## **Final Minutes**

# New York State Reliability Council - Installed Capacity Subcommittee (ICS) Meeting #252 – October 6, 2021 Webex / NYISO

## Attendees

#### Present Phone

# Members / Alternates:

	Brian Shanahan (National Grid) ICS Chair		]		]
	Rick Brophy (NYSEG/RG&E) ICS Vice Chair / Secretary		]		]
	Rich Bolbrock (Unaffiliated)		]		]
	Clay Burns (National Grid)		]		]
	Ruby Chan (CHG&E)		]		]
	John Cordi (NYPA)		]		]
	John Dellatto (PSEG LI)		]		]
	Jim Kane (NYPA)		]		]
	Howard Kosel (Con Edison)		]		]
	Mike Mager (MI)		]		]
	Chris Wentlent (MEUA)		]		]
	Rich Wright (CHG&E)		]		]
	Mark Younger (Hudson Economics)		]		]
	Khatune Zannat (PSEG LI)		]		]
Advisers/Non-member Participants:					
	John Adams (ICS Consultant)		]		]
	Leen Almadani (CHG&E)		]		]
	Charles Alonge (NYISO)		]		]
	Josh Boles (NYISO)		]		]
	Andrea Calo (CES)		]		]
	Ryan Carlson (NYISO)		]		]
	Jie Chen (Potomac)		]		]
	Frank Ciani (NYISO)		]		]
	Michelle D'Angelo (Unknown)		]		]
	John Dellatto (Unknown)		]		]
	Greg Drake (ICS Consultant)		]		]
	Nelson Eng (Con Edison)		]		]

Adam Evans (DPS)
Kenneth Galarneau (Ravenswood)
Ricardo Galarza (PSM Consulting)
Nate Gilbraith (NYISO)
Ying Guo (NYISO)
Karl Hofer (Con Edison)
Erin Hogan (UIU)
Yvonne Huang (NYISO)
Dan Jerke (CPV)
Riaz Khan (NYISO)
Chris LaRoe (Brookfield)
Scott Leuthauser (HQUS)
Tim Lundin (LS Power)
Norman Mah (Con Ed Energy)
Arthur Maniaci (NYISO)
Maddy Moheman (Unknown)
Randy Monica Jr. (Unknown)
Scott Nevins (DPS)
Ben O'Rourke (NYISO)
Carl Patka (NYISO)
Laura Popa (NYISO)
Richard Quimby (DPS)
Max Schuler (NYISO)

## 1. Roll Call – R. Brophy

• Roll call was conducted.

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

• B. Shanahan said that he had a request from C. Dahl (PSEGLI). He would like to propose another sensitivity study for this year's IRM related to decreasing Zone K intertie availability. In particular, the impact of increasing Y49/Y50 grouping intertie forced outage rates. (see 8.3 below)

## 3. Approval of Minutes – B. Shanahan

## 3.1. Meeting #250

• The meeting minutes were approved.

### 3.2. Meeting #251

• The meeting minutes were approved.

## 4. Review of Action Items List – B. Shanahan

- 220-1: Will be discussed later in the meeting (5.3). In brief, it was discussed at the EC and they were okay with the ICS issuing this set of questions subject to any further comment on them.
- 233-1: Potential white paper on this subject, on hold at this time.
- 247-2: Will be discussed later in the meeting (5.1).
- 247-4: Will be discussed later in the meeting (5.2).
- 247-7: B. Shanahan will check with N. Gilbraith on the status of this.
- 249-17: Ongoing tracking item.
- 249-18: Will be discussed later in the meeting (5.1).
- 251-1: The Aggregated Wind Data 2016-2020 was sent out on 9/1 by G. Drake.
- 251-2: Will be discussed later in the meeting (7.1).
- M. Younger offered a suggestion re completed items continuously clean up the list but keep the newly completed items on the list for one meeting following their completion. This would help members keep track of the action items. No objections from the group so B. Shanahan will incorporate that practice going forward.

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

# 5.1. Update on 2022 NYSRC Corporate Goals (AI 247-2)

- Latest changes a result of input from R. Clayton, A. Adamson, and others. The goals remain the same.
  - Goal A.1.: Progress target changes to January 2022, but need to have the scope figured out in December for the Phase 3 High Intermittent Renewable Resource analysis.
  - o Goal B: RRS items
  - Goal C.2.: Revised completion date to January 2022
  - o Goal D: EC items
- No objections or comments from the group.

### 5.2. Review of Draft ICS Scope Document Revision

- B. Shanahan reviewed the scope document posted on the RC website and incorporated changes associated with required actions from the 2022 goals and anything that was outdated.
  - #6: B. Shanahan will update to include both the NYISO ICAPWG and the RC Resource Adequacy Working Group.
  - #8 & #9: Based on what the goals document specifies for the ICS (C.2 and E.2).
- B. Shanahan will review the document again at the November meeting.

# 5.3. Review of Public Appeal Questions for TO's (AI 220-1)

- At the September 10th EC meeting the question presented was whether the ICS should solicit updates from the NYTOs regarding Public Appeal EOP load reduction data. The EC was in favor of it, they also made revisions to the draft questions and asked the ICS to discuss and further refine the questions.
- The ICS reviewed the EC comments on the proposed questions to be asked of Transmission Owners and after some discussion made a number of revisions to the questions. B. Shanahan will review the revised questions with the EC at their October 15 meeting.

- The revised set of questions to be submitted to the EC at their October meeting will be:
  - 1. Did your company call for Public Appeals to reduce load this past summer (note, by public appeals we mean something that is not part of explicit load reduction programs)?
  - 2. If you did call for load reductions, approximately how much reduction do you believe was achieved, and how did you estimate the amount of load reduction that you received? Please describe your confidence in this estimate.
  - 3. Was there any overlap between the reductions that you achieved from your public appeals and load reductions from customers that participate in the NYISO SCR or other supplier programs?
  - 4. Was the load reduction from public appeals on the date that the NYISO has identified as being either the NYCA system peak or your Locality peak? If it was, are you planning to include the public appeals load reduction in your weather normalized loads?
  - 5. Do you believe that you would be able to get the same level of response to public appeals on any summer weekday with peak type conditions?
- The group suggested that the best way to get the questions out to the TOs would be for them to be sent by the ICS Chair to the individual SRC-EC TO representatives annually. The questionnaire would have a requested response back date of the second Friday in December.
- It was suggested that B. Shanahan review the process we laid out at the October 15th EC meeting. The request would be generated by the ICS Chair, it would be directed to the RC point person for the utility along with the timing for responses.
- B. Shanahan will send out the updated questions to the group for a final review and comment.

### 6. NYISO and TOs report preliminary data base quality assurance review – N. Gilbraith

### 6.1. ICS accepts preliminary data base quality assurance review

- N. Gilbraith reported that the NYISO conducted its quality assurance review of the preliminary database in conjunction with GE and NYTOs Con Ed and LIPA.
- GE reported a handful of non-material findings. They identified some unit name changes, some area renamings, retirement date changes for units that were retired, installation date changes for new units, changes in capacity that corresponded to DMNC changes, and changes in EFORd that corresponded with updates in the GADS data. One of the things they noted that needs to be corrected is that there were two line ratings in the topology identified that were inconsistent with the diagram. One of which the diagram was in Western NY an incorrect label on the IESO interface, it has been corrected for the power base case assumptions matrix. There was also a line rating on PJM and NYISO border there was a return path from NY into PJM that was duplicated, the NYISO removed the duplicate path line. It had less than 0.1% impact on the IRM. There was one other line rating on the interface with New England the line between NE and Zone G that has a 600MW rating in one direction and 800MW in the other direction. The flow from NE into Zone G was mislabeled as 800MW when it should be 600MW. Correcting that had no impact on the IRM.
  - On total, there was about a 0.1% change in the IRM. NYISO will have the exact results as part of the Final Base Case Parametric Study.
- Con Ed also identified the Zone G to NE rating issue and the NY to PJM duplicate path their main two findings. No disagreement with GE's findings.

- LIPA also does not have any concerns with the masked database. They have spoken with F. Ciani concerning a few changes from the preliminary to the final data base which are already in the assumptions.
- ICS accepted the preliminary data base quality assurance review.

#### 7. IRM Base Case Assumptions

#### 7.1. Final 2021 IRM Base Case Assumption Matrix – For ICS Approval – N. Gilbraith/C. Avallone

- N. Gilbraith walked through the updates since the last review.
  - #2: In general there are reductions in load across the NYCA with larger reductions in load downstate.
    - R. Bolbrock said that looking at the impact of the load forecast there is a 0.70% drop in the IRM (Parametric IRM Impact Comparison 2021 IRM Study vs. 2022 PBC IRM). He thought that was a large decrease and would not have expected that much of a change, also that the driver for that was unclear to him. M. Younger explained that the main driver is not the peak load forecast but it is the non-coincident peak load forecast which moved much more than the peak load forecast. The NYISO reevaluated its method of estimating the non-coincident peaks, their update resulted in the non-coincident peaks as it was in earlier years. That update affected many of the load shapes that ultimately get run through the model. R. Bolbrock thought we should include that information in the report so it is clear why the relative step change has come about.
  - #7: There are some proposed new thermal units (111.2MWs). Will be covered next in 7.2.
  - #15: There are some additional solar resources (182.9MWs) that are new to the FBC relative to the PBC. These are a collection of 20MW facilities scattered throughout Zones C, E, and F that have made substantial progress towards coming on-line as capacity suppliers next summer. Will also be covered next in 7.2.
    - In response to a question as to what substantial progress entails, N. Gilbraith explained that the NYISO has a detailed process for evaluating whether a facility should be included in the study. It involves whether they have their interconnection agreement, are included in the planning studies, they are planning to come into service before June, and started the process of becoming a capacity supplier in the NYCA – a variety of metrics.
  - #36 #38: As we move towards the FBC we may need to reperform the Policy 5 adjustments to make sure the areas fall within their reliability criteria.
  - Attachment A1: The Deltas show the numbers resulting from subtracting the FBC from the PBC (negative numbers indicate the magnitude of the increase in the FBC compared to the PBC).
  - Attachment B1: Details for the new and uprated thermal units.
  - Attachment B3: Details for the new wind and solar units.
  - Attachment C: Contains preliminary derating factors, the IRM report will have an updated version that includes the presence of the new solar facilities and the updated thermal units.
  - Attachment E1: As mentioned before, there was an incorrect label for IESO/NY interface which has been corrected. We should have the updated Zone K dynamic limits table reflected.

- Attachment G1: Fenner Wind received its CRIS, however it is not being modeled in the IRM study.
- Attachment G2: Have the new solar units listed in Attachment B3 but not listed in this attachment. NYISO will update the attachment to include them.
- R. Bolbrock had a question concerning SCRs, he wondered why in the parametric results there is a plus 0.09% impact from the SCRs on the IRM while there was a decrease in SCR enrollments and a 1% increase in their performance. He thought those changes should lower the IRM.
  - N. Gilbraith confirmed that there was about a 30MW reduction in SCRs and the 0 UCAP rating increase by 0.1%. What they did was to start with last year's SCR case and updated those parameters – the total quantities and performance in each zone. Because there was less capacity the LOLE went up by a small amount. The reductions in SCR capacity were more concentrated in downstate then upstate so we see reductions across all reserve margin locations, most concentrated in G-J. To return to 0.1 LOLE they had to add capacity on a state-wide basis, zones A-K, and they had to add more than the 30MWs that was lost. Although we had less SCR MWs which would tend to reduce IRM, what ended up happening is they added capacity state-wide resulting in a higher reserve margin. But at the same time we had a lower zone J margin even after they finished the case on G-J reserve margin. What this is showing is a) the effects are really small - SCRs increased the IRM on a parametric basis by 0.09% and they decreased the G-J margin by 0.1%, decreased NYC by 0.06%, and increased LI by 0.05%. On net the effects on reserve margin were extremely small, not in the same direction in all locations, and why we see a net positive effect on the IRM is because they had to add more state-wide capacity then they removed from SCRs - they added state-wide capacity and lost locational capacity and it takes more state-wide capacity to replace locational capacity even if that locational capacity is only a moderate performer.
  - R. Bolbrock felt it would be helpful to include the explanation for this counterintuitive result in the report for readers of the IRM Study. N. Gilbraith said he has discussed this with G. Drake and they do plan to include a write-up of this in the report – address the SCR questions.
- K. Zannat raised a question concerning whether Riverhead Solar should be included in the study. N. Gilbraith said that that unit showed up in the Goldbook for one or two years a few years back but has disappeared from the Goldbook. His understanding is the unit was dropped because they were not participating in the markets. N. Gilbraith said that his understanding could be incorrect, in which case we need to add them to the list in some form. He explained that since they aren't in the Goldbook to start with, which is where NYISO starts its existing and new units process from, they wouldn't show up in the assumptions matrix. PSEGLI said they would take this back and follow-up on it. J. Dellatto thought it might fall into the same bucket as Shoreham Solar with the unit not being modeled (Attachment G3).
- N. Gilbraith will circulate an updated draft of the assumptions matrix that has the solar attachment corrected.
- ICS approved the final 2021 IRM base case assumption matrix and will be bringing it to the EC at their next meeting for approval.

### 7.2. New Generator Assumptions Summary – Y. Huang/Y. Guo

• Y. Huang explained the NYISO's generator screening criteria in response to a previous question. NYISO verifies 1) executed interconnection agreements, 2) the proposed

commercial operation date is earlier than June 1 (2022 for this year's study), 3) if they have completed or are in progress with a CRIS study, 4) if they are included in the most recent RNA or STAR report, 5) if they have completed or are in progress with the customer registration process.

- Y. Huang reviewed the updates for the FBC as compared to the PBC.
- It was noted that the time to complete the process for existing units is relatively short and some of the EDS projects could complete the process in time to be included in the FCB, with the caveat that there is confidential information the NYISO is aware of that could explain why they are not included in the FBC. NYISO confirmed that base their recommendations on their engineering judgement which may include confidential information; based on the totality of the circumstances they don't believe the unit(s) will be in-service by June 1 of next year. C. Patka indicated that the NYISO could share the information with ICS Consultant G. Drake, who is able to receive confidential information from the NYISO due to his non-disclosure agreement with the RC and NYISO, and get his confirmation on the decision(s) if that would satisfy the RC/ICS.
- From a process step going forward the question is how to account for the this additional confidentially factor in the screening criteria. NYISO suggested that for the next round a step is added where the ICS Consultant verifies any confidential information used as part of the exclusion decision. The NYISO would also make a note of it in the FBC assumptions. ICS members found the suggestion acceptable. G. Drake asked if we planned on proposing something to the EC that we have a more formalized process, or are we just referencing the ISO's procedure in this case. B. Shanahan thought we should update the (written) process to include this attribute. It was suggested that the members take up issue for a more in-depth review and decision on how to incorporate it into the process as part of the lessons learned discussion. B. Shanahan will coordinate with N. Gilbraith and Y. Huang to setup this discussion topic for some time after the IRM is approved.

### 8. Sensitivity Cases

### 8.1. Sensitivity Results (Cases 1-9) - R. Carlson

- R. Carlson reviewed the cases and the reasons for their impact on the IRM for this year vs last year.
- Cases #s 1-5 are run every year, #s 6-9 are unique to this year.
- Case #2: LCR numbers for NYC band LI are a remnant of how the sensitivity is conducted, are able to take away capacity across NYS but still assume that there are some constraints that are relevant for NYC and LI and they are not. Comment made that it doesn't make sense to put LCR numbers out for NYC and LI. Agreement from the group that if there is no transmission constraints there should be no local requirement anywhere. Thought it best to leave those columns blank here. E. Hogan said that she expected that having no internal NYCA transmission constraints would drop the IRM a lot more that the 1.9% shown. M. Younger explained that with modeling much more capacity being able to go from zones H to I UPNY/SENY does not seem as critical as it used to be. We've also lost some our western capacity. R. Carlson confirmed that this delta is the same result the NYISO got last year a 1.9% decrease.
- Case #4: In addition to rolling an old year off and a new year on there were new wind resources added this year.
- Case #8: NYISO took the transition rate and replaced it with a simple EFORd of 50% and used that for the full 5-year period.

### 8.2. ELR Sensitivity (#7) – Y. Huang

- Y. Huang reviewed the details, results, and NYISO recommendations for the sensitivity.
- M. Younger asked Y. Huang, in their discussions with GE if there was any consideration of more overall improvements to how the model tries to optimize the usage of the ELRs. M. Younger said that ideally you'd want the model to actually be able to optimize ELRs for the periods with greatest LOLE risk in a day, barring that you would want to at least have the decision of when to use the ELRs come later in the process than is currently happening, in particular, after some of the import capability from neighbors has been considered. M. Younger asked if either of those discussions were going on. Y. Huang said they were, that in the white paper that was one of the conclusions GE made. Emergency assistance is modeled in a later step of the EOPs, and because that is at a much later EOP step it does have a delayed effect of how we count resources. The current calculation of incremental aid is a workaround trying to address that issue, but Y. Huang felt that emergency assistance is a broader modeling question and ELR has the greatest impact because of that. She recommend that if the ICS thinks it is a big issue to the modeling, should do a white paper to look into the issue and test what different configurations do and land on a solution or conclusion for emergency assistance and go back to see the ELR functionality and whether that is still legitimate.
- M. Younger thought we should consider some of the interchange with our neighbors as not being emergency assistance but as normal functioning of the markets, and that it would happen before we enter the EOP steps. Y. Huang agreed that it would have a significant impact on how the model dispatches all the resources, that could be included in the white paper.
- Y. Huang suggested incorporating some of the changes M. Younger suggested into a second ELR sensitivity. That would give us another data point to look at the impacts before we make any substantial modeling changes.
- Y. Huang said that what NYISO is looking to get from the ICS with this round of sensitivities is whether we agree with the recommendations for the FCB using the fixed shape and in parallel running that sensitivity using the ELR functionality. ICS agreed with the using the ELR whitepaper recommendations for this study:
  - Model the ELRs using fixed output shapes in the FBC
  - Perform a sensitivity case of the FBC using the GE MARS ELR model with the recommended TC-4C configuration

### 8.3. PSEG LI Sensitivity Request (C. Dahl)

- C. Dahl emailed B. Shanahan with a proposal for another sensitivity study for this year's IRM related to decreasing Zone K intertie availability. He asked ICS to look at the impact of increasing the Y49/Y50 group intertie forced outage rates.
- PSEG LI is proposing to reduce the limit to only Y50 on the interface limit or reduce the limit by 50% to see what the impact would be on the LCR. They also requested that a Tan45 also be performed at part of the analysis.
- ICS asked PESG LI to distribute a details write-up of the sensitivity for the group to review.
- N. Gilbraith said that if one of the lines is not expected to be in-service next summer we
  need to think about that carefully and maybe model that as OOS for the final base case or as
  a special sensitivity since we are trying to accurately represent grid conditions next summer.
  If this is more of a realistic scenario and not just a hypothetical we need model it correctly
  and run it on the software. The sooner they get the exact details the better. N. Gilbraith
  questioned whether it should be run on the PBC or the FBC.
- The argument was made to run it on both the PBC and the FBC. Using the PBC means it could be done right away which would give the EC critical information as to the impact

quickly and allow them to discuss whether to include it in the FBC for the study fairly soon rather than waiting weeks for the FBC to be ready to use for the sensitivity making the results only available near the end of the process which could create a rushed situation for their decision.

- PSEG LI will be working with the NYISO and the ICS consultant to finalize the specifics of the sensitivity. N. Gilbraith also suggested that PSEG LI inform the market place regarding the situation. He reminded everyone that last year there were some late changes in the IRM and LCRs which did not go over very well with market participants. Letting the market place know that this sensitivity will be conducted is important from a transparency perspective. N. Gilbraith suggested it be posted to the ICS website and then the NYISO would respond with a timeline for their work. N. Gilbraith estimated that once they get the request (detailed finalized sensitivity) in-house it would take about seven days turnaround. They will get make the results public as soon as available.
- ICS approved the additional Y49/Y50 sensitivity. B. Shanahan will bring as much information as available to the next Executive Committee meeting for their review and discussion.

#### 9. Fall Load Forecast – For ICS Approval – C. Alonge / R. Khan

- R. Khan reviewed the NYISO's summary of 2021 weather normalized peaks, reviewed the 2022 IRM study forecast, and walked through some of the results at the zonal level.
- E. Hogan asked NYISO how they produce their regional load growth factor. C. Alonge explained that the NYISO receives data from the TOs then they do an internal review and adopt what they believe are the appropriate values. C. Alonge said that the NYISO does have their own range based on the history. They look at the trends from the Gold Book primarily and then they compare against last year's growth factors. They look at their load forecast that was developed earlier this year and they look at the driving factors that have changed. Part of the weather forecast is also validated in the process. This year they did see that, for example, NYC did not have the grow-back that was originally forecasted as part of last year's IRM/ICAP forecast, NYISO takes things like that into account. They also look at general trends of the forecast and come up with a preliminary set of regional load growth factors. As part of the ICAP load forecasting process they will be developing the full set of regional load growth criteria for evaluation. For the IRM forecast they use a balance of corroborating with any preliminary regional load growth factors from the prior year, and those that are derived from the Gold Book.
- ICS approved the Fall Load Forecast. B. Shanahan will bring it to the EC for their approval at their next meeting.

### 10. Additional Agenda Items

- The EC's Resource Adequacy Working Group (RAWG) has looked at the application of various criteria in other parts of the world (LOLH and EUE Reliability Metrics). As a result, the EC asked ICS to report on some of them in this IRM effort. R. Bolbrock asked the NYISO for a status update. N. Gilbraith said the C. Wentlent reached out to him recently and is the process of preparing a meeting to review some preliminary results. The end-of-year commitment is to review these results with the RAWG, bring them in to the ICS, and eventually roll them into the IRM reports. The plan is to have some information on these metrics in this year's IRM report. The NYISO/RAWG meeting will take place after the 10/15 RC meeting.
  - o <u>Reliability Metric Suite Application Illustration</u>

- F. Ciani reminded the ICS that the NYISO will be switching from Webex to Microsoft Teams for the next meeting. Everyone will be receiving a new invitation to the Teams meetings and a cancellation of the Webex meetings.
- B. Shanahan reviewed the <u>milestones</u> for the November meeting.

## Next Meeting

Meeting #253 – November 3, 2021, 10 am – Microsoft Teams