




Electric Cooperatives

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A Touchstone Energy Cooperative 

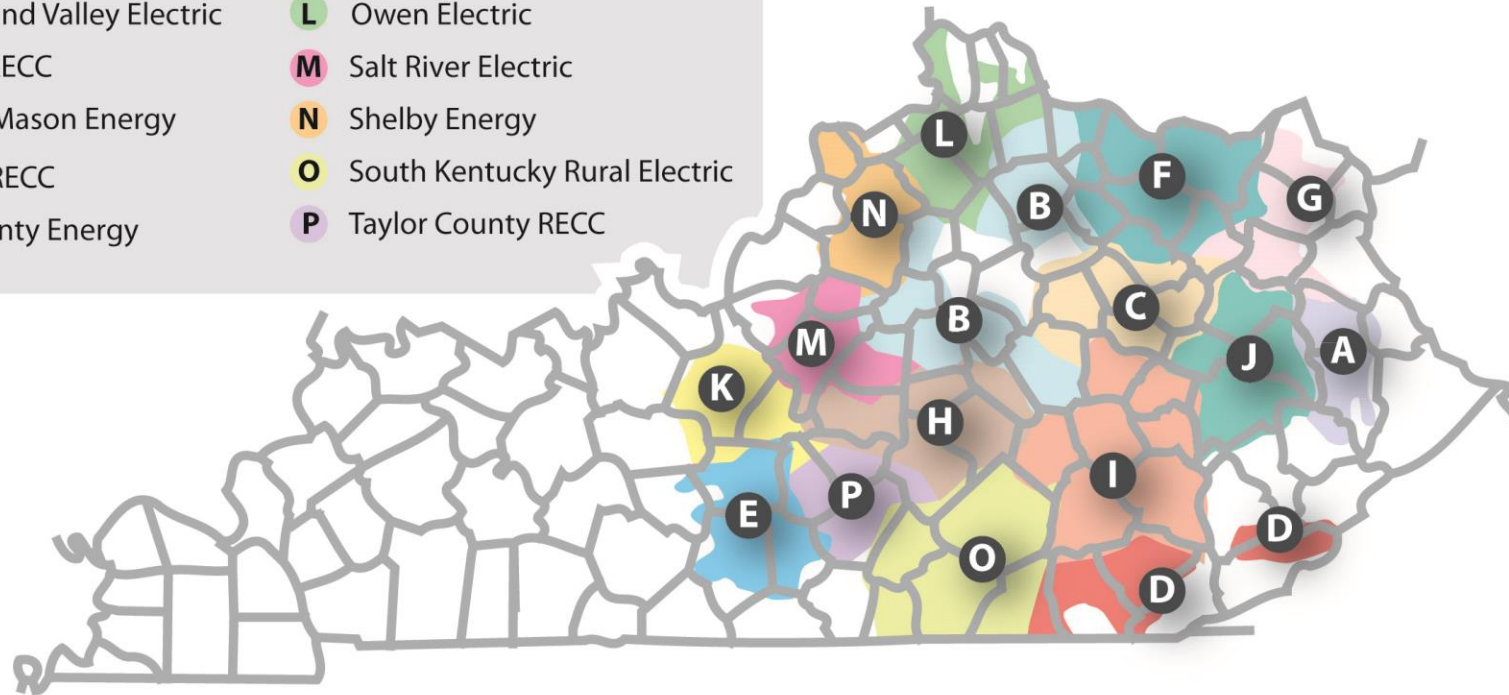
Electric Cooperatives

- Typically not a single integrated organization providing generation, transmission, distribution
- EKPC
 - Generation & transmission
 - Generate/acquire wholesale electricity; deliver it over high-voltage transmission to substations
- 16 distribution cooperatives own EKPC
 - Retail utilities; deliver electricity from substation to meters
- Not-for-profit, member-owned
- Each co-op is independent, autonomous

EKPC: Serving Rural Kentucky

Owner-Member co-ops provide electricity to more than 1.1 million Kentuckians in 87 counties

- A** Big Sandy RECC
- B** Blue Grass Energy
- C** Clark Energy
- D** Cumberland Valley Electric
- E** Farmers RECC
- F** Fleming-Mason Energy
- G** Grayson RECC
- H** Inter-County Energy
- I** Jackson Energy
- J** Licking Valley RECC
- K** Nolin RECC
- L** Owen Electric
- M** Salt River Electric
- N** Shelby Energy
- O** South Kentucky Rural Electric
- P** Taylor County RECC



EKPC and PJM

- PJM Interconnection
 - 13-state region
 - Regional transmission organization
 - Reliability coordinator
 - Balancing authority
 - Transmission operator
 - Markets for energy & capacity
- EKPC
 - Sells, buys energy and capacity
 - EKPC's owned/contracted resources are financial and reliability hedges



Reliability standards history

- A large blackout in the northeast in 1965 prompted calls for national regulation in 1967 - Never enacted
- The North American Electric Reliability Corporation (NERC) – formed 1968 as the “National Electric Reliability Council”
- Another large blackout in the northeast in 2003 led to the Energy Policy Act of 2005 making reliability standards mandatory
 - The standards we have today have been modified, updated, added to and subtracted from in the subsequent years

Federal reliability standards

- EKPC sole responsibility
 - 28 standards – (16 Operations & Planning (O&P), 12 Critical Infrastructure Protection (CIP))
 - 400+ requirements & sub-requirements
- EKPC / PJM shared responsibility
 - 18 standards
 - 300+ requirements & sub-requirements
- PJM owned with EKPC responsible for compliance tasks
 - 12 standards
 - EKPC performs tasks as equipment owner and PJM reports compliance

Incident reporting

- Reporting requirements depend on extent, intensity of potential/actual damage or disturbance
 - NERC
 - DOE (Electric Disturbance Events, DOE-417)
 - Ky. State Police
 - Ky. Office of Homeland Security
 - Federal Bureau of Investigation

Incident reporting, cont'd

- EKPC is a member of/coordinates with:
 - Electricity Information Sharing & Analysis Center (E-ISAC)
 - FBI InfraGuard
 - Centre for Energy Advancement through Technological Innovation (CEATI)
 - Cyber Mutual Agreement (CMA)

State agencies

- Kentucky Public Service Commission
 - Rates & service
 - CPCNs for major capital projects
 - Energy efficiency programming
 - Integrated resource planning
- Kentucky Emergency Operations Center

Winter Storm Elliott

- All-time record peak for EKPC
- Natural gas pipeline companies cut gas to 2 EKPC power plants
- PJM/EKPC avoided implementing rotating outages
- Keep Ky. EOC, Ky. PSC apprised of situation

