2017 RTEP Modeling Procedures

Pepco Holdings
An Exelon Company

Pepco Holdings (Atlantic City Electric, Delmarva Power, Potomac Electric Power Company)

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Base Case Power Flow Model

- Pepco Holdings (Atlantic City Electric, Delmarva Power and Potomac Electric Power Company) uses PJM developed RTEP power flow models for all assessments where available
- 5 year assessments – 2022 PJM RTEP Case
- Retool analyses – Prior year PJM RTEP base cases, updated as appropriate for consistency with PJM modeling procedures
- Use most recent ERAG MMWG series power flow models for other years where PJM cases are not available
- Load modeling – 50/50 and 90/10 forecasts consistent with load levels shown in the 2017 PJM Load Forecast Report

Baseline Analysis

- Both PHI and PJM study our system to determine baseline reliability upgrades
  - PJM criteria (Manual 14B)
  - Atlantic City Electric, Delmarva Power and Potomac Electric Power Company FERC Form 715 planning criteria
  - NERC Planning criteria
- PHI works with PJM to analyze and validate results
- Potential violations are included in the PJM open window process
- For immediate need projects (< 3 years out) PHI works with PJM to develop solutions
- Proposed solutions are presented to TEAC or Sub-Regional RTEP and become baseline projects

FERC Form 715 Planning Criteria

- Atlantic City Electric, Delmarva Power and Potomac Electric Power Company Transmission Planning Criteria
- Atlantic City Electric and Delmarva Power evaluate the base case and contingency loss (N-1, N-1-generator) of all transmission facilities 69kV and above.
- Included in FERC 715 filing
- Posted on PJM web site

Supplemental Projects

- A project that will typically impact transmission network flows or model
- Project drivers can include:
  - Transmission System configuration changes due to new or expansion of distribution substations
  - New transmission customer connections
  - Infrastructure replacement (EOL/condition/obsolescence) resulting in increased capacity and or configuration changes; consistent with efficient asset management decisions.
  - NERC Alert mitigation projects
  - Wood pole replacement program
  - Reliability improvements driven by internal standards (installing breakers on autos, removing tertiary capacitors)
  - Projects to address potential generation retirements
  - Enhancing Resiliency
  - Environmental drivers, for example, oil removal in water crossings or near waterways- Cables/OCBs
  - Enhanced Functionality /operability
  - Employee and public Safety- deteriorating condition, old technology, clearances, material construction, etc.
- Reviewed at PJM TEAC or Sub-Regional RTEP meetings for stakeholder input