**New York State Reliability Council – Extreme Weather Working Group (EWWG)**
**Meeting # 22 – March 28, 2025**
**Zoom**

1. **Draft Meeting Minutes for Meeting #21 (1/31/2025) – Hilme Athar**
   - Approved

2. **Offshore Wind Energy at the Atmospheric Sciences Research Center (ASRC) – John Dellatto**
   - John Dellatto provided the WG with the research presentation slides from ASRC and opened discussion about specifically the results of the ASRC's 44-yr analysis of wind ramp events in the New York Bight.
   - John presented his quick calculations utilizing the Total Number of 1-Hour Large Ramp Events (defined as a 10% change in generation during a 1-hour window using a 15 MW rated study unit) and Total Number of 3-Hour Large Ramp Events (defined as a 20% change in generation during a 3 hour window using a 15 MW rated study unit).
   - John found that from the total number of 1-hour 10% swings and 3-hour 20% swings over the 44 years of data, 1-hour 10% swings in generation accounted for 15% of all hours, and 3-hour 20% swings occurred during 22% of all hours.
   - Because of this John Dellatto raised the question regarding whether these events should continue to be considered extreme events given the frequency of these ramp events.
   - Daniel Kirk-Davidoff mentioned that at EPRI they have put together a time series corresponding to the DNV Wind and Solar data set, but driven by the ERA5 public analysis data set (dates back to 1940) and calibrated against the DNV data where there is overlap. And mentioned as well that they could try replicating the plots presented in the ASRC presentation, using their data set and seeing the results from a longer time series.
   - Thomas Primrose noted that a 10% swing for a 15 MW unit is not an enormous risk, but larger thresholds such as 60% or 70% swings across a fleet pose a threat to reliability. He noted as well that while skimming through the DNV data set, there was potential to have these large swings over much longer timeframes but these would be larger than the current most significant contingency.
   - John Dellatto noted that they will circle back with Roger Clayton, who attended the VOWELS meeting where this research was presented, to think through questions that could possibly be asked at the next VOWELS meeting.

3. **Virtual Offshore Wind Energy Laboratory & Simulator (VOWELS) – John Dellatto**
   - John Dellatto provided a quick review of the VOWELS program overview and presented the temporary VOWELS dashboard.
   - The temporary VOWELS Dashboard displays a list of projects, turbine model, number of turbines, turbine height, approximate commission year, and BOEM ID for each project.
   - The temporary dashboard also displays a few plots of current output.
   - Thomas Primrose suggested PSEGLI could possibly validate/benchmark the dashboard comparing it to output data from South Fork Wind if it is available.
   - Possible questions representatives of EWWG can bring up at next VOWELS committee meeting is if data displayed by VOWELS Dashboard is saved as a data set for use.

4. **NERC EOP-012-2 Revision to EOP-012-3 – Greg Campoli**
   - John Dellatto gave a quick outline of how NERC Board of Trustees has scheduled a special meeting on April 4th to review the standards and finalize adoption and revisions of EOP-012-3.

- Greg Campoli explained that the Board had to take a 321 action, roughly meaning that the industry was not able to come to a finalized agreement.
- Generally from the NYISO's perspective Northern Regions of NERC already maintain cold weather standards, and EOP-012-3 is mostly being put in place in response to the cold weather events which have occurred across the South.
- NYISO has been supportive of the standard with just some discussion of how to further align with the FERC directive.
- When originally posted the new standard did not make clear guidelines of what should be expected from generators. However after revisions all ISOs are mostly in support of the standard in its latest state and it should make it through the FERC process after the April 4th extension.

5. **Potential Reliability Rule – 153: System Conditions for Transmission Planning Performance Requirements Covering Wind and / or Solar Generating Resource Lulls – John Dellatto**
    - John Dellatto provided an update from Keith Burrell who attended the March RRS meeting and noted that the NYISO is in the process phase with no large updates on the reliability rule.
    - Brian Shanahan who was in attendance of the March RRS meeting agreed.

6. **Renewable Lulls: Issue Discovery Report – Thomas Primrose**
    - A quick page turn was conducted of the rough first skeleton of the Issue Discovery Report
    - Background section describes the critical need for understanding the potential reliability risks associated with Renewable Lulls, given the CLCPA targets of 9,000MW of OSW by 2035 and 10,000MW of distributed PV by 2030
    - Survey of Existing Work section states the existing studies that have been conducted and describes key takeaways.
    - Methodology and Data Sources section restates studies and data that will be utilized in the Issue Discovery Report.
    - Jack Garrett of the NYISO Resource Adequacy Team noted that they are working towards additions to the resource adequacy model that remediate extreme weather concerns. No specific examples have yet been identified, but internal workshopping is being done.
    - Discussion was then opened up about what the EWWG what are the high priority promising ideas to test.
    - Mark Younger stated that we need to identify what kind of extreme events are common enough that they need to be represented in the Resource Adequacy model, and what changes are needed. Specifically stating that using the previous 5 years renewable output data could overstate or understate the frequency of extreme events. We need to ensure that the events are represented at appropriate levels of happening and that may require development of a synthetic shape. It is similar to the discussions last year at ICS when switching from 5-years to 10-years of data for Tie-line forced outage rate.
    - John Dellatto agreed that the current prescription of last 5-years is almost certainly not the best way to model the renewable forced outage rate. And asked whether it may be helpful to look into how the IRM Study load forecasting task force chose 3 representative years, and whether a similar methodology could be used.
    - Mark Younger explained the load forecasting analysis took into account in their methodology that they do not over represent an extreme peak. But first thing that we need to understand is what events are in the shapes that are available or developed, and how much difference does having 5 years vs 10 years have.
    - Dylan Zhang agreed that this is an important issue, but wanted to mention that from initial testing model runtime and standard error become an issue when too many shapes are added. He explained that thinking about how cable outage modeling uses one created outage curve, for renewable modelling instead of having the model randomly select a shape, maybe we can

do an analysis to understand the probability of different events within a population of shapes, and model those probabilities.

- Thomas Primrose volunteered that he could modify his previous work of identifying renewable lull frequency, to characterize statistics EWWG thinks would be useful for representing lull event probability.
- Mark Younger suggested looking at the DNV data in 5 year chunks, and then comparing the mean to the most recent 5 years, to see how close previous 5 years is to a stable representation. If different 5-year histories are highly variable that can also be an argument for why even if by luck previous 5 years is close to the mean of the data set, using previous 5-years may not be a good representation.
- The group agreed this would be a good first step.

**7. Other Business**

- No other business was discussed