

Agenda Item 4.1: ICS Report to NYSRC Executive Committee (EC)

April 2, 2025, ICS Meeting #302

Prepared for: April 11, 2025, EC Meeting #312

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4.1.1 2026-2027 PBC Assumptions Matrix and Parametric Results

NYISO presented a few initial updates, notably the behind the meter (BTM) solar and enhanced load modeling (ELM) modeling change that collectively increase the IRM by 0.96%. In addition, there are 34.1 MW of unit deactivations.

4.1.2 Fuel Availability Constraints Modeling Phase 2 – Requesting EC Decision

NYISO presented their updated firm fuel estimate proposal. This included revising their available oil estimate from 12,100 MW to 11,750 MW based on consideration of air permit limits and discussion with NYISO Ops. M. Younger inquired about the duration cutoff used in assessing annual air permit limits and the prevalence of units with limits slightly above the threshold. C. Wentlent indicated that some generators have per MMBTU emission limits while others have negotiated annual tonnage caps. He suggested looking at annual caps and referencing an NSR settlement. NYISO indicated that they used their best judgement rather than a fixed duration cutoff.

M. Younger indicated that the market firm requirement is not just to run 56 h over 7 days but to be available over the entirety of Dec-Feb for 8 h/day, if needed. He suggested determining a threshold number of days for a generator to safely claim firm based on our model. His proposal involved multiplying the number of days in the three winter months with load >22,000 MW in the highest load bin by the minimum 8 h/day requirement. C. Wentlent indicated dual fuel units may economically switch to oil even in non-extreme weather days. In contrast, NYISO RA's estimate methodology does not directly align with the market rules for being firm, but NYISO reiterated that the available oil assumptions reflect the available capacity that has sufficient oil to operate for at least 56 hours. P. Nirbhavane from NYISO Ops testified in support of NYISO's estimate and did not identify air permit issues following a thorough review of the Title V air permits of generating units that were assumed to be >95% available (these units capture over 90% of the available oil estimate). ICS discussed the likelihood of generators receiving air permit waivers when needed to maintain grid reliability. The winter period when fuel constraints are relevant has higher air quality, however, planning the system assuming such waivers is undesirable. NYISO reiterated that their firm fuel estimate is not an exercise in estimating which resources can meet the market firm definition as rules are still under development.

M. Mager noted that NYISO estimates have been changing and suggested proceeding cautiously given the proposal is to lock in the assumption through the FBC. He also expressed concern with relying on the first ever firm fuel election. M. Younger asked that we develop a more rigorous representation of operating requirements to maintain consistency between the modeling and market. According to NYISO, these types of representations would be overly complex to administer and would be subject to significant reevaluation for any load forecast updates.

G. Jordan indicated representing some fuel limits is better than nothing. Y. Huang mentioned how MARS cannot model fuel duration limits, and fuel constraints must be modeled as a capacity rather than energy constraint. She mentioned that we started this journey two years ago and NYISO's proposal is a reasonable assumption providing stability and transparency for the first year. R. Gonzales expressed confidence in NYISO Ops review of available oil resources, the deficiency of the GE MARS model to reflect the firm fuel on an energy constraint basis, and that the capacity derate method proposed is reasonable for the purposes of the IRM study given the model limitations.

M. Younger pointed out that locking the current firm fuel estimate will lead to a high, e.g., > 90%, non-firm CAF and many resources will consequently elect non-firm. He further indicated that determining firm fuel availability based on elections solves NYISO's challenge with incentivizing generators and estimating firm fuel. M. Mager stated that there is low winter risk in the next few years and that this modeling change introduces significant uncertainty to the IRM and

markets for a yet non-existent reliability problem. M. Younger expressed that if NYSRC decides not to model firm elections, then it should be established that assumptions will be locked in for the purposes of this IRM study while reserving some standard updates for generator availability such as deactivations or other extreme scenarios. R. Bolbrock was not in favor of locking in a firm fuel assumption now and indicated we should be open to updating values if they are subsequently found to be incorrect. He suggested ICS can address late changes as an IRM sensitivity.

Shifting to gas availability, NYISO reviewed updated regressions of gas generation vs load level incorporating recent data and a suggestion from M. Younger to focus the regression on loads >22,000 MW where gas constraints may be relevant. Given limited and scattered data, M. Younger suggested the NYISO RA team consult with internal regression experts, e.g., M. Schuler. M. Cadwalader indicated the regressions have limited predictive power and was supportive of M. Younger's proposal to focus the regression on relevant load levels. R. Gonzales asked about pegging the Tier 1 bin at half the Tier 2 bin level, and NYISO confirmed the regression would predict zero and there are no historical data points in that load bin. ICS collectively supported M. Younger's proposal to focus the available gas estimate on loads above 22,000 MW.

As mentioned at the last EC meeting and given the significance of the decision, ICS requests that the EC provide direction on how to determine winter fuel availability limits in the IRM study. ICS is divided between (1) NYISO's proposal to use a firm fuel estimate, (2) IPPNY's proposal to use Aug 1 generator elections, and (3) a contingent that believes the firm fuel modeling construct is not ready for incorporation in the IRM base case. Deciding today will allow NYISO to calculate firm and non-firm capacity accreditation factors (CAFs) needed for generators to make their Aug 1 firm/non-firm elections.

4.1.3 DER Whitepaper – EC Approval Item

ICS approved the DER whitepaper and is seeking EC approval at this meeting (see attached file). The only change since a draft was circulated at the last EC meeting is an editorial correction to one word; no other comments were received. This whitepaper fulfills NYSRC goal A1.1.

4.1.4 ELR Whitepaper

NYISO proposed continuing the same modeling approach as last year while looking to improvements in future years. Specifically, NYISO proposed maintaining the current ELR output window starting at HB14 for the 2026-2027 IRM study. The 2025-2026 LCR study suggested shifting the 90% LOLE risk window up to HB13. G. Jordan suggested looking at EUE in addition to LOLE to identify hours with small magnitude risks. Looking forward, R. Bolbrock questioned the merits of optimizing storage discharge beyond the look ahead windows currently practiced by NYISO Operations, i.e. 2.5 h for RT and 24 h for DA. This whitepaper is associated with NYSRC goal A.1.4.

4.1.5 BTM Solar and ELM Whitepaper

NYISO presented an initial draft of the BTM Solar and ELM whitepaper. The draft is attached here for informational purposes, and the document will be brought to the following EC meeting for approval. The findings have already been discussed with the EC and incorporated into the PBC assumptions matrix/parametric results. Of note, the study author has moved on to another role. M. Younger indicated capturing the uncertainty associated with BTM solar and updating the load shape to capture winter peaks and annual energy are significant improvements. J. Popova asked why the LOLE distribution from this study shifting risk earlier was not used in the ELR whitepaper.

4.1.6 Additional Items

ICS briefly discussed the recent IIFO notice for three Gowanus and Narrows GTs. NYISO will provide additional analysis at the next ICS meeting, and we will also discuss inclusion of CHPE and 2025 peakers. Additionally, ICS discussed the NYSRC Policy 2 four-day posting rule in relation to delays in posting the firm fuel materials. Finally, ICS moved their April 30th meeting to April 29th to avoid a conflict with the NYISO MC meeting.