

Draft Minutes

**New York State Reliability Council - Installed Capacity Subcommittee (ICS)
Meeting #276 – May 03, 2023
Microsoft Teams**

Attendees **Present** **Phone**

Members / Alternates:

| | | |
|---|-------------------------------------|--------------------------|
| Brian Shanahan (National Grid) ICS Chair | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Noor Leghari (NYSEG/RG&E) ICS Vice Chair / Secretary | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Rich Bolbrock (Unaffiliated) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Clay Burns (National Grid)..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Sanderson Chery (Con Edison)..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| John Dellatto (PSEG LI)..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Ayman Elkasrawy (NYSEG/RG&E) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Jim Kane (NYPA) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Howard Kosel (Con Edison)..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Mike Mager (MI) | <input type="checkbox"/> | <input type="checkbox"/> |
| Mark Younger (Hudson Economics) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Advisers/Non-member Participants:

| | | |
|--|-------------------------------------|--------------------------|
| John Adams (ICS Consultant) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Josh Boles (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Andrea Calo (CES) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Ryan Carlson (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Adam Evans (DPS) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Grant Flagler (Con Ed Energy) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Ricardo Galarza (PSM Consulting) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Chris Hall (NYSERDA)..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Dave Allen (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Karl Hofer (Con Edison)..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Yvonne Huang (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Gary Jordon (ICS Consultant) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Leen Almadani (CHG&E) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Scott Leuthauser (HQUS) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Tim Lundin (LS Power) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

| | | |
|--|-------------------------------------|--------------------------|
| Popova, Julia (NRG)..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Randy Monica Jr. (DPS) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Rob Pile (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Otito Onwuzurike (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| William Gunther (Con Edison) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Emily Fernandes (Unknown)..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Herb Schrayshuen (Power Advisors)..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Kathleen O'Hare (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Sushil Silwal (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Thomas Primrose (PSEG LI) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Athar Hilme (PSEG LI)..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Syeda Lubna (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Keegan Guinn (NYISO)..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Dylan Zhang (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Mikaela Lucas (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Caroline kucher (Unknown) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Gabriel Centi (NYISO) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

1. Roll Call – N. Leghari

- Roll call was conducted.

2. Introduction and Request for Additional Agenda Items - B. Shanahan

- N/A

3. Approval of Minutes for Meeting #275 – B. Shanahan

- Minutes of Meeting #275 has been approved with minor edits.

4. Review of Action Items List – B. Shanahan

- 220-1 – Ongoing.
- 257-1 – No change.
- 265-2 – Completed and will not pursue any further.
- No change to the dates of current white papers.
- No changes to Model Improvement work.

5. Chair update on recent EC actions – B. Shanahan

- Provided an update on cable transition rate methodology status. ICS is not going to pursue it any further.

6. ICS Reviews Initial IRM Assumptions Matrix - M. Lucas

- M. Younger – Does NYISO have information that why the attachment in G1 not participating.
- Y. Huang – Some of the units never show up on markets. Future NYISO might have information to share.
- M. Younger – Someone in Josh’s team tracks CRIS retirement. Can we get information on their retirement.
- B. Shanahan – Question why someone have CRIS rights and don’t participate.
- D. Zhang – CRIS is being monitored. If they have CRIS in the Gold book that is the most recent snapshot in time. We don’t disclose when the facility is going to lose their CRIS. Some of their generators sell their RECS to Massachusetts or other NE jurisdictions.
- NYISO is going to take back and see these wind units and their exporting capacity and it should be tracked and reported.

6.1 Withholding Operating Reserve Assumption Review – L. Carr

- M. Younger – Suggestion to set Operating Reserve to 400MW by looking at LOLE window instead of 350.
- Y. Huang – Agree with the observation. Standard deviation over variability the more data is included that increase variability. Upward trend is more prominent in regulation study that is included in appendices.
- M. Younger – We have the data this year and the NYISO changing regulation requirements. Suggest changing it to 400 this year.
- B. Shanahan – Going forward we change the number to 400.
- Y. Huang – NYISO will come up with similar table with 400 based on ICS recommendation.

6.2 New Generation Inclusion Screening – L. Carr

- M. Younger - Does NYISO knows how long it takes to get these Solar Farm builds.
- Y. Huang – Follow up customer registration and establish relationship with developer to find information. Hard to tell because sample is very small.
- M. Younger – Is the translation factor is used for functional purposes?
- L. Carr – Translation Factor is the calculation NYISO use to translate UCAP.
- M. Younger – In Extreme Weather working group meeting does last 5 year of data represents the risk of wind lows.
- Y. Huang – Part of the strategic plan is to watch out the progress of extreme weather committee.

7. Updated PBC Parametric Results – M. Lucas

- Y. Huang – Highlight the remaining runs before wrapping up. The PBC Cable transition rate and new generator, topology update and EOP and external data and Policy 5. Next meeting NYISO is going to bring in some more information that is on hold.
- M. Younger – Any of the peaker unit that previously assumed to wear out can meet the requirement without shutting down.
- Y. Huang – Do not have complete information.

7.1 Explaining Load Forecast Update Results – M. Lucas

- NYCA load goes up by 205.5 MW, decreasing the margin by 0.76%, before applying any capacity adjustments
- Y. Huang – Enough data to bring in result by next meeting

8. Whitepaper/Study Load Forecast Uncertainty – Phase 3 – M. Schuler

8.1 LFU Phase 3 Variable Scaling Methodology – M. Schuler

- Does NYISO feels justification in scaling the hours other than the peak or it warranted further examination.
- M. Schuler – We are not confident in current purpose method that which way is better.
- M. Younger – There is no question that the annual energy is going up by 3% and peak is going up by 6% and scaling everything by 6% gives more prospective on the annual energy. When this load duration multiplier applied it adjusted the peak load to 100%
- M. Younger – Has concern that Lots of the hours above unadjusted shape. Most of the shaving comes of peak hours. NYISO picked very aggressive scaling near peak hours. Load scaling will give almost no effect during 80% of the time.
- M. Schuler – Change in adjustment is in the near peak hours but the over all hours are being cut back in annual.
- M. Schuler – Question is that how much the scaling overnight hours early afternoon hours should how much this scaling does beyond like the second because all of the scaling that's done in this method as of now is chronological information.
- M. Schuler - Phase 2 we went through that of 2002 shaping down to the 2013 shapes. This is showing is that that change of load shape made significant impact on the off-peak load in the top 100 hours relative to what it had been with the 2002 shape. The difference is much bigger than the difference we would have by going from 2013 shape to a scaled shape.
- M. Schuler - We made a significant change going from the 2002 shape and then to the 2013 shape. We basically doubled the load reduction relative to peak hour by moving from 2002 to 2013.
- B. Shanahan - There's going be some follow up. This is not resolved around the whole scaling issue at this point.
- Thanks NYISO for looking at this issue. Any of these approaches on the are not the best or ideal so we should not jump or switch to any of those approaches.
- Y. Huang – Michaela Lucas had the study result of looking at applying either of these options. We do want to make a formal recommendation for this IRM study.

8.2 LFU Phase 3 Variable Scaling Preliminary IRM Impact – M. Lucas

- Y. Huang - I just want to flag this we have we spend a lot of time looking at the Load Shapes with the adjustment of LFU and the load shape with different scaling LFU adjusted to the specific bins. Michaela is trying look at the top hours which can capture some visibility of peak near peak period and see how that impacts the bin specific load that simulation. By applying different scaling factors, we do see changes in that I would say low duration shape especially on the top bins the number one through three and four potentially with hourly

LOLE. We then perform either parametric adjustment or Tan45 adjustment to bring the system back to the LOLE criteria.

- Y. Huang – For this IRM we are recommending status quo until new set of methodology is in place.
- B. Shanahan - I just think we need to have a discussion on this variable scaling issue timeline to get it done.
- M. Younger - I think the NYISO has gone far enough to reach the conclusion that if you did an hourly adjustment and depending upon what hourly adjustment, it could impact the IRM and, but they also have gone far enough to know that they do not in any way know what an appropriate hourly adjustment would be. By the time we come back with the appropriate hourly adjustment it doesn't make much difference. There should be no changes at this point.
- Y. Huang - I think even on a monthly there is a little bit more work to be done at this point. Our plan could be coming back next month to talk about the plan moving forward on this particular topic.

8.3 LFU Phase 3 Weather Duration – M. Schuler

- Question - Starting from July 16th it looks like it never comes close to 95 so is that saying that the temperature has never reached 95 degrees.
- M. Schuler - It looks like it's getting about 95 degrees maybe on the 20th or 21st or 22nd but. That's chronologically equivalent to the maximum of the 2013 load shape it's capping out at 95 degrees but if you go back there was an earlier July so maximums that were exceeded 95 and got up to 98 degrees.
- M. Younger – Observed that over this time period looked at on any day and temperature is three or four degrees higher than some other days doesn't seem all that unexpected. The extreme weather working group have looked at many more years historic data and I got the impression that going back much further they indicated that some of the extreme temperatures were much bigger than we've had recently.

8.4 LFU Phase 3 BTM Solar – R. Khan

- NYISO have analyzed the three scenarios, took the net load shape and added the current BTM to get it gross load shape and for each scenario we subtracted scenario BTM from the current gross load.
- The upward change is primarily driven by reduced reference load and All changes are relative to current LFU values.
- Comment - The peak load in New York State is totally unaffected by how much solar you have the peak load is whatever the peak load is. Seems like wouldn't it be best to go back to just as we model wind generation, we model utility grade solar as generation.
- R. Khan – NYISO will look how they can incorporate this kind of modelling.
- M. Younger - Underestimating how much I agree that I don't expect it for 1.85% lower than we should be, but we could well be half a percent or 1% lower than we should be because we generally have gone back to like 2018 load forecast. What years are you using for the updated load forecast uncertainty analysis?

- R. Khan – NYISO is using 2019, 2020 and 2022 and we have different iterations of models however 2022 is always there and when we calculate the final response that's always based on the most recent year.
- M. Younger - Realize that NYISO is using a binary variable but that doesn't mean that it's taking out the variability so much as it's sort of adjusting the starting point. Assuming the variability from 2019 is carrying basically the same against temperature and other things basically the same weight as 2022 and none of them are representing the solar level from 2024. Look forward to when NYISO present load forecast uncertainty results that you also present doing this correction for the 2024 behind the meter solar.
- Y. Huang - I think we are actively pursuing to develop a methodology to split up BTM solar from low side. When we are able to model BTM solar as the generator in Mars in IRS study that would align the uncertainty of variation of BTM solar. We're not there yet but I think close to the strategic plan I do hope that we could have some sort of methodology in place before we open up to look at Tan45 methodology which was planned for 2024.
- M. Younger – Have NYISO ever done LFU analysis of gross load?
- NYISO – Not directly.
- Common trend of LFU increase with the increase of BTM Solar penetration was observed.

8.5 LFU Phase 3 Winter Variable – R. Khan

- Recommendation - Both candidate 1 and 2 show significant improvement in overall fits relative to the variables used in prior years
- NYISO proposes to use candidate 2 for winter LFU to be used in IRM 2024 LFU
- B. Shanahan - How do we define the winter period.
- R. Khan - The purpose of this is to offer the tool to predict winter peaking conditions. We have used like different weather metrics but you know this effort was to improve the overall fit. Winter applies to Dec, Jan and Feb.

9 Policy 5 - IRM/LCR Rounding Issue Discussion – J. Adams

- The only change is being proposed for policy five this year is to incorporate the rounding procedure, NYISO uses to round the results of the anchoring method to the nearest tenth of a percent IRM. NYISO recommended that those changes be incorporated in appendix. the calculation for the loss of load expectations is done to the nearest thousands.
- Added the language to point out that the system reliability is the measure of system reliability to the nearest thousands.
- B. Shanahan - Last meeting on rounding methodology and we went through some discussion and comment, M. Younger had some recommendation as well. Are those comments incorporated.
- J. Adams – Yes it was incorporated. Policy 5 had been silent on the degree of accuracy that the LOLE calculations were done, so we wanted to add that as well.
- J. Adams - The only change in Policy 5 this year after the prior discussion on the withholding of the operating reserve so like there's no changes that need to be made in policy 5.
- B. Shanahan – Correct the font issues in section 3.0 before we publish.
- B. Shanahan – if there are no further comments or objections, we can present this at the next EC meeting. No objections.

10 Milestone Schedule Items

- Y. Huang - If there is changes that is not capturing the RNA NYISO have to go to TPAS meeting. There are not going to be any changes this year currently for all the other topologies I haven't seen any changes that RNA has been kind of adopted but we are waiting for input from PSEGLI on any transfer limits that could change.
- B. Shanahan - The public policy changes segment A&B were incorporated last year
- Y. Huang - AC transmission impact of AC transmission projects study prior and then it was done actually through the RNA because they actually need model. Instead of presenting to the TPAS and getting the approval we just simply adopted.

Next Meeting

Meeting #277 – Wednesday, May 30, 2023, 10 am – Microsoft Teams