

Final Minutes

New York State Reliability Council - Installed Capacity Subcommittee (ICS)

Meeting #308– October 1st, 2025

Microsoft Teams and NYISO KCC

Attendees

Present Phone

Members / Alternates:

| | | |
|---|-------------------------------------|-------------------------------------|
| William Gunther (Con Edison – ICS Chair) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Brian Shanahan (National Grid) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Rich Bolbrock (Unaffiliated) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Clay Burns (National Grid) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Ruby Chan (CHG&E)..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Caroline Decker (CHG&E) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Sanderson Chery (Con Edison) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Ayman Elkasrawy (NYSEG/RG&E)..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Jin Hao (NYSEG/RG&E) | <input type="checkbox"/> | <input type="checkbox"/> |
| Jim Kane (NYPA) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Anthony Abate (NYPA) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Mike Mager (MI) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Chris Wentlent (MEUA) | <input type="checkbox"/> | <input type="checkbox"/> |
| Hilme Athar (PSEG LI) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Thomas Primrose (PSEG LI) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Mike DeSocio (Luminary)..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Advisers/Non-member Participants:

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| Gary Jordan (ICS Consultant) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| John Adams (ICS Consultant)..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Henry Fox (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Dylan Zhang (NYISO)..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Laura Popa (NYISO) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Max Schuler (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Yvonne Huang (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Bianca Prinsloo (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Lucas Carr (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

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| Sanket Milind Ulagadde (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Ryan Carlson (NYISO) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Heidi Nielsen (NYISO) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Brendan Long (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Carter Hempstead (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Garrett Bissell (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Kathleen O'Hare (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Josif Figueroa (NYISO) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Pramila Nirbhavane (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Ethan Avallone (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Keegan Guinn (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Pallavi Jain(NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Oyin Agunbiade (NYISO) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Andrew Gregory (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Arjun Malhotra (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Claudia Bustamente (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Leila Nayar (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Sushant Varghese(NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Diego Meucci (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Benjamin O'Rourke (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Jack Garrett (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Afreen Vahora (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Syeda Lubna (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Akin Aroge (NYISO) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Manish Sainani (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Zach T. Smith (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Helena Frudit (NYISO) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Chris Hamilton (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Aaron Markham (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Rajesh Subramanian (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Alexis Drake (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Ansa Altaf (NYISO) | <input type="checkbox"/> | <input type="checkbox"/> |
| Yi-An Chen (NYISO) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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| Mikaela Lucas (GE) | <input type="checkbox"/> | <input type="checkbox"/> |
| Matt Elkins (GE) | <input type="checkbox"/> | <input type="checkbox"/> |
| Adam Evans (DPS)..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Richard Quimby (DPS) | <input type="checkbox"/> | <input type="checkbox"/> |
| Randy Monica Jr. (DPS)..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Wes Yeomans (RRS/RCMS) | <input type="checkbox"/> | <input type="checkbox"/> |
| Kristine Agati (Avangrid)..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Leen Almadani (CHG&E) | <input type="checkbox"/> | <input type="checkbox"/> |
| Patrick Danner (NYPA)..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Andrea Calo (CES) | <input type="checkbox"/> | <input type="checkbox"/> |
| Joe Coscia (Potomac Economics) | <input type="checkbox"/> | <input type="checkbox"/> |
| Mike Cadwalader (Atlantic Economics)..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Grant Flagler (Con Ed Energy) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Karl Hofer (Con Edison) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Mariann Wilczek (PSEGLI)..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Lucy Khazanovich (PSEGLI) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| David Mirabella (PSEGLI) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Manny Panaligan (PSEGLI)..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Mark Magliola (PSEGLI) | <input type="checkbox"/> | <input type="checkbox"/> |
| Tim Lundin (LS Power) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Julia Popova (NRG) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Ricardo Galarza (PSM) | <input type="checkbox"/> | <input type="checkbox"/> |
| Richard Bratton (IPP NY)..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Khatune Zannat (NPCC) | <input type="checkbox"/> | <input type="checkbox"/> |
| Herb Schrayshuen (NYSRC)..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Vincent Gabrielle (RTO Insider) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Aaron Breidenbaugh (C Power)..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Eve Marengi (Luminary) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Dominic Riendeau-Krause | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Rick Gonzales | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Elynor Reyes | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Michael Swider | <input type="checkbox"/> | <input type="checkbox"/> |

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|-------------------------|--------------------------|-------------------------------------|
| Benjamin Cohen | <input type="checkbox"/> | <input type="checkbox"/> |
| Mackenzie Poulton | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Haizhen Wang..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Jared Anderson | <input type="checkbox"/> | <input type="checkbox"/> |
| Mark Gaines..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Kenneth Galarneau..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| John Norris | <input type="checkbox"/> | <input type="checkbox"/> |
| Leon Almadani | <input type="checkbox"/> | <input type="checkbox"/> |
| Yannick Vennes..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Stephen Conant | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Nilkesh Gowalani | <input type="checkbox"/> | <input type="checkbox"/> |
| Matthew Schwall | <input type="checkbox"/> | <input type="checkbox"/> |
| Stephanie Palmer | <input type="checkbox"/> | <input type="checkbox"/> |
| James Pigeon | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| John Haff | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Matthew Napoli..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Ray Stalter..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Alan Ackerman..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Marisa Doherty..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Scott Niemann | <input type="checkbox"/> | <input type="checkbox"/> |
| Vaibhav Parekh..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Travis Atkinson | <input type="checkbox"/> | <input type="checkbox"/> |
| Daniel Jerke | <input type="checkbox"/> | <input type="checkbox"/> |

1&2 Roll Call and Request for Additional Agenda Items – W. Gunther / T. Primrose

W. Gunther raised a timing concern that the Q3 STAR results will not be released until 10/14 which is after the EC meeting for approval of FBC assumptions (10/9). ICS plans to proceed with best available assumptions as of ICS 308 in FBC assumptions matrix and reflect STAR results as part of special sensitivity case.

3. Approval of Previous Meeting Minutes – T. Primrose

Meeting minutes for previous meeting #307 were approved with no comments.

4. Review of Action Item List – W. Gunther

W. Gunther highlighted minor updates to action items discussing the whitepapers due at year's end as well as an EC request for a presentation on fuel availability constraints modeling.

5. Chair update on recent EC actions – W. Gunther

W. Gunther provided an update on the EC covering the following:

- EC expressed interest in status of 2025 goals as well as what the 2026 goals would be.
- EC had some interest in SCR extended response rate sensitivity, but no consensus on inclusion in FBC.
- EC had some consensus on loosening 3 day/yr voluntary curtailment limits in favor of 3 days/month while retaining 3 days/year limit on public appeals

6. IRM PBC 2026-2027 Sensitivity Results-Unchanged (Approval Item)– W. Gunther

W. Gunther raised the IRM PBC 2026-2027 Sensitivity Results as an ICS approval item. ICS approved the IRM PBC 2026-2027 Sensitivity Results.

7. RA Modeling Improvements 2026 Strategic Plan – D. Zhang

D. Zhang presented an update on the NYISO Resource Adequacy Modeling Improvements Strategic Plan (2026-2030):

- Background and objectives of the RA modeling improvements strategic plan, as well as drivers of strategic priorities.
- Recommended Strategic Plan Updates:
 - Deprioritize future work on “Tan45 Methodology Review” for 2026, and remove “Comprehensive IRM/LCR Stability Review”.
 - Work towards “Seasonal Topology” in 2026
 - Continue “ELR Modeling Improvements” into 2027
 - Defer the “Winter Emergency Assistance” review to 2027
 - Expand the “Synthetic Load Shapes” initiative and reframe as “Large Loads & Load Shape Review”
 - Addition of “Maintenance Modeling & Output Factor Curves” and “Parametric Process Improvements” starting in 2026

M. Mager asked if seasonal resources impact on the annual shifting construct of the Tan45 will be evaluated. D. Zhang responded that it is baked into the Seasonal Reliability Enhancements project. Also responded that there would be some interrelation with NYISO Winter Reliability Capacity Enhancements proposal. M. Cadwalader noted that Winter Reliability Capacity Enhancements would create some consistency with IRM model so long as the project proceeds as scheduled. M. Mager asked if the NYISO could quantify the impact of seasonal resources/elections. D. Zhang noted that it would be difficult to quantify without a complete market design from ICAPWG.

W. Gunther added that examining winter emergency assistance from neighboring regions was already a 2024 goal that was pushed back to 2026 and now 2027. R Gonzales followed up on winter emergency assistance topic asking if deferral of this project would result in retaining summer emergency assistance limits year-round. NYISO replied that the EA limitations were based on summer data observations.

G. Jordan noted that GE is working at modeling enhancements to simplify the MARS logic for fuel constraints.

M. DeSocio commented that the NYISO should explore charging logic constraints for ELRs such that ELR charging do not take margins to 0. He added that he believes operations would require some non-zero margin to charge storage.

M. Mager asked if the NYISO will investigate how possibly-more restrictive maintenance scheduling may impact outage patterns on the future system beyond historical patterns. NYISO replied yes they will.

J. Popova asked if the NYISO will account for possible “double dipping” in derating factors with firm fuel performance and fuel availability constraints. NYISO commented that they will look into this as part of their efforts.

T Primrose asked if the NYISO will look at the subset of units that are now bidding in the market with a derate post-sunset of the CLR provision that may have additional capacity available under emergency conditions. NYISO replied that they will look into this to see if it is appropriate for inclusion as an emergency operating procedure step or other modeling construct.

M. Mager and other stakeholders expressed significant support for rapid development of parametric process improvements. T. Primrose suggested GE look into possible Tan45 “lite” reducing computational requirements by finding a low point and 6 following points at 1% IRM granularity instead of .5% as a possible alternative. G. Jordan stated that this alternative approach could save half the runs but would still require significantly more computational effort than the current parametric method.

G. Jordan added that introduction of winter LOLE fundamentally changes how the .1day/year LOLE criteria is viewed. He noted that until now this criterion was effectively a .1day/summer criteria but with winter risk in the model, summer risk is also lower. M. Cadwalader expressed caution that ICS needs to be wary of downstream impacts of seasonal criteria and that alternative metrics such as EUE are worth exploration.

W. Gunther noted that with an annualized criteria but seasonal resources you can show an “apparent” deficiency without necessarily having a realized deficiency.

W. Gunther gave a quick overview of proposed 2026 ICS goals as follows:

- Update winter fuel availability modeling based on NYISO consultant study and generator firm fuel elections
- Incorporate winter maintenance outages and derates in IRM model, and address J. Adam's findings and recommendations in 8/6/25 2024 Summer Maintenance Analysis presentation
- Evaluate modeling of large loads and continue modeling improvements for winter load shapes and energy limited resources
- Introduce seasonal topology and other winter modeling improvements
- Improve parametric method representation of expected Tan 45 IRM outcomes

8. Fuel Constraints Whitepaper – L. Carr

L. Carr presented a draft copy of the Winter Fuel Availability Constraints Modeling Whitepaper – Phase 2. This draft summarizes key changes and updates since completion of Phase 1 (available oil duration requirements, available gas regression, consideration of firm fuel elections, interaction between CHPE and fuel constraints).

NYISO requested feedback and comments on this draft by mid-October to facilitate approval at the November ICS.

9. EOPs - Voluntary Curtailments and Public Appeals – L. Carr

L. Carr gave an update on an EOP analysis for Public Appeals/Voluntary Curtailments incorporating feedback from the 9/3 ICS and 9/12 EC covering the following:

- Impact analysis of alternative assumption of 3 days/month limit on voluntary curtailments (retaining retained the current 3 days/year limitation for public appeals) showing .4% IRM reduction under parametric analysis.
- Statistics on monthly voluntary curtailment calls from 2026-2027 PBC and alternative test case
- NYISO recommends implementing a revised limitation of 3 days/month for voluntary curtailments as part of the 2026-2027 IRM final base case (FBC)
 - Current 3 days/year limit for public appeals would be retained
 - Further analysis and coordination with GE Vernova on seasonal call limitations recommended.

M. DeSocio asked about reconciling 3 days/month limitation with calls per load bin. NYISO replied that within a load bin the calls limitation are never exceeded.

Stakeholder discussion ensued regarding the merits of different calls limitation structures under a capability year simulation model. W. Gunther added that exhaustion of calls prior to a season does have impacts on downstream CAFs.

Stakeholder discussion occurred regarding implementation of 3 calls/month limitation on voluntary curtailments only as an interim step until seasonal limitations on calls are added to the MARS model. M. DeSocio suggested a 1 call/month limitation may be reasonable, T. Primrose agreed. A. Evans noted support for moving towards a 3 calls/month limitation on voluntary curtailments.

ICS agreed to limit of 3 calls/month for voluntary curtailments and 3 calls/year for public appeals in the FBC.

10. Hydro Quebec (HQ) Chateauguay Modeling Recommendation – L. Carr

L. Carr provided an update on the HQ Chateauguay Modeling Recommendations covering the following:

- Background on current HQ modeling assumptions and modeling construct
- Updated modeling recommendation to capture monthly import variation and changing the modeling to utilize a curtailable contract rather than corresponding adjustments to capacity in Load Zone D and the interface limit.
- Parametric impact analysis of updated modeling construct showing +.09% IRM impact.
- Background and proposed updates to CASR market rules

A. Evans asked for additional details on how December/March assumptions were formed. NYISO noted that it was based on external CRIS rights for HQ into Zone D which vary on a monthly basis.

W. Gunther asked how must-offer requirements would be considered. NYISO noted that the proposals are not misaligned since must offer requirements apply to seasonal UDR elections.

T. Abate asked how future changes in HQ imports would be captured by this methodology. NYISO replied that they will continue to look at operational trends and that market design changes will lead to better understanding of future HQ imports.

M. DeSocio pointed out that the monthly schedule represents external CRIS rights, not historic sales, and thus there is still some misalignment. M. Cadwalader suggested HQ can only curtail the line in proportion to how much it curtails its own load. As such, the likelihood of curtailment is even less than the modeling approach checking if HQ has sufficient resources

11. 2026-2027 IRM Fall Load Forecast – M. Schuler

M. Schuler provided an update on the 2026-2027 IRM Fall Load forecast covering the following:

- Background on load forecasting process and inputs
- Background on adjustments for RLGs, large loads and BTM:NG Resources
- 2025 Weather Normalized NYCA Coincident Peaks and Pooled models for CTHI
- One notable change from the Gold Book forecast is a 30%+ drop in the zone D load resulting from loss of a large load.

G. Jordan asked if the large load removed from Zone D is permanently gone or just removed for 2026-2027. NYISO replied that large loads will be evaluated periodically, and updates will be provided for the Gold Book.

ICS approved the 2026-2027 IRM Fall Load Forecast.

12. 2026-2027 IRM FBC New Generator Screening – H. Fox

H. Fox provided an update on the 2026-2027 IRM FBC New Generator Screening covering the following:

- Background on methodology and data sources
- Review of past IRM study inclusion screenings and realized new generators.
- 4 projects are recommended for inclusion in the 2026-2027 IRM FBC (Baron Winds-Phase 2, Steel Wind, Erie Wind, Cassadaga Wind).
- Recommended inclusion criteria for DER Resources covering DERs that have been submitted for enrollment to date as well as certain resources participating in the Demand Side Ancillary Services Program (DSASP) that are currently working to complete transition to the DER participation model.
- For future years, the NYISO recommends including DER in the FBC that have been submitted for enrollment prior to the presentation of final SCR and DER value assumptions at an ICS meeting in September of each study year
- Recommended SCR and DER assumption values

M. Mager inquired about zonal patterns in SCR to DER resource conversions. NYISO replied that most resources transitioning to DERs are from DSASP which historically are primarily upstate.

13. 2026-2027 IRM FBC New Generator Screening Excel (Posting Only)

14. IRM 2026-2027 FBC Results - R. Subramanian

R. Subramanian presented an update for the IRM 2026-2027 FBC results.

- Material updates include: Inclusion of DERs, Resource Deactivations, and Revised SCR start times.
- Parametric result stands at 25.67% IRM, 80.70% NYC, 90.27% LHV, 105.70% LI

M. DeSocio asked for more detail on UDR elections. NYISO replied that the UDR elections are confidential and reflect the latest elections provided August 1st.

15. IRM 2026-2027 FBC Assumptions Matrix (Approval Item) - R. Subramanian

R. Subramanian presented an update for the IRM 2026-2027 FBC assumptions matrix. Noteworthy updates include peak load and energy forecasts, deactivations and removals, existing and proposed wind units, DERs, capacity purchases, interface limits, EOPs, and MARS version.

G. Jordan asked for clarification that assumptions matrix as presented reflects inclusion of CHPE and removal of the barges.

M. DeSocio asked the NYISO to provide a listing of Zone K topology changes.

ICS Approved the 2026-2027 FBC Assumptions Matrix with no changes.

16. SCR Response Rates Analysis – B. Prinsloo

B. Prinsloo provided an analysis of SCR response rates covering the following:

- Background on SCR performance dataset and historical performance data availability.
- Impact analysis of extended response rate assumptions provided by ICS for Zones A-E, G-I and J showing .11% IRM reduction (parametric).

M. Mager thanked the NYISO for running these sensitivities and commented that assumed extended response rates are likely to reflect reality, but that he is amenable to continue the existing process since this problem will be solved in the next IRM cycle (by increased data availability).

M. Cadwalader noted that ICS makes assumptions in the absence of data availability in other cases but concurred with M. Mager that the issue is effectively solved for the next IRM cycle. M. Mager and M. Cadwalader both added that if the IRM impact was significantly larger that they would have continued to advocate for a resolution in this IRM cycle.

17. Event List for SCR Response Rates (Posting Only)

18. Additional Agenda Items

No major additional agenda items identified.

Special ICS 309 cancelled considering timely receipt of fall IRM load forecast.

Next Meeting

Meeting #309 (Cancelled) –Friday, October 3rd, 2025, 2:30 pm–MS Teams

Meeting #310 –Wednesday, November 5th, 2025, 10:00 am–NYISO KCC and MS Teams