REINHOLD ENVIRONMENTAL ®

2024 Reinhold/PCUG Round Table Presentation

Hosted by LG&E/KU and Co-hosted by Southern Co. and TVA

in The Marriott Resort Lexington Griffin Gate Hotel, Lexington, KY on June 24-25, 2024

PPL CORPORATION

PPL's Utility of the Future Strategy

Lonnie Bellar, Senior Vice President, Engineering and Construction

Welcome to Kentucky — The Bluegrass State

The commonwealth thrives on unique assets and affordable, reliable energy

Global Thoroughbred capital/home of the Kentucky Derby

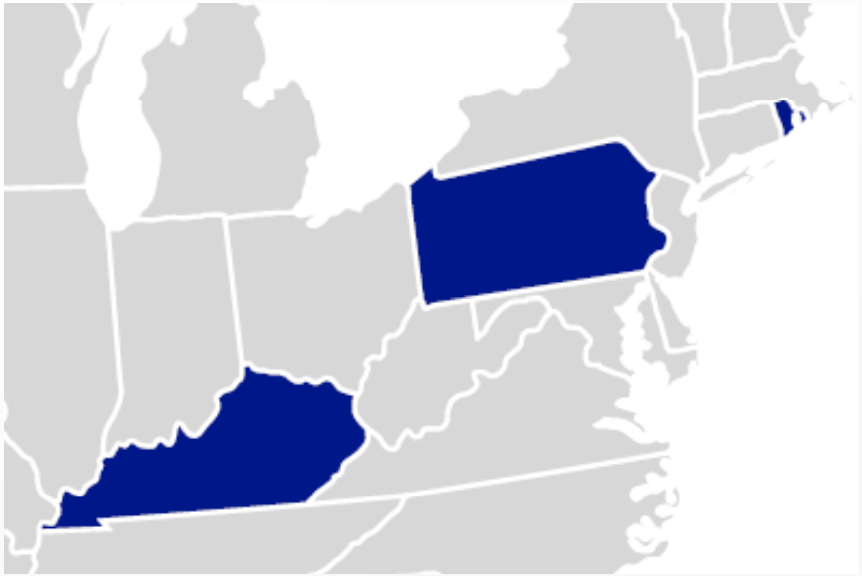
Maker of the world's finest bourbon

Features natural wonders and unique places

A hub for established and new businesses and industries

PPL Overview

We own and operate four top-quality utilities in the U.S.



	Pennsylvania	Kentucky	Rhode Island
Utility	PPL Electric Utilities	LG&E and KU	Rhode Island Energy
Coverage Area			
Service Area	10,000mi^2	8,000mi^2	1,200mi^2
Customers	1.5M Electric	1.0M Electric 0.3M Gas	0.5M Electric 0.3M Gas
Services	Electric Distribution Electric Transmission	Electric Distribution Electric Transmission Gas Distribution Gas Transmission Regulated Generation	Electric Distribution Electric Transmission Gas Distribution

$20.4B
Market Capitalization (1)

3.6M
Total Customers

19,200mi^2
Total Service Area

$25.4B
Year-end 2023 Rate Base

Our Strategy: Create Utilities of the Future

Focused on delivering value for BOTH customers AND shareowners

Enhance reliability and resiliency of our electric and gas networks through system hardening and use of technology

Advance the clean energy transition affordably and reliably for our customers

Deliver operational efficiencies to support customer affordability as we invest in the clean energy transition

Build scale, enable our strategy and drive sustainable growth for stakeholders

Empower customers through digital solutions and better customer service

Utility of the Future: Generation

Cleaner, more diverse, less centralized with significant intermittent resources

Substantial behind-the-meter DERs

Rooftop and community solar, battery storage, community geothermal, EV to GRID, combined heat and power plants, virtual power plants

Cleaner utility-scale generation

Onshore/offshore wind, solar, battery storage, low-emitting natural gas, coal with carbon capture and advanced small modular nuclear reactors (SMRs)

New generation in rate base, even in deregulated markets

T&D utilities must focus on generation even if they don't own or operate it

Utility of the Future: Transmission & Distribution

Intelligent, reliable and increasingly complex, requiring enhanced technologies

Updated design criteria and robust cybersecurity

Physically harden networks against climate impacts and protect against cyber attacks

Grid-Enhancing Technologies (GETS)

Connect more renewables and reduce congestion on existing resources

Efficiently enable new business connections

Data centers, large scale DERs, manufacturing, etc.

Distribution System Operator

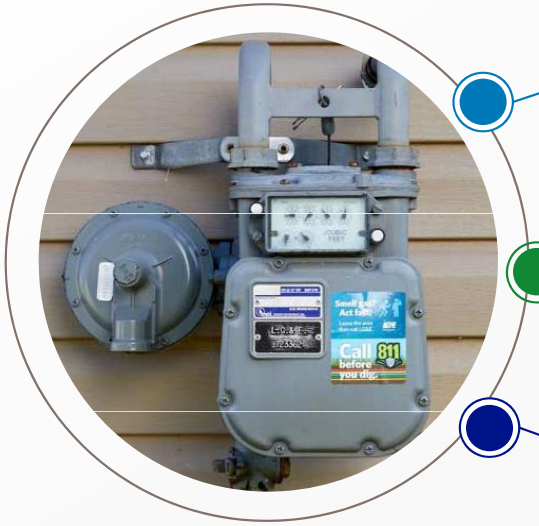
Visibility and control of behind-the meter assets to reliably manage two-way power flows and provide market services

Smart grid, automation, data analytics and AI

Automate outage detection/response, support proactive asset replacement, promote self-healing and mitigate climate risk, including wildfire risk

Utility of the Future: Gas LDCs

Electrification will change overall gas system needs



Prioritize safety and reliability investments

Leak prone pipe replacement and leak detection and remediation

Pressure and need to decarbonize

Identify alternate fuel strategies (RNG, Hydrogen, etc.)

A changing/shrinking customer base

Requiring more efficient operations and engagement with stakeholders to design and pursue enabling regulatory mechanisms/policies to navigate the transition to more electrification

Utility of the Future: Customer Service

Digital tools that make customer interactions quick and easy

Partner with customers

Enable their growth and support economic development

Expanded self-service options

Improve the digital experience and significantly reduce costs

Improved interconnection processes

Simplify to enable quicker customer interconnects to our Grids

New rate designs

Incentivize right behavior for utilities and customers to reduce energy consumption and move to cleaner sources of energy

Utility of the Future: Regulatory & Legislative Strategy

Proactive engagement and forward-looking mindset

Bring Deep Expertise to Look Ahead

Through our own expertise and innovative approach, and leveraging the expertise of others, we look ahead to the issues on the horizon

Engage with broad groups of stakeholders

Understanding the issues and priorities of the many different stakeholders, including those opposed in the past, will help us find common ground where we can

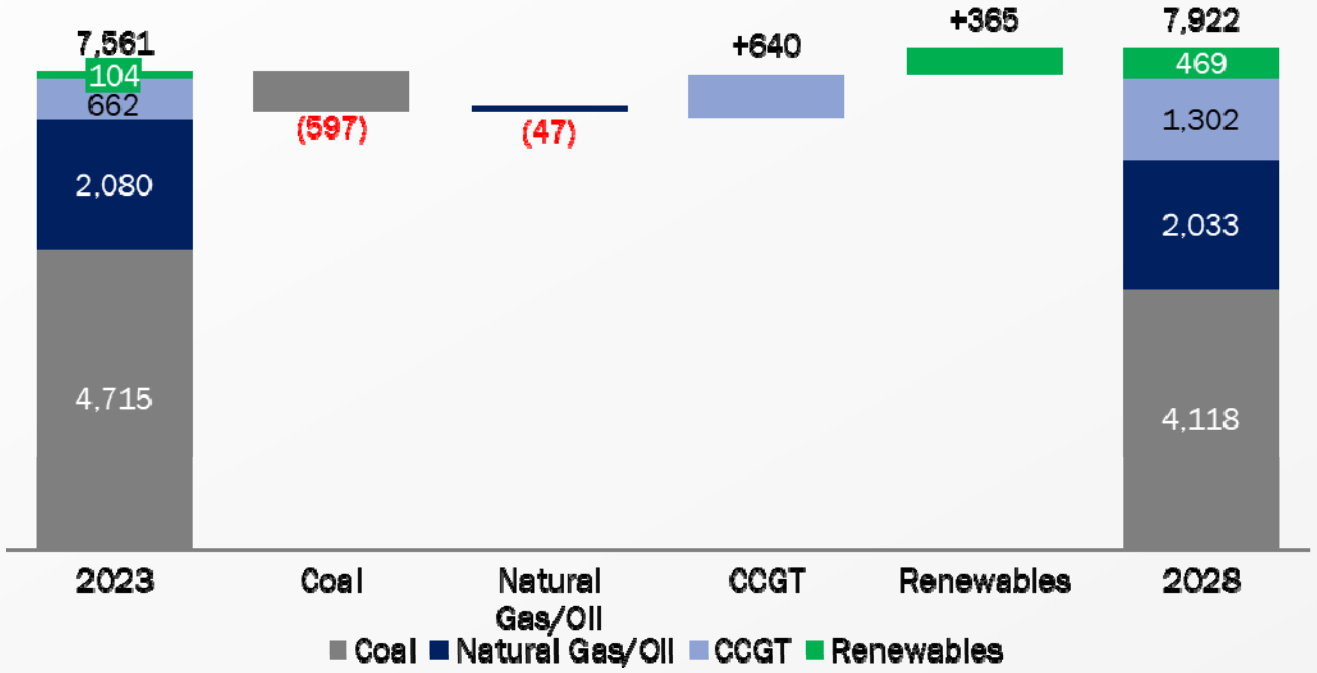
Solution and Locally Focused

Building consensus among stakeholders to drive actionable solutions while maintaining agility to reflect local policies for what is needed in different jurisdictions

Investment Needs from Aging Coal Fleet

Economically retiring aging coal units and replacing with cleaner resources

Example: November's CPCN Decision



Approved to retired 600 MW of coal and replace with 640 MW CCGT, 240 MW of owned solar and a 125MW battery totaling ~$2 billion of investment

Investment Needs from Aging Coal Fleet

LG&E and KU's remaining coal capacity after the CPCN decision

Power Plant	Unit	COD	Current Projected End of Economic Useful Life	Owned Capacity MW
E.W. Brown	3	1971	2028	412
Ghent	1	1974	2034	475
Ghent	2	1977	2034	485
Ghent	3	1981	2037	481
Ghent	4	1984	2037	478
Mill Creek	3	1978	2039	391
Mill Creek	4	1982	2039	477
Trimble County	1	1990	2045	370
Trimble County	2	2011	2066	549

We project that almost all of our coal units will economically reach the end of their useful lives within two decades

New environmental regulations

Likely to drive additional investments

CCR Rule	MATS	NAAQS — GNP and PM	ELG	111 Rule
Cost implications include investigations and monitoring but could impact status of closed legacy and 2015 surface impoundments.	Expect that LG&E and KU units will not be greatly impacted by rule due to existing baghouse technology.	GNP -- KY considered a significant contributor to downwind non-attainment areas. Jefferson and surrounding counties are in non-attainment PM – lowered standard impacts several KY counties. Expect that LG&E and KU units not impacted by rule due to existing baghouse technology.	Zero liquid discharge impacts require capital investment, operational changes, and impact CCR landfill life.	Rule results in reliability and affordability concerns.

111(b) & 111(d) New Source Performance Standards

Will have the greatest impact on our business plans for the future

Finalized rule is three separate rulemakings:

- Guidelines for states to regulate **existing fossil fuel-fired steam EGU** via CAA section 111(d) (40CFR60, Subpart UUUUb)
- New source performance standards for **new natural gas-based combustion turbine EGUs** under CAA section 111(b) (40CFR60, Subpart TTTTa)
- ACE Rule was repealed (40CFR60, Subpart UUUUa)
- NOT INCLUDED: Guidelines for states to regulate **existing natural gas-based combustion turbine EGU** under CAA section 111(d) will be in a new rule later this year.

Timeline

- States have 2 years to submit *State Implementation Plans (SIP)* – May 2026

  —Some states require legislative approval for SIP
- EPA approval in 6 months – *November 2026*
- Regulatory Approvals & Implement Controls in ~3 years
- Compliance January 1, 2030

GHG111(d) Existing NSPS

Best System of Emissions Reduction (BSER) and resulting standards

	Through Dec. 31, 2029	Jan. 1, 2030– Dec. 31 2031	Jan. 1, 2032– Dec. 31, 2034	Jan. 1, 2035– Dec. 31. 2038	2039 and Beyond
111(d) Existing Coal Fired EGU					
Unit Retires by 12/31/2031	No Applicable Standard	Routine operations & no emissions increases	Unit Retired		
Unit retires before 2039	No Applicable Standard	40% natural gas co-firing with 16% reduction in lbCO2/MWh-gross			Unit Retired
Unit operates beyond 1/1/2039	No Applicable Standard	Routine operations & no emissions increases	Carbon Capture & Storage (CCS) at 90% capture rate		
111(d) Existing Natural Gas Fired EGU					
Unit operates beyond 1/1/2030	No Applicable Standard	Routine operation: Baseload (>45% capacity factor) 1,400 lbCO2/MWh-gross, Intermediate (>8% and ≤ 45% capacity factor) 1.600 lbCO2/MWh-gross; Low Load (≤8% capacity factor) 130 lbCO2/MMBtu			

GHG111(b) New Natural Gas NSPS

Best System of Emissions Reduction (BSER) and Resulting Standards

	May 23, 2023 - Dec. 31 2031	Jan. 1, 2032 and Beyond
111(b) New Natural Gas Stationary Combustion Turbines/Combined Cycle Units		
Base Load >40% Capacity Factor	Highly efficient combined cycle generation with best O&M practices ≥ 2000 MMBtu/hr: 800 lb CO_2/MWh-g < 2,000 MMBtu/hr: 800-900 lbCO_2/MWh-g	Continued highly efficient combined cycle generation with CCS at 90% capture rate 100 lbs CO_2/MWh-gross
Intermediate Load ≥20 and ≤40% Capacity Factor	Highly Efficient Simple Cycle Tech with best O&M practices 1,170 lbs. CO_2/MWh-g	
Low Utilization <20% Capacity Factor	Use of lower emitting fuels (e.g., hydrogen, natural gas, and distillate oil) <160 lbCO_2/MMBtu	

Note: The Phase 1 standards are effective from May 23, 2023, for any new CT/NGCC construction (e.g., MC5) or reconstruction after that date.

Collateral Impacts of EPA Regulations

EPA compliance investments could negatively impact services/stakeholders

Reliable Energy

Return for Investors

Affordable Energy

Customer Services

Economic Growth

Quality of Life


PPL: The Utility of the Future