

## **Installed Capacity Subcommittee**

### **Whitepaper Scope for Changing the Study Year in MARS**

**Problem:** The goal of changing the study year is to update the year to be analyzed in the GE Multi-Area Reliability Simulation (“MARS”) software, while changing nothing else in the master input file (“MIF”). Some Loss of Load Expectation (“LOLE”) changes are expected due to the shifting of load against the resource shapes of intermittent generators, as well as changing the underlying maintenance profile. However, during the last IRM study process, the NYISO observed counterintuitive results when changing the study year. Updating the simulation year from 2019 to 2020 resulted in an unexplainable drop in LOLE. This caused the NYSRC Installed Capacity Subcommittee (“ICS”) to maintain the 2019 study year parameter<sup>1</sup> for the 2020 IRM Study.

**Scope:** GE recommended the temporary workaround used for the 2020 IRM Study, which was to hold the study year constant. The company committed to adding functionality to set a specific start day for a study year. The goal of diving further into this issue is to develop a recommendation on how we treat the study year parameter. The white paper analyzes the year-over-year variability in LOLE by changing the study year, testing the new MARS functionality of keeping a constant start day of the year, and take in to consideration potential other options to mitigate the counterintuitive results. We expect to recommend to the ICS and the Executive Committee a change for the 2021 IRM study. The latest MARS version, which includes the new start day functionality, is being tested.

### **Results from GE Study discussed at ICS Meeting #222 – NY LOLE when changing the study year**

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<sup>1</sup> ICS Meeting Minutes from study year discussion:

[http://nysrc.org/pdf/MeetingMaterial/ICSMeetingMaterial/ICS%20Agenda%20223/ICS%20Meeting%20222\\_R1%5b10303%5d.pdf](http://nysrc.org/pdf/MeetingMaterial/ICSMeetingMaterial/ICS%20Agenda%20223/ICS%20Meeting%20222_R1%5b10303%5d.pdf)

