Manual 20 Updates

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Changes

• Update to PJM Manual 20: PJM Resource Adequacy Analysis
  – Section 3.3: PJM Installed Reserve Margin and Reliability Analysis
    – Reliability Calculations and Analysis
  – Objective:
    • To reflect changes to the methodology for developing the winter peak week’s capacity model.
• The new methodology for developing the winter peak week’s capacity model was used as part of PJM’s preliminary response to the MRC-approved problem statement / issue charge on Winter Resource Adequacy.
  – Preliminary response was reviewed with RAAS, PC and MRC
• The new methodology is needed because PRISM’s theoretical approach to derive RTO-aggregate outage levels during the winter peak week is not representative of actual historical outage levels.
• The new methodology uses RTO-aggregate actual historical outage levels to build the winter peak week’s capacity model
RTO Aggregate Forced Outages at Winter Peak - Density/Frequency plot
3.3 Reliability Calculations and Analysis

The capacity model used in PRISM, GEBGE and MARS is probabilistic. For each week of the year, except the winter peak week, the PRISM model uses each generating unit’s capacity, forced outage rate, and planned maintenance outages to develop a cumulative capacity outage probability table for each week. For the winter peak week, to better account for the risk caused by the large volume of concurrent outages observed historically during this week, the cumulative capacity outage probability table is created using historical actual RTO-aggregate outage data.

Planned maintenance scheduling can be specified by the user or performed by the program based on one of two approaches:

- **Levelized Reserves Option** — uses the capacity of units on planned maintenance to attempt to levelize the MW amount of available reserves for each week.

- **Levelized Risk Option** — follows the same approach but uses a modified MW value for each unit based in part on the reliability of the unit. This method results in scheduling units on maintenance that are less reliable for the more critical weeks.
Schedule

- MRC First Read: 05/24/18
- PC Endorsement: 06/07/18
- MRC Endorsement: 06/21/18