

# Winter Fuel Availability Constraints Modeling Review: *Comparison with 2026-2027 Firm Fuel Elections*

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**EC Meeting #322**

February 12, 2026

# Purpose of Today's Presentation

- During the 2/4 ICS meeting, the NYISO reviewed 2026-2027 Firm Fuel Characteristic Election information with respect to the winter fuel availability constraints modeling assumptions for the 2026-2027 IRM study ([Link to ICS Presentation](#))
- This presentation provides to the Executive Committee (“EC”) a summary of key information discussed at the 2/4 ICS and the next steps under the 2026 whitepaper effort

# Firm Fuel Characteristic Elections and Winter Fuel Availability Constraint Model

## ■ The Firm Fuel Characteristic Elections:

- Elected MW will be required to have fuel available to run for 56 hours over any consecutive seven-day period during the Winter Performance Period (December, January and February)
  - An effective operating plan is also required by the start of the Winter Performance Period and must be maintained throughout the period
- The Winter Performance Period for the 2026-2027 Firm Fuel Characteristic Elections is December 2026 through February 2027
- The Firm Fuel Characteristic Elections are in ICAP MW terms

## ■ The Winter Fuel Availability Constraint Model:

- 6-tiered resource derates on gas-only and dual fuel units in Load Zones F-K at different load levels
- Available fuel (gas and oil) assumptions were determined based on available historical data
- Available fuel assumptions are in UCAP terms

## ■ Due to the differences between the elections and the model assumptions, database adjustments are needed for comparison:

- Limit the Firm Fuel Characteristic Elections dataset to only include gas-only and dual fuel units and limit the MW to the lesser of DMNC and CRIS
- Convert the Firm Fuel Characteristic Elections from the ICAP MW to UCAP MW

# Firm Fuel Characteristic Elections Summary for the 2026-2027 Capability Year

Capacity Zones	A: Sum of Firm Fuel Elections (GW) (2026-2027 Capability Year)	B: Sum of Natural Gas and/or Fuel Oil Resources (GW) (Winter 2025-2026 DMNC/DMGC)	Percentage of Natural Gas and/or Fuel Oil MWs that are covered by Firm Fuel Elections (A/B)
Rest of State (ROS)* (only Zone F)	2.8 GW	3.5 GW	80%
G-J Locality (excluding Load Zone J)	3.2 GW	4.8 GW	67%
NYC Locality (Load Zone J)	7.6 GW	9.3 GW	82%
Long Island Locality (Load Zone K)	4.6 GW	5.2 GW	89%
Total	18.3 GW	22.8 GW	80%

\*Only Firm Fuel Characteristic Elections in Load Zone F are applicable in ROS because the 2026-2027 IRM study only modeled certain ICAP Suppliers in Load Zones F-K as subject to winter fuel availability constraints.

# Assessment of Datasets (cont.)

- **Modeled ICAP**
  - Total modeled capacity of gas-only and dual fuel resources in Load Zones F-K in the 2026-2027 IRM study.
- **Modeled UCAP**
  - Equivalent UCAP of all modeled ICAP in the 2026-2027 IRM study.
  - ICAP converted to UCAP using 5-year EFORD from the 2026-2027 IRM study.
  - Represents UCAP prior to fuel availability derates.
- **Elected Firm ICAP**
  - Total Firm Fuel Characteristic Elections for the 2026-2027 Capability Year from dual fuel and gas-only generators in Load Zones F-K
- **Min(CRIS,DMNC, Firm MW)**
  - Adjustment to ensure Firm Fuel Characteristic Elections for the 2026-2027 Capability Year do not exceed resource capability modeled in the 2026-2027 IRM study (uses 2024-2025 Winter DMNC values).
- **Elected Firm UCAP**
  - Min(CRIS, DMNC, Firm MW) ICAP is converted to UCAP using 5-year EFORD from the 2026-2027 IRM study.

(GW)	Modeled ICAP	Modeled UCAP	Elected Firm ICAP	Min(CRIS, DMNC, Firm MW)	Elected Firm UCAP
<b>Dual Fuel</b>	<b>15.5</b>	<b>14.1</b>	<b>14.4</b>	<b>14.1</b>	<b>12.8</b>
F	1.0	0.9	0.3	0.3	0.2
G	3.2	2.6	3.2	3.1	2.6
J	7.8	7.4	7.6	7.4	7.0
K	3.5	3.2	3.3	3.3	3.0
<b>Gas-Only</b>	<b>6.0</b>	<b>5.6</b>	<b>2.6</b>	<b>2.5</b>	<b>2.4</b>
F	2.5	2.4	2.6	2.5	2.4
G	1.6	1.5	-	-	-
J	1.4	1.3	-	-	-
K	0.4	0.3	-	-	-
<b>Total</b>	<b>21.5</b>	<b>19.7</b>	<b>17.0</b>	<b>16.6</b>	<b>15.2</b>

# Assessment of Datasets (cont.)

2026-2027 Winter Fuel Availability Constraints Model							2026-2027 Firm Fuel Characteristic Elections		
Tier	NYCA Load Conditions (MW)	Available Gas (MW)	Available Oil (MW)	Total Available Fuel (MW)	Modeled UCAP (MW)	Derate (%)	Elected Firm ICAP (MW)	Elected Firm UCAP (MW)	Derate (%)
				(Gas + Oil)					
1	> 26,000	300		12,000		39%			
2	25,000 - 26,000	600		12,300		38%			
3	24,000 - 25,000	2,550	11,700	14,250	19,720	28%	16,904	15,254	23%
4	23,000 - 24,000	4,200		15,900					
5	22,000 - 23,000	5,575		17,275		12%			
6	< 22,000	No Constraint				No Constraint			

# Observations

- **The Firm Fuel Characteristic Elections for the 2026-2027 Capability Year are equivalent to ~15.2 GW on a UCAP basis for comparison to the winter fuel availability constraints modeling from the 2026-2027 IRM study, which is within the range of the Tier 3 and Tier 4 levels of assumed available fuel in the 2026-2027 IRM study**
  - As noted in the 2024 Gas Constraints Modeling Whitepaper, Tiers 3 and 4 represented load conditions that aligned with peak loads observed in recent prior winters
- **Tiers 1 and 2 of the winter fuel availability constraints model represent colder/more extreme winter conditions with ~3,000 MW less UCAP than reflected in the Firm Fuel Characteristic Elections for the 2026-2027 Capability Year.**
  - Using the total UCAP from gas-only and dual fuel units in Load Zone F-K modeled in the 2026-2027 IRM study (i.e., 19,720 MW), Tier 1 of the winter fuel availability constraints model assumes ~60% of the total affected UCAP will be available, while the Firm Fuel Characteristic Elections represents ~77% of the total affected UCAP will be available
- **Tier 5 of the winter fuel availability constraints model represents warmer winter conditions with ~2,000 MW more UCAP than reflected in the Firm Fuel Characteristic Elections for the 2026-2027 Capability Year.**

# Next Steps

- **Perform additional analysis, as necessary, based on feedback**
- **Review additional data to help inform updates to the winter fuel availability constraints modeling assumptions for 2027-2028 IRM study**
- **Whitepaper milestones:**
  - Q2 2026: Review findings of the NYISO’s 2025 Fuel Constraints Study and potential implications for the winter fuel availability constraints modeling in the IRM study
  - Q3/Q4 2026: Consider modeling updates to winter fuel availability assumptions for the 2027-2028 IRM study
    - Updates may include exploring zonal specific derates, derates to oil-only units, consideration of generator “firm fuel” election information, and assessing the presence of fuel constraints in regions beyond Load Zones F-K

# Questions?

# Our Mission and Vision



## Mission

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

