



DUKE ENERGY SMART GRID STRATEGY

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FACTS ABOUT DUKE ENERGY

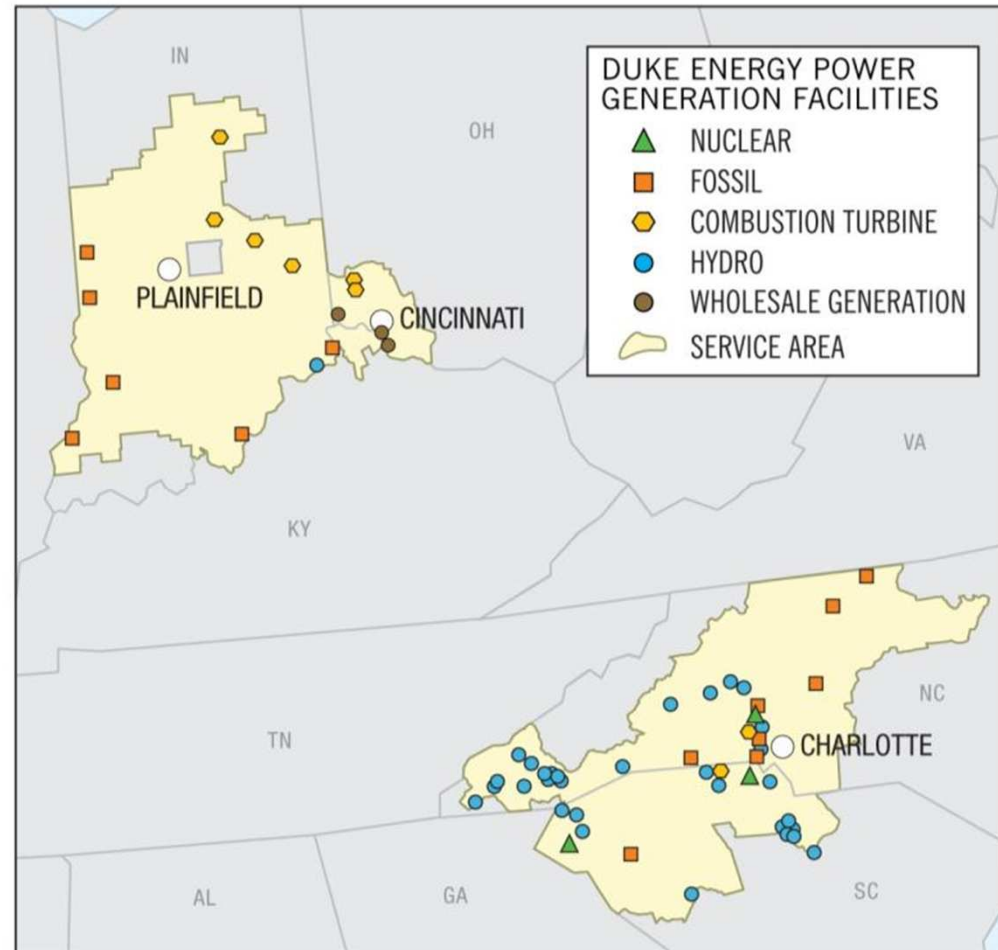
- 150+ years of service
- 4 million customers
- Fortune 500
- \$50 billion in assets
- Stock dividends for 80+ years
- Traded on NYSE as DUK
- Dow Jones Sustainability Index





U.S. FRANCHISED ELECTRIC AND GAS

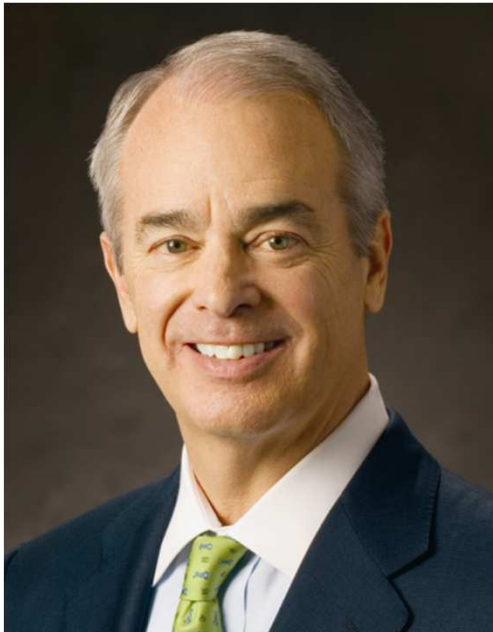
- 5 states: North Carolina, South Carolina, Indiana, Ohio and Kentucky
- 47,000 square miles of service area
- 28,000 MW of regulated generating capacity
- 4.0 million retail electric customers
- 500,000 retail gas customers





OUR SMART ENERGY CHALLENGE

- Operate in the most cost effective, reliable, safe and environmentally friendly way
- Adapt to the new energy paradigm, one where grid modernization will enable the next generation of energy efficiency and customer interaction.



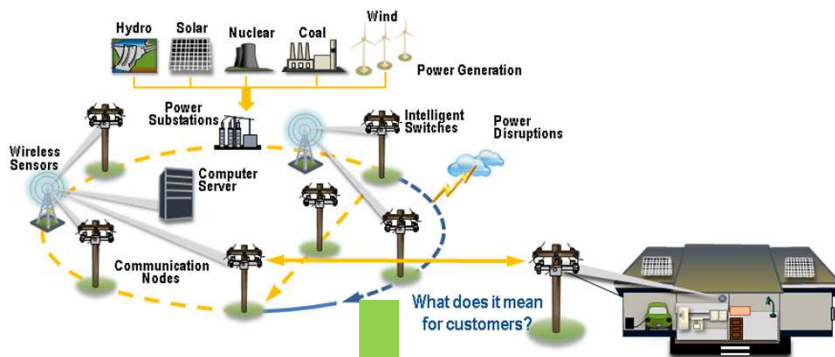
“Our business in the 21st century is as an (energy) optimizer not just of the grid, but an optimizer of energy use at every residential home, and every business. Optimizing all the way from the device to the generating plant.”

Jim Rogers

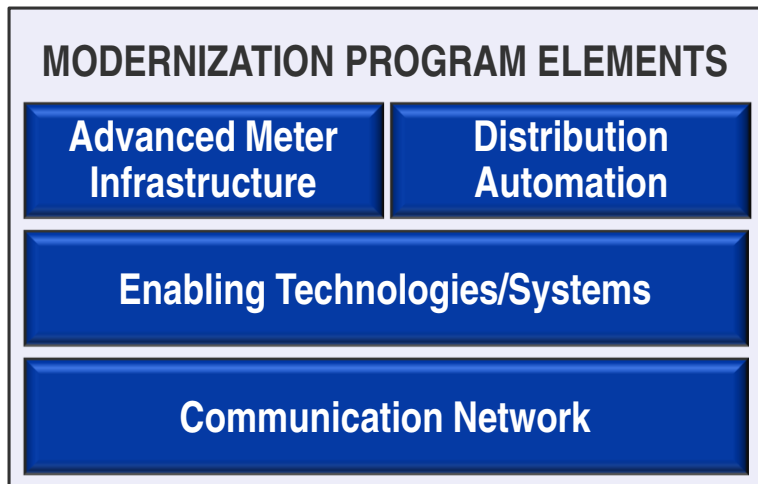
Chairman, President and CEO



Grid Modernization



What does it mean for customers?



System Modernization

SYSTEM BENEFITS

Enhanced system operations & reliability through:

- Outage assessment & reduction
- System voltage control
- Self-healing circuits
- Remote on/off
- Elimination of manual reads
- Integration of renewables



Extending "Beyond the Meter"

CUSTOMER BENEFITS

- Improved reliability
- Improved convenience
- Daily usage information
- New pricing options
- Flexible billing & payment options
- New products & services



Creating Balance Between Pilots and Execution

“Innovation is the central issue in economic prosperity.” Michael Porter
“(Yawn) Duke, DOE, EPRI sign yet another smart grid technology MOU.” Michael Berst, *Smart Grid Today*





Scaled Deployment and the Smart Grid Investment Grant Program

- Midwest Focus
 - Scaled deployment of Automated Meter Infrastructure, Distribution Automation, Communications Network and Back office systems
 - Deployment underway in OH. Regulatory filings made in IN. Discussions underway in KY.
- Carolinas' Focus
 - Acceleration of routine system enhancements that's been underway for several years
 - Evaluation of technology that would allow us to leverage our existing automated meter reading technology
- Smart Grid Investment Grant
 - \$200 million for power delivery system modernization efforts in Ohio, Indiana, Kentucky and both Carolinas.
 - Additional \$4 million for transmission upgrades in the Carolinas
 - Additional \$3.5 million for workforce development and training
 - Estimated job creation = approximately 1,000 across all five states



Envision Energy

Umbrella project designed to test / pilot a number of new energy technologies, including:

- Home Energy Management (phase 2)
 - First phase resulted in positive results with customers saving an average of 8% each month
- Rooftop Solar Panels
- Plug-in Electric Vehicle Charging
- Energy Storage
- Energy Optimization
- Distribution Energy Resource Management System
- Smart Appliances
- Weather Monitoring



Envision: Charlotte

- City initiative to improve overall sustainability inside Charlotte's I-277 loop
- Goal = reduce energy usage by 20% by 2016, avoiding 220,000 metric tons of greenhouse gases
- Leverages digital smart grid technologies (Smart Energy Now) to aggregate energy usage of 70+ buildings and display it on monitors as one overall number



Envision: Charlotte is a unique public-private collaboration that is leading Charlotte to become a global model for environmental sustainability and measurable community results.⁹



SmartBuilding AdvantageSM



Digital, smart grid technology is changing how we provide energy to our customers. With detailed, frequent information about their electricity use, customers will have more control and more choices. They'll be able to make better-informed decisions about how they use electricity, saving them money and benefiting the environment."

— **Jim Rogers**, Duke Energy chairman, president and CEO

- End-to-end pilot program leveraging smart grid technologies to gain energy efficiencies in commercial buildings
- Early participants have averaged 27% annual savings and payback periods of two to four years
- Sample of Current Customers: Davidson College, Catawba College, Presbyterian Hospital



Thank You!

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