

May 5th, 2021 ICS Meeting #246

Prepared for the May 14th, 2021 EC Meeting – Brian Shanahan

1. Status of 2021 IRM Study

- Continued to populate the draft assumptions matrix
- Began the process of building the 2021 IRM Preliminary Base Case (PBC)
- Generation changes were presented for 2021-22 for model inclusion (Gold Book data updates).
- Topology changes for 2022 considered:
  - Western New York Public Policy Transmission Project impacts
    - Increased transfer capability between Zones A and B, and between Zones B and C
  - Status of IESO/NYISO PARS in Zone D
    - With 2 PARS in service next year, the transfer limit between IESO and Zone D increases by 150 MW
    - IESO group interface limit also increases by 150 MW
  - Cedar Rapids Transmission Upgrade
    - Increased transfer capability between Zones D and Chateaugay bubble

2. IRM Annual Report for 2020 Approved by ICS

- First/Initial Annual ICS Report

3. LFU Modeling – A near-term recommendation stemming from the LFU Phase I White Paper was to update the standard normal distribution bin values to better reflect the temperature probability distribution and perform an impact analysis with MARS.

Results of a Parametric and TAN45 analysis using the 2021 IRM Study indicated that the updated LFU Bins had a -1.3% impact on the NYCA IRM.

4. An update to the High Renewable Case Phase II Study was approved by ICS, which included tabulated results that evaluated ICAP/UCAP impact.. In this whitepaper update, the addition of 2,000 MW, 4,000 and 6,000 MW of renewable

resources (on-shore wind, off-shore wind and solar PV) were added to the NYCA system. The Phase II study evaluates these scenarios with transmission constraints removed. Results are tabulated using the NYSRC parametric study method.

Executive Committee Action Requested:

Review / Approve White Paper Study results.

5. GE presented progress results on the Energy Limited Resource (ELR) White Paper. The White Paper explores improvements to GE MARS to represent ELRs in the IRM model as the current model uses a fixed-shape (repeated daily) to capture the dispatch of ELRs during high-risk hours. The new GE MARS release (4.0) includes improvements to as-needed energy limited resources (EL3) and new energy storage model (ES).

- Several Models were evaluated:
  - “Fixed shape”: current model
  - “Max shape”: maximum capacity, help at all hours (to bound performance)
  - “ES Window”: ES unit that only generates after 1pm
  - “EL3 window”: EL3 unit with generation window gradually enabled 6-10am

Conclusions/Recommendations:

- The ES/EL3 models (with generation windows and gradual generation dispatch of ELRs) improves model performance, as it avoids battery storage charging at times that trigger the need for EOPs (it happens with fixed shapes).
- The 2022-2023 IRM study should include the demonstration of IRM impacts using both simplified methodology and the GE MARS functionality
- NYISO recommends using the existing pre-determined ELR output shapes in the 2022 Final Base Case (FBC) and adopting the ES and EL3 model types in a sensitivity case for comparison.
- .Further refinement and updating of ELR modeling.

Executive Committee Action Requested:

White Paper Approval

6. -The NYISO repeated its presentation on TSLs that it gave to ICAPWG and provided an overview of how TSL’s are determined in NYISO Capacity Markets.

The NYISO also presented a potential method for incorporating TSLs into the Tan45 process, which demonstrated small IRM impacts when applied to the 2021 IRM FBC.

- The presentation, and further discussion, answered most of the questions that were posted for the meeting.
- Additional questions were raised regarding the methodology used for the TSLs compared to that used by the planning department for their transmission security analysis (used in the RNA and possibly elsewhere).
- The ICS took no action but suggested that the issue be taken up by a NYISO committee (ICAPWG) before further consideration be given for either use of TSLs in the IRM study or for altering the current IRM methods.