4.3 Modeling Specifics

The specific modeling details and CETO procedures are coordinated with the PJM Reserve Requirement Studies as reviewed by the RAAS and PC. Capacity Emergency Transfer Objective (CETO) modeling includes the following list of guidelines:

1. A loss of load expectation (LOLE) which is considered much smaller compared to the generation LOLE, is used to evaluate the import capability risk. The generation LOLE, defined in the RF BAL-502-RFC-02 Standard, is one occurrence, on average, in ten years.

2. The CETO is the import capability required for the area to meet a risk level of one day, on average, in 25 years. This risk specifically refers to the probability of an LDA shedding load due solely to its inability to import needed capacity assistance.

3. The PJM reliability program PRISM is used. Only a single area, the study area, is modeled.

4. Both Zonal and Global models are used depending on the LDA. A Zonal model excludes units directly connected to the 500 kV system and is used if the LDA is a zone or part of a zone. A Global model includes all connected units and is used if the LDA consists of more than one zone. Zone definitions are shown in the RAA Schedule 15.

4. PJM currently considers LDAs that are composed of either single zones, sub-zones or combinations of contiguous zones. Single zones or sub-zones are referred to as Zonal LDAs while combinations of contiguous zones are referred to as Global LDAs. All Zonal and Global LDAs for which PJM calculates a CETO are defined in Attachment C of Manual M14b.

5. The most recent PJM Load Forecast Report is used for modeling loads.

6. The area’s unrestricted peak load forecast (non-coincident peak), adjusted for forecasted load management, energy efficiency and behind-the-meter load, is used.

7. Resource data is consistent with the most recent annual reserve requirement study and the CETL analysis.

8. Monthly load profile values and unit capacity factors are inputted and verified to capture the difference between winter and summer values.

9. Summer planned generator maintenance is not permitted.

10. See the PJM paper on PJM Generation Adequacy Analysis: Technical Methods and the Reserve Requirement Study posted on the PJM web site. Further information is documented per the Application for Reliability Calculation’s technical documentation and is available upon request.

(12) A unit with a Reliability Must Run (RMR) contract for part of or for the entire delivery year is modeled consistent with the RTEP. [Note: Per RPM business rules, an RMR unit with a part year contract must offer into the auction at its Avoidable Cost. If it clears, it should be kept in service for the entire year.] A unit scheduled to be retired with no RMR contract is not modeled.

(13) A planned generation resource addition or planned increase in rating that has executed an Interconnection Service Agreement (ISA) is modeled.

(14) A unit that was previously mothballed but committed to serve RPM or FRR load at the time of the study is modeled.

(15) Energy Only and Behind-The-Meter units can be modeled per agreement between the zone’s TO staff and the PJM Transmission Planning department staff.