ERCOT Monthly Operational Overview
(December 2023)

ERCOT Public
January 18, 2024

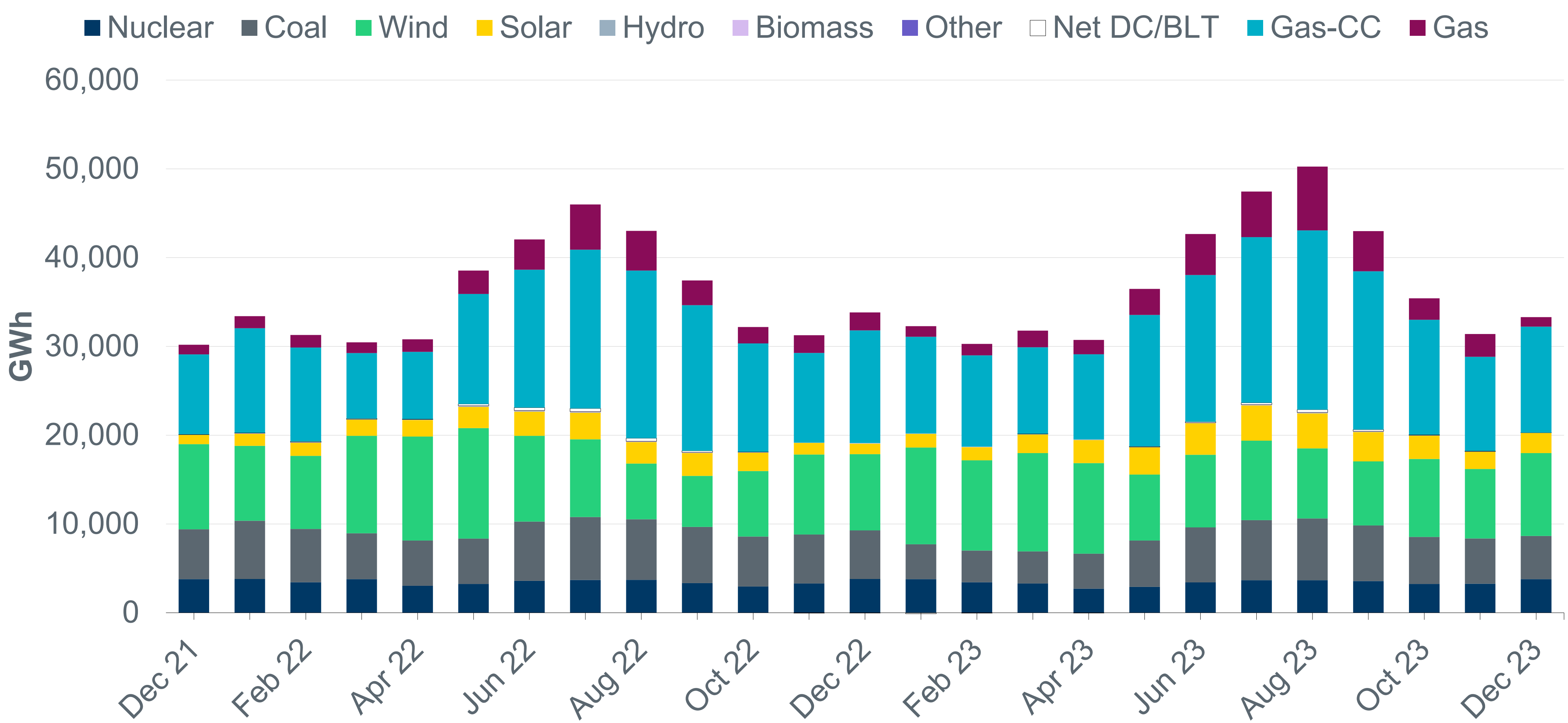
Highlights, Records and Notifications

- ERCOT had a maximum peak demand of 59,976 MW* in the month of December; this is 14,549 MW less than the December 2022 demand of 74,525 MW.

- ERCOT issued 2 notifications:
  - 1 OCN for PANHANDLE IROL due to planned outage and topology change.
  - 1 Advisory issued for geomagnetic disturbance of K7.

* Preliminary value from January Demand and Energy 2024 report.

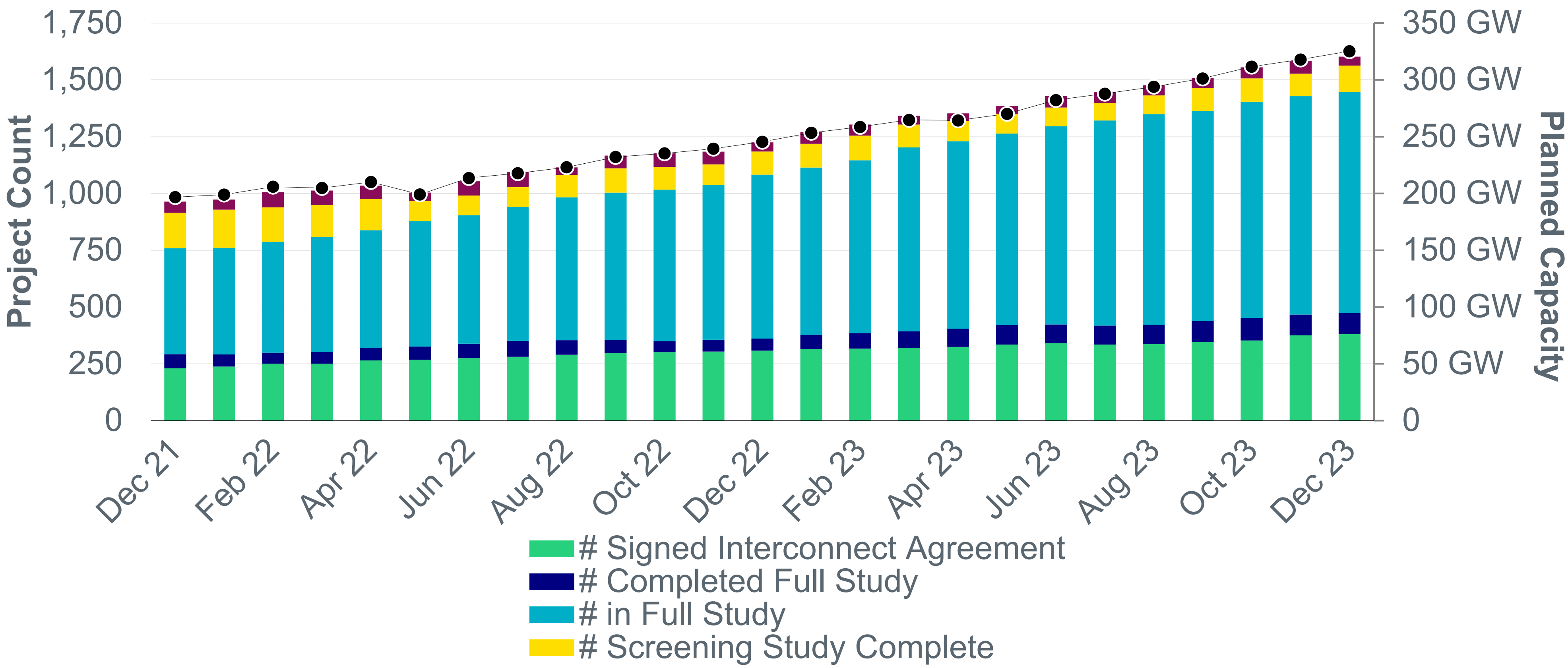
Monthly energy generation decreased by 1.5% year-over-year to 33,271 GWh in December 2023, compared to 33,786 GWh in December 2022



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)

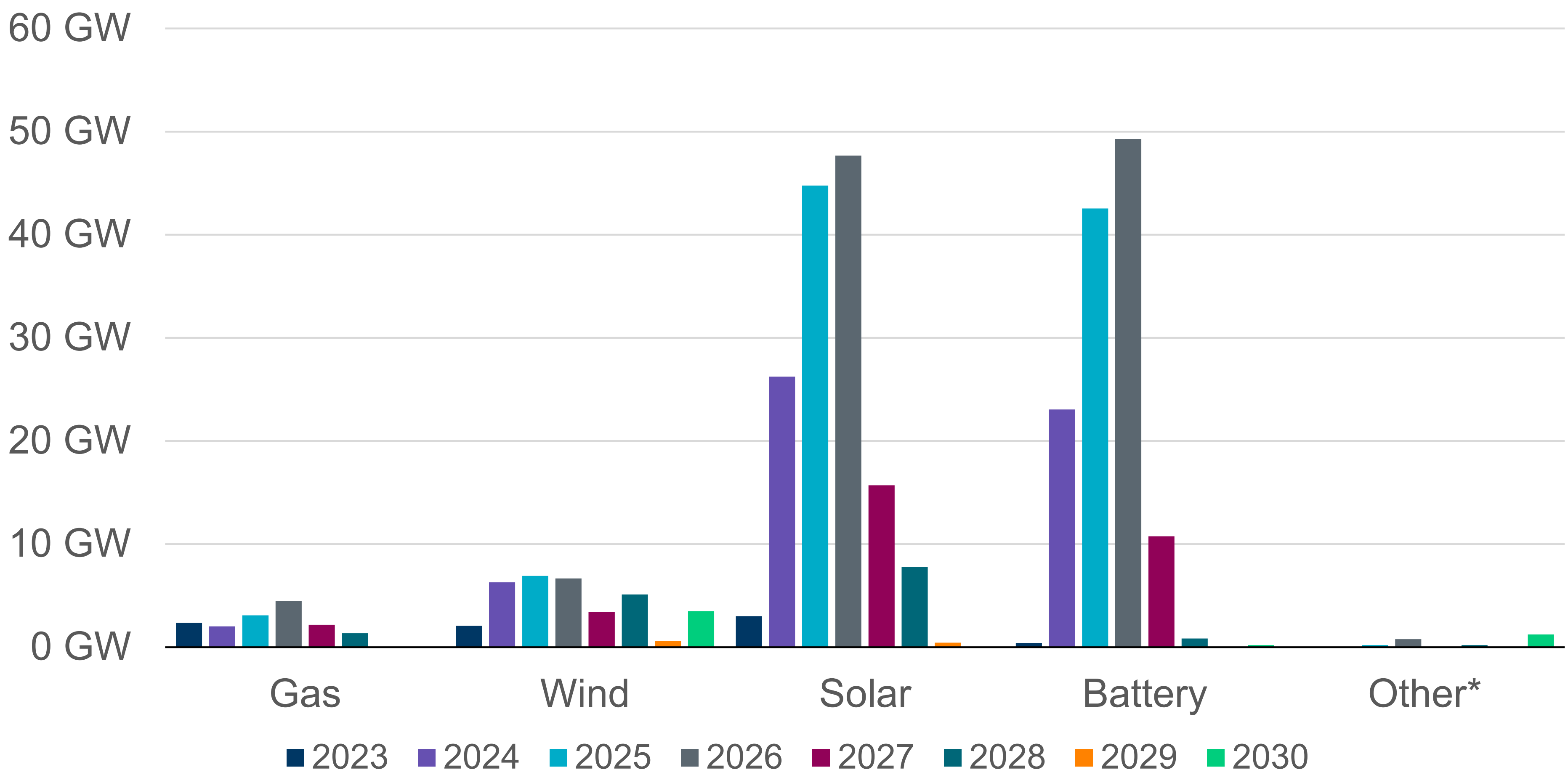


- There are an additional 28 “Small Generator” projects totaling 263 MW that are going through the simplified interconnection process.

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 146 GW (44.8%), Wind 35 GW (10.6%), Gas 15 GW (4.8%), Battery 127 GW (39.1%) (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

* Other includes petroleum coke (pet coke), hydroelectric, fuel oil, geothermal energy, other miscellaneous fuels reported by developers, and fuel cells that use fuels other than natural gas.

Planning Summary

- ERCOT is tracking 1,671 active generation interconnection requests totaling 325,215 MW as of December 31. This includes 145,654 MW of solar, 34,591 MW of wind, 127,068 MW of battery, and 15,483 MW of gas projects; 83 projects were categorized as inactive, down from 85 inactive projects in November 2023.

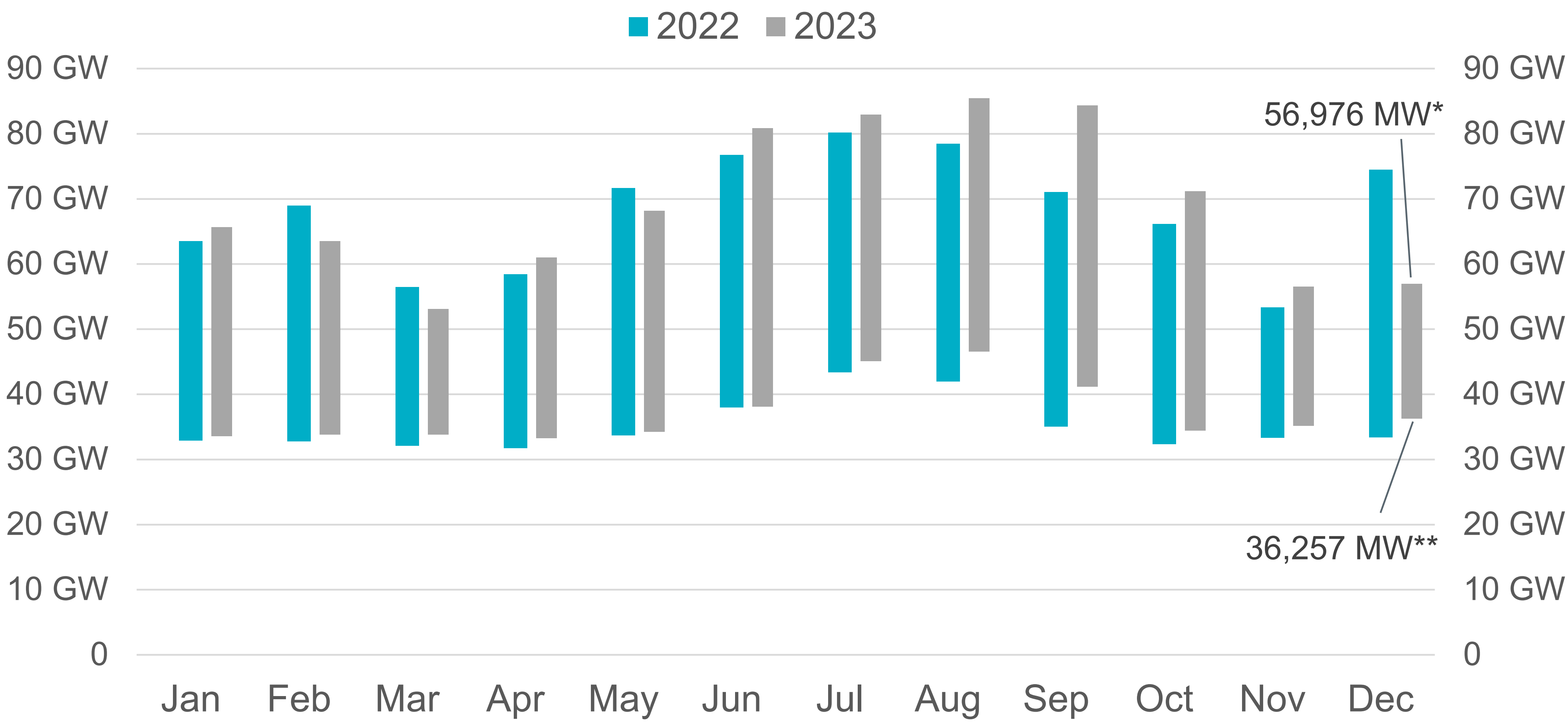
- ERCOT is currently reviewing proposed transmission improvements with a total estimated cost of $1.525 billion as of December 31, 2023.

- Transmission Projects endorsed in 2023 total $3.231 billion as of December 31, 2023.

- All projects (in engineering, routing, licensing and construction) total approximately $13.537 billion as of October 12, 2023.

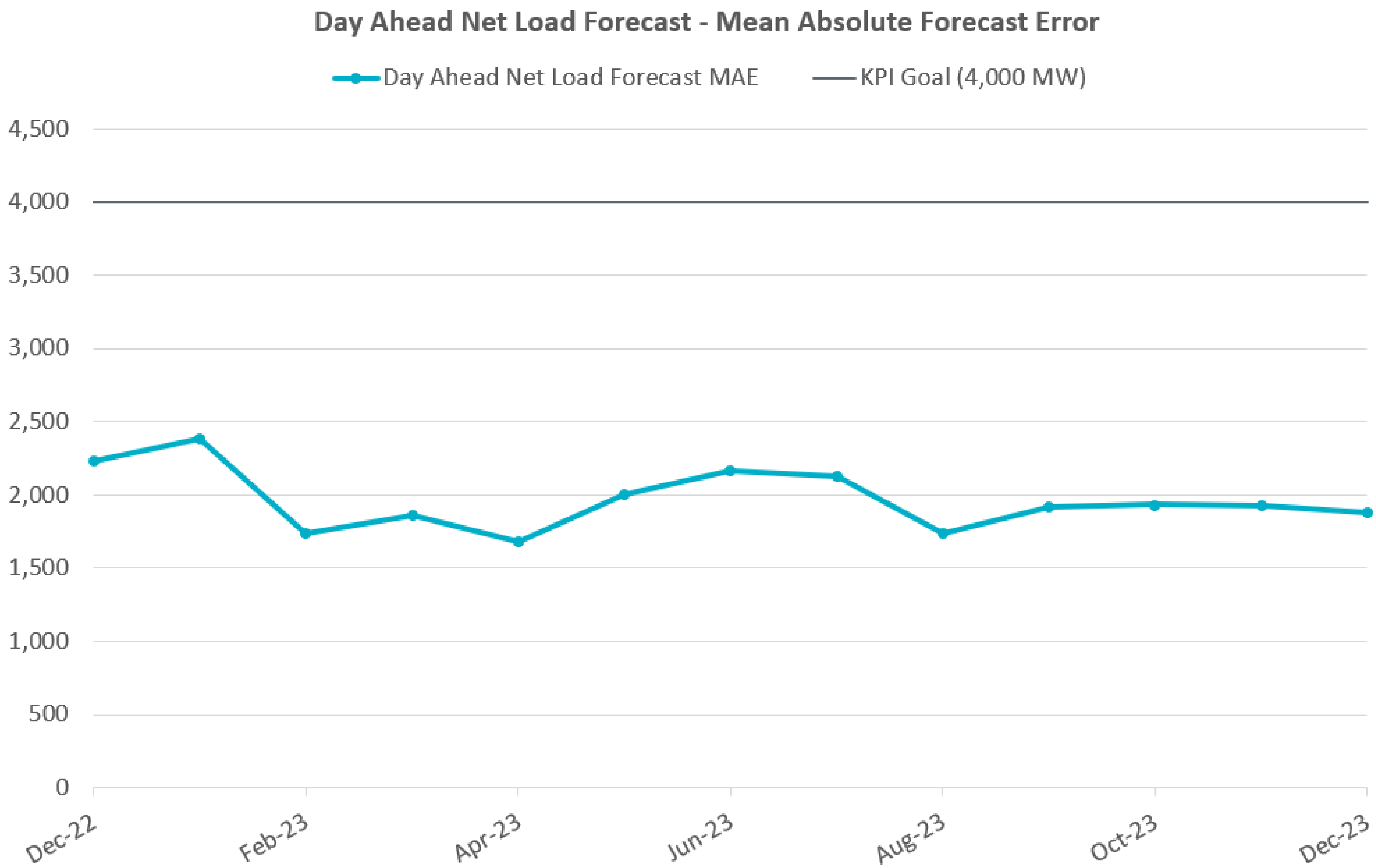
- Transmission Projects energized in 2023 total approximately $1.553 billion as of October 12, 2023.

ERCOT’s maximum peak demand for the month of December was 59,976 MW*; this is 17,549 MW less than the December 2022 demand of 74,525 MW.

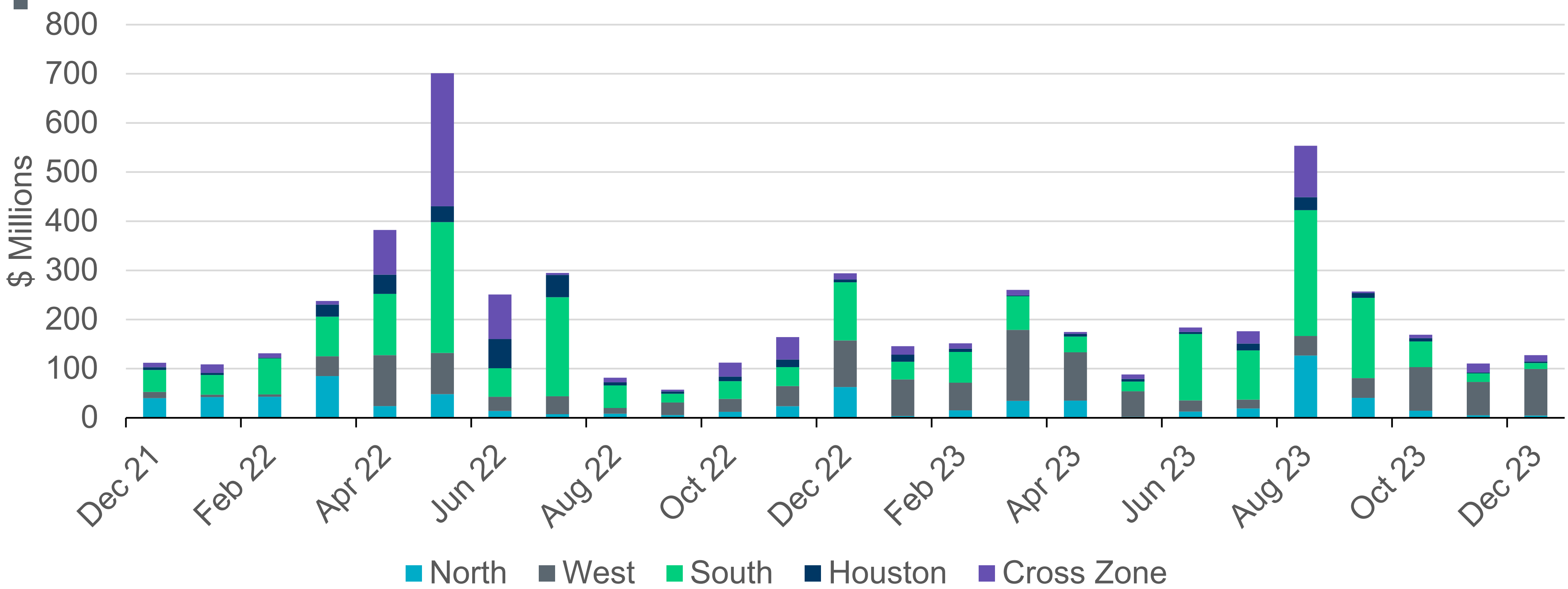


*Based on the maximum net system hourly value from the December Demand and Energy 2023 report.
**Based on the minimum net system 15-minute interval value from the December Demand and Energy 2023 report.
Data for latest two months are based on preliminary settlements.

Net Load Forecast Performance

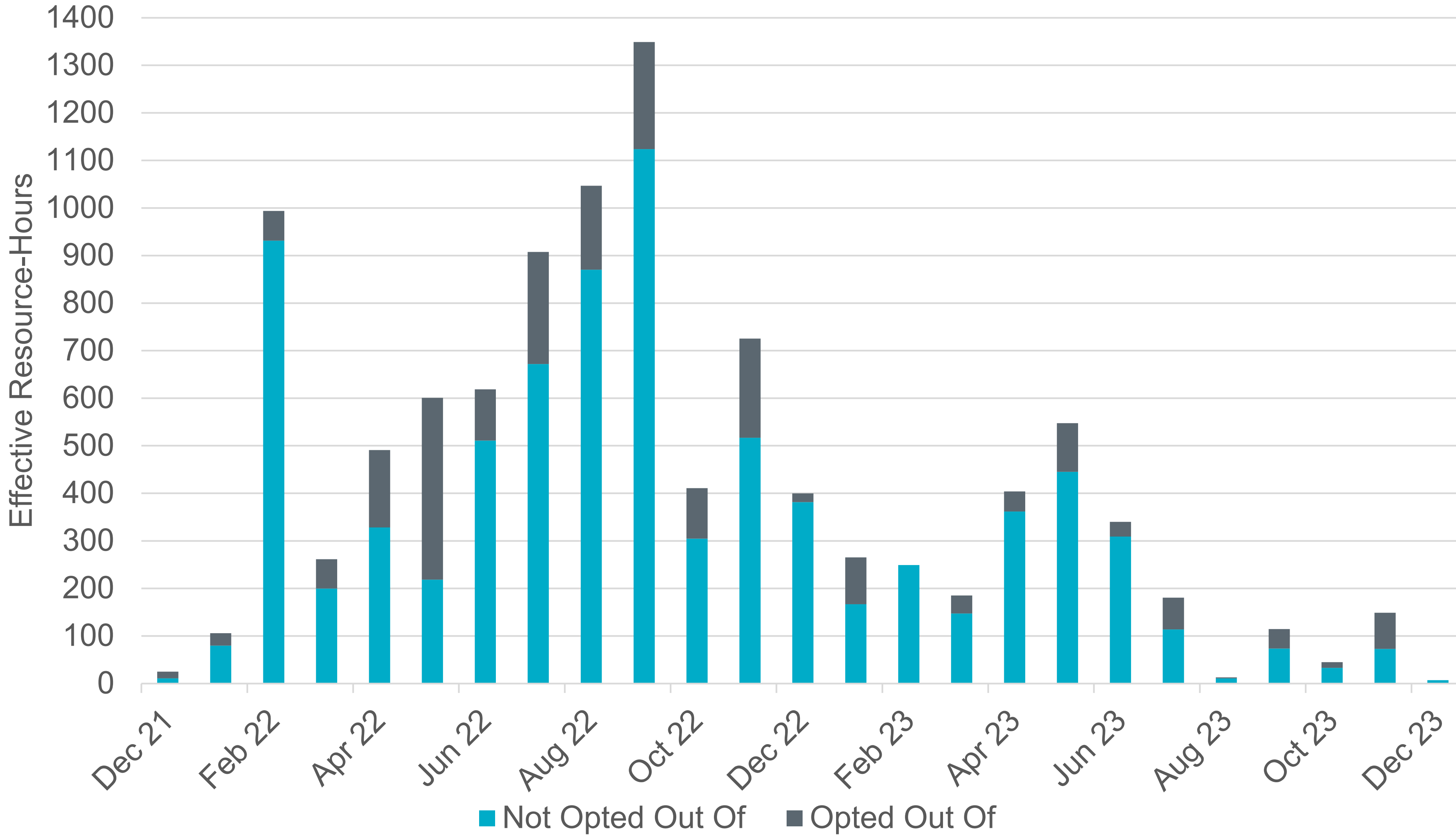


Real-Time Congestion Rent by Zone



- Congestion rent increased in the West and Houston Zones in December compared to November.
- The two zones with the highest congestion rent were the West and Cross Zones.
  - Congestion rent in the West Zone was primarily driven by the loss of the 345 kV contingency from Morgan Creek to Champion Creek and Bitter Creek to Morgan Creek overloading the 345 kV transmission line from Morgan Creek to Tonkawa Switch.
  - Congestion rent in the Cross Zone category was primarily driven by the West Texas Generic Transmission Constraint.
- 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.

One Resource was Committed in December for Congestion

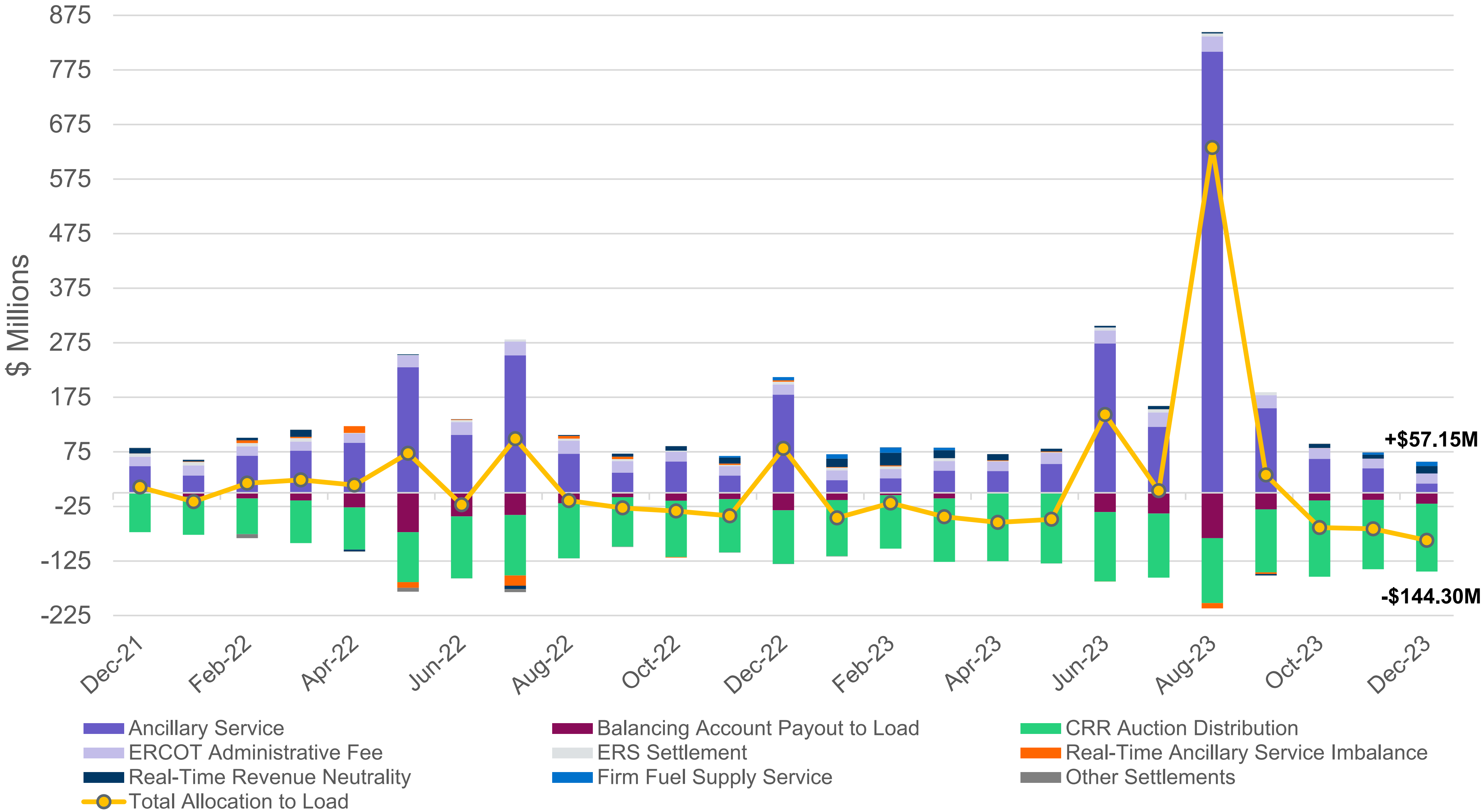


"Effective Resource-Hours" excludes any period during a Reliability Unit Commitment hour when the RUC-committed Resource was starting up, shutting down, off-line, or otherwise not available for dispatch by SCED.

One Resource was Committed in December for Congestion

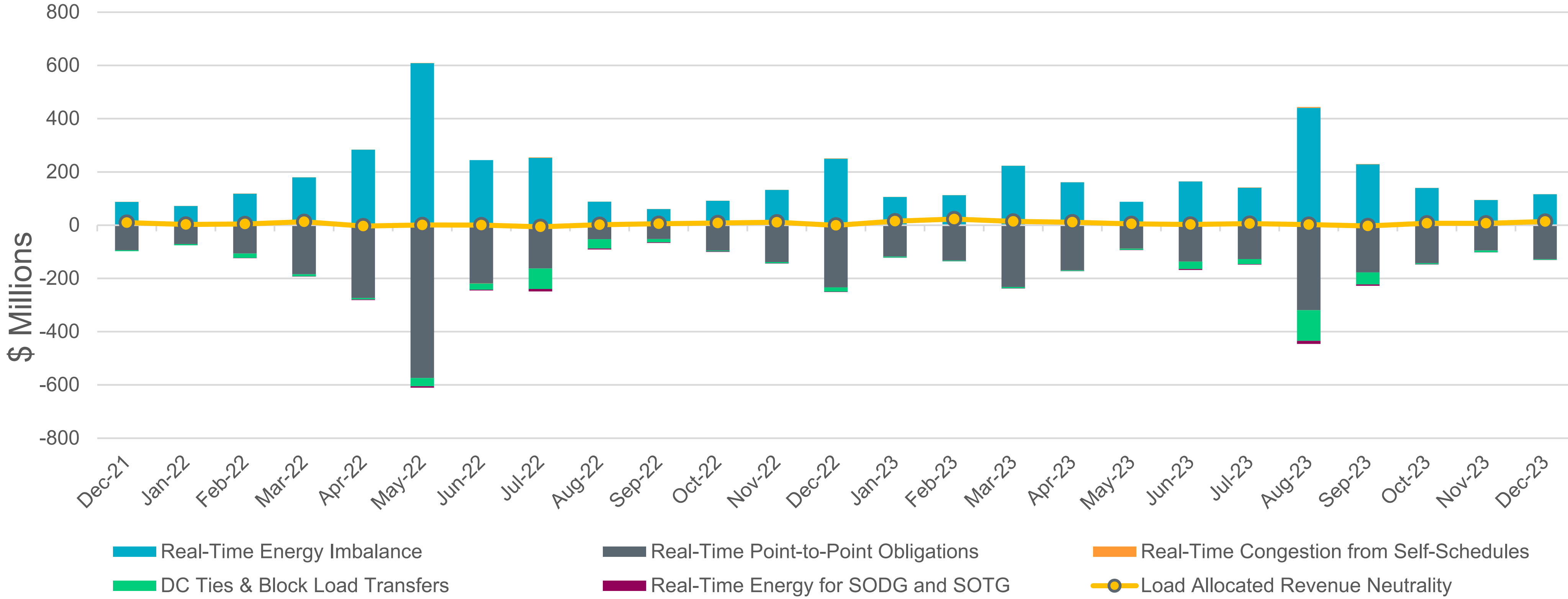
Resource #	Effective Resource-hours	Non-Opt Out (Effective Hours)	Opt Out (Effective Hours)
1	7.0	7.0	0.0
Total	7.0	7.0	0.0

Net Allocation to Load in December 2023 was ($87.14) Million



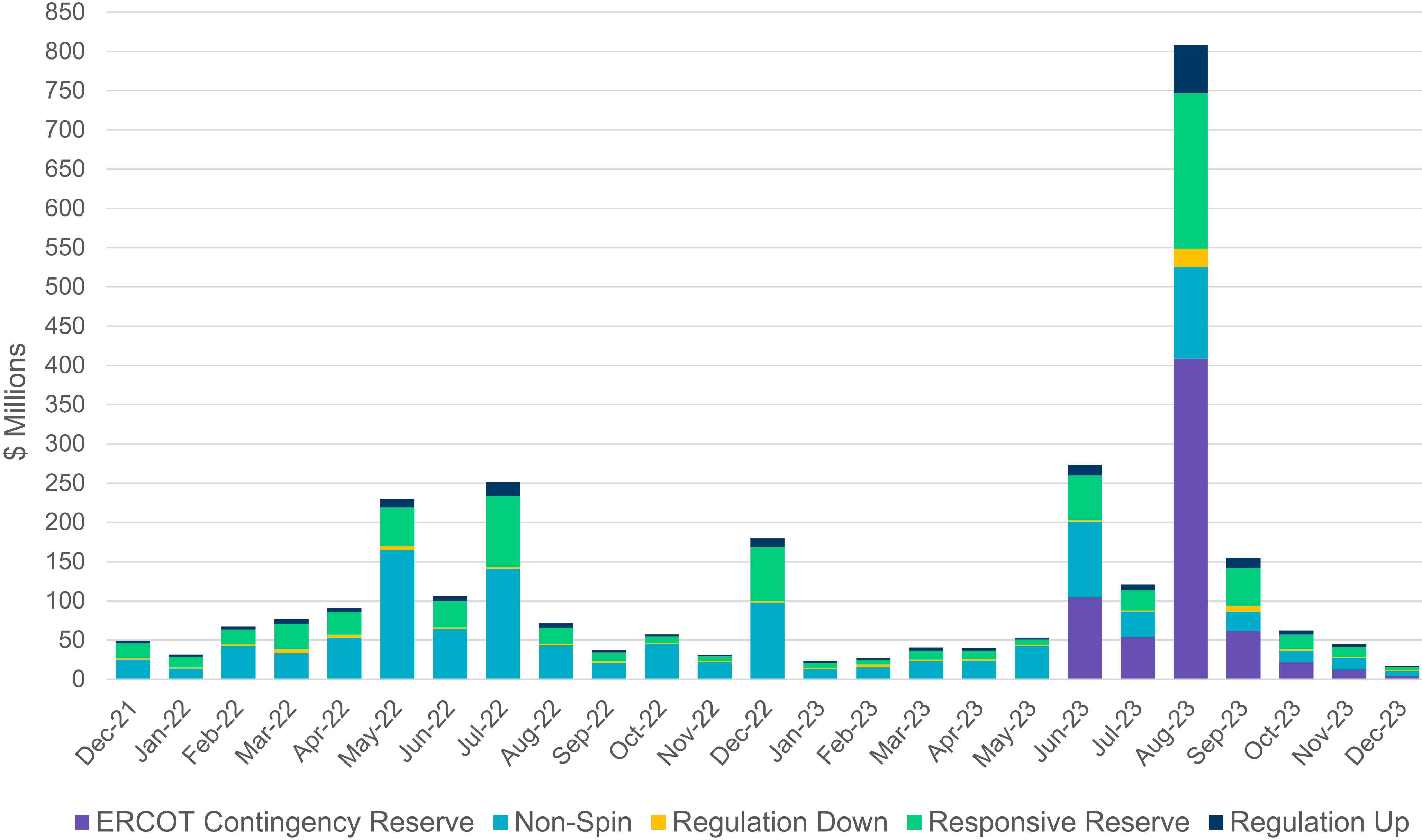
This information is available in tabular form in the Settlement Stability Report presented quarterly to the [Wholesale Market Subcommittee]

Real-Time Revenue Neutrality Allocated to Load was $13.89M for December 2023

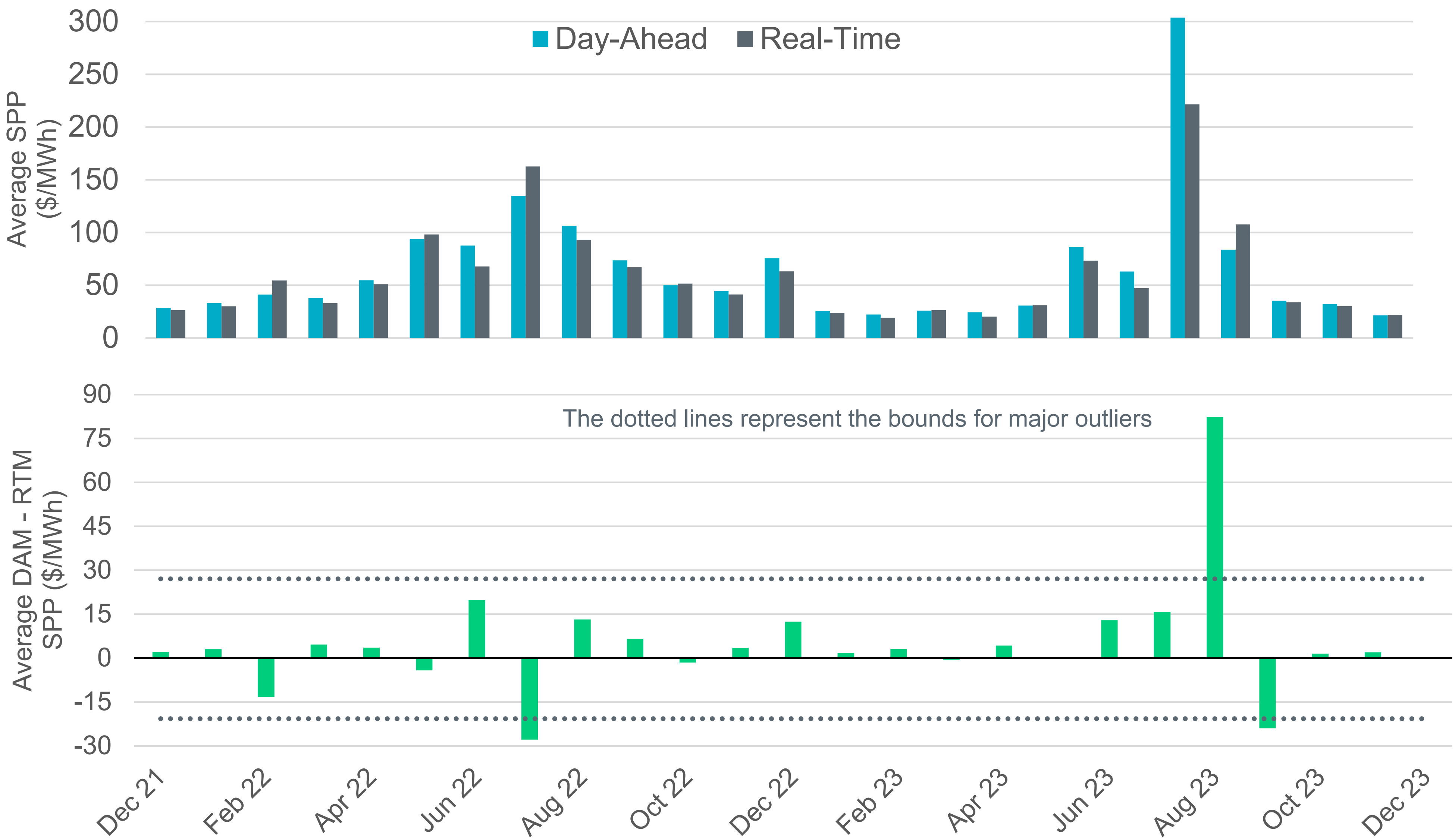


	December 2023 ($M)
Real-Time Energy Imbalance	$116.45
Real-Time Point-to-Point Obligation	($127.79)
Real-Time Congestion from Self-Schedules	$0.13
DC Tie & Block Load Transfer	($2.36)
Real-Time Energy for SODG and SOTG	($0.32)
Load Allocated Revenue Neutrality	**$13.89**

Ancillary Services for December 2023 totaled $16.94M

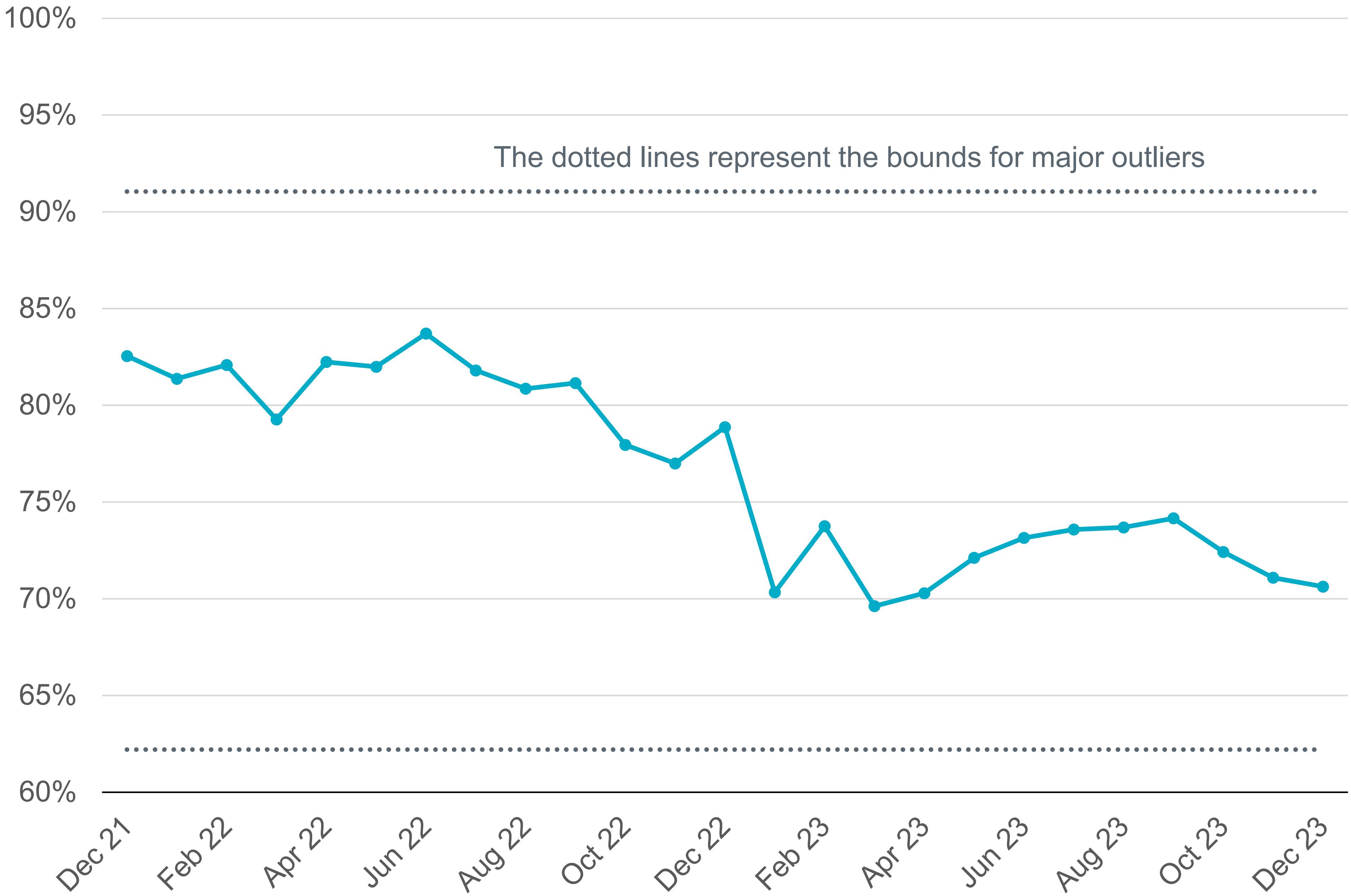


Day-Ahead and Real-Time Market Price Differences

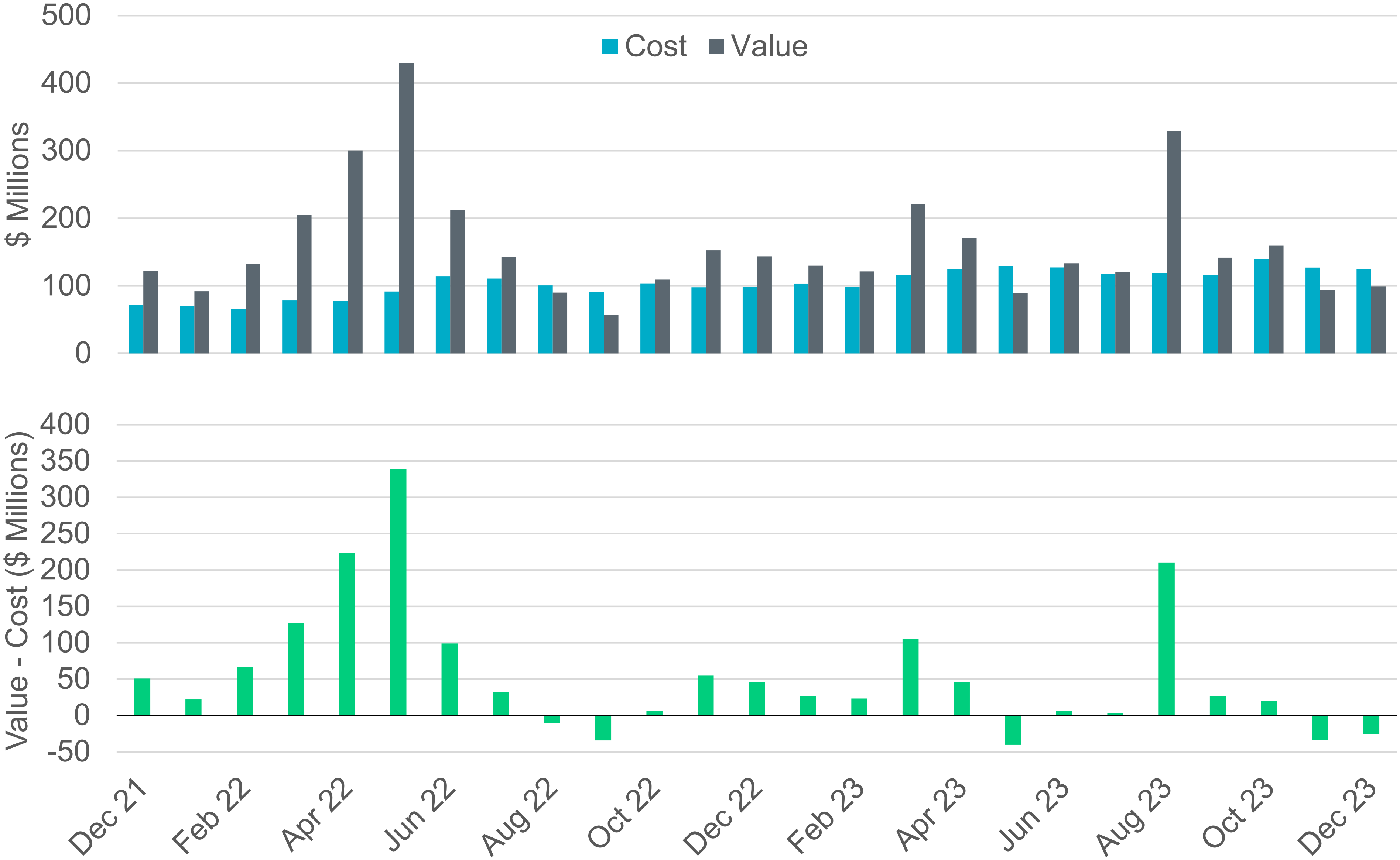


*Averages are weighted by Real-Time Market Load

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



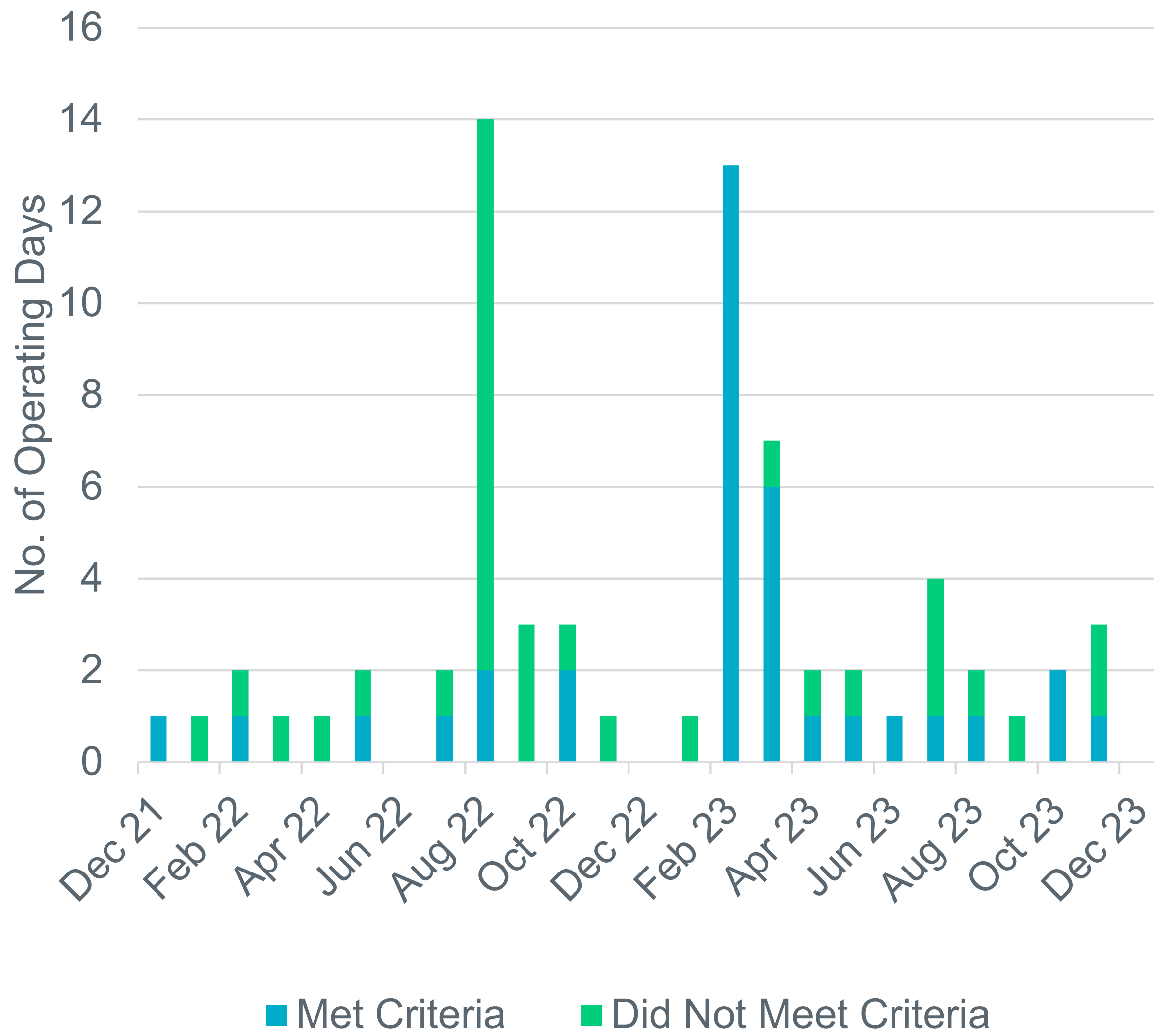
CRR Value and Cost Differences



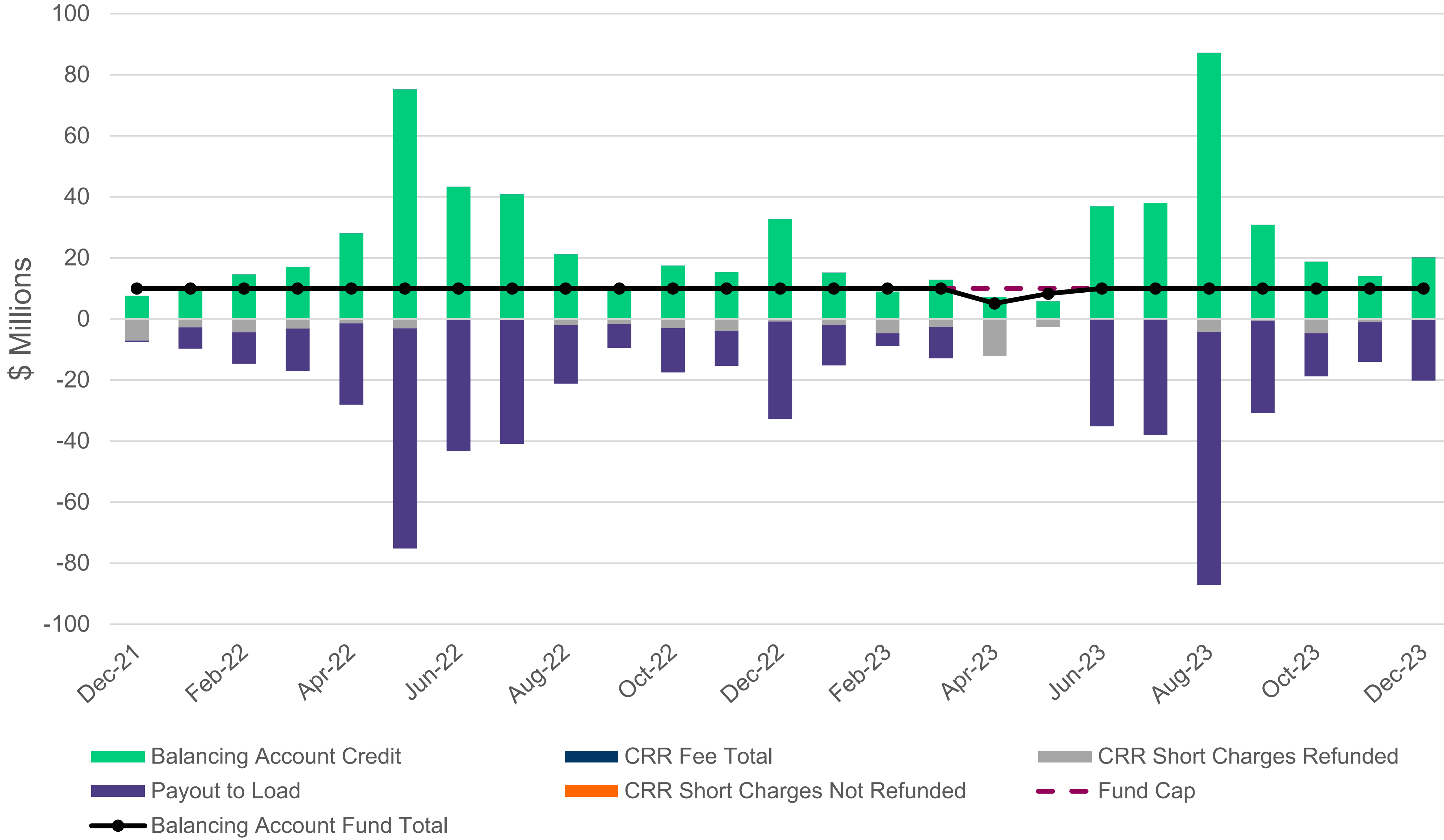
Price Issues and the Impact of Nodal Protocol Revision Request (NPRR) 1024 on Price Corrections

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

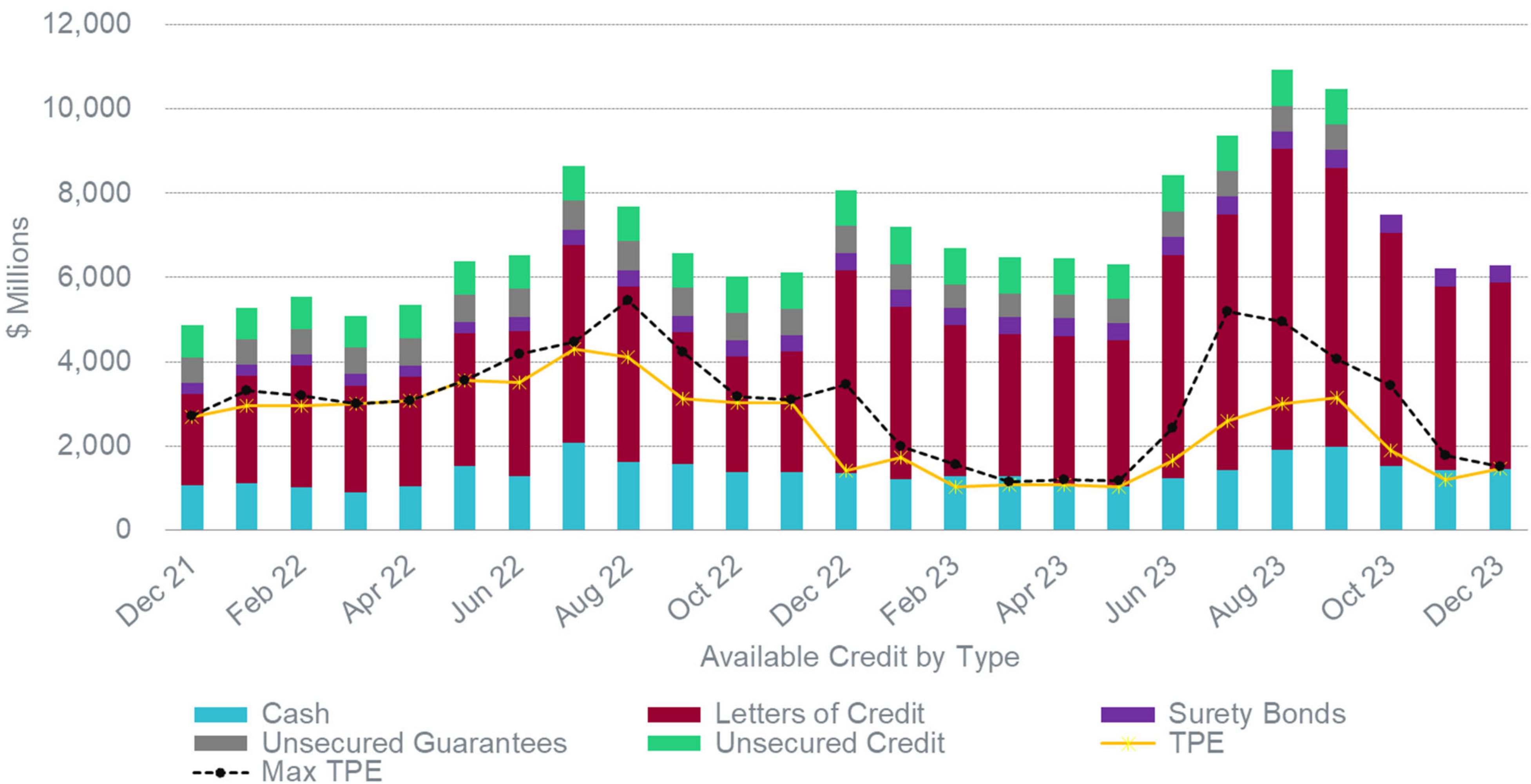
- Days that met the criteria for "significance" under NPRR1024 and were corrected;
- Days that would not have met the criteria for "significance" under NPRR1024, but were corrected because NPRR1024 was not yet in place; and
- Days that were not corrected because they did not meet the criteria for "significance"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



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 – December 2023

	Year-To-Date		Transactions Received	
Transaction Type	**December 2023**	**December 2022**	**December 2023**	**December 2022**
Switches	1,154,851	1,182,485	124,388	70,513
Acquisitions	0	0	0	0
Move - Ins	3,070,588	3,098,201	208,546	232,968
Move - Outs	1,403,990	1,381,804	98,427	95,982
Continuous Service Agreements (CSA)	433,469	676,125	37,755	33,759
Mass Transitions	0	24,463	0	0
Total	**6,062,898**	**6,363,078**	**469,116**	**433,222**