



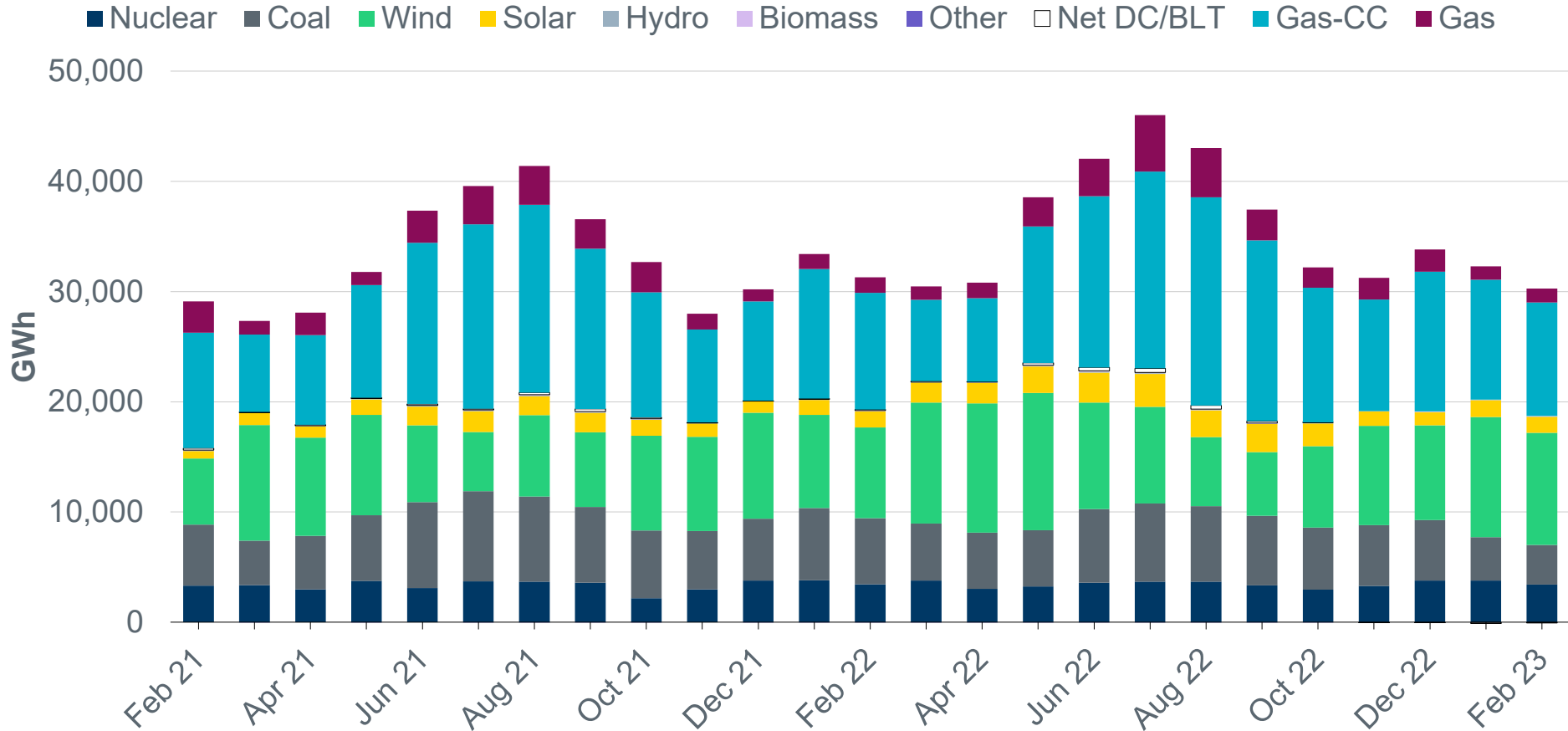
## ERCOT Monthly Operational Overview (February 2023)

ERCOT Public  
March 17, 2023

# Highlights, Records and Notifications

- ERCOT's maximum peak demand for the month of February was 63,505 MW\*; this was 6,307 MW less than record of 69,812 MW set on 02/14/2021\*\*, and 5,463 MW less than the February 2022 demand of 68,968 MW.
- ERCOT issued 13 notifications:
  - 1 DC Tie Curtailment Notice for the DC\_R due to a planned or unplanned outage.
  - 1 OCN issued for the WESTEX IROL due to taking manual action for a topology change.
  - 2 Advisories issued for postponed deadline for posting of the DAM solution due to a long running solution.
  - 6 Advisories issued for a geomagnetic disturbance of K-7 and extended alerts pertaining to the disturbance.
  - 1 Watch due to DRUC not completing by 1800 due to DAM timeline deviation.
  - 1 Watch due to potential freezing precipitation event for the Panhandle, North, West and Central areas.
  - 1 Transmission Emergency Notice issued for local congestion and unsolved contingencies due to numerous forced outages.

# Monthly energy generation decreased by 3% year-over-year to 30,223 GWh in February 2023, compared to 31,279 GWh in February 2022

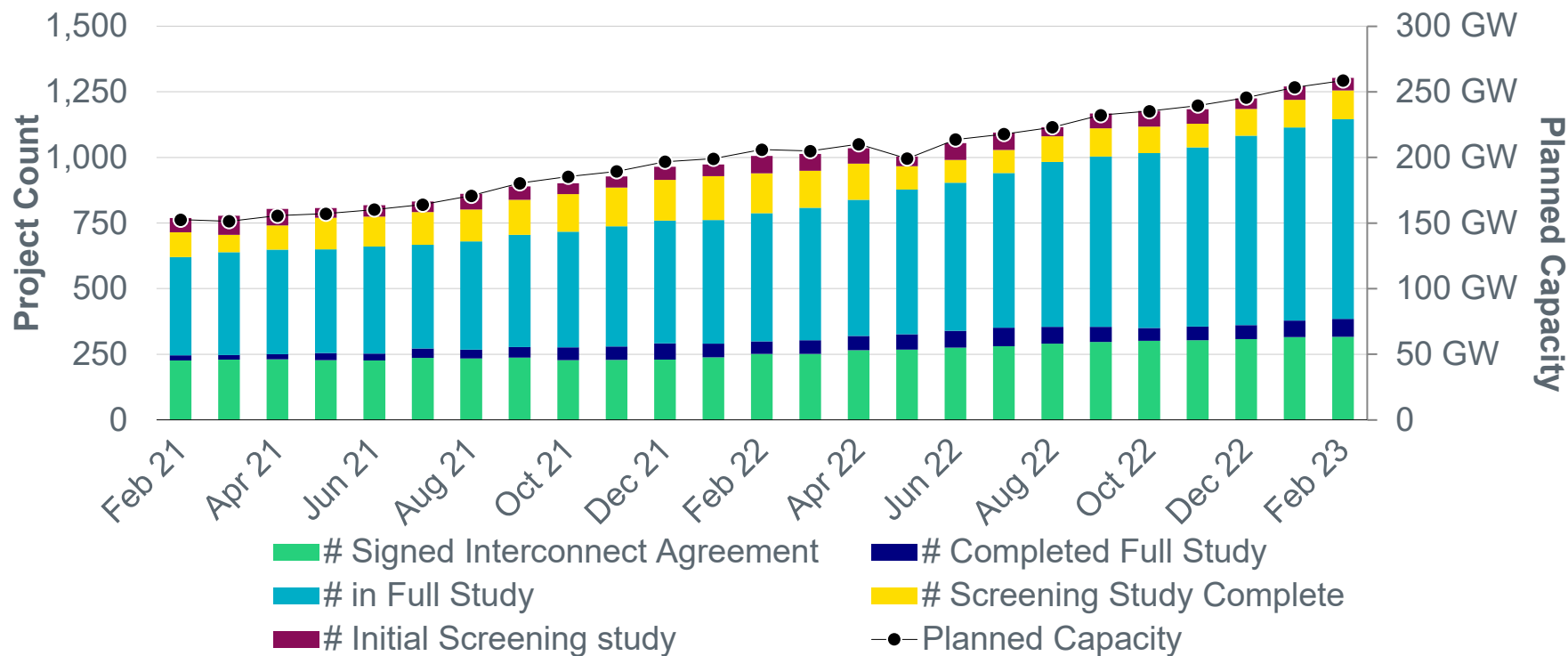


Data for latest two months are based on preliminary settlements.



# Generation Interconnection activity by project phase

(Excludes capacity associated with projects designated as Inactive per Planning Guide Section 5.7.6)

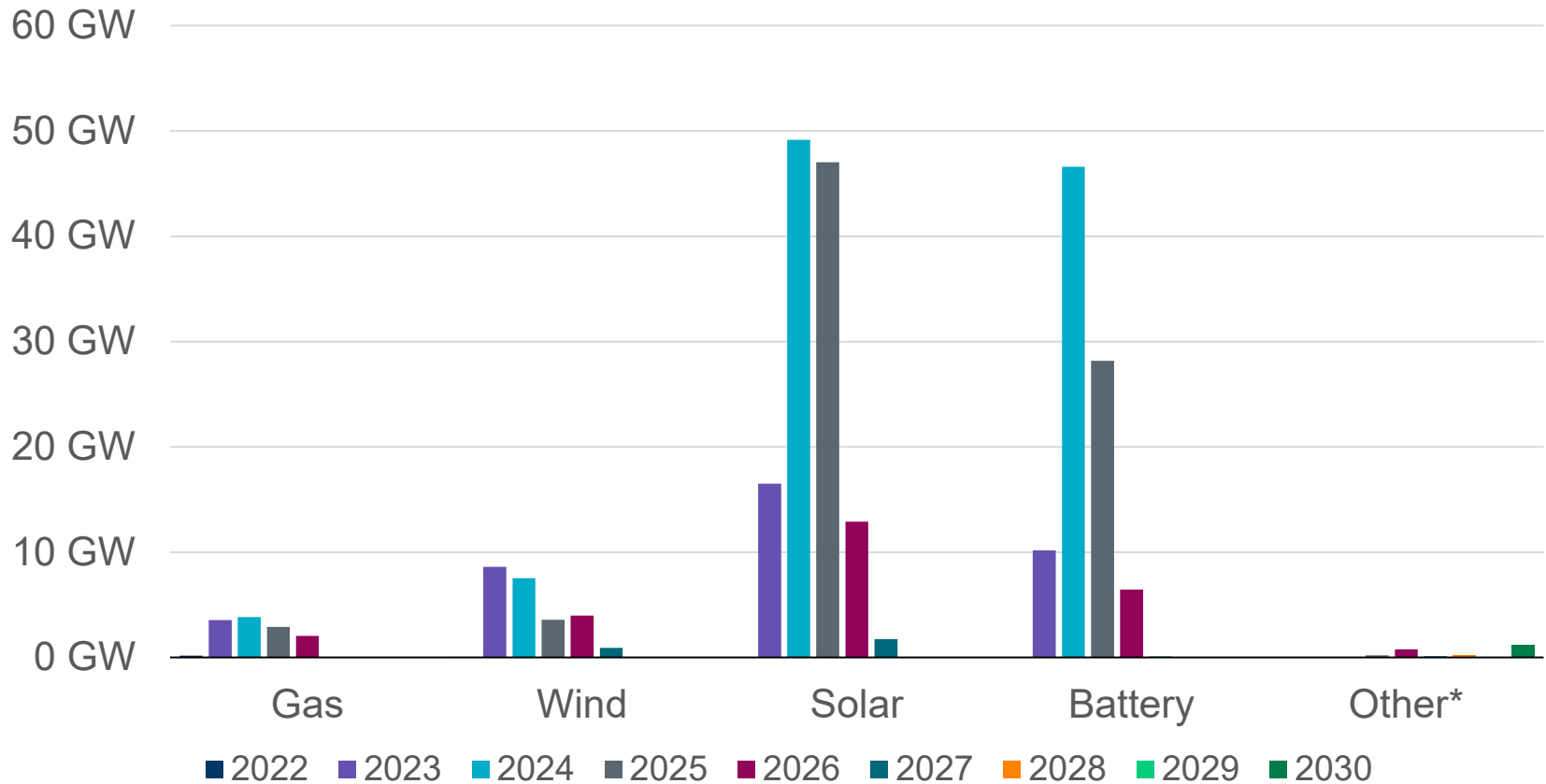


- There are an additional 13 “Small Generator” projects totaling 120 MW that are going through the simplified interconnection process.

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 127 GW (49.2%), Wind 25 GW (9.6%), Gas 13 GW (4.9%), Battery 91 GW (35.4%)  
 (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>

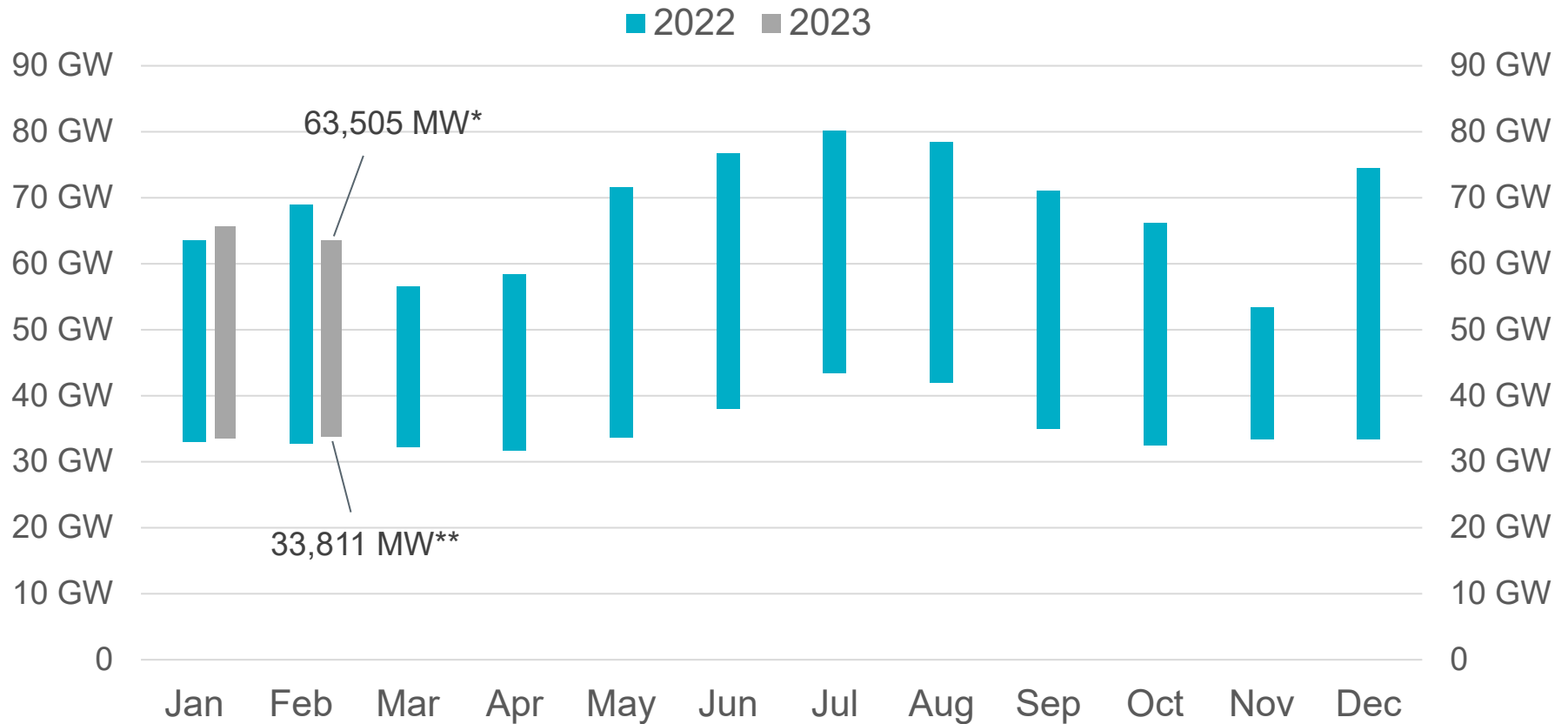
\* Other includes petroleum coke (pet coke), hydroelectric, fuel oil, geothermal energy, other miscellaneous fuels reported by developers, and fuel cells that use fuels other than natural gas.



# Planning Summary

- ERCOT is tracking 1,334 active generation interconnection requests totaling 258,586 MW as of February 28. This includes 127,309 MW of solar, 24,702 MW of wind, 91,493 MW of battery, and 12,542 MW of gas projects; 66 projects were categorized as inactive, up from 64 inactive projects in January 2023.
- ERCOT is currently reviewing proposed transmission improvements with a total estimated cost of \$385.85 million as of February 28, 2023.
- Transmission Projects endorsed in 2023 total \$380.89 million as of February 28, 2023.
- All projects (in engineering, routing, licensing and construction) total approximately \$11.643 billion as of February 1, 2023.
- Transmission Projects energized in 2023 total about \$149 million as of February 1, 2023.

**ERCOT's maximum peak demand for the month of February was 63,505 MW\*; this was 5,462 MW less than the February 2022 demand of 68,968 MW.**



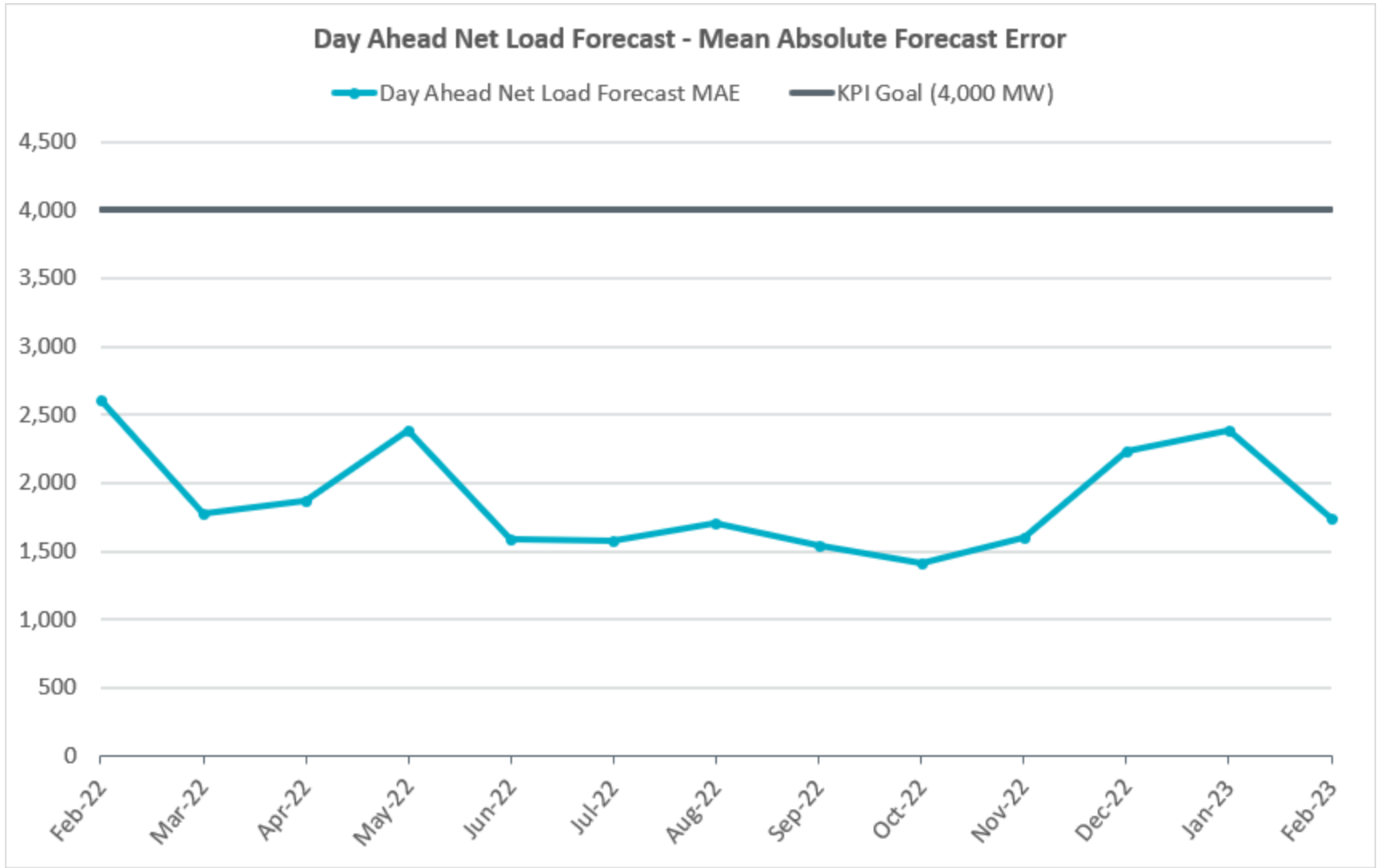
\*Based on the maximum net system hourly value from March release of Demand and Energy 2022 report.

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

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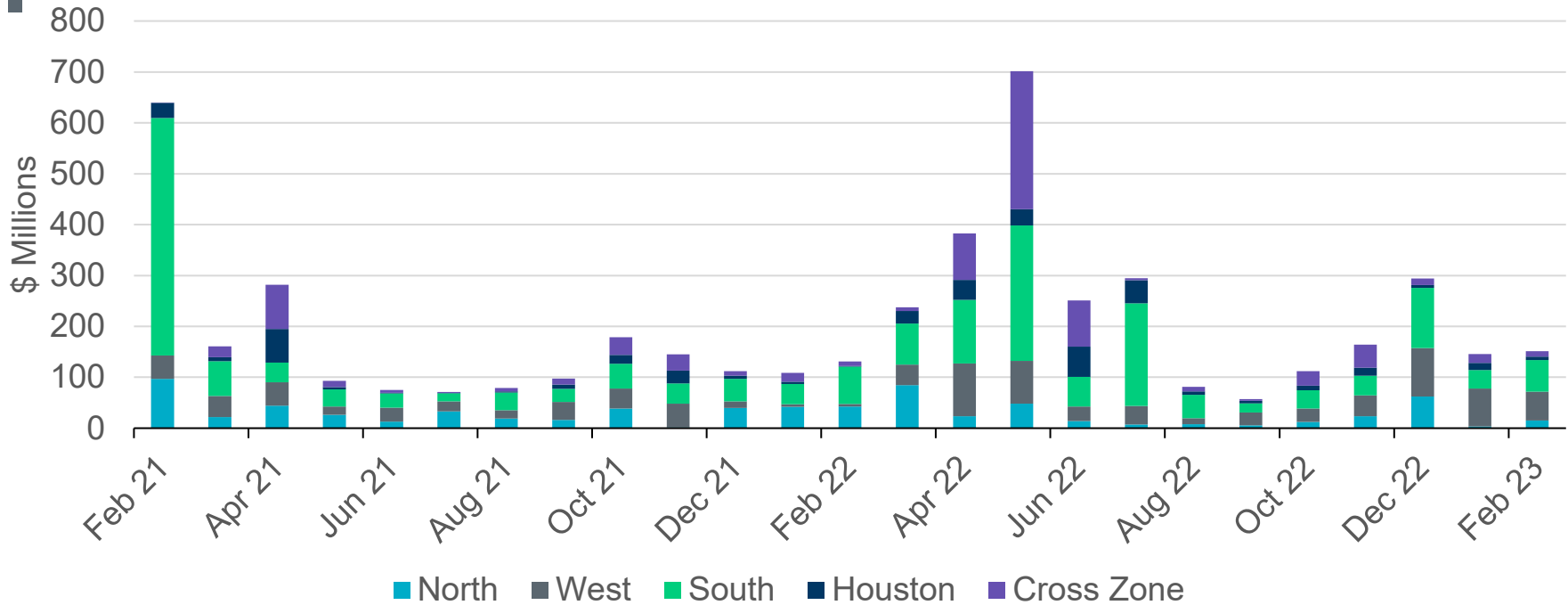


# Net Load Forecast Performance



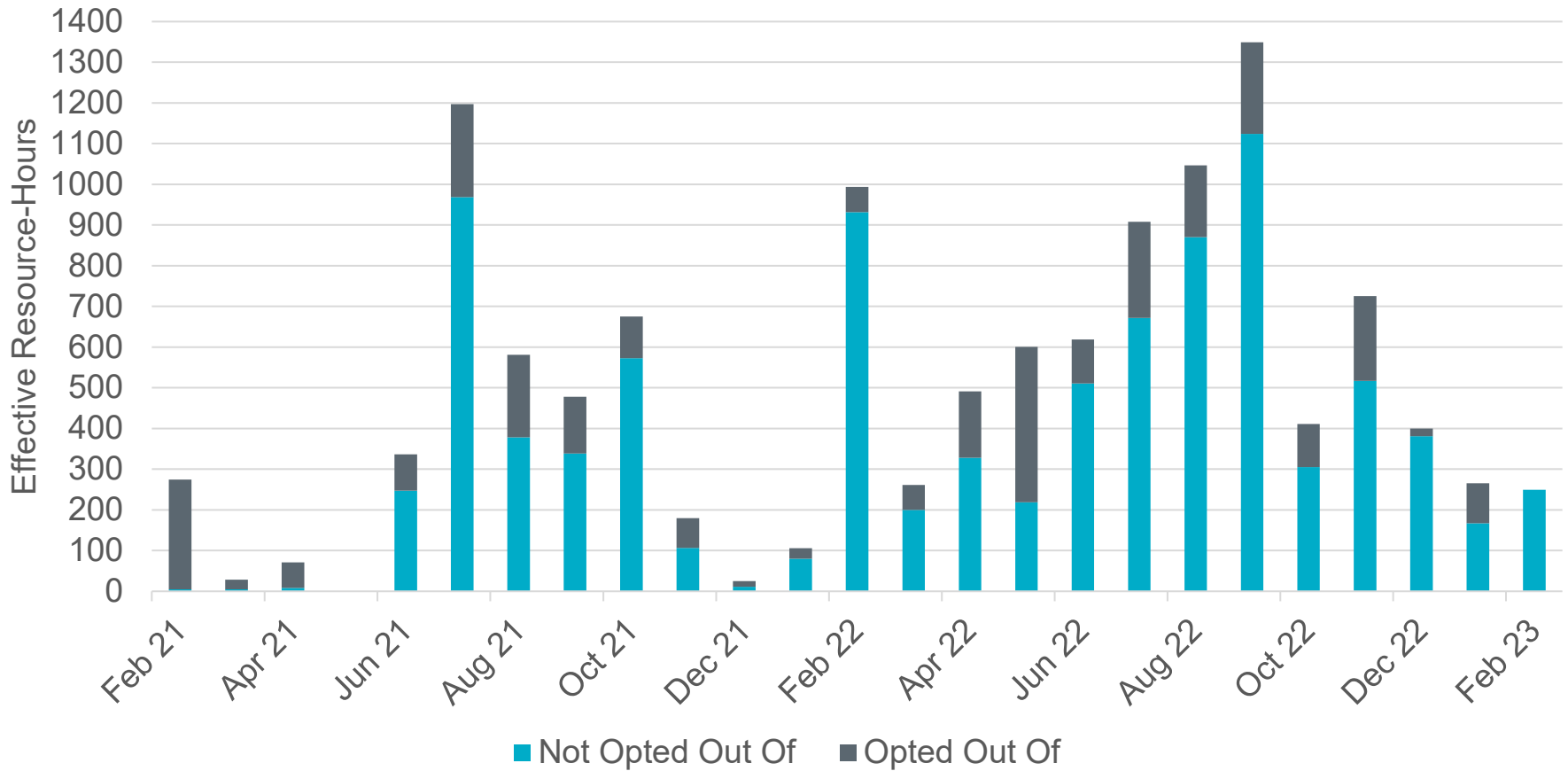


# Real-Time Congestion Rent by Zone



- Congestion rent increased in the North and South Zones in February compared to January.
- 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 Skywest to Spraberry switch 138 kV contingency overloading the 138 kV line from South Midland to Consavvy switch.
  - 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 Resources were Committed in February for Capacity or Congestion



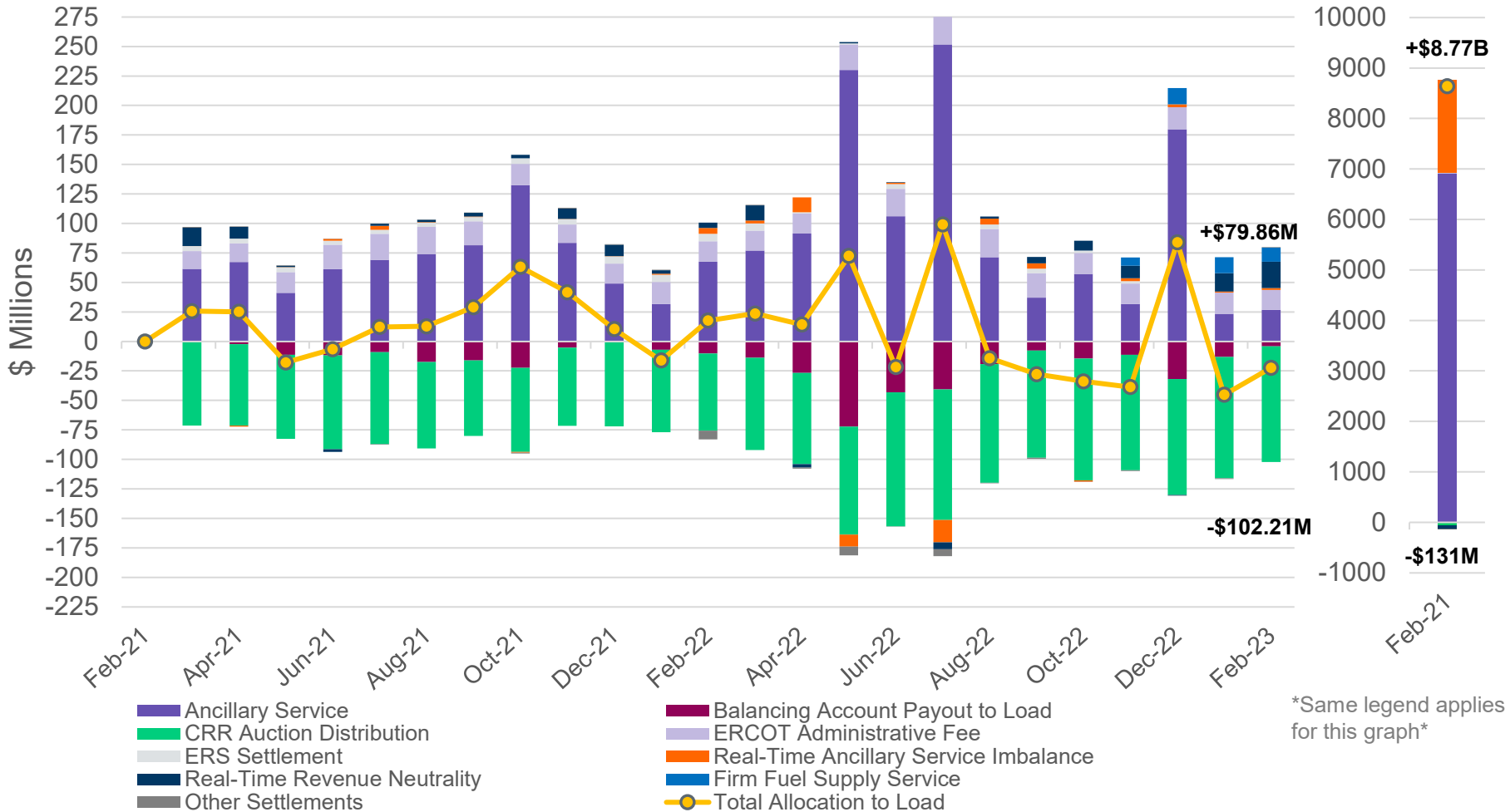
“Effective Resource-Hours” excludes any period during a Reliability Unit Commitment hour when the RUC-committed Resource was starting up, shutting down, off-line, or otherwise not available for dispatch by SCED.



# Twenty Resources were Committed in February for Capacity or Congestion

Resource #	Effective Resource-hours	Non Opt Out (Effective Hours)	Opt Out (Effective Hours)
1	5.8	5.8	0.0
2	8.5	8.5	0.0
3	8.0	8.0	0.0
4	24.8	24.8	0.0
5	10.0	10.0	0.0
6	10.0	10.0	0.0
7	10.0	10.0	0.0
8	4.0	4.0	0.0
9	2.5	2.5	0.0
10	6.0	6.0	0.0
11	41.0	41.0	0.0
12	44.0	44.0	0.0
13	9.0	9.0	0.0
14	6.0	6.0	0.0
15	3.0	3.0	0.0
16	12.9	12.9	0.0
17	9.3	9.3	0.0
18	2.7	2.7	0.0
19	12.9	12.9	0.0
20	19.0	19.0	0.0
<b>Total</b>	<b>249.3</b>	<b>249.3</b>	<b>0.0</b>

# Net Allocation to Load in February 2023 was (\$22.35) Million

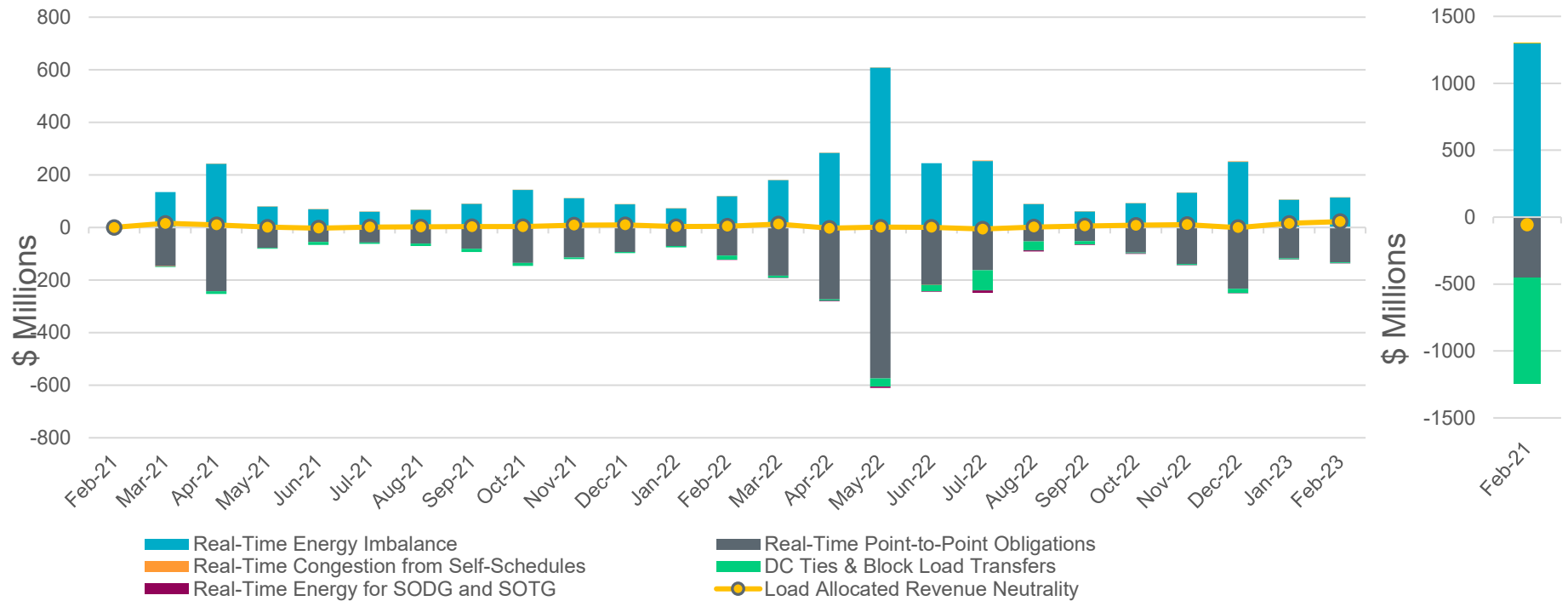


This information is available in tabular form in the Settlement Stability Report presented quarterly to the [Wholesale Market Subcommittee](#)

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 \$22.22M for February 2023

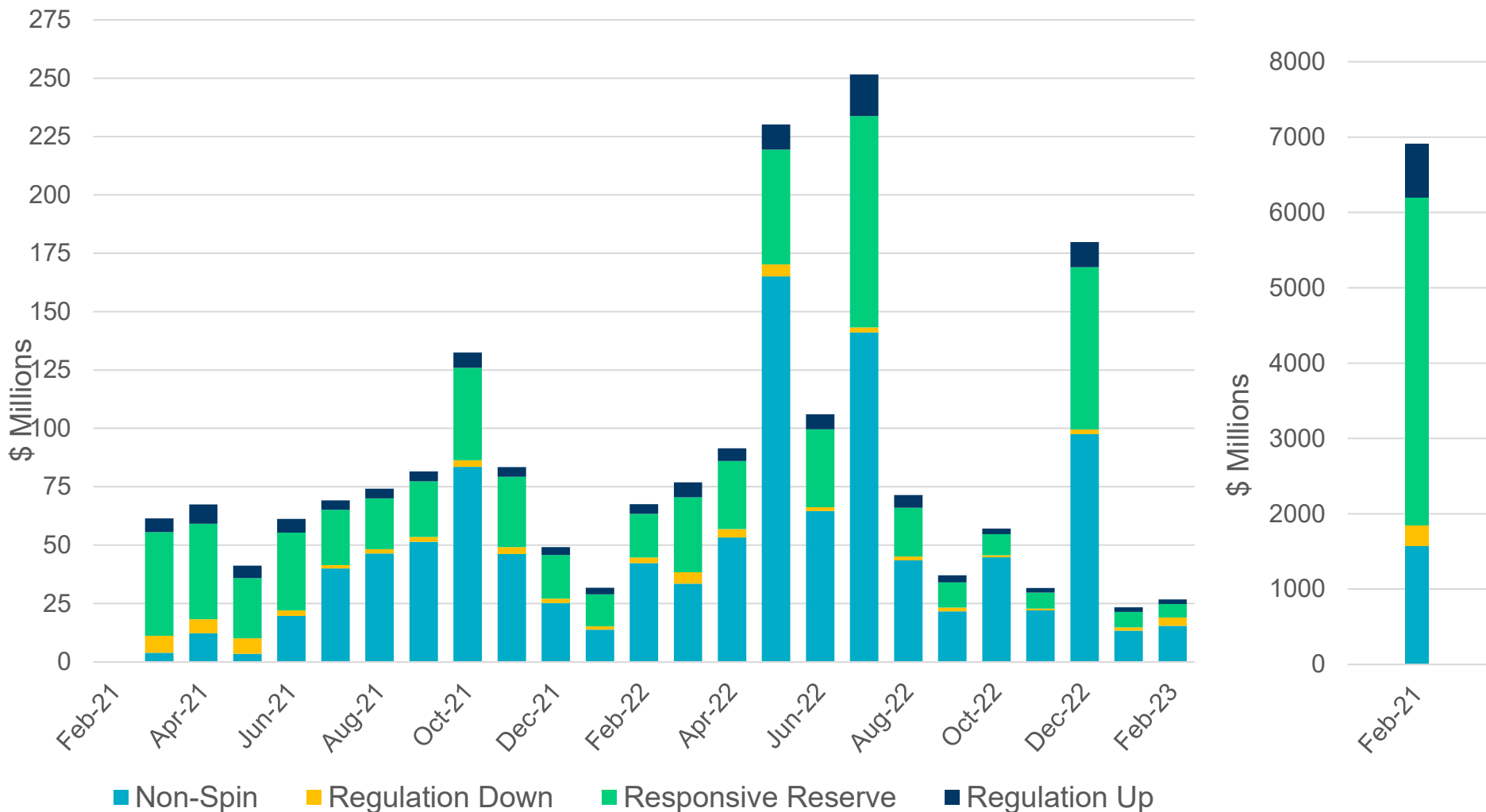


February 2023 (\$M)	
Real-Time Energy Imbalance	\$113.45
Real-Time Point-to-Point Obligation	(\$132.65)
Real-Time Congestion from Self-Schedules	\$0.21
DC Tie & Block Load Transfer	(\$2.83)
Real-Time Energy for SODG and SOTG	(\$0.40)
<b>Load Allocated Revenue Neutrality</b>	<b>\$22.22</b>

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



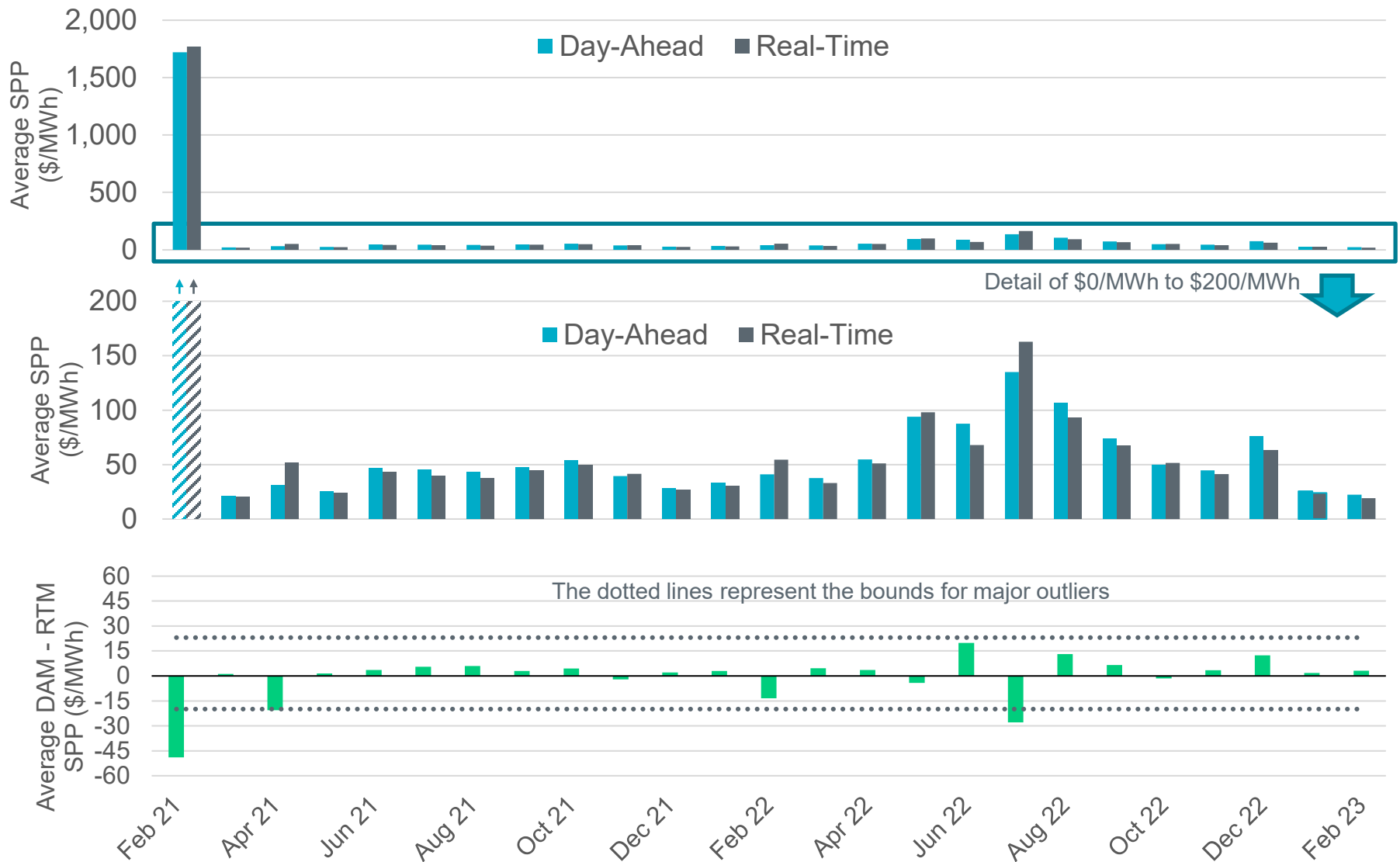
# Ancillary Services for February 2023 totaled \$26.70M



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



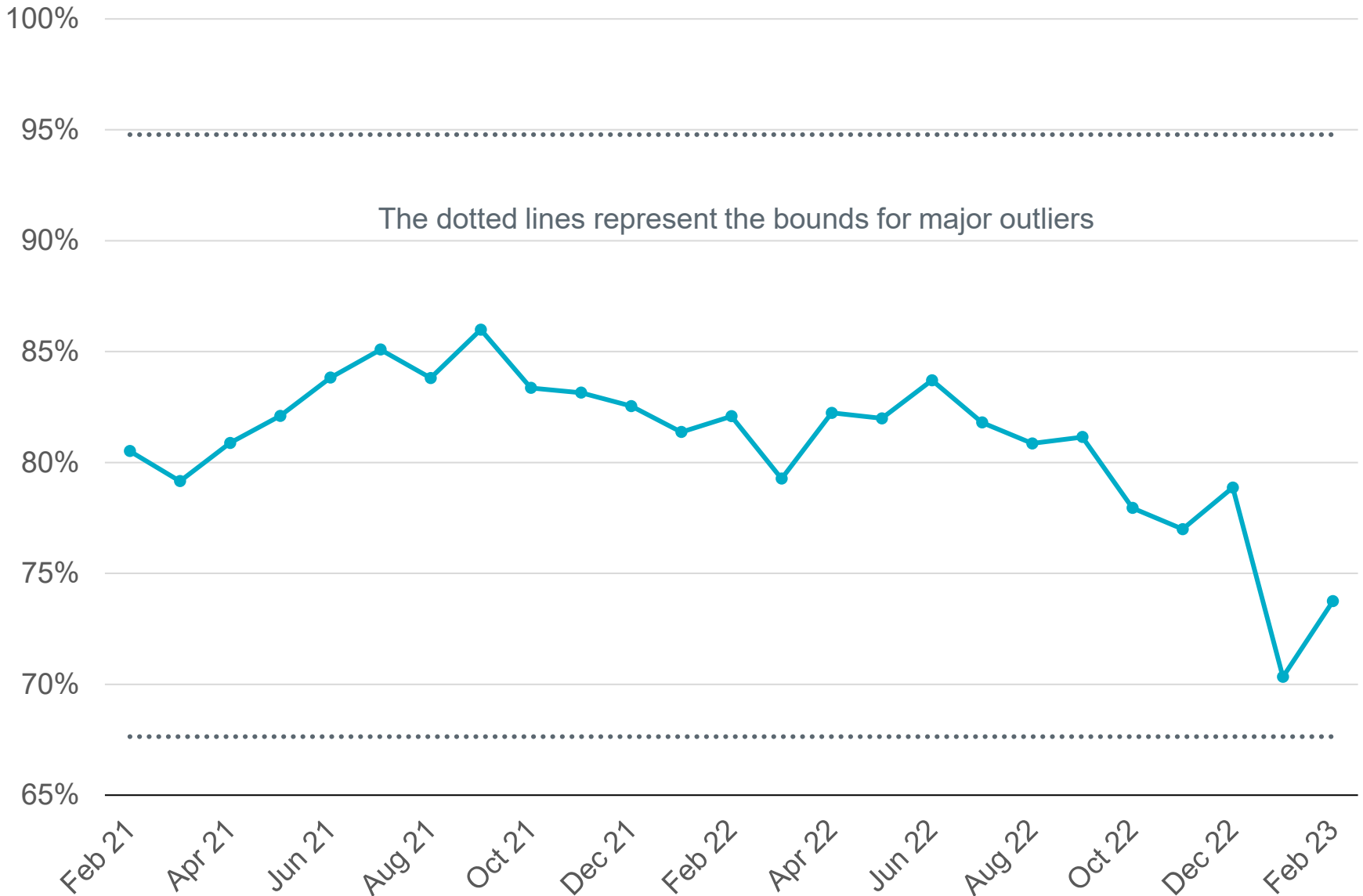
# Day-Ahead and Real-Time Market Price Differences



\*Averages are weighted by Real-Time Market Load

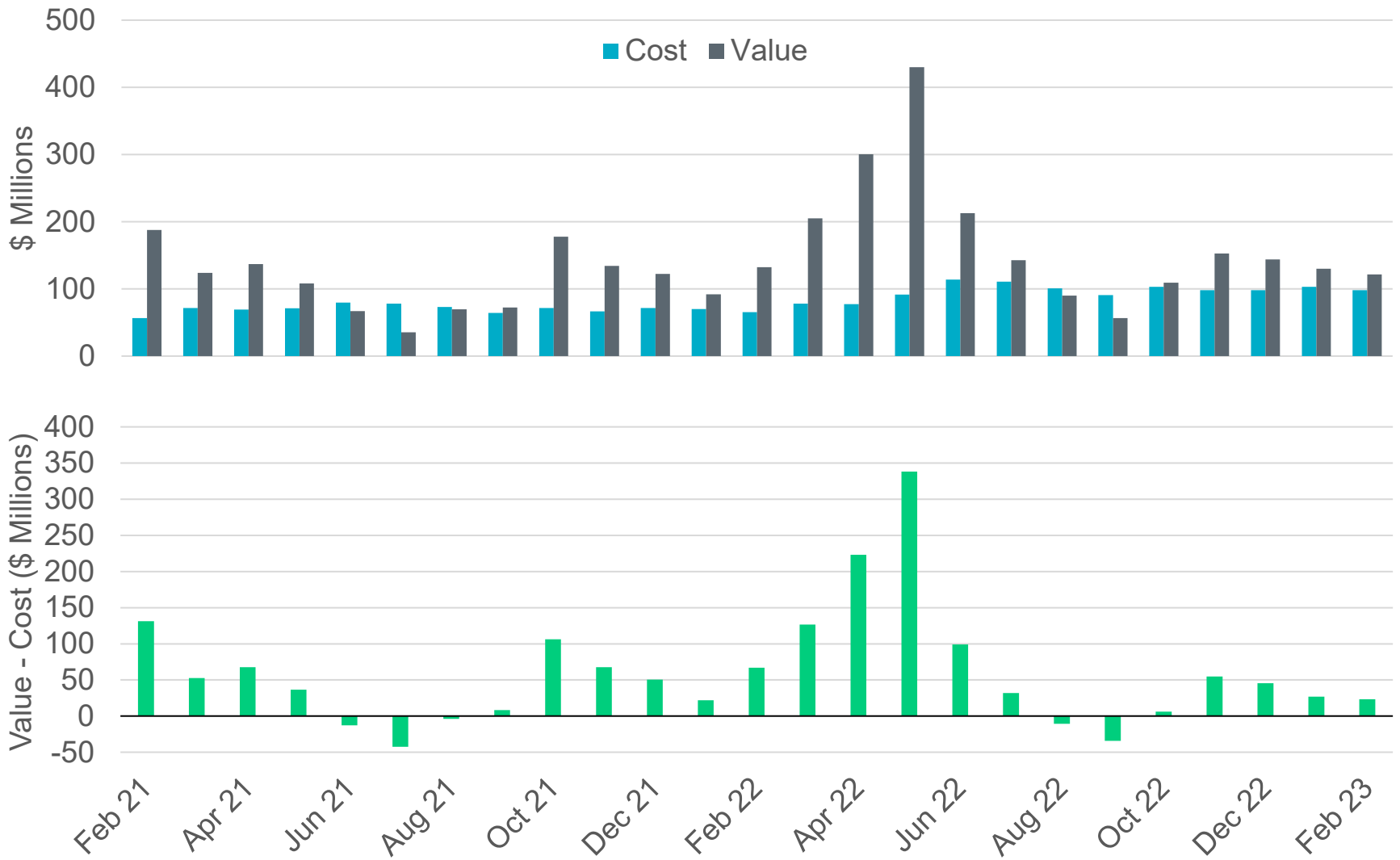


# Percentage of Real-Time Load Transacted in the Day-Ahead Market





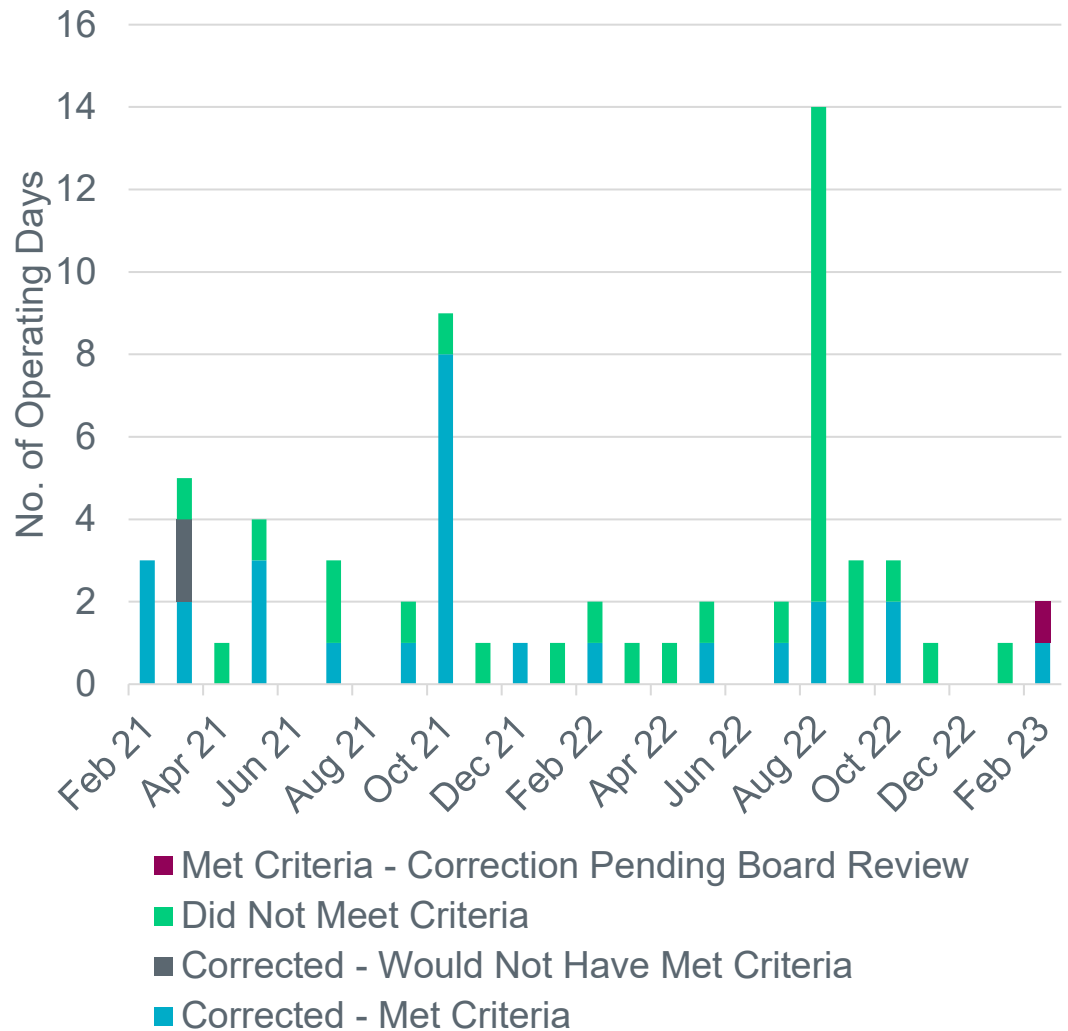
# CRR Value and Cost Differences



# 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:

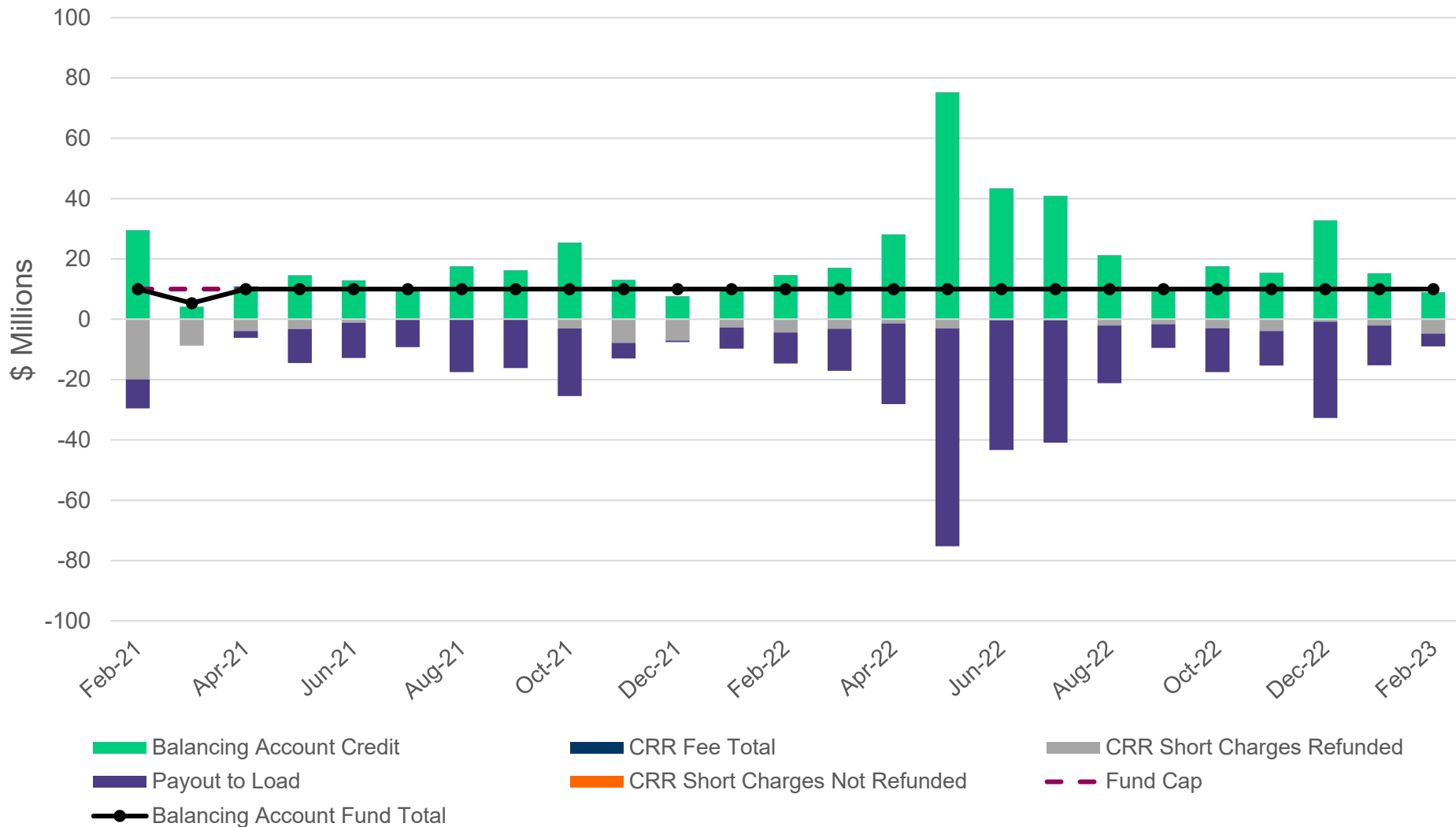
- Days that met the criteria for “significance” under NPRR1024 and were corrected;
- Days that would not have met the criteria for “significance” under NPRR1024, but were corrected because NPRR1024 was not yet in place; and
- Days that were not corrected because they did not meet the criteria for “significance”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



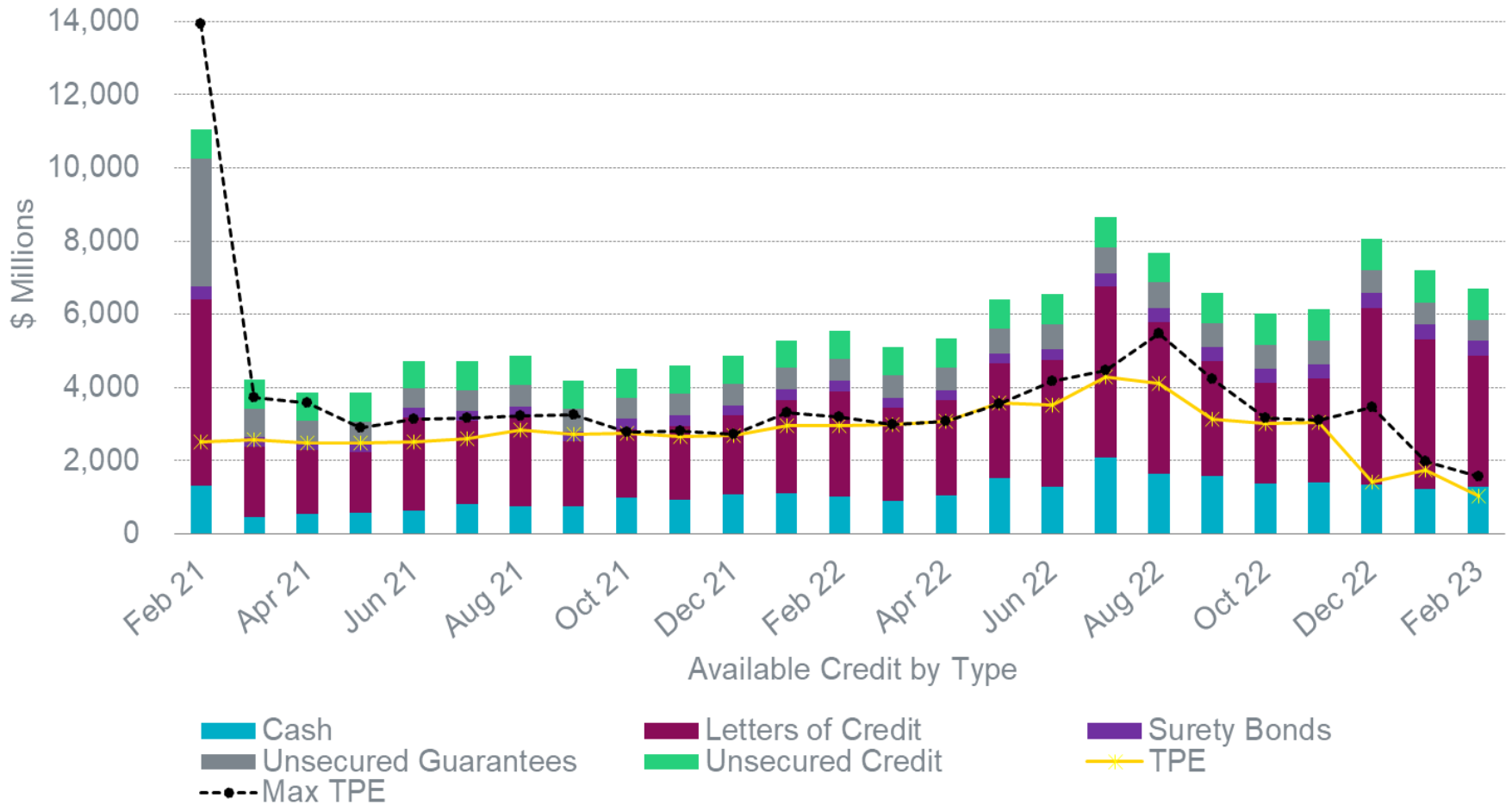
# Details for Price Corrections meeting Criteria

- On February 5, 2023 and February 6, 2023, the Valley Export (VALEXP) Generic Transmission Constraint (GTC) was found to be binding when the flow on the GTC was in the opposite direction of the GTC definition.
- This was due to the Transmission Constraint Manager (TCM) passing the flow as an absolute value to the Market Management System (MMS). Normal transmission constraints are non-directional, which is why the TCM passes an absolute value. There was a change made to the TCM that allows it to pass the signed value of the flow to the MMS. This change only applies to GTCs.
- February 6, 2023 met criteria for correction and was able to be corrected before prices became final on February 8, 2023 at 4:00PM.
- While February 5, 2023 met criteria for correction before prices became final, ERCOT was unable to meet the deadline of February 7, 2023 at 4:00PM. Further impact analysis found that the impact to Counter Parties met criteria for seeking ERCOT Board of Directors review for price correction and will be presented at the April 2023 Board meeting.

# 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 – February 2023

Transaction Type	Year-To-Date		Transactions Received	
	February 2023	February 2022	February 2023	February 2022
<b>Switches</b>	206,872	209,376	127,309	105,063
<b>Acquisitions</b>	0	0	0	0
<b>Move - Ins</b>	485,381	429,748	239,968	208,309
<b>Move - Outs</b>	210,049	188,287	102,027	91,927
<b>Continuous Service Agreements (CSA)</b>	79,056	88,833	40,616	43,619
<b>Mass Transitions</b>	0	0	0	0
<b>Total</b>	<b>981,358</b>	<b>916,244</b>	<b>509,920</b>	<b>448,918</b>