ERCOT Monthly Operational Overview
(May 2023)

ERCOT Public
June 19, 2023

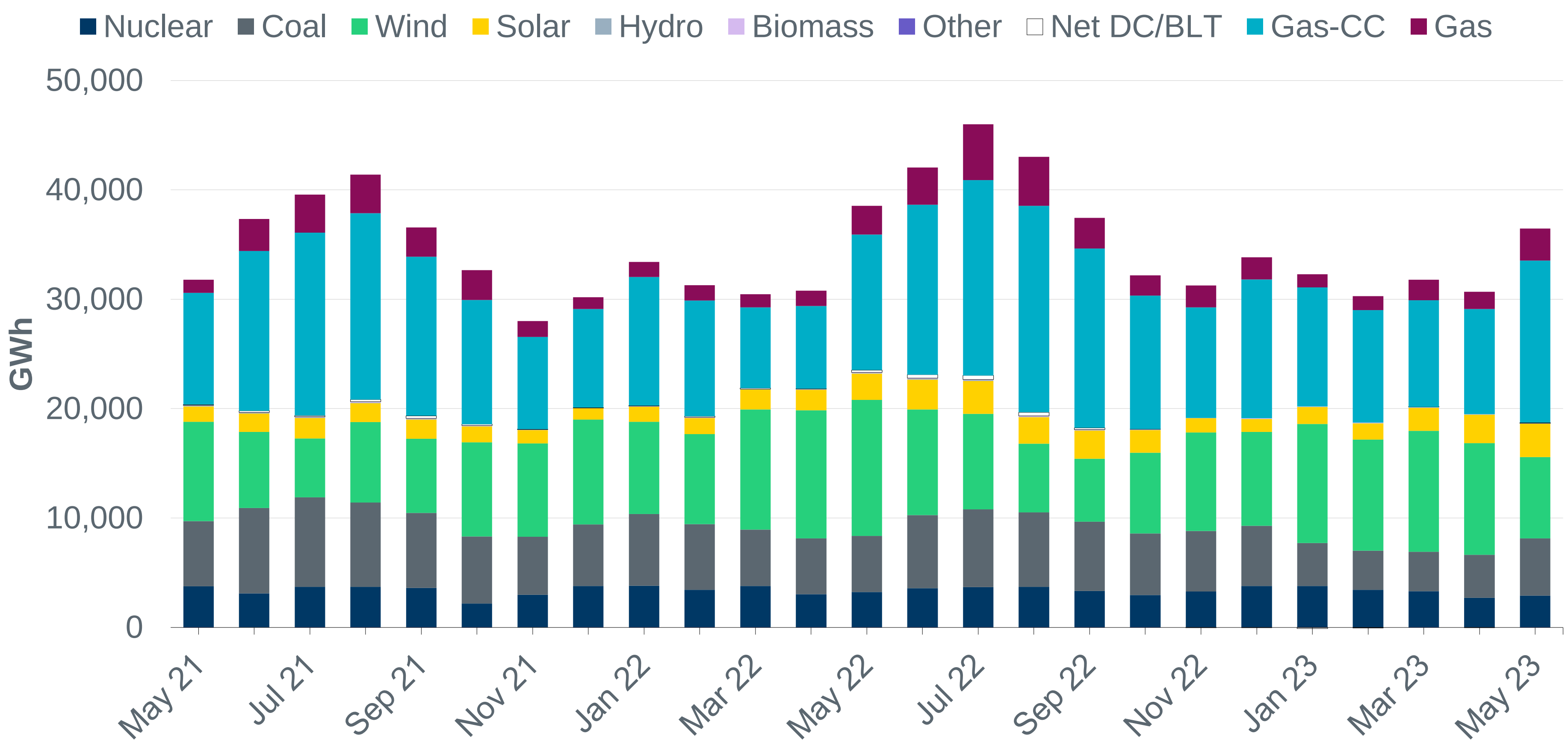
Highlights, Records and Notifications

- ERCOTs Maximum peak demand was 68,121 MW* for the month of May on 5/5/2023; this was 3,524 MW less than the previous record of 71,645 MW set on 5/31/2022.

- ERCOT issued 8 notifications:
  – 2 OCN's due to taking manual action on the WESTEX GTC.
  – 4 AAN's issued for possible future emergency condition.
  – 1 Advisory due to postponed the deadline for the posting of the DAM solution.
  – 1 Advisory due to VSAT is unavailable.

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

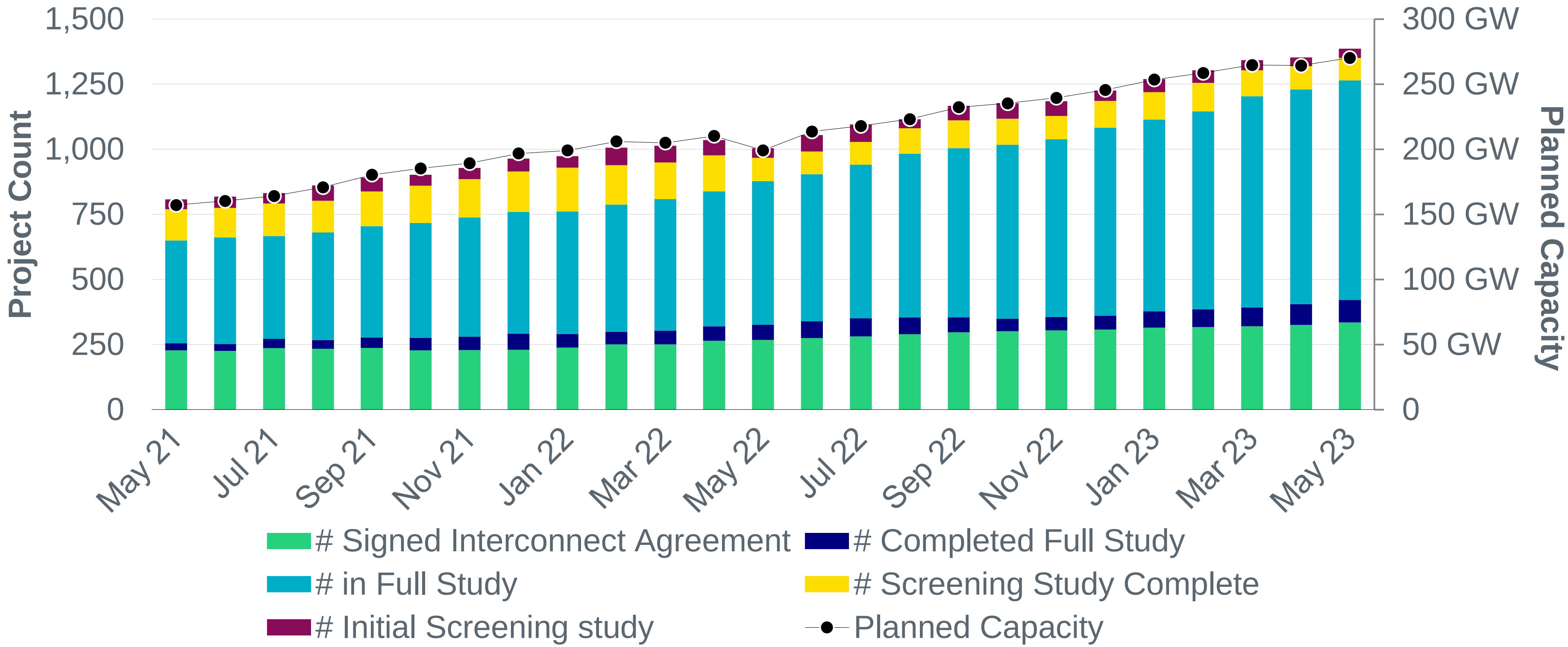
Monthly energy generation decreased by 5.4% year-over-year to 36,449 GWh in May 2023, compared to 38,535 GWh in May 2022



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)

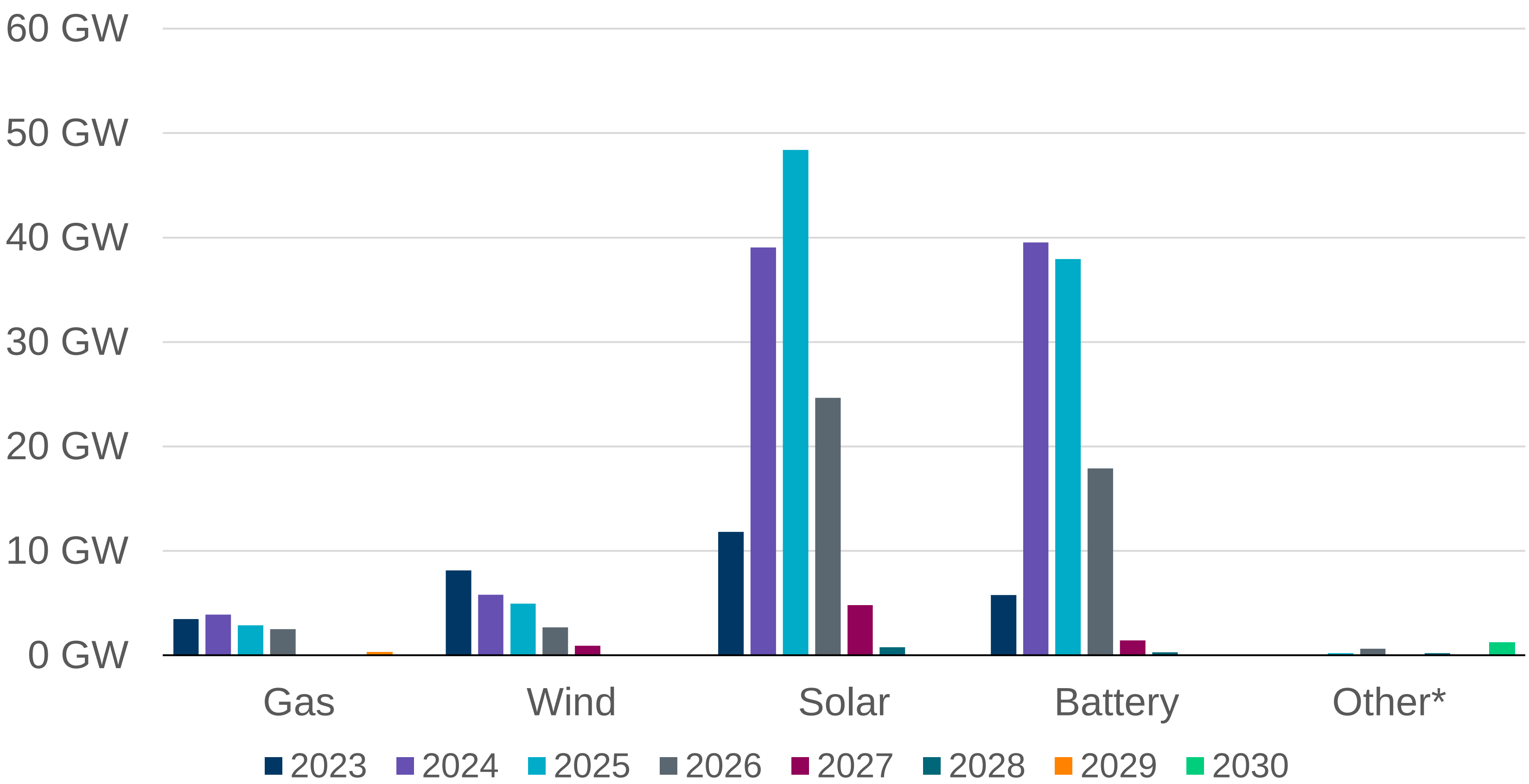


- There are an additional 20 “Small Generator” projects totaling 185 MW that are going through the simplified interconnection process.

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 130 GW (47.9%), Wind 22 GW (8.3%), Gas 13 GW (4.8%), Battery 103 GW (38.1%) (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 1,424 active generation interconnection requests totaling 270,119 MW as of May 31. This includes 129,507 MW of solar, 22,472 MW of wind, 102,825 MW of battery, and 13,026 MW of gas projects; 64 projects were categorized as inactive, down from 66 inactive projects in April 2023.

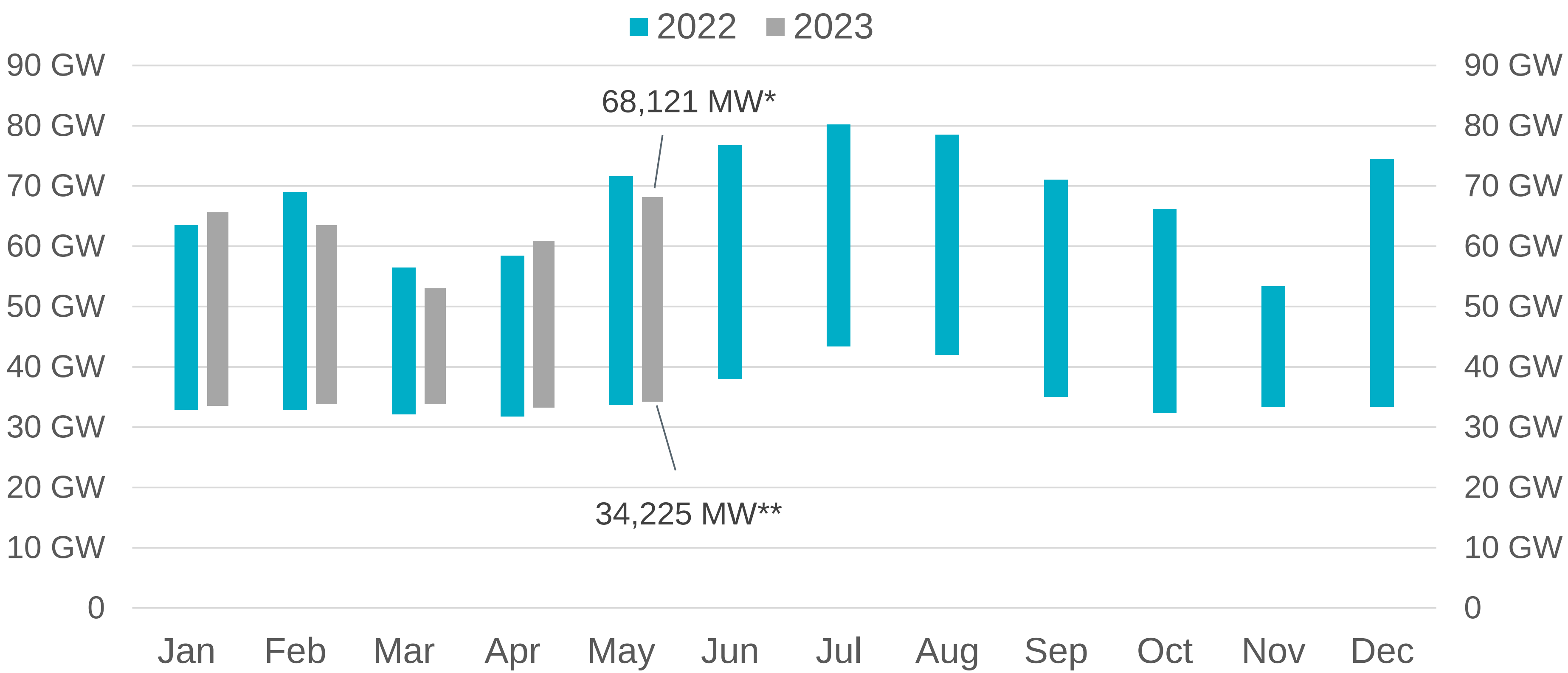
- ERCOT is currently reviewing proposed transmission improvements with a total estimated cost of $616.80 million as of May 31, 2023.

- Transmission Projects endorsed in 2023 total $915.73 million as of May 31, 2023.

- All projects (in engineering, routing, licensing and construction) total approximately $12.469 billion as of February 1, 2023.

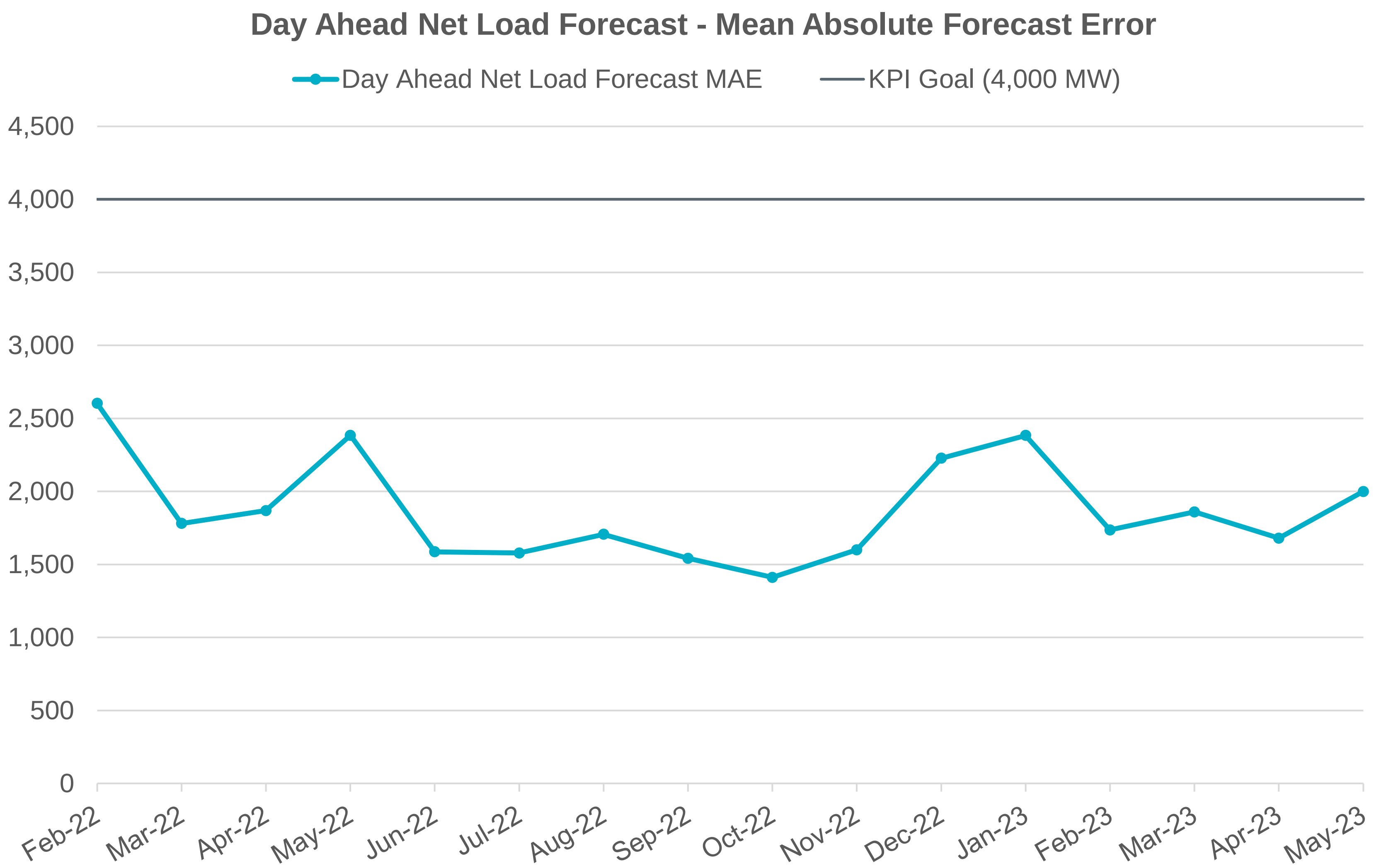
- Transmission Projects energized in 2023 total about $442 million as of May 12, 2023.

ERCOT's maximum peak demand for the month of May was 68,121 MW*; this was 3,524 MW less than the record of 71,645 MW set on 5/31/2022.

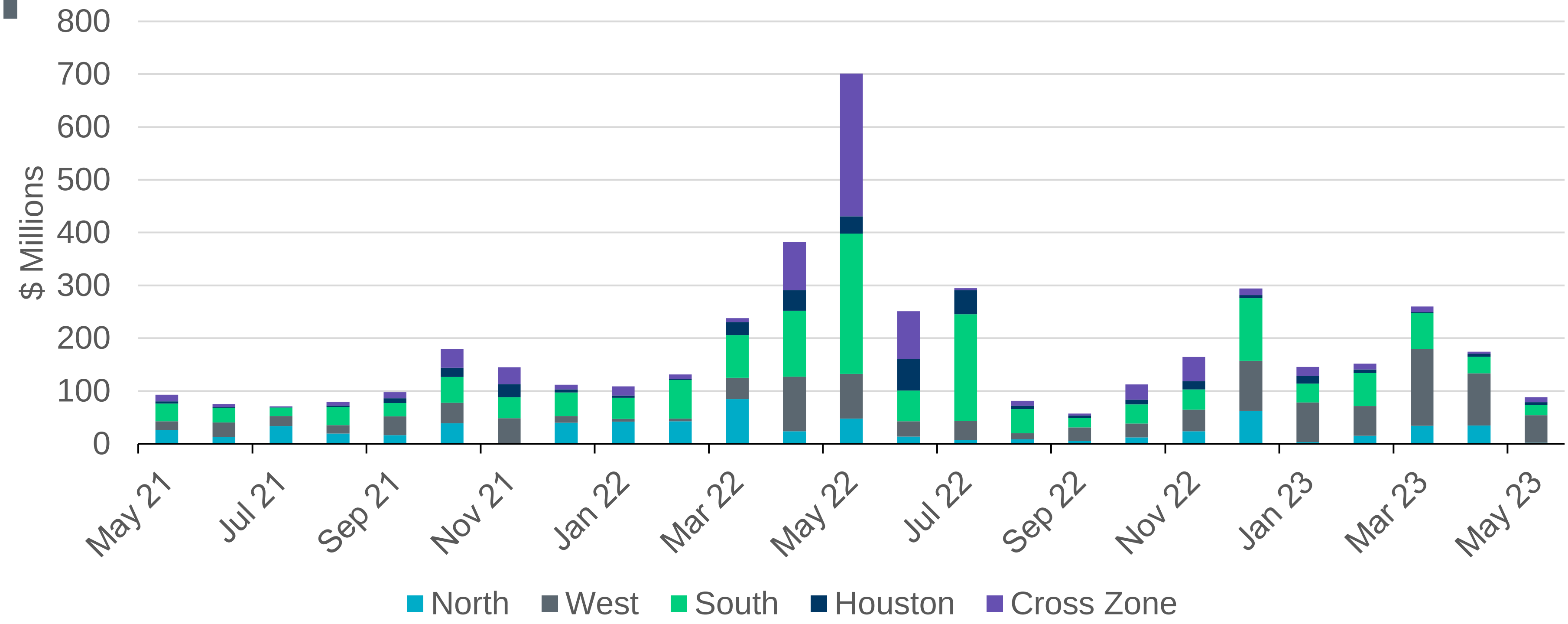


*Based on the maximum net system hourly value from the May Demand and Energy 2023 report.
**Based on the minimum net system 15-minute interval value from the May Demand and Energy 2023 report.
Data for latest two months are based on preliminary settlements.

Net Load Forecast Performance

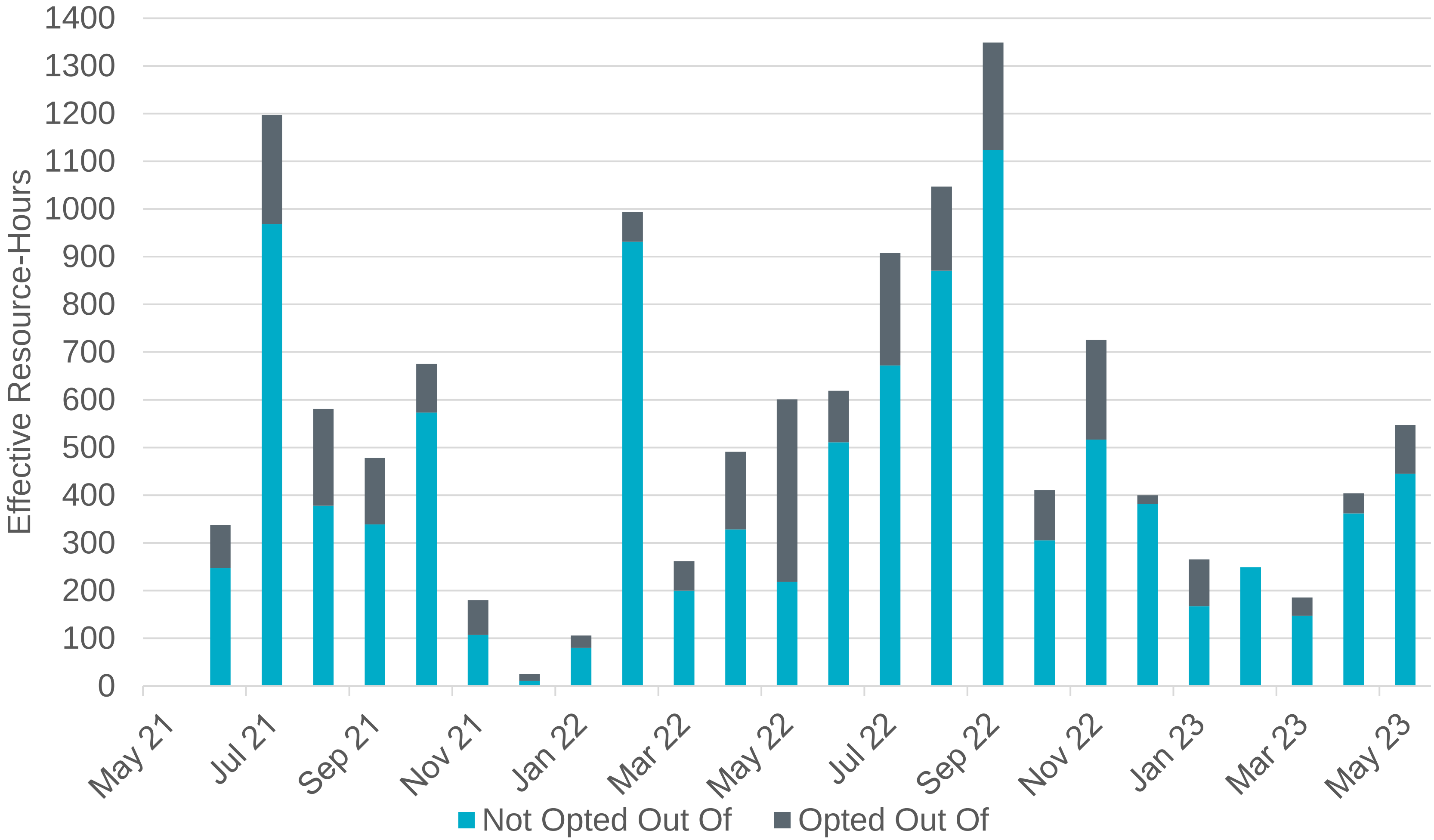


Real-Time Congestion Rent by Zone



- Congestion rent increased in the Cross Zone in May compared to April.
- The two zones with the highest congestion rent were the West and South Zones.
  - Congestion rent in the West Zone was primarily driven by the loss of the 69 kV transmission line from McCullough to Co-op overloading the 69 kV transmission line from Erskine to Mackenzie.
  - Congestion rent in the South Zone was primarily driven by the North Edinburg to Lobo 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.

Twenty-six Resources were Committed in May for Capacity or Congestion

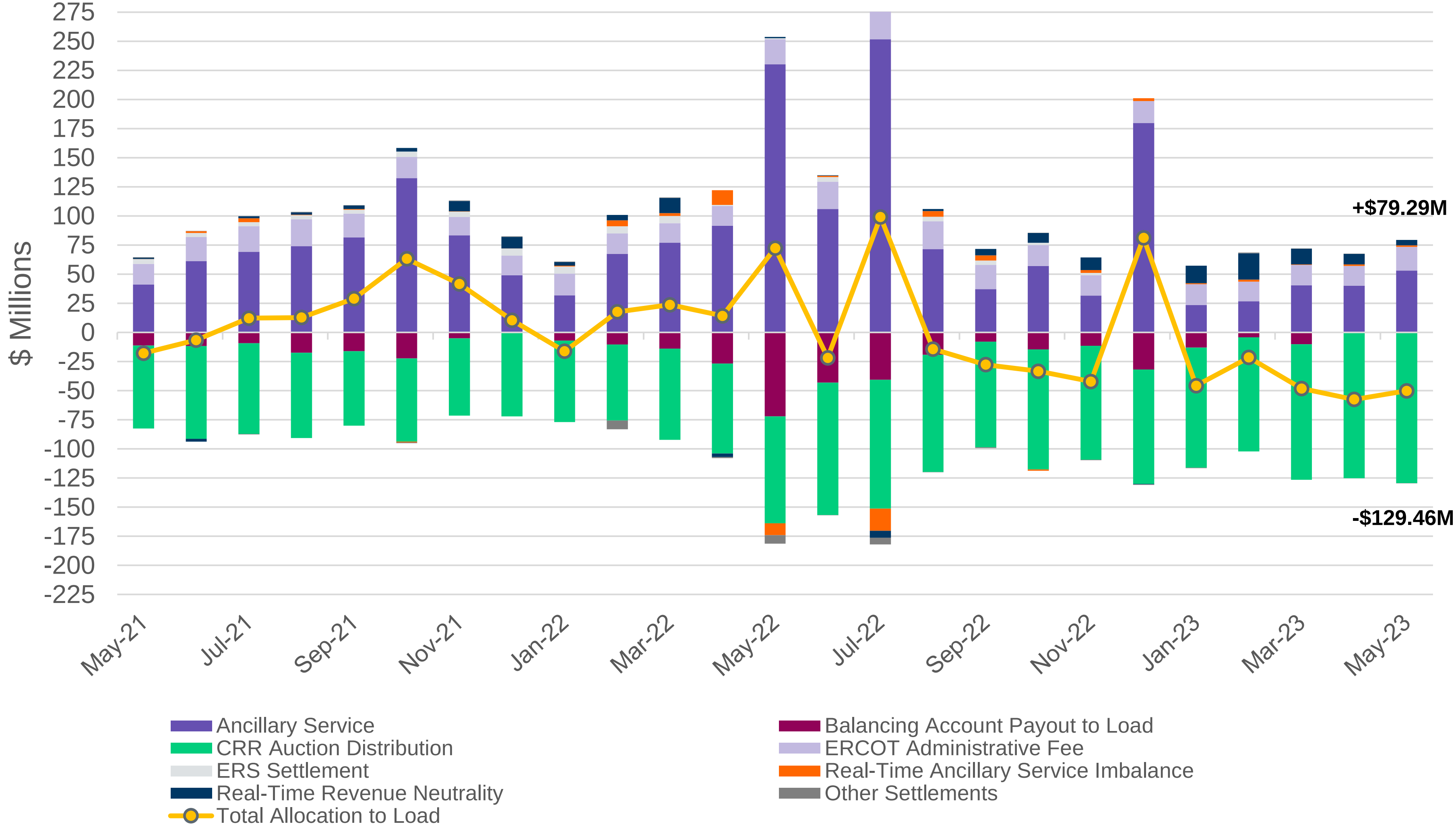


"Effective Resource-Hours" excludes any period during a Reliability Unit Commitment hour when the RUC-committed Resource was starting up, shutting down, off-line, or otherwise not available for dispatch by SCED.

Twenty-six Resources were Committed in May for Capacity or Congestion

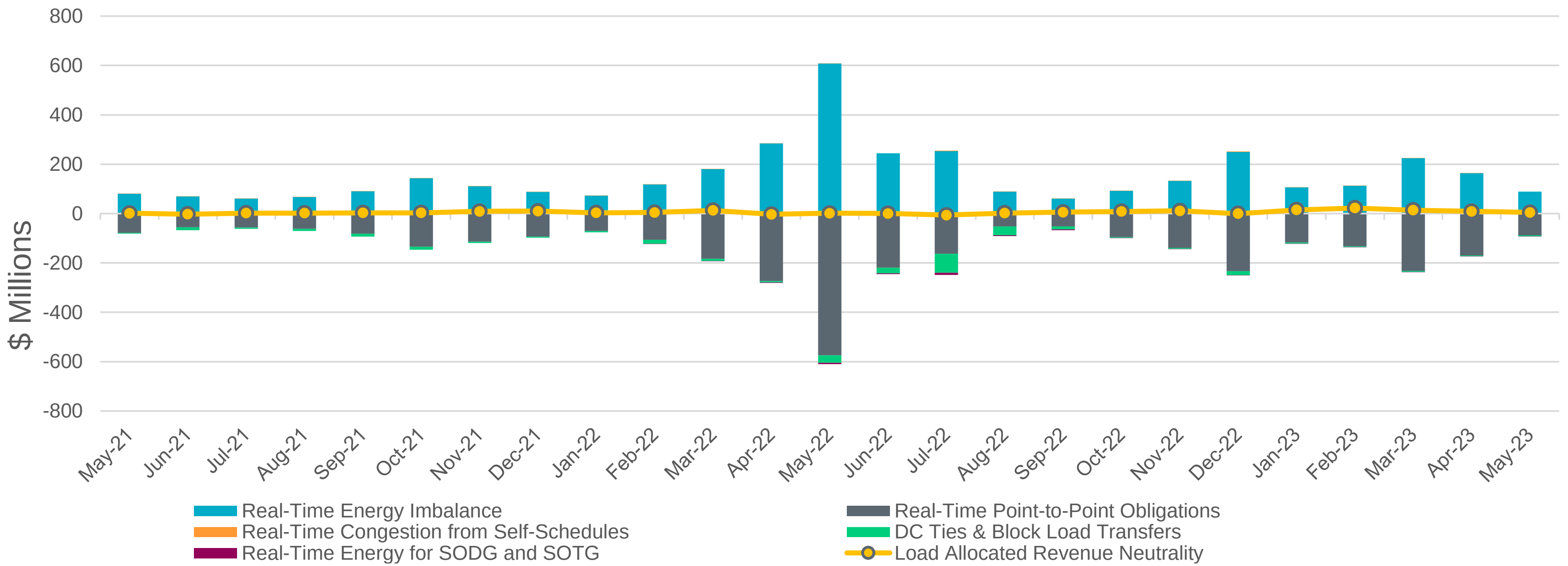
Resource #	Effective Resource-hours	Non Opt Out (Effective Hours)	Opt Out (Effective Hours)
1	11.0	0.0	11.0
2	24.0	6.0	18.0
3	55.0	32.0	23.0
4	7.0	7.0	0.0
5	7.0	0.0	7.0
6	31.9	23.9	8.0
7	23.9	23.9	0.0
8	140.0	140.0	0.0
9	3.9	3.9	0.0
10	23.8	23.8	0.0
11	23.8	23.8	0.0
12	108.7	108.7	0.0
13	11.9	2.0	9.9
14	2.5	2.5	0.0
15	2.0	2.0	0.0
16	3.0	3.0	0.0
17	9.9	9.9	0.0
18	9.9	9.9	0.0
19	8.0	8.0	0.0
20	3.0	3.0	0.0
21	7.5	3.0	4.5
22	11.0	3.0	8.0
23	1.0	1.0	0.0
24	7.0	0.0	7.0
25	8.7	2.9	5.8
26	2.0	2.0	0.0
Total	**547.4**	**445.2**	**102.2**

Net Allocation to Load in May 2023 was ($50.17) Million



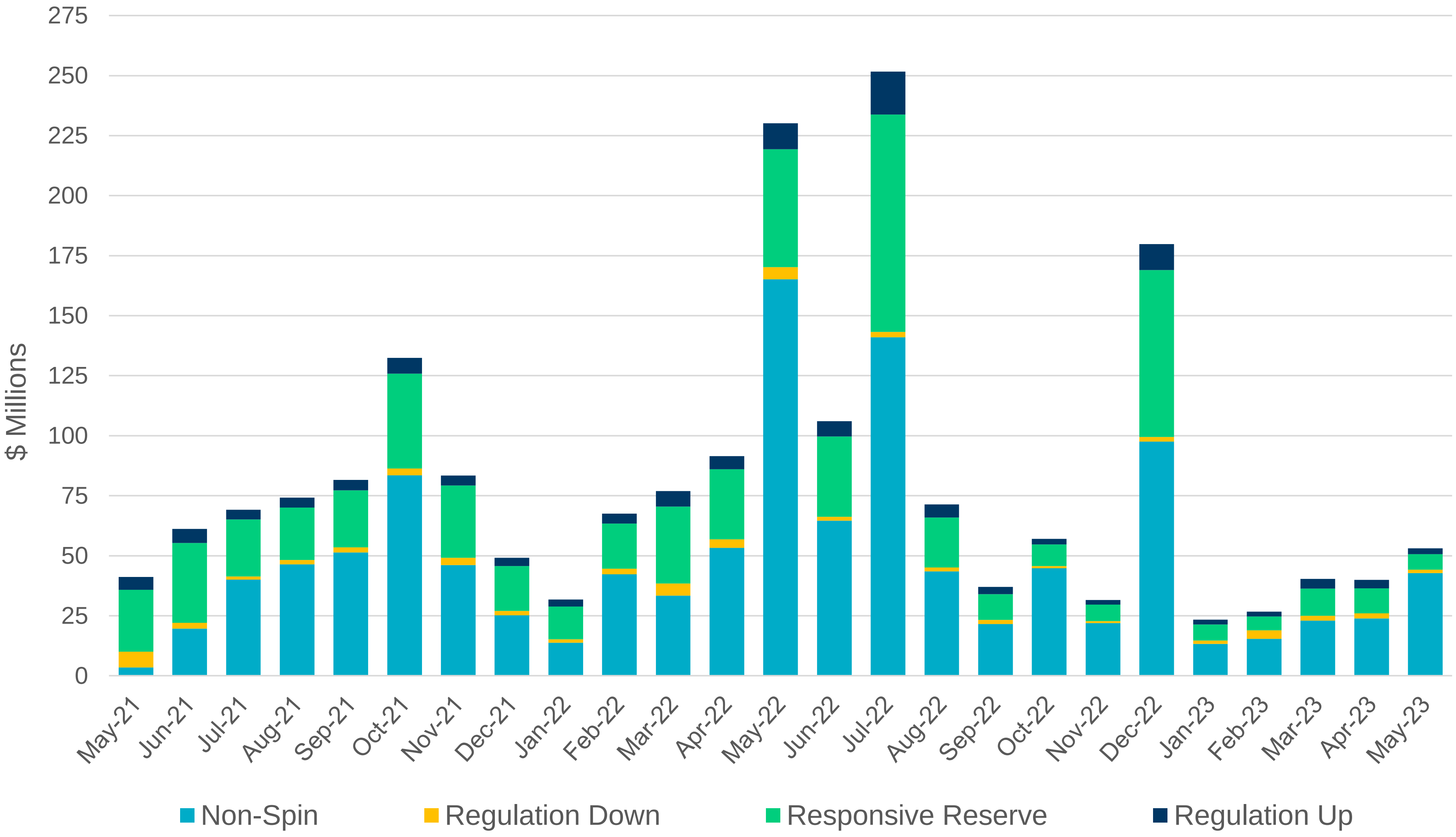
This information is available in tabular form in the Settlement Stability Report presented quarterly to the [Wholesale Market Subcommittee]

Real-Time Revenue Neutrality Allocated to Load was $4.53M for May 2023

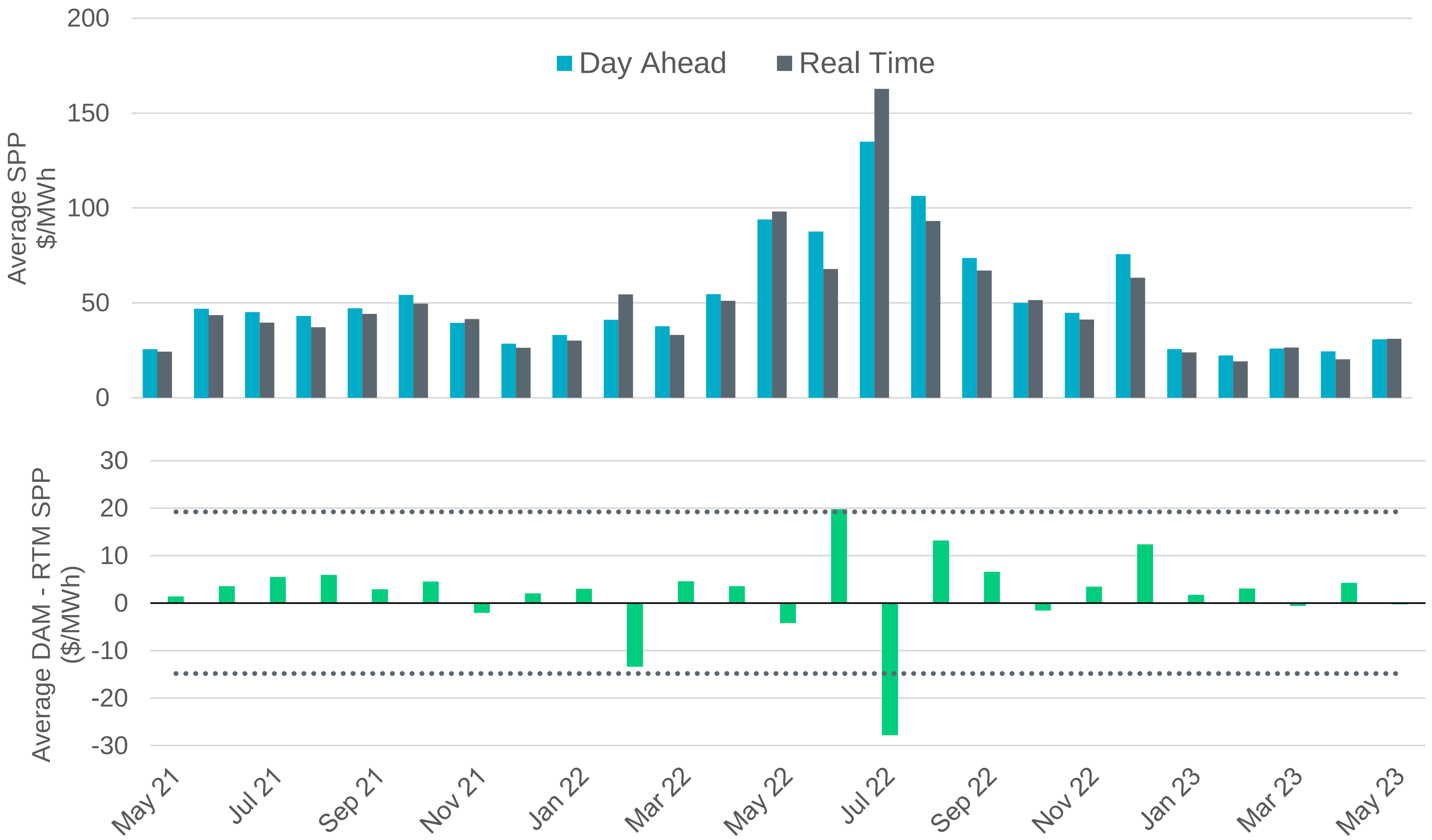


	May 2023 ($M)
Real-Time Energy Imbalance	$88.59
Real-Time Point-to-Point Obligation	($88.00)
Real-Time Congestion from Self-Schedules	($0.04)
DC Tie & Block Load Transfer	($4.28)
Real-Time Energy for SODG and SOTG	($0.80)
Load Allocated Revenue Neutrality	**$4.53**

Ancillary Services for May 2023 totaled $53.10M

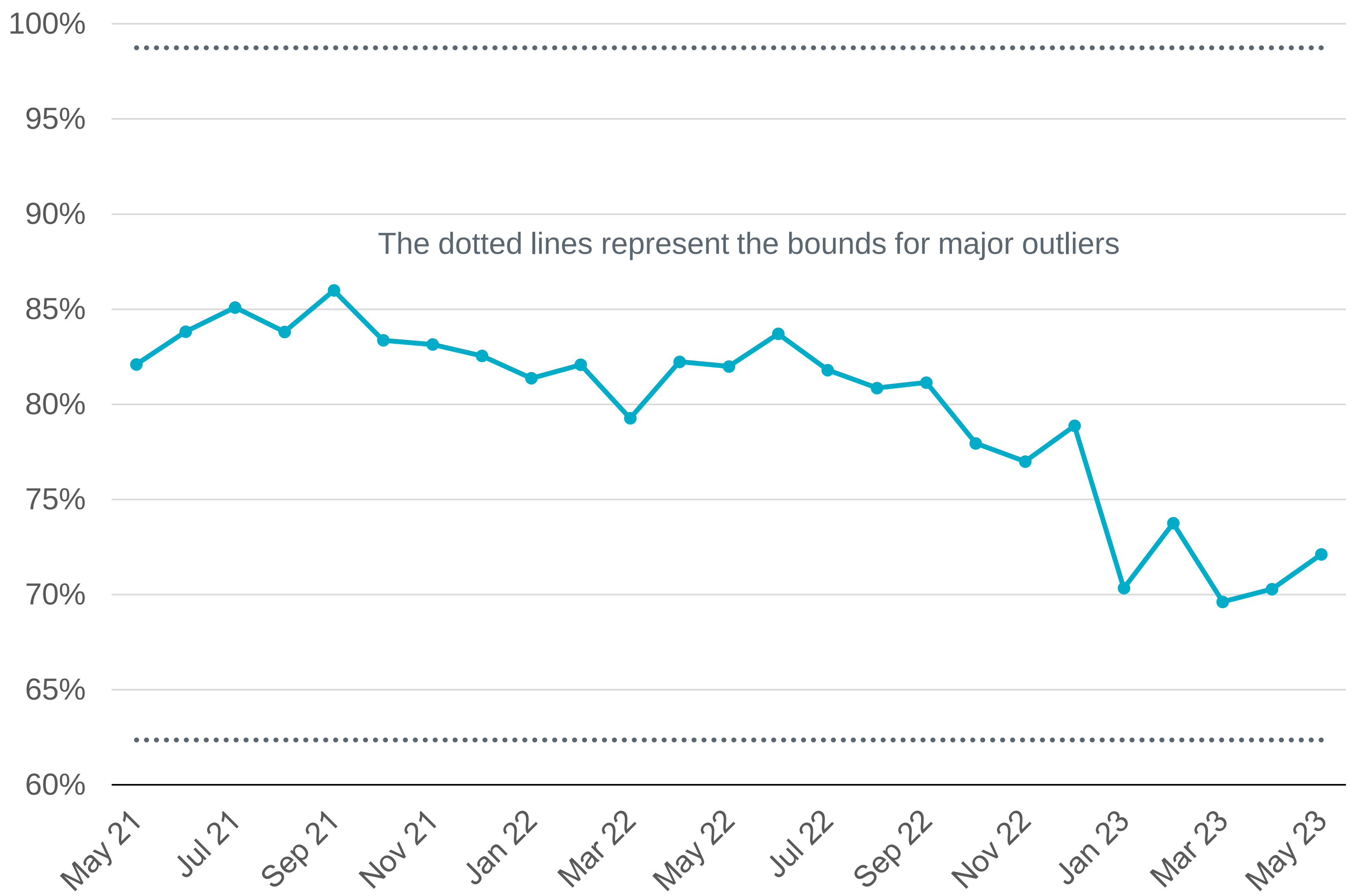


Day-Ahead and Real-Time Market Price Differences

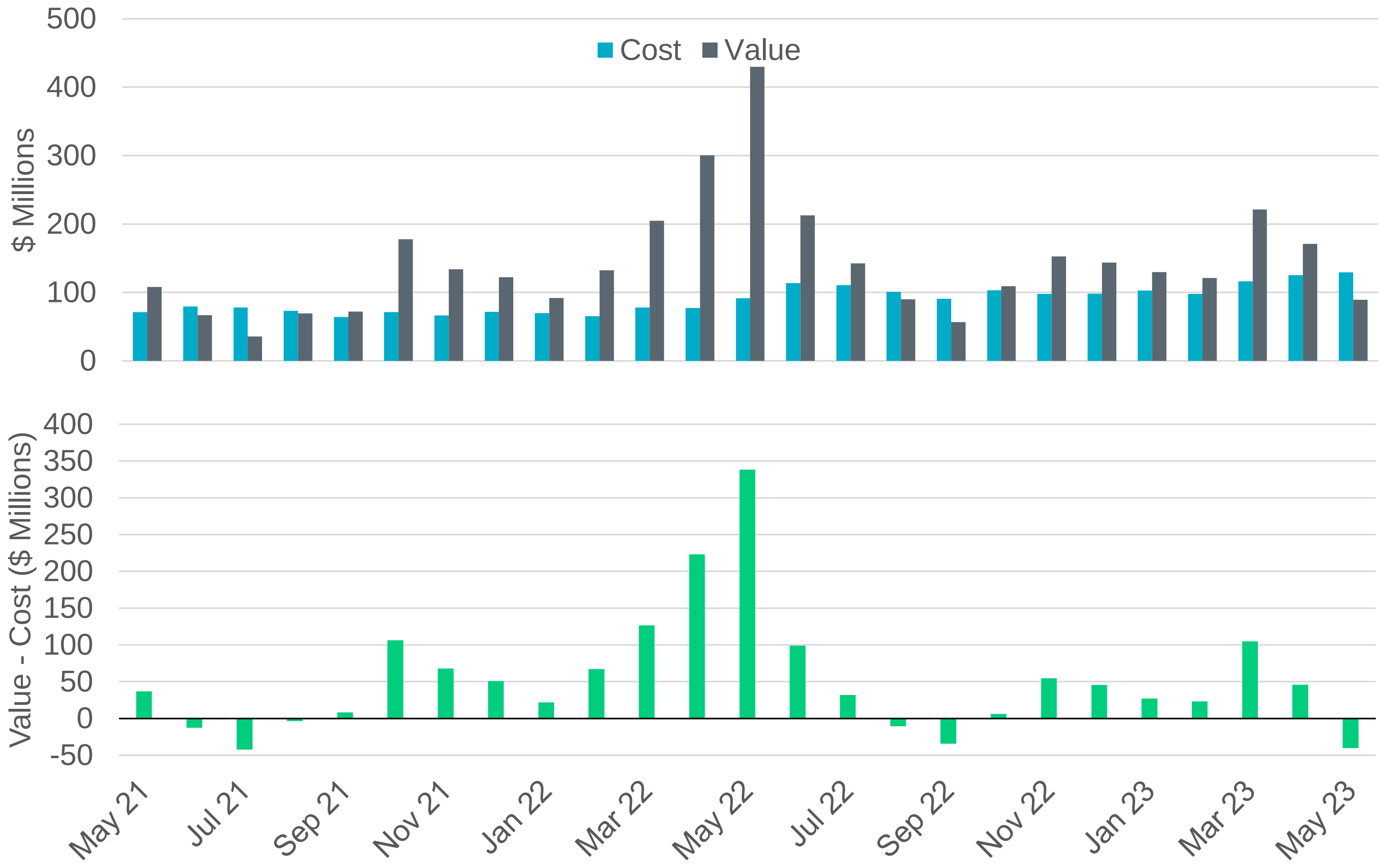


*Averages are weighted by Real-Time Market Load

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



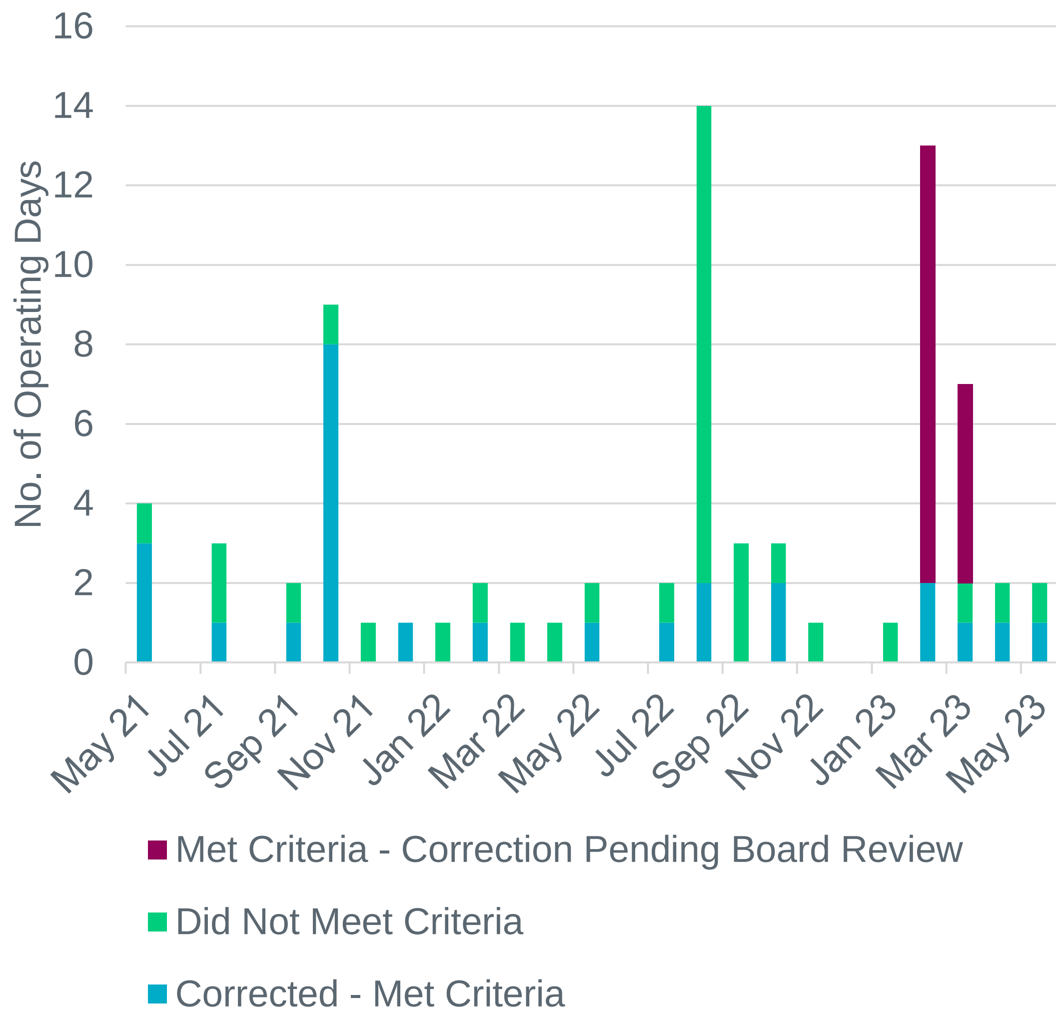
CRR Value and Cost Differences



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 were not corrected because they did not meet the criteria for “significance” under NPRR1024; and
- Days that met the criteria for “significance” under NPRR1024 and are awaiting Board Review.



Details for Price Corrections Reviews

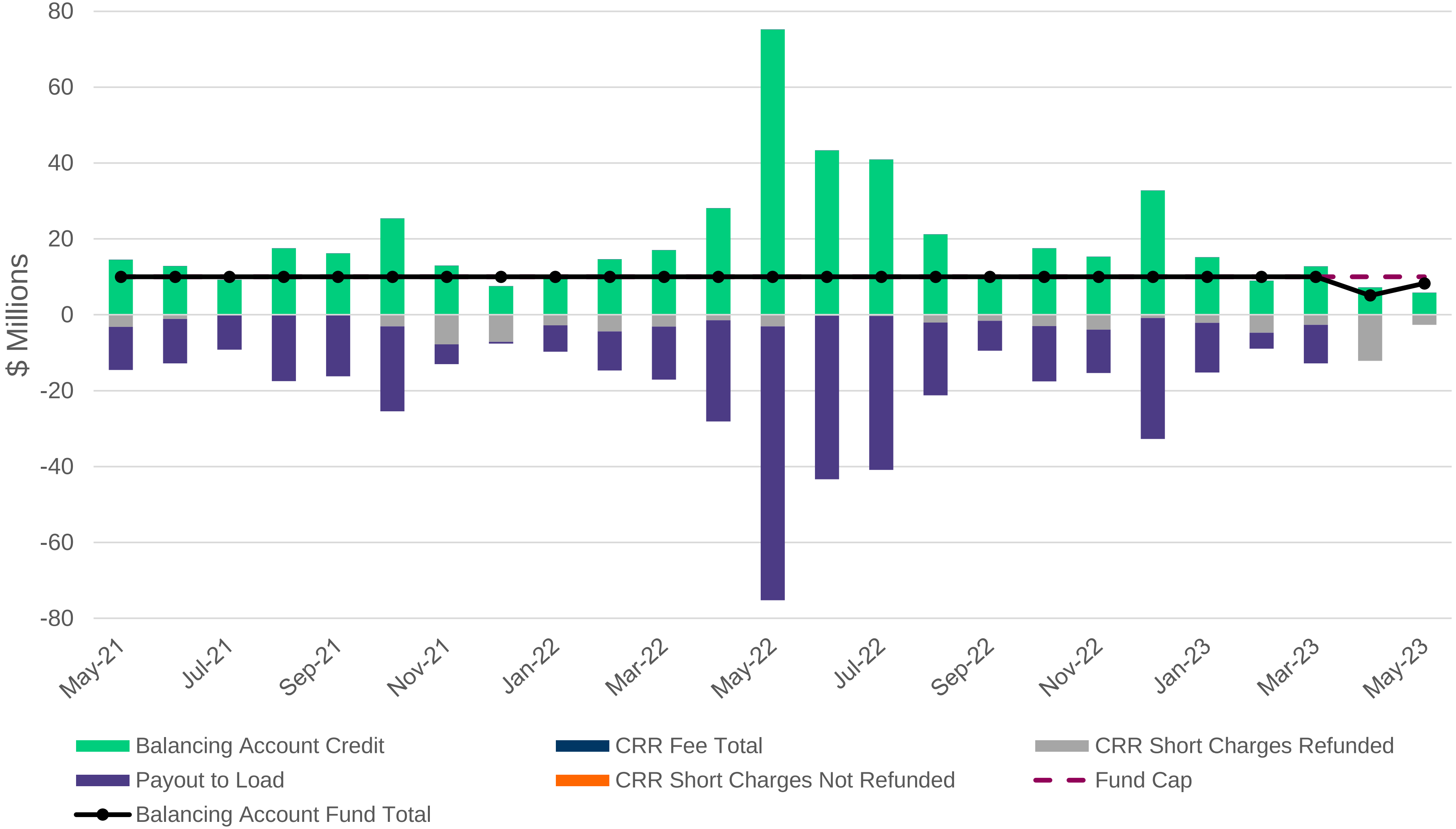
Operating Day Not Meeting Significance Criteria

- On May 8, 2023, during routing maintenance, interval 16:40 did not run and the emergency base point flag was turned on. After completing impact analysis, ERCOT found it did not meet criteria for price correction, with an estimated total dollar impact of $396.49.

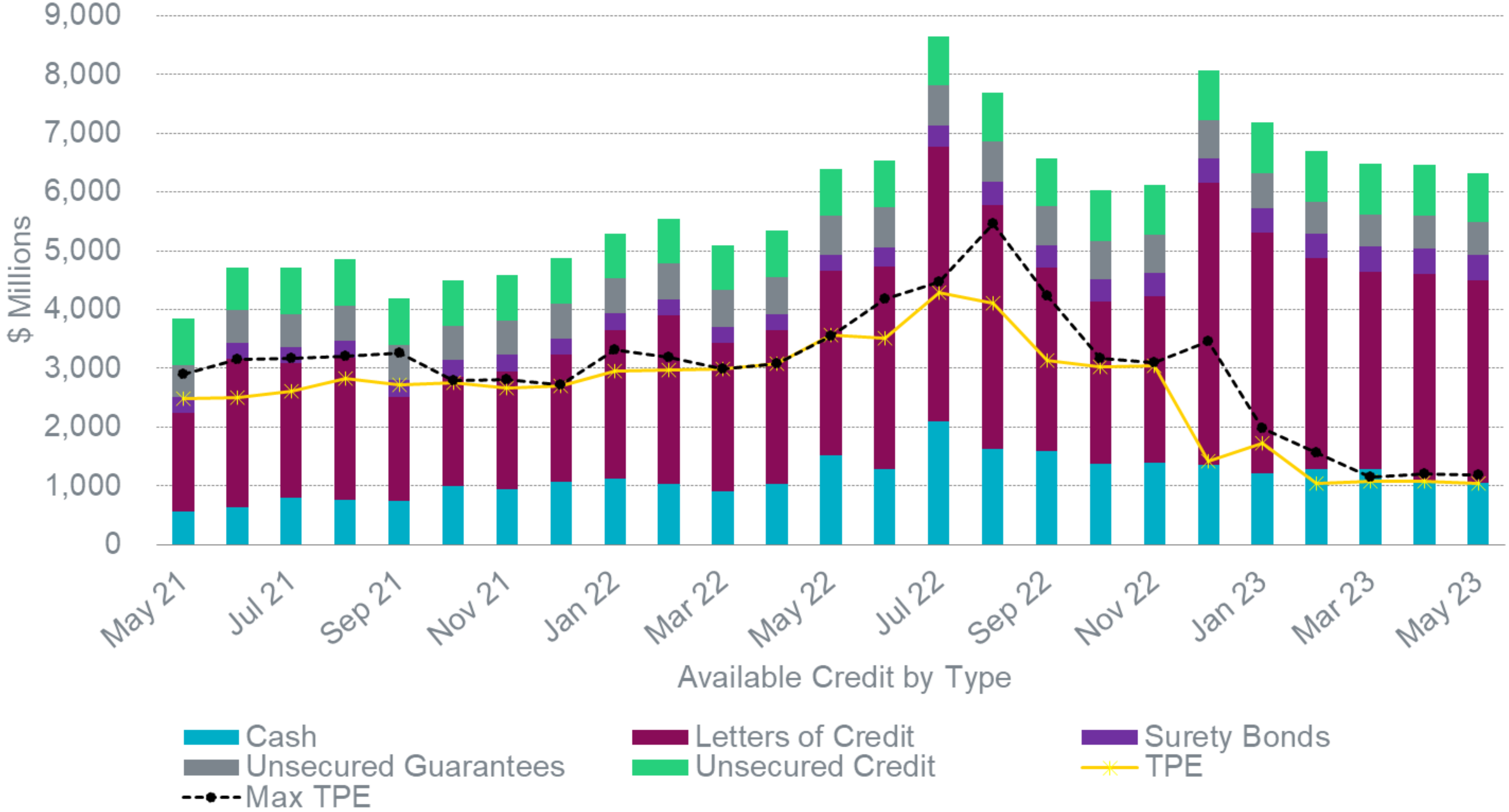
Operating Day Meeting Significance Criteria

- On May 1, 2023, the DAM was found to have used incomplete deenergized electrical bus mapping when calculating prices for specific settlement points. The resulting analysis showed that criteria was met for price correction before prices became final, with the largest absolute value impact across all Settlement Point Prices being approximately $39.

Congestion Revenue Rights settlement payments were fully funded. No excess amounts remained to allocate to Load. The CRR Balancing Account fund balance is $8.28M.



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



*Numbers are as of month end except for Max TPE

Retail Transaction Volumes – Summary – May 2023

	Year-To-Date		Transactions Received	
Transaction Type	**May 2023**	**May 2022**	**May 2023**	**May 2022**
Switches	474,563	582,419	92,186	131,481
Acquisitions	0	0	0	0
Move - Ins	1,279,405	1,204,313	267,939	257,179
Move - Outs	567,390	545,669	130,836	130,031
Continuous Service Agreements (CSA)	193,323	319,820	50,707	120,894
Mass Transitions	0	23,435	0	23,435
Total	**2,514,681**	**2,675,656**	**541,668**	**663,020**