Load Forecast Adjustment Guidelines

**Issue Identification**

PJM annually solicits information from its member Electric Distribution Companies (EDC) for large load shifts (either positive or negative) which are known to the EDC but may be unknown to PJM. PJM will send the request in mid-July with responses expected in time for any proposed adjustments to be reviewed with the Load Analysis Subcommittee in October/November.

ComEd requested a downward load forecast adjustment to account for the implementation of their Voltage Optimization program, which will use smart meter technologies (along with improved communication and voltage measurements) to control switched capacitors, such that each circuit profile will be flatter and towards the lower end of the acceptable bandwidth range. On average, customers’ voltage will decrease 2-3%. The program will be built out beginning in 2018 and concluding in 2025.

**Issue Verification – verify that identified issue is real and significant, using the following methods:**

Determine if the load change has been publically acknowledged through the media, press release, regulatory process, etc.

Verify that requesting EDC has adjusted its own financial/planning forecast

Ascertain that the load shift is related to a single site or a limited number of related sites (not a systemic cause)

Discuss with economic forecast vendor(s) whether or not the load shift is reflected in its/their economic forecast(s). Also, determine if the requested load adjustment’s load impact is consistent with its economic impact. Additionally, determine if the requested load adjustment is tied to any of the metro areas that PJM uses to define the economic variable of a zone.

Verify that any behind-the-meter generation adjustment has complied with PJM’s behind-the-meter process.

Determine adjustment’s significance, either by sheer magnitude or percentage of a zone’s load.

The Voltage Optimization plan has been publicly acknowledged and has been reviewed and approved by the State of Illinois. It is a systemic impact, but is independent of economic activity. While initially small, the Voltage Optimization program impact becomes significant by the end of the planning horizon.

**Adjustment Estimation – for each identified and verified issue, estimate its impact on peak load using the following methods (which may be combined):**

Acquire load history for the load that has/will change and produce analysis to isolate the impact (e.g., forecast runs with and without the load involved, trend analysis)

Acquire any contracted amounts of load changes

For any after-the-fact adjustments, review the zone’s forecast model’s residual pattern

Review any available independent analysis of the impact of the load change.
ComEd provided a third-party feasibility study of the Voltage Optimization program and its Energy Efficiency and Demand Response Plan. PJM’s subject matter expert on voltage matters reviewed the material and concluded that the predicted load impacts are consistent with the average voltage reduction in the Voltage Optimization program.

This program started to come online in 2018 and thus is already showing up load history. PJM examined residual patterns in its forecast model for 2018 and did not observe appreciable difference to justify not recognizing VO program reductions existing in 2018. Due to this, VO program reductions existing in 2018 is considered already embedded. Future amounts thus use existing 2018 VO program reduction amounts as the starting point. The blue line in the chart below is the original savings amount and the green line is the savings adjusted for reductions already in place.

Adjustment Review – Each proposed load forecast adjustment will be reviewed with the Load Analysis Subcommittee prior to inclusion in the load forecast. The final decision on any load adjustment is made by PJM.

PJM will make the following adjustments to the ComEd zone summer peak forecast (monthly adjustments will be scaled to the summer value):

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<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
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