Current RTEP Process & Education

Special Planning Committee
March 22, 2019
RTEP Process

• RTEP Process encompasses many steps, constraints, deadlines and dependencies

• Existing process balances efficiency with focused scope

• Process requires assumptions which lead to the ability to reduce uncertainty

• PJM’s planning analyses are based on a consistent set of fundamental assumptions regarding load, generation and transmission built into power flow models
Reinforcements to RTEP Cases

- **Baseline**
  - Violations identified and reinforcement to system is devised

- **Network Upgrades**
  - Violations identified for each proposed customer project to develop reinforcements to system
    - Relies on clean system of known topology (system configuration including all elements impacting the systems under study)
    - Systems under study may involved lower voltage systems

- **Supplemental Projects**
  - Needs identified and Solutions designed
Developing RTEP Cases

Inputs
- Load forecast
- New Services Queue activity
- MMWG external model
- Previous year RTEP
• System reinforcement over time requires an incremental approach.
• Incremental approach requires previous design to be known in order to take the next step.
  – Failure to define the existing system has potential consequences:
    • Complicates design of subsequent upgrades.
    • Requires revisiting previously identified system requirements during each study to develop new solutions.
    • Prevents ability for PJM to administer the New Services Queue.
• If existing system elements are unknown, new designs will suffer.
• Excerpt from Section 217.3 (a) of Part Vi of the PJM Open Access Transmission Tariff
  – “Each New Service Customer shall be obligated to pay for 100 percent of the costs of the minimum amount of Local Upgrades and Network Upgrades necessary to accommodate its New Service Request and that would not have been incurred under the Regional Transmission Expansion Plan but for such New Service Request”
Defining Upgrade Responsibility

- Upgrades developed to mitigate reliability violation, public policy requirement, other system needs, etc.
- Upgrade responsibility identified in part to define cost responsibility
- Failure to determine New Services Queue cost responsibility may result in the need for load to pay for upgrades to support initial connection of New Service Queue projects
Removing Upgrades

• Removal of any system upgrade may complicate previously identified reinforcements
  – With previously identified system upgrade removed, subsequent upgrades may need to be modified
• Once studies have determined that upgrades are technically acceptable, upgrades remain in cases
Uncertainty in Network Configuration

• Failure to establish RTEP case with known upgrades introduces uncertainty
  – Multiple possible futures to study in baseline
  – Multiple possible futures to study in New Services Queue
  – Multiple possible futures to study in Market Efficiency Analysis

• Increase in study requirements likely delay RTEP

• RTEP delays will delay subsequent processes (New Services Queue, RPM)
• V1 – 03/19/2019 – Original Slides Posted