M14B Update: Winter Temperature Rating

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September 15, 2016
In 2015 PJM held discussions with the Planning Committee around Temperature Ratings used in Winter Reliability Analysis

Discussions revealed that the 50F rating was not representative of all geographic areas of PJM Transmission Owners

Conclusion: allow more flexibility with Winter Temperature ratings
Based on Planning Committee discussions, PJM is proposing to update M14B to allow PJM Transmission Owners to propose winter temperature ratings lower than 50F for PJM review and approval as appropriate. PJM will apply the alternate ratings set on an individual TO basis.
2.3.13 Winter Peak Reliability Analysis

The winter peak reliability analysis ensures that the Transmission System is capable of delivering the system generating capacity at winter peak. The PJM 50/50 winter peak demand level was chosen as being representative of a typical winter peak condition. The system generating capability modeling assumption for this analysis is that the generation modeled reflects generation by fuel class that historically operates during the winter peak demand level.

The starting point load flow is the same power flow case set that is used for the baseline analysis, with adjustments to the model for the winter peak demand level, winter peak load profile, winter ratings (50F rating). In coordination with individual TTUs, PJM may apply a lower temperature degree ratings set (e.g., 32F degree ratings instead of 50F ratings) as defined by the ratings submitted to PJM Operations in accordance with FAC-008 as appropriate. PJM will apply the alternate ratings set on an individual TTU basis, interchange, and accompanying generation dispatch. The PJM portion of the model is adjusted, and the MMWG winter model is used for areas surrounding PJM. Interchange levels for the various PJM zones will reflect all yearly long term firm (LTF) transmission service, except MAAC which will reflect the historical average. Load level, interchange, and generation dispatch for non-PJM areas impacting PJM facilities are based on historical averages for previous winter peak periods. Thus the same baseline network model and criteria apply. The flowgates used in the winter peak reliability analysis are determined by running all applicable contingencies maintained by PJM planning and operating procedures.

Step 1: Develop Base Case

The RTEP base case is developed for a reference year 5 years in the future. All RTEP identified system upgrades and Supplemental RTEP Projects are included in the system model. PJM load is modeled at a non-diversified forecasted 50/50 winter peak load level per the latest applicable PJM load forecast and 50F degree ratings. In coordination with individual TTUs, PJM may select and apply a lower temperature degree ratings set (e.g., 32F degree ratings instead of 50F ratings) as defined by the ratings submitted to PJM operations in accordance with FAC-008 as appropriate. PJM will apply the alternate ratings set on an individual TTU basis. Target PJM RTO area interchange that reflects all yearly long term firm (LTF) transmission service will be maintained. Generation and Didn't Transmission projects that have proceeded at least through the execution of the Facility Study Agreement stage of the interconnection process are considered in the model along with any associated network upgrades. The starting point dispatch is developed as explained in the next step.

Red Line updates to M14B

Attachment D-3.1 Winter Peak Reliability Analysis

• Red Text is revision since first read
• PC First Read – 8/11/2016
• MRC First Read – 8/25/2016
• PC Endorsement – 9/15/2016
• MRC Endorsement – 9/29/2016
Please email all questions or comments to
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