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Pay-for-Performance Financial Assurance

Discussion of Financial Assurance Policy regarding Pay-for-Performance Penalties and further Redlines to the FAP

NEPOOL Budget & Finance Subcommittee Meeting

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The ISO has developed a recommendation to address the higher credit risk posed by participants in the FCM that may be unable to pay PFP penalties when they arise due to capacity scarcity conditions occurring

Executive Summary

- The ISO performed a credit risk assessment of all capacity sellers in FCA 16 and determined that more than three quarters of them do not have sufficient corporate liquidity to cover their potential penalty payment obligations associated with the CSOs that were awarded to them
- The ISO, therefore, developed a recommendation to update the FCM Delivery FA methodology (i.e., Pay-for-Performance collateral requirements) in the FAP with input from stakeholders over the last year
- The updated FCM Delivery FA will require capacity sellers that are assessed as medium / high risk per a new Corporate Liquidity Assessment to post additional collateral in order to ensure the PFP market design operates as intended, the ISO can clear the market on a timely basis and socialized defaults are adequately mitigated
- The ISO plans to file the recommendation with FERC during Q4-2024 with an effective date of January 1, 2025 so MPs may reconfigure their CSOs in the final ARA before the effective CCP
- The expected cost to consumers is immaterial and ranges from $0.00003 to $0.00007/kWh using very conservative financing assumptions for the cost of the incremental collateral incurred by medium / high risk capacity sellers

The ISO's recommendation to address the risk posed by uncreditworthy capacity sellers in the FCM was indicated to stakeholders back in 2023

Background

- In September 2023, the ISO initially presented four recommended updates to the FAP regarding FCM Delivery FA following its analysis of the adequacy of the PFP collateral methodology in the wake of Winter Storm Elliot and events in PJM
- The ISO subsequently filed three of those updates to the methodology (i.e., Scaling Factor, CWAP and IMC) with FERC which addressed the risk of collateral shortfalls with capacity sellers that incur net payment obligations, but doesn't address the higher non-payment risk posed by capacity sellers with inadequate corporate liquidity risk profiles in the FCM; these FAP updates became effective on March 1, 2024
- In September 2023, the ISO indicated that the fourth recommended FAP update was significantly more complex to develop because, even accounting for the updated PFP collateral methodology that became effective as of March 1, 2024, the FAP does not have a nuanced approach to evaluate capacity sellers and collateralize based on their financial ability to settle their contractually obligated PFP penalty payment obligations that exceed collateral already posted to the ISO

The ISO's credit risk management of capacity sellers that are not creditworthy needs to evolve to ensure the PFP market design operates as intended, the ISO can clear the market on a timely basis and socialized defaults are adequately mitigated

Rationale for Making Recommendation

- Per the ISO's analysis of the corporate liquidity of all capacity sellers awarded CSOs in FCA 16, the ISO is concerned about the following credit risks and issues that it sees in the FCM
  a) Many capacity sellers cannot demonstrate access to adequate corporate liquidity to ensure that they are able to pay PFP penalty charges resulting from a capacity scarcity condition. This affects the ISO's ability to settle the market efficiently.
  b) The current PFP collateral methodology doesn't increase the collateralization of the potential credit exposure (i.e., the monthly and annual stop-loss) posed by capacity sellers that may be unable to make those penalty payments on a timely basis to the ISO
  c) Capacity sellers are unlikely to be able to resolve operational performance issues during capacity scarcity conditions before triggering their maximum potential financial loss for the given month
  d) Although there have been no socialized defaults to date, some capacity sellers may be risking bankruptcy absent appropriate corporate liquidity risk management practices (similar to recent events in PJM) which would result in socialized defaults impacting consumers and the rest of the market

ISO is recommending the application of a new Corporate Liquidity Risk Assessment methodology to determine the appropriate PFP collateral requirements for all capacity sellers from CCP 25-26 onwards

Options Considered to Address Credit Risk Issue

- The ISO considered the following potential options to address the risks and issues introduced by capacity sellers with inadequate liquidity to meet their contractual obligations
  a) Do nothing given that historically the ISO has only experienced five periods of capacity scarcity conditions in the last 10 years and just socialize defaults to the market when the risk materializes and illiquid capacity sellers cannot pay the bill; or
  b) Apply a periodic corporate liquidity risk assessment to determine the ability of capacity sellers on a standalone basis to honor their contractual financial obligations under their CSOs and mitigate those posing higher credit risk by increasing cash and LC collateral requirements which would be the most costly impact for the overall market; or
  c) Apply a periodic corporate liquidity assessment to determine the ability of capacity sellers and potential guarantors on a collective basis to satisfy the contractual financial obligations of the MP and mitigate those remaining that pose higher credit risk by increasing cash and LC collateral requirements which has lower cost implications for the market; or
  d) Develop other market based (non-collateral approaches) that could potentially mitigate risk such as those proposed by NEPGA and CPV at the joint meeting last month of the Markets Committee and Budget and Finance Subcommittee meeting

The ISO recommendation focuses on addressing the higher credit risk presented by capacity sellers that are unable to demonstrate their ability to satisfy the financial obligations associated with their CSOs (as limited by the stop-losses)

ISO's Recommendation

- The ISO determined that Option C is the most optimal solution for the following reasons
  a) It periodically monitors and assesses the ability of capacity sellers to satisfy their financial contractual obligations under a CSO (i.e., the monthly and annual stop-loss) and adjusts collateral accordingly which pro-actively mitigates default risk
  b) Additional collateral is required to be posted only by those capacity sellers assessed as posing a higher default risk which mitigates socialized defaults to the market
  c) Capacity sellers that pose a higher default risk are therefore required to internalize their own collateral financing costs to reduce their risk to the pool rather than using other mechanisms such as longer-pay back periods which disadvantages capacity sellers that over-performed during capacity scarcity conditions and expect timely payment of their bonus revenues (i.e., the capacity performance payment)
  d) Higher risk capacity sellers have incremental financial assurance requirements which ensures the ISO can clear the market on a timely basis
- As requested by stakeholders, the ISO has also provided a range of expected costs incurred by capacity sellers using more conservative financing assumptions for the incremental PFP collateral associated with this recommendation
- The expected cost to consumers is immaterial and ranges from $0.00003 to $0.00007/kWh despite applying more conservative financing assumptions potentially incurred by capacity sellers while the integrity of the consumer's capacity hedge is significantly improved as potential socialized defaults are mitigated by this recommendation

Per feedback from stakeholders, the ISO has reflected the operational diversification benefits of multi-resource portfolios into the recommended incremental collateral requirements for capacity sellers that are assessed as high and medium risk

Modification of ISO's Recommendation Per Stakeholder Feedback

- The ISO has decided to incorporate the diversification benefits of multi-resource MPs into the "risk adders" applied to the PFP collateral methodology for medium and high risk capacity sellers; the risk adders now take into account the historical performance of a capacity sellers portfolio relative to its slice of system obligation and continues to assume the largest resource is offline during scarcity conditions
- Additionally, based on feedback from Stakeholders during prior Budget and Finance Subcommittee meetings, the ISO modified the Corporate Liquidity Risk Assessment Methodology recommendation in several instances to include the following
  a) Additional corporate liquidity risk assessment categories and resulting collateralization levels so that there's more differentiation in the risk assessment versus just a binary pass or fail result
  b) Delaying the effective date in terms of when the corporate liquidity assessment methodology would start (i.e., from June 1, 2024 to June 1, 2025) so capacity sellers have adequate time to reconfigure their CSOs during an ARA prior to the commencement of the CCP
  c) The inclusion of excess collateral in the corporate liquidity assessment calculation to reflect all sources of corporate liquidity available to cover PFP net payment obligations and other modifications to the corporate liquidity assessment (such as the exclusion of debt maturing in 12 months)

Several amendments recently proposed by the stakeholders do not meaningfully address the fundamental credit risk issue facing the ISO in the FCM by uncreditworthy capacity sellers

NEPGA / CPV Proposed Amendments

- The ISO analyzed each of the proposed amendments and conceptual ideas put forward by NEPGA and CPV and has several concerns
- The ISO doesn't consider them a replacement for the current recommendation nor do they address the underlying credit risk issue
- Conceptually, the most meaningful way to mitigate credit risk to the pool is by collecting higher amounts of collateral from capacity sellers upfront based on their assessed ability to pay the PFP penalties that they are contractually obliged to per the size of their CSO throughout the CCP
- Capacity sellers are encouraged to proactively manage their exposure to PFP penalty payments by shedding CSO in ARAs / MRAs or executing capacity performance bilaterals, but this in no way allows the ISO to prudently reduce collateral requirements for a CSO
- Additionally, the ISO considers it a moral hazard to put longer-pay mechanisms in place to force the pool to effectively lend to uncreditworthy capacity sellers that fail to pay the PFP penalties on a timely basis should they arise

The ISO plans to request a vote from the Participants Committee in September and subsequently file its proposal with FERC in Q4 2024

Next Steps and Stakeholder Process

- The ISO is planning to request a vote at the Participants Committee on September 5, 2024 regarding this modified recommendation
- The ISO will request a January 1, 2025 effective date, however the new PFP risk management framework would apply to capacity commitment period 2025-26 (FCA 16) starting on June 1, 2025 and each CCP thereafter
- Capacity sellers would be able to participate in ARA3 occurring in March 2025 which is after the effective date should they decide to reconfigure their CSOs going into the next CCP (i.e., June 1, 2025)

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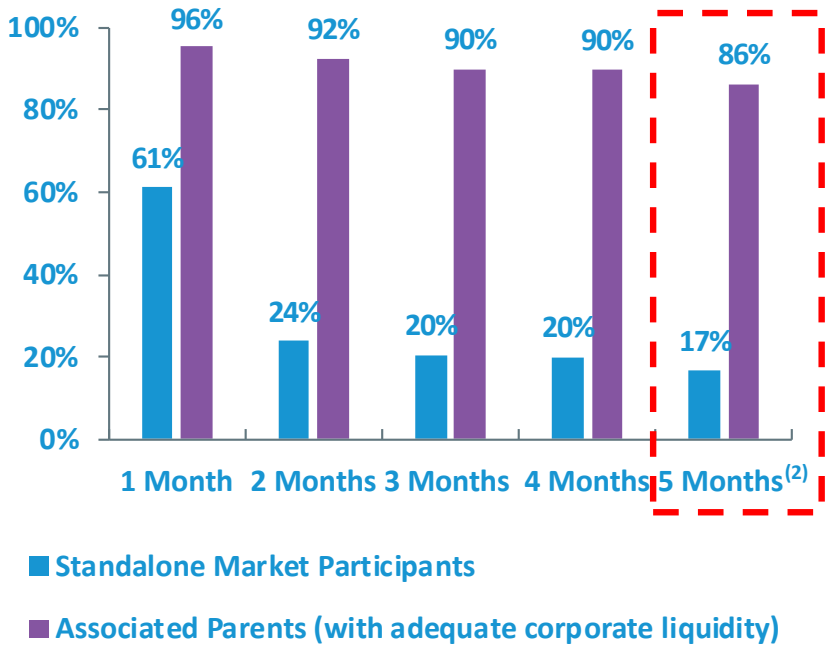
There is significant risk that many MPs default on their PFP contractual obligations (i.e., max penalties associated with the stop-loss) after multiple months of capacity scarcity conditions without adequate corporate liquidity

Probability of Default due to Inadequate Corporate Liquidity

% of MPs / Parents by CSO Volume with Corporate Liquidity Exceeding Monthly Stop-Loss Obligation[1]



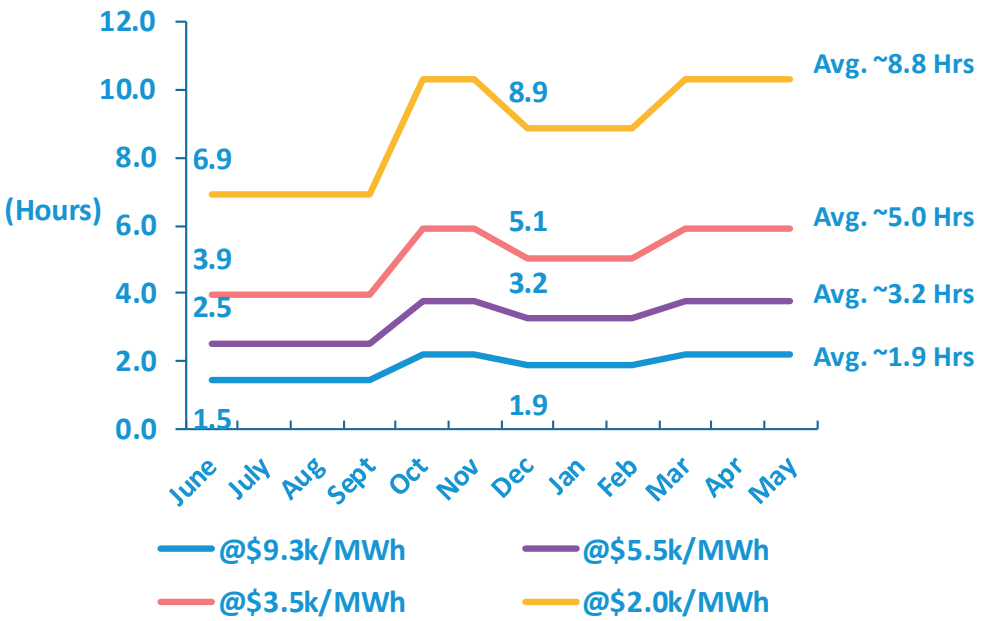
1) Based on review of the financial statements of MPs in FCA 16 as of Q4-23.
2) 5 Months stop-loss is approximately equal to the Annual stop-loss

- The maximum potential net settled obligations (i.e., penalties) can be calculated ahead of time in the FCM and prudently managed from a corporate liquidity perspective but only ~17% of MPs (i.e., capacity sellers) reported enough corporate liquidity to cover the maximum potential contractual obligations associated with their CSO position
- The ISO has noted that the majority of the parent entities of these capacity sellers maintain much stronger levels of liquidity to cover these potential payment obligations as the cash flows generated by the capacity sellers are regularly swept up to equity owners and debt providers
- Market participants that face a liquidity-crunch after repeated capacity scarcity conditions pose higher default risk to the pool as they may need to seek bankruptcy protection without firm parental support
- During stressed market conditions, there is correlated risk that multiple market participants with inadequate liquidity will be unable to meet their contractual CSO obligations; the ISO's proposal is focused on analyzing the risk at an individual market participant level based on such market participant's corporate liquidity as compared to its obligations

Capacity sellers have limited opportunities in real time to address operational performance issues before incurring the maximum potential financial loss during a month

Ability to Address Operational Performance Issues in Real Time

# of Capacity Scarcity Condition (CSC) Hours Required to Reach Monthly Stop-Loss[1]



- Capacity sellers may not be able to resolve operational performance issues in real time before incurring their monthly stop-loss obligation during capacity scarcity conditions
- Short duration capacity scarcity condition (CSC) events can result in capacity sellers owing the ISO their maximum monthly financial contractual obligation due to non-performance
- Even at the lower PFP payment rates, the risk of capacity sellers with inadequate corporate liquidity defaulting still exists

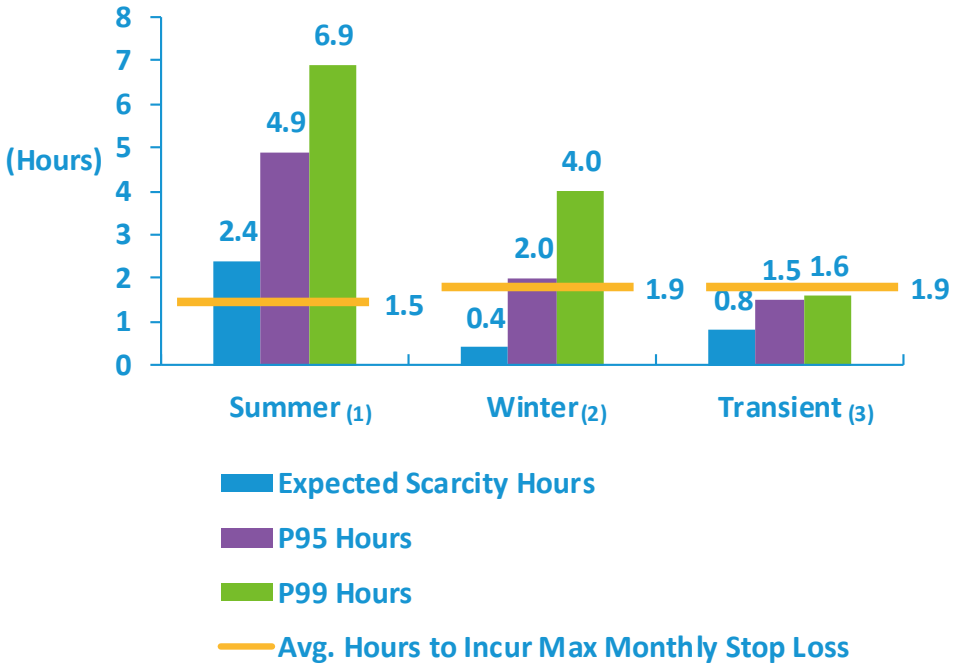
In all PFP payment rate scenarios, capacity sellers may able unable to resolve operational performance issues in time before realizing their maximum potential loss during capacity scarcity conditions

1) FCA 16 (CCP 2025-26)

Capacity sellers are expected to honor their contractual financial obligations to the ISO following stressed market conditions

Capacity Scarcity Conditions Hours

FCA 16 CSC in Hours at Current Capacity Levels[4]



- Stressed market conditions can place significant pressure on corporate liquidity constrained capacity sellers in scenarios where non-performance leads to the stop-loss being reached during a month (i.e., the monthly stop-loss) or series of months (i.e., the annual stop-loss)
- The ISO expects that all capacity sellers are able to satisfy their financial contractual obligations during stressed market conditions
- As indicated by several ISO studies regarding the summer, winter, and transient periods such events (or series of events) could place significant pressure on capacity sellers available corporate liquidity

1) Per the memo "Operating Reserve Deficiency Information – Capacity Commitment Period 2025-2026" https://www.iso-ne.com/static-assets/documents/2021/12/a00_pspc_2021_12_iso_memo_or_def_fca_16.pdf
2) Per the "FCA16 Net CONE Parameters - Expected Capacity Scarcity Hours and Balancing Ratio" https://www.iso-ne.com/static-assets/documents/2020/07/a5_a_iso_memo_scarcity_hours_balancing_ratio.pdf
3) Per the "Summary of Analysis for Calculating an Updated Forward Reserve Offer Cap" https://www.iso-ne.com/static-assets/documents/100006/a07_mc_2023_12_12_14_frm_offer_cap_iso_memo.pdf
4) Current Capacity Levels for FCA 16 are ~ICR + 2,000 MW

NEPGA's proposed amendments regarding trading out of CSOs do not fundamentally mitigate the credit risk posed by uncreditworthy capacity sellers

NEPGA "Shedding / Termination" Proposed Amendments

- A capacity seller's collateral requirements during the capacity commitment period (CCP) are determined by the FCM Delivery FA methodology which is designed to ensure sufficient collateral is posted to the ISO to cover the potential financial settlement of the CSO
- Increasing the ability of capacity sellers to shed a CSO more frequently during a CCP doesn't change the payment risk associated with the financial settlement of a CSO (i.e., PFP penalties) although it can help them to more proactively risk manage their CSO position with more frequent trading opportunities
- Likewise, the proposed termination of a CSO following a FA default still results in potential uncollateralized exposure for the ISO
- Capacity performance bilaterals (CPBs) already offer capacity sellers the ability to prospectively manage the financial risk associated with their CSO
  - CPBs are processed by the ISO only after a capacity scarcity condition (CSC) occurs
  - In concept, participants could make arrangements before CSCs occur to manage their risk, but the ISO is not involved until after the CSC occurs and acts only as a settlement agent
- The ISO has provided links in the appendix of this presentation to existing training materials regarding capacity performance bilaterals

The ability to shed a CSO more frequently doesn't have any bearing on the collateral requirements designed to mitigate the default risk of capacity sellers related to penalty payments

CSO Collateral Requirements

- The potential credit exposure begins on the day the position is created where capacity sellers acquire a CSO which has an embedded financial obligation to pay penalty payments up to the value of the annual stop-loss associated with the CSO position (~$6.1 MM for a 100 MW CSO position in FCA 16)
- CSO bilateral trades will reduce the potential credit exposure only after the trade is completed (i.e., the CSO is shed) and financially settled with the ISO
- Consequently, the capacity sellers maximum potential financial obligation remains ~$6.1 MM until the settlement process (i.e., shedding or acquisition of CSO) is fully completed
- The FCM Delivery FA methodology is already designed to increase / decrease the collateralization of a CSO position if a capacity seller acquires / sheds a CSO as a result of trading activity in ARAs, MRAs and bilaterals
- The ISO doesn't see any merit in reducing the collateral requirements of capacity sellers even if they were able to shed / acquire CSO on a daily basis as the credit risk of a position is always determined by the size of the exposure (e.g., ~$6.1 MM for a 100 MW CSO position in FCA 16) and the ability of the counterparty to the trade to financially settle from existing funds

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ISO recommends updating the PFP collateral requirements to curtail socialized defaults impacting consumers and capacity sellers (that over-perform) due to the non-payment of PFP penalties by illiquid capacity sellers

PFP Collateral Recommendation Overview

Current Risk Framework

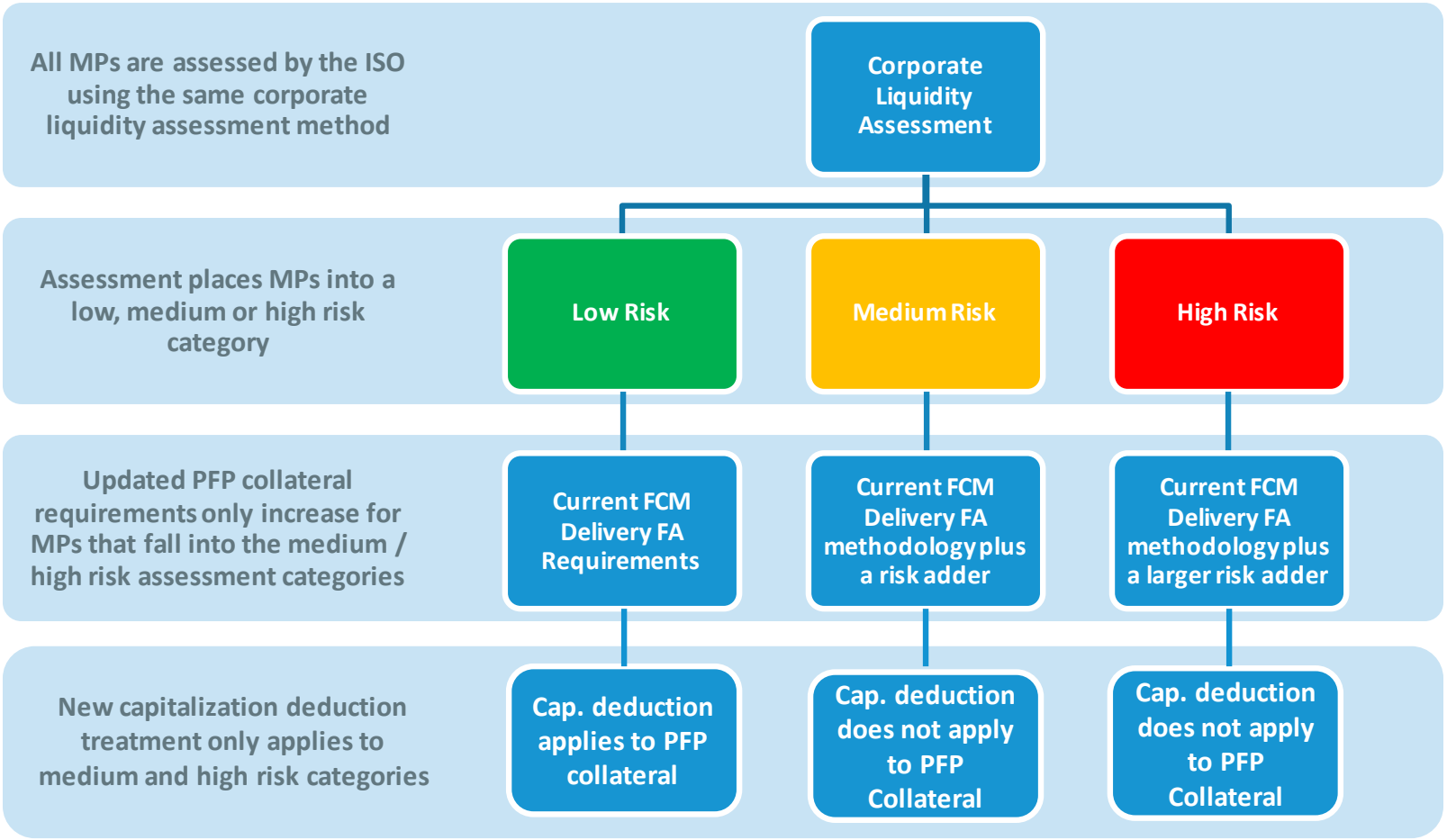
- All MPs with CSOs are required to post PFP collateral based on the current FCM Delivery FA methodology
- The PFP collateral requirements are the same for all MPs despite material differences in their ability to satisfy the potential penalty payments that they are contractually obligated to per their CSO positions
- Cash and LCs are the only acceptable forms of financial assurance

Recommended Risk Framework

- All MPs are subject to the same corporate liquidity assessment to determine their ability to pay potential peak penalty payment obligations associated with their CSO over a forward looking rolling 6 months
- Low risk MPs are subject to the current FCM Delivery FA methodology
- Medium and high risk MPs are subject to higher collateral requirements (risk adders) as they pose higher non-payment risk to the market
- Operational diversification benefits of multi-resource portfolios are reflected in risk adders
- MPs may provide Parent / Affiliate guarantees to satisfy the new corporate liquidity assessment
- MPs have a quarterly / monthly corporate liquidity reporting requirement
- Cash and LCs are the only acceptable forms of financial assurance
- ISO can draw upon Parent / Affiliate guarantees up to the amount of unpaid PFP penalties in the event of a payment default

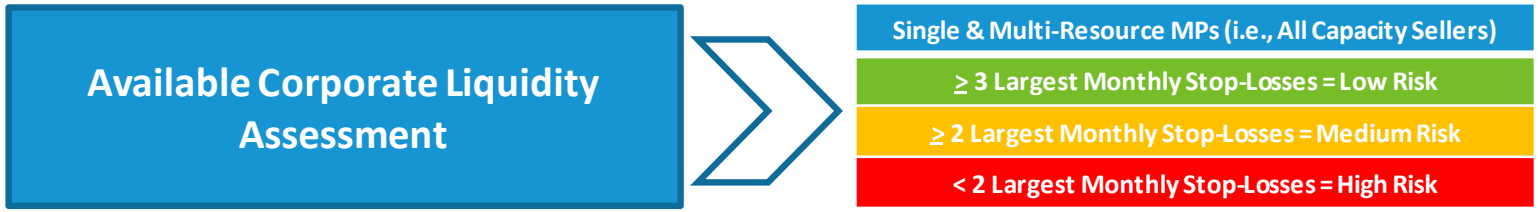
A corporate liquidity assessment determines if MPs pose a higher default risk to the ISO regarding potential PFP penalty payment obligations and increases collateral requirements accordingly

Recommended PFP Risk Management Framework



ISO modified its recommendation and now reflects the diversification benefit of multi-resource portfolios in collateral requirements; as a result, the liquidity test thresholds are set equivalent for all capacity sellers

Corporate Liquidity Assessment



- Liquidity testing thresholds are the same for all MPs and the ISO intends to calculate the assessment daily for all MPs with a CSO position from June 1, 2025
- Available corporate liquidity is based off financial statements provided to the ISO for the most recently reported period and applicable financial assurance in FAM
- The monthly stop-losses are based on the profile of a MP's CSO position over the next 6 months from the start of the current delivery month
  a) The test will find the 3 largest monthly stop-losses over the current month and next 5 months
     - If corporate liquidity is greater than or equal to the sum of the 3 largest monthly stop-losses, the MP will be assessed as Low Risk
     - If corporate liquidity is greater than or equal to the sum of the largest 2 monthly stop-losses, the MP will be assessed as Medium Risk
     - If corporate liquidity is less than the sum of the largest 2 monthly stop-losses, the MP will be assessed as High Risk

Higher risk MPs are required to post incremental PFP collateral based on a risk adder component which accounts for their non-performance risk in future months (i.e., CWAP) as well as their slice of system obligation (i.e., ABR)

FCM Delivery FA Methodology Per Liquidity Risk Category

Liquidity Risk Assessment Category	Applicable FCM Delivery FA Methodology	Applicable Risk Adders
Low Risk	DFAMW*PE*max[(ABR-CWAP), 0.1]*SF – IMC – MCC(1)	None
Medium Risk	DFAMW*PE*max[(ABR-CWAP), 0.1]*SF – IMC – MCC – Applicable Risk Adder	Peak Monthly Stop-Loss(2)*max[(ABR-CWAP), 0.1]
High Risk	DFAMW*PE*max[(ABR-CWAP), 0.1]*SF – IMC – MCC – Applicable Risk Adder	Peak Monthly Stop-Loss(2)*max[(ABR-CWAP), 0.1] + 2nd Largest Monthly Stop-Loss*max[(ABR-CWAP), 0.1]

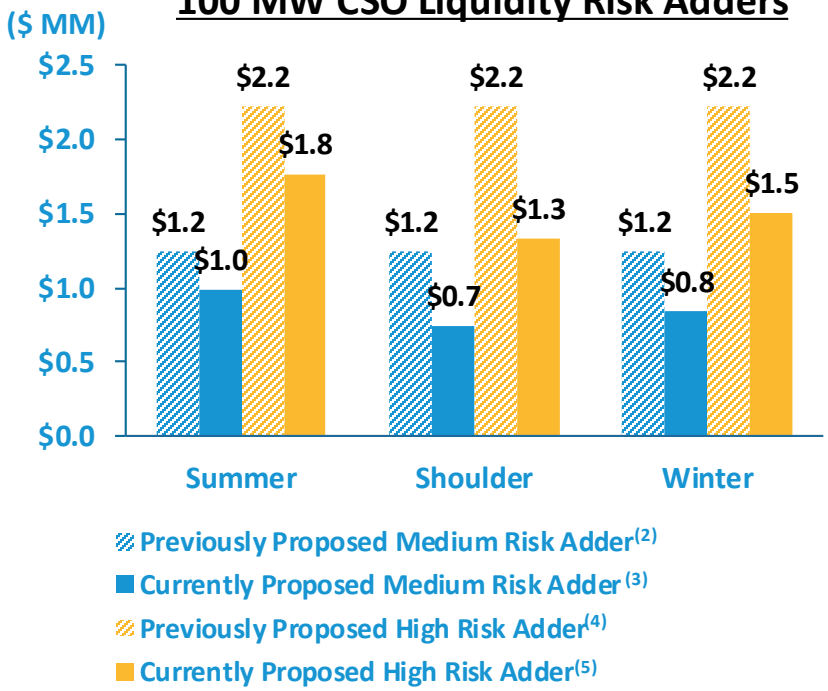
- ISO has reflected the operational diversification benefits of multi-resource portfolios of medium and high risk MPs into the applicable risk adders for such MPs and IMC (intra-month collateral) is now also included in the applicable FCM Delivery FA methodology; this diversification benefit is reflected in the "max[(ABR-CWAP),0.1]" portion of the risk adder

(1) ISO filed updates to the FCM Delivery FA methodology which were approved by FERC with an effective date of March 1, 2024 (Docket No. ER24-661-000). The formula above reflects those updates.
(2) Peak month stop-loss = CSO MW from peak month over a 6 month window * FCA Starting Price; see market rule 1 section III.13.7.3.1 for the formal definition.

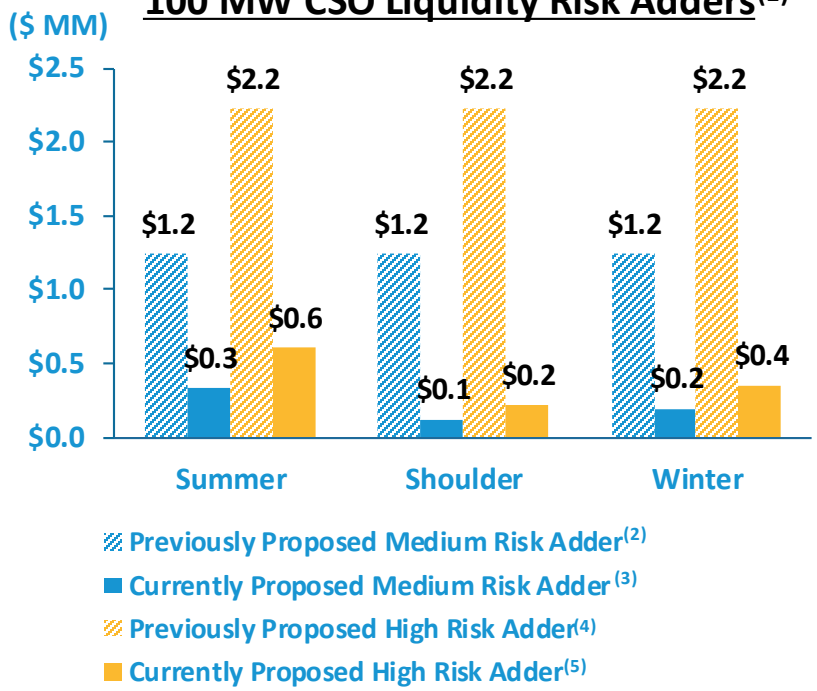
ISO has reduced the proposed applicable risk adders by considering expected operational performance (CWAP) relative to the slice of system obligation (ABR)

Applicable Risk Adders

Single Resource Example
100 MW CSO Liquidity Risk Adders



Multi-Resource Example
100 MW CSO Liquidity Risk Adders(1)



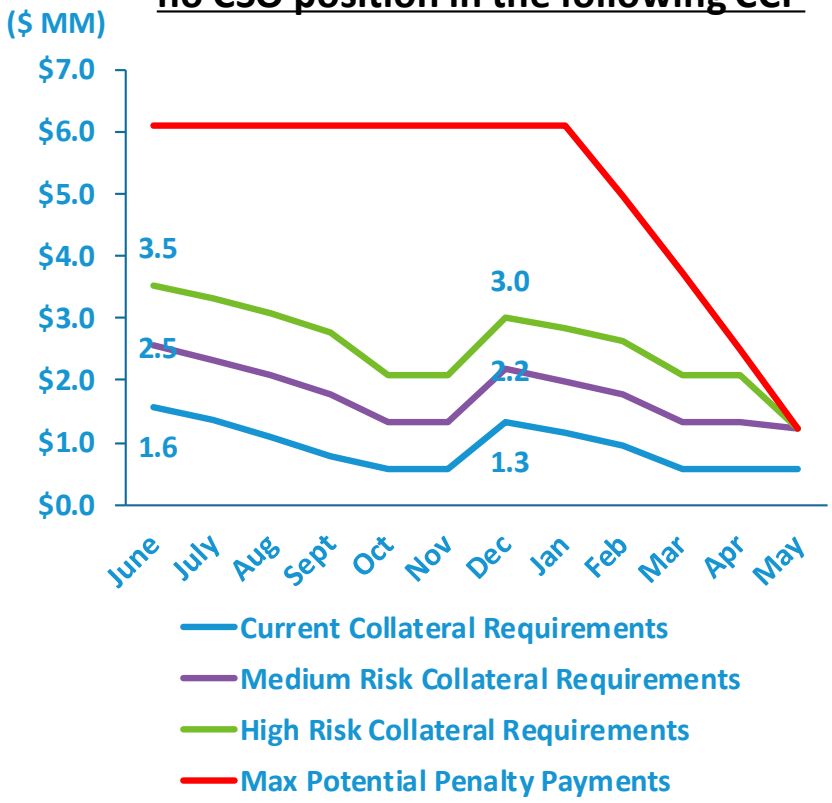
The high risk adder has been reduced by 73% - 90% for multi-resource portfolios(1) and 20% - 40% for single resources on average across the CCP

(1) Based on weighted average CWAP (Capacity Weighted Average Performance) of all multi-resource MPs awarded CSOs in FCA 16.
(2) Current Month Stop-Loss
(3) Peak Monthly Stop-Loss * max(ABR-CWAP,0.1)
(4) Current Month Stop-Loss + Next Month Net Loss
(5) Peak Monthly Stop-Loss * max(ABR-CWAP,0.1) + Second Largest Monthly Stop-Loss * max(ABR-CWAP,0.1)

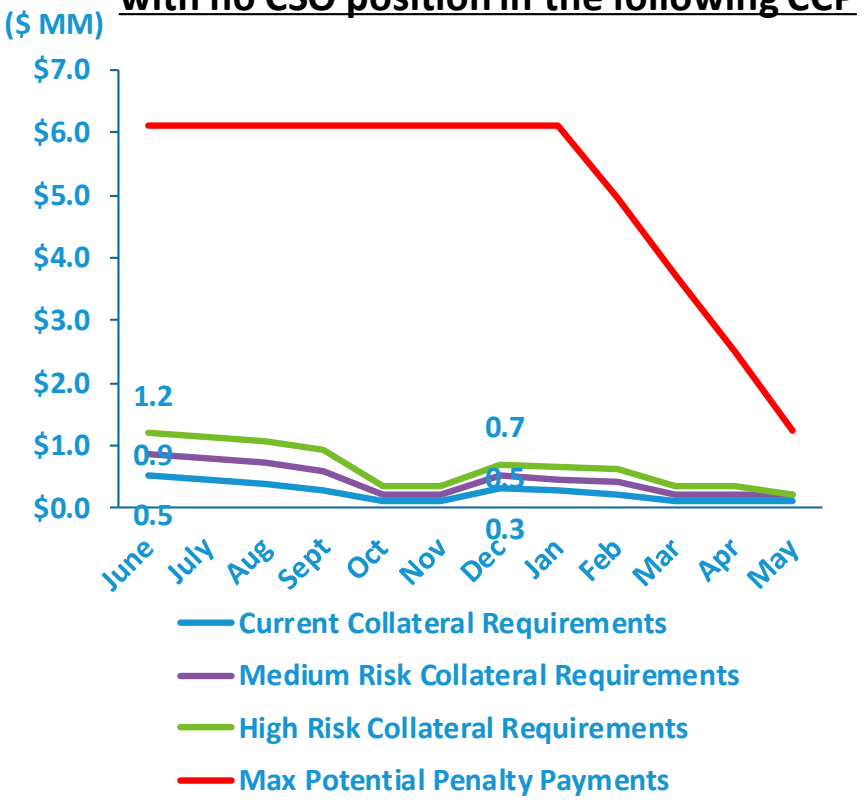
ISO's recommendation increases collateral requirements for MPs that are assessed as posing a higher risk of defaulting and reflects the operational performance benefits of multi-resource portfolios

Incremental PFP Collateral Requirements Examples

Single Resource Example
100 MW CSO Collateral Requirements with no CSO position in the following CCP



Multi-Resource Example
100 MW CSO Collateral Requirements(1) with no CSO position in the following CCP



(1) Based on weighted average CWAP (Capacity Weighted Average Performance) of all multi-resource MPs awarded CSOs in FCA 16.

The ISO is also recommending an update to the Intra-Month Collateral (IMC) calculation so that the overall collateralization of the delivery month PFP penalty payment risk is commensurately sized

Maximum IMC Calculation Example

Month	DFAMW (MW)	Remaining Annual Stop-Loss ($ MM)	Monthly Stop-Loss ($ MM)	Max PFP Penalty ($ MM) A	PE ($/MW)	ABR	CWAP	SF	Current Month Collateralization ($ MM) B	Next Month Collateralization ($ MM) C	Max IMC ($ MM) A - (B – C)
Jun	100	$6.1	$1.2	$1.2	$9,810	0.9	0	2.000	$1.8	$1.5	$0.9
Jul	100	$4.9	$1.2	$1.2	$9,810	0.9	0	1.732	$1.5	$1.2	$0.9
Aug	100	$3.7	$1.2	$1.2	$9,810	0.9	0	1.414	$1.2		

- The Intra-Month Collateral (IMC) variable was introduced as part of the updates to the FCM Delivery FA methodology which were approved by FERC with an effective date of March 1, 2024 (Docket No. ER24-661-000) and the ISO has identified a further beneficial refinement
- IMC, which estimates the amount of PFP penalties incurred during the current month, will be limited to the maximum Pay-for-Performance penalty less the difference between current month collateralization and next month collateralization
- Limiting the amount of IMC is appropriate to avoid situations where the ISO collects collateral that will ultimately be returned to the MP on the first of the following month regardless of the result of future CSC events and resulting PFP penalties
  a) Maximum IMC = Maximum PFP Penalty – Max[(Current Month Collateralization – Next Month Collateralization), 0]
  b) Maximum PFP Penalty = MIN[Current Month Stop-Loss, Remaining Annual Stop-Loss]
  c) Current Month Collateralization = DFAMW * PE * Max[(ABR-CWAP), 0.1] * SF
     - All values are taken from the current delivery month
  d) Next Month Collateralization = DFAMW * PE * Max[(ABR-CWAP), 0.1] * SF
     - All values are taken from the delivery month immediately following the current delivery month

The available corporate liquidity calculation assesses the ability of MPs to satisfy the PFP penalty payment obligations should they arise during the CCP

Available Corporate Liquidity Calculation

Data Source	Corporate Liquidity Values	Values	Amount
Financial Statements of MP or Guarantor	Unrestricted Cash	(a)	$1 MM
	Marketable Securities / Money Market Instruments	(b)	$5 MM
	Undrawn Committed Credit Facilities expiring ≥ 3 Months from Reporting Date	(c)	$20 MM
ISO FAM System	Cash / LCs Posted by MP to ISO covering FCM Delivery FA plus any excess collateral(1)	(d)	$1 MM
Available Corporate Liquidity = (a + b + c + d)			**$27 MM**

- ISO's calculation of available corporate liquidity will be based on the financial statements of the MP or a guarantor (in cases where an affiliate guarantee has been provided)
- Collateral data is taken directly from the FAM system

(1) Excess collateral is defined as excess remaining cash / LCs posted to the ISO which exceed the MP's total financial assurance obligations.

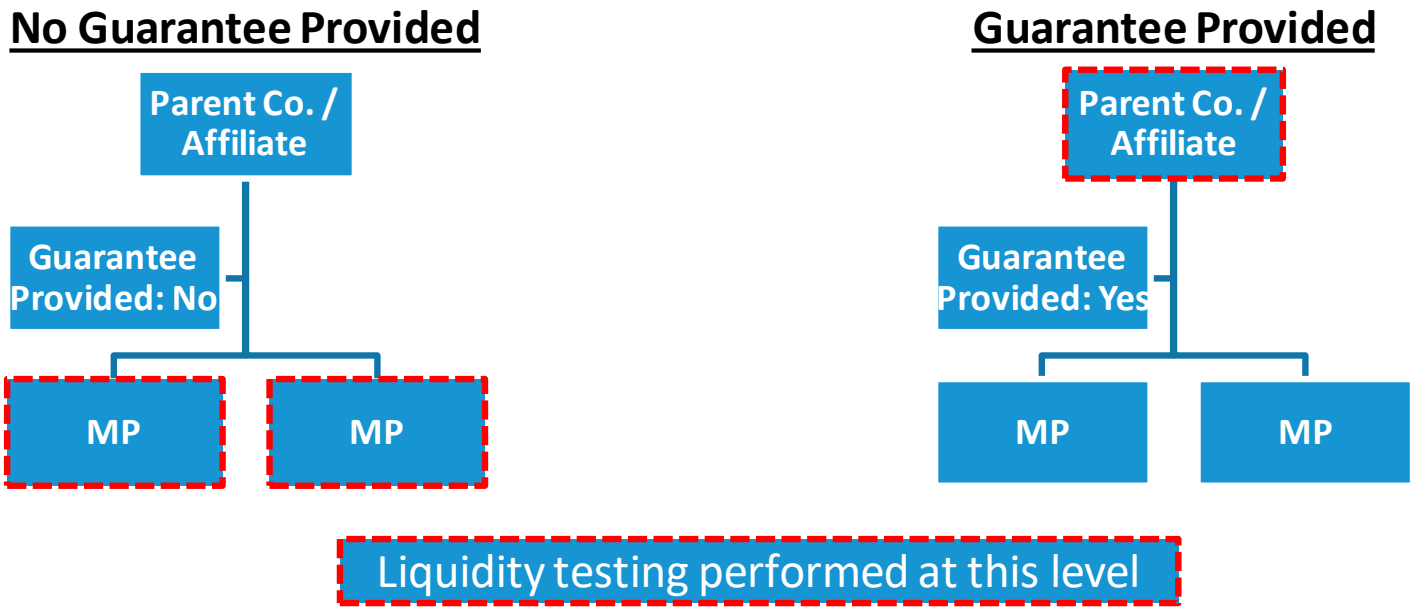
The financial information reporting requirements for the new corporate liquidity test assessment will remain generally consistent with the requirements in the FAP regarding establishing credit limits

Financial Information Reporting Requirements

- The ISO will accept both audited and unaudited financial statements (including officer certified financial statements) to conduct the corporate liquidity assessment which is consistent with the information reporting requirements applied to the establishment of credit limits currently in the FAP
- Quarterly (and annual) financial statements are required to be provided within 10 days of them becoming available and within 65 days after the end of the applicable fiscal quarter
- Monthly financial statements such as officer certified financial statements are required (for MPs who opt in to monthly liquidity testing) to be provided within 20 days of the applicable monthly reporting period
- For MPs that have chosen not to submit financial statements or who have failed to provide them per the respective deadlines above, the ISO will assume available corporate liquidity is equal to their current FCM Delivery FA plus excess financial assurance (i.e., $0 values will be assigned to components of the corporate liquidity assessment derived from financial statements)

ISO will look through to the liquidity profile of a parent / affiliate entity of a MP that posts an acceptable unconditional guarantee when conducting the corporate liquidity assessment

Liquidity Demonstration Options



- In cases where a parent / affiliate is providing a guarantee covering multiple MPs, the respective Designated FCM Participants will be assessed as a whole and are collectively assigned one Corporate Liquidity Assessment result (i.e., low risk, medium risk, or high risk)
- In cases where more than one parent / affiliate provides a guarantee (e.g., for a joint venture entity), the ISO will assess the guarantors collectively

The guarantee accepted by the ISO is intended to exclusively cover the PFP penalty payments in the forward capacity markets

ISO Guarantee Form

- ISO has developed a new guarantee template which it will post on the ISO website, a draft of the guarantee template has been posted for discussion
- Upon acceptance of a parent / affiliate guarantee and associated financial statements, the ISO will perform certain components of the corporate liquidity assessment based on the financial statements of the guarantor
- The guarantee will cover all capacity performance payment obligations in any amount owed at any time
- The ISO has rights to draw upon the guarantee up to the amount of unpaid PFP penalties in the event of a payment default
- The guarantee terminates at the earlier of (a) termination by the ISO, (b) ISO providing written consent to terminate (not to be unreasonably withheld) so long as MP has provided adequate financial assurance, or (c) when the market participant no longer has obligations under the FAP
- The ISO in its sole discretion can reject a guarantor at any time if it presents unreasonable risk to the pool
- A MP can provide a guaranty from multiple guarantors (e.g., in the case of a joint venture) if the guaranty is joint and several

The additional FA requirements for MPs that fail to satisfy the minimum capitalization requirements are revised for those that fall into the medium and high risk liquidity assessment categories

FAP Capitalization Deduction Approach

Liquidity Test Result	Minimum Capitalization Requirements	Applicable FCM Delivery FA Methodology	Capitalization Deduction Treatment
Low	Fail	DFAMW*PE*max[(ABR-CWAP), 0.1]*SF – IMC – MCC (1)	No change from current policy approach
Medium	Fail	DFAMW*PE*max[(ABR-CWAP), 0.1]*SF – IMC – MCC – Applicable Risk Adder	Excluded from additional 25% financial assurance requirement against total FCM Delivery FA obligations
High	Fail	DFAMW*PE*max[(ABR-CWAP), 0.1]*SF – IMC – MCC – Applicable Risk Adder	Excluded from additional 25% financial assurance requirement against total FCM Delivery FA obligations

- If a MP falls into the medium / high risk liquidity test assessment category and is required to post additional FCM Delivery FA (under the new collateral methodology), such MP will be excluded from additional FCM Delivery FA requirements for failing to meet the capitalization requirements in FAP Section II.A.4
- ISO considers this a reasonable approach given the higher collateralization

(1) ISO filed updates to the FCM Delivery FA methodology which were approved by FERC with an effective date of March 1, 2024 (Docket No. ER24-661-000). The formula above reflects those updates.

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The updated PFP penalty risk management framework commences from FCA 16 onwards (i.e., June 1, 2025)

FAP Redlines – FCM Delivery FA

A. FCM Delivery Financial Assurance

Each Designated FCM Participant that has a Capacity Supply Obligation for the Capacity Commitment Period associated with the sixteenth Forward Capacity Auction or any Capacity Commitment Period thereafter, shall be subject to a "Corporate Liquidity Assessment" as described in this Section VII.A to determine its FCM Delivery Financial Assurance.

1. FCM Delivery Financial Assurance Calculation

A Designated FCM Participant must include, for the Capacity Supply Obligation of each resource in its portfolio other than the Capacity Supply Obligation associated with any Energy Efficiency measures, FCM Delivery Financial Assurance in the calculation of its FCM Financial Assurance Requirements under the ISO New England Financial Assurance Policy. If a Designated FCM Participant's FCM Delivery Financial Assurance is negative, it will be used to reduce the Designated FCM Participant's Financial Assurance Obligations (excluding FTR Financial Assurance Requirements), but not to less than zero.

The liquidity risk adders now reflect the operational diversification benefits offered by multi-resource portfolios by introducing (ABR-CWAP) into the formula

FAP Redlines – FCM Delivery FA Calculation

FCM Delivery Financial Assurance is calculated according to the following formula for a Designated FCM Participant that has a Capacity Supply Obligation up to and including the end of the Capacity Commitment Period associated with the fifteenth Forward Capacity Auction:

FCM Delivery Financial Assurance = [DFAMW x PE x max[(ABR – CWAP), 0.1] x SF] – IMC – MCC

FCM Delivery Financial Assurance is calculated according to the following applicable formula for a Designated FCM Participant that has a Capacity Supply Obligation commencing at the beginning of the Capacity Commitment Period associated with the sixteenth Forward Capacity Auction and every Capacity Commitment Period thereafter. The applicable FCM Delivery Financial Assurance formula is determined by the results of a Corporate Liquidity Assessment and is limited by the operation of the applicable stop-loss mechanisms as set forth in Market Rule 1 (including those that may apply in the next Capacity Commitment Period).

Corporate Liquidity Assessment Result: Low Risk

FCM Delivery Financial Assurance = [DFAMW x PE x max[(ABR – CWAP), 0.1] x SF] – IMC – MCC

Corporate Liquidity Assessment Result: Medium Risk

FCM Delivery Financial Assurance = [DFAMW x PE x max[(ABR – CWAP), 0.1] x SF] – IMC – MCC – Peak Monthly Stop-loss x max[(ABR – CWAP), 0.1]

Corporate Liquidity Assessment Result: High Risk

FCM Delivery Financial Assurance = [DFAMW x PE x max[(ABR – CWAP), 0.1] x SF] – IMC – MCC – Peak Monthly Stop-loss x max[(ABR – CWAP), 0.1] – Second Largest Monthly Stop-loss x max[(ABR – CWAP), 0.1]

The basis for medium and high risk additional collateral requirements are the peak monthly stop losses over a forward looking 6 month window

FAP Redlines - FCM Delivery FA Calculation (cont.)

Where:

IMC (intra-month collateral) equals estimated monthly capacity payments incurred during the current delivery month as limited by the difference (which shall in no event be less than zero) between (A) the minimum of the applicable monthly stop-loss and the remaining annual stop-loss as described in Section III.13.7.3.1 and Section III.13.7.3.2 of Market Rule 1, respectively, and (B) the amount of additional FCM Delivery Financial Assurance when considering the Designated FCM Participant's current month FCM Delivery Financial Assurance obligation as compared to the Designated FCM Participant's next month FCM Delivery Financial Assurance obligation, in each case without giving effect to the IMC and MCC variables when calculating such additional amount. ~~and,~~ Where the estimated monthly capacity payments for each Designated FCM Participant, shall be updated three (3) days after publication of the most recent FCM Preliminary Capacity Performance Score report (or equivalent report) on the Market Information Server ~~and shall be limited by the monthly stop-loss as described in Section III.13.7.3.1 of Market Rule 1~~.

Peak Monthly Stop-loss equals the largest monthly stop-loss for the Designated FCM Participant that would occur during the period from the current delivery month through the following five consecutive months, where each monthly stop-loss is equal to the sum of the monthly stop-losses of each resource in the Designated FCM Participant's portfolio as described in Section III.13.7.3.1 of Market Rule 1.

Second Largest Monthly Stop-loss equals the second largest monthly stop-loss for the Designated FCM Participant that would occur during the period from the current delivery month through the following five consecutive months, where each monthly stop-loss is equal to the sum of the monthly stop-losses of each resource in the Designated FCM Participant's portfolio as described in Section III.13.7.3.1 of Market Rule 1.

Multi-resource portfolios are evaluated on the same basis as single resources in terms of corporate liquidity

FAP Redlines – Corporate Liquidity Assessment

2. Corporate Liquidity Assessment Methodology

The ISO will perform a "Corporate Liquidity Assessment" to determine the appropriate liquidity risk assessment category for each Designated FCM Participant (i.e., low risk, medium risk, or high risk) that has a Capacity Supply Obligation for the Capacity Commitment Period associated with the sixteenth Forward Capacity Auction or any Capacity Commitment Period thereafter.

(a) For each Designated FCM Participant, the Corporate Liquidity Assessment shall be performed as follows:

- When the Available Corporate Liquidity is greater than or equal to the sum of the three largest Applicable Monthly Stop-losses during the Calculation Period, the Designated FCM Participant shall be considered low risk;
- When the Available Corporate Liquidity is less than the sum of the three largest but greater than or equal to the sum of the two largest Applicable Monthly Stop-losses during the Calculation Period, the Designated FCM Participant shall be considered medium risk; and
- When the Available Corporate Liquidity is less than the sum of the two largest Applicable Monthly Stop-losses during the Calculation Period, the Designated FCM Participant shall be considered high risk.

MPs guaranteed by the same parent / affiliate are assessed on a consolidated basis for the purposes of the liquidity assessment while multiple guarantors will be considered on an aggregate basis

FAP Redlines – Corporate Liquidity Assessment (cont.)

(b) For Designated FCM Participants that have provided a guaranty (in accordance with this Section VII.A) from the same Affiliate, or for Designated FCM Participants that are also providing a guaranty (in accordance with this Section VII.A) for an Affiliate:

- The respective Designated FCM Participants will be assessed as a whole and will be collectively assigned one Corporate Liquidity Assessment result (i.e., low risk, medium risk, or high risk);
- When the Available Corporate Liquidity is greater than or equal to the sum of the three largest aggregated Applicable Monthly Stop-losses during the Calculation Period, each Designated FCM Participant in the collective assessment is considered low risk;
- When the Available Corporate Liquidity is less than the sum of the three largest aggregated Applicable Monthly Stop-losses but is greater than or equal to the sum of two largest aggregated Applicable Monthly Stop-losses during the Calculation Period, each Designated FCM Participant in the collective assessment is considered medium risk; and
- When the Available Corporate Liquidity is less than the sum of the two largest aggregated Applicable Monthly Stop-losses during the Calculation Period, each Designated FCM Participant in the collective assessment is considered high risk.

(c) For Designated FCM Participants that have provided a guaranty (in accordance with this Section VII.A) from multiple Affiliates:

- The guarantors' financial statements will be considered on an aggregate basis for purposes of the Available Corporate Liquidity calculation taking into account other guaranties provided by any such guarantor under this Section VII.A.

The corporate liquidity assessment takes into account collateral posted to the ISO by a market participant and corporate liquidity as reported in financial statements

FAP Redlines – Corporate Liquidity Assessment (cont.)

Where:

Calculation Period is the current delivery month through the following five consecutive months.

The Applicable Monthly Stop-loss equals the sum of the monthly stop-losses for each resource in a Designated FCM Participant's portfolio as described in Section III.13.7.3.1 of Market Rule 1 for the corresponding months within the Calculation Period.

Available Corporate Liquidity is the sum of unrestricted cash and cash equivalents; marketable securities and money market instruments; undrawn committed credit facilities not expiring within three months of the date of the applicable financial statements; and excess financial assurance. Other than with respect to excess financial assurance, such values shall be (a) as reflected on the most recent financial statements provided by the Designated FCM Participant, provided that such financial statements were provided for the most recently completed financial reporting period and compliant with the requirements of this Section VII.A, and (b) calculated in accordance with international accounting standards or generally accepted accounting principles in the United States at the time of determination consistently applied. Excess financial assurance shall be calculated as any financial assurance (in an acceptable form in accordance with Section X) provided by the Designated FCM Participant covering its FCM Delivery Financial Assurance obligations plus any financial assurance (in an acceptable form in accordance with Section X) provided by the Designated FCM Participant in excess of its total Financial Assurance Obligations, each as reflected in the ISO's Financial Assurance Management (FAM) or equivalent system.

Financial statements provided to the ISO are typically reviewed at least quarterly

FAP Redlines – Corporate Liquidity Assessment (cont.)

For the avoidance of doubt, the components of the Available Corporate Liquidity calculation that are derived from financial statements shall be based on the financial statements of the Designated FCM Participant unless it provides an Affiliate guaranty in compliance with this Section VII.A, in which case the values shall be based on the financial statements of the entity(ies) providing the guaranty. If an acceptable Affiliate guaranty is provided, stop-loss and excess financial assurance values will still be based on the Designated FCM Participant.

Each Designated FCM Participant shall submit to the ISO, on a quarterly basis, its (or its guarantor's, as applicable) audited or unaudited balance sheet or equivalent financial statements, which shall show sufficient detail for the ISO to assess the Designated FCM Participant's (or guarantor's, as applicable) Available Corporate Liquidity. Such financial information shall be accompanied by a certificate from a Senior Officer of the Designated FCM Participant (or guarantor as applicable) that provides the relevant financial information and certifies the accuracy of the attached financial statements. If an attestation was made by an independent accounting firm, then the certificate shall indicate the level of attestation made; if no attestation was made by an independent accounting firm, then no such indication is required. The ISO shall post a generally acceptable "clean" form of certificate on its website. Financial statements provided on a quarterly basis shall be submitted within 10 days of such statements becoming available and within 65 days after the end of the applicable fiscal quarter.

Medium and high risk market participants may elect to submit financial statements monthly

FAP Redlines – Corporate Liquidity Assessment (cont.)

Designated FCM Participants that are assessed as medium risk or high risk may elect to provide financial statements on a monthly basis until such a time as they are subsequently assessed as a lower risk category (e.g., from high risk to medium risk, medium risk to low risk, or high risk to low risk); provided that such election shall be for a minimum period of six continuous months during which they are continuously assessed at a lower risk category. Financial statements submitted on a monthly basis are required to be provided to the ISO within 20 days after the end of the prior month and otherwise be provided in accordance with this Section VII.A.

A Designated FCM Participant may choose not to submit financial statements as described in this Section VII.A. If a Designated FCM Participant chooses not to submit financial statements as described in this Section VII.A or if such financial statements are not compliant with the requirements described in this Section VII.A, the ISO shall use a value of $0.00 for Available Corporate Liquidity values derived from financial statements until such time as compliant financial statements are provided.

The ISO shall review the information provided pursuant to this Section VII.A on a rolling basis and will calculate the Available Corporate Liquidity within a reasonable time period which shall not exceed 30 Business Days from the date of receipt.

The ISO may at its sole discretion, reject or terminate any guaranty that poses unreasonable risk to the New England Markets and, may accept a guaranty from multiple affiliates

FAP Redlines – Affiliate Guarantees

3. FCM Affiliate Guaranties

For the purposes of the Corporate Liquidity Assessment, a Designated FCM Participant may provide an unconditional, irrevocable guaranty from an Affiliate to the ISO guaranteeing the payment of all Capacity Performance Payments owed by the Designated FCM Participant. Upon the ISO's acceptance of an Affiliate guaranty, the guarantor(s) must provide financial statements in accordance with this Section VII.A, and the Corporate Liquidity Assessment will be performed based on the financial information of the guarantor(s). The ISO will post a generally acceptable sample "clean" guaranty on its website, and all guaranties provided pursuant to this Section VII.A shall be in such form with only non-material changes (as determined by the ISO in its sole discretion). The ISO in its sole discretion may update the form guaranty from time to time. The ISO has the right to draw upon the guaranty in the event of a default under the ISO New England Billing Policy up to any amount owed for unpaid Capacity Performance Payments. At any time, the ISO may in its sole discretion provide notice to a Designated FCM Participant that it is choosing to reject or terminate its Affiliate guaranty because such guaranty presents unreasonable risk to the ISO or the New England Markets. In the case of a termination (or planned termination), upon the ISO providing such notice the guaranty shall not be considered for purposes of such Designated FCM Participant's Corporate Liquidity Assessment beginning at 8:30 on the next Business Day, provided that the ISO may, in its sole discretion, extend this period by up to twenty (20) Business Days. For the avoidance of doubt, notice from the ISO to the Designated FCM Participant that the guaranty its Affiliate provided is being terminated (or will be terminated), does not constitute a termination notice under such guaranty and the ISO, in its sole discretion, may choose when to send the applicable termination notice under the terms of such guaranty.

In the ISO's sole discretion, a Designated FCM Participant may provide an unconditional, irrevocable guaranty from multiple Affiliates to the ISO guaranteeing the payment of all Capacity Performance Payments owed by the Designated FCM Participant, so long as such guaranty is otherwise in accordance with this Section VII.A and the guarantors have joint and several liability under such guaranty.

FCM Delivery FA for medium and high risk MPs are excluded from the capitalization deduction requirements

FAP Redlines – Capitalization Deduction Requirements

For markets other than the FTR market:

(i) Where a customer or applicant fails to meet the capitalization requirements, the customer or applicant will be required to provide an additional amount of financial assurance in one of the forms described in Section X of the ISO New England Financial Assurance Policy in an amount equal to 25 percent of the customer's or applicant's total financial assurance requirement, ~~(~~excluding the following:

- FTR Financial Assurance Requirements; and

- FCM Delivery Financial Assurance for customers or applicants that are assessed as medium risk or high risk per the Corporate Liquidity Assessment (as described in Section VII.A below) from the start of the Capacity Commitment Period related to the sixteenth Forward Capacity Auction (i.e., June 1, 2025) or any Capacity Commitment Period thereafter~~)~~.

(ii) An applicant that fails to provide the full amount of additional financial assurance required as described in subsection (i) above will be prohibited from participating in the New England Markets until the deficiency is rectified. For a customer, failure to provide the full amount of additional financial assurance required as described in subsection (i) above will have the same effect and will trigger the same consequences as exceeding the "100 Percent Test" as described in Section III.B.2.c of the ISO New England Financial Assurance Policy.

(iii) Any additional financial assurance provided pursuant to this Section II.A.4(c) shall not be counted toward satisfaction of the total financial assurance requirements as calculated pursuant to the ISO New England Financial Assurance Policy.

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The incremental PFP collateral costs incurred by higher risk capacity sellers may be passed through to consumers so the ISO has provided an estimated potential range for informational purposes

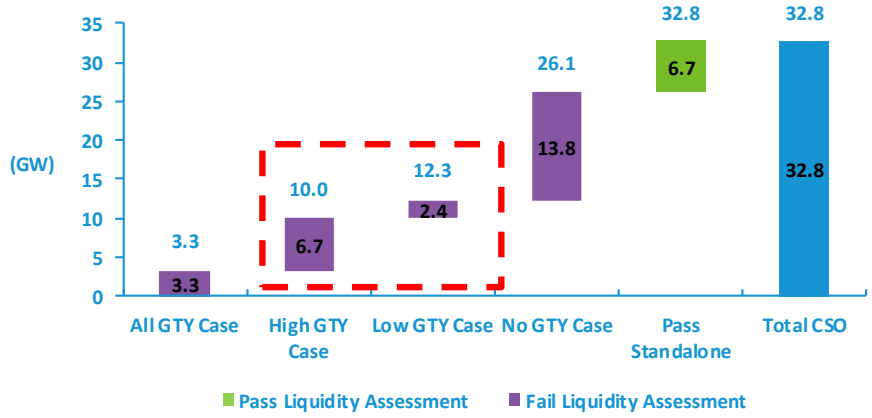
Potential Cost Impact to Consumers

- It is important to note that the potential cost impact to consumers may fall within an estimated range depending on the total amount of additional collateral in the form of cash or letters of credit that are posted to the ISO and the respective financing costs thereof
  - The analysis doesn't reflect the offsetting benefit of the returns generated by investments in the Blackrock accounts of capacity sellers (currently, ~5% annually)
- Capacity sellers that are operating on adequate corporate liquidity levels will not incur any incremental collateral costs as they have already internalized the cost of such liquidity requirements on their balance sheets
- Capacity sellers that fall into the medium / high risk categories may be faced with financing costs that range from the cost of capital associated with a debt (liquidity facilities or term debt) or an equity style issuance
  - ISO has provided more conservative cost ranges using the after-tax weighted average cost of capital (ATWACC) assumptions used in the Net CONE for FCA 19
- The ISO has assessed the potential impact on consumers if capacity sellers successfully passed through their incremental financing costs
  - Capacity sellers are assumed to incur financing costs of 5.01% (after-tax cost of debt) at the low-end to 8.96% (after-tax weighted average cost of capital) at the higher end

PFP collateral requirements are expected to increase by $72 to $90 MM out of a maximum of $154 MM depending on the number of affiliate guarantees received by the ISO

Estimated Incremental PFP Collateral (FCA 16) Requirements

Corporate Liquidity Assessment by CSO (GW)



Incremental PFP Collateral ($ MM)

- If the ISO receives the maximum number of guarantees from eligible affiliates, the total increase in collateral requirements would be $35 MM as 3.3 GW of CSO would fall into the higher risk categories from a corporate liquidity perspective (i.e., 3.3 GW of CSO are from single entity MPs in the medium/high risk categories)
- ISO expects the number of guarantees[1] offered by eligible affiliates to fall within the low and high case guarantee posting scenarios which would result in the total increase in PFP collateral falling within a range of $72 MM (~10.0 GW of high liquidity risk CSOs) to $90 MM (~12.3 GW of high liquidity risk CSOs) which is assumed in our cost analysis for consumers
- If the ISO receives no guarantees, then total collateral requirements would increase by a maximum of $154 MM (currently, total collateral requirements stands at $114 MM on average based on the current methodology) when aggregated across all capacity sellers reflecting the total additional PFP collaterals posted by medium and high liquidity risk capacity sellers

1) See slides 51-52 for further details.

The expected cost to consumers if the cost of the additional collateral was fully passed through by capacity sellers ranges from $0.00003 to $0.00007/KWh using a 5% and 9% financing assumption, respectively

FCA 16 Estimated Incremental Cost to Consumers Analysis

GTY Case	CSO Failing Liquidity Assessment (GW) A	Real Time Load (GW) B	Incremental FA ($ MM) C	After Tax Cost of Debt (%) D	After Tax WACC (%) E	Low End Generator Cost[1] (@5.01%) ($/kW-Month) (C/A*D/12)	High End Generator Cost[1] (@8.96%) ($/kW-Month) (C/A*E/12)	Low End Cost (@ 5.01%) to Consumer ($/kWh) (C/B*D/12/30/24)	High End Cost (@ 8.96%) to Consumer ($/kWh) (C/B*E/12/30/24)
High	10	13	$72	5.01%	8.96%	$0.030	$0.054	$0.00003	$0.00006
Low	12	13	$90	5.01%	8.96%	$0.031	$0.055	$0.00004	$0.00007

- Under the high case guarantee posting scenario, ~10 GW of CSOs fall into the higher risk corporate liquidity assessment category resulting in on average ~$72 MM of additional PFP collateral posting requirements costing between $0.030/KW-M and $0.054/KW-M for capacity sellers
  - Assuming all these additional costs for capacity sellers are passed through to consumers, the additional cost to the consumer ranges from $0.00003 and $0.00006/KWh
- Under the low case guarantee scenario, ~12 GW of CSOs fall into the higher risk corporate liquidity assessment category resulting in on average ~$90 MM of additional PFP collateral posting requirements costing between $0.031/KW-M and $0.055/KW-M for capacity sellers
  - Assuming all these costs are passed through to consumers by the affected capacity sellers, the additional cost to the consumer ranges from $0.00004 to $0.00007/KWh

The expected costs to consumers is immaterial in all cases versus the benefit of mitigating socialized defaults by non-performing illiquid capacity sellers

1) Generator cost assumptions were adjusted from 0.2% (20 BPS) - 5.0% (500 BPS) in previous materials to 5.01% - 8.96%

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The ISO is recommending an effective date on January 1, 2025 however the new FA methodology would go-live as of June 1, 2025 (FCA 16) and apply to each Capacity Commitment Period thereafter. The revised IMC calculation will be effective January 1, 2025

Recommended Effective Date

FCA	Capacity Commitment Period	FCM Delivery FA Methodology
15	2024-25	Current Methodology
16	2025-26	Recommended Methodology
17	2026-27	Recommended Methodology
18	2027-28	Recommended Methodology
19	2028-29	Recommended Methodology
Beyond		Recommended Methodology

Stakeholder Schedule

Stakeholder Committee and Date	Scheduled Project Milestone
Budget and Finance Subcommittee January 24, 2024	Introduce Pay-for-Performance Financial Assurance Update to the Financial Assurance Policy (FAP)
Budget and Finance Subcommittee February 9, 2024	Continue discussion on Pay-for-Performance Financial Assurance Updates including detail on corporate liquidity testing assessment
Budget and Finance Subcommittee March 26, 2024	Continue discussion on Pay-for-Performance Financial Assurance Updates including FCM Delivery FA methodology and assessment
Budget and Finance Subcommittee April 24, 2024	Continued discussion on Pay-for-Performance Financial Assurance Update to the FAP, including redlines
Budget and Finance Subcommittee May 10, 2024	Continued discussion on stakeholder presentation and stakeholder memo on Pay-for-Performance Financial Assurance Update to the FAP
Joint Markets Committee and Budget and Finance Subcommittee June 11, 2024	Introduce stakeholder amendment concepts to MR1 and FAP or Billing Policy

Stakeholder Schedule

Stakeholder Committee and Date	Scheduled Project Milestone
Markets Committee July 9-10, 2024	Discuss stakeholder amendment detail including Market Rule 1 Redlines
Budget and Finance Subcommittee July 29, 2024	Discuss any updates to the ISO's Financial Assurance Proposal and final redlines Discuss stakeholder amendments in detail, including redline review of stakeholder amendments to the Financial Assurance Policy (FAP) or billing policy
Markets Committee August 6-7, 2024	Discuss and vote on stakeholder amendments to MR1 related to the ISO's financial assurance update proposal
Participants Committee September 5, 2024	Vote

- **The NPC vote is targeted for September to ensure adequate time for filing and to receive an order by January 1, 2025. This will provide an opportunity for participants to utilize ARA3 to adjust their position ahead of the upcoming CCP**

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The updated FCM Delivery FA methodology accepted by FERC recently(1) will remain the PFP collateral requirement for low risk MPs but an updated definition of IMC is proposed

Low Risk PFP Collateral Methodology

DFAMW*PE*max[(ABR-CWAP), 0.1]*SF – IMC – MCC	
DFAMW (Delivery Financial Assurance MW)	The sum of the Capacity Supply Obligations of each resource in the Designated FCM Participant's portfolio for the month, excluding the Capacity Supply Obligation of any resource that has reached the annual stop-loss as described in Section III.13.7.3.2 of Market Rule 1
PE (Potential Exposure)	PE is a monthly value calculated for the Designated FCM Participant's portfolio as the difference between the Capacity Supply Obligation weighted average Forward Capacity Auction Starting Price and the Capacity Supply Obligation weighted average capacity price for the portfolio, excluding the Capacity Supply Obligation of any resource that has reached the annual stop-loss
ABR (Average Balancing Ratio)	The duration-weighted average of all of the system-wide Capacity Balancing Ratios calculated for each system-wide Capacity Scarcity Condition occurring in the relevant group of months in the three Capacity Commitment Periods immediately preceding the current Capacity Commitment Period and those occurring in the months within the relevant group that are prior to the current month of the current Capacity Commitment Period. It generally reflects a participant's slice of system obligation
CWAP (Capacity Weighted Average Performance)	The average performance of a resource is the Actual Capacity Provided during Capacity Scarcity Conditions divided by the product of the resource's Capacity Supply Obligation and the equivalent hours of Capacity Scarcity Conditions in the relevant group of months in the three Capacity Commitment Periods immediately preceding the instant current Capacity Commitment Period and those occurring in the months within the relevant group that are prior to the current month of the current Capacity Commitment Period
SF (Scaling Factor)	A month specific multiplier: June / December 2.00; July and January 1.732; August and February 1.414; and all other months 1.00
***(Proposed)* IMC (Intra-month Collateral)**	IMC (intra-month collateral) equals estimated monthly capacity payments incurred during the current delivery month as limited by the difference (which shall in no event be less than zero) between (A) the minimum of the applicable monthly stop-loss and the remaining annual stop-loss as described in Section III.13.7.3.1 and Section III.13.7.3.2 of Market Rule 1, respectively, and (B) the amount of additional FCM Delivery Financial Assurance when considering the Designated FCM Participant's current month FCM Delivery Financial Assurance obligation as compared to the Designated FCM Participant's next month FCM Delivery Financial Assurance obligation, in each case without giving effect to the IMC and MCC variables when calculating such additional amount. Where the estimated monthly capacity payments for each Designated FCM Participant, shall be updated three (3) days after publication of the most recent FCM Preliminary Capacity Performance Score report (or equivalent report) on the Market Information Server.
MCC (Monthly Capacity Charge)	MCC (monthly capacity charge) equals monthly capacity payments incurred in previous months, but not yet billed. The MCC is estimated from the first day of the current delivery month until it is replaced by the actual settled MCC value when settlement is complete.

(1) ISO filed updates to the FCM Delivery FA methodology which were approved by FERC with an effective date of March 1, 2024 (Docket No. ER24-661-000). The formula above reflects those updates, IMC changes will be part of the upcoming filing.

In a scenario where the ISO receives no affiliate guarantees, the average increase in PFP collateral requirements is ~$154 MM for the entire market while this reduces to $35 MM on average if it received guarantees from every affiliate that is creditworthy

Guarantee Posting Scenarios

CCP 2025-26 (Total CSOs ~32.8 GW)								
	No GTY Scenario				All GTY Scenario			
Market Participant Category	CSO (GW)	MPs (#)	Current Average Monthly PFP Collateral ($ MM)	Average Incremental PFP Collateral ($ MM)	CSO (GW)	MPs (#)	Current Average Monthly PFP Collateral ($ MM)	Incremental PFP Collateral ($ MM)
Pass on Standalone Basis(1)	6.7	75	$26	NA	6.7	75	$26	NA
Pass Utilizing Affiliate GTY(1)	0.0	0	$0	NA	22.8	40	$68	NA
Medium & High Risk(1)	26.1	82	$88	$154	3.3	42	$20	$35
Total	32.8	157	$114	$154	32.8	157	$114	$35

(1) Based on a review of financial statements reporting as of Dec 31, 2023.

The ISO expects that the total incremental collateral requirements for the entire market increases to between $72 MM and $90 MM depending on the number of guarantees it receives which is reflected in the low and high guaranty case scenarios below

Guarantee Posting Scenarios

CCP 2025-26 (Total CSOs ~32.8 GW)								
	Low GTY Scenario				High GTY Scenario			
Market Participant Category	CSO (GW)	MPs (#)	Current Average Monthly PFP Collateral ($ MM)	Average Incremental PFP Collateral ($ MM)	CSO (GW)	MPs (#)	Current Average Monthly PFP Collateral ($ MM)	Incremental PFP Collateral ($ MM)
Pass on Standalone Basis(1)	6.7	75	$26	NA	6.7	75	$26	NA
Pass Utilizing Affiliate GTY(1)	13.8	14	$37	NA	16.1	27	$47	NA
Medium & High Risk(1)	12.3	68	$51	$90	10.0	55	$41	$72
Total	32.8	157	$114	$90	32.8	157	$114	$72

(1) Based on a review of financial statements reporting as of Dec 31, 2023.

The ISO made a conservative assumption regarding non-energy industry parents/ affiliates and their willingness to provide guarantees

Parent / Affiliate Guarantee Assumptions Revision

	Revised Assumption	
Market Participant (Parent) Sector	Low GTY Case CSO Coverage (GW)	High GTY Case CSO Coverage (GW)
Energy Industry	13.8	14.1
Asset Management, Private Equity or Pension Fund Firms	0.0	2.0
Total	13.8	16.1

- ISO has revised the High and Low Guaranty scenarios by grouping ~16 GWs of CSO that is expected to require liquidity support from a guarantor into two categories
  - The remaining ~17 GWs either pass on a standalone basis (6.7 GW) or is not assumed to have an affiliate with adequate liquidity willing to provide a guaranty (10.3 GW)
- CSOs from MPs with a guarantor showing adequate liquidity that is also in the energy industry were largely placed in the Low GTY Case while CSOs from MPs with an affiliate not in the energy industry fall into the High GTY Case
  - ISO anticipates that affiliate companies with significant balance sheets that are in the energy industry are highly likely to provide a guaranty on behalf of their MP
  - Affiliate companies outside of the energy industry may provide a guaranty as well, but ISO is less confident in receiving a guaranty from this sector and assumed zero would be received in the low case

These are the links to capacity performance bilateral ISO materials and trainings

Capacity Performance Bilateral ISO Training Materials

- https://www.iso-ne.com/static-assets/documents/support/user_guides/submitting_ibts_using_sms.pdf (page 78)
- Settlements Forum: 2018 Q1 (presentation) (slides 11-14)
- Pay-for-Performance (video)
- See Section 6 of the User Guide for Submitting Internal Bilateral Transactions using SMS for additional details