



Item 6.3: Commercial Markets Update

Kenan Ögelman

Vice President, Commercial Operations

Reliability and Markets Committee Meeting

ERCOT Public

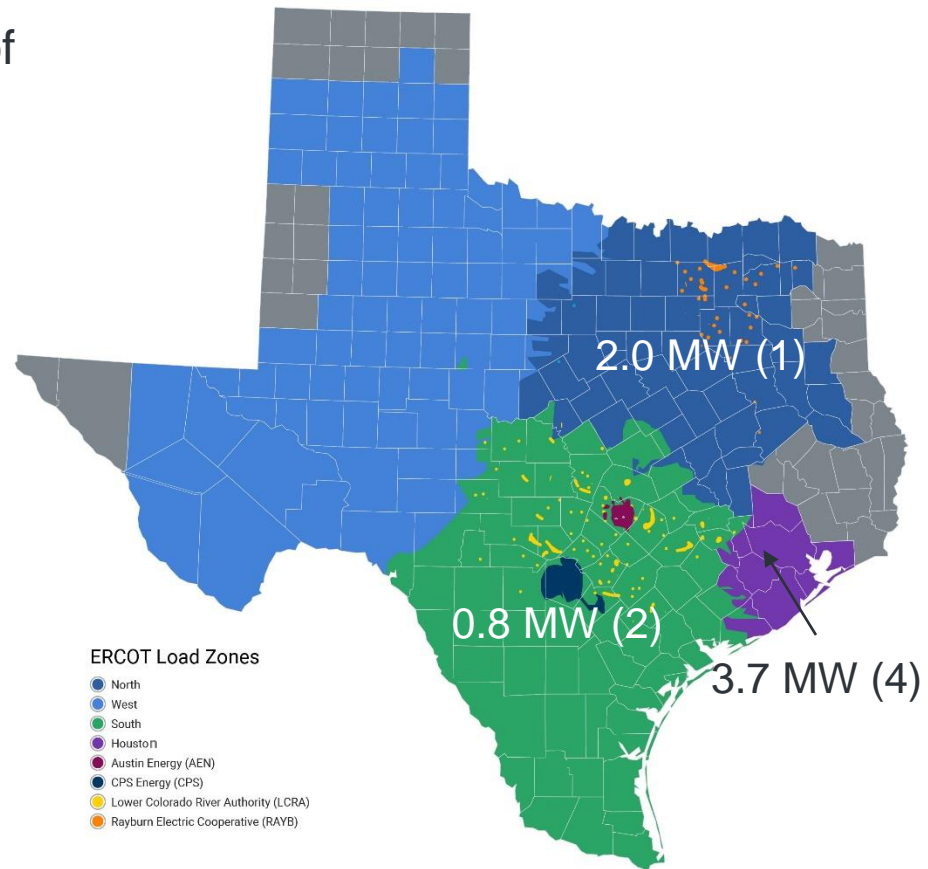
April 17, 2023

Commercial Markets Update: Overview

- **Purpose**
 - Provide an update on recent commercial markets activity
- **Voting Items / Requests**
 - No action is requested of the R&M Committee or Board; for discussion only
- **Key Takeaway**
 - Update on the Aggregate Distributed Energy Resource (ADER) pilot project.

Aggregate Distribution Energy Resource (ADER) pilot participation as of April 6, 2023

- Prospective participants in the pilot have been engaging with end-use customers, Distribution Service Providers (DSPs), and ERCOT staff to set up ADERs.
- ERCOT has accepted seven Details of the Aggregation (DOTA) forms:
 - Aggregated devices include synchronous generators, stationary batteries, and HVAC systems.
 - All ADERs intend to provide some amount of Non-Spin, based on DOTA submissions.
 - ERCOT-Wide Energy: 6.5 MW
 - ERCOT-Wide Non-Spin: 2.2 MW
- The first set of ADERs are now in the ERCOT Network Model, which will allow for qualification processes to begin.

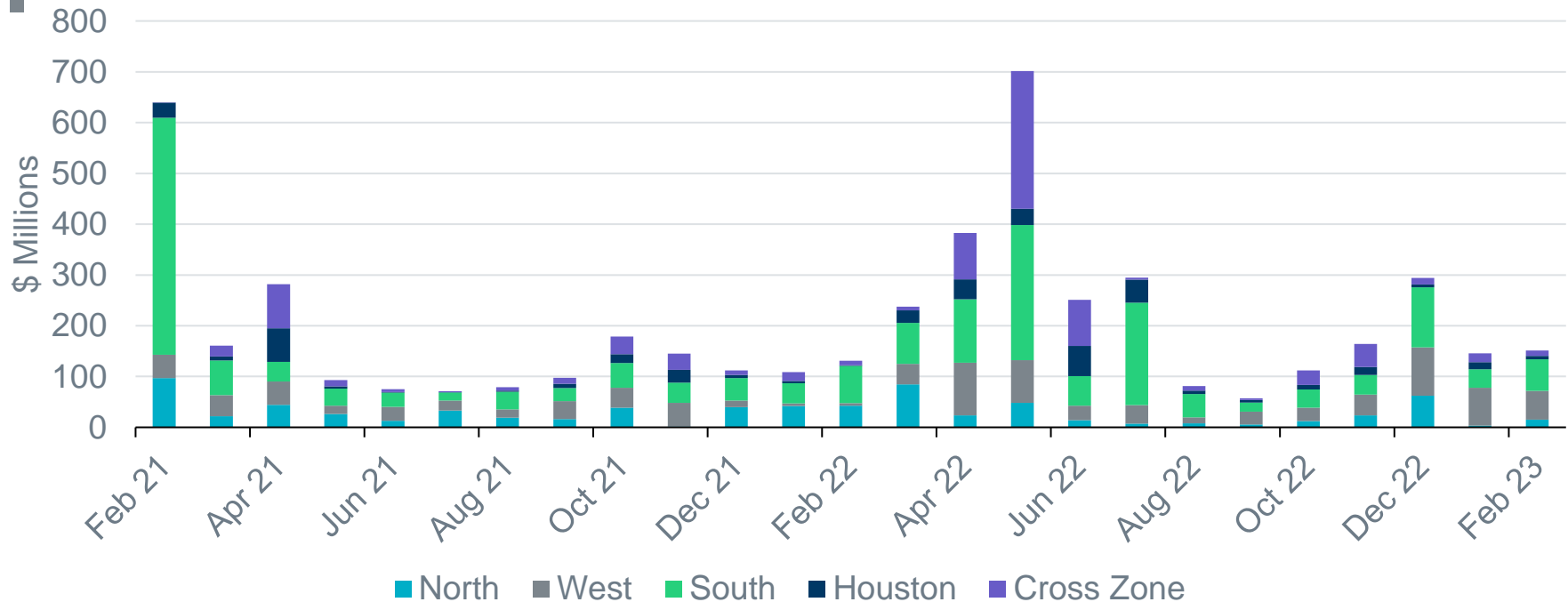


Next Steps

- File recommendation on Bridge Solutions
- Finish next steps on Firm Fuel Service
- Prepare for the implementation of ERCOT Contingency Reserve Service (ECRS) in June
- Finish planning Real-Time Co-optimization (RTC)

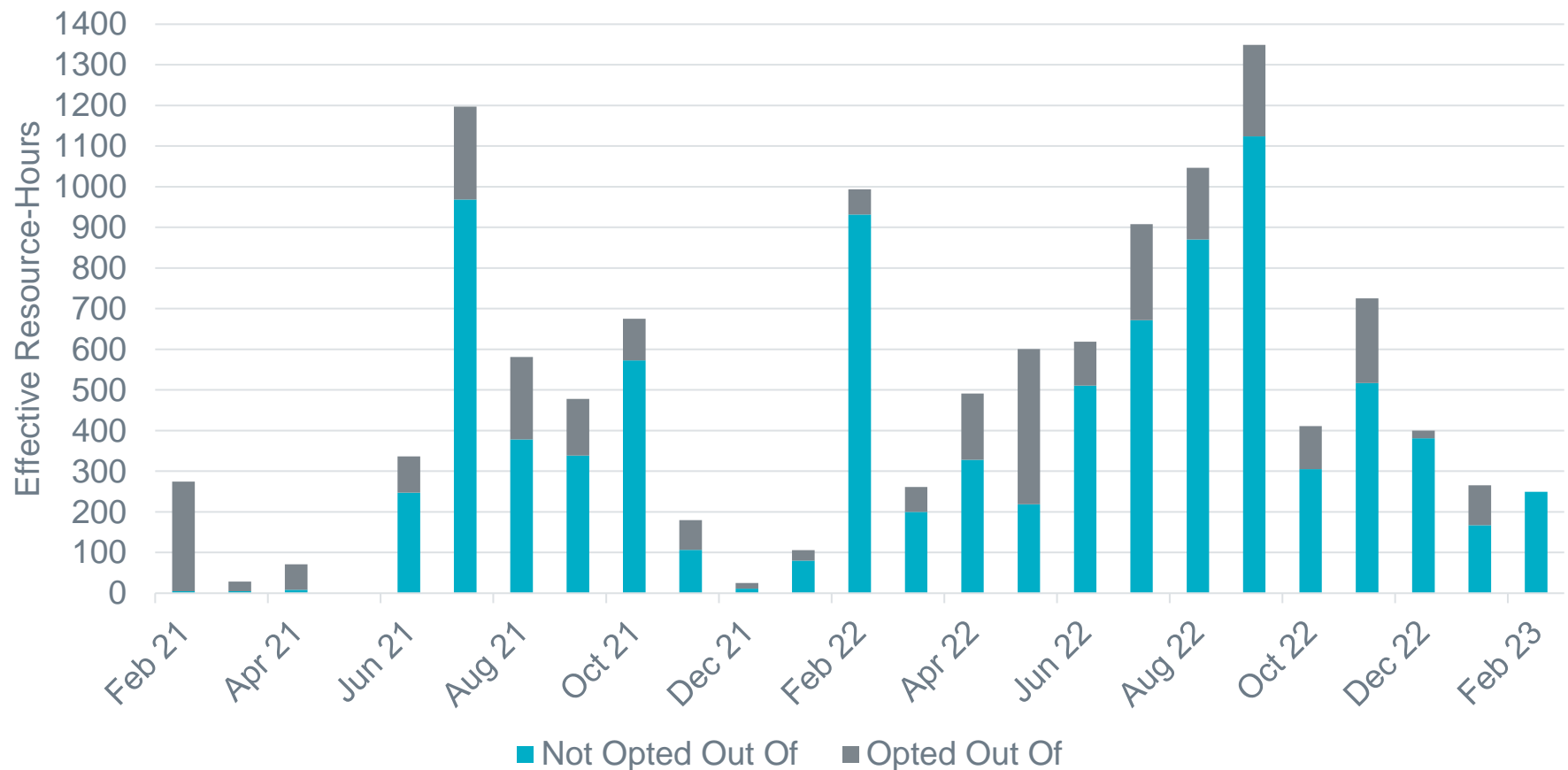
Appendix

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

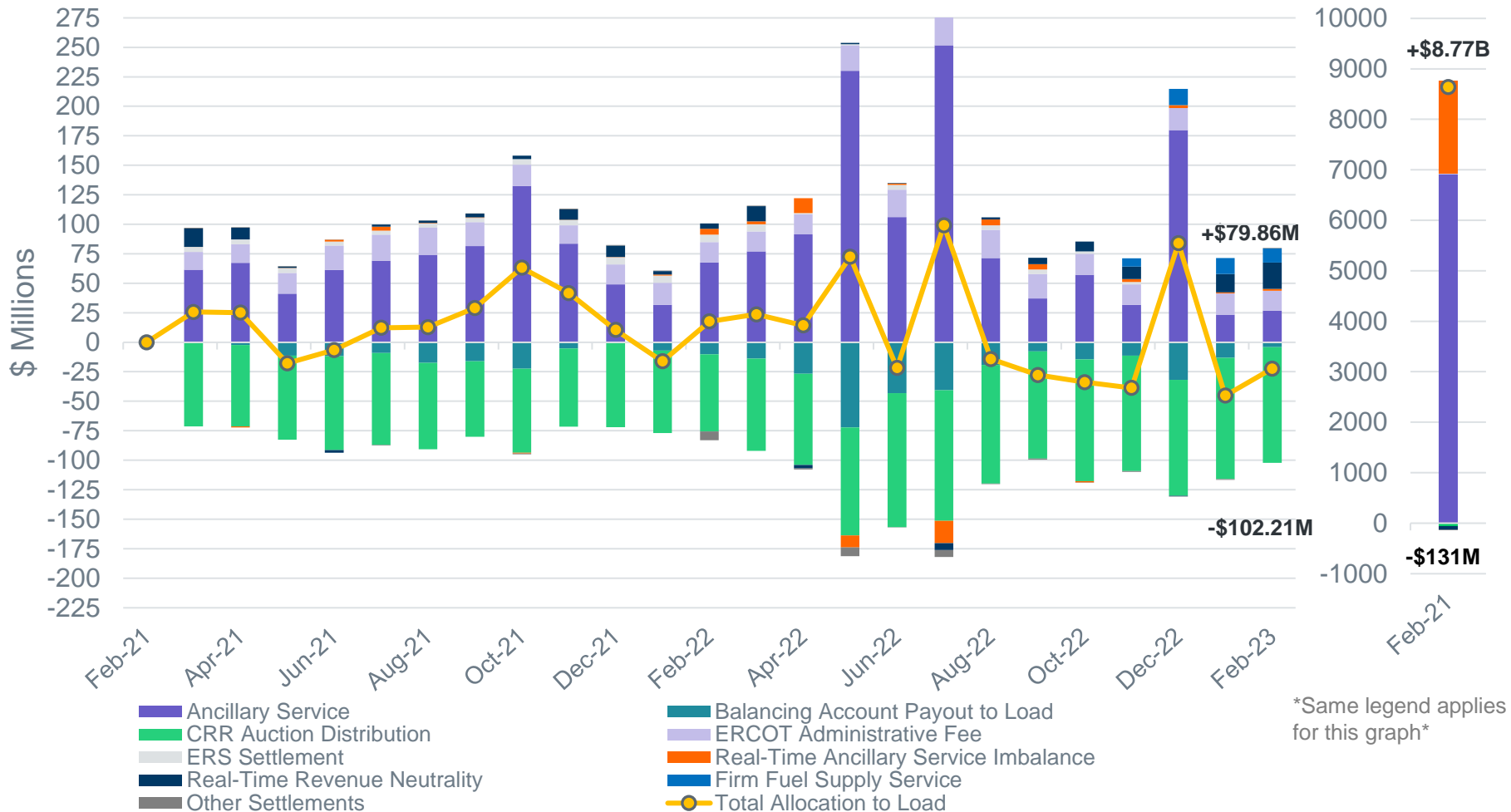


“Effective Resource-Hours” excludes any period during a Reliability Unit Commitment hour when the RUC-committed Resource was starting up, shutting down, off-line, or otherwise not available for dispatch by SCED.

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
Total	249.3	249.3	0.0

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

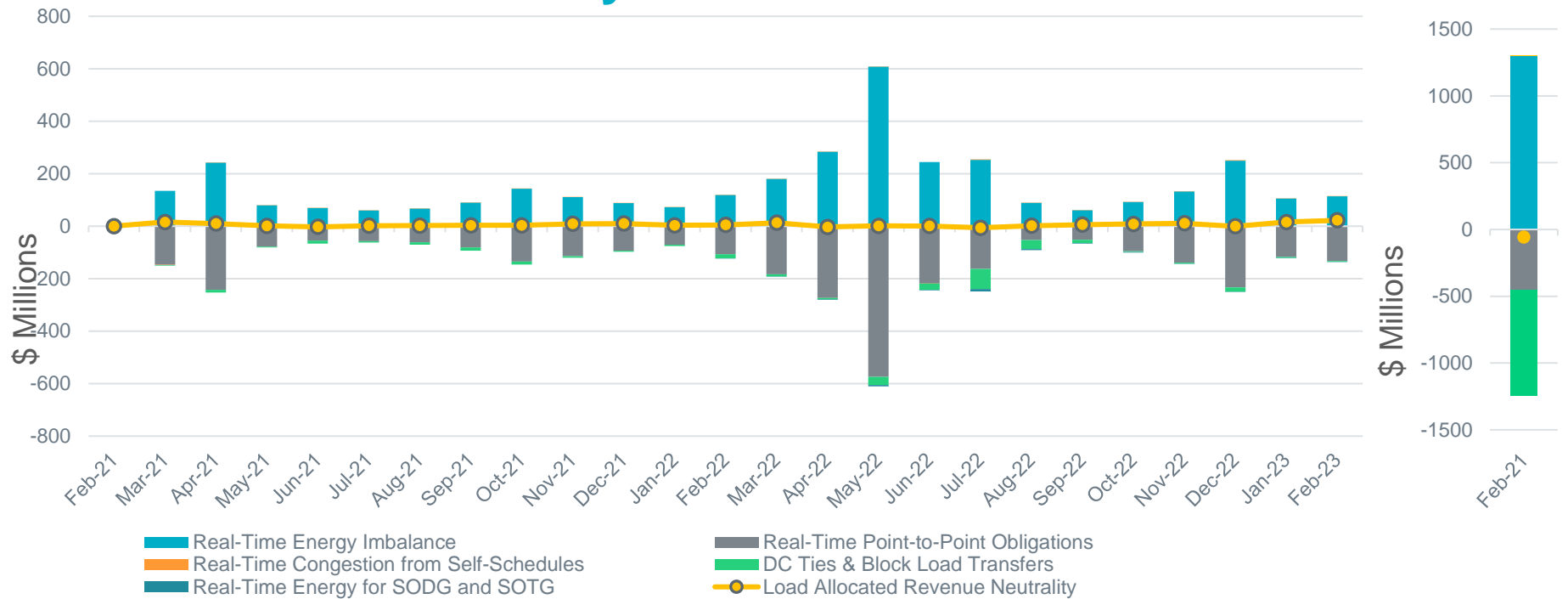


This information is available in tabular form in the Settlement Stability Report presented quarterly to the [Wholesale Market Subcommittee](#)

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



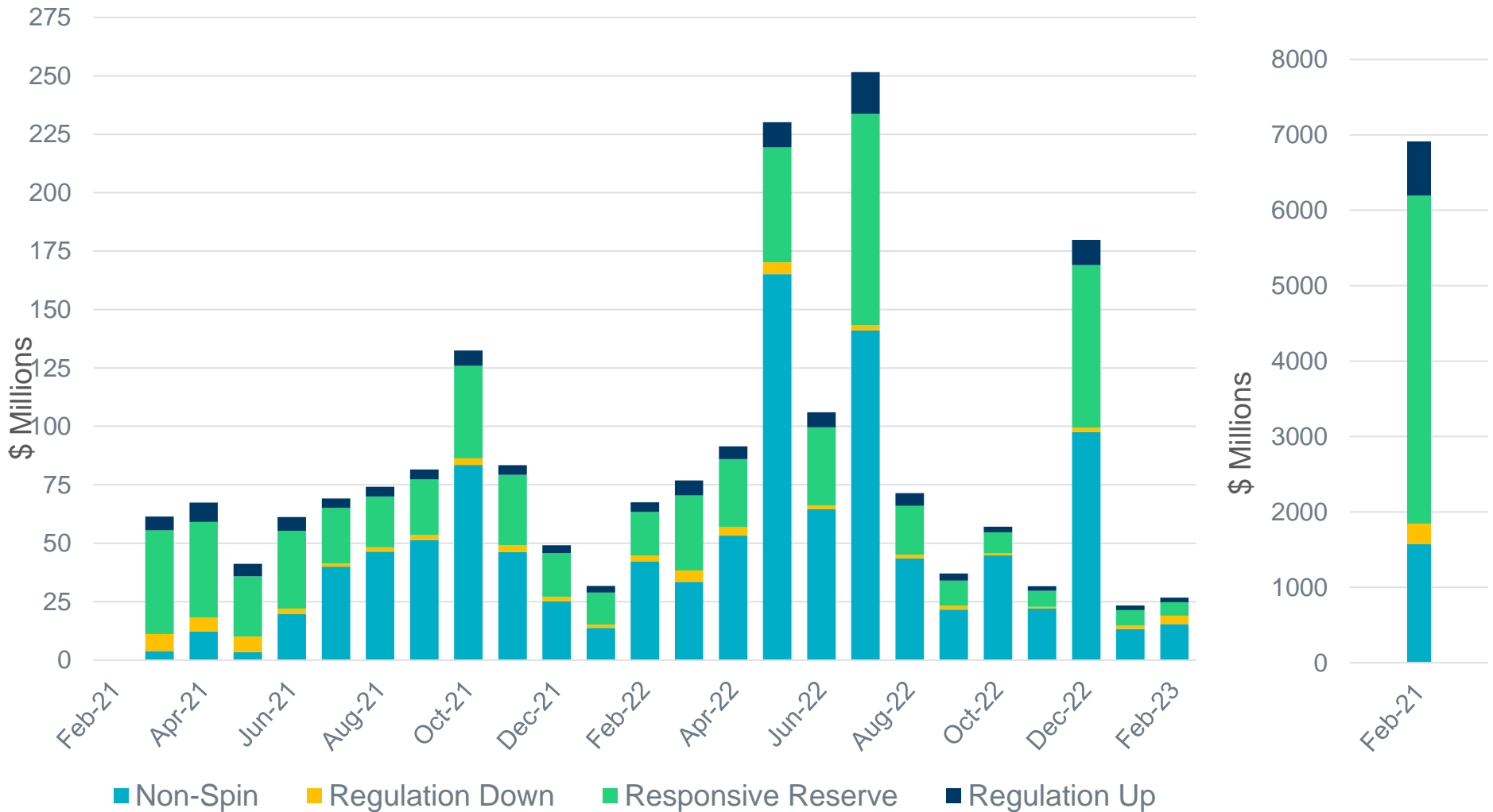
Real-Time Revenue Neutrality Allocated to Load was \$22.22M for February 2023



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)
Load Allocated Revenue Neutrality	\$22.22

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

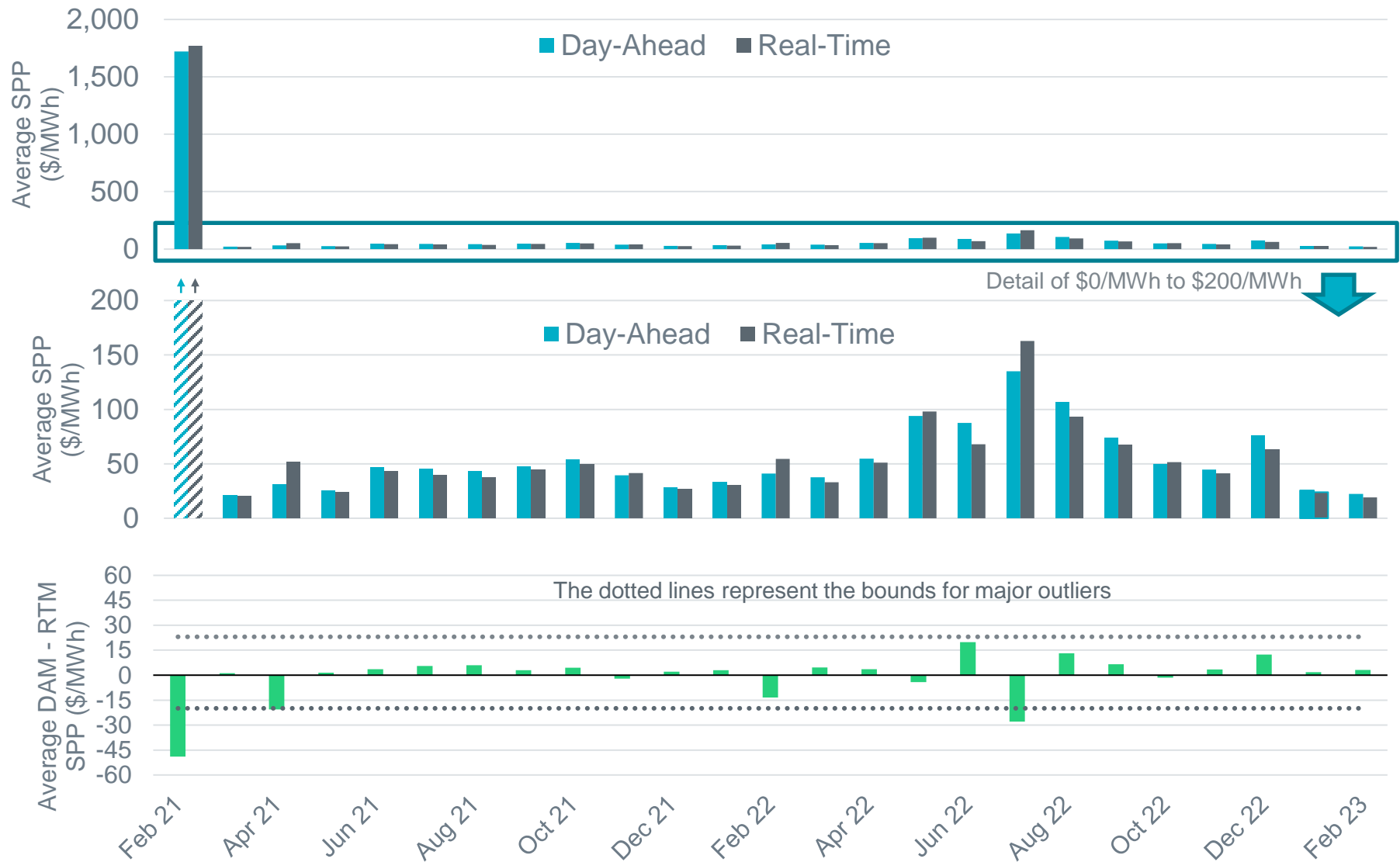
Ancillary Services for February 2023 totaled \$26.70M



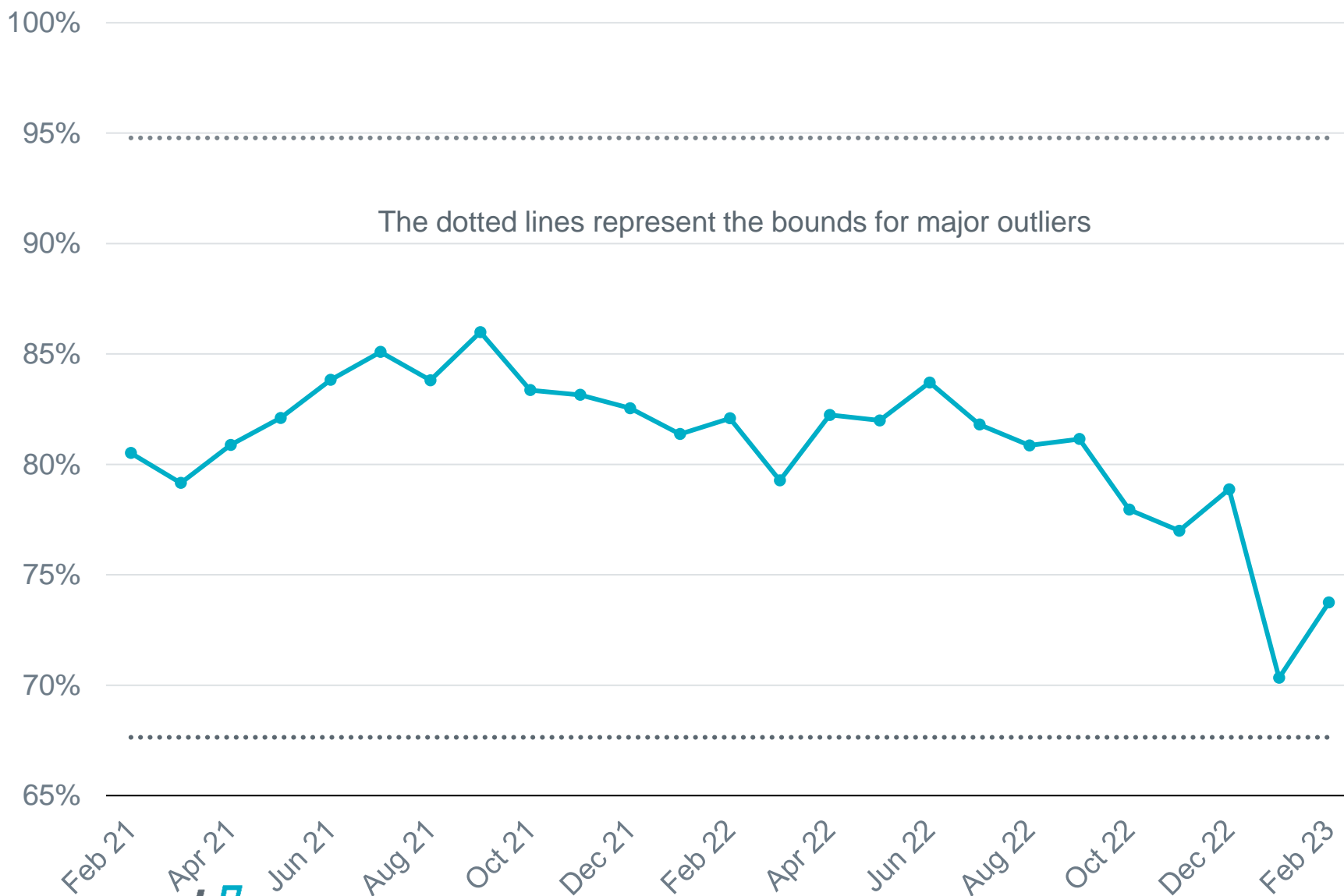
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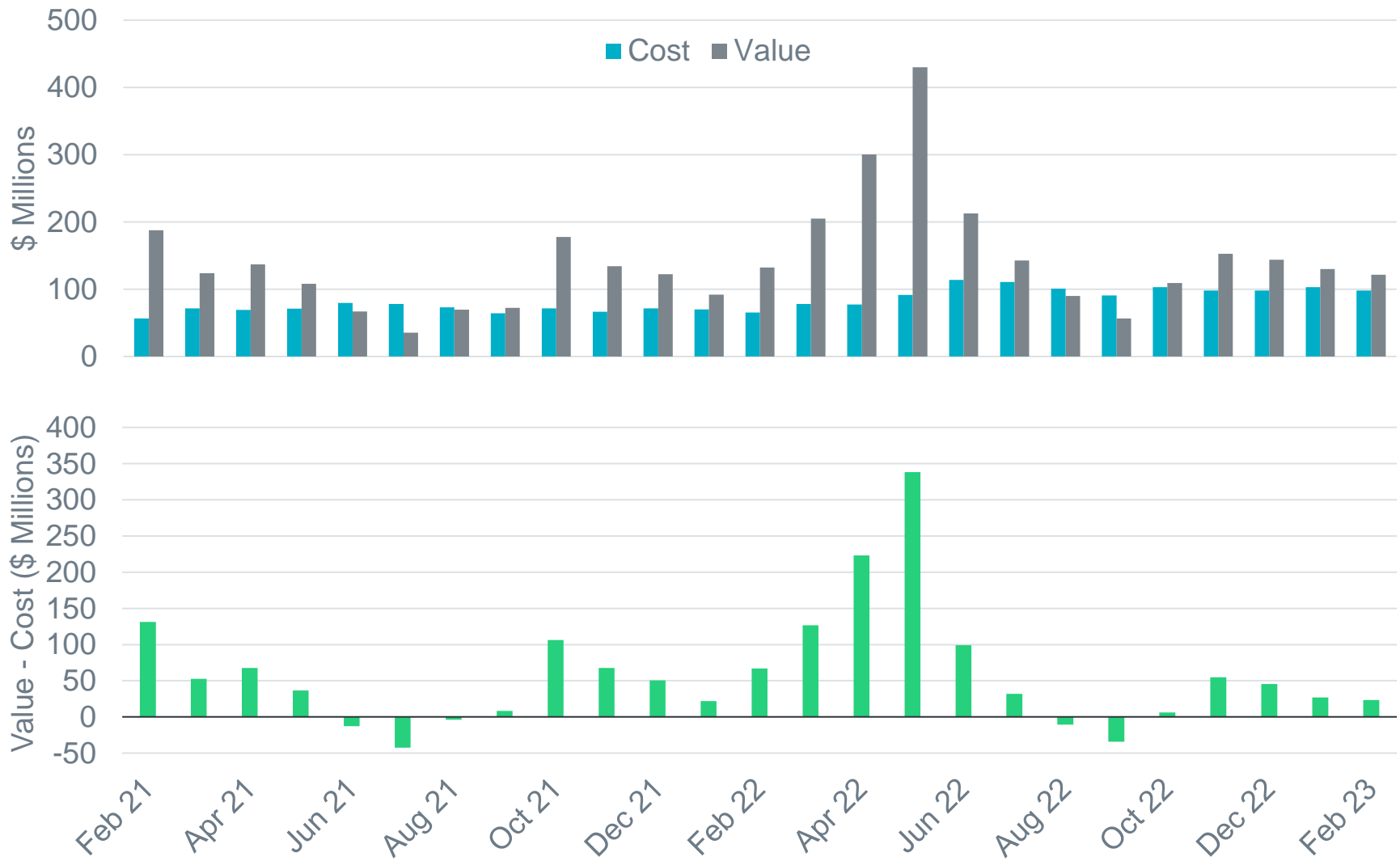
Day-Ahead and Real-Time Market Price Differences



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



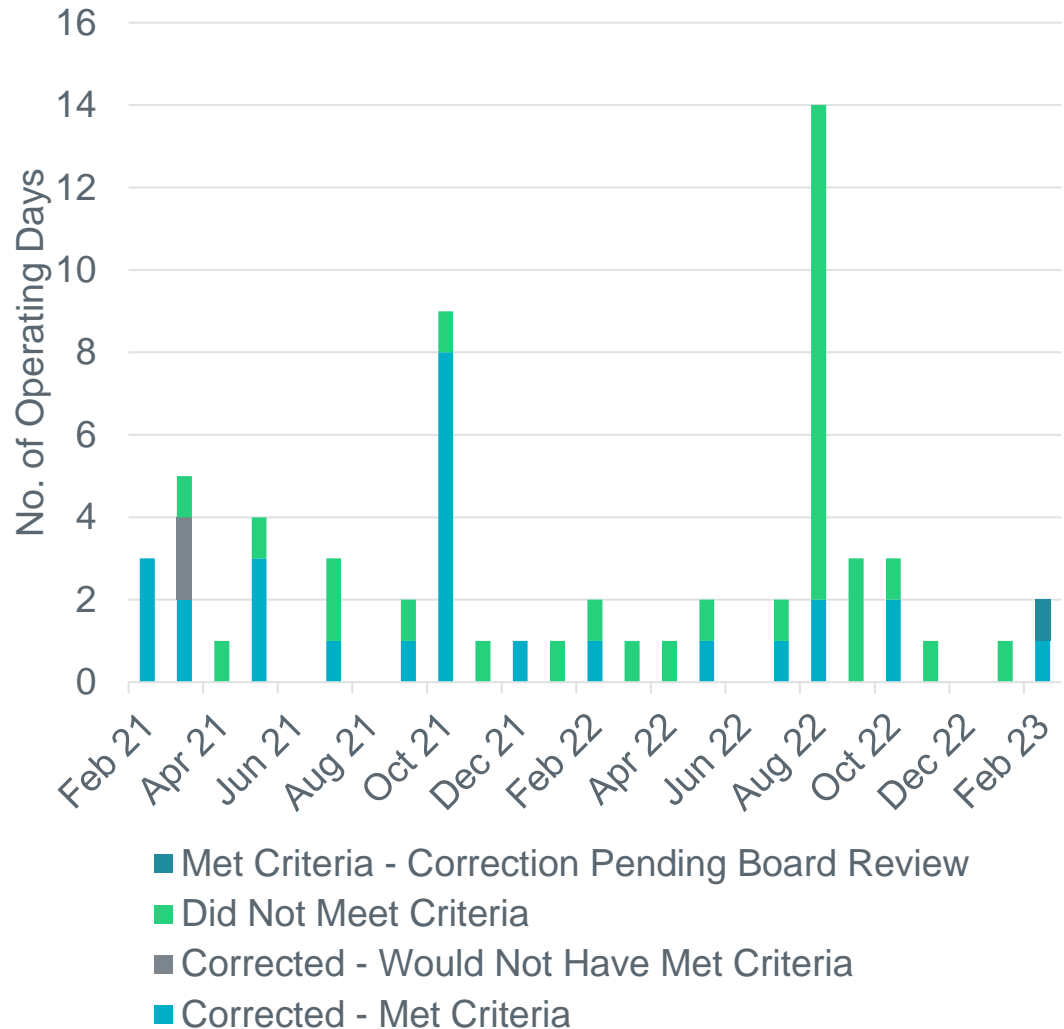
CRR Value and Cost Differences



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:

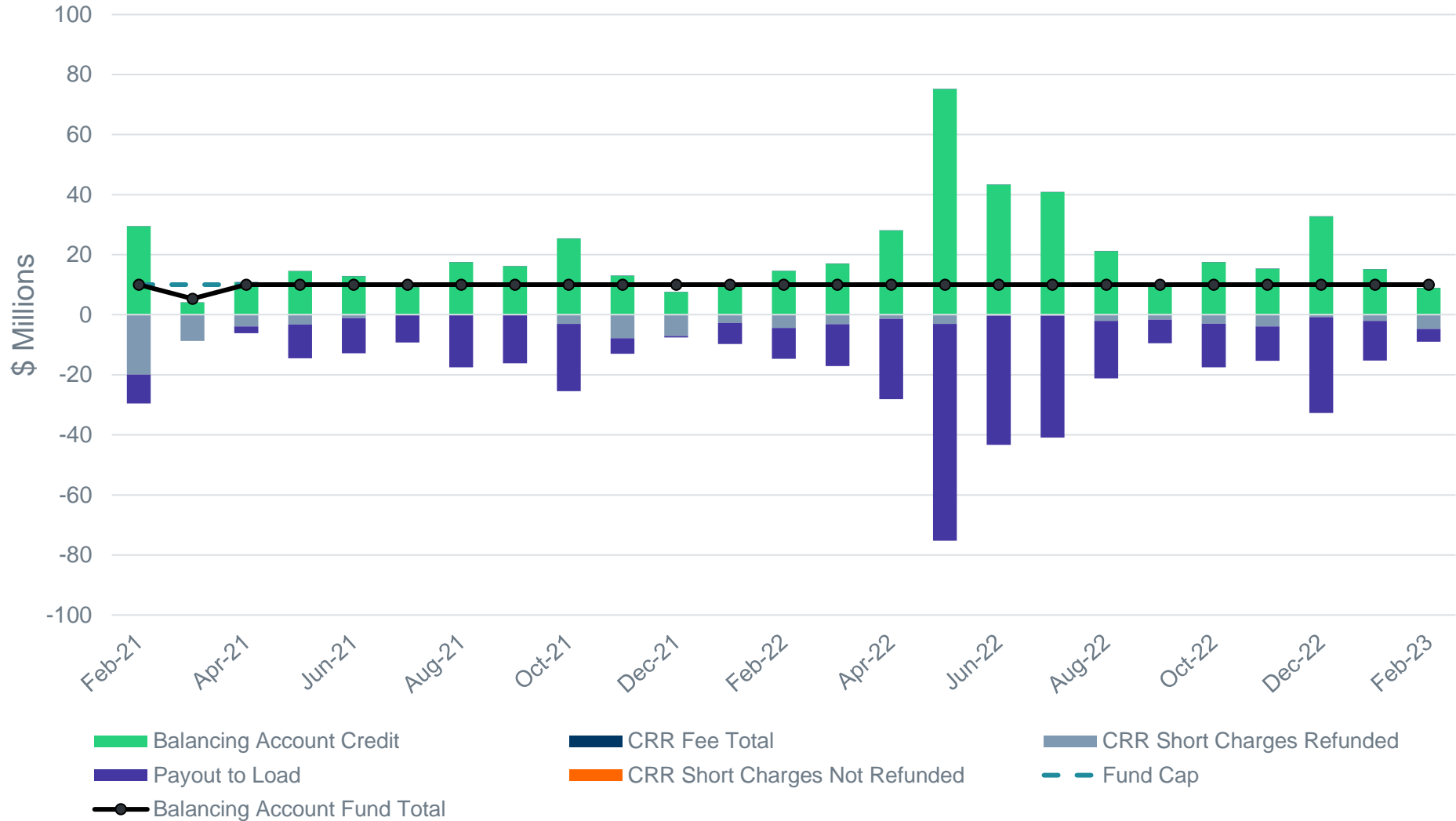
- Days that met the criteria for “significance” under NPRR1024 and were corrected;
- Days that would not have met the criteria for “significance” under NPRR1024, but were corrected because NPRR1024 was not yet in place; and
- Days that were not corrected because they did not meet the criteria for “significance”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



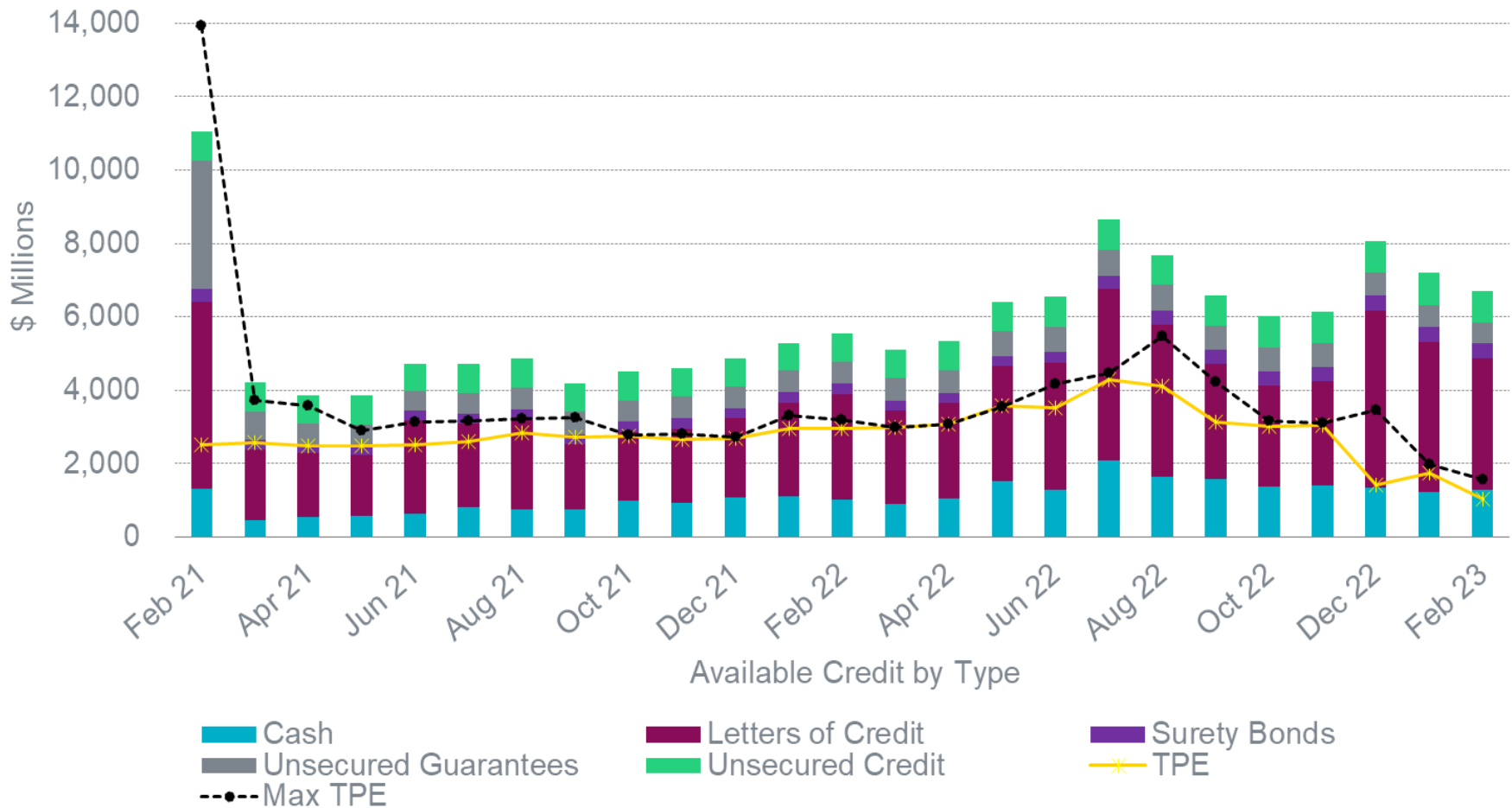
Details for Price Corrections meeting Criteria

- 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

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