



Modeling Improvements for Capacity Accreditation Support: Non-Firm CAFs Methodology

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Today's Presentation

■ Background

- Natural Gas Constraints Whitepaper
 - NYSRC-ICS meeting: April 3, 2024
 - Discussion may continue past this date
 - If model is not included in IRM/LCR this year, Informational CAF (iCAFs) methods are subject to change
 - Testing of iCAFs will use best available Gas Constraints model

■ Non-Firm and Firm CARCs and CAFs will be implemented starting in the 2025-2026 Capability Year

Link to April 3rd ICS Presentation: [Gas Constraints Whitepaper Update \(nysrc.org\)](https://www.nysrc.org/gas-constraints-whitepaper-update)

Background: Whitepaper Assumptions

- **Gas constraints will be applied to certain thermal units in Load Zones F-K for the months of December, January, and February**
- **Winter load levels will be used as a proxy for temperature to trigger the application of fuel constraints in the IRM model**
 - Demand for gas is closely related to temperature during winter
- **Different gas constraint magnitude levels are observed under different winter load conditions**
 - Gas constraints increase as winter load levels increase

Proposed (iCAF for “Non-Firm”) Methodology

- Start with the 2024 LCR database
- Apply most recent gas constraint model
- A new Tan45 and a new LCR case will be run under the updated conditions
- The following slides list three possible Methods (#1, #2, and #3) that the NYISO is considering
 - NYISO seeks stakeholder feedback on each methodology

Proposed (iCAF for “Non-Firm”) Method #1

- Representative (100 MW) Unit for the Non-Firm CARC as:
No fuel availability at loads above 22,000 MW during
December, January and February

NYCA Load Conditions (MW)	Dec, Jan, Feb: Representative Unit (MW)	All other month: Representative Unit (MW)
>26,000		
25,000 - 26,000		
24,000 - 25,000	0	100
23,000 - 24,000		
22,000 - 23,000		
<22,000	100	

Proposed (iCAF for “Non-Firm”)

Method #2

- **Representative (100 MW) Unit for the Non-Firm CARC as: Subject to natural gas constraints applied in December, January, and February**
 - The Representative Unit derates are consistent with the applicable case’s derates

NYCA Load Conditions (MW)	Gas Availability (MW)	Oil Availability (MW)	Gas-Only Derate	Dec, Jan, Feb: Representative Unit (MW)	All other months: Representative Unit (MW)
>26,000	375	11,000	95.8%	4.2	100
25,000 - 26,000	750		91.6%	8.4	
24,000 - 25,000	2,750		69.4%	30.6	
23,000 - 24,000	4,500		49.9%	50.1	
22,000 - 23,000	5,500		38.7%	61.3	
<22,000	8,975		No Constraint	100.0	

Proposed (iCAF for “Non-Firm”) Method #3

- **Representative (100 MW) Unit for the Non-Firm CARC as:
Subject to combined fuel derates for December, January and February**
 - The Representative Unit derates are consistent with the applicable case’s derates

NYCA Load Conditions (MW)	Gas Availability (MW)	Oil Availability (MW)	Combined Fuel Derate	Dec, Jan, Feb: Representative Unit (MW)	All other month: Representative Unit (MW)
>26,000	375	11,000	43.1%	56.9	100
25,000 - 26,000	750		41.2%	58.8	
24,000 - 25,000	2,750		31.2%	68.8	
23,000 - 24,000	4,500		22.4%	77.8	
22,000 - 23,000	5,500		17.4%	82.6	
<22,000	8,975		No Constraint	100.0	

Future Sensitivities

- **NYISO will calculate iCAFs based on available cases**
- **Sensitivities could include**
 - Alternative values of available gas or oil
 - Updated derates of fuel availability

Next Steps

- **Return to ICAPWG with proposed sensitivities for informational CAF values of a Non-Firm CARC**
 - NYISO invites continued feedback and comments on the proposed methods and will continue discussions regarding methodology through May 2024.
- **NYISO will calculate informational CAF values for Non-Firm and begin presenting them to Stakeholders in May, with additional scenarios through May and June.**
- **The deadline to provide elections is August 1, 2024.**
 - Elections are to be submitted to participation@nyiso.com

Questions?

Email: accreditation@nyiso.com

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Ensure power system reliability and competitive markets for New York in a clean energy future



Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation