Transmission Substation Equipment in FERC Order 1000

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Transmission Substation Equipment Upgrades

• Historical look at the RTEP

• Typical solution to an Transmission Substation Equipment overload is to upgrade it, replace it in kind with higher rated equipment or add additional substation equipment to achieve required system performance.

• Few Transmission Substation Equipment driven baseline projects have resulted in Greenfield Projects. If the analysis shows that a greenfield project is possible, PJM would Open a window.

• Otherwise and by default, a typical Transmission Substation Equipment violation would be excluded from the FERC Order 1000 Window Process.
Next Steps

• Transmission Substation Equipment
  – Recommend that Transmission Substation Equipment issues that can be solved by Transmission Owner Upgrades be excluded from FERC Order 1000 competitive window process

• New PJM Operating Agreement section
  – See associated OA language that is posted with today’s materials
  – Section 1.5.8(o) - Reliability Violations on Transmission Substation Equipment
Timeline

- April 2016
  - Conceptual discussion at PC and MRC
- May/June 2016
  - First read of recommendation at PC and MRC
- June 2016
  - Informational review of recommendation at PC and MRC
- Following resolution of FERC Deficiency notice related to Lower Voltage Facilities exemption filing
  - Anticipated request for endorsement at PC and MRC
Appendix: Transmission Substation Equipment Types in RTEP

- Breaker Bay
- Breaker Disconnects
- Breaker Drops
- Capacitor
- Circuit Breaker
- Control Building
- Current Transformer
- Digital Microwave
- Disconnect Switch
- Entrance Conductor
- Exit Conductor
- Fiber Optic Terminal Equipment
- Fuse
- Ground Grid
- Lightning Arrestors
- Line Trap
- Microwave Communications
- Motor Operated Disconnect (MOD) Switch
- Protection Relays
- Protection Scheme
- Reactor
- Relay
- Riser
- RTU
- SCADA control
- Shunt Reactor
- Station Equipment
- Switch
- Termination
- Tie Breaker
- Transformer