

# Modeling Improvements for Capacity Accreditation: Firm Fuel

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**Business Issues Committee**

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# Agenda

- **Summary of Proposal**
- **Fuel Characteristic Elections**
- **Firm Fuel Requirements**
- **Financial Sanctions**
- **Tariff and ICAP Manual Updates**
- **Next Steps**

# Summary of Proposal

- **The NYISO is proposing tariff revisions to support the Gas Constraints track Modeling Improvements for Capacity Accreditation**

# Background

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- **On July 23, 2024, FERC accepted the tariff revisions for the Modeling Improvements for Capacity Accreditation project**
  - As part of its acceptance, FERC directed the NYISO to submit a compliance filing that delayed the implementation of the firm fuel election process to the 2026-2027 Capability Year
    - On October 24, 2024, FERC accepted the NYISO compliance filing
- **Throughout 2024 and early 2025 ICAP, the NYISO has been working with stakeholders to develop changes to the approved tariff related to the firm fuel election process and requirements**

# Firm Fuel Characteristic Election

# Firm Fuel Characteristic Election

- As discussed at the 11/21/2024 ICAPWG, ICAP Suppliers making a Firm Fuel Characteristic Election will no longer be required to submit supporting documentation composed of firm fuel contracts or liquid fuel inventory documentation to validate their firm fuel election
  - Relevant dates related to data submission and NYISO review will be removed from the FERC-accepted tariff language
  - Based on this change, there will be no ex-ante review of documentation prior to firm fuel elections
- Further, the NYISO proposes that ICAP Suppliers not be required to submit an attestation with their firm fuel election
- Elections will be made with the understanding that the ICAP Supplier can meet the criteria that will be set forth in the ICAP manual for its elected MWs to be considered firm for capacity accreditation
  - Elections will be made by August 1 of the calendar year preceding a subject Capability Year (Aug. 1 for the 2026/2027 CY) and will need to include the Firm Fuel Characteristic Election Excel Spreadsheet (See Appendix).

# Firm Fuel Characteristic Election (Cont'd)

- **Based on stakeholder feedback received at the 2/25/2025 ICAPWG, the NYISO also proposes to require ICAP Suppliers making a Firm Fuel Characteristic Election to have firm fuel supplies and transportation (if necessary) and, if applicable, replenishment strategies in place by Dec. 1 of the Subject Capability Year through the end of the Winter Performance Period.**
  - The expectation is that the ICAP Supplier will have in place and maintain throughout the Winter Performance Period, an operating plan that details how the ICAP supplier will meet the firm fuel performance requirements
  - If the ICAP Supplier fails to meet its firm fuel performance obligation or the NYISO suspects that the ICAP Supplier's Firm Fuel Characteristics Election is not backed by adequate firm supply, this operating plan, and any other relevant information, will be subject to audit and review by the NYISO as a part of its Financial Sanction evaluation
  - If through its monitoring and compliance program, the NYISO identifies that the ICAP Supplier, irrespective of performance during the Winter Performance Period, did not have its operating plan by December 1 and/or maintain the operating plan throughout the Winter Performance Period, the ICAP Supplier will be evaluated consistent with the NYISO Market Monitoring Plan



# Firm Fuel Characteristic Election (Cont'd)

- All ICAP Suppliers who elect to provide firm fuel capacity will need to submit a Firm Fuel Characteristic Election, regardless of whether their geographic location is subject to the fuel constraints in the IRM model
- ICAP Suppliers will not need to submit a fuel election if they will provide non-firm fuel capacity; their Unforced Capacity (UCAP) will be considered non-firm, unless they submit a Firm Fuel Characteristic Election.
- The ICAP Suppliers in Load Zones F through K that elect firm fuel MW will receive the firm fuel Capacity Accreditation Resource Class and Capacity Accreditation Factor (CAF)
  - The fuel constraints in the IRM model currently only apply to Load Zones F through K
  - There will be no distinction in CAF values between firm and non-firm fuel in areas that are not subject to the fuel constraints in the IRM model (i.e., Load Zones A-E)
- **Since fuel constraints in external areas are not reflected in the IRM model, there will be no distinction in CAF values between firm and non-firm fuel for External Resources**
  - External Resources will receive the applicable CAF for the location in which they are electrically located (e.g., a non-firm external resource that is electrically located in Zone K will receive a CAF value with no distinction to that of the firm CAF value for that zone)

# Firm Fuel Characteristic Election (Cont'd)

## ■ UCAP Calculations

- When an ICAP Supplier makes a fuel characteristic election, the election will be for a MW value that will not change for the duration of the subject Capability Year
- However, consistent with existing market rules, the amount of capacity that the ICAP Supplier is permitted to sell may change depending upon its seasonal DMNC testing results, for example:
  - If an ICAP Supplier elects 100 MW of firm supply but has a summer DMNC test result of 97 MW, the ICAP supplier would only be permitted to sell 97 MW as firm for the Summer Capability Period
  - If an ICAP Supplier elects 100 MW of firm supply but has a winter DMNC test result of 105 MW, the ICAP Supplier would be permitted to sell 100 MW as firm and 5 MW as non-firm for the Winter Capability period
    - The evaluation of whether the firm fuel performance requirements were met would be based on the ICAP Supplier's election of 100 MW of firm supply; any firm fuel that was supplied beyond 100 MW would be counted towards the satisfaction of the firm fuel performance requirements

# Firm Fuel Requirements

# Firm Fuel Requirements

- **By selling UCAP based on a firm fuel election, ICAP Suppliers are committing to have fuel available to run for 56 hours over any consecutive seven-day period from December through February**
  - Firm supply must be able to, at a minimum, allow the ICAP Supplier to operate its unit for eight hours a day for seven consecutive days at the elected MW value (e.g., 100 MW Firm election = 5600 MWh)
    - ICAP Suppliers will be evaluated based on the ability to operate for a minimum of eight hours on any given day if not having already run for a total of 56 hours the previous six days at the elected firm MW
      - For example: If a 100MW unit has run for 5600 MWh over days 1-6, the ICAP Supplier **will not** need to perform a minimum of eight hours on Day 7 to satisfy its firm fuel obligation
    - A financial sanction evaluation is triggered when:
      - An ICAP Supplier is unavailable in DAM or RT due to firm fuel supply related issues and has not run for its MWh commitment (5600 MWh in this example) over the previous seven consecutive days
      - In the DAM, the ICAP Supplier fails to Bid or schedule a Bilateral Transaction for the elected firm MW capacity due to lack of fuel
      - ICAP Supplier fails to respond to an SRE due to lack of fuel
      - The NYISO, through its monitoring and compliance program, has identified one or more concerns about an ICAP Supplier's ability to operate based on possibly not having procured or maintained firm fuel supply, for example, when the NYISO identifies anomalous Energy market bidding behavior
        - » The NYISO compliance program includes but is not limited to performance, fuel surveys, audits, site visits, etc.
- **Important Notes:**
  - Outages irrespective of fuel status will be accounted for in individual EFORD calculations
  - Ramping intervals will be counted towards the MWh balance within the seven-day period
  - The NYISO will consider expectations of fuel usage from day-ahead schedules when evaluating if Generators met their performance obligations

# Firm Fuel Requirements (Cont'd)

## ■ Partial Firm

- An ICAP Supplier can make a Firm Fuel Characteristic Election for any portion of its UCAP based on its firm fuel supply arrangement
  - For example, a 100 MW unit can make 50 MW Firm Fuel Characteristic Election if the firm fuel supply arrangement is able to allow 50% of the plant meeting the firm fuel requirements described on Slide 12
- Note that an ICAP Supplier cannot elect to be partially firm if a Generator's fuel supply arrangement does not allow it to meet the 8 hour/day, 56-hour run-time requirements
  - For example, a 100 MW unit has a firm fuel supply arrangement with a 6 hours/day limitation. This unit is not permitted to make a Firm Fuel Characteristic Election because it is not able to meet firm fuel requirements described on Slide 12

# Firm Fuel Requirements (Cont'd)

- For initial implementation, ICAP Suppliers with dual fuel capability electing any amount of firm fuel capacity via the use of an onsite fuel will not need to demonstrate operability through the successful completion of a one-hour test on their onsite fuel
  - ICAP Suppliers will have discretion to elect the firm fuel MW value consistent with satisfying the performance requirements or be at risk of a deficiency charge
- The NYISO may reevaluate in the future the need for a testing requirement based on the elections and performance of units utilizing onsite fuel arrangements

# Financial Sanctions

# Financial Sanctions

- To mitigate against ICAP Suppliers making fuel characteristic elections that do not align with their ability to perform during the winter performance period, under the financial sanction structure, revenues generated by electing firm fuel and failing to perform should not exceed those of a non-firm fuel election
- The NYISO has revised its financial sanction proposal that seeks to provide a stronger incentive for making fuel characteristic elections that align an ICAP Supplier's fuel arrangements with the firm fuel performance requirement



# Financial Sanctions (Cont'd)

- **ICAP Suppliers who elect any amount of firm MW but thereafter are not available (outage, derate, etc.) at any time during the months of December, January and February due to lack of fuel and have not run for 56 hours over the past seven consecutive days will be subject to a 1.5 or 1.0 financial sanction multiplier**
  1. The financial sanction will be based on the ratio of the total firm/non-firm MW difference of the unit to what the unit sold in each month of the subject Capability Year
    1. e.g., If the unit's full firm fuel value is 100MW but would otherwise be 90MW non-firm, and it sold 75 MW in December, the base deficiency MW for that month would be  $10\text{MW} * .75 = 7.5\text{MW}$
  2. The financial sanction will be further prorated by the ratio of months within the winter performance period in which the ICAP Supplier demonstrated successful performance (e.g., did not have a fuel related outage, derate, etc., during a given month)
    1. e.g., If a supplier fails to perform in December but successfully performs in January and February,  $1/3$  of the MW difference will be subject to a financial sanction ( $7.5\text{MW} * (1/3) = 2.5\text{MW}$ )
- **Whether an ICAP Supplier is assessed a 1.5 or 1.0 financial sanction multiplier will depend on the reason firm fuel supply was not available (i.e., whether the loss of firm fuel was within or outside ICAP Supplier's control. See Slides 18-20)**

# Financial Sanctions (Cont'd)

- The NYISO proposes to utilize NERC guidance on “Outside Management Control” (OMC) to determine whether a loss or reduction in firm fuel supply was within or outside of the ICAP Supplier’s control
- The NERC guidance contained in the following slides is not an exhaustive list, and the NYISO may consider other factors when determining if loss of firm fuel was outside an ICAP Supplier’s control

# Financial Sanctions (Cont'd)

- NERC guidance specifies that *outside of management control* includes failure of a fuel supplier to fulfill contractual obligations or a pre-arranged deal due to physical fuel disruptions or operational impairments (e.g., force majeure on a pipeline or compressor down; making the pipeline incapable of making its firm deliveries.) More detailed examples include:
  - Firm pipeline gas transportation segment interrupted causing disruption or reduction in the flow of natural gas
  - Physical damage to pipeline or cyber disruption
  - Routine pipeline maintenance (e.g., pigging)
  - Commodity supplier fails to deliver firm gas to primary pipeline receipt point
- Examples of factors that the NYISO may consider when determining if loss of firm fuel was outside an ICAP Supplier's control:
  - Weather
  - Failing to respond to an SRE event when notice is given *after* 1300 the day before an operating day

# Financial Sanctions (Cont'd)

- **NERC guidance specifies that lack of fuel due to contractual or tariff provisions that allow for service interruption or price fluctuations during peak demand periods are *not considered outside of management control*. Examples include:**
  - Company's fuel supply group allocates limited firm fuel to other fleet sites
  - Interruptible pipeline transportation interrupted
  - Pipeline issues Operational Flow Order
  - Pipeline enforces ratable takes provision to tariff levels
  - Local Distribution Company confiscates or interrupts fuel scheduled for delivery to plant gate
  - Plant fuel buyer rejects gas at implied delivered price (possibly including penalties)

# Financial Sanctions (Cont'd)

- **Based on the movement to the performance approach, the provisions in section 23.4.5.4 of the Services Tariff related to exemptions for Pivotal Suppliers offering mitigated capacity will be removed**
  - By making a firm fuel election, Pivotal Suppliers commit to being available during December, January and February or otherwise be subject to a financial sanction

# Non-firm Elections and Physical Withholding

- **Stakeholders have requested that the NYISO clarify how it will approach the application of certain Supplier-side Mitigation rules to non-firm designations by Pivotal Suppliers**
  - Section 23.4.5.6.1 of MST Att. H provides that any proposal or decision by a Market Participant to retire or otherwise remove an ICAP Supplier from a Mitigated Capacity Zone or to de-rate the amount of ICAP available from such supplier may be subject to audit and review by the NYISO if the NYISO determines that such action could reasonably be expected to affect Market-Clearing Prices
  - In the absence of economic justification, the NYISO may seek to issue penalties on the entire portfolio of a Pivotal Supplier if capacity prices are sufficiently impacted
- **At this time, the NYISO is not proposing to perform such an *ex-ante* evaluation for Pivotal Suppliers' non-firm designations. NYISO currently believes that Pivotal Suppliers' non-firm fuel designations are unlikely to be an effective 'lever' with which to manipulate ICAP market outcomes**
  - Although not entirely beyond the realm of possibility, NYISO currently believes that a non-firm fuel designation having sufficient impact on capacity prices to prompt an audit from the NYISO may be a very low probability event

# Reporting on Financial Sanctions

- The NYISO is currently exploring avenues to annually report details related to the imposition of financial sanctions for failures to comply with the firm fuel requirements
- Reporting the magnitude of financial sanctions will provide valuable insights into whether the market design needs additional enhancements
- Potential forums for reporting financial sanction information include:
  - MMU State of the Market Report
  - NYSRC Installed Capacity Subcommittee – For use in annual gas modeling assumptions

# Tariff and ICAP Manual Updates



# Tariff Updates

- **Included with today's meeting material is draft tariff language**
  - Incremental edits from the 2/25/2025 ICAPWG have been highlighted in yellow
  - Incremental edits from the 3/3/2025 ICAPWG have been highlighted in blue
- **Edits to have been made to the follow sections of the approved Services Tariff:**
  - 5.12.1.15 – Removal of dual fuel testing requirement
  - 5.12.5 – Ministerial Edits unrelated to firm fuel
  - 5.12.6.2 – Ministerial Edits unrelated to firm fuel
  - 5.12.6.2.2 – UCAP Adjustment for partial firm units – updated reflecting performance approach
  - 5.12.7 - Ministerial Edits unrelated to firm fuel
  - 5.12.8 – Further dual fuel testing requirement deletions, Ministerial Edits unrelated to firm fuel
  - 5.12.11.1 - Ministerial Edits unrelated to firm fuel
  - 5.12.12.3 – Language on the financial sanction to capture performance approach and new structure
  - 5.12.14 - Ministerial Edits unrelated to firm fuel
  - 5.12.14.1 - Ministerial Edits unrelated to firm fuel
  - 5.12.14.2 - Ministerial Edits unrelated to firm fuel
  - 5.12.15 – Elections – Updated to reflect performance approach, removal of second paragraph related to bidding/scheduling a bilateral (3/17)
  - 5.14.2.3.5 – Language will be removed. Financial sanction language now in MST section 5.12.12.3
  - 23.4.5.4 – Removal of the pivotal supplier exemption clause

# ICAP Manual Updates

- **Preliminary ICAP Manual updates include, but are not limited to the following topics**
  - UCAP Calculation for ICAP Suppliers making firm fuel characteristic elections and resource applicability
  - Financial Sanctions
    - Applicability
      - Inside/Outside supplier control
    - Example Calculation
    - Audit processes
  - Elections
    - Updates to Section 7.1 and 7.1.1 to include details related to the firm fuel requirement rules
    - Details on timelines and materials to be submitted
  - Entry Requirements
    - Performance/Capability Expectations
    - Performance tracking example
  - Partial Firm
    - Details on how a partial firm fuel election can be obtained
    - Example Calculation

# Note on Tariff Updates

- The market design proposal detailed in this presentation is expected to evolve over time based on NYISO's observations of the performance of ICAP Suppliers making firm fuel elections and as the New York Control Area system evolves
- These proposed tariff changes will replace components of the current FERC-accepted firm fuel market design for the 2026/2027 Capability Year with elections due on August 1, 2025.
- Elements of the currently effective FERC-accepted market design include:
  - Data submittal timelines and content requirements
  - ICAP Shortfall Penalty
  - One-hour testing requirement for units electing firm fuel via an alternate fuel

# Next Steps

# Next Steps

- **March 26, 2025 Management Committee Meeting**
- **April 14, 2025 Board Review and subsequent FERC filing**
- **April 2025: Begin ICAPWG discussions of ICAP Manual changes related to the firm fuel requirements**
- **For any questions or feedback, please email [ntubbs@nyiso.com](mailto:ntubbs@nyiso.com)**

# Appendix

# Firm Fuel Election Excel Spreadsheet

## Firm Supply Election Coversheet

PTID\_\_\_\_\_

Unit Name\_\_\_\_\_

Market Participant\_\_\_\_\_

Nameplate\_\_\_\_\_

Unit Type\_\_\_\_\_

Fuel Type\_\_\_\_\_

Subject Capability Year\_\_\_\_\_

Date of Submission\_\_\_\_\_

Main Contact (name)\_\_\_\_\_

Main Contact (email)\_\_\_\_\_

Main Contact (phone)\_\_\_\_\_

**Total Firm Election  
(MW)**\_\_\_\_\_

Single-Fuel Firm Election (MW)\_\_\_\_\_

Dual-Fuel Firm Election (MW)\_\_\_\_\_

# Financial Sanctions (Cont'd)

## ■ Financial Sanction Example:

- 100 MW Unit electing fully firm assuming the following facts: 100% Firm CAF, 90% Non-firm CAF, and no individual derating factor
  - Winter MCP = \$10/ KW-month
  - Summer MCP = \$20/ KW-month
  - MW Sold = 100 MW = 100% of unit
  - Full Firm/Non-Firm MW delta =  $100 - 90 = 10\text{MW}$
  - MW Subject to Financial Sanction =  $10\text{MW} * 100\% = 10\text{MW}$
  - Financial Sanction Multiplier = 1.5
- Assuming the unit successfully performed in January and February, the full financial sanction amount for the capability year would equal  $(10\text{MW} * 1/3) * ((6 * \$10 * 1000) + (6 * \$20 * 1000)) * 1.5 = \$900,000$

## ■ A more detailed financial sanction example for a full Capability Year is included in the Appendix



# Financial Sanctions (Cont'd)

- Example of Performing 56 hours over any Consecutive Seven-Day Period (100MW Firm Fuel Election):

	December									
	1	2	3	4	5	6	7	8	9	10
Expected capability (MWh)	800	800	800	800	800	0	0	0	800	800
Performance (MWh)	800	1600	1000	800	800	800	600	0	0	0
Prior 7 Day Total Performance (MWh)							6400	5600	4000	3000

\*In this instance, although Day 7 performance was for less than eight hours at the elected firm MW value, the unit successfully performed 56 or more hours over the previous seven consecutive days and thus is not subject to a financial sanction

# Financial Sanctions (Cont'd)

- **Example of Performing 56 hours over any Consecutive Seven-Day Period (100MW Firm Fuel Election with infrequent performance):**

	December									
	1	2	3	4	5	6	7	8	9	10
<b>Expected capability (MWh)</b>	800	800	800	800	800	800	800	800	800	800
<b>Performance (MWh)</b>							*600	0	0	0
<b>Prior 7 Day Total Performance (MWh)</b>							600	600	600	600

\* In this example, the ICAP Supplier would be subject to a financial sanction as it was expected to perform for a minimum of eight hours on Day 7 because it has not demonstrated enough performance the previous six days to provide less than eight hours on Day 7. However, if the NYISO directs the ICAP Supplier to run for less than eight hours on Day 7, then no financial sanction would be applied

# Detailed Financial Sanction Examples (Based on Capability Year)

Financial Sanction Example - 100 MW Firm, 90MW Non-firm	May	June	July	August	September	October	November	December	January	February	March	April	Totals
(A) MCP \$	20	20	20	20	20	20	10	10	10	10	10	10	
(B) Full Firm MW	100	100	100	100	100	100	100	100	100	100	100	100	
(C) Non-firm MW	90	90	90	90	90	90	90	90	90	90	90	90	
(D) MW Sold	80	100	100	100	70	80	80	100	100	100	80	80	
(E) % Unit Sold	80%	100%	100%	100%	70%	80%	80%	100%	100%	100%	80%	80%	
(F) Unit Revenue \$ = (A)*(D)*1000	1,600,000	2,000,000	2,000,000	2,000,000	1,400,000	1,600,000	800,000	1,000,000	1,000,000	1,000,000	800,000	800,000	16,000,000
(G) Revenue Full Firm Capacity \$ = (A)*(B)*1000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	18,000,000
(H) Non-firm Revenue \$ (A)*(C)*1000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	900,000	900,000	900,000	900,000	900,000	900,000	16,200,000
(I) Weighted Revenue Difference \$ (G)-(H)*(E)	160,000	200,000	200,000	200,000	140,000	160,000	80,000	100,000	100,000	100,000	80,000	80,000	1,600,000
(J) 1.5 Multiplier	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
(K) 1.0 Multiplier	1	1	1	1	1	1	1	1	1	1	1	1	
(L) Full 1.5 Multiplier Amount \$ (I)*(J)	240,000	300,000	300,000	300,000	210,000	240,000	120,000	150,000	150,000	150,000	120,000	120,000	2,400,000
(M) Full 1.0 Multiplier Amount \$ (I)*(K)	160,000	200,000	200,000	200,000	140,000	160,000	80,000	100,000	100,000	100,000	80,000	80,000	1,600,000
Scenario 1 - Fail one month \$ (L)*(1/3)	80,000	100,000	100,000	100,000	70,000	80,000	40,000	50,000	50,000	50,000	40,000	40,000	800,000
Scenario 2 - Fail two months \$ (L)*(2/3)	160,000	200,000	200,000	200,000	140,000	160,000	80,000	100,000	100,000	100,000	80,000	80,000	1,600,000

# Previous Discussions on Modeling Improvements for Capacity Accreditation

Date	Working Group	Discussion Points and Links to Materials
January 26, 2023	ICAPWG	Modeling Improvements for Capacity Accreditation: Project Kick Off: <a href="https://www.nyiso.com/documents/20142/35880057/2023-01-26%20ICAPWG%20Modeling%20Improvements%20-%20Kick%20Off.pdf/c7ac6b6e-c90b-54b4-832d-ec6ecfc8f7ff">https://www.nyiso.com/documents/20142/35880057/2023-01-26%20ICAPWG%20Modeling%20Improvements%20-%20Kick%20Off.pdf/c7ac6b6e-c90b-54b4-832d-ec6ecfc8f7ff</a>
February 28, 2023	ICAPWG	Correlated Derates - Overview: <a href="https://www.nyiso.com/documents/20142/36499713/Correlated_Derates_MIWG_022823_FINAL.pdf/35eaab46-740e-aed0-9e2d-2207c06a0659">https://www.nyiso.com/documents/20142/36499713/Correlated_Derates_MIWG_022823_FINAL.pdf/35eaab46-740e-aed0-9e2d-2207c06a0659</a> Natural Gas Constraints - Overview: <a href="https://www.nyiso.com/documents/20142/36499713/Gas%20Constraints%2002_28_2023%20ICAPWG_Final.pdf/e258d867-12f9-8453-c93b-49bc94b8e803">https://www.nyiso.com/documents/20142/36499713/Gas%20Constraints%2002_28_2023%20ICAPWG_Final.pdf/e258d867-12f9-8453-c93b-49bc94b8e803</a> SCR Modeling - Overview: <a href="https://www.nyiso.com/documents/20142/36499713/2023-02-28%20ICAPWG%20Modeling%20Improvements%20-%20SCR%20Modeling.pdf/c1a52495-bc30-3e7c-f5c1-61c38f30fbe4">https://www.nyiso.com/documents/20142/36499713/2023-02-28%20ICAPWG%20Modeling%20Improvements%20-%20SCR%20Modeling.pdf/c1a52495-bc30-3e7c-f5c1-61c38f30fbe4</a>
April 27, 2023	ICAPWG	Natural Gas Constraints - Gas Availability Estimates and Classification: <a href="https://www.nyiso.com/documents/20142/37254128/Natural%20Gas%20Constraints%202023_04_27_Final.pdf/0821aba8-bdcd-b1ce-96f3-2d8a740e1356">https://www.nyiso.com/documents/20142/37254128/Natural%20Gas%20Constraints%202023_04_27_Final.pdf/0821aba8-bdcd-b1ce-96f3-2d8a740e1356</a> SCR Modeling - Exploratory Testing Methodology for Existing SCRs: <a href="https://www.nyiso.com/documents/20142/37254128/2023-04%20ICAPWG%20Modeling%20Improvements%20-%20SCR%20Modeling.pdf/30382824-7468-24d2-e567-56c770d6a185">https://www.nyiso.com/documents/20142/37254128/2023-04%20ICAPWG%20Modeling%20Improvements%20-%20SCR%20Modeling.pdf/30382824-7468-24d2-e567-56c770d6a185</a> Start up Notifications - Project Overview: <a href="https://www.nyiso.com/documents/20142/37254128/Start-up%20notification%20time%20-%20ICAPWG%204.27.2023%20v0.2%20clean.pdf/b44eb773-6f7d-e895-e202-a12f2fb6e24e">https://www.nyiso.com/documents/20142/37254128/Start-up%20notification%20time%20-%20ICAPWG%204.27.2023%20v0.2%20clean.pdf/b44eb773-6f7d-e895-e202-a12f2fb6e24e</a>
May 8, 2023	ICAPWG	Correlated Derates - Ambient Adjustments and Emergency Capacity: <a href="https://www.nyiso.com/documents/20142/37431277/5%20Correlated_Derates_ICAPWG_050823.pdf/a1e9a0f4-d922-503d-06d0-682b49c46c4c">https://www.nyiso.com/documents/20142/37431277/5%20Correlated_Derates_ICAPWG_050823.pdf/a1e9a0f4-d922-503d-06d0-682b49c46c4c</a>

# Previous Discussions on Modeling Improvements for Capacity Accreditation

Date	Working Group	Discussion Points and Links to Materials
June 1, 2023	ICAPWG	Natural Gas Constraints – Potential methods for quantifying firm capacity, CARC designation, and fuel election timelines: <a href="https://www.nyiso.com/documents/20142/37883690/Natural%20Gas%20Constraints%2006_01_2023_ICAPWG_Final.pdf/d479ea64-a0d0-86d1-388a-f93d01ff1e10">https://www.nyiso.com/documents/20142/37883690/Natural%20Gas%20Constraints%2006_01_2023_ICAPWG_Final.pdf/d479ea64-a0d0-86d1-388a-f93d01ff1e10</a>
June 7, 2023	ICAPWG	SCR Modeling – Exploratory Testing Methodology (Continued): <a href="https://www.nyiso.com/documents/20142/38023757/2023-06-07%20ICAPWG%20Modeling%20Improvements%20-%20SCR%20Modeling.pdf/250f8f1d-9dfe-5756-640b-c1e31f3a6328">https://www.nyiso.com/documents/20142/38023757/2023-06-07%20ICAPWG%20Modeling%20Improvements%20-%20SCR%20Modeling.pdf/250f8f1d-9dfe-5756-640b-c1e31f3a6328</a>
June 27, 2023	ICAPWG	Natural Gas Constraints – Addressing Stakeholder feedback and discussion on simpler framework for classifying units: <a href="https://www.nyiso.com/documents/20142/38423065/2%20Natural%20Gas%20Constraints_06_23_2023_ICAPWG_Final.pdf/177ad95e-1fa3-5c57-a626-d06182b55c9b">https://www.nyiso.com/documents/20142/38423065/2%20Natural%20Gas%20Constraints_06_23_2023_ICAPWG_Final.pdf/177ad95e-1fa3-5c57-a626-d06182b55c9b</a>
July 11, 2023	ICAPWG	SCR Modeling – Exploratory Testing Methodology Initial Results: <a href="https://www.nyiso.com/documents/20142/38699263/2023-07-11%20ICAPWG%20Modeling%20Improvements%20-%20SCR%20Modeling%20v2%20-%20clean.pdf/2f27473b-2292-31d4-ecb7-5d30d6b860f0">https://www.nyiso.com/documents/20142/38699263/2023-07-11%20ICAPWG%20Modeling%20Improvements%20-%20SCR%20Modeling%20v2%20-%20clean.pdf/2f27473b-2292-31d4-ecb7-5d30d6b860f0</a>
July 27, 2023	ICAPWG	Correlated Derates - Ambient Adjustments and Emergency Capacity: <a href="https://www.nyiso.com/documents/20142/39044934/Correlated_Derates_ICAPWG_072723_final.pdf/0f80f8f2-8100-b8f7-0c65-0098242634e1">https://www.nyiso.com/documents/20142/39044934/Correlated_Derates_ICAPWG_072723_final.pdf/0f80f8f2-8100-b8f7-0c65-0098242634e1</a> Start-up Time – Long Start-up Time and Considerations: <a href="https://www.nyiso.com/documents/20142/39044934/Startup%20time%20-%20ICAPWG%207.27.2023_v2.pdf/bbf6fa0d-b45e-6b7f-1697-2c002442b1de">https://www.nyiso.com/documents/20142/39044934/Startup%20time%20-%20ICAPWG%207.27.2023_v2.pdf/bbf6fa0d-b45e-6b7f-1697-2c002442b1de</a>
August 9, 2023	ICAPWG	Gas Constraints – Classification Proposal, Requirements for Firm Units, and Data Submittal Timeline: <a href="https://www.nyiso.com/documents/20142/39257338/Natural%20Gas%20Constraints_08_09_2023%20ICAPWgv4%20(002).pdf/de6053e0-030d-5520-ed59-18f2225f0f92">https://www.nyiso.com/documents/20142/39257338/Natural%20Gas%20Constraints_08_09_2023%20ICAPWgv4%20(002).pdf/de6053e0-030d-5520-ed59-18f2225f0f92</a>

# Previous Discussions on Modeling Improvements for Capacity Accreditation

Date	Working Group	Discussion Points and Links to Materials
September 5, 2023	ICAPWG	Correlated Derates – Ambient Adjustments: <a href="https://www.nyiso.com/documents/20142/39768278/5%20Correlated_Derates_ICAPWG_090523_final.pdf/5aa71990-e873-166b-a520-e8e6c44b42e1">https://www.nyiso.com/documents/20142/39768278/5%20Correlated_Derates_ICAPWG_090523_final.pdf/5aa71990-e873-166b-a520-e8e6c44b42e1</a>
September 18, 2023	ICAPWG	Startup Notification - Recommendation and Draft Tariff Revisions: <a href="https://www.nyiso.com/documents/20142/40044890/7%20Start-up%20Time%20Proposed%20Capacity%20Tariff%20Revision%20-%20ICAPWG%2009-18.pdf/9d6e8c5e-b7cd-384c-b713-be93507912ed">https://www.nyiso.com/documents/20142/40044890/7%20Start-up%20Time%20Proposed%20Capacity%20Tariff%20Revision%20-%20ICAPWG%2009-18.pdf/9d6e8c5e-b7cd-384c-b713-be93507912ed</a>
September 20, 2023	ICAPWG	Gas Constraints – Updated Requirement, Data Verification Timeline and Shortfall Penalty: <a href="https://www.nyiso.com/documents/20142/40085480/Natural%20Gas%20Constraints_9_20_2023_v4.pdf/8c76a250-d1e0-d30a-2c24-115f10268c65">https://www.nyiso.com/documents/20142/40085480/Natural%20Gas%20Constraints_9_20_2023_v4.pdf/8c76a250-d1e0-d30a-2c24-115f10268c65</a>
October 3, 2023	ICAPWG	SCR Modeling – Project Update: <a href="https://www.nyiso.com/documents/20142/40342797/2023-10-03%20Modeling%20Improvements%20-%20SCR%20Modeling.pdf/e5b6faa3-7865-c92a-dbf2-39e1ea6c65e8">https://www.nyiso.com/documents/20142/40342797/2023-10-03%20Modeling%20Improvements%20-%20SCR%20Modeling.pdf/e5b6faa3-7865-c92a-dbf2-39e1ea6c65e8</a>
October 10, 2023	ICAPWG	Gas Constraints – Response to Stakeholder Feedback, Liquid Receipt Point Guidance, Additive Arrangements: <a href="https://www.nyiso.com/documents/20142/40481418/2%20Natural%20Gas%20Constraints_10_10_v3.pdf/7f39851d-f477-6a12-d7d2-52f52af87fcb">https://www.nyiso.com/documents/20142/40481418/2%20Natural%20Gas%20Constraints_10_10_v3.pdf/7f39851d-f477-6a12-d7d2-52f52af87fcb</a>
		Correlated Derates – Ambient Adjustment Procedures and CLR Tariff: <a href="https://www.nyiso.com/documents/20142/40481418/3%20Correlated_Derates_ICAPWG_101023_final.pdf/76326e11-e97f-cb93-2ca4-902d11365bda">https://www.nyiso.com/documents/20142/40481418/3%20Correlated_Derates_ICAPWG_101023_final.pdf/76326e11-e97f-cb93-2ca4-902d11365bda</a>
October 19, 2023	ICAPWG	Startup Notification – Proposed Capacity Tariff Revisions: <a href="https://www.nyiso.com/documents/20142/40696384/Start-up%20Time%20Capacity%20Tariff%20Discussion-%20ICAPWG%2010-19.pdf/247ea46c-9bc3-60c5-9363-69d787bb78c9">https://www.nyiso.com/documents/20142/40696384/Start-up%20Time%20Capacity%20Tariff%20Discussion-%20ICAPWG%2010-19.pdf/247ea46c-9bc3-60c5-9363-69d787bb78c9</a>

# Previous Discussions on Modeling Improvements for Capacity Accreditation

Date	Working Group	Discussion Points and Links to Materials
October 26, 2023	ICAPWG	SCR Modeling- Enhanced SCR Modeling Results: <a href="https://www.nyiso.com/documents/20142/40834869/2023-10-26%20Modeling%20Improvements%20-%20SCR%20Modeling.pdf/7d81b04c-e08a-0298-eea6-cf99d92aa88c">https://www.nyiso.com/documents/20142/40834869/2023-10-26%20Modeling%20Improvements%20-%20SCR%20Modeling.pdf/7d81b04c-e08a-0298-eea6-cf99d92aa88c</a>
November 8, 2023	ICAPWG	Gas Constraints – Response to Stakeholder Feedback and Market Design Summary + Tariff: <a href="https://www.nyiso.com/documents/20142/41049783/Natural%20Gas%20Constraints_11_8_w_Tariff_v5.pdf/8badbfff-06cd-3db3-46f9-c7de5107e993">https://www.nyiso.com/documents/20142/41049783/Natural%20Gas%20Constraints_11_8_w_Tariff_v5.pdf/8badbfff-06cd-3db3-46f9-c7de5107e993</a>
November 17, 2023	ICAPWG	Gas Constraints – Response to Stakeholder Feedback: <a href="https://www.nyiso.com/documents/20142/41273741/Natural%20Gas%20Constraints_11_17_ICAPWG_v3.pdf/9e3b921a-0161-3a21-4874-21811077efb5">https://www.nyiso.com/documents/20142/41273741/Natural%20Gas%20Constraints_11_17_ICAPWG_v3.pdf/9e3b921a-0161-3a21-4874-21811077efb5</a>
November 27, 2023	ICAPWG	Modeling Improvements for Capacity Accreditation – Summary: <a href="https://www.nyiso.com/documents/20142/41393553/2023-11-27%20ICAPWG%20-%20Modeling%20Improvements%20Summary.pdf/9c383992-bebf-6a4a-e660-4cb96f842ef2">https://www.nyiso.com/documents/20142/41393553/2023-11-27%20ICAPWG%20-%20Modeling%20Improvements%20Summary.pdf/9c383992-bebf-6a4a-e660-4cb96f842ef2</a>
December 4, 2023	ICAPWG	Modeling Improvements for Capacity Accreditation – Tariff Review: <a href="https://www.nyiso.com/documents/20142/41570800/2023-12-04%20ICAPWG%20-%20Modeling%20Improvements_v3.pdf/7d334598-46c3-23d8-3217-4bf3eeacadce">https://www.nyiso.com/documents/20142/41570800/2023-12-04%20ICAPWG%20-%20Modeling%20Improvements_v3.pdf/7d334598-46c3-23d8-3217-4bf3eeacadce</a>
December 13, 2023	BIC	Modeling Improvements for Capacity Accreditation – BIC Presentation: <a href="https://www.nyiso.com/documents/20142/41671891/06%20Modeling%20Improvements%20for%20Capacity%20Accreditation.pdf/470bc7a0-277c-dfac-62e6-9cd439f9c813">https://www.nyiso.com/documents/20142/41671891/06%20Modeling%20Improvements%20for%20Capacity%20Accreditation.pdf/470bc7a0-277c-dfac-62e6-9cd439f9c813</a> Motion: <a href="https://www.nyiso.com/documents/20142/41671891/06%20Modeling%20Improvements%20for%20Capacity%20Accreditation%20Motion.pdf/f6afdb1e-f59a-584b-8280-b9b1cab39151">https://www.nyiso.com/documents/20142/41671891/06%20Modeling%20Improvements%20for%20Capacity%20Accreditation%20Motion.pdf/f6afdb1e-f59a-584b-8280-b9b1cab39151</a>

# Previous Discussions on Modeling Improvements for Capacity Accreditation

Date	Working Group	Discussion Points and Links to Materials
December 15, 2023	ICAPWG	Modeling Improvements for Capacity Accreditation – SCR Modeling: <a href="https://www.nyiso.com/documents/20142/41825507/12-15-2023%20ICAPWG%20-%20Modeling%20Improvements%20-%20SCR%20Modeling.pdf/7c754c58-381e-0532-4b13-83181677f3db">https://www.nyiso.com/documents/20142/41825507/12-15-2023%20ICAPWG%20-%20Modeling%20Improvements%20-%20SCR%20Modeling.pdf/7c754c58-381e-0532-4b13-83181677f3db</a>
February 2, 2024	ICAPWG	Modeling Improvements for Capacity Accreditation – Gas Constraints Tariff & ICAP Supplier Bidding Requirements: <a href="https://www.nyiso.com/documents/20142/42748388/2%202024-2-2%20ICAPWG%20-%20Modeling%20Improvements.pdf/0d4f32dd-036d-0a5a-2481-cdf230d35a16">https://www.nyiso.com/documents/20142/42748388/2%202024-2-2%20ICAPWG%20-%20Modeling%20Improvements.pdf/0d4f32dd-036d-0a5a-2481-cdf230d35a16</a>
February 20, 2024	ICAPWG	Modeling Improvements for Capacity Accreditation – Gas Constraints Tariff & ICAP Supplier Bidding Requirements: <a href="https://www.nyiso.com/documents/20142/43038997/7%202024-2-20%20ICAPWG%20-%20Modeling%20Improvements.pdf/9d48164f-4617-48da-dc06-3838e0fd042f">https://www.nyiso.com/documents/20142/43038997/7%202024-2-20%20ICAPWG%20-%20Modeling%20Improvements.pdf/9d48164f-4617-48da-dc06-3838e0fd042f</a>
March 4, 2024	ICAPWG	Modeling Improvements for Capacity Accreditation: <a href="https://www.nyiso.com/documents/20142/43315080/2024-3-4%20ICAPWG%20-%20Modeling%20Improvements.pdf/a6f5b52d-6adb-5cec-2e30-c362788dfc50">https://www.nyiso.com/documents/20142/43315080/2024-3-4%20ICAPWG%20-%20Modeling%20Improvements.pdf/a6f5b52d-6adb-5cec-2e30-c362788dfc50</a>
March 20, 2024	ICAPWG	Modeling Improvements for Capacity Accreditation: <a href="https://www.nyiso.com/documents/20142/43621521/3%202024-3-20%20ICAPWG%20-%20Modeling%20Improvements_v6.pdf/b86db27c-79af-4cdd-24ff-fb9e9d4a339f">https://www.nyiso.com/documents/20142/43621521/3%202024-3-20%20ICAPWG%20-%20Modeling%20Improvements_v6.pdf/b86db27c-79af-4cdd-24ff-fb9e9d4a339f</a>
March 27, 2024	MC	Modeling Improvements for Capacity Accreditation: <a href="https://www.nyiso.com/documents/20142/43713211/5%202024-03-27%20MC%20-%20Modeling%20Improvements_v2.pdf/0dc344f9-22e8-20a8-cda6-95c38b85a73e">https://www.nyiso.com/documents/20142/43713211/5%202024-03-27%20MC%20-%20Modeling%20Improvements_v2.pdf/0dc344f9-22e8-20a8-cda6-95c38b85a73e</a>
May 8, 2024	ICAPWG	Modeling Improvements for Capacity Accreditation – Update: <a href="https://www.nyiso.com/documents/20142/44546131/Modeling%20Improvements%20for%20Capacity%20Accreditation%20Firm_non-firm%20Update%205_8_2024.pdf/acd199e7-dc94-2c06-02f9-bb68cec94ce4">https://www.nyiso.com/documents/20142/44546131/Modeling%20Improvements%20for%20Capacity%20Accreditation%20Firm_non-firm%20Update%205_8_2024.pdf/acd199e7-dc94-2c06-02f9-bb68cec94ce4</a>
August 1, 2024	ICAPWG	Modeling Improvements for Capacity Accreditation – Update: <a href="https://www.nyiso.com/documents/20142/46161626/4%20MICA%20Update%20August%201%20icap.pdf/c7393f29-2919-df63-82df-226de0a8537b">https://www.nyiso.com/documents/20142/46161626/4%20MICA%20Update%20August%201%20icap.pdf/c7393f29-2919-df63-82df-226de0a8537b</a>



# Previous Discussions on Modeling Improvements for Capacity Accreditation

Date	Working Group	Discussion Points and Links to Materials
August 29, 2024	ICAPWG	Modeling Improvements for Capacity Accreditation – ICAP Manual Changes and Firm Requirements: <a href="https://www.nyiso.com/documents/20142/46679593/August%20MICA%20Manuals%20and%20Requirements_v1.6.pdf/8335b836-1ca6-1b01-c6eb-154e7e90a3b7">https://www.nyiso.com/documents/20142/46679593/August%20MICA%20Manuals%20and%20Requirements_v1.6.pdf/8335b836-1ca6-1b01-c6eb-154e7e90a3b7</a>
November 21, 2024	ICAPWG	Modeling Improvements for Capacity Accreditation – Firm Fuel Requirements: <a href="https://www.nyiso.com/documents/20142/48151567/MICA%2011_21%20ICAPWG_v6.pdf/3901561d-5c11-db8a-b22a-3dfad962786b">https://www.nyiso.com/documents/20142/48151567/MICA%2011_21%20ICAPWG_v6.pdf/3901561d-5c11-db8a-b22a-3dfad962786b</a>
February 4, 2025	ICAPWG	Modeling Improvements for Capacity Accreditation – Firm Fuel Requirements: <a href="https://www.nyiso.com/documents/20142/49572424/MICA_FFR_2_4_ICAPWG_v5_Final.pdf/76d55a2f-2776-10af-e6d2-7dc4af5557ce">https://www.nyiso.com/documents/20142/49572424/MICA_FFR_2_4_ICAPWG_v5_Final.pdf/76d55a2f-2776-10af-e6d2-7dc4af5557ce</a>
February 25, 2025	ICAPWG	Modeling Improvements for Capacity Accreditation – Firm Fuel Requirements: <a href="https://www.nyiso.com/documents/20142/49964716/MICA_FFR_2_25ICAPWG_v6_clean.pdf/6b5aae49-8910-91a7-7c8e-199a995f1335">https://www.nyiso.com/documents/20142/49964716/MICA_FFR_2_25ICAPWG_v6_clean.pdf/6b5aae49-8910-91a7-7c8e-199a995f1335</a>
March 3, 2025	ICAPWG	Modeling Improvements for Capacity Accreditation – Firm Fuel Requirements: <a href="https://www.nyiso.com/documents/20142/50076312/MICA_FFR_3_3_ICAPWG_v3_Clean.pdf/ebb3b256-58ac-03bd-3f11-ee8bb3ae296b">https://www.nyiso.com/documents/20142/50076312/MICA_FFR_3_3_ICAPWG_v3_Clean.pdf/ebb3b256-58ac-03bd-3f11-ee8bb3ae296b</a>
March 17, 2025	ICAPWG	Modeling Improvements for Capacity Accreditation – Firm Fuel Requirements: