



## **Item 6.2: Commercial Markets Update**

*Keith Collins*

Vice President, Commercial Operations

Board of Directors Meeting

ERCOT Public

June 23-24, 2025

# Overview

- **Purpose**

To provide a status update on key market initiatives and priorities for the remainder of 2025, update the Board on Credit initiatives and provide insights on outcomes, and to update the Board on the Market Design Framework introduced last year.

- **Voting Items / Requests**

No action is requested of the ERCOT Board; for discussion only.

- **Key Takeaway(s)**

- ERCOT is continuing to advance Residential Demand Response in consultation with stakeholders aiming for a NPRR at the end of Q3.
- ERCOT will resume stakeholder discussions on the design of a Dispatchable Reliability Reserve Service that meets statutory requirements.
- ERCOT has proposed a new collateralization approach that is making its way through the stakeholder process and has proposed a stress test risk mitigation approach for stakeholder discussion.
- ERCOT has developed, along with stakeholder feedback, a Market Design Framework to aid decisionmakers and stakeholders in understanding and prioritizing market enhancements.

# Key Market and Credit Design Initiatives

## Growing Residential Demand Response (DR)

With the expectation of significant projected demand growth, ERCOT is consulting with stakeholders on expanding residential DR through a program that provides an incentive payment to Retail Electric Providers (REP) based on Residential Demand Response performance at times of system need.

- A workshop was held on May 2, 2025 to present an initial design proposal and solicit stakeholder feedback, and stakeholders were invited to provide written feedback to ERCOT by May 23, 2025. A second workshop was held on June 16, 2025 to discuss the feedback, ERCOT's responses, and provide both further analysis and refinements to the design proposal to reflect stakeholder feedback. We are targeting to file an NPRR by the end of August 2025.
- Current design options envision a program whereby REPs are incentivized to reduce consumption during the highest net load hours in each season and are paid based on the amount of demand reduction that is delivered in those hours. The distribution of events is weighted more heavily in summer and winter months but still ensures the capability is available during times of need in spring and fall.

**Key Takeaway:** ERCOT will work with stakeholders over the summer to develop a program that provides appropriate incentives to capture this potential DR capability.

# Advancing Dispatchable Reliability Reserve Service (DRRS)

ERCOT will resume stakeholder discussions from earlier in the year around the design of DRRS.

- We last consulted with stakeholders on the design of DRRS at a February workshop focused on real-time pricing issues.
- We will use the Market Design Framework to evaluate options and will ensure alignment with statutory requirements.
- The design of DRRS will meet statutory obligations to account for uncertainty and reduce RUC, and has the potential to support improved resource adequacy from dispatchable resources.
- The next DRRS workshop is scheduled for June 26, 2025 and will further explore design options. We target to develop an NPRR reflecting the chosen design option by mid-December 2025.

**Key Takeaway:** ERCOT will work with stakeholders on a proposed design and impact analysis for DRRS to meet key legislative requirements and Board approved OKRs.

# Estimated Aggregate Liability (EAL) Formula Changes

As discussed with the Board in previous meetings, ERCOT and stakeholders have been working to enhance credit calculations.

- ERCOT submitted NPRR 1277, Revisions to EAL formula, related to collateral requirements for Counter-Parties.
- PRS voted unanimously to recommend approval of NPRR 1277 as submitted in May. All Market Segments participated in the vote.
- The focus of this NPRR is to address instances of unreasonably high collateralization requirements and volatility relative to underlying Counter-Party exposure.
  - These instances are a result of formula mechanics in the Estimated Aggregate Liability (EAL) credit formula, and do not properly reflect anticipated exposure.
  - NPRR 1277 helps to more properly reflect anticipated exposure.

## Key Takeaways:

- NPRR1277 has been submitted to address over-collateralization and volatility.
- PRS voted unanimously to recommend approval of NPRR1277 as submitted.

# Credit Stress Testing Framework

ERCOT Credit staff proposed developing a stress testing framework at the May Credit Finance Sub-Group (CFSG) meeting. This approach aims to expand and strengthen ERCOT market risk management practices. ERCOT will proactively (1) identify, (2) measure and (3) mitigate the risk before an event occurs.

- Under the current framework a counter-party that cannot meet collateral requirements or pay market settlement invoices is defaulted and terminated. Unpaid amounts not covered by collateral are uplifted to the market.
- The intent for the new stress testing framework is to work in concert with the current framework, not to replace it.
- This proposal is under review at the CFSG.

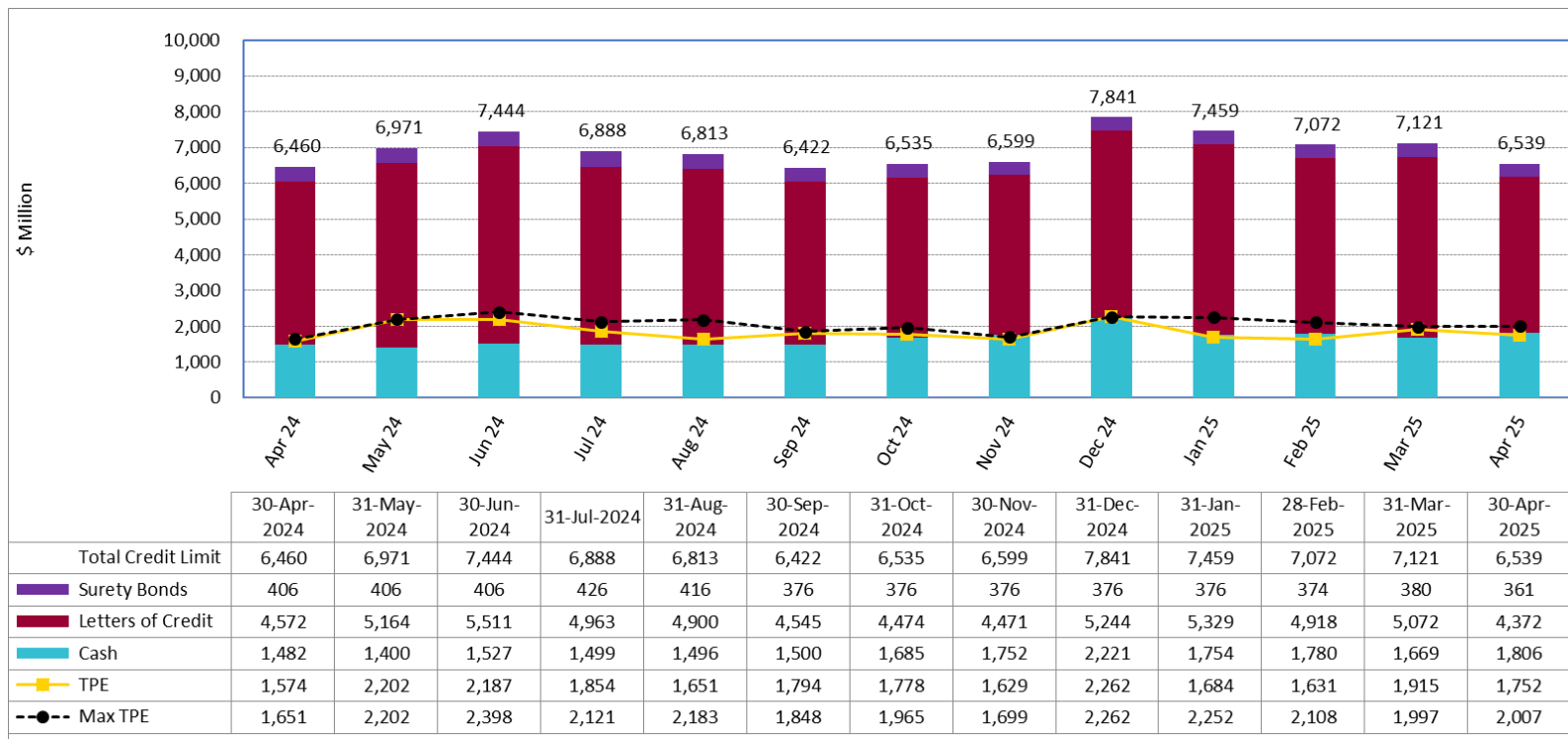
## Key Takeaway:

- ERCOT is working with CFSG on a new stress testing framework to expand market risk management by more proactively identifying, measuring and mitigating risk before an event occurs.



# Available Credit by Type Compared to Total Potential Exposure (TPE) Month-End April 2024 – April 2025

This shows TPE compared to the forms of collateral held. April results are inline with overall trends.



- Numbers are as of month-end except for Max TPE
- Max TPE is the highest TPE for the corresponding month

# Market Design Framework

# Market Design Framework Background

At the August 2024 Board meeting, Pablo introduced in his CEO update a new Framework for Evaluating Market Design. He noted the following:

- As we consider the drivers for investment and the various levers available to us to provide investment signals, we need to think about the full suite of attributes that are needed to reliably operate the grid.
- These attributes create a framework with which market features can be evaluated.
- Development of an evaluation framework has begun, and we expect this to be a future and ongoing topic with the Board.

Since last year, ERCOT staff have been working with stakeholders and have incorporated feedback into the framework design.

- While there has been mixed reactions from stakeholders, there is a general sense to move forward with using the framework.

# Framework can achieve multiple purposes

## Primary Purpose

- Provide decision-makers, including the ERCOT Board, regulators, and legislators, a framework for understanding, assessing, and prioritizing market design initiatives, by better appreciating how different initiatives contribute to the overall market design.
- In other words, to better understand how each market design tool fits within the market design toolshed to make better use of tools to meet goals.



## Secondary Purposes

- Aid stakeholder discussion, communication, and prioritization.
- Provide common framework for stakeholders to discuss and consider initiatives.

## What the framework is not

- A comprehensive list of all factors and attributes that influence market design.
- Setting a reliability standard or superseding legislative or regulatory priorities.

## Initial attributes

|               |                                                                                                                                                                              |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flexibility   | <ul style="list-style-type: none"><li>• Value resources that can ramp up and down, quickly</li></ul>                                                                         |
| Dependability | <ul style="list-style-type: none"><li>• Value resources that can achieve instructed dispatch levels for required durations</li></ul>                                         |
| Availability  | <ul style="list-style-type: none"><li>• Provide incentives for resource availability when needed, meeting current and future demands</li></ul>                               |
| Resiliency    | <ul style="list-style-type: none"><li>• Provide the grid with tools to manage both local and system-wide reliability events</li></ul>                                        |
| Quality       | <ul style="list-style-type: none"><li>• Value operational attributes that are important to the ERCOT market, such as being carbon-free and contributing to inertia</li></ul> |
| Efficiency    | <ul style="list-style-type: none"><li>• Design markets to achieve efficient results to benefit consumers and market participants</li></ul>                                   |
| Location      | <ul style="list-style-type: none"><li>• Enhance value of locating resources closer to where they are most needed</li></ul>                                                   |

## Additional attributes based on feedback

Affordability

- Minimizing costs to consumers while maintaining and promoting reliability

Competition

- Maximizing the use of competitive and inclusive market mechanisms, where appropriate

# Attribute and initiative comparison

| Attribute     | Real-time<br>Cooptimization<br>plus Batteries<br>(RTC+B) | DRRS as<br>Ancillary<br>Service Only | DRRS as<br>Ancillary<br>Service and<br>Resource<br>Adequacy | Operating<br>Reserve<br>Demand Curve<br>(ORDC) | ERCOT<br>Contingency<br>Reserve Service<br>(ECRS) | HB 1500 Firming | Residential<br>Demand<br>Response |
|---------------|----------------------------------------------------------|--------------------------------------|-------------------------------------------------------------|------------------------------------------------|---------------------------------------------------|-----------------|-----------------------------------|
| Flexibility   | ++                                                       | ++++                                 | ++++                                                        | ++                                             | ++                                                | +               | +                                 |
| Dependability |                                                          | ++                                   | ++                                                          |                                                |                                                   | ++++            |                                   |
| Availability  | --                                                       | +                                    | ++++                                                        | +++                                            |                                                   | ++              | ++                                |
| Resiliency    |                                                          | +++                                  | +++                                                         |                                                | ++++                                              |                 | ++                                |
| Quality       |                                                          |                                      |                                                             |                                                | ++                                                | +               | +++                               |
| Efficiency    | ++++                                                     |                                      |                                                             | +                                              | -                                                 |                 | -                                 |
| Location      | ++                                                       |                                      |                                                             | +                                              |                                                   |                 |                                   |
| Affordability | +++                                                      |                                      | ++                                                          |                                                |                                                   | TBD             | +                                 |
| Competition   | ++                                                       | -                                    | -                                                           | +++                                            |                                                   | TBD             |                                   |

The rankings + and - are a relative measure compared to other initiatives. These rankings are largely intended to be illustrative and further refined as designs are developed. Under the proposed framework, it's expected that each of the attributes will have more specific metrics/measures associated with them.

# Measuring where we are relative to framework

Important to measure where we are relative to given attribute.

- For instance, have we achieved an optimal amount of **Efficiency** or should we focus on enhancing **Flexibility** or **Resiliency**?

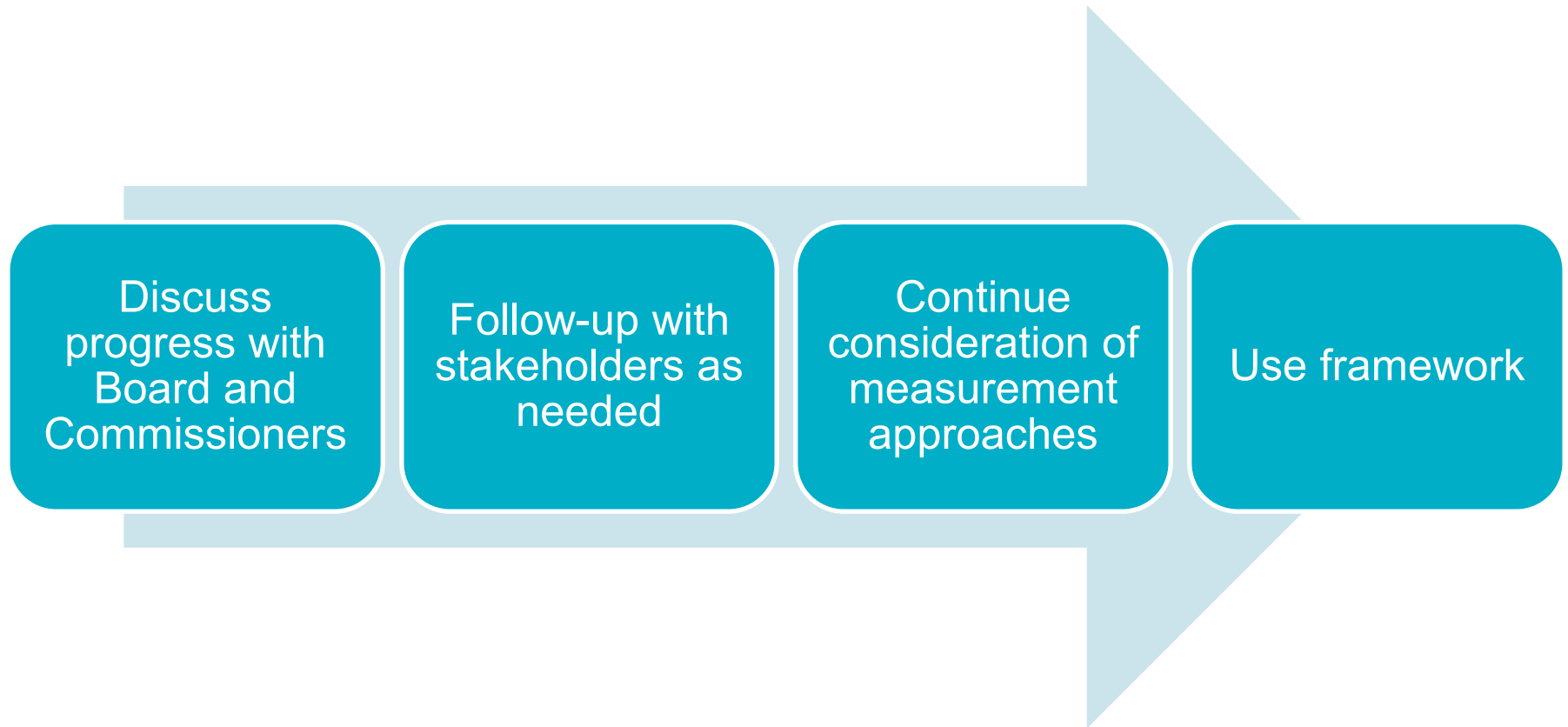
There can be different measures for different sets of attributes. For example:

- The IMM regularly evaluates market **Efficiency** as part of its annual State of the Markets report.
- Future analysis of system **Flexibility** needs will assess the requirement levels for Dispatchable Reliability Reserve Service.
- The reliability standard is an important measuring stick relative to multiple items of the framework including **Availability**, **Flexibility**, **Dependability**, and **Resiliency**.

## Need to focus on the reliability standard

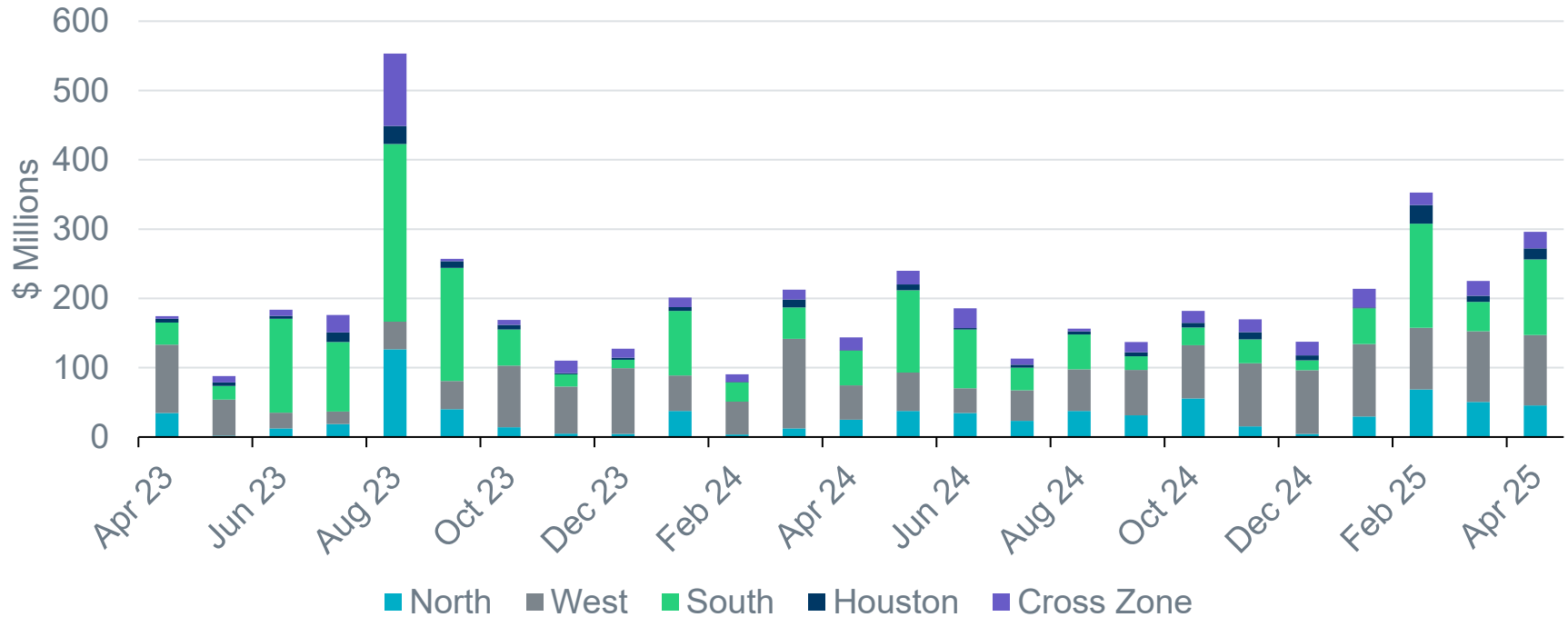
- Reliability standard requires:
  - Frequency: must be equal to or less than one event per ten years on average
  - Duration: the maximum expected length of a loss of load event must be less than 12 hours
  - Magnitude: must be less than the maximum number of megawatts that can be safely rotated (dynamic value that is currently set to 16 GW)
- Going forward it is crucial to focus on the development of market mechanisms that can move us towards the reliability standard.
- Key attributes include **Availability**, **Flexibility**, **Dependability**, and **Resiliency**.
- Key initiatives to help meet reliability standard include:
  - Dispatchable Reliability Reserve Service as an Ancillary Service with Resource Adequacy capability (per PUCT guidance from December 12, 2024 meeting)
  - Residential Demand Response
  - House Bill 1500 “Firming” requirement

## Next steps



# Appendix

# Real-Time Congestion Rent by Zone



- Total Real-Time congestion rent increased in April compared to March, with the highest congestion rent in the South and West Zones.
  - Congestion rent in the South Zone was primarily driven by a constraint representing the loss of the 345kV double circuit from North Edinburg to Bonilla and the 138kV line from Rio Hondo to Primera which would overload the 138kV line from La Palma to Haine Drive.
  - Congestion rent in the West Zone was primarily driven by a constraint representing the loss of the 345 kV line from Wett Long Draw to Volta which would overload the 138 kV line from Vealmoor to Koch Tap.

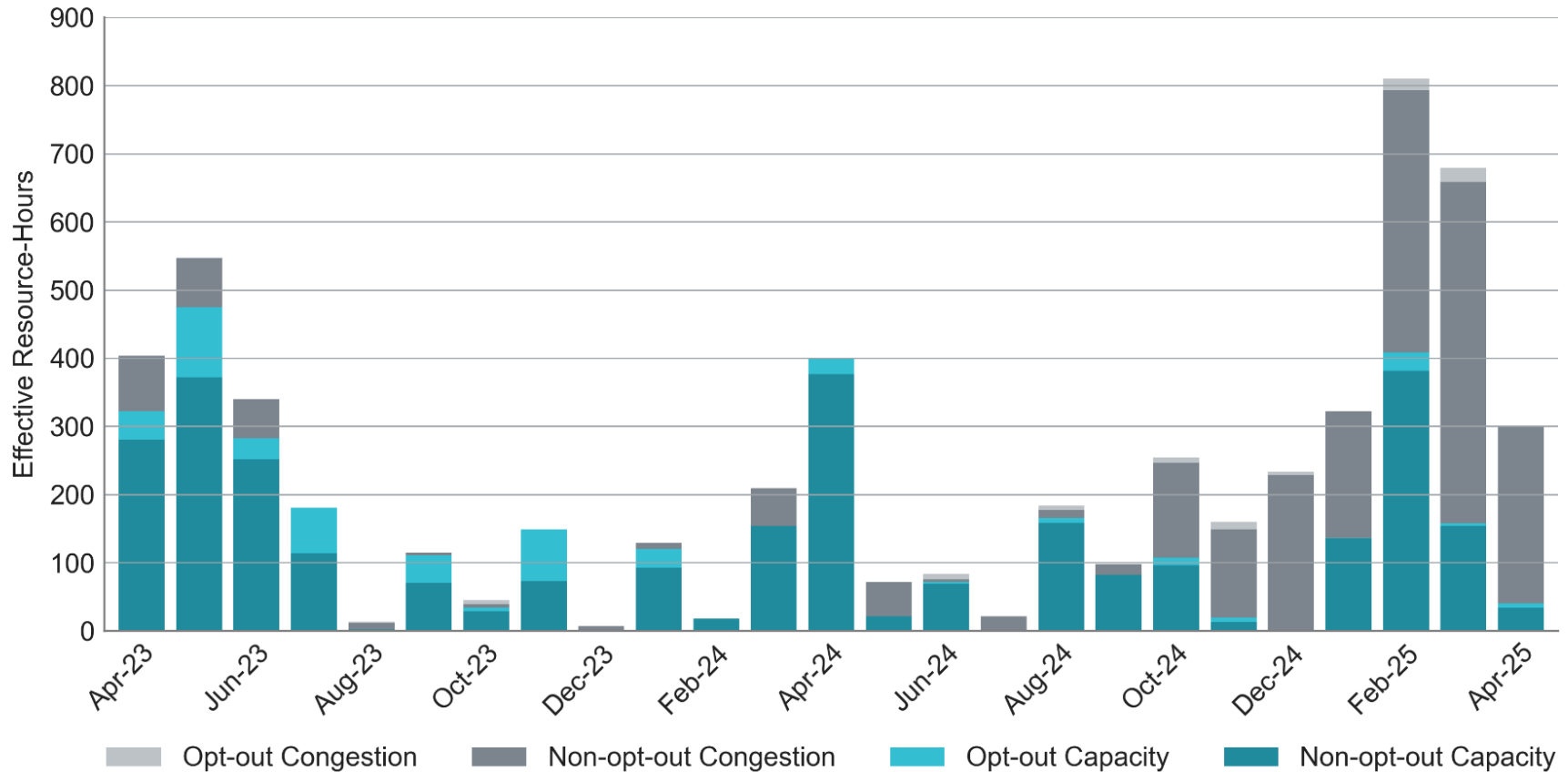
## Notes:

1) 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.

2) The "Cross Zone" category consists of cases in which the substations on either end of the constraint are in different zones.



# RUC activity decreased in April compared to March, and used to mostly manage congestion, but also for capacity needs

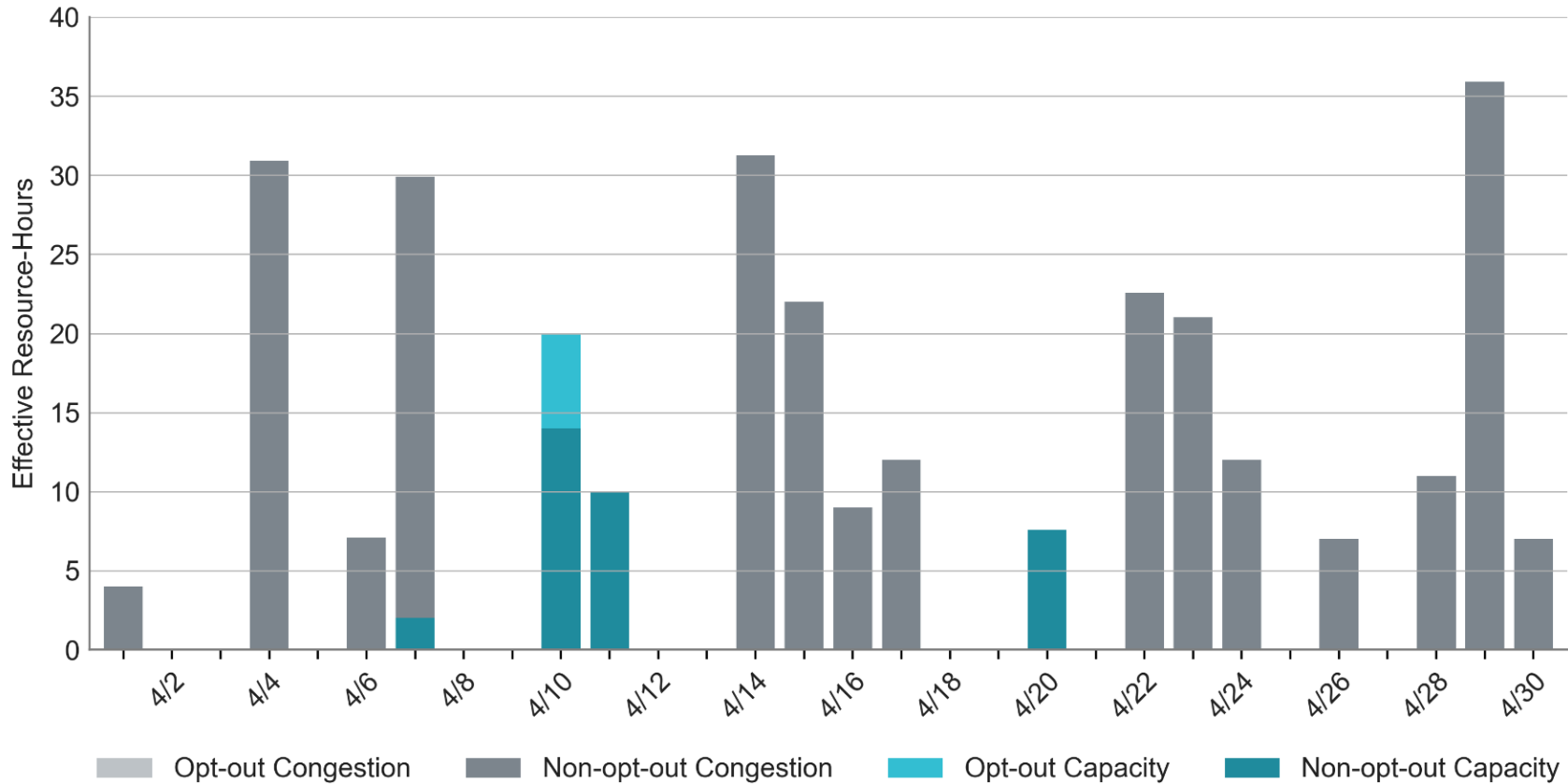


## Notes:

1) "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.

# RUC Instruction Reasons in April 2025

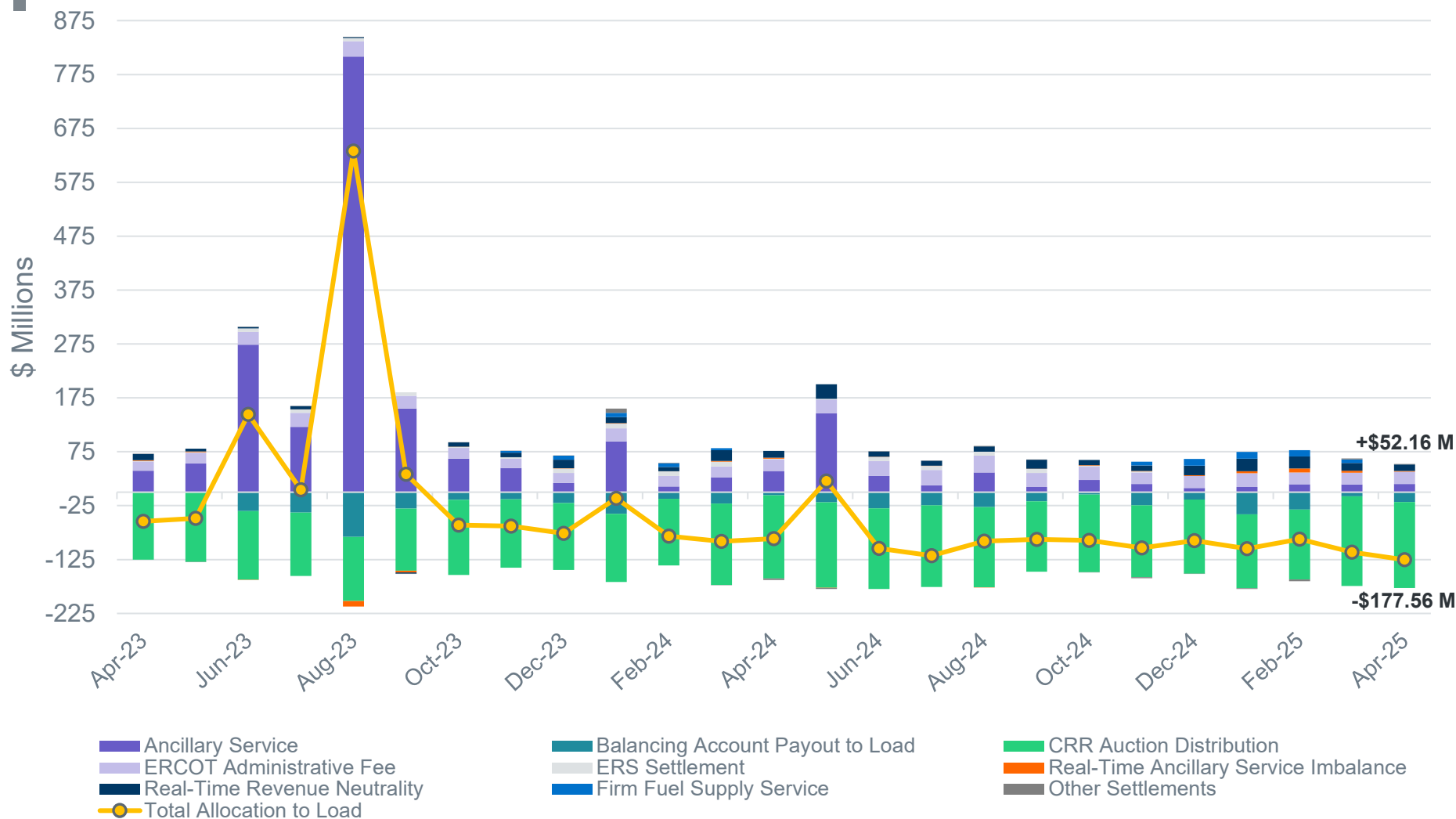
- Factors contributing to RUC volumes include seasonal outages and managing transmission constraints in South Texas



## Twenty-three Resources were committed in April, and used to mostly manage congestion, but also for capacity needs

| Resource # | Effective Resource-hours | For Congestion |             | For Capacity |             |
|------------|--------------------------|----------------|-------------|--------------|-------------|
|            |                          | Opt-Out        | Non-Opt-Out | Opt-Out      | Non-Opt-Out |
| 1          | 5.9                      | 0.0            | 0.0         | 5.9          | 0.0         |
| 2          | 4.0                      | 0.0            | 4.0         | 0.0          | 0.0         |
| 3          | 4.0                      | 0.0            | 4.0         | 0.0          | 0.0         |
| 4          | 2.0                      | 0.0            | 2.0         | 0.0          | 0.0         |
| 5          | 24.0                     | 0.0            | 24.0        | 0.0          | 0.0         |
| 6          | 6.9                      | 0.0            | 6.9         | 0.0          | 0.0         |
| 7          | 8.0                      | 0.0            | 8.0         | 0.0          | 0.0         |
| 8          | 3.6                      | 0.0            | 0.0         | 0.0          | 3.6         |
| 9          | 12.0                     | 0.0            | 12.0        | 0.0          | 0.0         |
| 10         | 13.0                     | 0.0            | 13.0        | 0.0          | 0.0         |
| 11         | 56.9                     | 0.0            | 48.9        | 0.0          | 8.0         |
| 12         | 10.0                     | 0.0            | 10.0        | 0.0          | 0.0         |
| 13         | 54.0                     | 0.0            | 38.0        | 0.0          | 16.0        |
| 14         | 8.0                      | 0.0            | 8.0         | 0.0          | 0.0         |
| 15         | 3.0                      | 0.0            | 3.0         | 0.0          | 0.0         |
| 16         | 11.6                     | 0.0            | 11.6        | 0.0          | 0.0         |
| 17         | 11.0                     | 0.0            | 11.0        | 0.0          | 0.0         |
| 18         | 2.0                      | 0.0            | 0.0         | 0.0          | 2.0         |
| 19         | 21.4                     | 0.0            | 21.4        | 0.0          | 0.0         |
| 20         | 6.0                      | 0.0            | 6.0         | 0.0          | 0.0         |
| 21         | 5.0                      | 0.0            | 5.0         | 0.0          | 0.0         |
| 22         | 12.0                     | 0.0            | 12.0        | 0.0          | 0.0         |
| 23         | 15.8                     | 0.0            | 11.8        | 0.0          | 4.0         |
| Total      | 300.1                    | 0.0            | 260.6       | 5.9          | 33.6        |

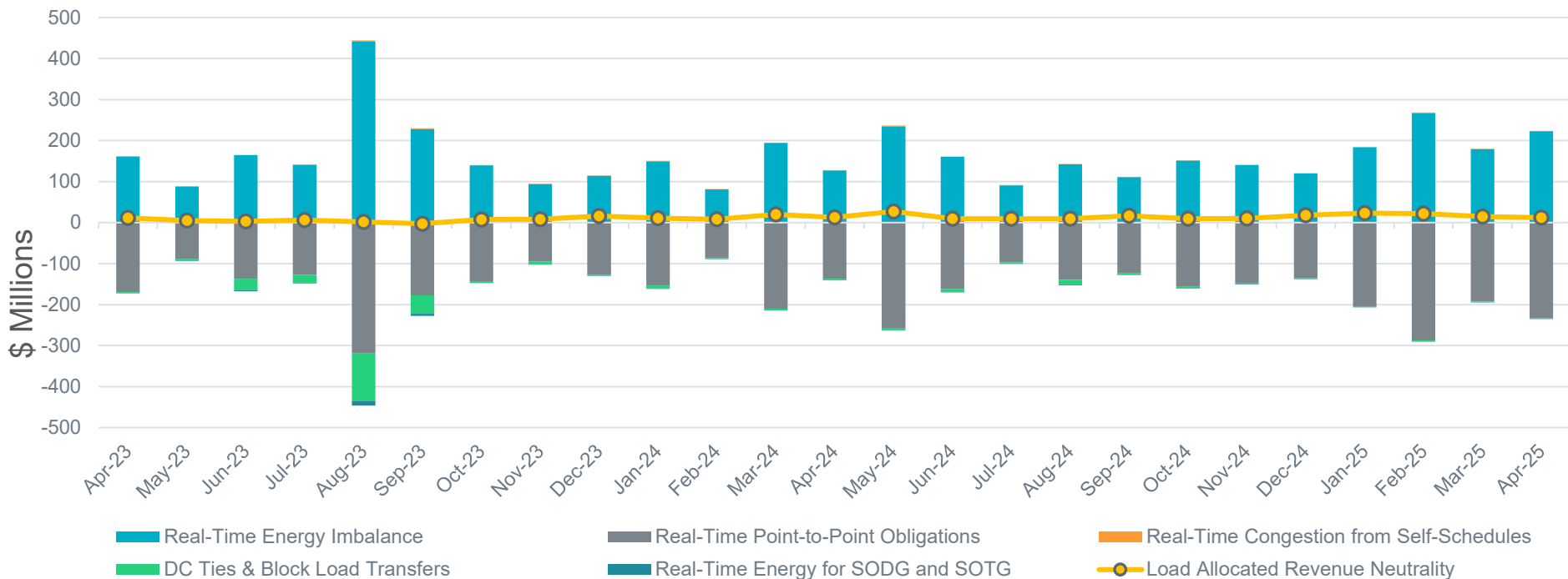
# Net Allocation to Load in April 2025 was (\$125.4) Million



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

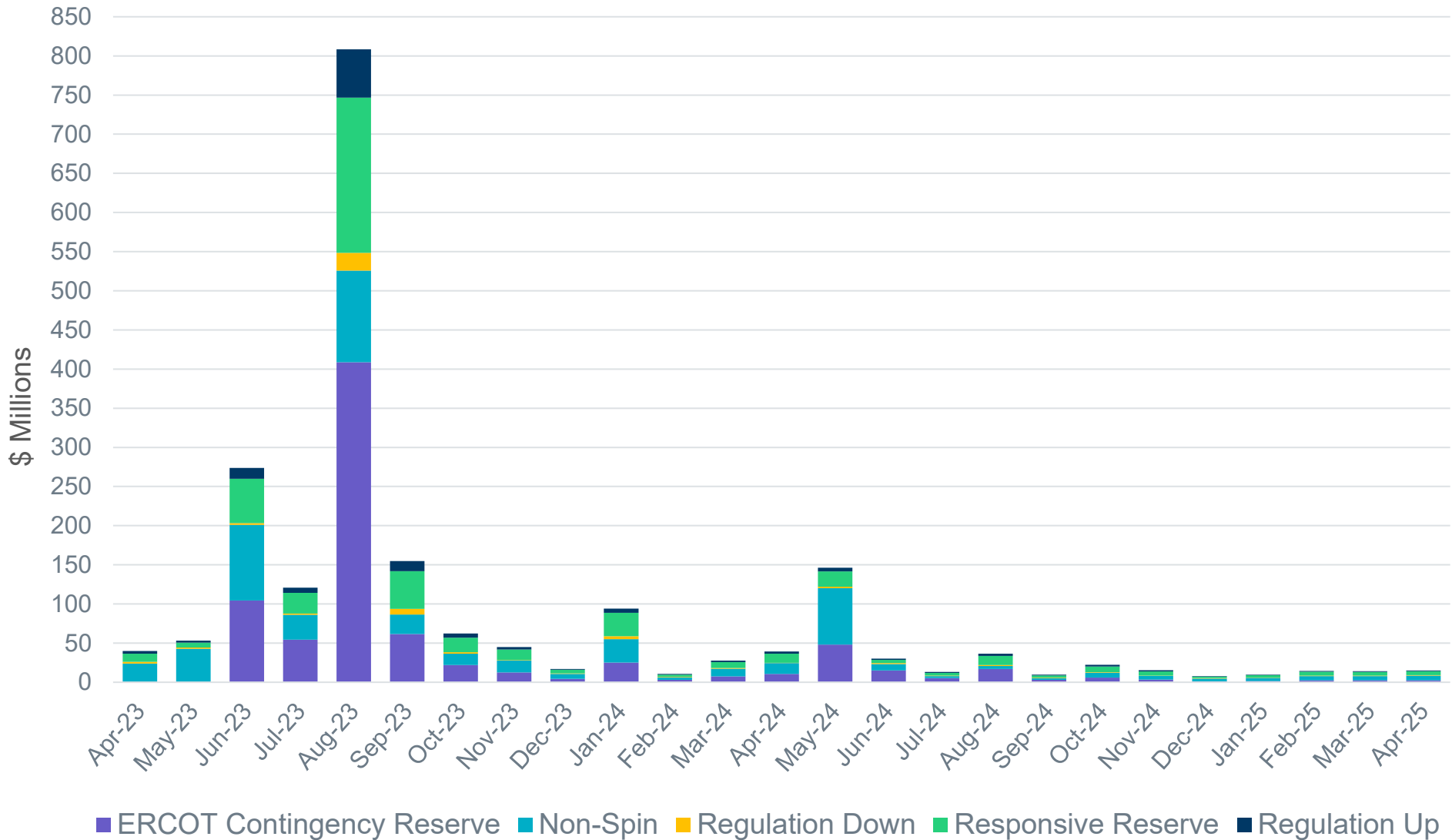


# Real-Time Revenue Neutrality allocated to Load was \$12.06 million for April 2025

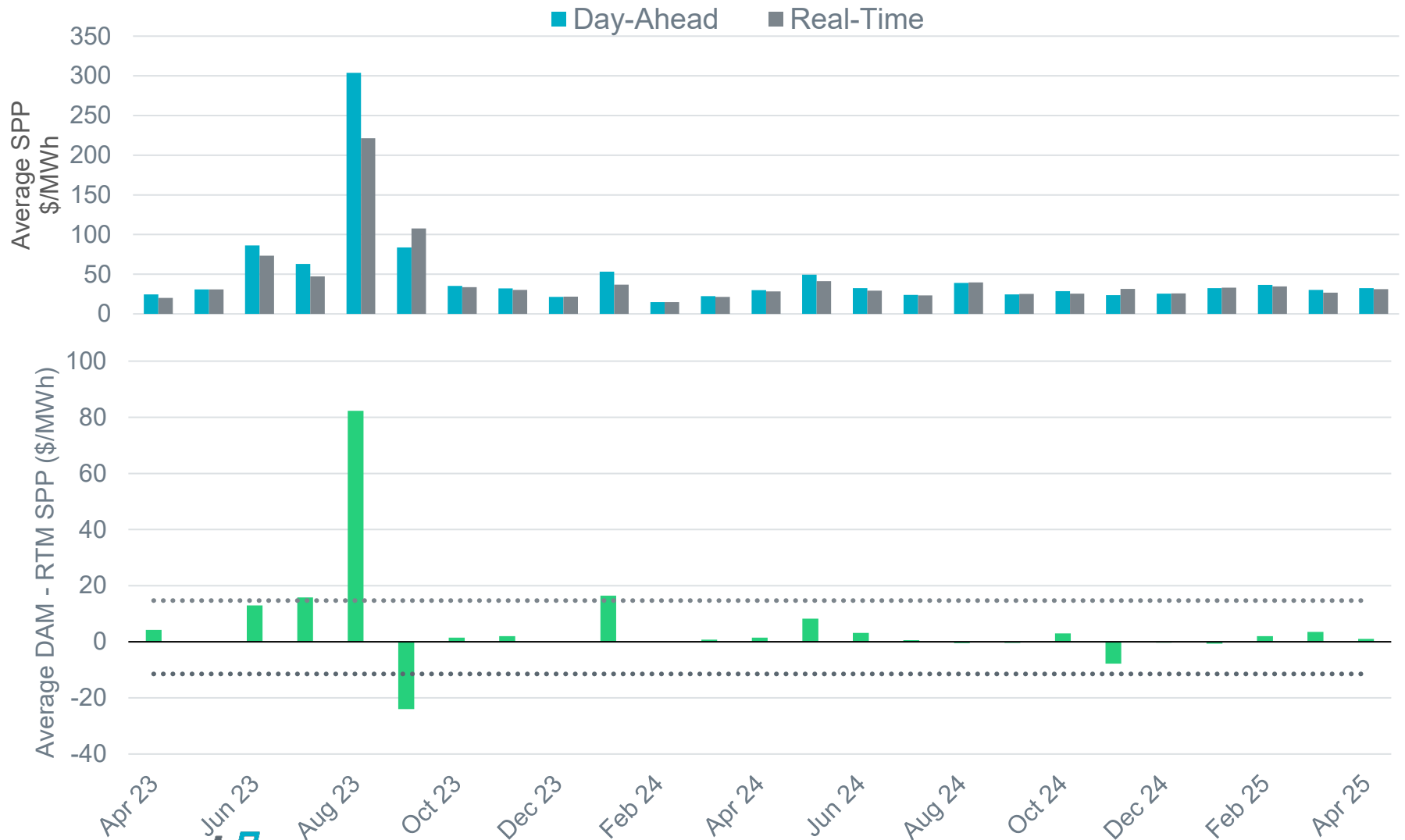


| April 2025 (\$M)                         |                |
|------------------------------------------|----------------|
| Real-Time Energy Imbalance               | \$222.89       |
| Real-Time Point-to-Point Obligation      | (\$232.59)     |
| Real-Time Congestion from Self-Schedules | \$0.53         |
| DC Tie & Block Load Transfer             | (\$2.29)       |
| Real-Time Energy for SODG and SOTG       | (\$0.60)       |
| <b>Load Allocated Revenue Neutrality</b> | <b>\$12.06</b> |

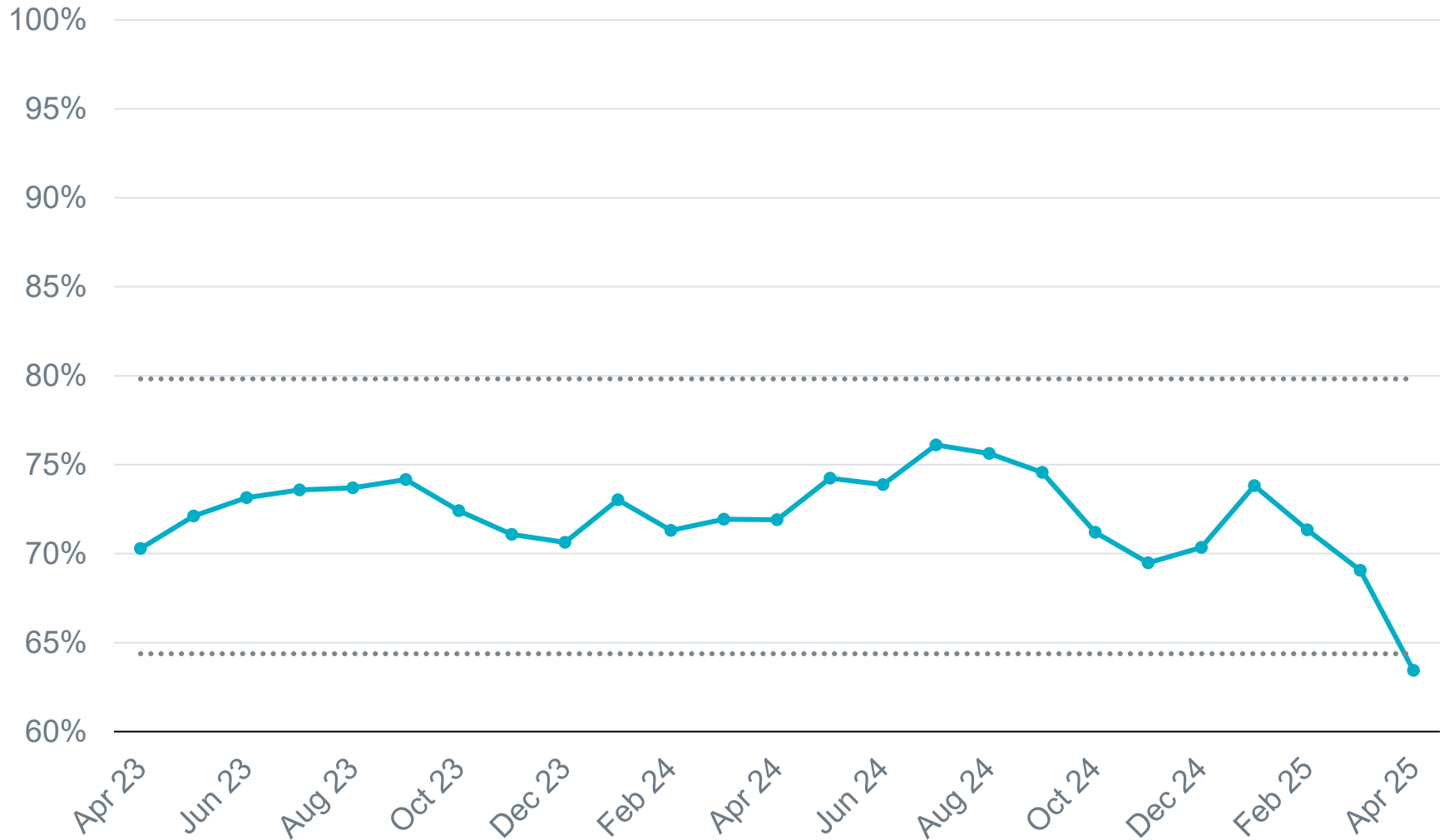
# Ancillary Services for April 2025 totaled \$15.04 million



# Real-Time prices were closely aligned with Day-Ahead prices, on average, in April

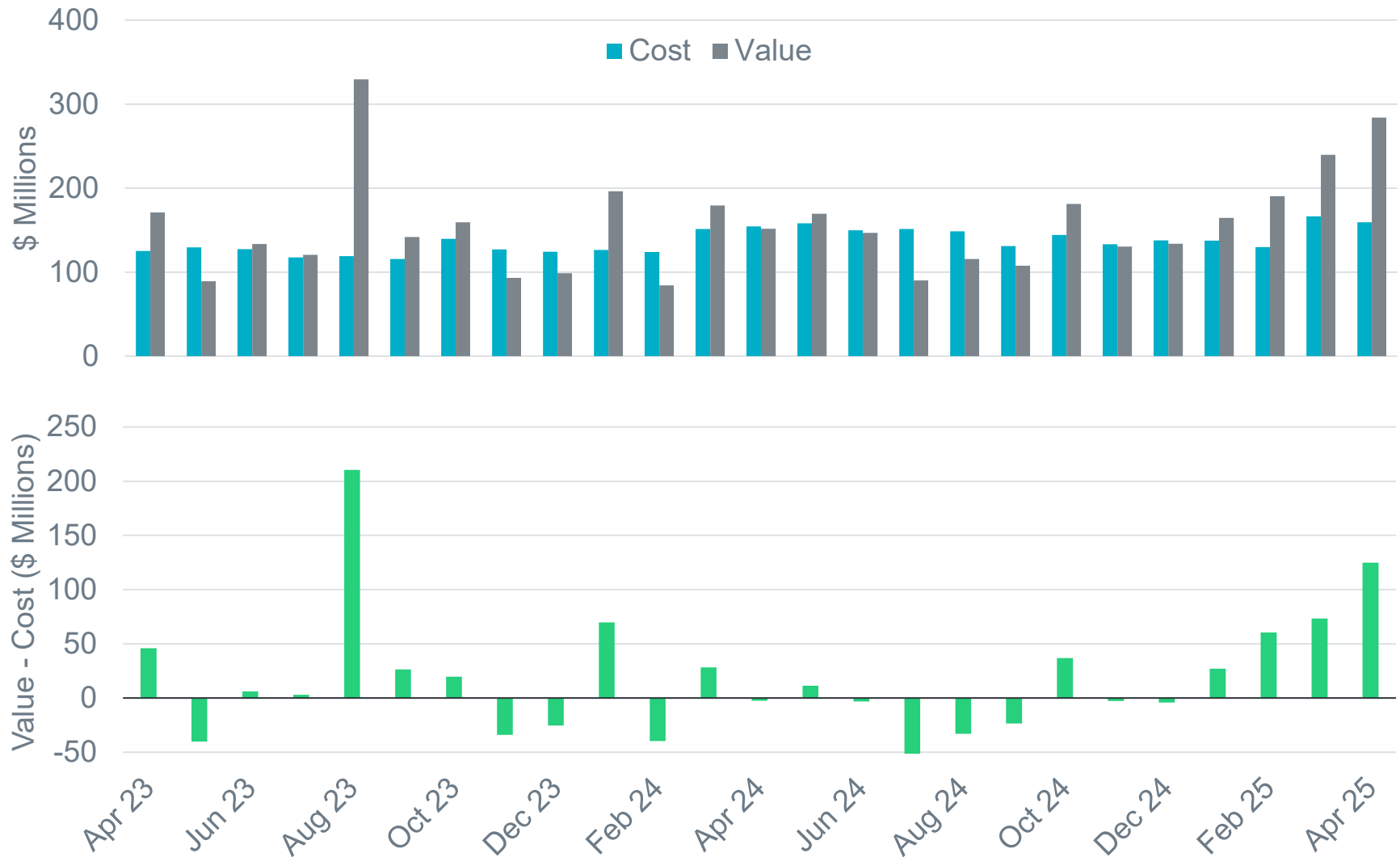


# Percentage of Real-Time Load transacted in the Day-Ahead Market decreased significantly in April compared to March

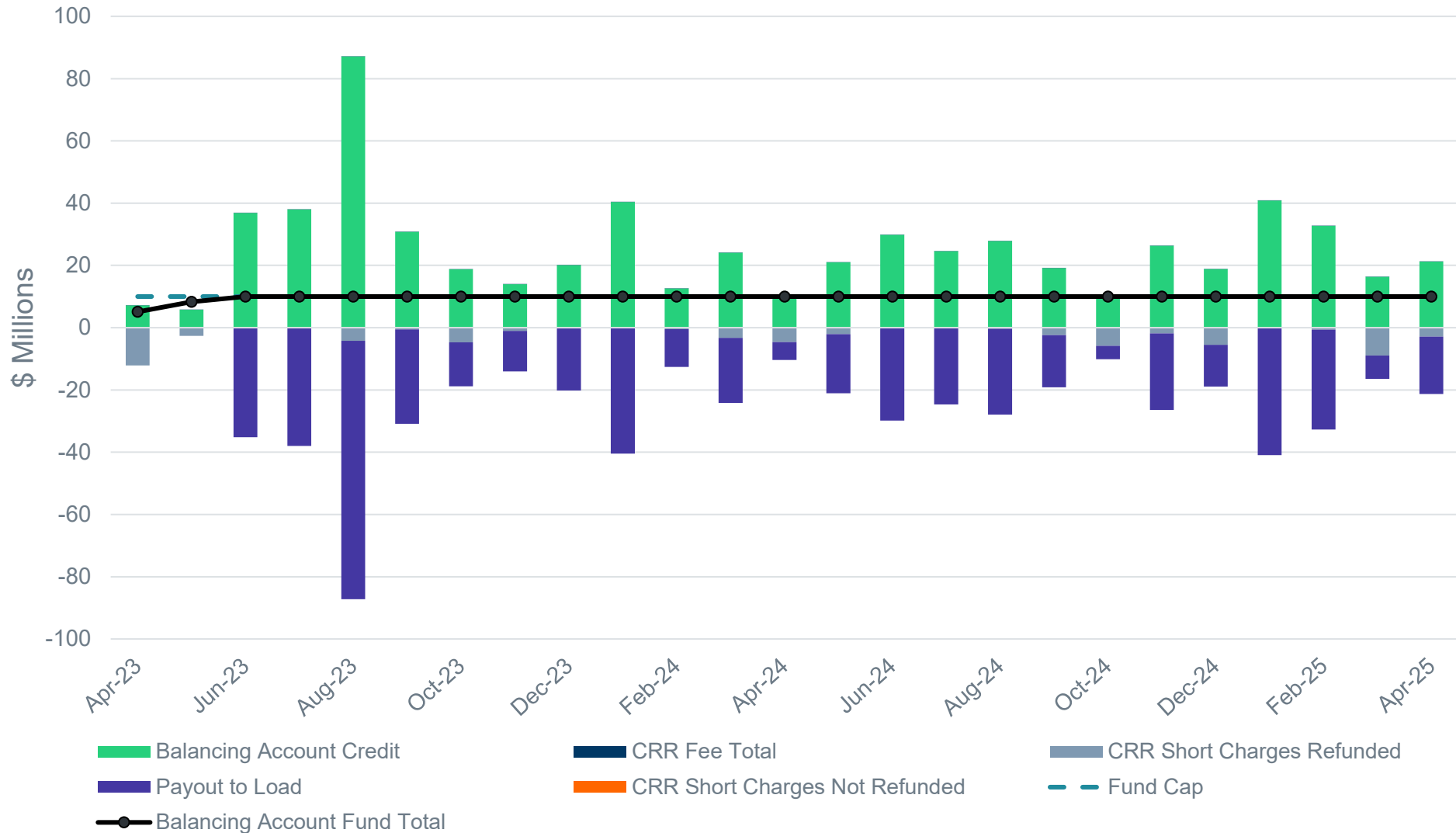


Notes:  
1) The dotted lines represent the bounds for major outliers.

## Congestion Revenue Right (CRR) Value was greater than cost in April due to increased congestion in the Day-Ahead Market



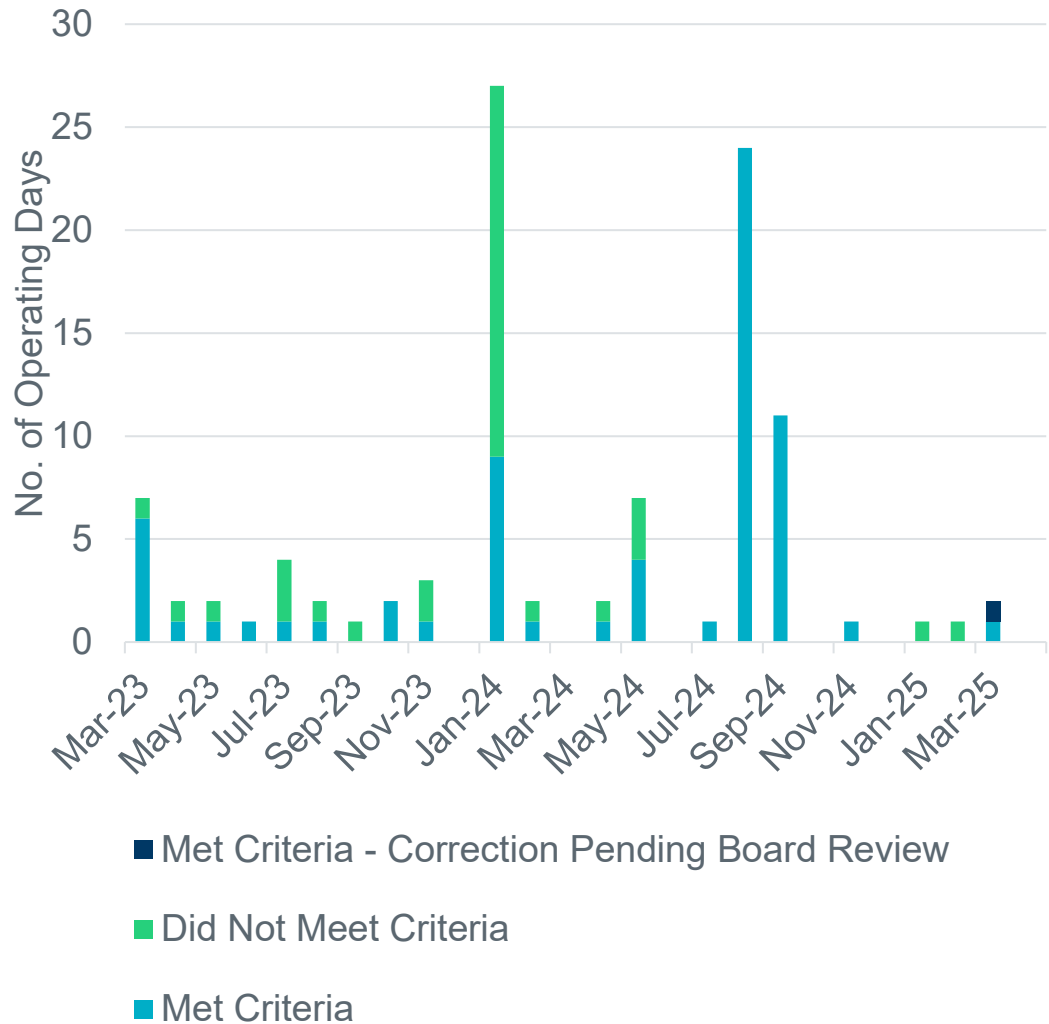
# The CRR Balancing Account was fully-funded and excess amounts were allocated to Load



# 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 NPRR 1024 and were corrected;
- Days that were not corrected because they did not meet the criteria for “significance” under NPRR1024; and
- Days that are currently undergoing analysis to determine if criteria for “significance” under NPRR 1024 is met.



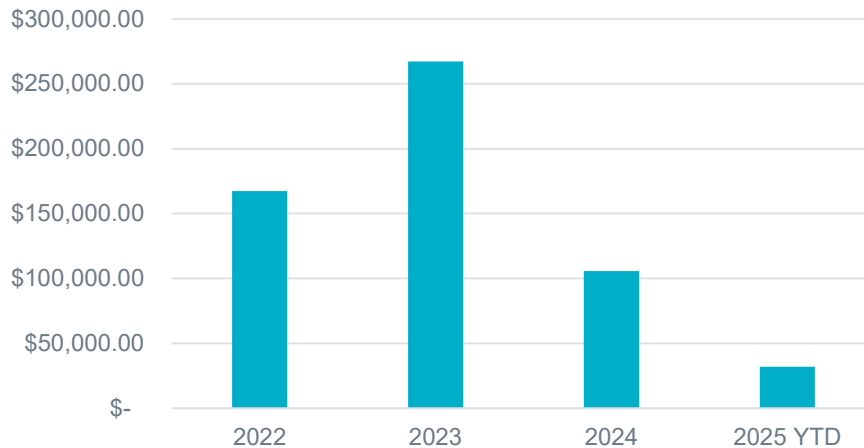
## Details for Price Corrections Review

There were no price impact events during the months of April or May 2025.

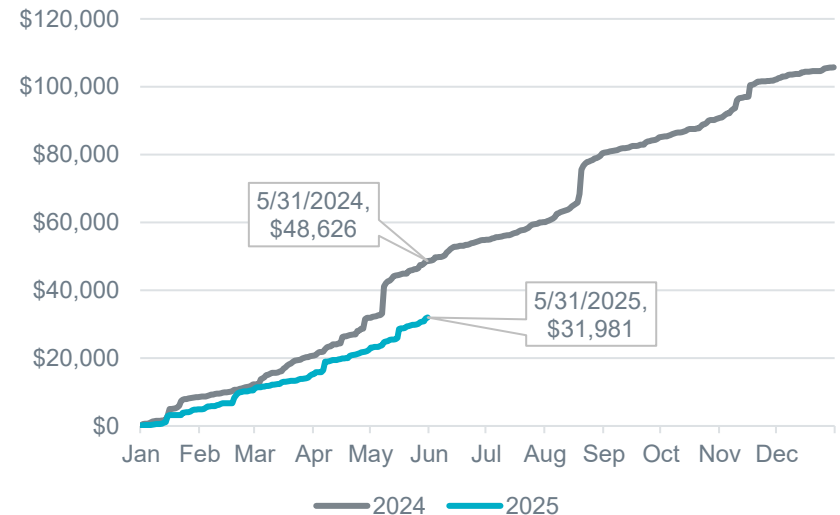
# Peaker Net Margin

- Peaker Net Margin represents the net revenue that a hypothetical gas-fired combustion turbine generator could have earned from the Real-Time Market
- After a significant drop in Peaker Net Margin in 2024 from recent years, it continues to trend lower so far this year even when compared to 2024.

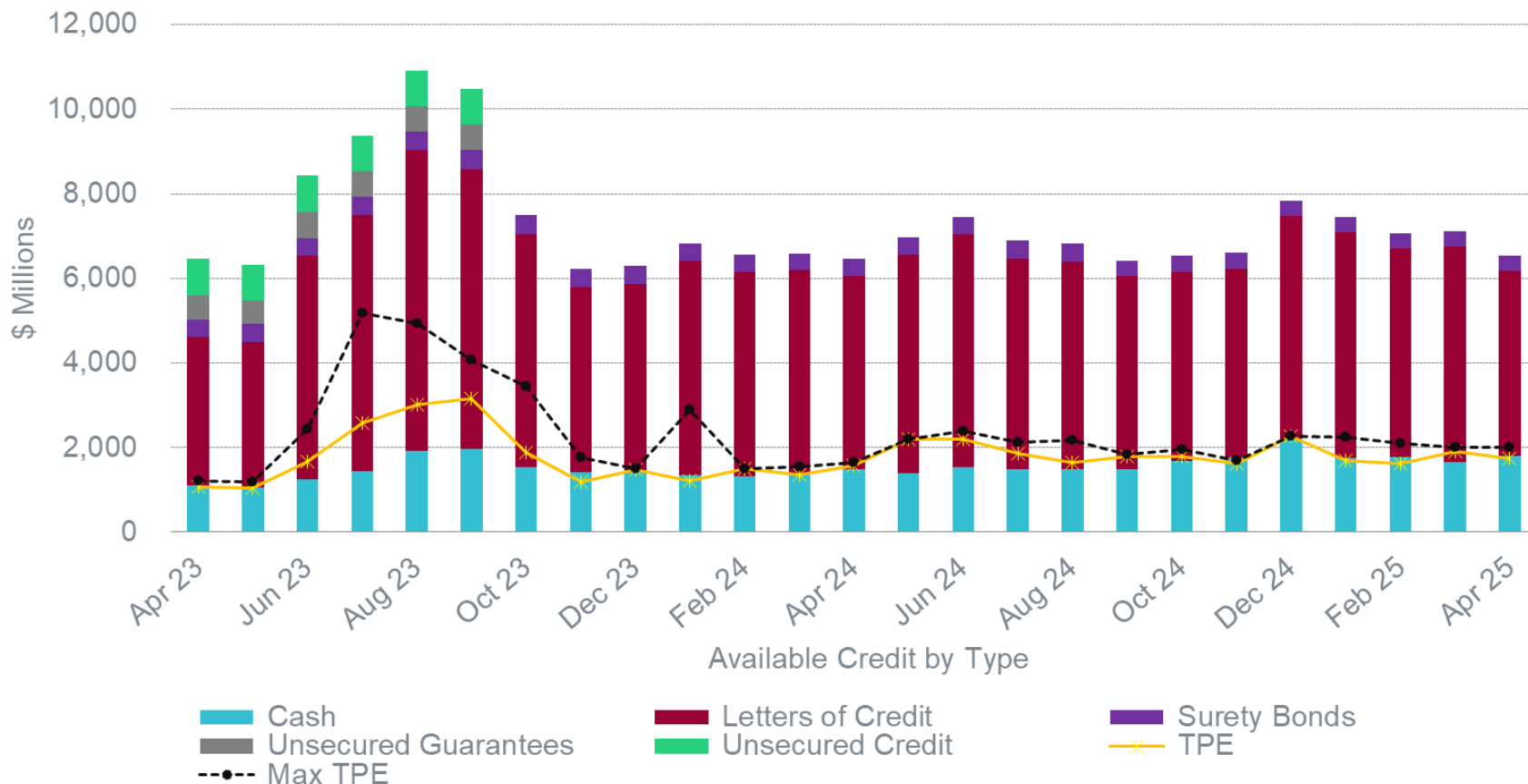
Annual Peaker Net Margin Accumulation



2025 Cumulative Peaker Net Margin



# Available Credit by Type compared to Total Potential Exposure (TPE)



\*Numbers are as of month end except for Max TPE

# Summary of Retail Transaction Volumes – April 2025

|                                     | Year-To-Date     |                  | Transactions Received |                |
|-------------------------------------|------------------|------------------|-----------------------|----------------|
| Transaction Type                    | April 2025       | April 2024       | April 2025            | April 2024     |
| Switches                            | 495,230          | 451,201          | 115,540               | 145,509        |
| Acquisitions                        | 0                | 0                | 0                     | 0              |
| Move - Ins                          | 935,346          | 1,099,514        | 238,444               | 251,888        |
| Move - Outs                         | 456,744          | 453,553          | 121,303               | 120,430        |
| Continuous Service Agreements (CSA) | 149,999          | 121,373          | 27,290                | 30,727         |
| Mass Transitions                    | 0                | 0                | 0                     | 0              |
| <b>Total</b>                        | <b>2,037,319</b> | <b>2,125,641</b> | <b>502,577</b>        | <b>548,554</b> |
|                                     |                  |                  |                       |                |