ERCOT Monthly Operational Overview
(September 2023) Revised 11.17.23

ERCOT Public
October 16, 2023

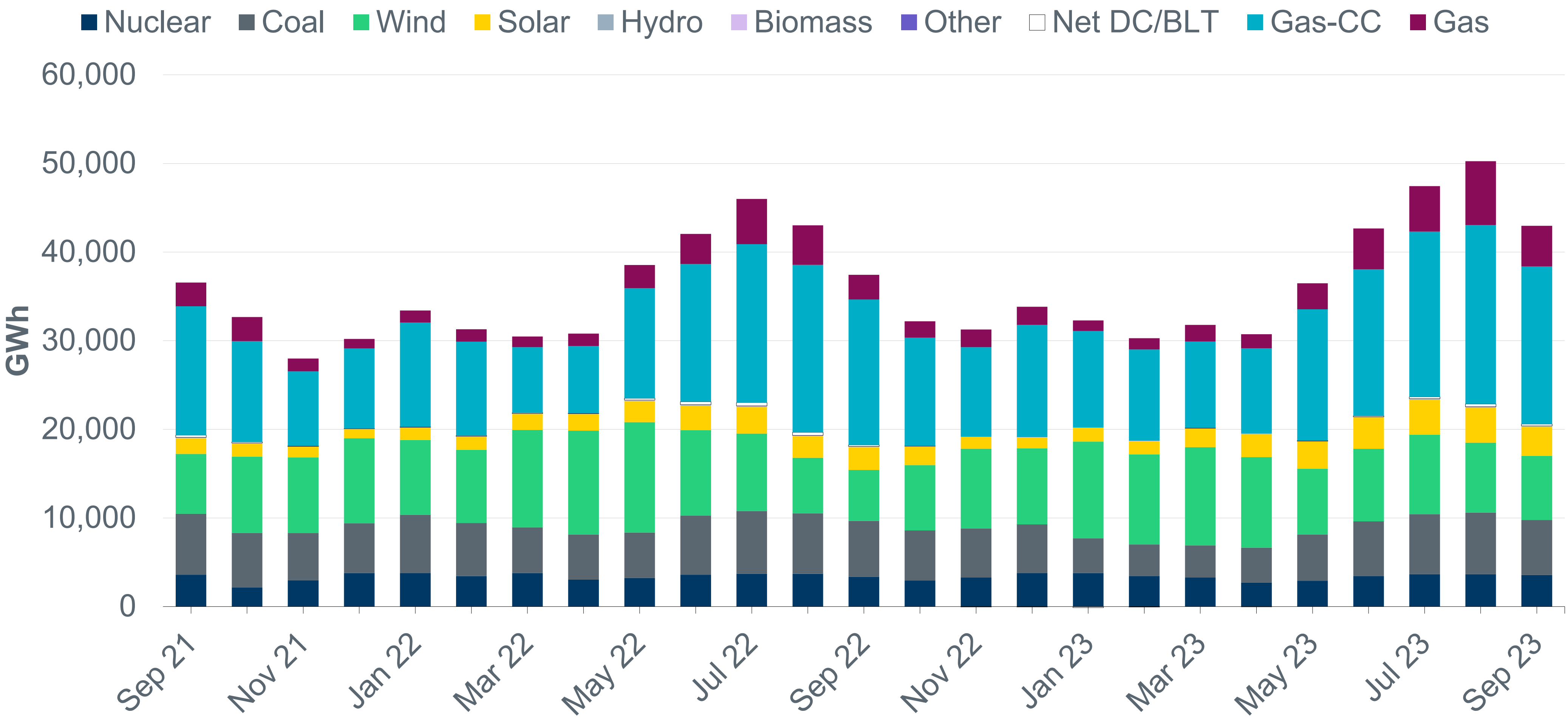
Highlights, Records and Notifications

- ERCOT set a new record of 84,343 MW* for the month of September on 9/08/2023; This is 13,268 MW more than the September 2022 demand of 71,075 MW.

- ERCOT issued 12 notifications:
  - 1 Energy Emergency Alert Level 2
    - Load resources were deployed
  - 2 Watches due to projected reserve capacity shortage with no market solution
  - 1 Advisory due to PRC falling below 3000 MW
    - ERS deployed
    - Distribution Voltage Reduction Implemented
  - 1 OCN was issued due to extreme hot weather forecasted in North Central and South Central weather zones
  - 2 Watches issued for post-contingency overload for south of San Antonio
  - 3 OCNs were issued due to ERCOT modifying the PNHNDL Generic Transmission Constraint due to the current transmission outage topology
  - 1 Advisory due to Geomagnetic Disturbance
  - 1 DC Tie Curtailment Notices for DC_L due to an actual or anticipated emergency in its Control Area

* Preliminary value from October release of Demand and Energy 2023 report.

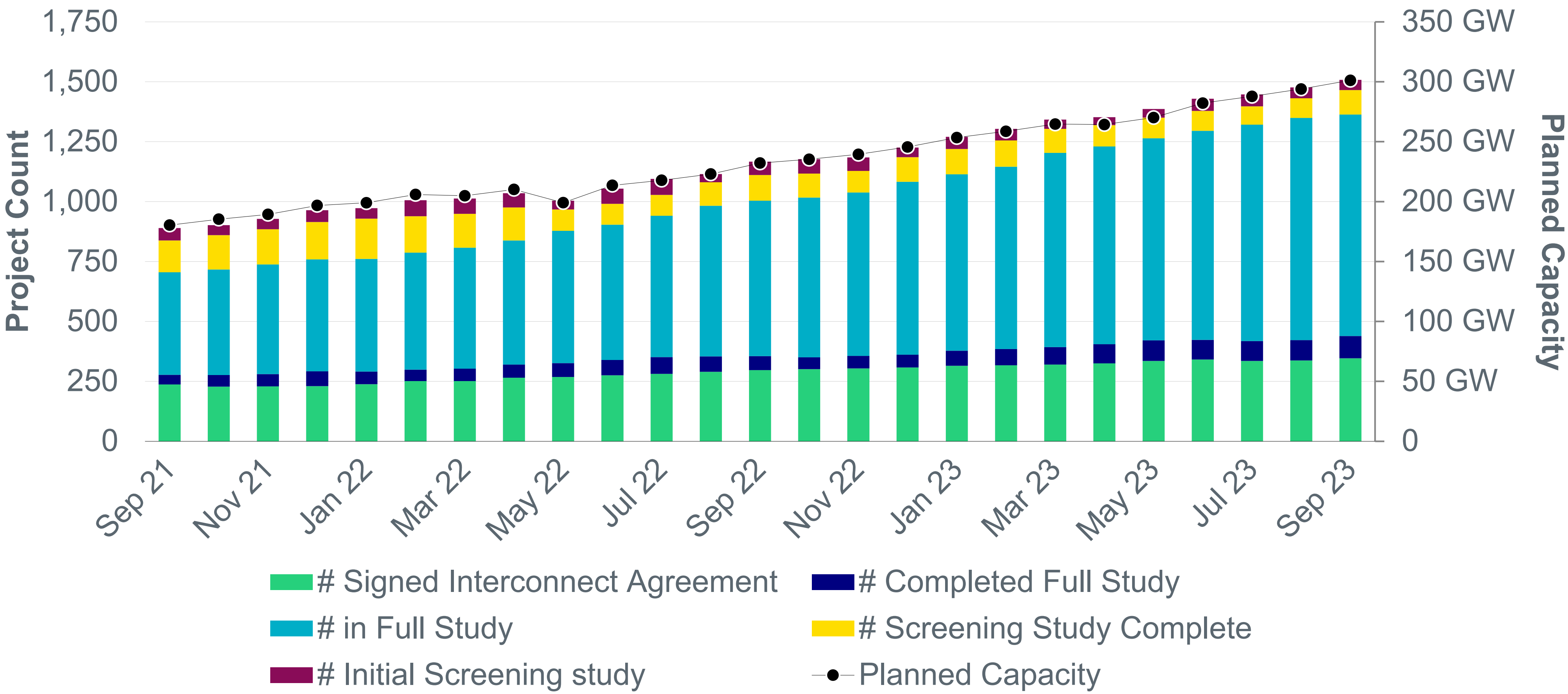
Monthly energy generation increased by 14.8% year-over-year to 42,950 GWh in September 2023, compared to 37,422 GWh in September 2022



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)

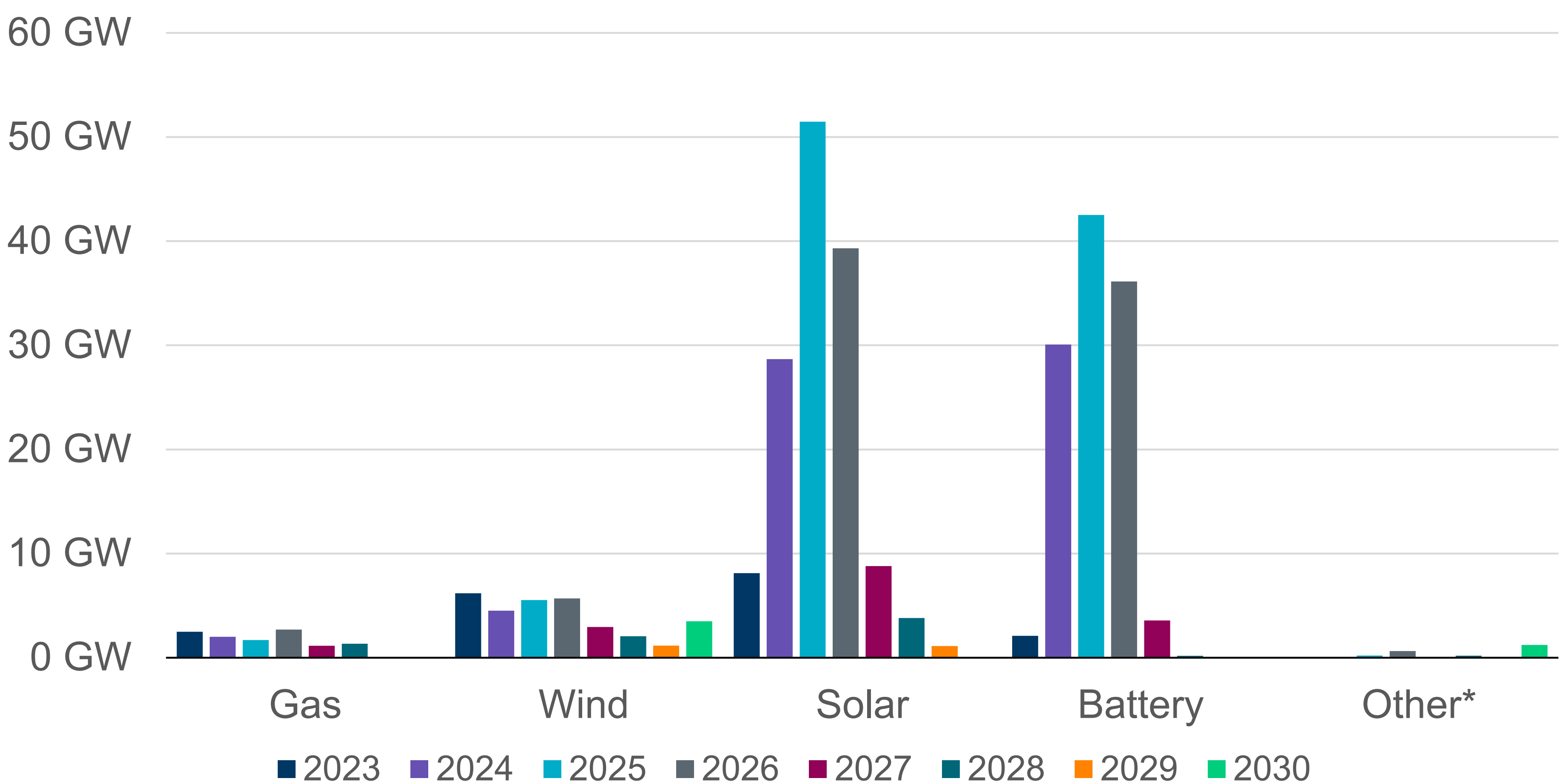


- There are an additional 32 “Small Generator” projects totaling 304 MW that are going through the simplified interconnection process.

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 141 GW (46.9%), Wind 32 GW (10.5%), Gas 11 GW (3.8%), Battery 115 GW (38%)
(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 1,580 active generation interconnection requests totaling 301,190 MW as of September 30. This includes 141,315 MW of solar, 31,640 MW of wind, 114,563 MW of battery, and 11,384 MW of gas projects; 82 projects were categorized as inactive, this is up from 76 inactive projects in August 2023.

- ERCOT is currently reviewing proposed transmission improvements with a total estimated cost of $1.410 billion as of September 30, 2023.

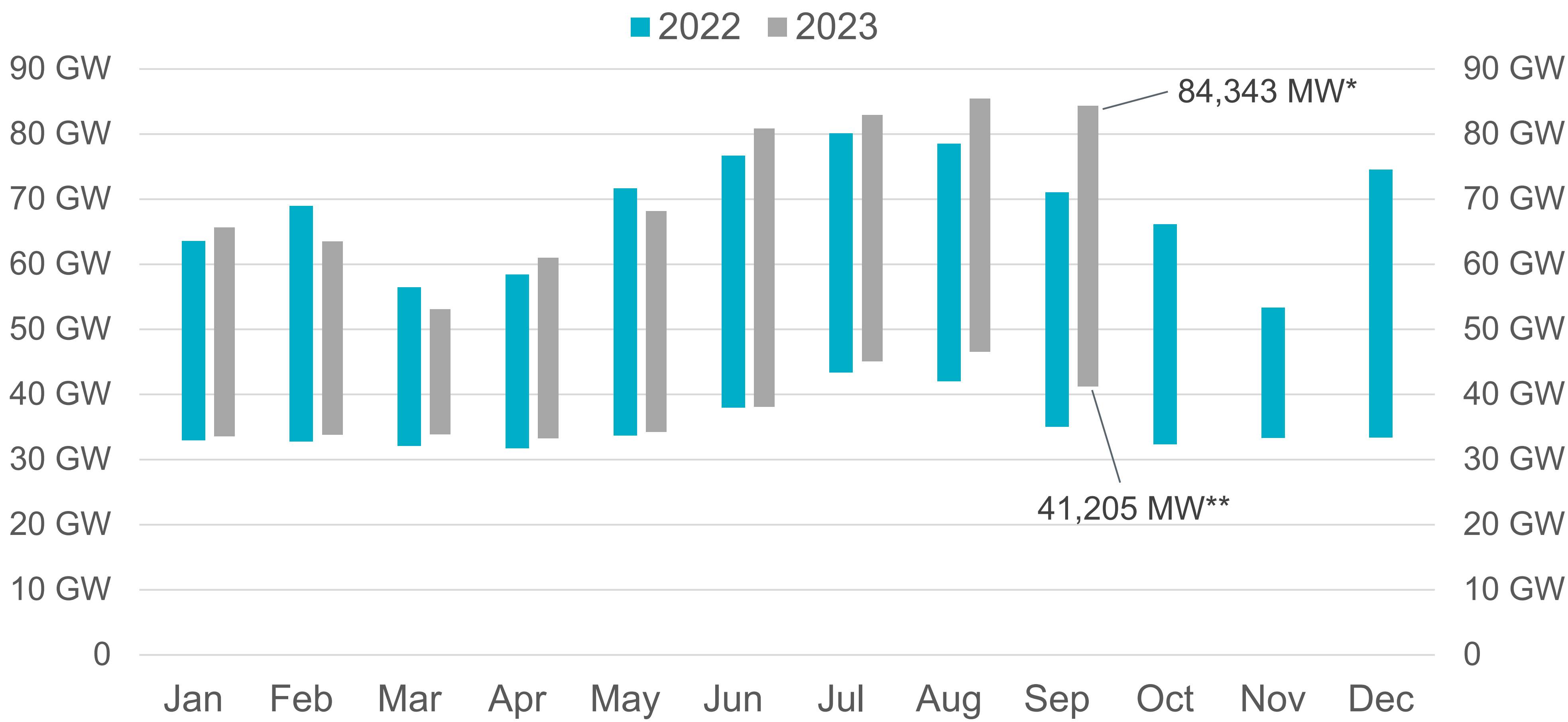
- Transmission Projects endorsed in 2023 total $1.838 billion as of September 30, 2023.

- All projects (in engineering, routing, licensing and construction) total approximately $12.469 billion as of May 12, 2023.

- Transmission Projects energized in 2023 total about $442 million as of May 12, 2023.

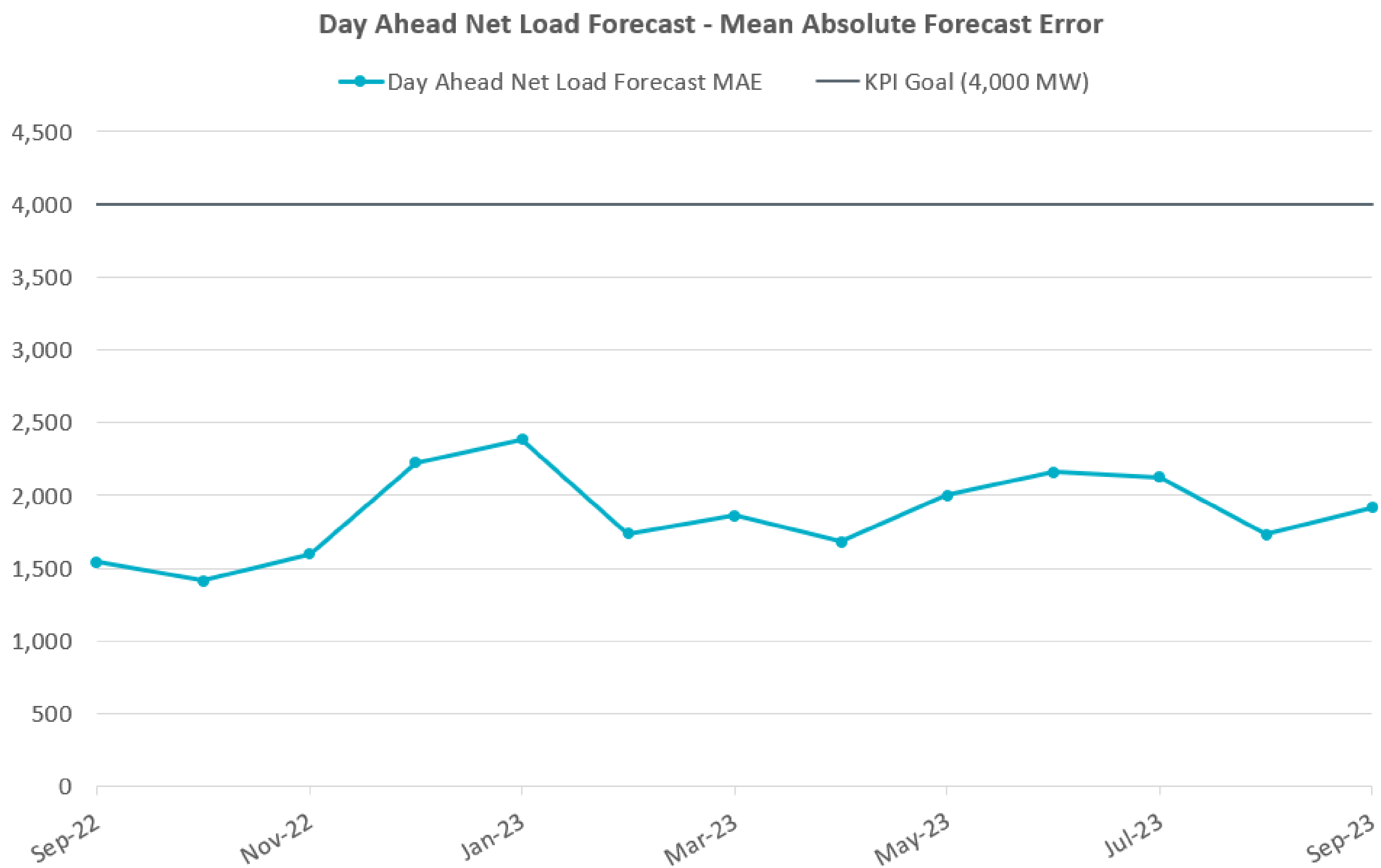
Corrected

ERCOT set a new record of 84,343 MW* for the month of September on 9/08/2023; This is 13,268 MW more than the September 2022 demand of 71,075 MW.

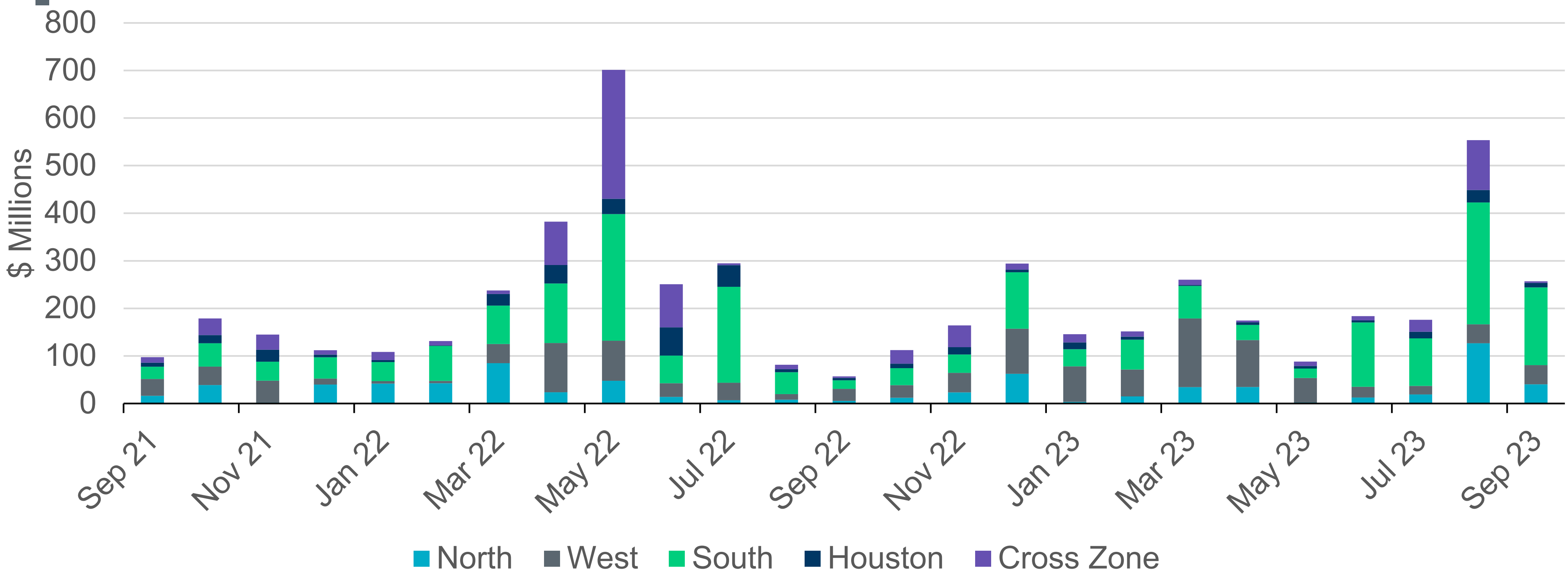


*Based on the maximum net system hourly value from the September Demand and Energy 2023 report.
**Based on the minimum net system 15-minute interval value from the September Demand and Energy 2023 report.
Data for latest two months are based on preliminary settlements.

Net Load Forecast Performance

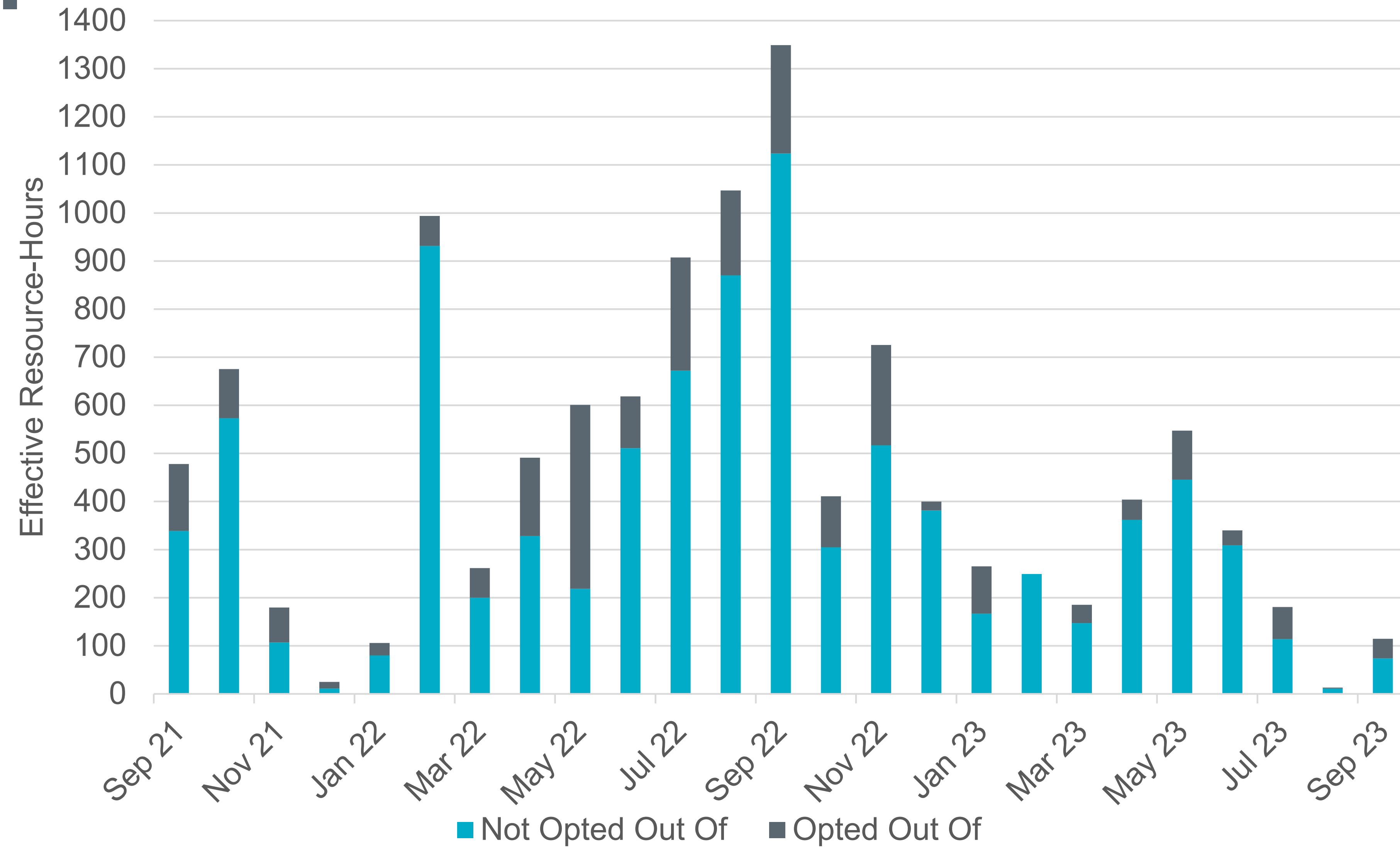


Real-Time Congestion Rent by Zone



- Congestion rent increased in the West Zone in September compared to August.
- The two zones with the highest congestion rent were the South and West Zones.
  - Congestion rent in the South Zone was primarily driven by the loss of the double circuit 345 kV contingency from Elmcreek to San Miguel Gen overloading the 345 kV transmission line from Pawnee Switching Station to Calaveras.
  - 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 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.

Nine Resources were Committed in September for Capacity

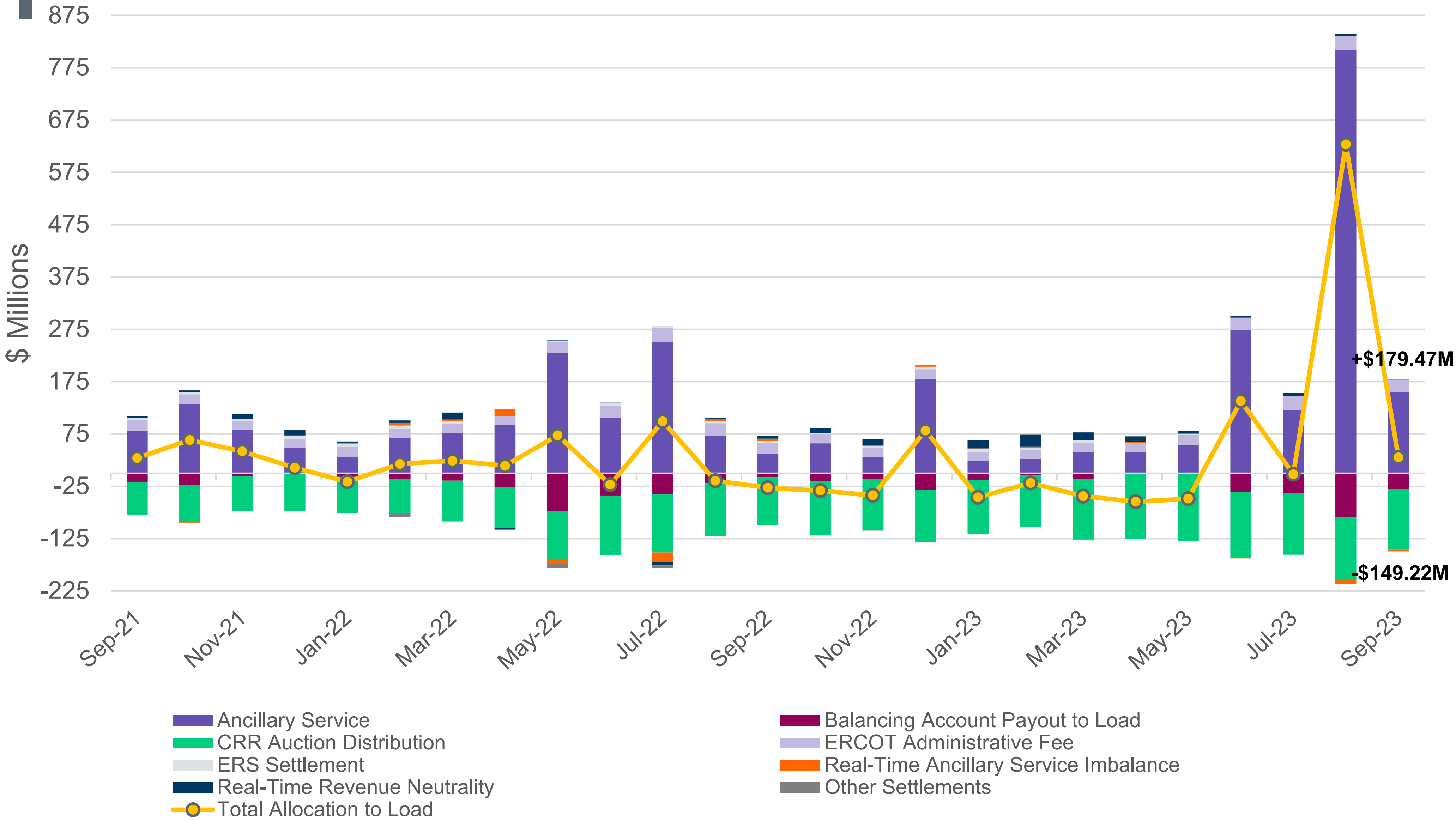


"Effective Resource-Hours" excludes any period during a Reliability Unit Commitment hour when the RUC-committed Resource was starting up, shutting down, off-line, or otherwise not available for dispatch by SCED.

Nine Resources were Committed in September for Capacity

Resource #	Effective Resource-hours	Non-Opt Out (Effective Hours)	Opt Out (Effective Hours)
1	30.0	7.0	23.0
2	24.0	24.0	0.0
3	8.0	0.0	8.0
4	12.0	12.0	0.0
5	2.0	0.0	2.0
6	8.0	0.0	8.0
7	15.8	15.8	0.0
8	7.9	7.9	0.0
9	6.9	6.9	0.0
Total	**114.7**	**73.7**	**41.0**

Net Allocation to Load in September 2023 was $30.25 Million

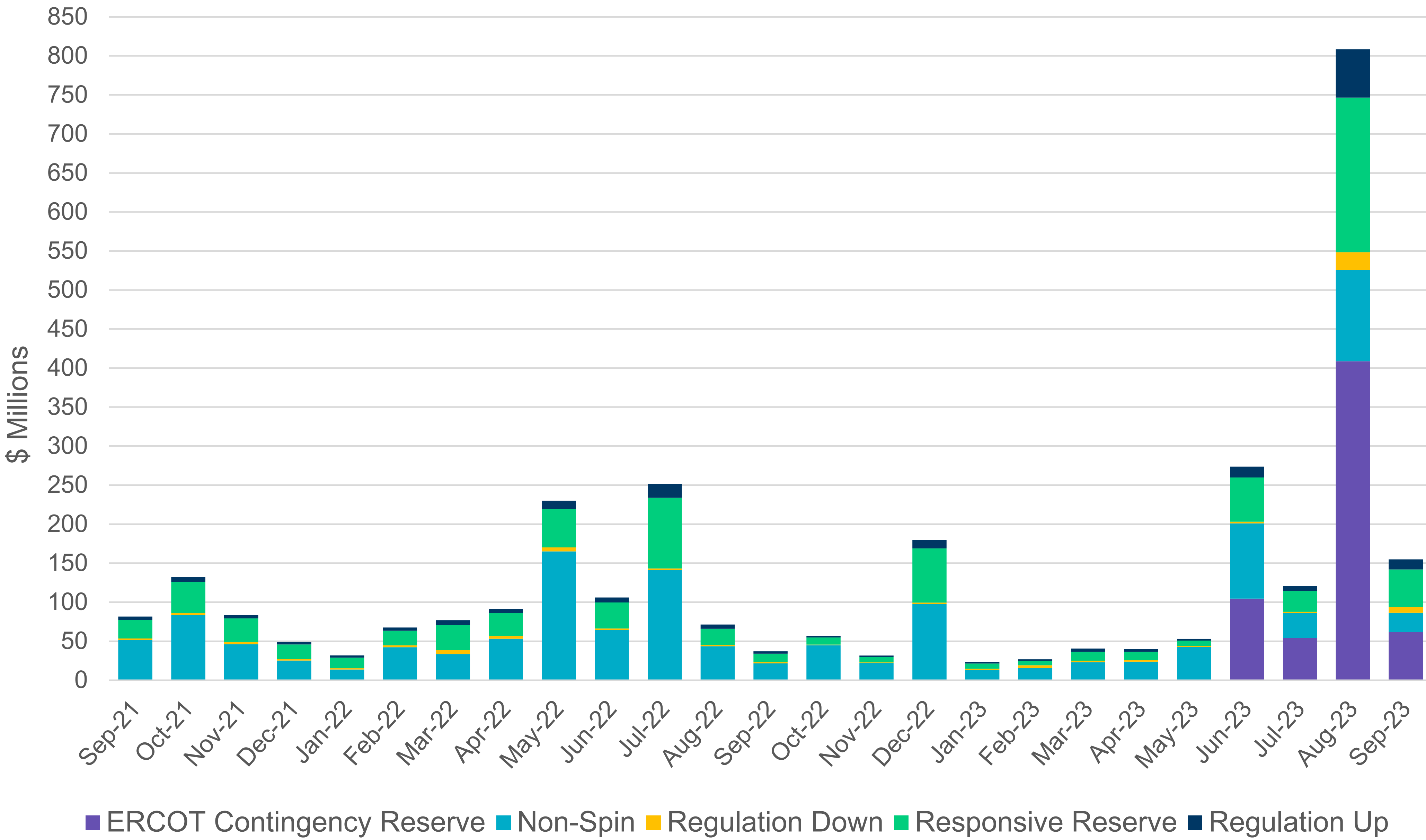


This information is available in tabular form in the Settlement Stability Report presented quarterly to the [Wholesale Market Subcommittee]

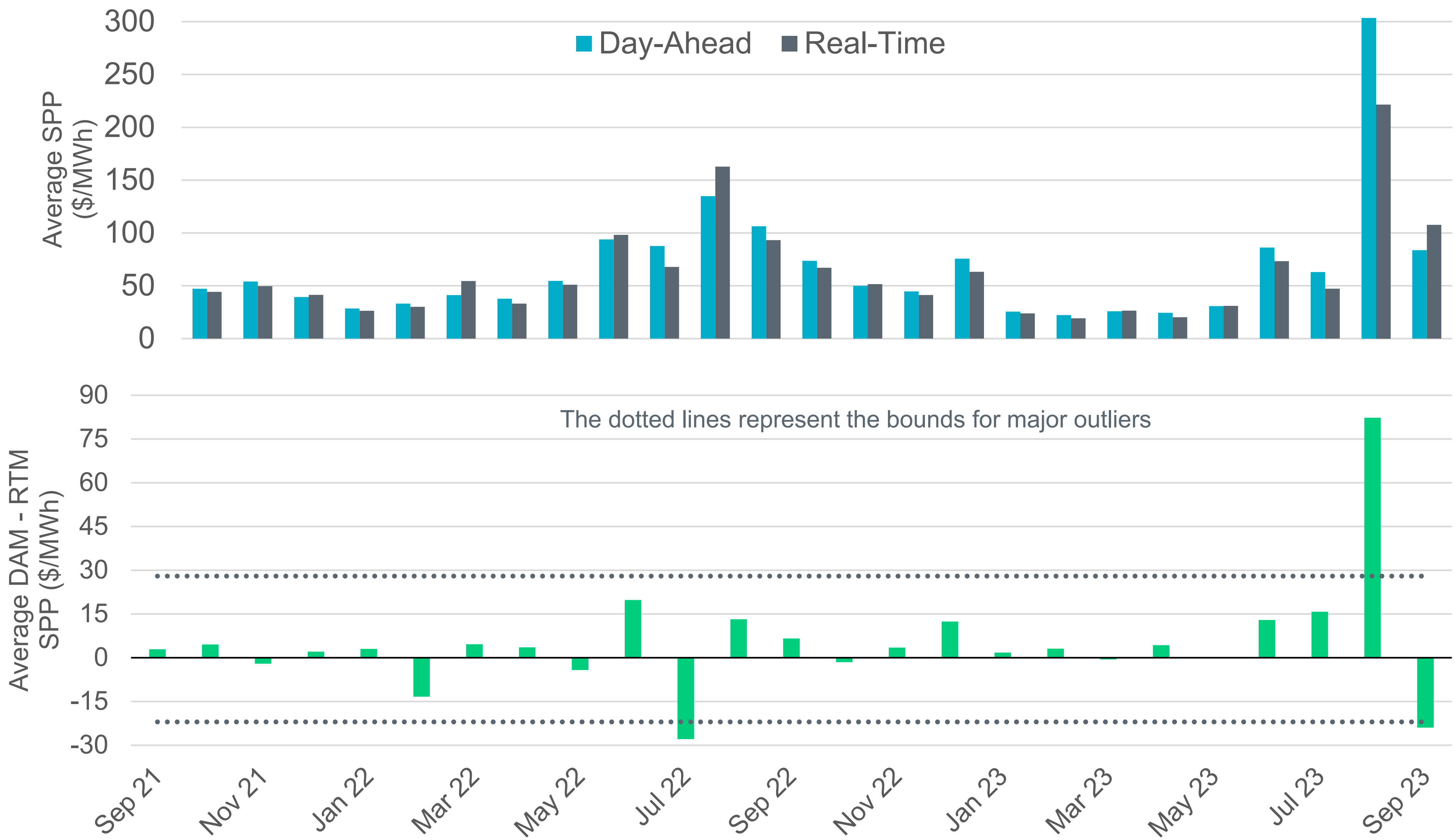
Real-Time Revenue Neutrality Allocated to Load was $0.64M for September 2023

	September 2023 ($M)
Real-Time Energy Imbalance	$224.56
Real-Time Point-to-Point Obligation	($177.46)
Real-Time Congestion from Self-Schedules	$1.68
DC Tie & Block Load Transfer	($45.02)
Real-Time Energy for SODG and SOTG	($4.40)
Load Allocated Revenue Neutrality	**$0.64**

Ancillary Services for September 2023 totaled $154.94M

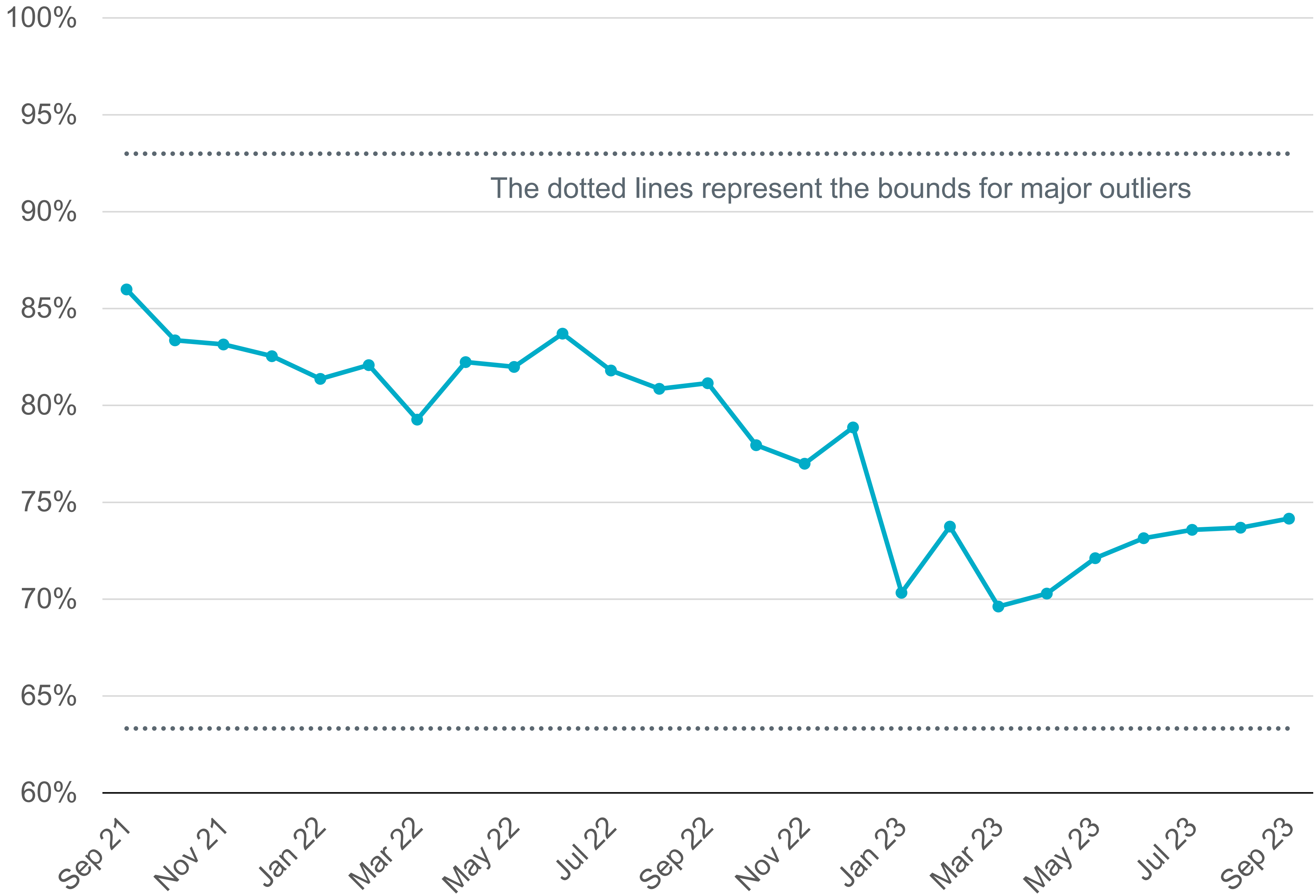


Day-Ahead and Real-Time Market Price Differences

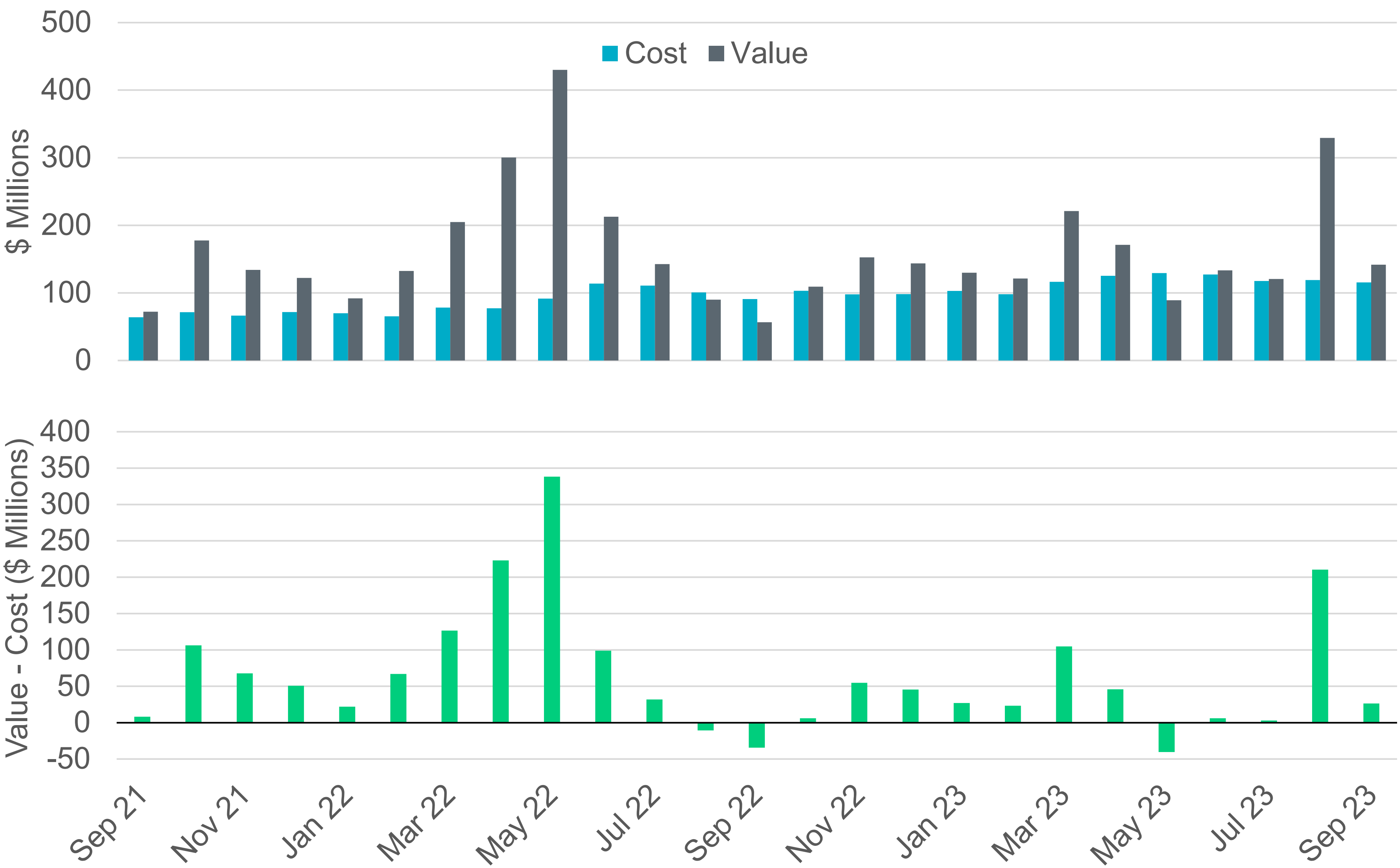


*Averages are weighted by Real-Time Market Load

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



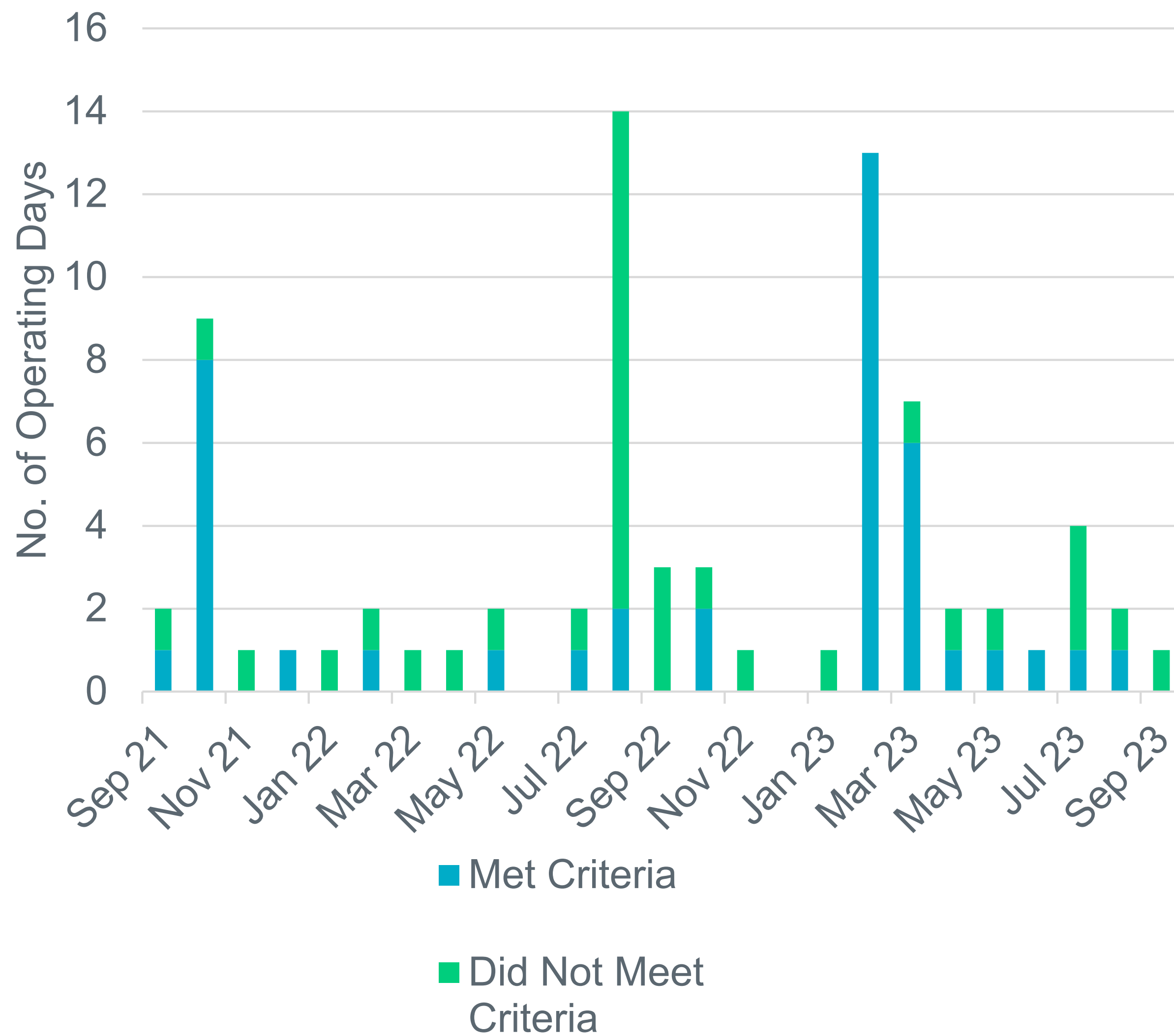
CRR Value and Cost Differences



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; and
- Days that were not corrected because they did not meet the criteria for "significance" under NPRR1024.

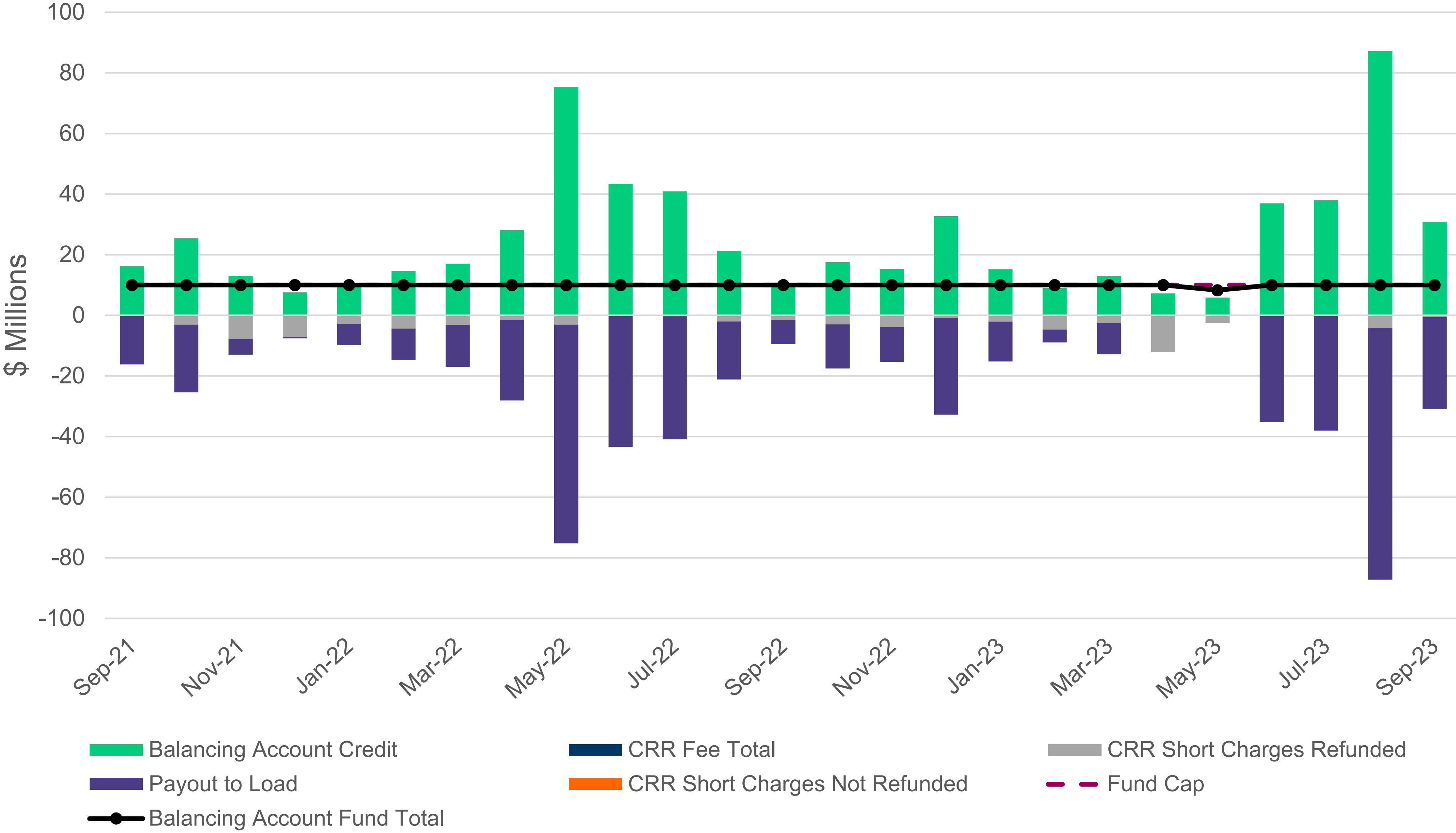


Details for Price Corrections Review

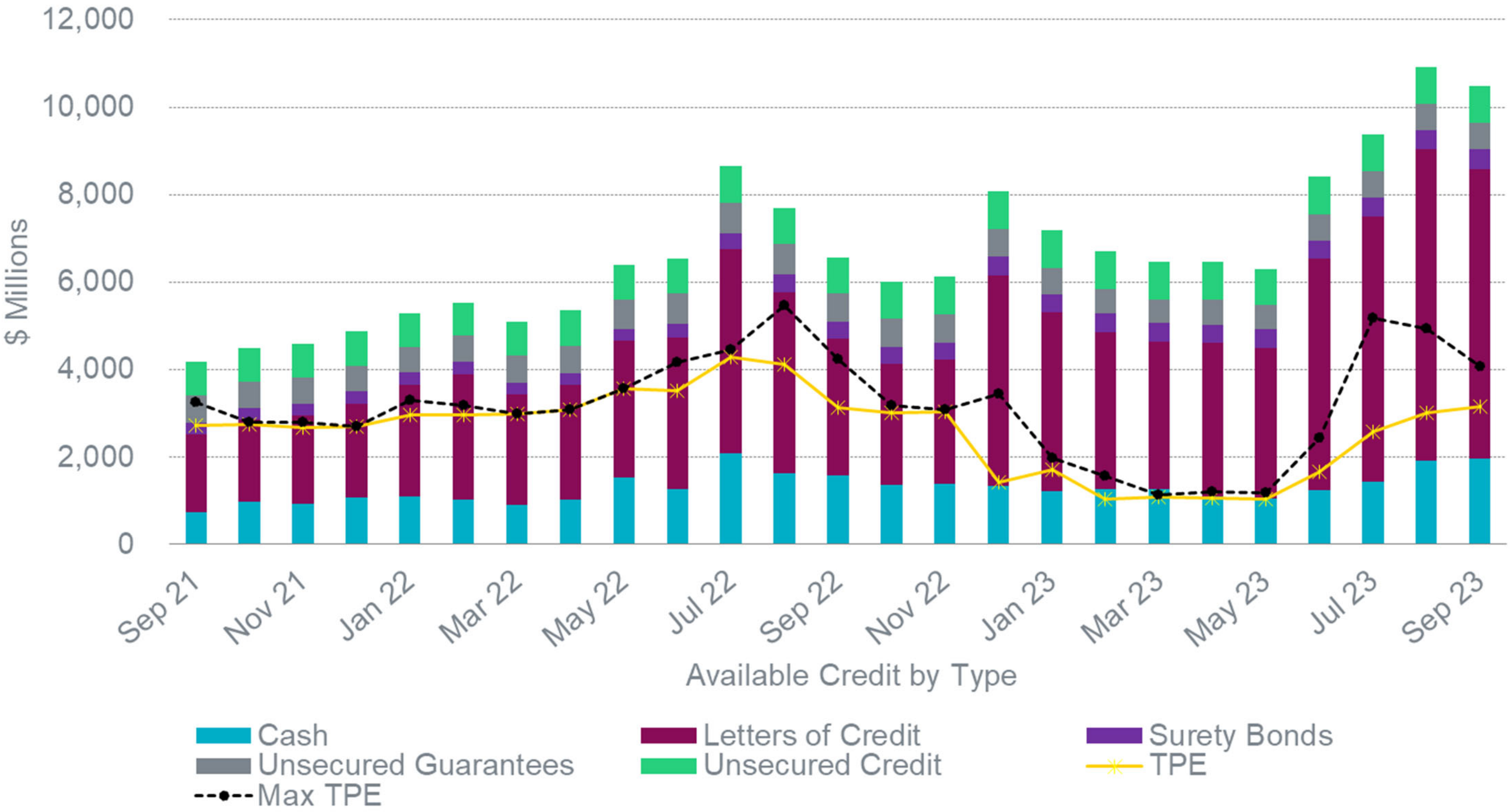
Operating Days Not Meeting Significance Criteria

- On September 11, 2023, Emergency Basepoints were activated during a planned failover. The resulting impact analysis showed that this day had not met criteria for price correction, with an estimated total dollar impact of $19.50.

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 – September 2023

	Year-To-Date		Transactions Received	
Transaction Type	**September 2023**	**September 2022**	**September 2023**	**September 2022**
Switches	865,960	966,486	78,185	81,440
Acquisitions	0	0	0	0
Move - Ins	2,373,339	2,372,628	271,986	284,323
Move - Outs	1,069,539	1,070,677	124,702	127,785
Continuous Service Agreements (CSA)	346,354	568,777	34,758	50,023
Mass Transitions	0	24,463	0	0
Total	**4,655,192**	**5,003,031**	**509,631**	**543,571**