



PJM Capacity Market Workshop: Session 2

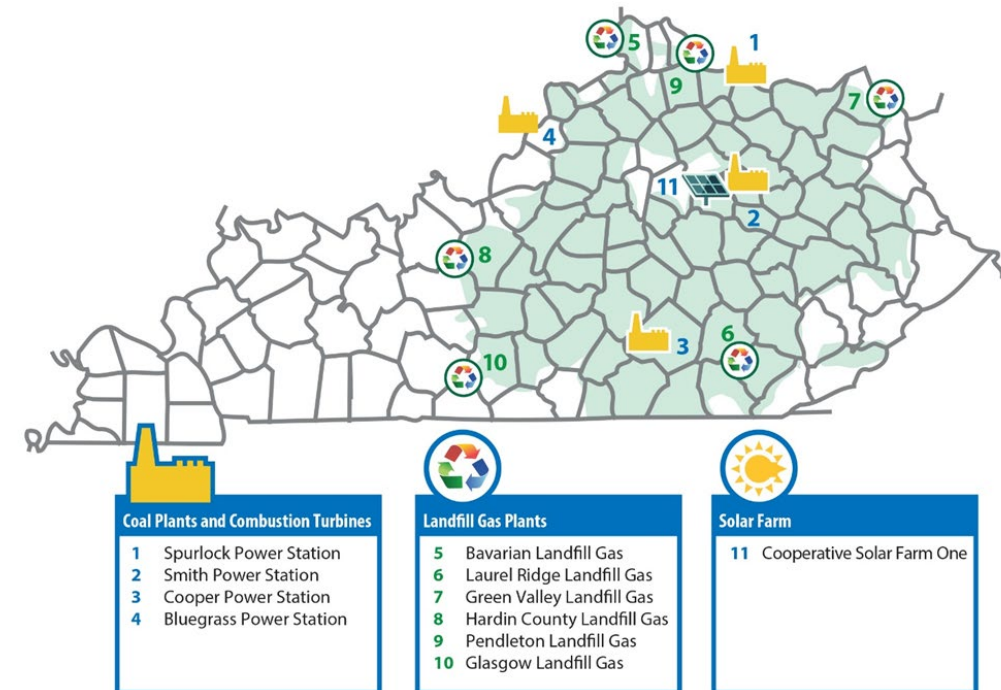
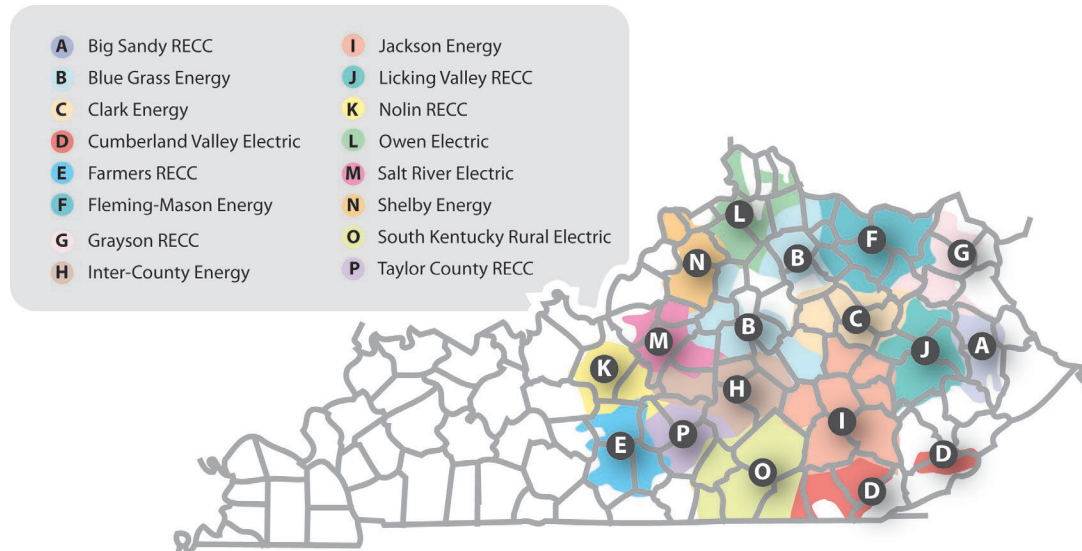
East Kentucky Power Cooperative
Denise Foster Cronin, VP, Federal & RTO Regulatory Affairs

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East Kentucky Power Cooperative

Member co-ops provide electricity to more than 1.2 million Kentuckians in 87 counties

- Not-for-profit, member-owned generation and transmission cooperative
- Provides wholesale power to 16 member-owner distribution cooperatives serving rural Kentucky
- Over \$860 million in operating revenue; \$3.8 billion in assets
- 3,500 MW of winter generating capacity
- 13.5 million MWh delivered to member-owners in 2019



* Hydropower via contract with SEPA

EKPC's Sustainability Goals

- EKPC and its owner-members have adopted Sustainability Goals backed by meaningful business objectives to carry out their commitment to environmental stewardship and customer service.
- **EKPC's Sustainability goals:**
- **35% reduction by 2035** in total CO2 emissions (tons) and **70% by 2050**, based on 2010 emissions
- **10% energy by 2030** from new renewables and **15% by 2035**, not including current renewable assets as of 2019

Electric Cooperatives

- Cooperatives are responsible for serving residents and businesses spanning over **56% of the nation's land mass**
 - Own and maintain 42% (2.6 million miles) of U.S. electric distribution lines
 - Serve 42 million people across 2,500+ U.S. counties (in 48 states)
- NRECA's 900 member coops serve 92% of U.S. Counties in "**Persistent Poverty**" - meaning that at least 20% of the county's population is in poverty
- EKPC and its owner members serve some populations in extreme poverty that currently pay up to 30% of their income on energy
 - Consumers located in rural areas, which present challenging terrain and other conditions for ordinary maintenance and emergency restoration events

Principle: Respect the G&T Cooperative Business Model

- G&Ts are owned by the distribution cooperatives they serve
- Employ long-term planning to make resource investment decisions based on their long-term obligation to serve load, not the short-term capacity price.
 - Derive benefits from assembling a portfolio of generation resources
 - Reliability
 - Hedges against energy costs
 - Other non-price values (such as attainment of sustainability goals or other consumer technology preferences)
- G&T business model does not give rise to concerns related to artificial price suppression
- Resource entry/exit is not coordinated solely by the RTO administered market, but market signals are an important factor in G&T decision-making
- EKPC must file an Integrated Resource Plan every 3 years with the KY PSC which comprises a portfolio intended to ensure reliability in peak conditions and hedge consumer from market volatility risk

Principle: Reliability is Always a Priority

- A mandatory resource adequacy construct has ensured resource adequacy in the PJM region
 - Incentive to hedge supply availability and price risk
- PJM region currently has more capacity resources committed to perform than required by the IRM
 - It is appropriate to expect committed resources to perform
 - It is appropriate to penalize resources (not dictate specific actions) for non-performance; resource owner responsible to take appropriate measures to ensure performance
- It is not wise to wait and layer in a reliability consideration after other deemed “nearer term” issues are addressed in the capacity market design
 - Reliability considerations should be inherent in every design element choice; they cannot be “add ons”
 - Fuel-neutral, reliability services must be appropriately compensated; can’t assume the resource will continue to provide the service or to be available

Principle: Reliability is Always a Priority (Cont.)

- Clean energy goals effectively are **generation displacement** goals (renewable or no/low CO2 emitting resources replacing emitting resources)
 - Displacing resources in the state with the clean energy goal; in a multi-state RTO, displacing resources in other states
 - Each state has an energy policy (may be articulated through various means, not necessarily a state master plan)
 - States are on different transition trajectories, factoring in different state interests (e.g., affordability)
 - One state's policy should not dictate another state's resource mix/resource adequacy decision
 - Market design cannot result in states "leaning" on other states to ensure reliability

Principle: Reliability is Always a Priority (Cont.)

- **Wholesale electricity market design cannot focus on achieving clean energy goals without also ensuring that reliability can be maintained – in all hours of the day, in peak and non-peak seasons**
 - Capacity market is a forward market – retirement decisions may not be able to be undone, and reliance on technology development and deployment to meet operational needs cannot be based on aspiration
 - Market (Capacity, energy, and ancillary services) design must incent the operating characteristics needed in the portfolio of resources available to PJM to meet operational reliability
 - Electricity is an essential service lives depend upon; consumer expectation of reliability is high in the digital economy
 - The Kentucky economy is based on high energy use industries which are sensitive to frequency and voltage levels
 - As the penetration of EVs continues and other forms of beneficial electrification are pursued, electric reliability will have broader implications (e.g., fuel to drive to safer location if power is out)

Principle: Reliability is Always a Priority (Cont.)

- **(cont.) Wholesale electricity market design cannot focus on achieving clean energy goals without also ensuring that reliability can be maintained – in all hours of the day, in peak and non-peak seasons**
 - Will the generation portfolio have the ramping capability and operational flexibility needed for reliable real-time operations?
 - Importance of generation diversity in mitigating fuel availability; Fuel security
 - Will the assumptions of fuel availability be correct? Main source and backup sources?
 - No fuel source's availability can be 100% assured; what steps can be taken in advance to best ensure its availability
 - Will the necessary transmission infrastructure be sited and constructed in time to manage the change in generation portfolio?
 - If not, how will generation operation be impacted by congestion; what costs will load pay?

Principle: Affordability For Even the Most Economically Vulnerable

- **Consumer cannot afford to be without power, and they need power they can afford.**
- NRECA's CEO Jim Matheson:
 - “We serve 92% of the persistent poverty counties in America,” he said. “When co-ops talk about affordability, we’re talking about consumer-owned utilities, and these consumers are in challenging economic circumstances.”*
- **Economic development** opportunities is an important consideration too
 - Industrial customer growth drives both the Kentucky and US economies and works to constrain rates for residential consumers
 - Consumer preference drives supply portfolio with consumers balancing cost, reliability, and sustainability profile (e.g., Diageo distillery)

PJM's Important Information Provider Role

PJM is a valuable, independent source of information about wholesale markets and reliability implications of energy policy decisions.

- EKPC appreciates the thoughtful, fact and data-driven, markets and reliability analysis PJM has done in the past to inform state and federal policy debate as well as PJM stakeholder consideration of market design options.
- Encourages PJM to update fuel security analysis and to perform analysis of specific state/federal clean energy policies under consideration.
 - Analysis should look at different time horizons and factor in necessary transmission enhancements to ensure reliability/generation deliverability