BALANCING AFFORDABLE GENERATION AND MEMBER EXPECTATIONS

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- What is a cooperative G&T?
- What does Big Rivers do?
- What is affordable generation?
- What are member expectations?
- How do we balance affordable generation with member expectations?
- Headwinds
THE COOPERATIVE DIFFERENCE

- We operate differently by putting our Member-Owners first.
- We do not have stockholders; the end consumer is our shareholder.
- Cooperatives don't have customers. We have members who own our electric utility and have a say in how it works. A board of locally-elected members oversees the not-for-profit cooperative operations.
- No shareholder profit motive
- Cooperatives provide energy at or below cost of service
- Net margins belong to the individual consumers (Member-Owners)
- Like any business, cooperatives must cover their expenses.
- Cooperatives must maintain equity levels and other financial metrics to qualify for affordable financing and fulfill their lender obligations.
- Cooperative Net Margins are allocated to Members as Patronage Capital.
Big Rivers supplies wholesale electric generation and transmission service to three electric distribution cooperatives (“Member-Owners”):

- Jackson Purchase Energy Corporation – Paducah, KY
- Kenergy Corp. – Henderson, KY
- Meade County Rural Electric Cooperative Corporation – Brandenburg, KY

We are headquartered in Henderson, KY with 430 employees.

Big Rivers is a not-for-profit electric cooperative that is owned by the Member-Owners (customers) it serves. Combined, our Members provide electric service for more than 116,000 retail homes and businesses in 22 western Kentucky counties.

Likewise, the Distribution Coops are owned by the customers they serve.

Big Rivers and its Member-Owners are regulated utilities, which includes oversight by the Kentucky Public Service Commission.
MISSION & VALUES

Our Mission:
Safely deliver competitive and reliable wholesale power and cost-effective shared services desired by our Member-Owners.

Our Vision:
Big Rivers will be viewed as one of the top G&Ts in the country and provide the services our Members desire in meeting future challenges.

Core Principles:
Safety, Excellence, Integrity, Teamwork, Member-Owners and Community Service, Respect for the Employee, and Environmentally Conscious
WHAT MAKES BIG RIVERS DIFFERENT?

- We are your neighbors, located next door and not in another state or country.
- Our reliability is among the highest in the nation.
- We consistently maintain strong financial metrics.
- We are the only utility in Kentucky with proven reliable service to large industrial loads.
- We find value in our membership of Midcontinent Independent System Operator (MISO), a not-for-profit member-based organization that ensures reliable, least-cost delivery of electricity across all or parts of 15 U.S. states and one Canadian province.
- Our MISO membership provides us access to 200,000 megawatts of power-generating resources to support our system.
**BIG RIVERS GENERATING CAPACITY**

**Coal-Fired Generation**
- Robert Green (Webster County) – 454 MW
- D. B. Wilson (Ohio County) – 417 MW
- Kenneth Coleman (Hancock County) – 443 MW (Idled May, 2014)
- Robert Reid Unit 1 (Webster County) – 65 MW (Idled April, 2016)

**Gas-Fired Generation**
- Robert Reid Combustion Turbine (Webster County) – 65 MW

**Hydro Generation**
- Contracted Capacity from Southeastern Power Administration – 178 MW

**Total Capacity 1,622 MW**

The Green and Wilson units consistently place in the top decile and quartile performance in reliability and cost compared to its peers.
The Big Rivers owned and operated transmission network includes **1,298 circuit miles** (69 kV, 138 kV, 161 kV, 345 kV).

Transmission owning MISO member.

25 interconnections with a total rated capacity of over 8500 MVA.

- MISO (Hoosier Energy, HMP&L, Southern Illinois Power Cooperative, and Vectren)
- LG&E/KU
- TVA

Partnering with Republic Transmission LLC to construct Duff (Vectren) to Coleman EHV (Big Rivers) 345 kV circuit.

Positioned to offer **creative transmission solutions** to potential **customers of all sizes** at various locations.
DO OUR MEMBERS SUPPORT RENEWABLES?

- Survey taken indicated that most members agreed that they should be given an opportunity to purchase electricity from renewable sources.
- Most survey participants would not be willing to pay more for renewable power.
- The respondents who were willing to pay more for renewables, would not be willing to pay more than 5% more for renewable power.
7 solar arrays of varying size from 10 kW to 30 kW for a total of 120 kW(dc)/101 kW (ac)

- Arrays are placed throughout our service territory within each Member-Owner’s region, with the primary purpose of providing the public with an educational opportunity to learn more about solar generation.

Information about each individual array is available through the Big Rivers website at www.solar.bigrivers.com

- Both cost and production data is accessible by students and retail members who are interested in solar energy.

- The interactive website provides hourly, monthly and annual production data, along with weather and solar radiance information.

Big Rivers received a REAP grant of $83,000 from USDA
WE EXTRACT THE FULL ECONOMIC VALUE OUT OF EXISTING GENERATION SOURCES

- Run the generation units to the end of their depreciable life.
- Prudent investment decisions regarding capital upgrades and maintenance expenses.
- Retired uneconomic units
The Environmental Department continually monitors actions taken by the EPA related to the Clean Power Plan, Effluents Limitation Guidelines, Coal Combustion Residuals and the National Ambient Air Quality limits on SO2 and NOx. All of these regulations are in various stages of reform.

Through its Membership in ACCCE, Big Rivers continues to get the opportunity to personally discuss environmental issues with top Federal Environmental leaders. (Director of EPA, FERC Commissioners and DOE)

Impact of environmental policy changes with each administration

Level playing field
  - Production Tax Credit and Investment Tax Credit
  - Solar impact