East Kentucky Power Cooperative

- EKPC integrated into PJM on June 1, 2013
- Generation & Transmission cooperative serving mainly rural portions of eastern two-thirds of KY
- Total Miles of Transmission Line = 2902
  - 122 miles @ 345
  - 370 miles @ 161
  - 431 miles @ 138
  - 1979 miles @ 69 kV
- EKPC Forecasted Net Peak Demand (50/50 Probability)
  - 2015 Summer – 2567 MW
  - 2015-16 Winter – 3577 MW
  - 2020 Summer – 2709 MW
  - 2020-21 Winter – 3643 MW
EKPC Powerflow Models

- EKPC participates in annual SERC LTSG DBU process
  - Develops near-term and long-term cases to be used by SERC NTSG and LTSG
  - This case set includes annual models for the ERAG MMWG base case development

- EKPC presently jointly develops internal base cases with LGE/KU in spring of the year for internal studies
  - EKPC and LGE/KU have 54 free-flowing interconnections
  - EKPC has 57 distribution delivery points connected to the LGE/KU system (622 MW at peak)
  - LGE/KU has 17 distribution delivery points connected to the EKPC system (109 MW at peak)
  - Beginning in 2013, EKPC is effectively utilizing the same EKPC representation for the SERC LTSG process, PJM planning processes, the joint LGE/KU-EKPC process, and the EKPC internal process.

- EKPC participating in development of PJM RTEP 2020 case
  - Incremental updates have been provided for the 2020 case.
EKPC Planning Criteria

• EKPC plans its system to meet:
  • NERC Reliability Standards requirements
  • SERC Regional criteria
  • EKPC transmission planning criteria – posted on PJM website

• EKPC identifies different categories of projects:
  • Reliability projects to address planning criteria violations
  • Other projects to address items such as equipment condition, operational enhancements, outage reductions, improved service restoration, etc.
  • Interconnection projects to provide facilities for connection of new generation, transmission, and/or distribution facilities
EKPC Planning Criteria (cont.)

• EKPC planning criteria similar to Table I of the existing NERC TPL Standards in most respects
  • Primary difference – EKPC considers loss of a line, transformer, or generator in conjunction with loss of a generator to be a single-contingency (Category B) event.
  • EKPC planning criteria posted at http://www.pjm.com/planning/planning-criteria/to-planning-criteria.aspx
EKPC/PJM Coordination

- EKPC Participates in TEAC and PC meetings
- EKPC Participates in Monthly RTEP project status meeting
- EKPC will continue assessment of its system to supplement and verify PJM’s assessments
  - Focus will be on testing against EKPC criteria
EKPC/PJM Coordination (cont.)

• EKPC will share its assessment results with PJM and will review PJM results to validate

• EKPC will work with PJM to develop appropriate upgrades/mitigation plans for identified violations

• EKPC will present identified projects, planning criteria, and processes at PJM TEAC and sub-regional RTEP meetings as necessary to allow stakeholder input and feedback
EKPC RTEP Projects

- EKPC has 27 RTEP projects identified in the 2015-2019 period.
  - Two at 161 kV, Two at 138 kV, remainder at 69 kV
  - 23 are baseline projects
- EKPC is submitting 13 additional RTEP projects identified in the 2015-2020 period.
  - One at 161 kV, remainder at 69 kV
  - 8 are baseline projects
- Most significant EKPC RTEP projects
  - Uprate of JK Smith-Lake Reba Tap and JK Smith-Dale 138 kV lines
  - Addition of a 3rd EKPC-TVA tie between the Summershade substations
  - Addition of a 69kV EKPC-Duke tie-line at Hebron.