MARCH 26, 2024

Pay-for-Performance Financial Assurance

Update to the Financial Assurance Policy regarding Pay-for-Performance Penalties

NEPOOL Budget & Finance Subcommittee Meeting

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This presentation outlines the ISO's risk management recommendation to mitigate default risk in the FCM associated with MPs that have inadequate corporate liquidity to settle potential PFP penalty payments

Executive Summary

- The ISO presented and discussed a recommended update to the FAP with the Budget and Finance Subcommittee regarding the adequacy of FCM Delivery FA (PFP Collateral) and Market Participants (MPs) that may not have sufficient liquidity to cover incremental collateral requirements associated with potential PFP penalty payments that exceed the posted PFP collateral
- The ISO has developed an updated design for both the corporate liquidity assessment methodology as well as the collateral requirements for MPs that fall into a higher PFP penalty non-payment risk category
- This presentation focuses on the updated design, the market stress scenario which the ISO seeks to mitigate, and reflects some of the stakeholder input and feedback received during the prior Budget and Finance Subcommittee meetings
- ISO recommends an updated PFP risk management framework which assesses the corporate liquidity of MPs to determine their ability to settle their potential PFP penalty payment obligations and calls for incremental collateral postings from those that present a higher risk of non-payment to the ISO
- MPs may provide parent / affiliate guarantees to satisfy the new corporate liquidity assessment applicable in the FCM

The new PFP risk management framework materially reduces the potential for sizable socialized defaults impacting the market with an immaterial potential incremental cost to consumers and generators

Executive Summary (Continued)

- MPs would fall into either a low, medium or high risk assessment category based on the results of a new corporate liquidity assessment methodology
- Each liquidity risk category is subject to different PFP collateral requirements designed to limit the impact of potential socialized defaults on the overall market
- The ISO developed a market stress scenario to analyze the magnitude of socialized defaults; under the scenario socialized defaults reduce from an estimated range of ~$350 MM to ~$760 MM under the current PFP risk management framework to ~$0-$60 MM under the new recommended PFP risk management framework
- The estimated incremental cost to consumers and generators of the new PFP risk management framework is considered immaterial $0.000001 to $0.00007/KWh and $0.004 to $0.091/KW-Month, respectively
- FAP Redlines will be presented and discussed at the April 24th Budget and Finance Subcommittee meeting
- The ISO is recommending an effective date in Q4 2024 however the new PFP risk management framework would apply to capacity commitment period 2025-26 (FCA 16) starting on June 1st 2025 and each CCP thereafter

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The ISO recommends an updated PFP collateral design to address the non-payment risk associated with PFP penalties that are socialized to the entire market per the Billing Policy

Introduction

- Per the existing design of Pay-for-Performance in Forward Capacity Market (FCM), a resource may incur a net financial loss (i.e., PFP penalty payment) in the FCM settlement if its performance is sufficiently poor, relative to its share of the system's requirement, in a month with a sufficiently high number of scarcity hours
- The annual and monthly stop loss mechanisms limit the suppliers maximum exposure to financial loss in the capacity market as it is not commercially reasonable for a capacity supplier to face potentially unlimited losses for non-performance
  - Each capacity supplier receives insurance against the possibility of a large negative Capacity Performance Payment – that is, in excess of the stop-loss limit – in the event that its capacity resource performs poorly in a month with many scarcity hours. This insurance is paid for out of the net surplus that accrues during capacity scarcity conditions
  - If one (or more) capacity resource reaches the stop-loss limit, the other capacity resources in the pool will receive reduced net FCM payments as the net surplus that remains to be shared among all other capacity suppliers will decrease
- In effect, capacity suppliers are insuring one another, in part, against the adverse financial consequences of very poor resource performance; they are not insuring each other against the associated default risk related to the non-payment of PFP penalties when they incur a net financial loss in the FCM settlement

The ISO recommends updating the PFP collateral design to mitigate the risk of payment defaults related to PFP penalties which are socialized to the entire market and not just capacity suppliers

The overall market is exposed to significant socialized defaults in scenarios when MPs have inadequate corporate liquidity to cover their potential penalty payment obligations associated with their CSO positions

Market Stress Scenario

Market Stress Scenario

- Capacity scarcity conditions occur more frequently across high risk seasons (June, July, Aug, Dec and January) resulting in FA / billing defaults which amount to the respective monthly stop loss
- CSO positions during the capacity commitment period are not shed in a timely fashion by MPs
- MPs with inadequate corporate liquidity are unable to settle PFP penalty payments
- The ISO's short-pay protocols result in a reduction of remittances to MPs, irrespective of sector
- The ISO's default socialization protocols result in the allocation of defaulted amounts to the non-defaulting MPs, irrespective of sector
- In one scenario, the defaulting MPs file for bankruptcy in February to get protection from creditors while in another scenario they do not file for bankruptcy protection

- The current PFP collateral methodology does not adequately protect the ISO against MPs that have weak corporate liquidity profiles in this market stress scenario
- The recommended PFP collateral design is tailored to mitigate the risk of socialized defaults arising from this scenario
- All MPs are ultimately exposed to socialized defaults resulting from PFP penalty payment defaults

The ISO's PFP collateral methodology needs to evolve to mitigate the risk of socialized defaults impacting the overall market due to the non-payment of PFP penalties in the FCM related to MPs that have inadequate corporate liquidity

The ISO recommends updating the PFP risk management framework to curtail the magnitude of potential socialized defaults impacting the overall market due to the non-payment of PFP penalties

PFP Risk Management Framework Recommendation

Current Risk Framework	Recommended 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	• All MPs are subject to a corporate liquidity assessment to determine their ability to pay the penalty payments associated with their CSO • Low risk MPs are subject to the current FCM Delivery FA methodology • Medium and high risk MPs are subject to higher collateral requirements as they pose higher risk to the market • MPs may provide parent / affiliate guarantees to satisfy the new corporate liquidity assessment • 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 an FA / payment default

The ISO proposed PFP risk management framework significantly mitigates the risk of non-payment of PFP penalties through the acceptance of parent / affiliate guarantees

FCM Corporate Liquidity Assessment

CCP 2025-26 (CSO ~33 GWs)					
PFP Risk Management Framework	Available Corporate Liquidity[(1)]: Peak Monthly Stop Loss Ratio				
	< 1x	< 2x	< 3x	< 4x	< 5x
Current Framework (GW)	17	24	25	28	29
Proposed Framework - High Case Guaranty Scenario (GW)	1	2	3	3	4
Proposed Framework - Low Case Guaranty Scenario (GW)	5	8	8	8	9

- In CCP 2025-26, there are approximately 17 GW of CSOs awarded to MPs that do not demonstrate sufficient available corporate liquidity to cover their peak monthly stop loss (i.e., 1x)
- Under the ISO's proposed PFP risk management framework where parents / affiliates can provide a guarantee to support MPs, those MPs that do not demonstrate sufficient available corporate liquidity to cover their peak monthly stop loss (i.e., 1x) drops from 17 GW to a range of 1-5 GW
- The range is based on the ISO's assessment of the willingness of the parents / affiliates (that have adequate corporate liquidity) to provide a guarantee for its MP
  - The high case guaranty scenario largely assumes all such parents / affiliates do so
  - The low case guaranty scenario excludes certain potential guarantors that are predominately asset management / private equity firms as they may prefer the MP to be bankruptcy remote

(1) Based on a review of MPs financial statements as of Q4-23.

Potential socialized defaults decreases to a reasonable level under the ISO's market stress scenario when the new PFP risk management framework is in effect

Socialized Default Analysis Scenarios

CCP 2025-26 (Total CSOs ~33 GW)			
Available Corporate Liquidity: Peak Monthly Stop Loss Ratio	**< 1x**	**< 2x**	**< 3x**
Current Framework (GW)	17	24	25
- Cumulative Socialized Defaults ($ MM)	$342 - $519	$472 - $720	$497 - $758
Proposed Framework Low Case Guaranty Scenario (GW)	5	8	8
- Cumulative Socialized Defaults ($ MM)	$4 - $45	$4 - $55	$6 - $60
Proposed Framework High Case Guaranty Scenario (GW)	1	2	3
- Cumulative Socialized Defaults ($ MM)	$0 - $5	$1 - $12	$3 - $18

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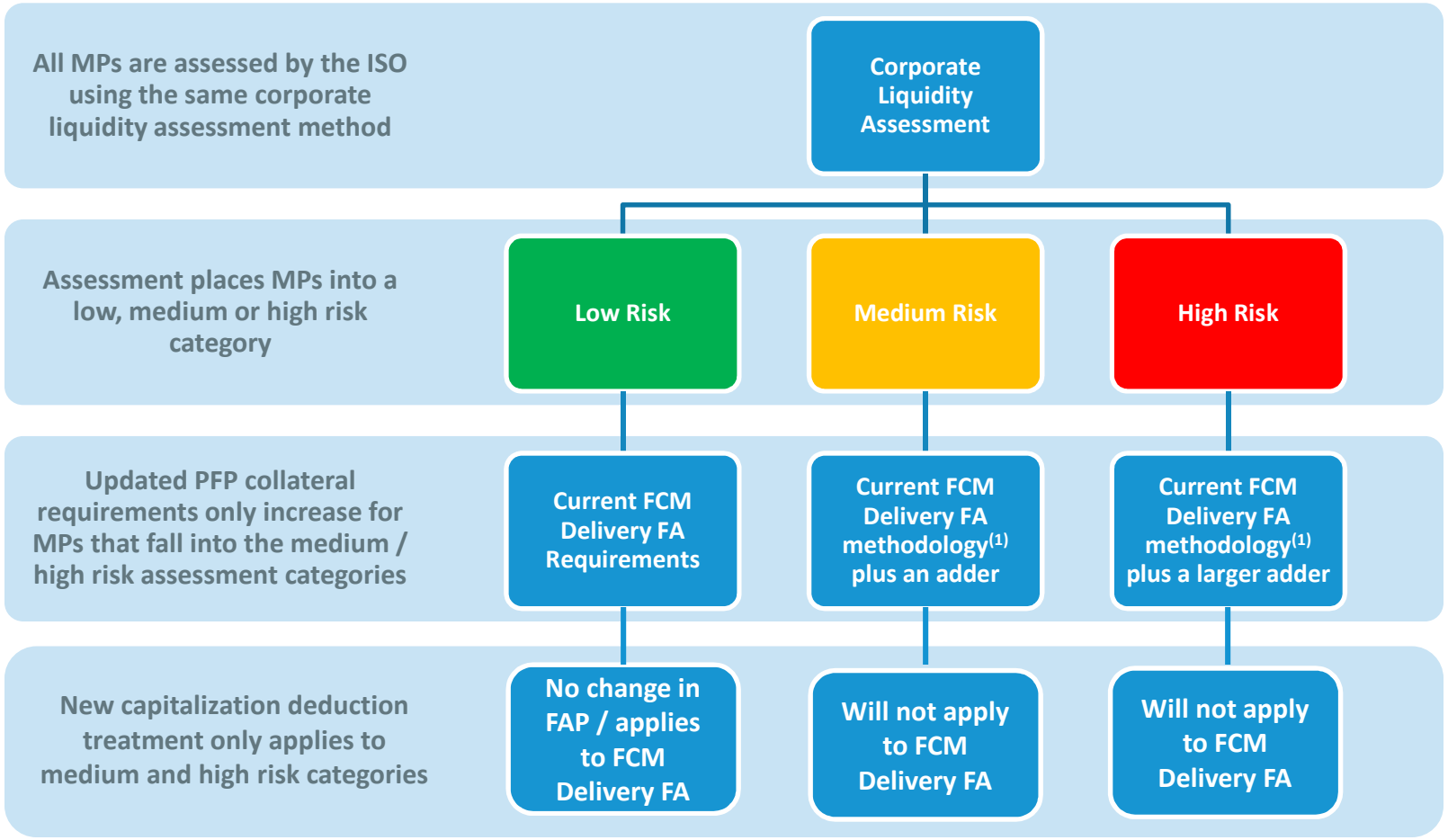
A corporate liquidity assessment determines if MPs pose a higher default risk to the ISO regarding potential PFP penalty payment obligations and increases collateral requirements accordingly

Updated PFP Risk Management Framework Overview



(1) IMC (intra-month collateral) is excluded from FCM Delivery FA formula.

A corporate liquidity assessment will be performed daily by the ISO to determine the appropriate level of PFP collateral for each MP based on its available corporate liquidity relative to its CSO

Corporate Liquidity Assessment

- The ISO intends to calculate the Corporate Liquidity Assessment daily for all MPs with a CSO position from June 1, 2025 onwards
  - MPs that fall into the medium / high risk liquidity categories can opt to report corporate liquidity on a monthly basis to the ISO and have the test performed monthly thereafter
- Available corporate liquidity is based off financial statements provided to the ISO for the most recently reported period and applicable financial assurance as reflected in FAM
  - Excess amounts of cash and letters of credit posted to the ISO will be calculated daily 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
  - The test will find the 3 largest monthly stop losses over the next 6 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

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

Available Corporate Liquidity Calculation Revision

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 has removed "debt maturing in 12 months" from the calculation as the purpose of the test is to determine the adequacy of corporate liquidity versus potential penalty payments rather than the MPs ability to cover maturing debt with cash / revolvers
- Consequently, the total value of cash restricted for the purposes of servicing debt is excluded from available corporate liquidity

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

The corporate liquidity assessment test is performed daily based on various inputs which update daily (cash / LCs posted to ISO, peak monthly stop losses), or quarterly (financial statements data)

Corporate Liquidity Assessment Test Frequency Example

Available Corporate Liquidity Updates Daily

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

Peak Monthly Stop Loss (PMSL) Updates Daily

CCP Month	CSO (MW)	Annual Stop Loss ($ MM)	Monthly Stop Loss ($ MM)	PMSL June ($ MM)
June	100	$6.05	$1.24	
July	100	$6.05	$1.24	
Aug	100	$6.05	$1.24	
Sept	100	$6.05	$1.24	$1.24
Oct	100	$6.05	$1.24	$1.24
Nov	100	$6.05	$1.24	$1.24
Sum of top 2 peak monthly stop losses over next 6 months				$2.48
Sum of top 3 peak monthly stop losses over next 6 months				$3.72

Daily Corporate Liquidity Test Result

For example as of June 1st, available corporate liquidity ($27 MM) is greater than sum of top 3 highest monthly stop losses ($3.72 MM) through November so the MP is considered low risk but this can change intra-month as available corporate liquidity updates daily

The two and three highest monthly stop loss limits over the next six months set the threshold levels for the low, medium and high risk liquidity assessment categories

Peak Monthly Stop Losses (PMSL) Example

FCA16 – FCA 17	CSO (MW)	Annual Stop Loss ($ MM)	Monthly Stop Loss ($ MM)	PMSL June ($ MM)	PMSL July ($ MM)	PMSL Aug ($ MM)	PMSL Sept ($ MM)	PMSL Oct ($ MM)	PMSL Nov ($ MM)	PMSL Dec ($ MM)	PMSL Jan ($ MM)	PMSL Feb ($ MM)	PMSL Mar ($ MM)	PMSL Apr ($ MM)	PMSL May ($ MM)
June	100	$6.05	$1.24												
July	100	$6.05	$1.24												
Aug	100	$6.05	$1.24												
Sept	100	$6.05	$1.24	$1.24											
Oct	100	$6.05	$1.24	$1.24	$1.24										
Nov	100	$6.05	$1.24	$1.24	$1.24	$1.24									
Dec	200	$12.10	$2.48		$2.48	$2.48	$2.48								
Jan	200	$12.10	$2.48			$2.48	$2.48	$2.48							
Feb	200	$12.10	$2.48				$2.48	$2.48	$2.48						
March	200	$12.10	$2.48					$2.48	$2.48	$2.48	$2.48	$2.48	$2.48		
April	200	$12.10	$2.48						$2.48	$2.48	$2.48	$2.48	$2.48	$2.48	
May	200	$12.10	$2.48							$2.48	$2.48	$2.48	$2.48	$2.48	$2.48
Jun	50	$3.08	$0.64												
Jul	50	$3.08	$0.64												
Aug	100	$6.16	$1.28												
Sept	200	$12.32	$2.55											$2.55	$2.55
Oct	300	$18.48	$3.83												$3.83
Sum of top 2 peak monthly stop losses				$2.48	$3.72	$4.96	$4.96	$4.96	$4.96	$4.96	$4.96	$4.96	$4.96	$5.03	$6.38
Sum of top 3 peak monthly stop losses				$3.72	$4.96	$6.20	$7.44	$7.44	$7.44	$7.44	$7.44	$7.44	$7.44	$7.51	$8.86

6 month forward window

The liquidity assessment continuously identifies MPs that have limited corporate liquidity to satisfy their potential PFP penalty payments associated with a CSO position over the next 6 months

Corporate Liquidity Assessment Examples

Obligation Month	CSO (1) (MW)	Monthly Stop Loss ($ MM)	Available Corporate Liquidity ($ MM)	Top 3 Peak Monthly Stop Losses (2) ($ MM)	Top 2 Peak Monthly Stop Losses (3) ($ MM)	Risk Category
June	100	$1.2	$4.0	$3.6	$2.4	Low
July	100	$1.2	$4.0	$4.8	$3.6	Medium
August	100	$1.2	$4.0	$6.0	$4.8	High
September	100	$1.2	$4.0	$7.2	$4.8	High
October	100	$1.2	$4.0	$7.2	$4.8	High
November	100	$1.2	$4.0	$7.2	$4.8	High
December	200	$2.4	$4.0	$7.2	$4.8	High
January	200	$2.4	$4.0	$7.2	$4.8	High
February	200	$2.4	$4.0	$7.2	$4.8	High
March	200	$2.4	$4.0	$7.2	$4.8	High
April	200	$2.4	$4.0	$6.1	$4.8	High
May	200	$2.4	$4.0	$5.0	$3.7	Medium

(1) Assumes the same CSO profile for the following CCP.
(2) Based on the highest 3 monthly stop losses over the next 6 months as of the 1st day of the delivery month.
(3) Based on the highest 2 monthly stop losses over the next 6 months as of the 1st day of the delivery month.

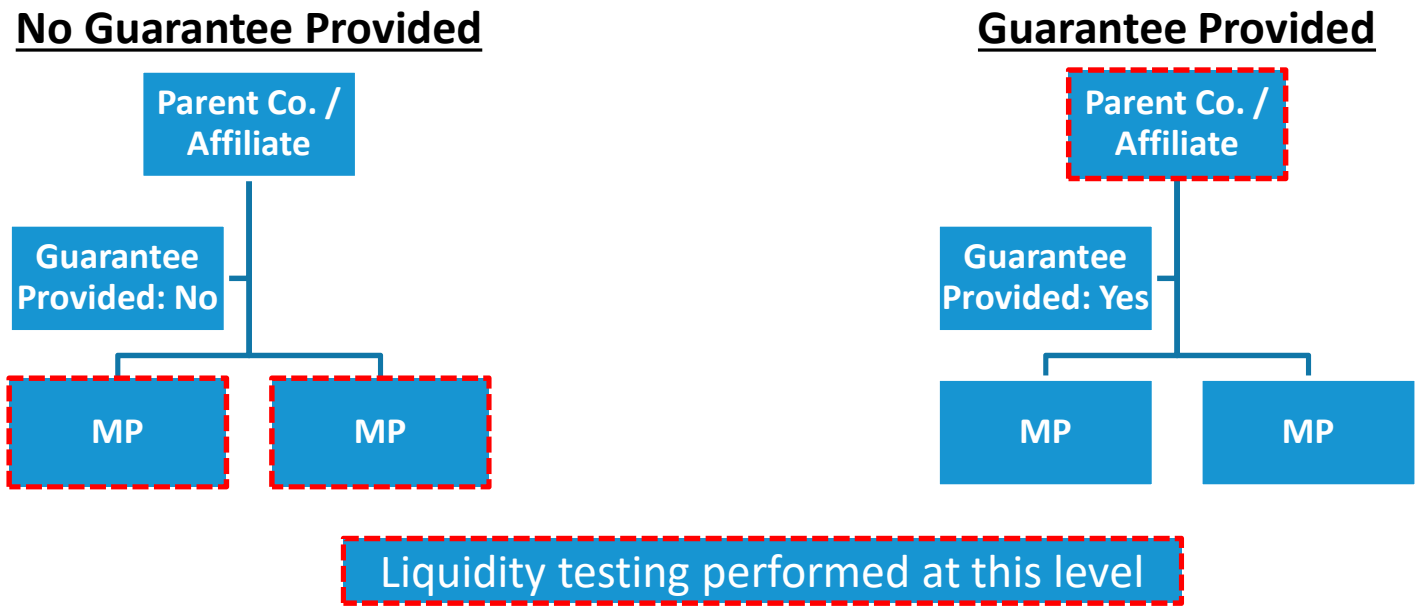
The financial information reporting requirements for the new corporate liquidity test assessment will remain consistent with the requirements in the FAP regarding establishing credit limits

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
- 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 DFA plus excess financial assurance posted to the ISO

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 parent / affiliate is providing a guarantee covering multiple MPs, the ISO will test the available corporate liquidity versus the aggregate obligations of the respective underlying MPs

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 FA / Billing default
- The guarantee terminates at the earlier of (a) termination by the ISO, or (b) when the MPs financial assurance requirements are no longer in effect under the FAP
- The ISO in its sole discretion can reject a guarantor at any time if it presents unreasonable risk to the pool

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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

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
IMC (Intra-month Collateral)	IMC (intra-month collateral) equals estimated monthly capacity payments incurred during the current delivery month and 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.
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.

Medium and high risk MPs are required to post incremental PFP collateral based on the applicable methodology which includes a risk adder component

FCM Delivery FA Methodology Per Liquidity Risk Category

Liquidity Risk Assessment Category	Applicable FCM Delivery FA Methodology	Risk Adder
Low Risk	DFAMW*PE*max[(ABR-CWAP), 0.1]*SF – IMC – MCC(1)	None
Medium Risk	DFAMW*PE*max[(ABR-CWAP), 0.1]*SF – MCC – Current Month Stop Loss(2)	Current Month Stop Loss
High Risk	DFAMW*PE*max[(ABR-CWAP), 0.1]*SF – MCC – Current Month Stop Loss – Next Month Net Loss(3)	Current Month Stop loss & Next Month Net Loss

- Note that IMC (intra-month collateral) of FCM Delivery FA does not apply to the medium and high risk MPs as they are collateralizing upfront their PFP penalty payment exposure versus the current and next month stop loss, respectively

(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) Current month stop loss = CSO MW from current month * FCA Starting Price; see market rule 1 section III.13.7.3.1 for the formal definition.
(3) Net loss equals the monthly stop loss limit as defined in the tariff minus the base capacity payments for that month.

For high risk MPs, the ISO is not requiring full collateralization of the next month's net loss as it has the ability to set-off base capacity payments owed to a defaulting MPs assuming it has not filed for bankruptcy

Current Month Stop Loss and Next Month Net Loss Definitions

- Current Month Stop Loss = applicable FCA Starting Price multiplied by the resource's Capacity Supply Obligation for the current obligation month
- Next Month Net Loss(1) = applicable FCA Starting Price multiplied by the resource's Capacity Supply Obligation for the obligation month immediately following the current obligation month less the Capacity Base Payment for the obligation month immediately following the current obligation month

Risk Adder	Calculation
Current Month Stop Loss(2)	Applicable FCA Starting Price * Current Obligation Month CSO
Next Month Net Loss(2)	Applicable FCA Starting Price * Next Obligation Month CSO – Next Obligation Month Capacity Base Payment

(1) In May the obligation month immediately following the current obligation month will be June of the following CCP.
(2) Expressed as a negative value.

The stop loss is calculated per market rule 1 section III.13.7.3.1

Current Month Stop Loss and Next Month Net Loss Example

Obligation Month	Auction	Auction Starting Price ($/MW-month)	Auction Clearing Price ($/MW-month)	Capacity Supply Obligation (MW)	Capacity Base Payment ($ MM)	Current Month Stop Loss[1] ($ MM)	Next Month Net Loss[1,2] ($ MM)
June 2025	FCA 16	$12,400	$2,591	100	$0.26	$1.24	$0.98
July 2025	FCA 16	$12,400	$2,591	100	$0.26	$1.24	$0.98
Aug 2025	FCA 16	$12,400	$2,591	100	$0.26	$1.24	$0.98
Sept 2025	FCA 16	$12,400	$2,591	100	$0.26	$1.24	$0.98
Oct 2025	FCA 16	$12,400	$2,591	100	$0.26	$1.24	$0.98
Nov 2025	FCA 16	$12,400	$2,591	100	$0.26	$1.24	$1.96
Dec 2025	FCA 16	$12,400	$2,591	200	$0.52	$2.48	$1.96
Jan 2026	FCA 16	$12,400	$2,591	200	$0.52	$2.48	$1.96
Feb 2026	FCA 16	$12,400	$2,591	200	$0.52	$2.48	$1.96
March 2026	FCA 16	$12,400	$2,591	200	$0.52	$2.48	$1.96
April 2026	FCA 16	$12,400	$2,591	200	$0.52	$2.48	$1.96
May 2026	FCA 16	$12,400	$2,591	200	$0.52	$2.48	$1.02

(1) Expressed as a negative value.
(2) In May the obligation month immediately following the current obligation month will be June of the following CCP.

PFP collateral for low risk MPs is unchanged; Medium risk MPs are required to post the current month's stop loss additionally; High risk MPs post the current month's stop loss and next month's net loss additionally

FCM Delivery FA by Risk Category – Single Resource Example

Obligation Month	DFAMW	Potential Exposure ($/MW-month)	ABR	CWAP	SF[1]	Low Risk FCM Delivery FA ($ MM)	Current Month Stop Loss ($ MM)[2]	Next Month Net Loss ($ MM)[2,3]	Medium Risk FCM DFA ($ MM)	High Risk FCM DFA ($ MM)
						(A)	(B)	(C)	(D) = A+B	(E) = A+B+C
June 2025	100	$9,809	0.9	0	2.000	$1.77	$1.24	$0.98	$3.01	$3.99
July 2025	100	$9,809	0.9	0	1.732	$1.53	$1.24	$0.98	$2.77	$3.75
Aug 2025	100	$9,809	0.9	0	1.414	$1.25	$1.24	$0.98	$2.49	$3.47
Sept 2025	100	$9,809	0.9	0	1.000	$0.88	$1.24	$0.98	$2.12	$3.10
Oct 2025	100	$9,809	0.6	0	1.000	$0.59	$1.24	$0.98	$1.83	$2.81
Nov 2025	100	$9,809	0.6	0	1.000	$0.59	$1.24	$1.96	$1.83	$3.79
Dec 2025	200	$9,809	0.7	0	2.000	$2.75	$2.48	$1.96	$5.23	$7.19
Jan 2026	200	$9,809	0.7	0	1.732	$2.38	$2.48	$1.96	$4.86	$6.82
Feb 2026	200	$9,809	0.7	0	1.414	$1.94	$2.48	$1.96	$4.42	$6.38
March 2026	200	$9,809	0.6	0	1.000	$1.18	$2.48	$1.96	$3.66	$5.62
April 2026	200	$9,809	0.6	0	1.000	$1.18	$2.48	$1.96	$3.66	$5.62
May 2026	200	$9,809	0.6	0	1.000	$1.18	$2.48	$1.02	$3.66	$4.68

(1) Reflecting new recently FERC approved winter scaling factors.
(2) Expressed as a negative value.
(3) In May the obligation month immediately following the current obligation month will be June of the following CCP.

Under the proposed design, PFP collateral requirements step up commensurately with the higher risk of non-payment that a MP poses to the ISO, albeit without full collateralization of the annual stop loss

FCM Delivery FA Requirements Comparisons

				Single Resource MPs			Multi Resource MPs[1]		
CCP 2025-2026 Month	CSO (MW)	Annual Stop Loss ($ MM)	Monthly Stop Loss ($ MM)	Low Risk PFP Collateral ($ MM)	Medium Risk PFP Collateral ($ MM)	High Risk PFP Collateral ($ MM)	Low Risk PFP Collateral ($ MM)	Medium Risk PFP Collateral ($ MM)	High Risk PFP Collateral ($ MM)
June	200	$12.1	$2.5	$3.5	$6.0	$7.9	$1.8	$4.3	$6.3
July	200	$12.1	$2.5	$3.1	$5.6	$7.5	$1.5	$4.0	$6.0
Aug	200	$12.1	$2.5	$2.5	$5.0	$6.9	$1.2	$3.7	$5.7
Sept	200	$12.1	$2.5	$1.8	$4.3	$6.2	$0.9	$3.4	$5.4
Oct	200	$12.1	$2.5	$1.2	$3.7	$5.6	$0.3	$2.8	$4.8
Nov	200	$12.1	$2.5	$1.2	$3.7	$5.6	$0.3	$2.8	$4.8
Dec	200	$12.1	$2.5	$2.7	$5.2	$7.1	$1.0	$3.5	$5.5
Jan	200	$12.1	$2.5	$2.4	$4.9	$6.8	$0.8	$3.3	$5.3
Feb	200	$12.1	$2.5	$1.9	$4.4	$6.3	$0.7	$3.2	$5.2
March	200	$12.1	$2.5	$1.2	$3.7	$5.6	$0.3	$2.8	$4.8
April	200	$12.1	$2.5	$1.2	$3.7	$5.6	$0.3	$2.8	$4.8
May	200	$12.1	$2.5	$1.2	$3.7	$5.6	$0.3	$2.8	$4.8
Average PFP Collateral as % of Annual Stop Loss				16%	37%	53%	6%	27%	43%

(1) Based on a MP with two gas fueled resources (100 MW per resource).

There is a immaterial increase in the cost of posting additional collateral for the high and medium risk MPs assuming they have not shed via the auctions / bilaterally

Incremental Collateral Cost Analysis

CCP Month	Average PFP Collateral 2018-2023[1] ($ MM)	Incremental Letters of Credit Nominal Amount (High / Medium Risk) ($ MM)	Incremental Letters of Credit Cost @ 20 bps ($ MM)	Incremental Letters of Credit Cost @ 500 bps ($ MM)
June	$234	$55-$171	$0.01-$0.03	$0.23-$0.71
July	$202	$55-$171	$0.01-$0.03	$0.23-$0.71
Aug	$162	$55-$171	$0.01-$0.03	$0.23-$0.71
Sept	$109	$55-$171	$0.01-$0.03	$0.23-$0.71
Oct	$64	$55-$171	$0.01-$0.03	$0.23-$0.71
Nov	$65	$55-$171	$0.01-$0.03	$0.23-$0.71
Dec	$184	$55-$171	$0.01-$0.03	$0.23-$0.71
Jan	$129	$55-$171	$0.01-$0.03	$0.23-$0.71
Feb	$96	$55-$171	$0.01-$0.03	$0.23-$0.71
March	$52	$55-$171	$0.01-$0.03	$0.23-$0.71
April	$52	$55-$171	$0.01-$0.03	$0.23-$0.71
May	$52	$55-$171	$0.01-$0.03	$0.23-$0.71

- The ranges reflect the low and high guarantee posting scenarios which result in ~8 GW and ~3 GW, respectively of CSOs with MP that fall into the medium / high risk liquidity risk assessment categories
- Under the assumption that medium and high risk MPs raise additional liquidity via committed credit facilities in order to avoid posting the higher collateral requirements, the incremental cost based on a 20 bps revolving credit facility commitment fee assumption ranges from ~$9k to $28k per month
- This increases to ~$227k to $712k per month under a higher 500 bps cost assumption

(1) Historical collateral requirements adjusted for new winter scaling factors in Dec, Jan and Feb data set.

From both the generator and consumer perspective the potential incremental cost of the new PFP risk management framework is immaterial

Consumer versus Generator Potential Cost Analysis

- The potential cost to the consumer ranges from ~$0.000001/KWh (i.e., high guarantee – low cost scenario) to ~$0.00007/KWh (i.e., low guarantee – high cost scenario) based on an average RTLO of ~13 GW assumption over last 5 years since 2022
- The potential cost to generators that are classified as medium or high risk per the corporate liquidity assessment category (i.e., 3-8 GW) ranges from $0.0004/KW-Month (i.e., high guarantee – low cost scenario) to $0.091/KW-Month (i.e., low guarantee – high cost scenario) that cleared in FCA 16 at a price of $2.59/KW-Month
- The remaining generators (low risk) with volumes of 25-30 GW have already incurred these liquidity costs as they're able to demonstrate it at the parent, affiliate or MP level

The new PFP risk management framework is a relatively low cost solution which mitigates the risk of material socialized defaults impacting the ISO

The ISO is recommending an effective date in Q4-2024 however the new methodology would go-live as of June 1, 2025 (FCA 16) and apply to each Capacity Commitment Period thereafter

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

The delayed start to the new methodology provides adequate lead time for MPs to risk manage their CSO positions according to their corporate liquidity constraints from FCA 16 onwards

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Stakeholder Schedule

Stakeholder Committee and Date	Scheduled Project Milestone
B&F Subcommittee March 26, 2024	Discuss updated FCM Delivery FA methodology
B&F Subcommittee April 24, 2024	Discuss Redlines to FAP
Participants Committee June 6, 2024	Vote on updated FCM Delivery FA methodology
Effective Date	Q4 2024

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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 – MCC – Current Month Stop Loss	Excluded from additional 25% financial assurance requirement against total FCM Delivery FA obligations
High	Fail	DFAMW*PE*max[(ABR-CWAP), 0.1]*SF – MCC – Current Month Stop Loss – Next Month Net Loss	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.

If a MP is medium / high risk per the liquidity test 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

FAP Capitalization Deduction Approach Example

Hypothetical Values Used for Example – June	Under current FAP methodology an additional 25% collateral is required if the MP doesn't satisfy the capitalization minimum requirements		Under proposed FAP methodology, the new FCM delivery FA requirements are considered adequately collateralized against MPs that fall into the medium and high risk categories and it is therefore excluded from the additional 25% capitalization deduction requirement			
ISO's Capitalization Requirements Satisfied	Yes	No	Yes	No	Yes	No
Corporate Liquidity Test Result	NA	NA	Pass	Pass	Medium / High	Medium / High
Total Market Obligations (excluding FTRs) ($ MM)	$5.0	$6.25	$5.00	$6.25	$7.00	$7.25
- FCM Delivery FA ($ MM)	*$4.0*	*$5.0* (1)	*$4.0*	*$5.0* (1)	*$6.0* (2)	*$6.0* (2)
- All Other Obligations (excluding FTRs and FCM Delivery FA) ($ MM)	*$1.0*	*$1.25* (1)	*$1.0*	*$1.25* (1)	*$1.0*	*$1.25* (1)

(1) Failure to satisfy the capitalization requirements effectively increases the FCM delivery FA and Other Market Obligations by 25% - the so called "capitalization deduction" amount.

(2) The increase in FCM delivery FA from $4 MM to $6 MM is attributable exclusively to the higher collateral requirements associated with medium / higher risk MPs; an additional 25% capitalization deduction is not applied due to not satisfying the minimum capitalization requirements.