ComEd
An Exelon Company

ComEd 2016 Assumptions for Western Sub-Regional RTEP

February 4, 2016

Background

- ✓ComEd Overhead Transmission System
  - 765 kV: 90 Miles
  - 345 kV: 2,621 Miles
  - 138 kV: 2,616 Miles
- ✓Underground Transmission
  - 345 kV: 35 Miles
  - 138 kV: 288 Miles
- ✓Historical Peak Loads
  - 23,753 MW Summer
  - 16,514 MW Winter

Power Flow Models

- ✓ComEd creates a detailed internal model for planning studies
  - 90/10 and 50/50 load levels, years 1-6 & 10.
  - Loads consistent with PJM Load Forecast Report
    - 2020 summer 50/50 load of 24,582 MW
  - Latest ERAG MMWG cases used for external
  - New generators included only if under construction or judged highly likely to enter construction in the next 2 years
  - Wind is not dispatched in peak cases
- ✓ComEd provides updates to PJM for inclusion in the PJM 2019 RTEP model
- ✓ComEd detailed model is submitted to RF for inclusion in ERAG MMWG cases

Planning Criteria

- ✓ComEd Transmission Planning Criteria
  - Major Differences from PJM Criteria
    - Double underground lines at 90/10 load
    - Transient voltage recovery
    - Voltage stability
  - Included in FERC 715 filing
  - Posted on PJM web site
- ✓NERC TPL Standards
- ✓PJM Criteria - Manual 14B

Baseline Analysis

- ✓Both ComEd and PJM study our system to determine baseline reliability upgrades
  - PJM Focus is PJM criteria (Manual 14B)
  - ComEd focus is ComEd criteria
- ✓ComEd 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) ComEd works with PJM to develop solutions
- ✓Proposed solutions are presented to TEAC or Sub-Regional RTEP and become baseline projects

Supplemental Projects

- ✓Supplemental Projects
  - Material condition
  - Projects needed to supply the distribution system
  - Interconnection of transmission customers
  - Reliability improvement / upgrade to today's standards
  - Proactive generation retirement mitigation
- ✓Reviewed at PJM TEAC or Sub-Regional RTEP meetings to allow stakeholder input