



## ERCOT Monthly Operational Overview (January 2024)

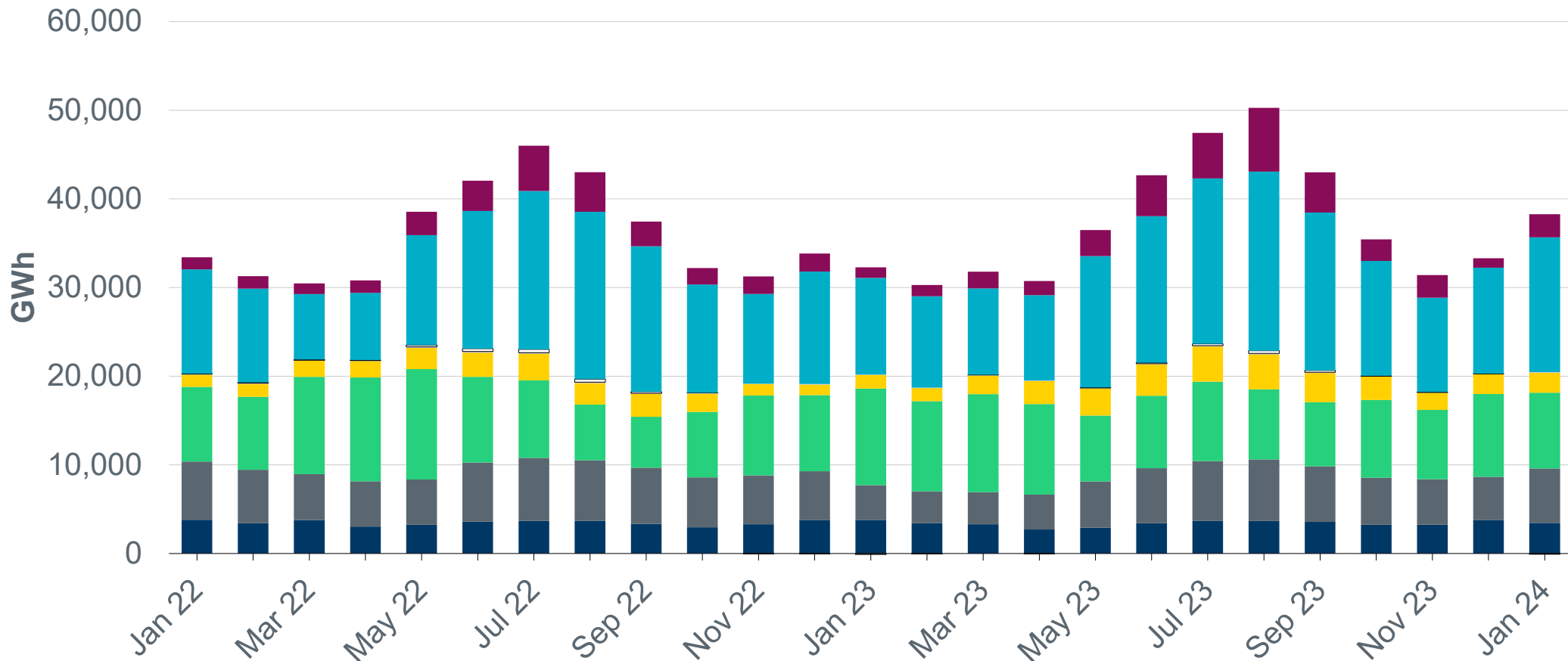
ERCOT Public  
February 15, 2024

# Highlights, Records and Notifications

- ERCOT had a maximum peak demand of 78,314 MW\* in the month of January; this is 12,682 MW more than the January 2023 demand of 65,632 MW.
- ERCOT issued 11 notifications:
  - 1 Emergency Notice for frozen precipitation impacting generation resources in the San Angelo area
  - 2 Watches for reserve capacity shortage
  - 1 Watch for extreme cold weather
  - 1 Advisory for VSAT
  - 1 Advisory for extreme cold weather
  - 2 OCNs for extreme cold weather
  - 2 Conservation Appeals
  - 1 DC Tie Curtailment Notice for DC\_E due to one or more transmission security violations

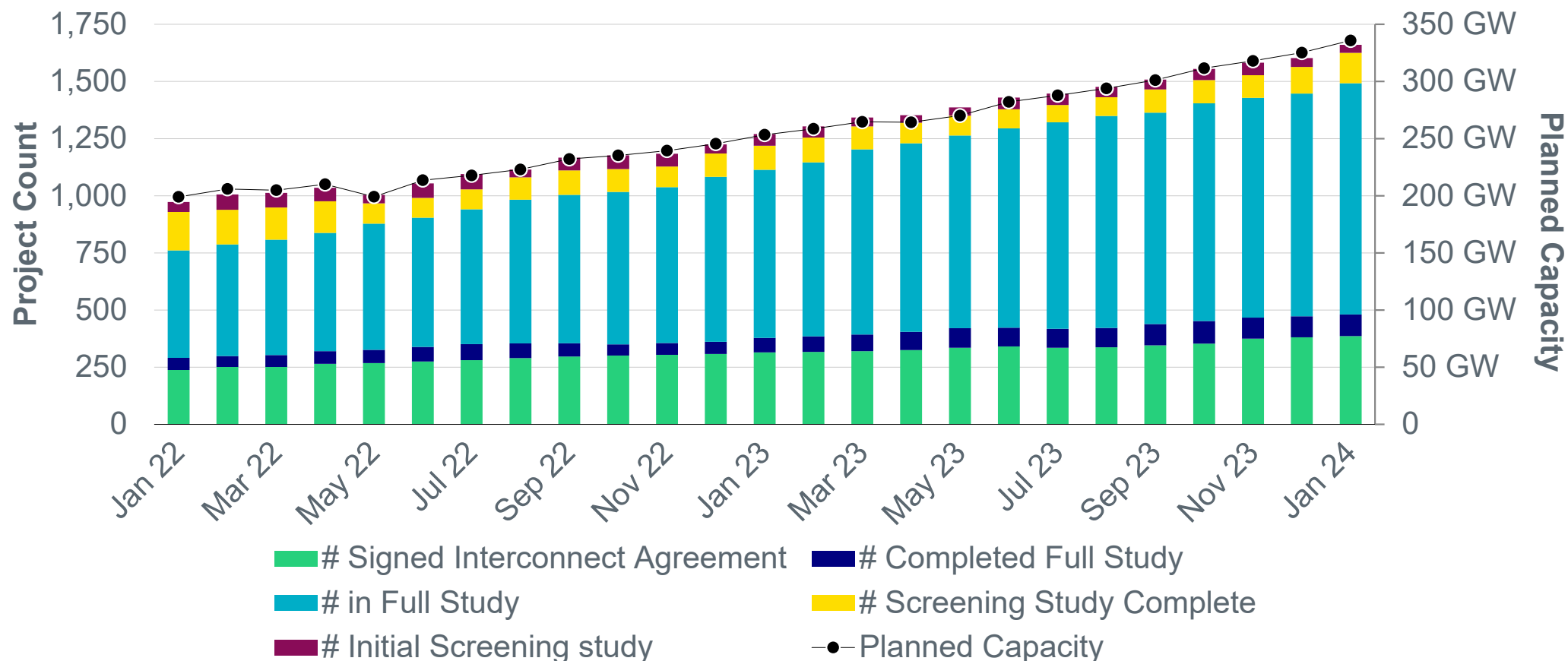
# Monthly energy generation increased by 18.7% year-over-year to 38,180 GWh in January 2024, compared to 32,164 GWh in January 2023

■ Nuclear ■ Coal ■ Wind ■ Solar ■ Hydro ■ Biomass ■ Other ■ Net DC/BLT ■ Gas-CC ■ Gas



# Generation Interconnection activity by project phase

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



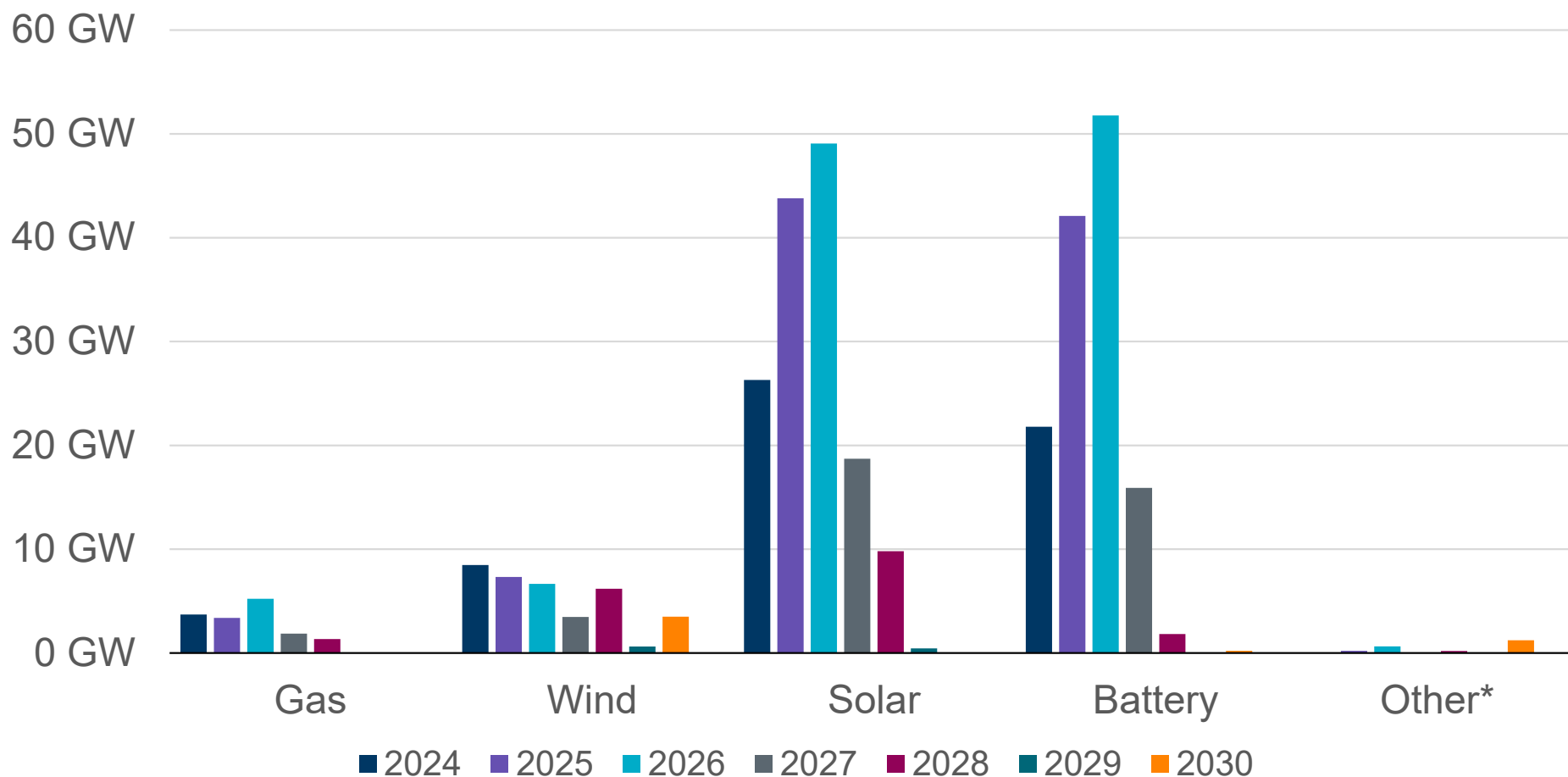
- There are an additional 29 “Small Generator” projects totaling 273 MW that are going through the simplified interconnection process.
- A break-out by fuel type can be found in the monthly Generator Interconnection Status (GIS) reports available on the ERCOT Resource Adequacy Page:

<http://www.ercot.com/gridinfo/resource>



# Interconnection Queue Capacity by Fuel Type

Queue totals: Solar 148 GW (44.1%), Wind 36 GW (10.8%), Gas 16 GW (4.6%), Battery 134 GW (39.8%)  
(Excludes capacity associated with projects designated as Inactive per Planning Guide Section 5.7.6)



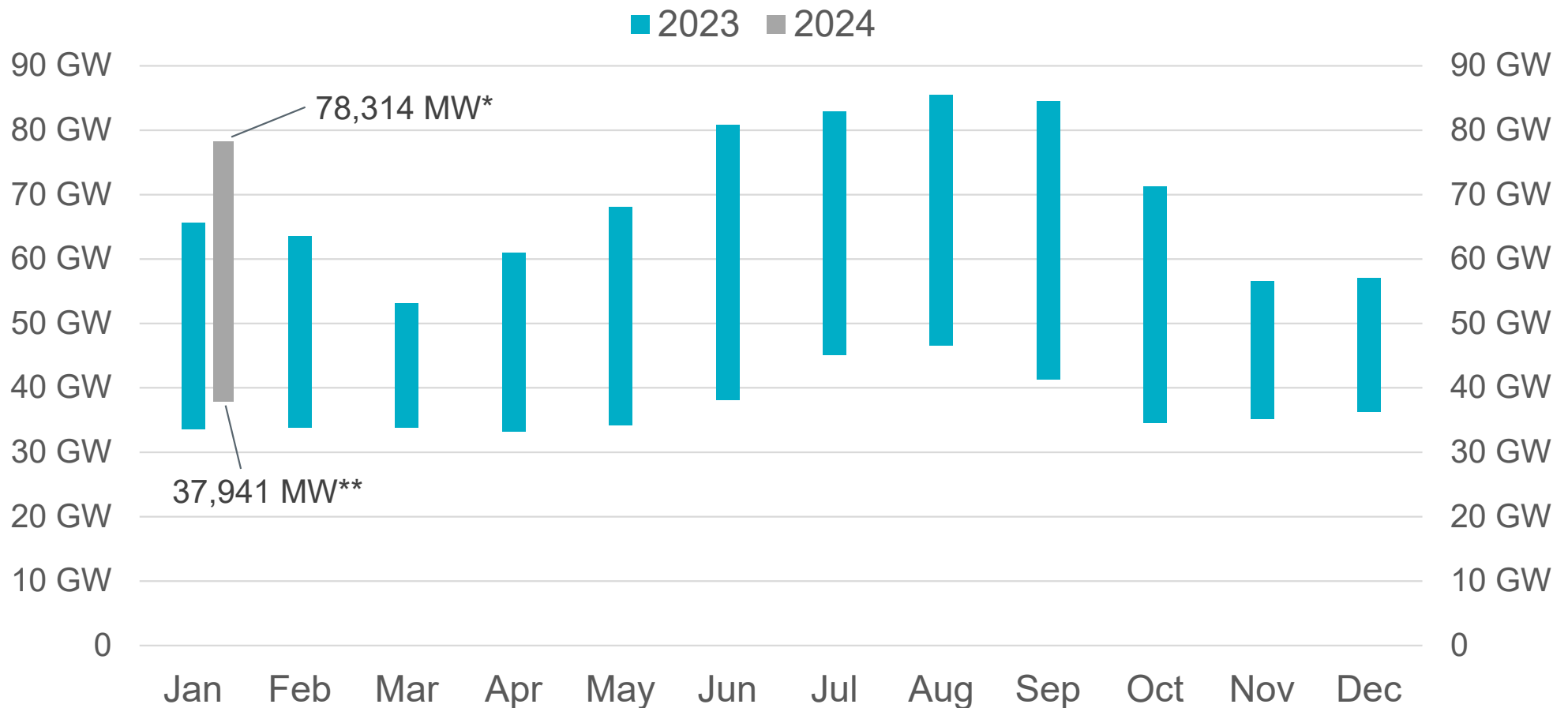
A break-out by zone can be found in the monthly Generator Interconnection Status (GIS) reports available on the ERCOT Resource Adequacy Page: <http://www.ercot.com/gridinfo/resource>

\* 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 1,731 active generation interconnection requests totaling 335,835 MW as of January 31. This includes 148,135 MW of solar, 36,261 MW of wind, 133,592 MW of battery, and 15,546 MW of gas projects; 74 projects were categorized as inactive, down from 83 inactive projects in December 2023.
- ERCOT is currently reviewing proposed transmission improvements with a total estimated cost of \$1.950 billion as of January 31, 2024.
- Transmission Projects endorsed in 2024 total \$0.00 million as of January 31, 2024.
- All projects (in engineering, routing, licensing and construction) total approximately \$13.933 billion as of February 1, 2024.
- Transmission Projects energized in 2024 total approximately \$789.5 million as of February 1, 2024.

**ERCOT set a new record of 78,314 MW\* for the month of January on 1/16/2024; This is 12,682 MW more than the January 2023 demand of 65,632 MW.**

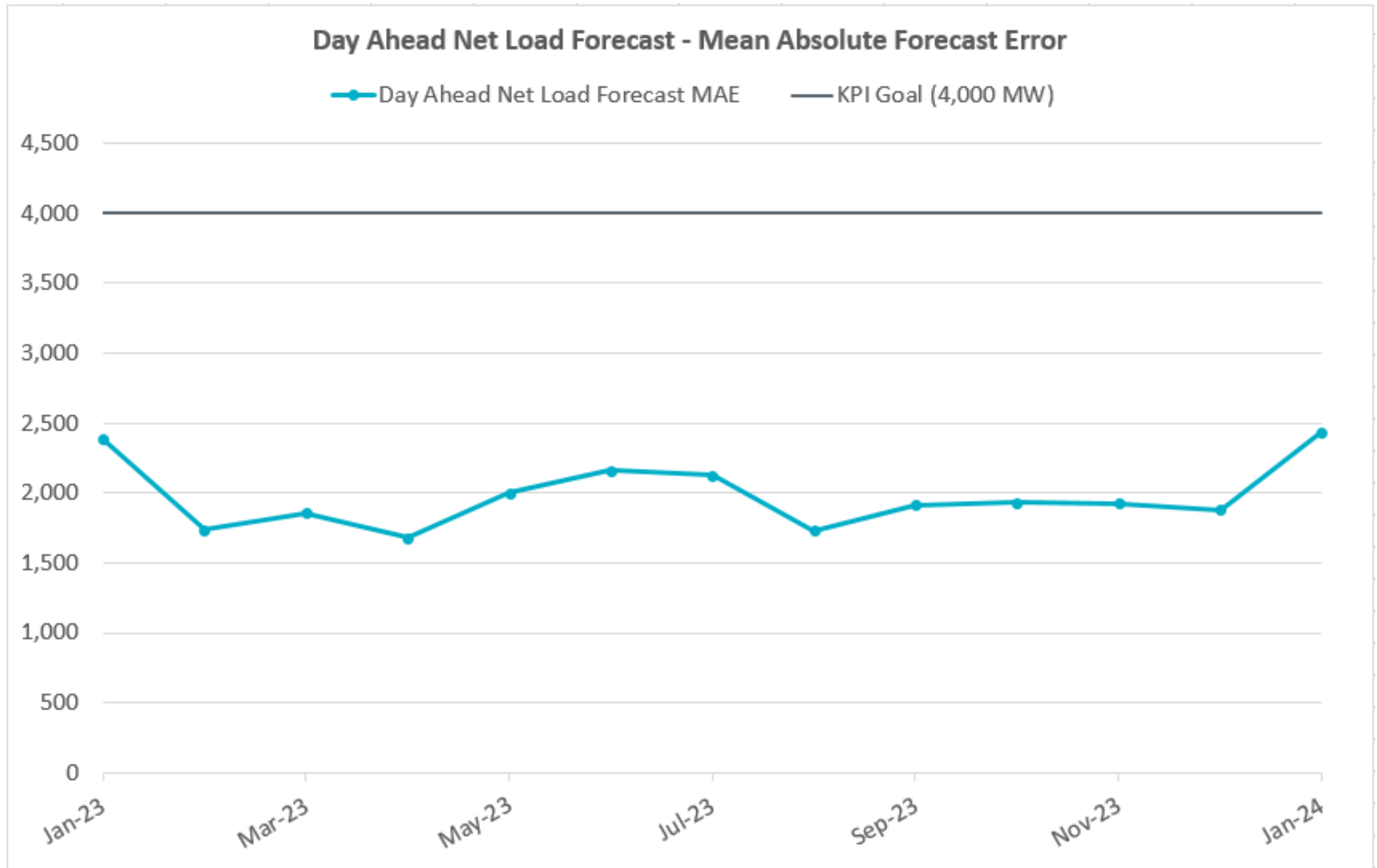


\*Based on the maximum net system hourly value from the January 2024 Demand and Energy report.

\*\*Based on the minimum net system 15-minute interval value from the January 2024 Demand and Energy report.

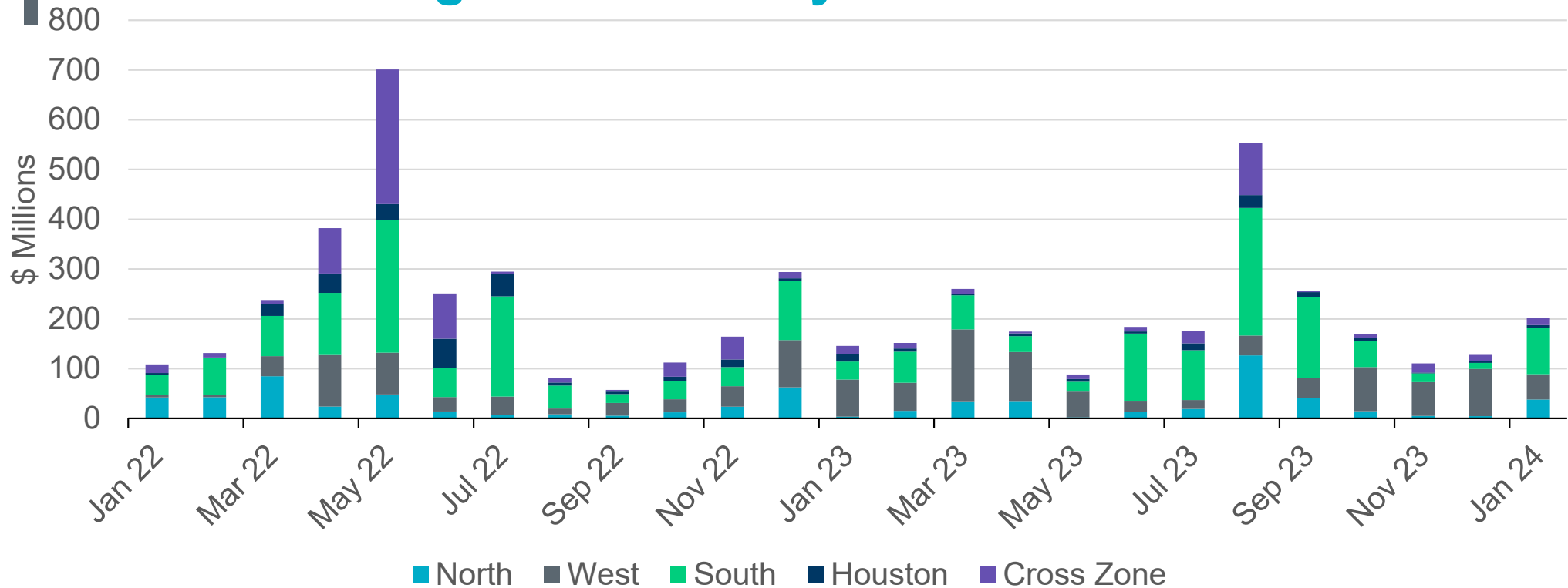
Data for latest two months are based on preliminary settlements.

# Net Load Forecast Performance



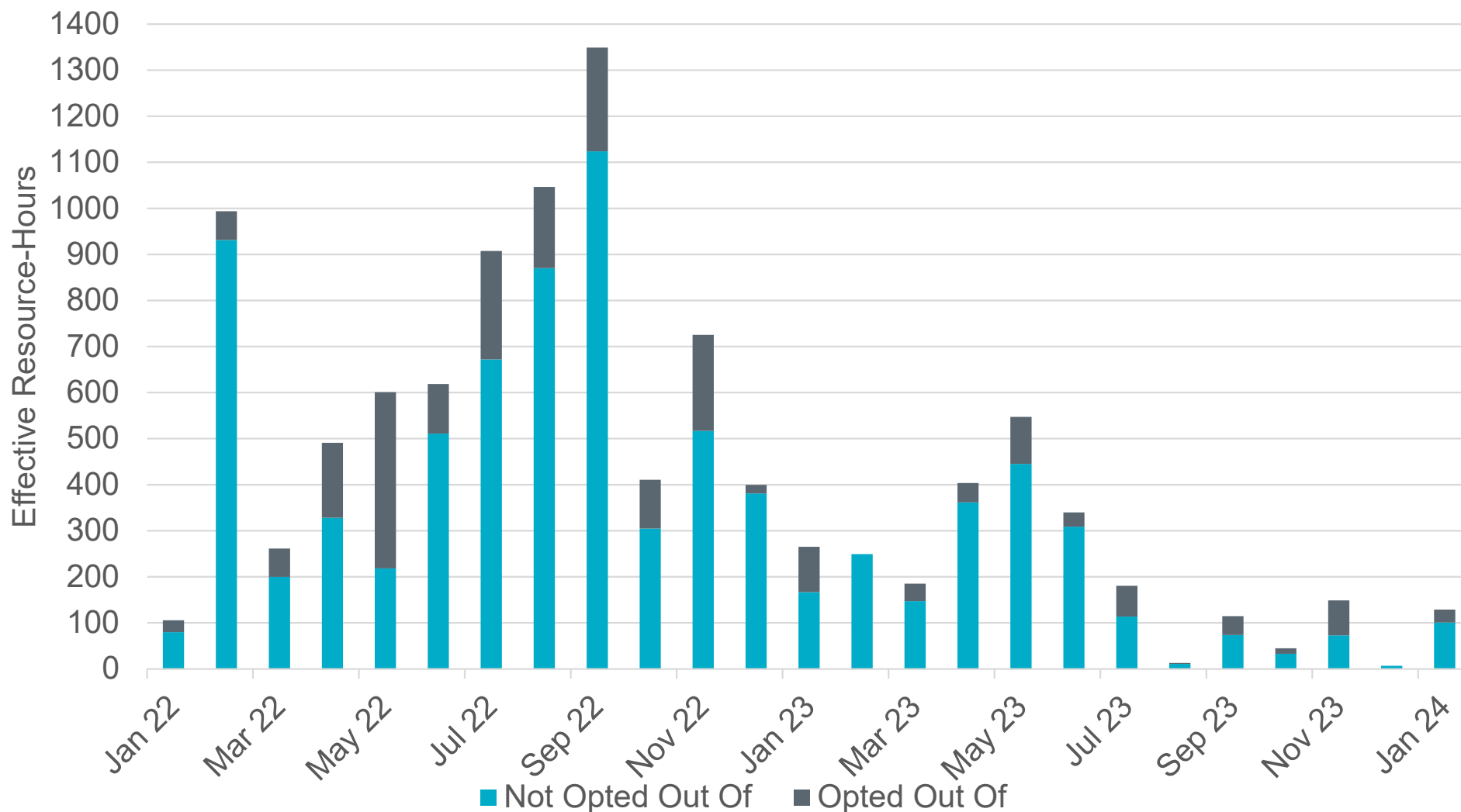


# Real-Time Congestion Rent by Zone



- Total Real-Time congestion rent increased in January 2024 compared to December 2023, with the highest congestion rent in the South and West Zones.
  - Congestion rent in the South Zone was primarily driven by the loss of the 138 kV contingency from Kendall to Comfort overloading the 138 kV transmission line from Kerrville Stadium to Kendall.
  - Congestion rent in the West Zone was primarily driven by the loss of the double circuit 345 kV contingency from Cedar Canyon to Bakersfield overloading the 138 kV transmission line from Hargrove to Twin Buttes.
- 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.

## Thirteen Resources were Committed in January for either Capacity or Congestion

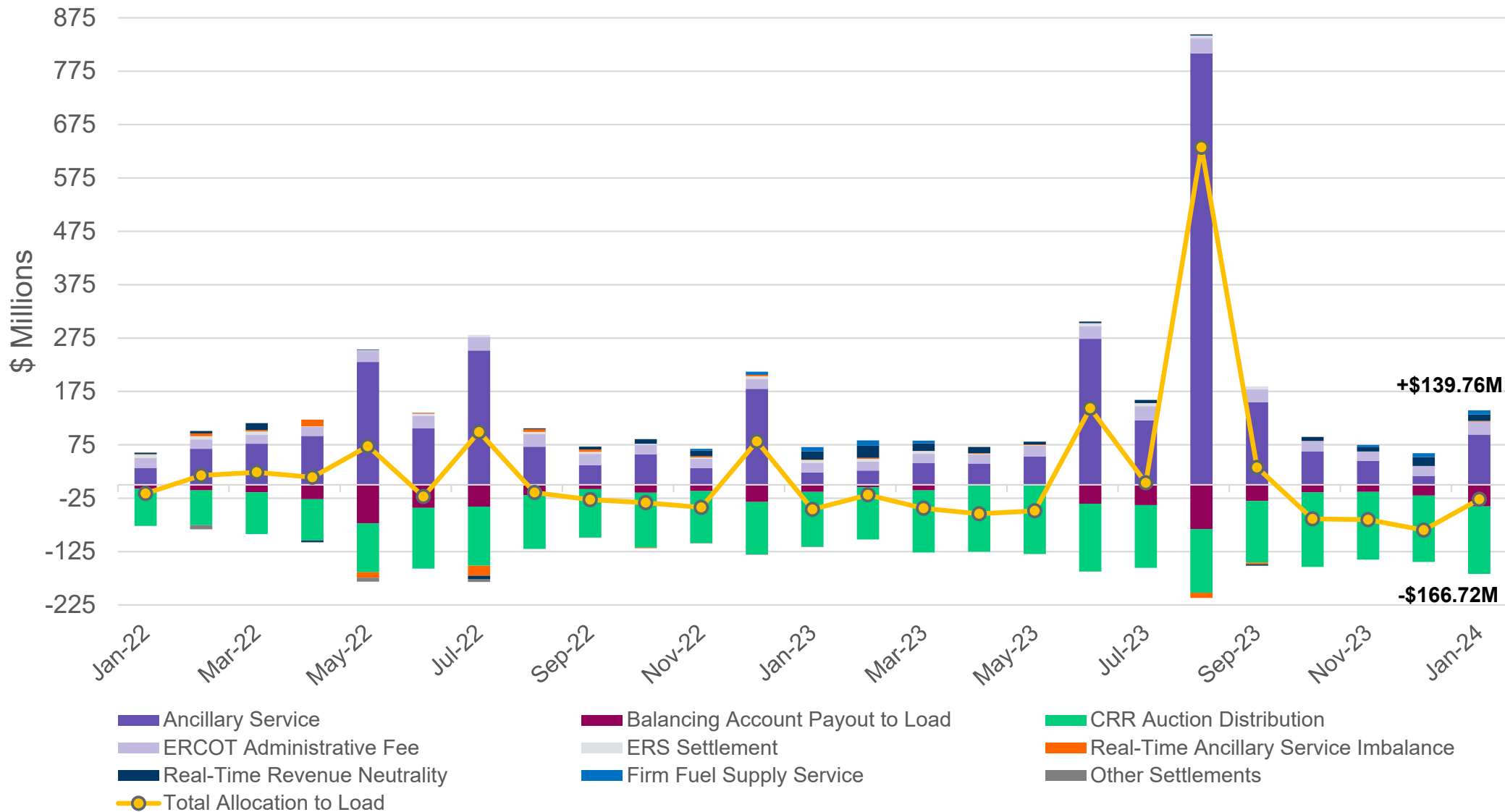


“Effective Resource-Hours” excludes any period during a Reliability Unit Commitment hour when the RUC-committed Resource was starting up, shutting down, off-line, or otherwise not available for dispatch by SCED.

## Thirteen Resources were Committed in January for Capacity and Congestion

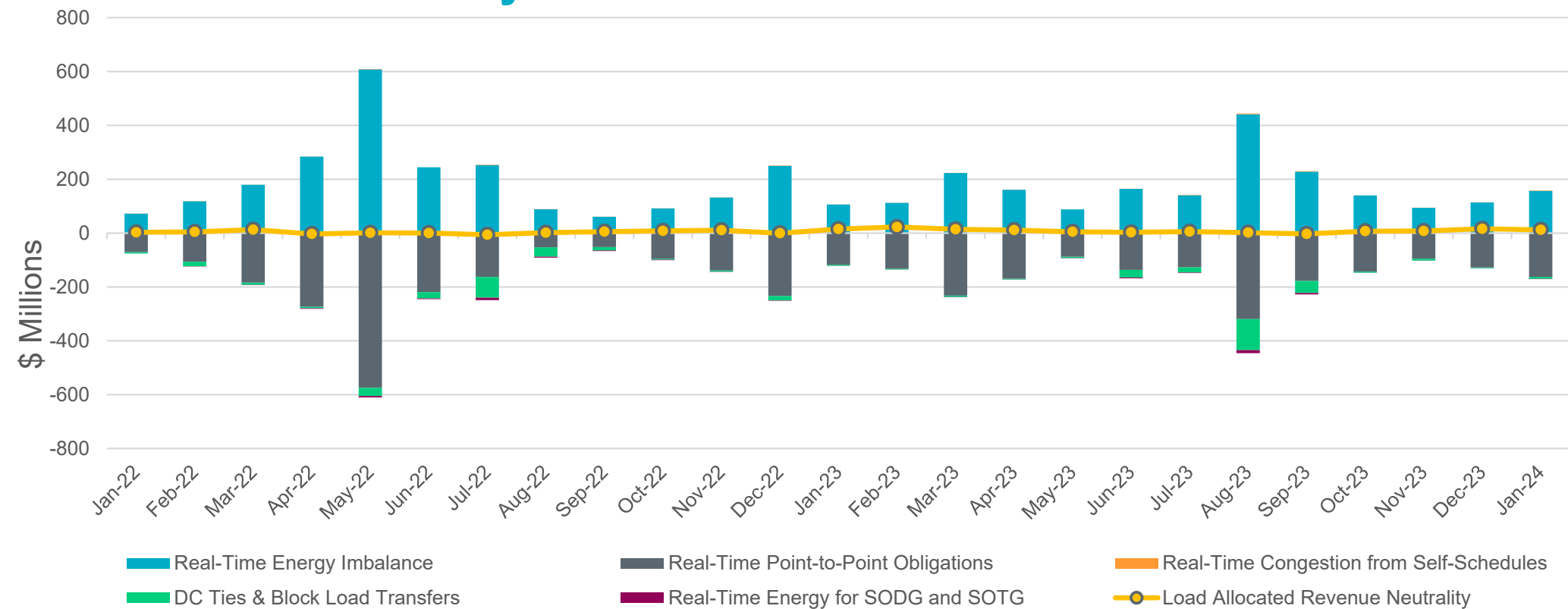
Resource #	Effective Resource-hours	Non-Opt Out (Effective Hours)	Opt Out (Effective Hours)
1	14.0	14.0	0.0
2	8.0	8.0	0.0
3	14.0	0.0	14.0
4	4.0	0.0	4.0
5	5.0	5.0	0.0
6	8.7	8.7	0.0
7	3.0	3.0	0.0
8	10.0	0.0	10.0
9	10.0	10.0	0.0
10	9.3	9.3	0.0
11	9.0	9.0	0.0
12	21.0	21.0	0.0
13	13.0	13.0	0.0
Total	129.0	101.0	28.0

# Net Allocation to Load in January 2024 was (\$26.96) Million



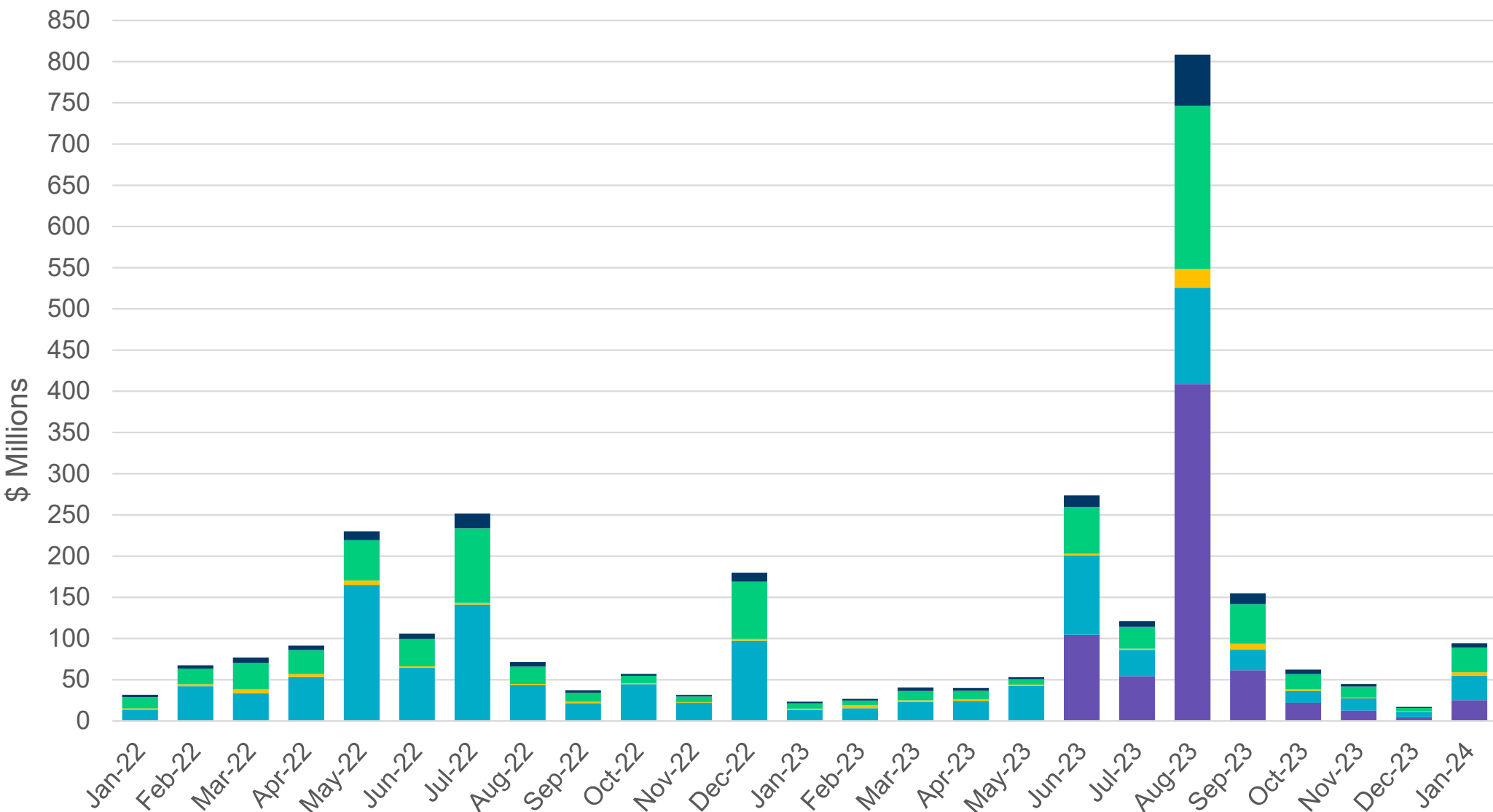
This information is available in tabular form in the Settlement Stability Report presented quarterly to the [Wholesale Market Subcommittee](#)

# Real-Time Revenue Neutrality Allocated to Load was \$12.3M for January 2024



January 2024 (\$M)	
Real-Time Energy Imbalance	\$157.42
Real-Time Point-to-Point Obligation	(\$162.41)
Real-Time Congestion from Self-Schedules	\$1.05
DC Tie & Block Load Transfer	(\$7.70)
Real-Time Energy for SODG and SOTG	(\$0.66)
<b>Load Allocated Revenue Neutrality</b>	<b>\$12.30</b>

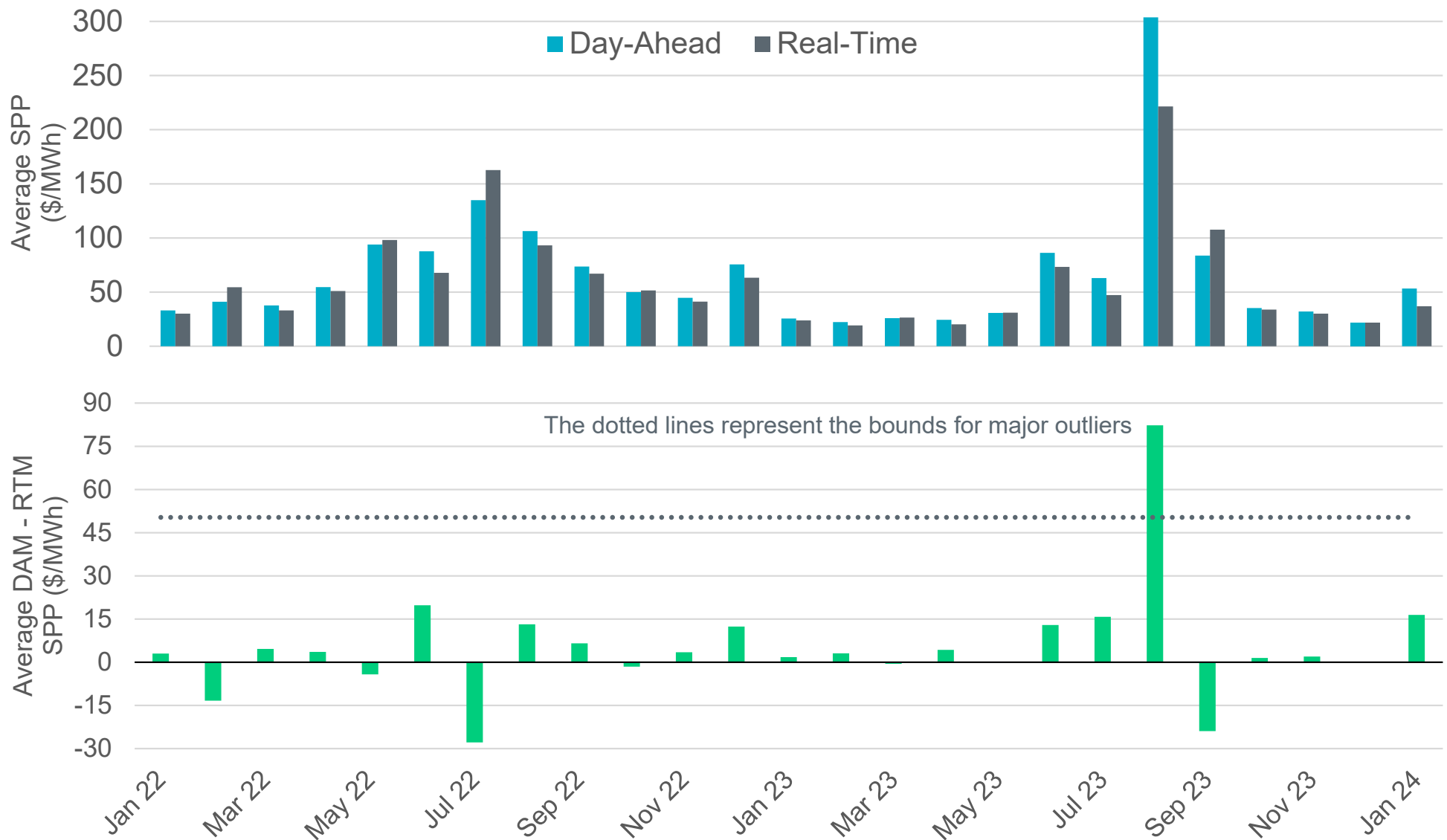
## Ancillary Services for January 2024 totaled \$94.21M



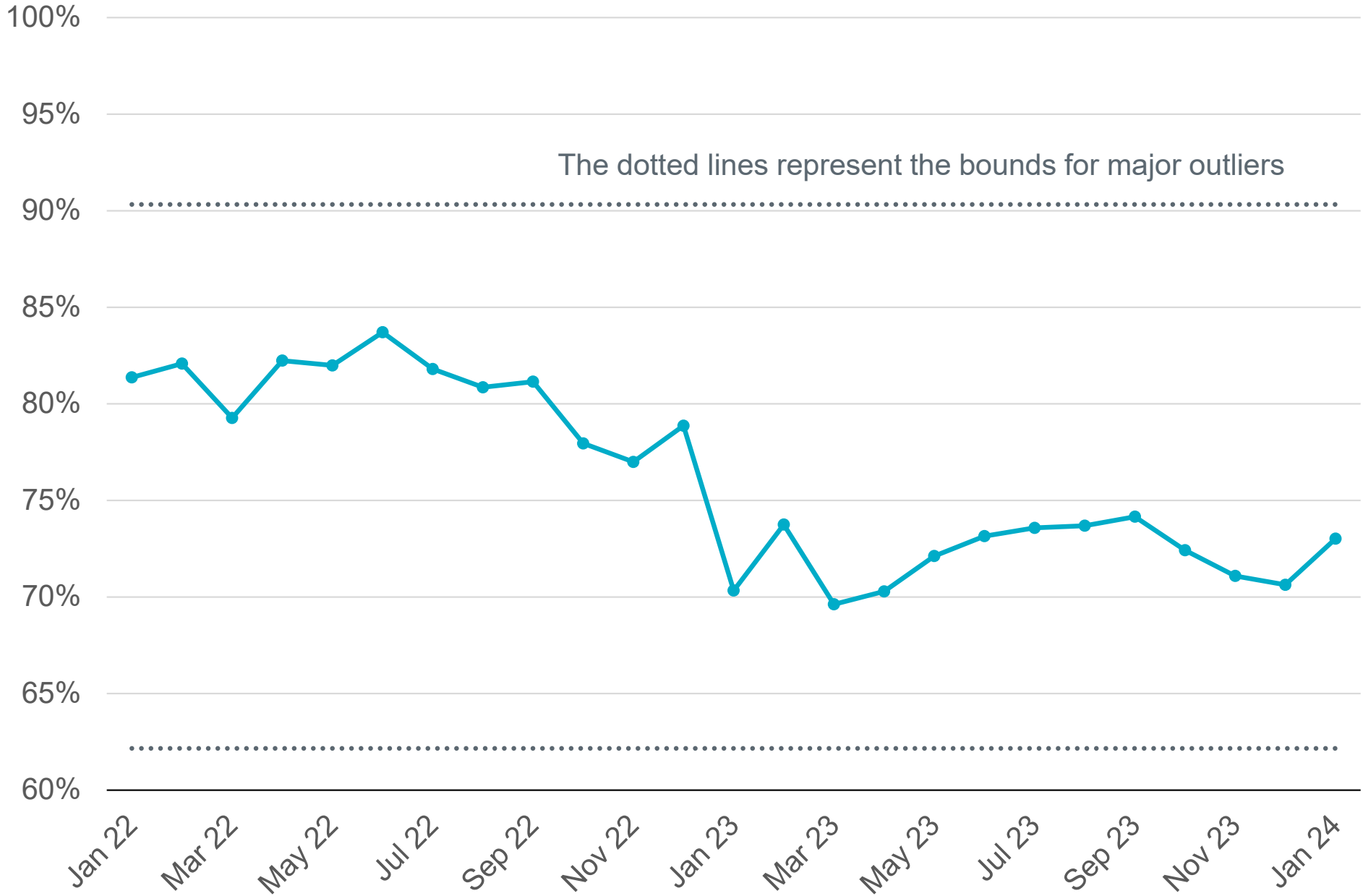
■ ERCOT Contingency Reserve ■ Non-Spin ■ Regulation Down ■ Responsive Reserve ■ Regulation Up



# Day-Ahead and Real-Time Market Price Differences



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





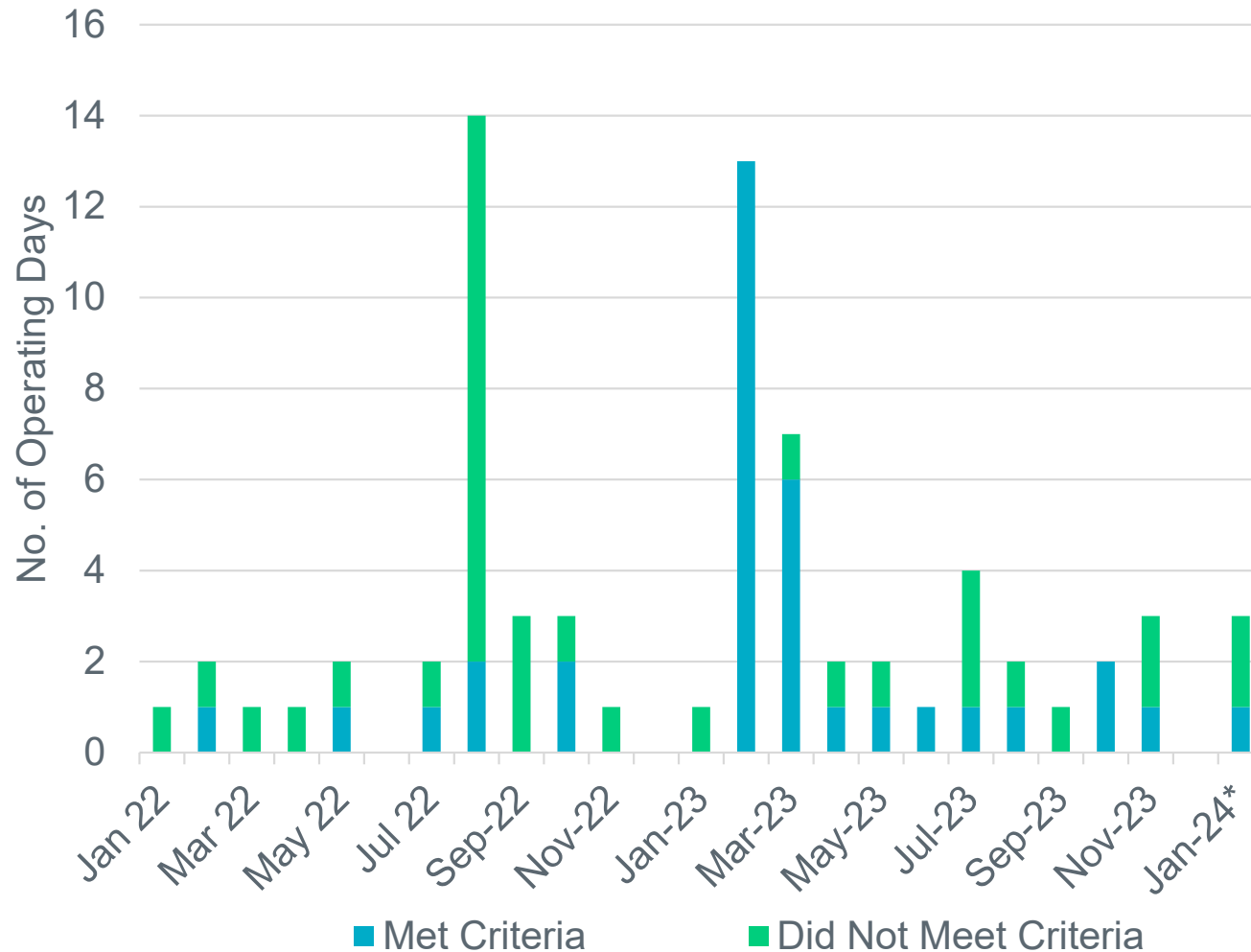
# CRR Value and Cost Differences



# 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.



\* Additional price corrections are likely for January '24, however the number of Operating Days impacted is still being evaluated. Additional information is on the next slide.

# Details for Price Corrections Review

## Operating Days Not Meeting Significance Criteria

- On January 18, 2024, Emergency Basepoints were activated during a planned site failover. The resulting impact analysis showed that this day had not met criteria for correction, with an estimated total dollar impact of \$54.03.
- On January 23, 2024, Emergency Basepoints were activated during a model database load. The resulting impact analysis showed that this day had not met criteria for correction, with an estimated total dollar impact of \$18.92.

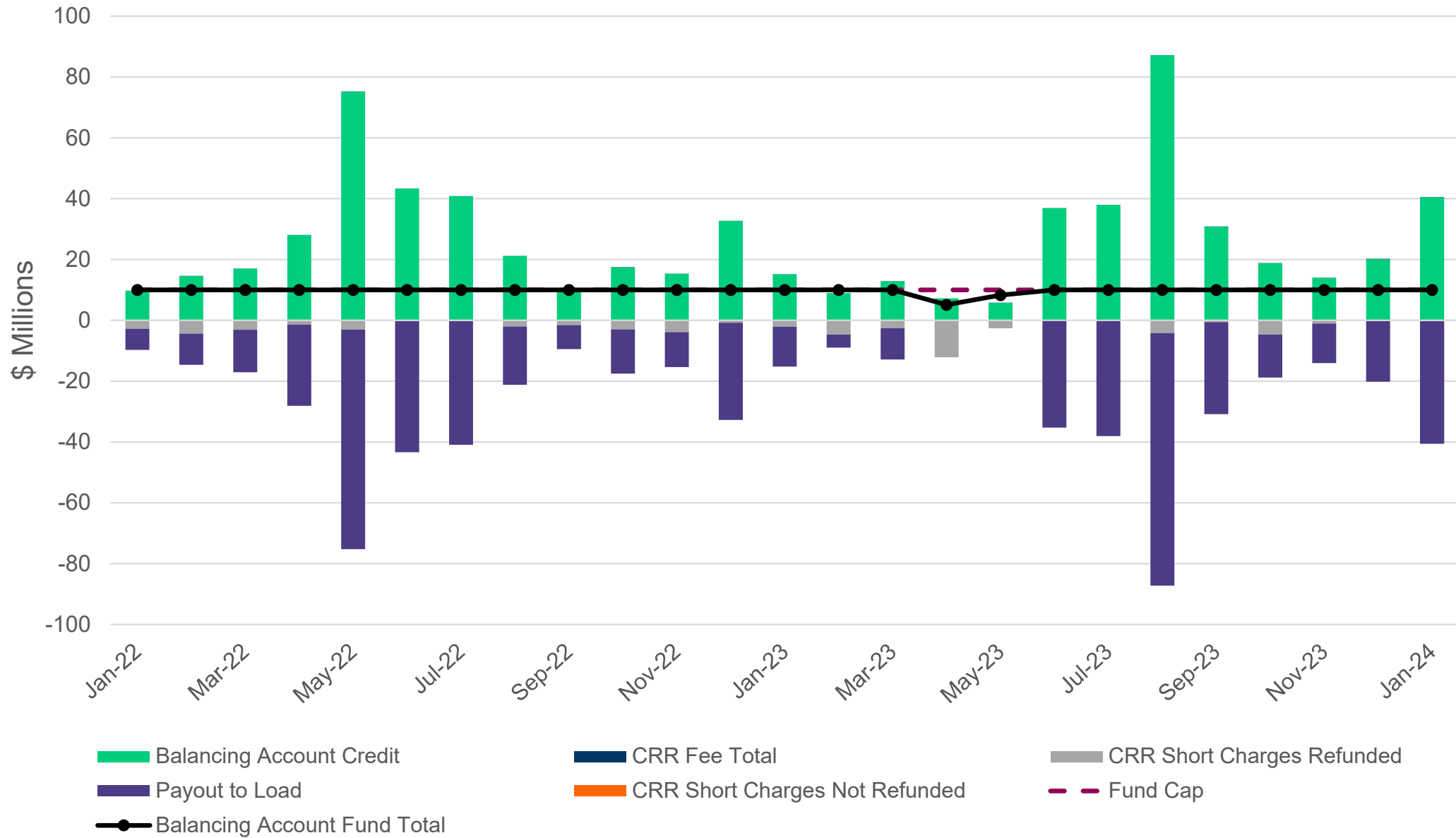
## Operating Days Meeting Significance Criteria

- On January 20, 2024, an issue occurred resulting in the DAM not using the most up-to-date network model. The resulting impact analysis showed that criteria was met for price correction, with the largest absolute value impact across all Settlement Point Prices being approximately \$15.

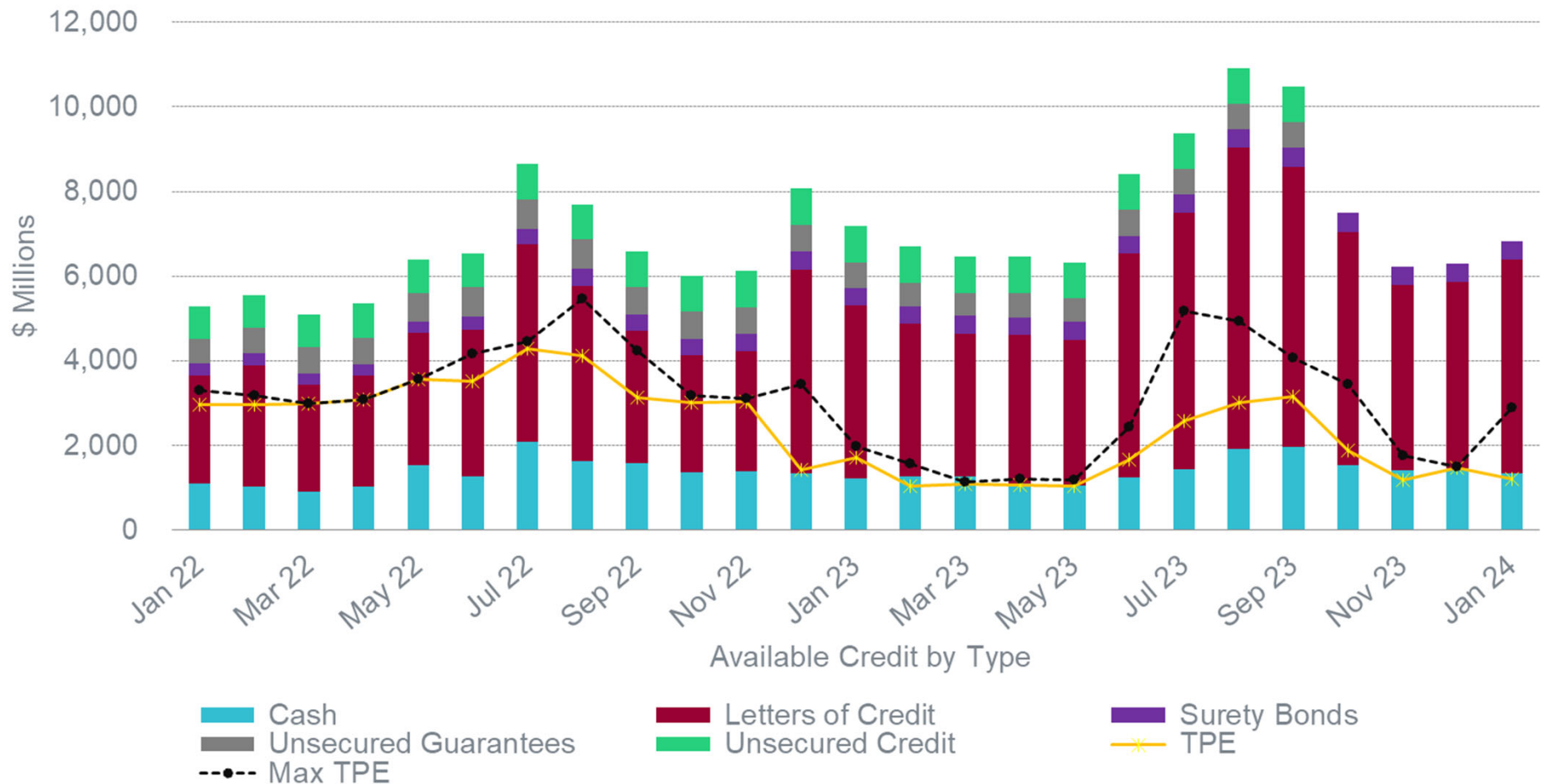
## On-Going Price Correction Analysis

- On January 29, 2024, an issue concerning the ratings of certain transmission lines, series devices, and transformers was discovered. Initial analysis indicates that multiple Operating Days for both the DAM and Real-Time Market were impacted by these erroneous ratings. While these rating errors existed between November 8, 2023, and January 31, 2024, only Operating Days between January 6 and 31, 2024 are eligible for potential price correction consideration by the Board. ERCOT is still evaluating which Operating Days meet the significance criteria needed for Board review of prices.

# 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 – January 2024

	Year-To-Date		Transactions Received	
Transaction Type	January 2024	January 2023	January 2024	January 2023
Switches	84,343	79,563	84,343	79,563
Acquisitions	0	0	0	0
Move - Ins	263,084	245,413	263,084	245,413
Move - Outs	108,465	108,022	108,465	108,022
Continuous Service Agreements (CSA)	22,247	38,440	22,247	38,440
Mass Transitions	0	0	0	0
Total	478,139	471,438	478,139	471,438