

**Draft Minutes**

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

**Meeting #250 – August 17, 2021**

**Webex**

**Attendees** **Present**    **Phone**

**Members / Alternates:**

Brian Shanahan (National Grid) <b>ICS Chair</b> .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Rick Brophy (NYSEG/RG&E) <b>ICS Vice Chair / Secretary</b> .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Rich Bolbrock (Unaffiliated) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Clay Burns (National Grid).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ruby Chan (CHG&E) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sanderson Chery (Con Edison).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
John Cordi (NYPA) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
John Dellatto (PSEG LI).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Howard Kosel (Con Edison).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chris Wentlent (MEUA).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mark Younger (Hudson Economics) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Khatune Zannat (PSEG LI) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Advisers/Non-member Participants:**

John Adams (ICS Consultant) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Leen Almadani (CHG&E) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Charles Alonge (NYISO) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Liam Baker (Eastern Generation) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Samantha Bergami (NYISO) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Josh Boles (NYISO) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Andrea Calo (CES) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ryan Carlson (NYISO) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Jie Chen (Potomac) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Frank Ciani (NYISO) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Michelle D'Angelo (Unknown) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
John Dellatto (Unknown) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Greg Drake (ICS Consultant) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Nelson Eng (Con Edison) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Kenneth Galarneau (Ravenswood) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ricardo Galarza (PSM Consulting) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Nate Gilbraith (NYISO) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chris Gloria (Con Edison) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ying Guo (NYISO) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Erin Hogan (UIU) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Yvonne Huang (NYISO) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Brian Irrgang (NYISO) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chris LaRoe (Brookfield) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scott Leuthauser (HQUS) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tim Lundin (LS Power) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Norman Mah (Con Ed Energy) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Arthur Maniaci (NYISO) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Randy Monica Jr. (Unknown).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scott Nevins (DPS) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Kevin Osse (NYISO).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Carl Patka (NYISO).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Richard Quimby (DPS).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**1. Roll Call – R. Brophy**

- Roll call was conducted.

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

- Item 4.2 was added to the original agenda, Nate will be presenting that.

**3. Tan 45 results of the PBC – F. Ciani**

- Frank reviewed the IRM 2022 PBC Tan45 draft preliminary results
  - NYC: IRM = 18.6%, LCR = 80.6%
  - LI: IRM = 18.6%, LCR = 96.1%
- A request was made for the NYISO to provide what the 45 degree tangent point was for each of the curves. Frank said that the NYISO could provide that information.
- Part of the process is to send the curve data to both LIPA and Con Ed so they can verify the regression analysis. NYISO agreed to send that data out to ICS members in time for the September 1st meeting and post it with the meeting materials. New action item created to track this: 250-1.

**4. Updated Assumptions**

**4.1. 2022 PBC EOP Usage Data – N. Gilbraith**

- Nate explained that as part of last year's IRM the EOP usage increased substantially and the NYISO identified that the increase was due to modeling ELRs in the IRM FBC. EOP usage for Step 1 – SCRs was about 150-160 days/year. Subsequently the NYISO discussed with both the EC and ICS the reasons for that increase. Part of it was due to the Reserves allocation and how the ELRs were modeled, and part of it was due to maintenance scheduling in MARS.
  - As a follow up NYISO wanted to present the same EOP data for this PBC and give a sense of where we are headed this year. What is shown in the data presented today is that the EOP usage dropped dramatically from last year's PBC, down to about 45 days/year. That is in large part due to the updated Reserves modeling method that the RC adopted earlier this year. EOP usage is concentrated in the summer, however, they do see some SCR calls in the winter. NYISO has done preliminary analysis of this and believes that is also related to how MARS schedules maintenance.
  - Nate noted that as part of the EC presentation last year they evaluated the flexibility of ELRs and showed that modeling greater flexibility in those ELRs would reduce EOP calls without materially changing the LOLE. That flexibility is the new GE protocol that continues to be refined in the ICS. That flexibility is not represented in the data presented today – it showed about 20-25 days/year of EOP calls in their analysis.
- M. Younger stated he continues to be concerned that MARS does not consider any interchange with our neighbors until EOP step 7, especially with the increase of ELRs. Mark went on to say that maybe by putting some of the import exchange earlier, possibly with lower limits, is going to be critical to getting ELR schedules that are good. Or, it would be beneficial if MARS incorporated a more sophisticated dispatch of ELRs that tries to look ahead and target the hours that have the worst EOP risks – having some level of economy exchange earlier, not counted as an EOP step and done before the ELRs are scheduled, otherwise we are not going to get a good schedule for the ELRs.
  - Nate agreed, said if you look at the interchange with our neighbors for some of the recent hot days you can see import flows that exceeded ICAP energy. It's not that we're in an emergency state, there is economic energy interchange going on.
  - Mark said that if you look at it from an Operator's perspective and several of these early EOP steps, by step 7 you've already done voltage reduction, emergency appeals, etc., the reality is we wouldn't do those things if we had 1,000MWs coming in (through economic imports) we wouldn't call SCRs if there wasn't a risk of the 1,000MWs being called back. Mark thinks it should be a priority for the NYISO to talk with GE about incorporating this capability, and an issue for the NYISO and their Planning department to be discussing how much they should allow to be scheduled in this first step before scheduling ELRs etc., and how much would be held over to what are truly emergency purchases.
  - Nate sees two approaches, one would be to add this to the White Paper list for consideration and determine when it could be done, and secondly in the short term, get a broader understanding of this and its impact – a drop in the need for these other steps, for these other Operator actions needed to maintain reliability re emergency assistance. When we look at those 45 days/year, have a general recognition that we could take off 20-22 of those calls to recognize the economic imports would come off the top of that.
  - Mark said he wasn't suggesting that we take all of the exchange with our neighbors and move it to the first step, even moving 1,000MWs of that to the first step and have the remainder as emergency assistance, that would have a significant impact

on the number of EOP steps. Mark also thinks we need to do that exchange with our neighbors before we schedule the ELRs given the limited ability of the model to do a true optimization of ELRs at this point, otherwise there is a risk the ELRs would be used up when they weren't really necessary.

- G. Drake agreed that this would be good information to have, we could add a qualifier suggesting the anticipated reduction due to economic purchases. Greg cautioned that this won't be included in the study, this is a design study with specific instructions to not rely on our neighbors for energy purchases in designing our system criteria. Mark said he had no problem with it not going in the study, he was trying to raise a longer-term issue.

#### **4.2. Updated Topology (for FBC) – K. Osse**

- Kevin reviewed the updated LIPA dynamic limits they received from LIPA.
  - Due to a decrease in forecasted load west of Newbridge, the Zone K to I-J limit in the event of one Barrett unit available increased from 200MWs to 220MWs. This update will be included in the final base case. This doesn't change any of the other limits.
- The NYISO has not done a run with the new topology but agreed with the comment that it is unlikely to have any significant impact. Nate commented that after run the final base case parametric they will present the impacts.

#### **5. Answers to Parametric Results questions – K. Osse**

- G. Drake had a number of questions when the parametric results were presented at the August 4th meeting which he sent to the NYISO. This presentation provided Greg's questions and the NYISO's responses to those questions.
- Greg had a follow-up question for #6: A-K Goldbook 2021 DMNC Values regarding DMNC ratios. The 2022 Upstate/Downstate ratio increased to .934 compared to 2021's ratio of .924. Greg thought that would cause a slight increase in the IRM because for the Tan45 we're shifting from downstate to upstate. Downstate is not providing on a relative basis the same amount of assistance when it stacks up against this process this year versus last year. Greg thought it seemed counterintuitive.
  - K. Osse said they can take this back and try to bring a more thorough explanation back to the September 1st meeting.

#### **6. Load Forecasting Update – C Alonge**

- Chuck reviewed the updated Large Load Interconnections Forecast, the updated Load Duration Analysis, and the Behind-the-Meter (BTM) Solar Adjusted Load Duration Curve Analysis. Both of the latter two analyses discussed will be informative in the analysis on which load shapes to use going forward in future IRM and RNA studies.
  - Fall Forecast Update
    - The five large loads are going to be considered separate from the typical longer running regional load growth factors that are applied in the annual peak load process. The biggest difference this year is these large loads factoring in and additional collaboration with the TOs on what the impact of these sizable loads are on the year-over-year forecast.
    - The NYISO is continuing to track the status of these projects with the TOs and are going to be getting another update for the fall forecast.

- These loads may offer load curtailment but at this point the NYISO is modeling them at their traditional load factors for performance in the forecast.
    - The NYISO believes that the best way forward to handle large loads, in terms of the overall load shape, is when they construct the loads for the next year's IRM (and the 10-year RNA) they need to separately project any weather sensitivity and load growth for those specific loads if they are very large in comparison to the zone as a whole, if they are not it's of less importance. They do recognize these loads are non-conforming and the method recognizes that and as a result are taking a two-step process to construct the final load shape for each of the bins appropriate to the procedures in place for the zonal and sub-zonal load with the proper regard for the characteristics for growth and weather for the large loads.
  - Load Duration Analysis Update
    - The Daily Peaks Relative to Annual Peak chart is not intended to show weather response. It does not show that one particular year is more "peaky" than another. What it fundamentally shows is how the loads for a particular summer, whether it's the peak daily or hourly loads, are in relation to the top peak load for that summer. A flatter load duration curve shows a very consistent load pattern for the summer, a steeper load duration curve would be indicative of a extreme heat wave or set of events which then it tails off to more typical summer conditions.
    - The three years with the steepest load duration curve are born from the four hottest summers which produced the highest three peak load days. Summers with extreme values of peak day heat have load duration curves that are steeper than the average group.
  - BTM Solar Adjusted Load Duration Curve Analysis
    - Analysis with BTM Solar factored into each of the last nine years.
    - M. Younger asked if the NYISO could release the load shapes to ICS members. Mark commented that there is not just an impact on the daytime shape but also a shifting of the peak load hour to later in the day. This shift is critical going forward when the NYISO will be doing capacity accreditation analysis – wouldn't want to be valuing solar across a 2 p.m. peak when real LOLE is likely to be 5 p.m. Getting these shifting load shapes into future resource adequacy and resource valuation studies is critical. Mark said that it also could be important if the Wind happen to differ in any predictable way between 5 p.m. and 2 p.m., important that the modeling capture that.
      - The NYISO said they have posted normalized BTM Solar load shapes and are planning to provide an update to that in the fall. With respect to the full adjusted load shapes, that is part of the process already. If these are going to be considered for use in a reliability study in future years then they would post them.
      - NYISO has not posted the Wind generation shapes used for this year's study – have done so in the past, but will get them posted and agreed to make that part of the process.
    - The Demand Forecasting & Analysis team is working on a recommendation for new Bin assignments for the load shapes based in part on this analysis and also based on an updated framework for giving a base load shape for scaling into the future. They are going to make some recommendations and

then open them up for discussion with the various stakeholder groups at the NYISO – LFTF, ESPWG, and ICS. It won't be just recommendations, it will also include some impact analysis on the reliability simulations themselves. They are currently in the midst of doing some additional analysis and also working with NYISO's engineering staff to do some of the impact analysis with the reliability simulations and expect to have LFU Phase 2 work complete in October and stakeholder presentations and recommendations about that time – October/November.

#### **7. 2022 ICS Meeting Schedule – B. Shanahan**

- Brian did a quick review of what was decided at the August 4th meeting concerning changed dates and the meetings that would be held as WebEx vs. in-person at the NYISO.
- The incorrect version of the meeting schedule was posted so Brian committed to sending out the correct schedule to the group. That was done shortly after the meeting ended. The correct meeting schedule will also be posted with the September meeting materials.
- Depending on the NYISO's corporate policy concerning meetings, in-person meeting(s) could change to webex. At the July 28 MC Rich Dewey did announce that they will require all visitors to the NYISO facility be vaccinated.
- The status of having any in-person meetings this year is still in flux. There is a possibility we may meet in-person for the October meeting, will be discussed at our September meeting.

#### **8. Additional Agenda Items**

- H. Kosel asked when the PBC would be approved by the ICS – it is an approval item for the next meeting. Howard also asked when NYISO would get the case to GE to mask it and give it to the TOs – imminently.

#### **Next Meeting**

**Meeting #251 – Wednesday September 1, 2021, 10 am – Webex**