

Gas Constraints Whitepaper Update

Lucas Carr

NYISO

EC Meeting #301

May 10, 2024

Purpose and Background

- **This presentation reflects a summary of the information discussed at the 5/1/2024 ICS meeting and is provided to EC for information**
- **During the previous discussion on the Gas Constraint Whitepaper, additional testing was requested to determine the potential impact of varying amounts of firm fuel elections**
 - The initial fuel constraints modeling recommendation (see appendix) was presented at the 4/3/2024 ICS meeting
- **Today's presentation will go through the results and insights of the additional testing conducted**

Key Takeaways of the Additional Testing

- Slide 4 contains Tan45 analysis of varying amounts of firm oil elections using the final base case results from the 2024-2025 study
 - Note that the gas availability levels remain consistent with the initial recommendation in all the additional test cases
- 1,000 MW decrease in the assumed level of “available oil” from the initial recommendation would lead to over 1% increase on the IRM and 10% increase in winter risk
 - The initial recommendation with 11,000 MW of available oil shows only a small increase on the IRM and winter risk
- Beyond 3,000 MW decrease in the assumed level of “available oil” from the initial recommendation (i.e. below 8,000 MW available oil), the system will switch to winter-driving LOLE risk and IRM will increase by over 5%
- With 5,000 MW or less of assumed “available oil,” the Tan45 methodology was not able to establish an IRM

Tan45 Results Comparison

Available Oil Assumed (MW)	IRM	IRM Delta	J LCR	J LCR Delta	K LCR	K LCR Delta	G - J	G - J Delta	Summer LOLE Risk (%)	Winter LOLE Risk (%)
Base Case	23.10%	-	72.73%	-	103.21%	-	84.58%	-	100.0%	0.0%
12,000	23.10%	+0.00%	72.73%	+0.00%	103.27%	+0.06%	84.58%	+0.00%	99.7%	0.3%
11,000	23.40%	+0.30%	72.68%	-0.05%	103.15%	-0.05%	84.54%	-0.04%	97.2%	2.8%
10,000	24.30%	+1.20%	72.75%	+0.02%	102.98%	-0.23%	84.59%	+0.01%	89.1%	10.9%
9,000	25.80%	+2.70%	73.27%	+0.54%	102.98%	-0.23%	84.98%	+0.40%	73.8%	26.2%
8,000	28.10%	+5.00%	75.18%	+2.45%	103.37%	+0.16%	86.37%	+1.79%	53.2%	46.8%
7,000	31.00%	+7.90%	78.68%	+5.95%	104.57%	+1.36%	88.93%	+4.35%	35.6%	64.4%
6,000	34.30%	+11.20%	82.55%	+9.82%	107.15%	+3.94%	91.76%	+7.18%	18.6%	81.4%

Our Mission & 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

Appendix

Initial Modeling Recommendation

- At the 4/3/2024 ICS, the NYISO presented the updated fuel constraint initial modeling recommendation below

Tier	NYCA Load Conditions (MW)	Available Gas (MW)	Available Oil (MW)	Total Available Fuel (MW) (Gas + Oil)**	Illustrative Modeled Derate (Rounded MW)***
1	>26,000	375	11,000	11,375	8,600
2	25,000 - 26,000	750		11,750	8,225
3*	24,000 - 25,000	2,750		13,750	6,225
4*	23,000 - 24,000	4,500		15,500	4,475
5	22,000 - 23,000	5,500		16,500	3,475
6	<22,000	No Constraint		No Constraint	0

* Tier 3 and 4 load levels comprise the actual peak loads observed in recent winter operating conditions. The illustrative MW derates are generally consistent with the typical reduction in generator capability experienced during such operating conditions.

**Includes gas-only and dual fuel units

*** “Illustrative Modeled Derate” calculated based on the gas-only and dual fuel resources modeled in Load Zones F-K in 2024-2025 IRM Final Base Case (FBC) (ICAP: ~21,770 MW, UCAP: ~19,975 MW)

Questions?