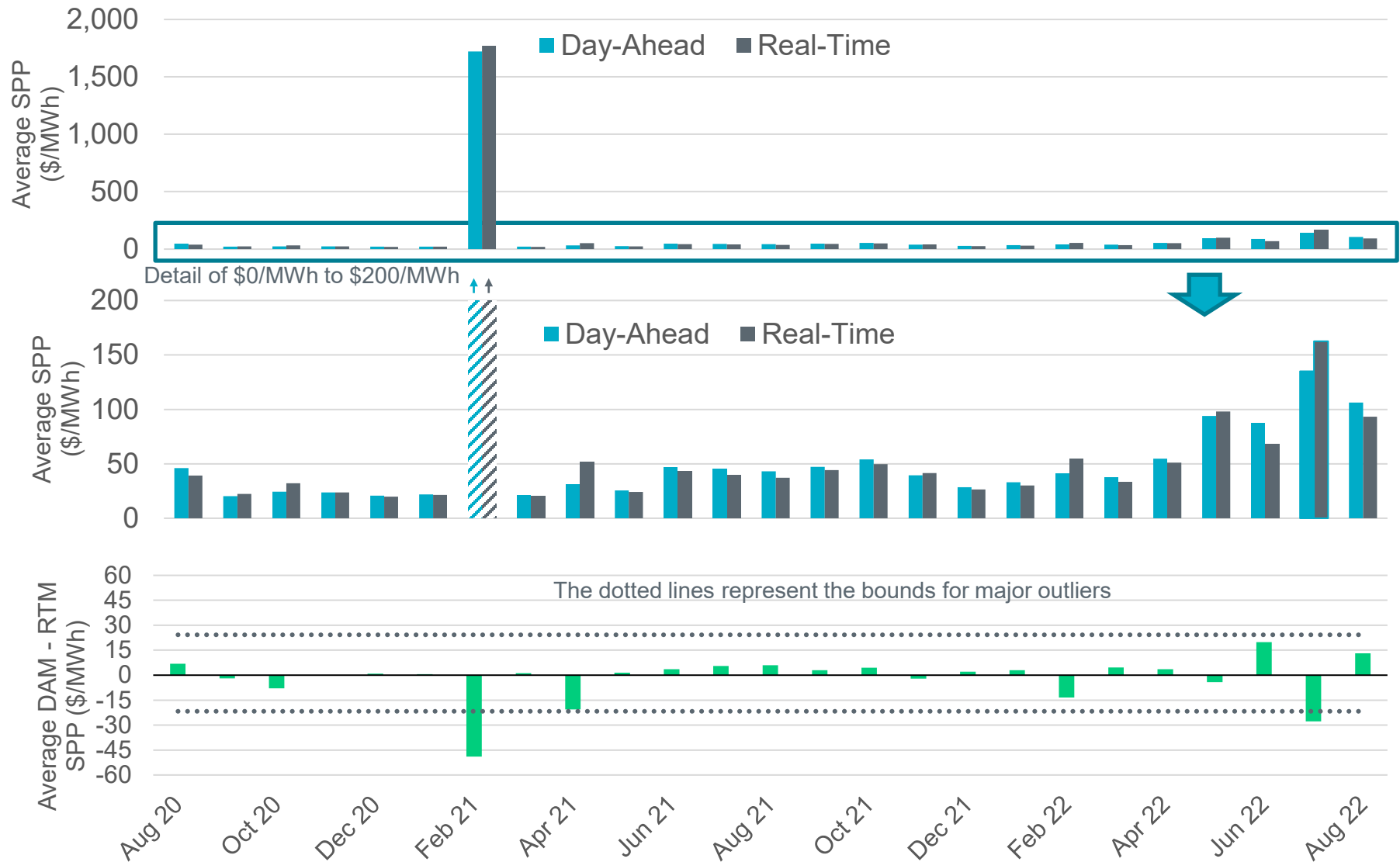
Note: For visual purposes, February 2021 has been separated into its own graph with different scaling. The legend applies for both graphs.

Ancillary Services for August 2022 totaled \$71.42M



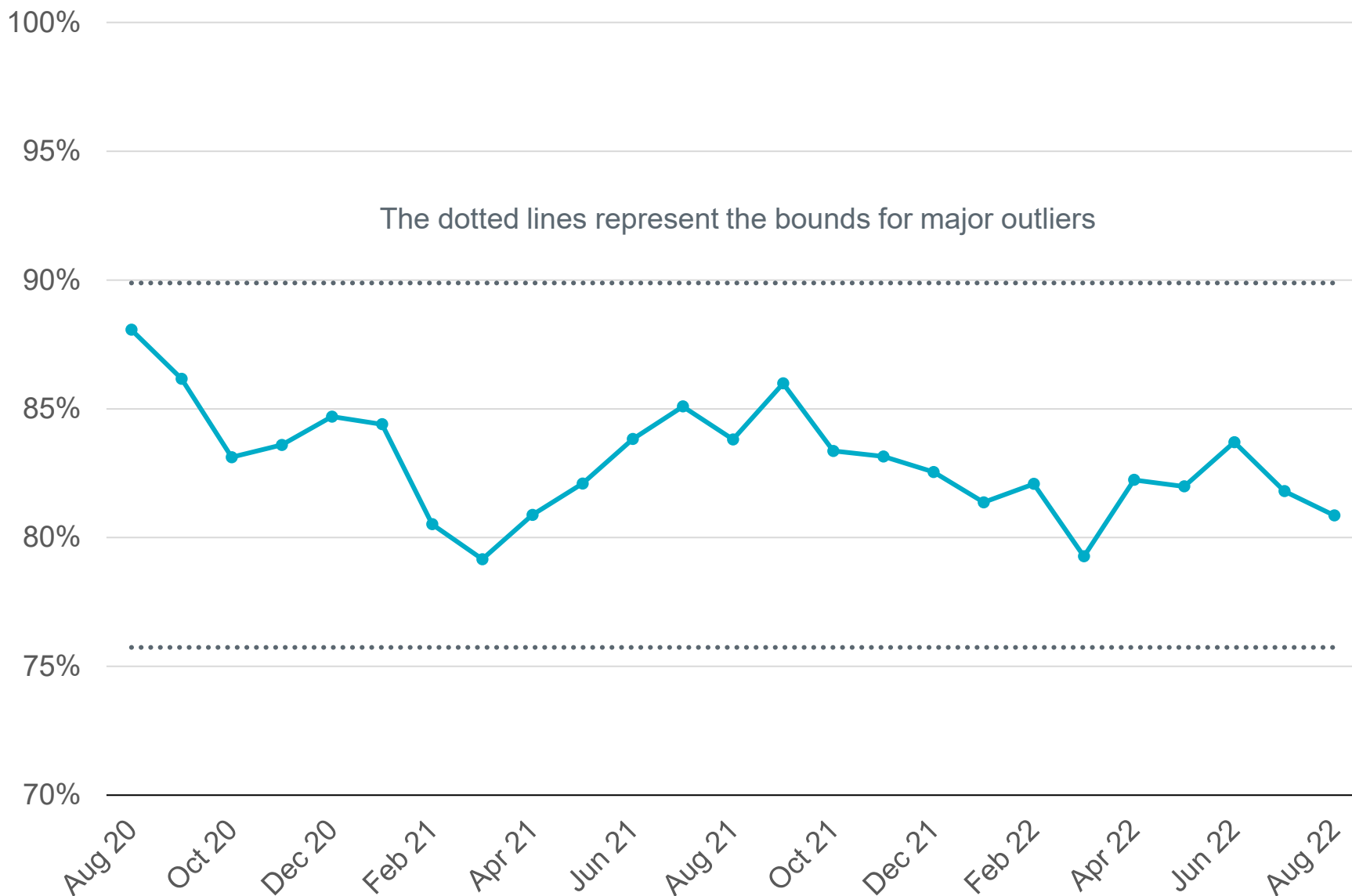
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Day-Ahead and Real-Time Market Price Differences

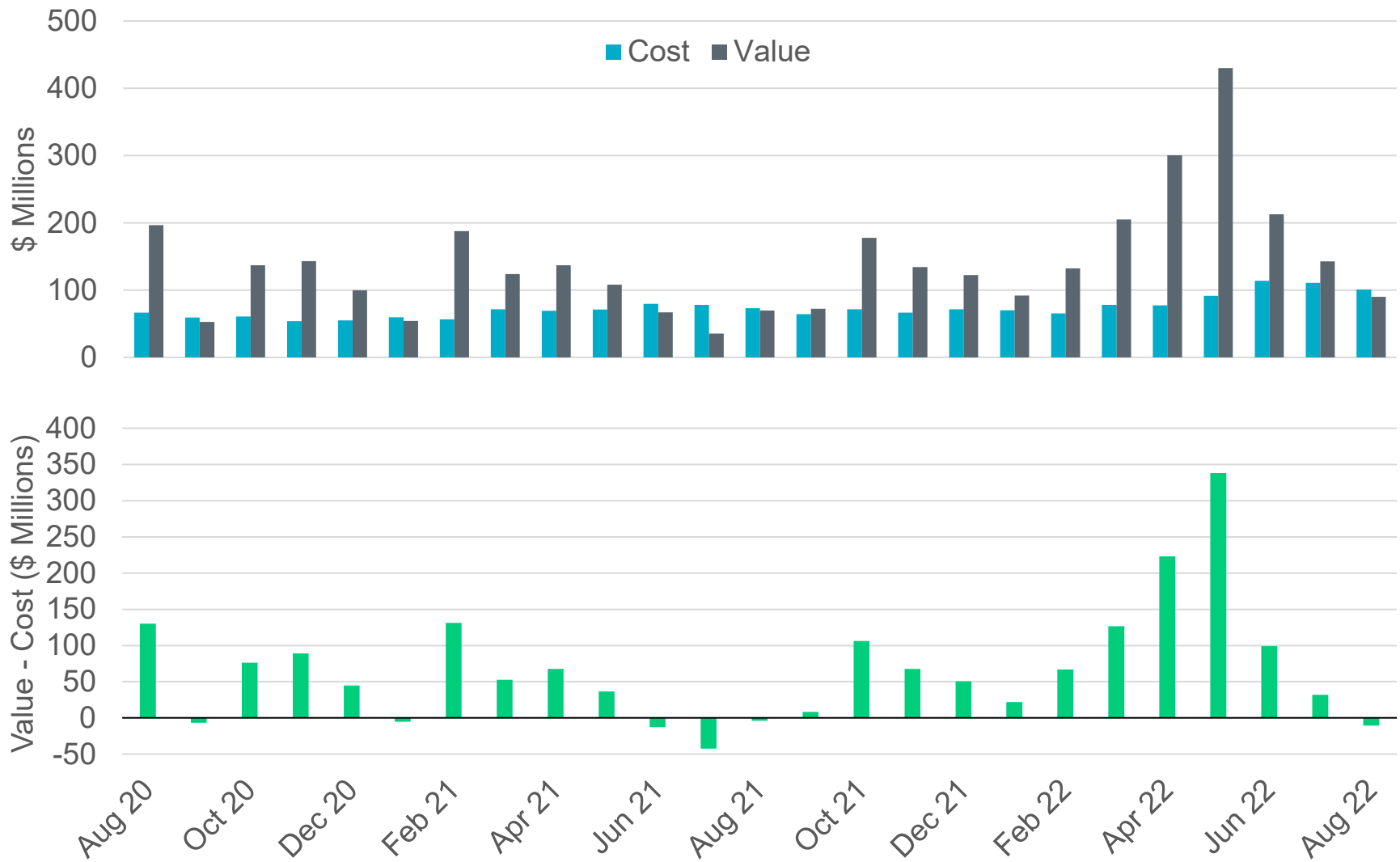


*Averages are weighted by Real-Time Market Load

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



CRR Value and Cost Differences



Price Issues and the Impact of Nodal Protocol Revision Request (NPRR) 1024 on Price Corrections

This graph looks at the recent history of price issues in the RTM or DAM and breaks the impacted Operating Days into three categories:

- Days that met the criteria for “significance” under NPRR1024 and were corrected;
- Days that would not have met the criteria for “significance” under NPRR1024, but were corrected because NPRR1024 was not yet in place; and
- Days that were not corrected because they did not meet the criteria for “significance” under NPRR1024.

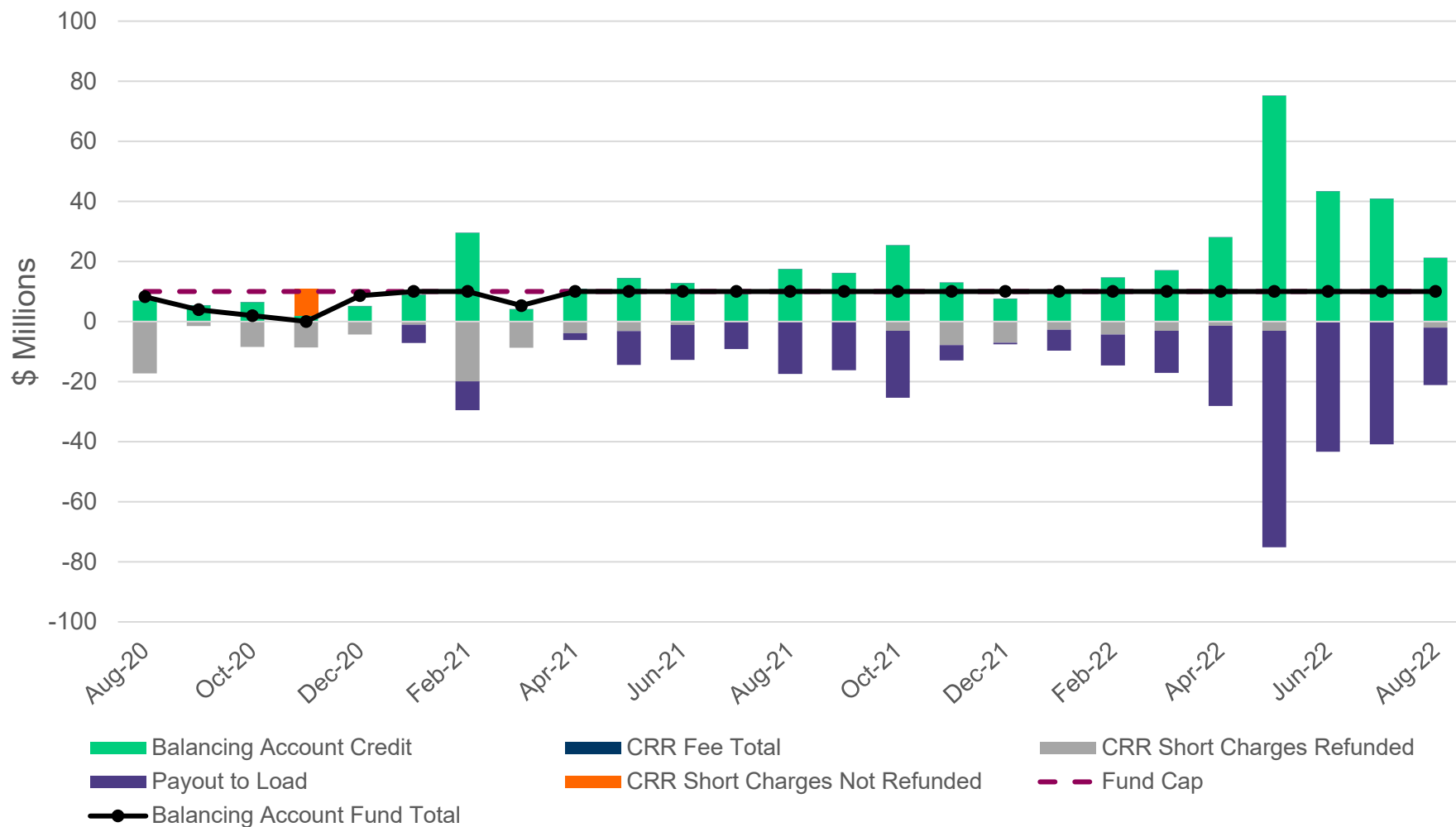


Details for Operating Days not Meeting the Criteria for Significance

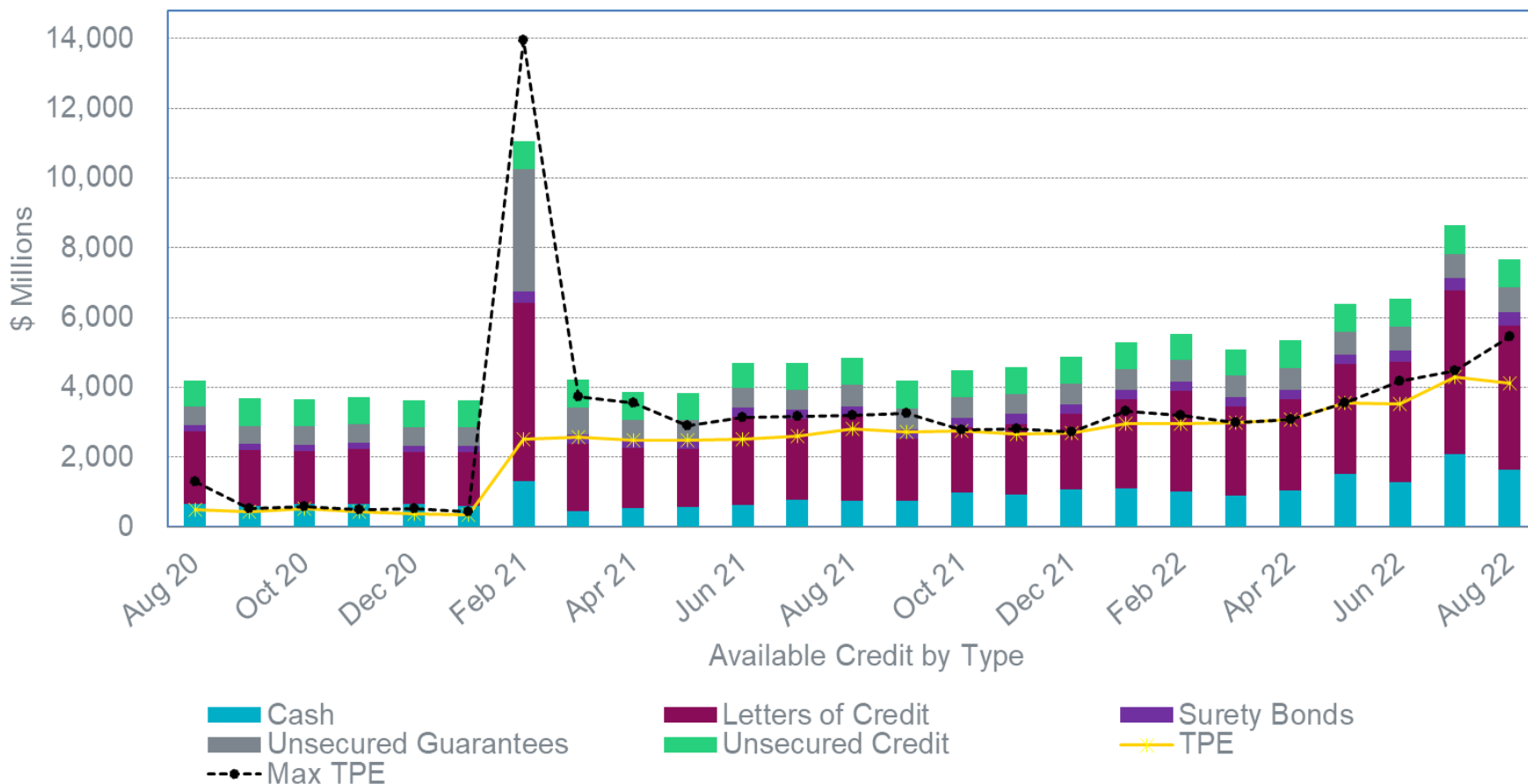
Operating Days August 11 through 24, 2022

- The price issue was driven by Load Zone calculations not being correctly adjusted to account for DESRs. The impact was limited to Load Zone Settlement Point Prices.
- For August 11-21, the Operating Days were evaluated after the two business-day period for initial price correction had passed. The analysis found that the criteria for bringing it to the ERCOT Board for review was not met. The largest impact to any individual Counter-Party across these Operating Days was \$459.
- For August 22 and 23, the Operating Days were evaluated before the two business-day period for initial price correction had passed. The analysis found that the criteria for correction within the two business-day period was met and prices were corrected.
- For August 24, the Operating Day was also evaluated before the two business-day period for initial price correction had passed. The analysis found that the criteria for correction within the two business-day period was not met. The largest impact to any Real-Time Settlement Point price was \$0.01.

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 – August 2022

	Year-To-Date		Transactions Received	
Transaction Type	August 2022	August 2021	August 2022	August 2021
Switches	885,046	988,656	102,478	112,901
Acquisitions	0	48,862	0	0
Move - Ins	2,088,305	1,876,952	320,855	264,683
Move - Outs	942,892	873,789	142,108	125,885
Continuous Service Agreements (CSA)	518,754	448,491	62,201	56,737
Mass Transitions	24,463	26,584	0	0
Total	4,459,460	4,263,334	627,642	560,206