



Item 9.4: Market Credit Update

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Reliability and Markets Committee Meeting

ERCOT Public

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Market Credit Update: Overview

- **Purpose**

Provide updates on key Credit indicators and other Credit-related developments

- **Voting Items / Requests**

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

- **Key Takeaways**

- Market-wide average Total Potential Exposure (TPE) increased from \$1.62 billion in November 2024 to \$1.76 billion in December 2024
 - Forward adjustment factors increased towards year-end ahead of the cold front in January
- Average Discretionary Collateral remained flat in December 2024 at \$3.98 billion

New Credit NPRR

New NPRR

- ERCOT is planning to submit a new NPRR related to collateral requirements for Counter-Parties.
- 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.
- The final proposal is a result of extensive analysis and discussion taking place at the Credit Finance Sub Group (CFSG) between April 2023 and November 2024.
- CFSG approved the final proposal through a formal vote at the December 2024 meeting.

Estimated Aggregate Liability (EAL) Formula Changes

What is Estimated Aggregate Liability?

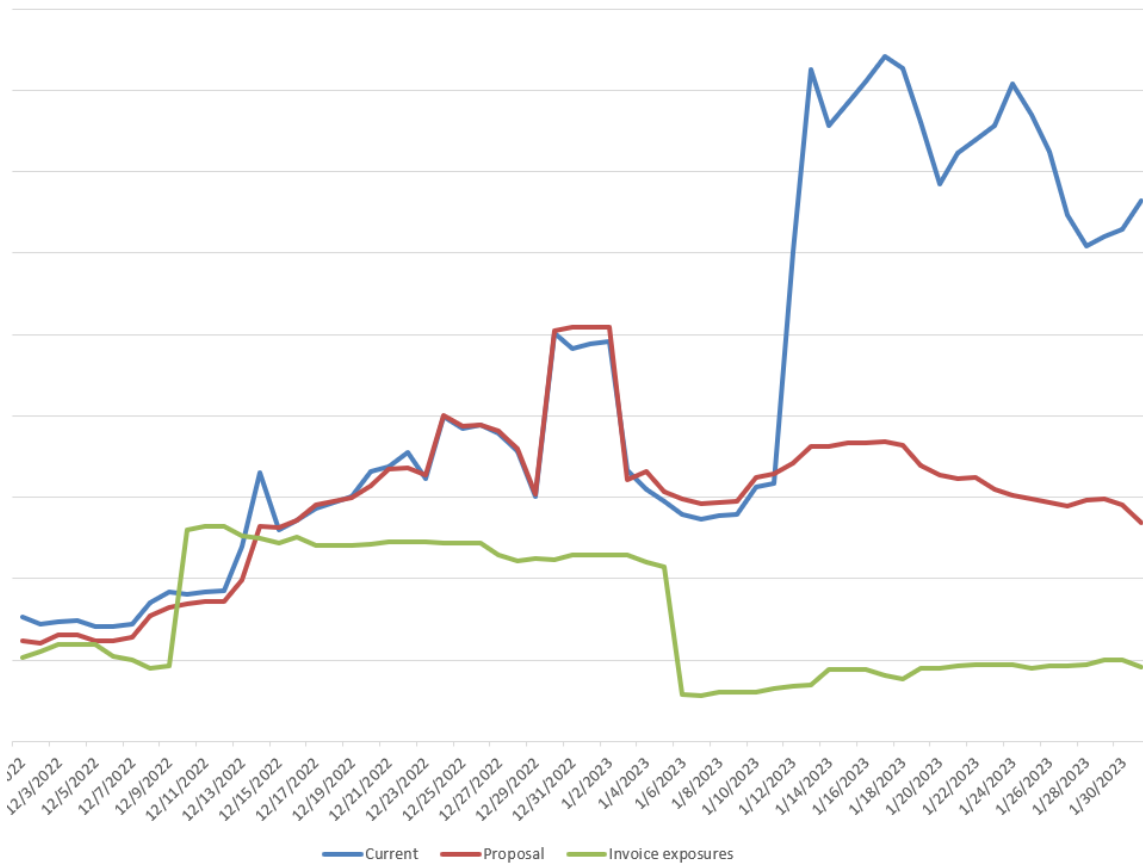
- In general, ERCOT credit exposure to Real-Time and Day-Ahead Statements is estimated via the ERCOT Credit formula referred to as Estimated Aggregate Liability (EAL). The EAL formula is defined in Nodal Protocol Section 16.11.4.3.
- To participate in the ERCOT Market, Counter-Parties must be fully secured with collateral that matches or exceeds the EAL.*

What is the goal of the proposal?

- Reduce instances of over-collateralization, referred to as “positive gaps” without increasing the instances of under-collateralization, referred to as “negative gaps”.

* There is another credit mechanism related to Congestion Revenue Rights, however that mechanism is not in scope for this discussion.

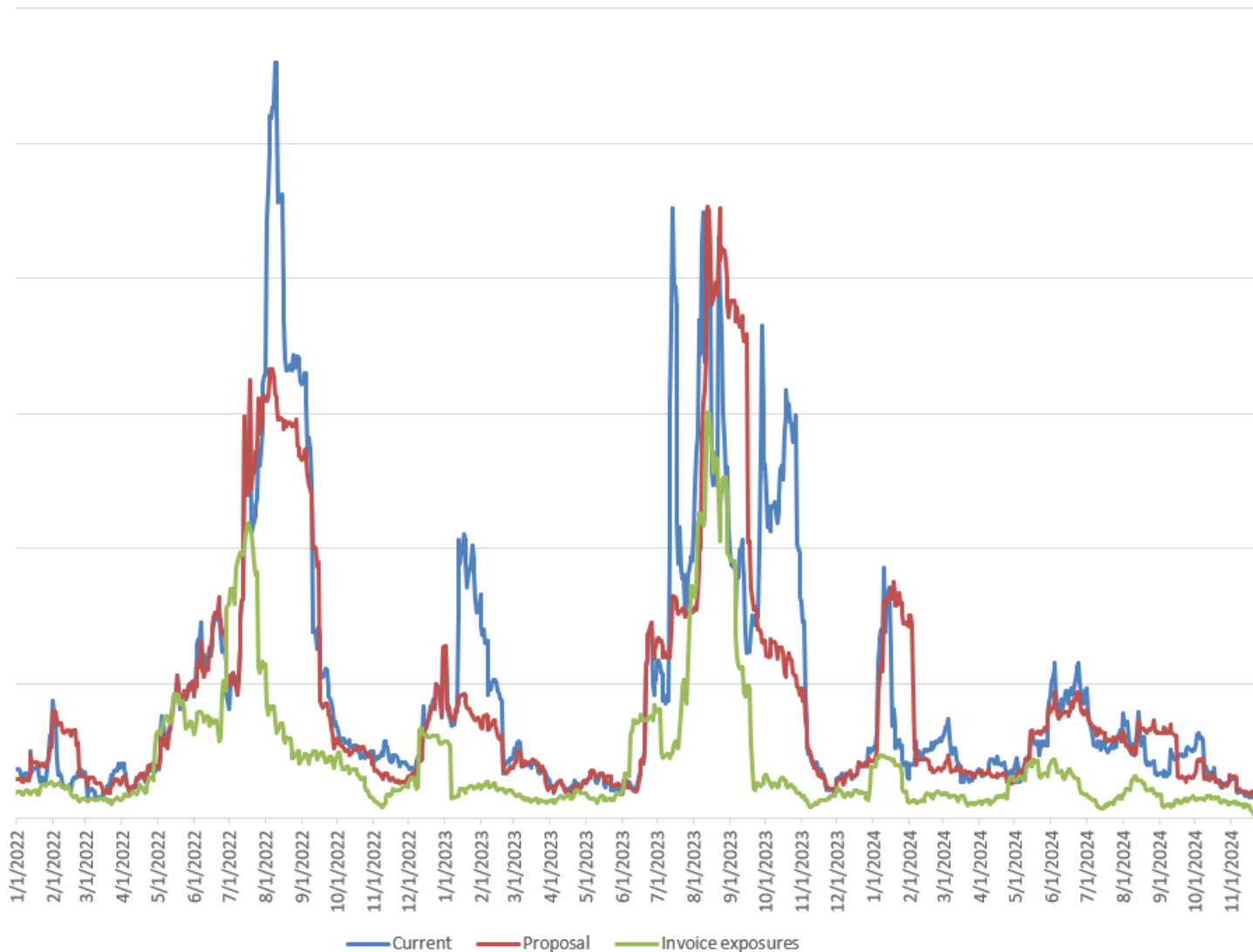
Winter storm Elliott: Example



Under the current framework credit exposures spike up higher than the initial peak (double top or even higher second top) after Winter storm Elliott had passed and settled. This led to an unreasonable over-collateralization under the existing EAL formula.

The new proposal addresses this “higher 2nd top” issue and the related over-collateralization.

Example Counter-Party



Market Credit Update

Appendices

EAL Negative and Positive Gaps: Current vs. Proposed

Overall

| Negative Gap | Sum total | Change, % | # of occurrences | Change, % |
|--------------|----------------------|-----------|------------------|-----------|
| Current | \$ (20,094,009,788) | | 16,680 | |
| Proposed | \$ (18,410,006,257) | -8% | 15,796 | -5% |
| Positive Gap | Sum total | Change, % | # of occurrences | Change, % |
| Current | \$ 1,056,088,196,812 | | 349,176 | |
| Proposed | \$ 990,209,921,825 | -6% | 349,954 | 0% |

Load & Gen

| Negative Gap | Sum total | Change, % | # of occurrences | Change, % |
|--------------|---------------------|-----------|------------------|-----------|
| Current | \$ (13,040,472,995) | | 3,061 | |
| Proposed | \$ (11,897,399,874) | -9% | 2,750 | -10% |
| Positive Gap | Sum total | Change, % | # of occurrences | Change, % |
| Current | \$ 746,283,524,068 | | 39,742 | |
| Proposed | \$ 690,027,197,900 | -8% | 40,129 | |

Load

| Negative Gap | Sum total | Change, % | # of occurrences | Change, % |
|--------------|--------------------|-----------|------------------|-----------|
| Current | \$ (3,807,555,846) | | 3,788 | |
| Proposed | \$ (3,406,783,555) | -11% | 3,390 | -11% |
| Positive Gap | Sum total | Change, % | # of occurrences | Change, % |
| Current | \$ 74,406,383,776 | | 36,792 | |
| Proposed | \$ 65,710,763,390 | -12% | 37,008 | 1% |

Traders

| Negative Gap | Sum total | Change, % | # of occurrences | Change, % |
|--------------|--------------------|-----------|------------------|-----------|
| Current | \$ (2,688,632,979) | | 6,960 | |
| Proposed | \$ (2,582,731,559) | -4% | 6,844 | -2% |
| Positive Gap | Sum total | Change, % | # of occurrences | Change, % |
| Current | \$ 143,827,295,793 | | 181,003 | |
| Proposed | \$ 143,939,425,859 | 0% | 181,199 | 0% |

The proposed EAL revision

- (1) Reduces negative gaps for the entire period(s) analyzed
- (2) Reduces negative gaps for all market activity types
- (3) Reduces positive gaps for the entire period(s) analyzed and most market activity types

* Data range of analysis: from 1/1/2022 – 11/1/2024

EAL Formula: Current vs. Proposed

Current: Apply the forward factor to the highest extrapolated historical RTM average exposures over the look back period.

$$EAL_q = \text{Max} [\dots, \text{RFAF} * \text{Max} \{\text{RTLE during the previous } lq \text{ days}\}, \text{RTLF}] + \dots *$$

ERCOT Proposal: Apply the forward factor to each extrapolated historical average exposures and take the highest over the look back period.

$$EAL_q = \text{Max} [\dots, \text{Max}\{(\text{RFAF} * \text{Max}\{\text{RTLE}\}) \text{ during the previous } lq \text{ days}\}, \text{RTLF}] + \dots *$$

Additional changes:

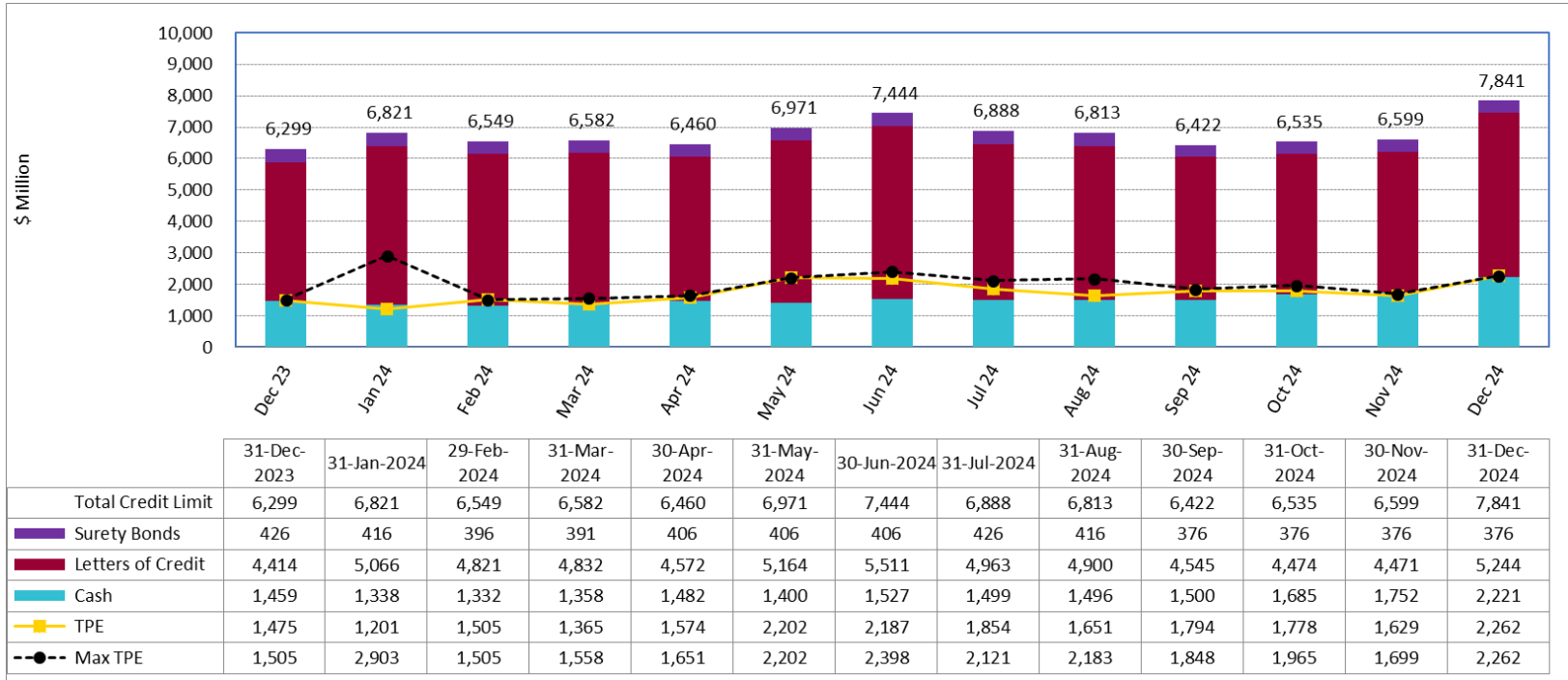
- Created seasonal lookback periods of 40 days for the summer months and 20 days for non-summer. (*lq* value in formula)
- Increased the Minimum Credit Exposure (MCE), which serves as a floor to the EAL formula, to cover 2 days of estimated load volumes from the current 1 day.

* Unaffected variables have been removed to improve readability in presentation.



Available Credit by Type Compared to Total Potential Exposure (TPE) Month-End November 2023 – November 2024

This shows TPE compared to the forms of collateral held.

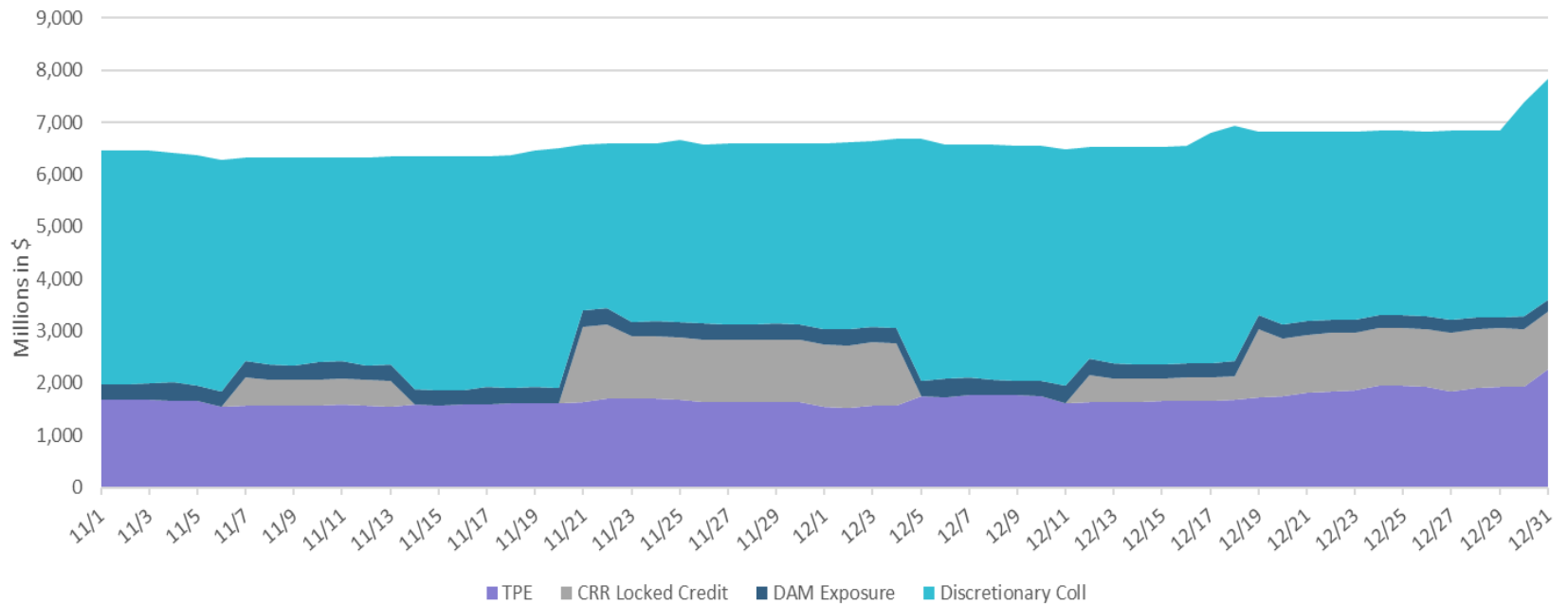


- Numbers are as of month-end except for Max TPE
- Max TPE is the highest TPE for the corresponding month



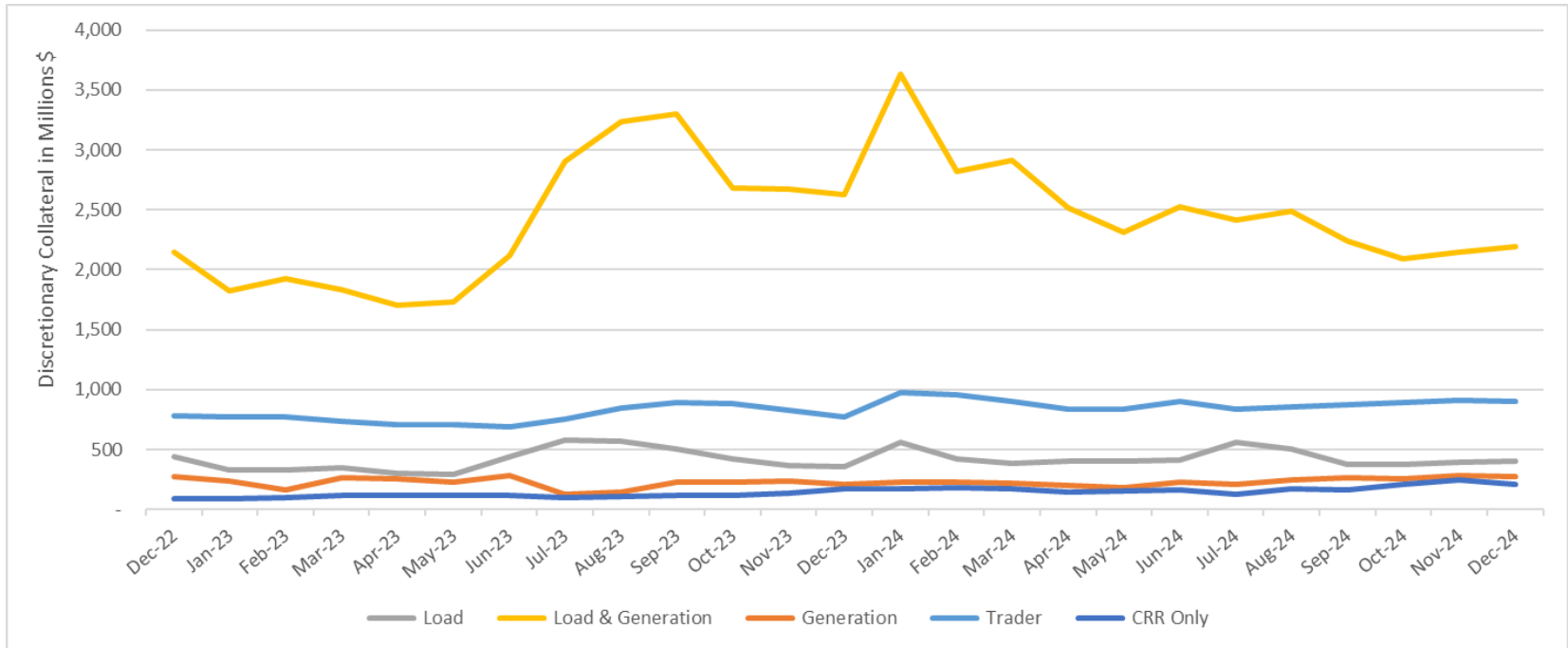
Discretionary Collateral November 2024 – December 2024

ERCOT Counter-Parties typically provide a large measure of collateral in excess of that required to cover TPE, Day-Ahead Market (DAM) activity and Congestion Revenue Right (CRR) auctions.



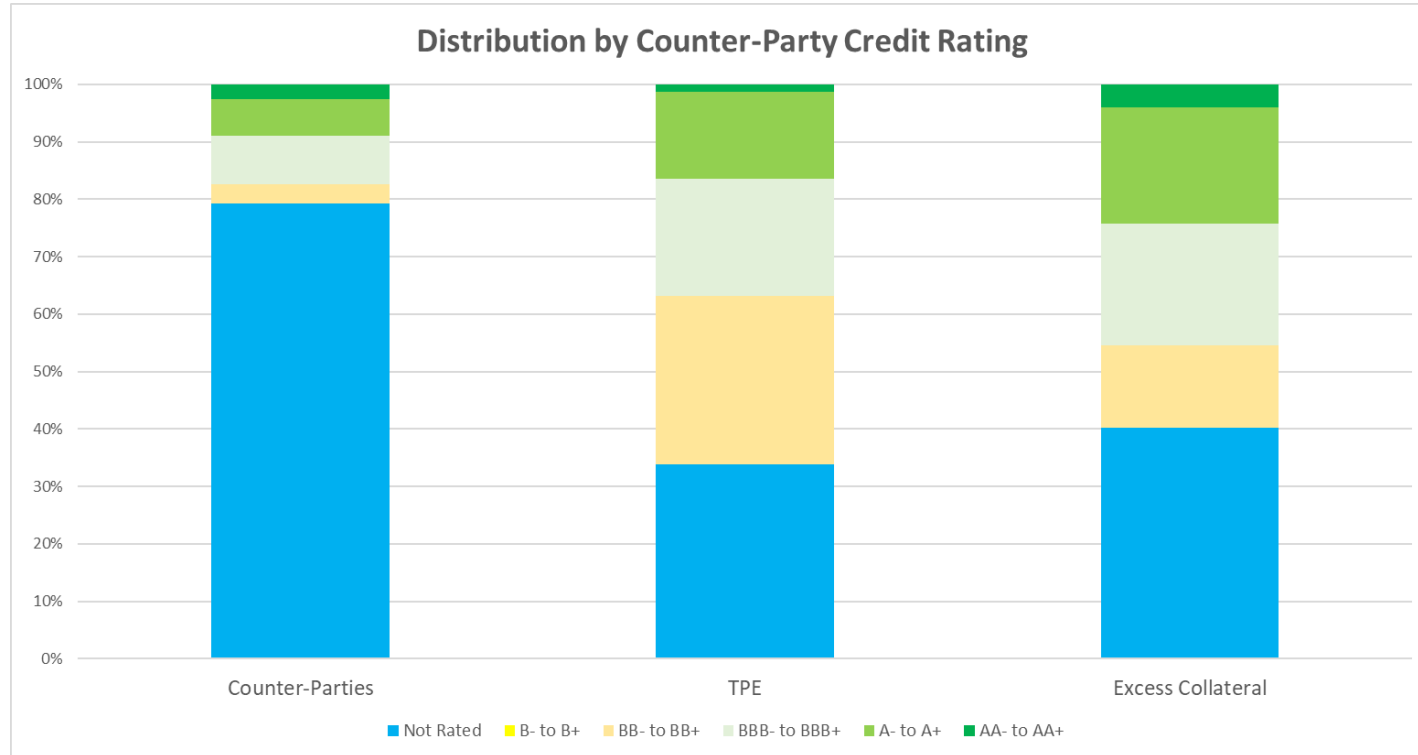
Discretionary Collateral by Market Segment

December 2022 - December 2024



Distributions by Counter-Party Credit Rating – December 2024

Most ERCOT Counter-Parties are not agency-rated. However, unrated entities account for proportionately less TPE and excess collateral than agency-rated entities.



* TPE is average for the month

* Excess collateral (collateral in excess of TPE) is average for the month

TPEA Coverage of Settlements November 2023 – November 2024

Total Potential Exposure – Any (TPEA) is estimated credit exposure for non-CRR market activities.

