

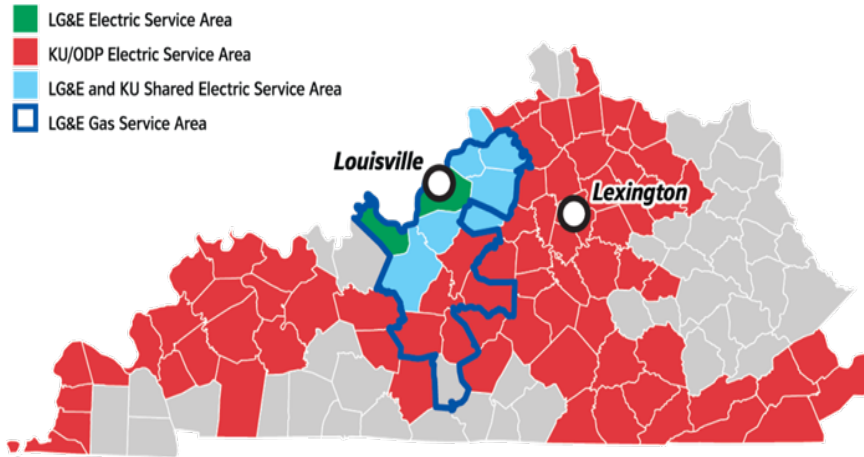
A scenic view of a river at sunset. In the foreground, a large barge with a grid of dark rectangular sections is positioned on the river. The sun is low on the horizon, creating a bright orange glow and reflecting on the water. To the left, a power plant with smokestacks emitting white smoke is visible. The background shows a forested hillside under a cloudy sky.

STABILIZE AND OPTIMIZE COAL POWER: GHENT UNIT 2 SELECTIVE CATALYTIC REDUCTION (SCR) Project

Brian Limberg, P.E. – Senior Manager, Major Project Development



INTRODUCTION TO LG&E AND KU



Louisville Gas & Electric

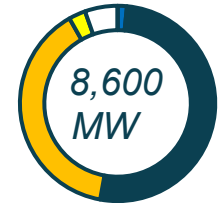
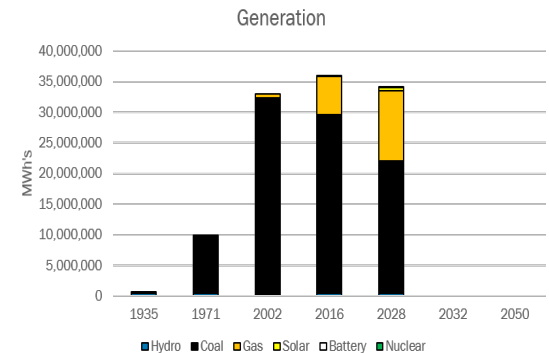
- Serving Louisville, KY + 16 surrounding counties
- 443,000 electric customers
- 336,000 gas customers
- 2,760 MW of regulated generation
- 669 pole miles of electric transmission
- 6,674 miles of electric distribution
- 4,804 miles of gas transmission and distribution

- Headquartered in Louisville, Kentucky
- Vertically-integrated utilities serving 2/3 of counties in Kentucky
- Small customer base in Virginia
- Nearly 1.4 million customers
- 7,535 MW of regulated generation

Kentucky Utilities

- Serving 77 counties in KY and 5 in VA
- 609,000 electric customers
- 4,775 MW of regulated generation
- 4,056 pole miles of electric transmission
- 16,790 miles of electric distribution
- 11 miles of gas transmission (serves EW Brown plant only)

2028:
Capability
Mix (MW's)



PROJECT BACKGROUND



Unit Information:

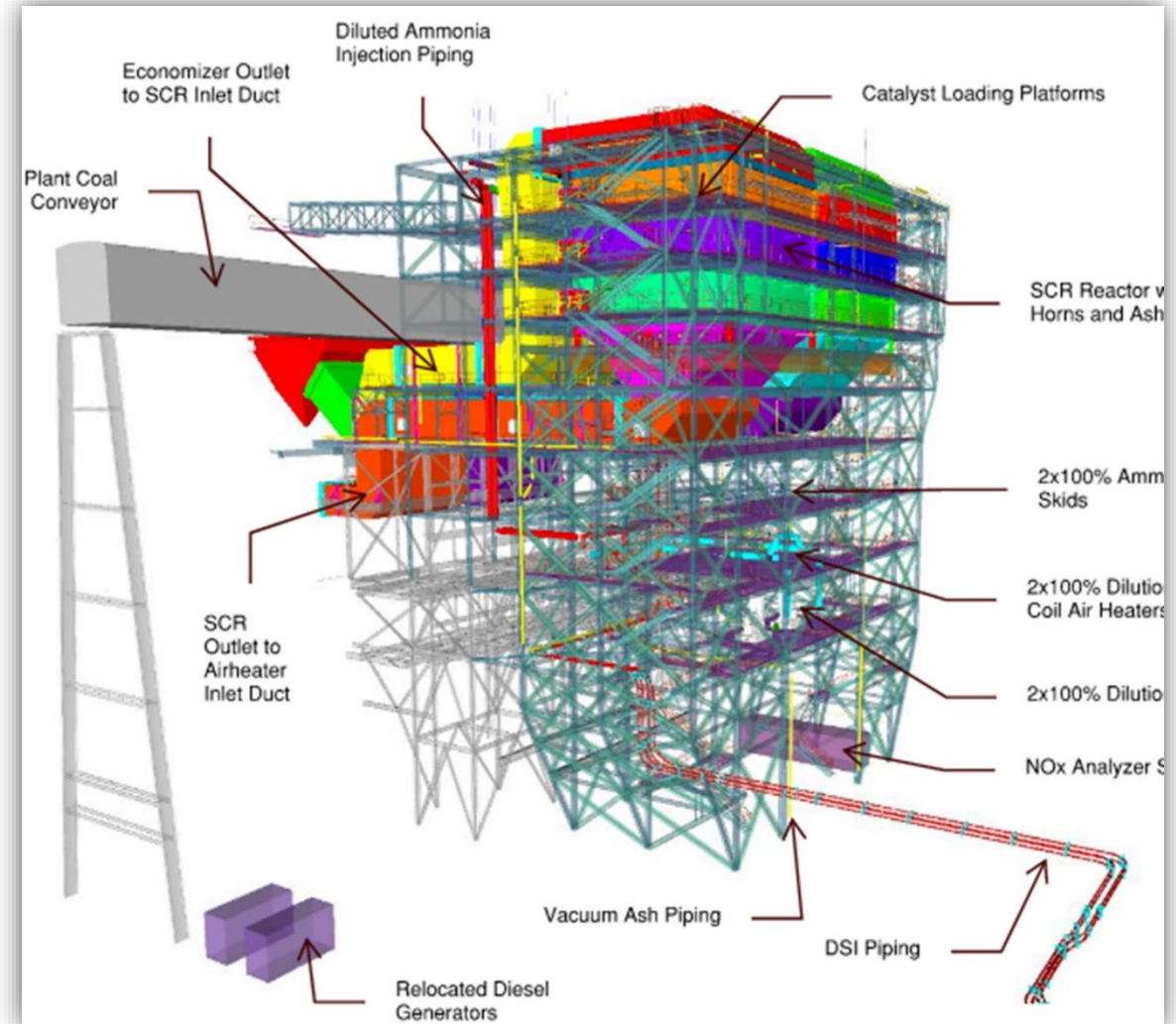
- Ghent Generating Station, Ghent, Kentucky
- GH2 Capacity: 556 MW gross / 485 MW net summer
- In service date: 1977 (49 years)
- Coal type: High Sulfur Bituminous
- Pollution control configuration: LNBs, Overfire Air System, Hydrated Lime injection, PJFF, WFGD, and Wet and Dry Hg Control Systems

Key Participants:

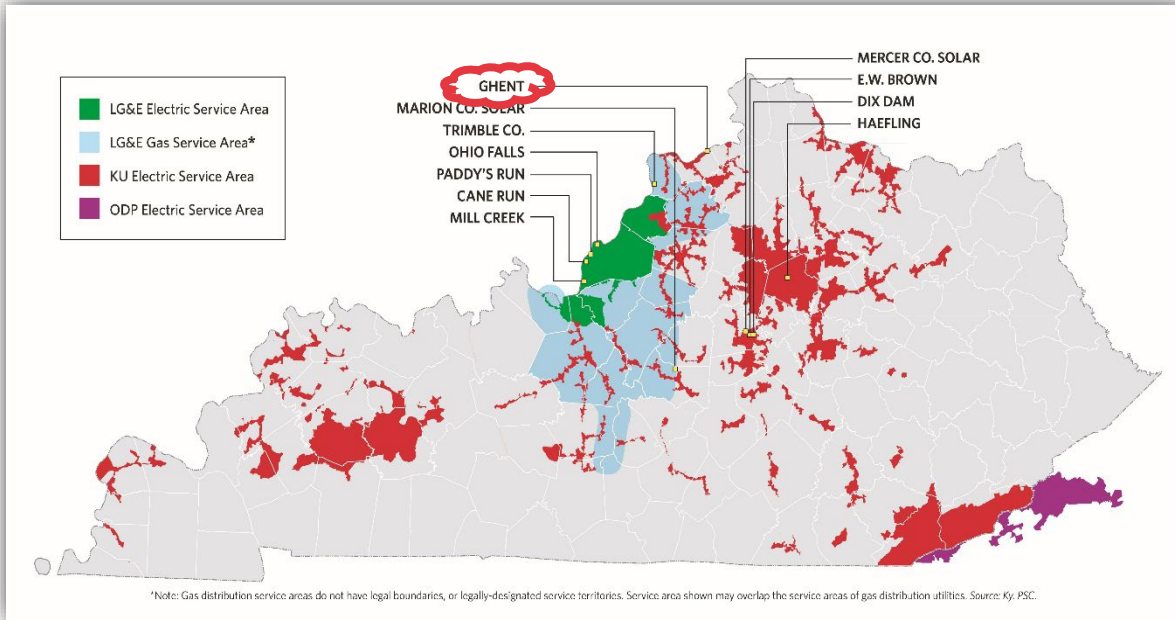
-  RileyPower - SCR (in contract negotiations)
A BABCOCK POWER INC. SUBSIDIARY
- TBD 2Q27 - EPC Contractor
-  - Project Oversight
PPL companies
-  U.S. DEPARTMENT of ENERGY - Grant Funding

PROJECT OVERVIEW

- Project goal(s):
 - Retrofit Ghent Unit 2 with an SCR system capable of: $\geq 90\%$ NO_x reduction; ≤ 2 ppm ammonia slip; and a minimum catalyst life of 16,000 hours
 - Increase capacity factor by at least 20%, increasing unit utilization
 - Improve affordability for customers through lowering production costs
 - Enhance dispatch flexibility across the generation fleet
- Project performance period:
January 31, 2027 - August 31, 2029



PROJECT OVERVIEW



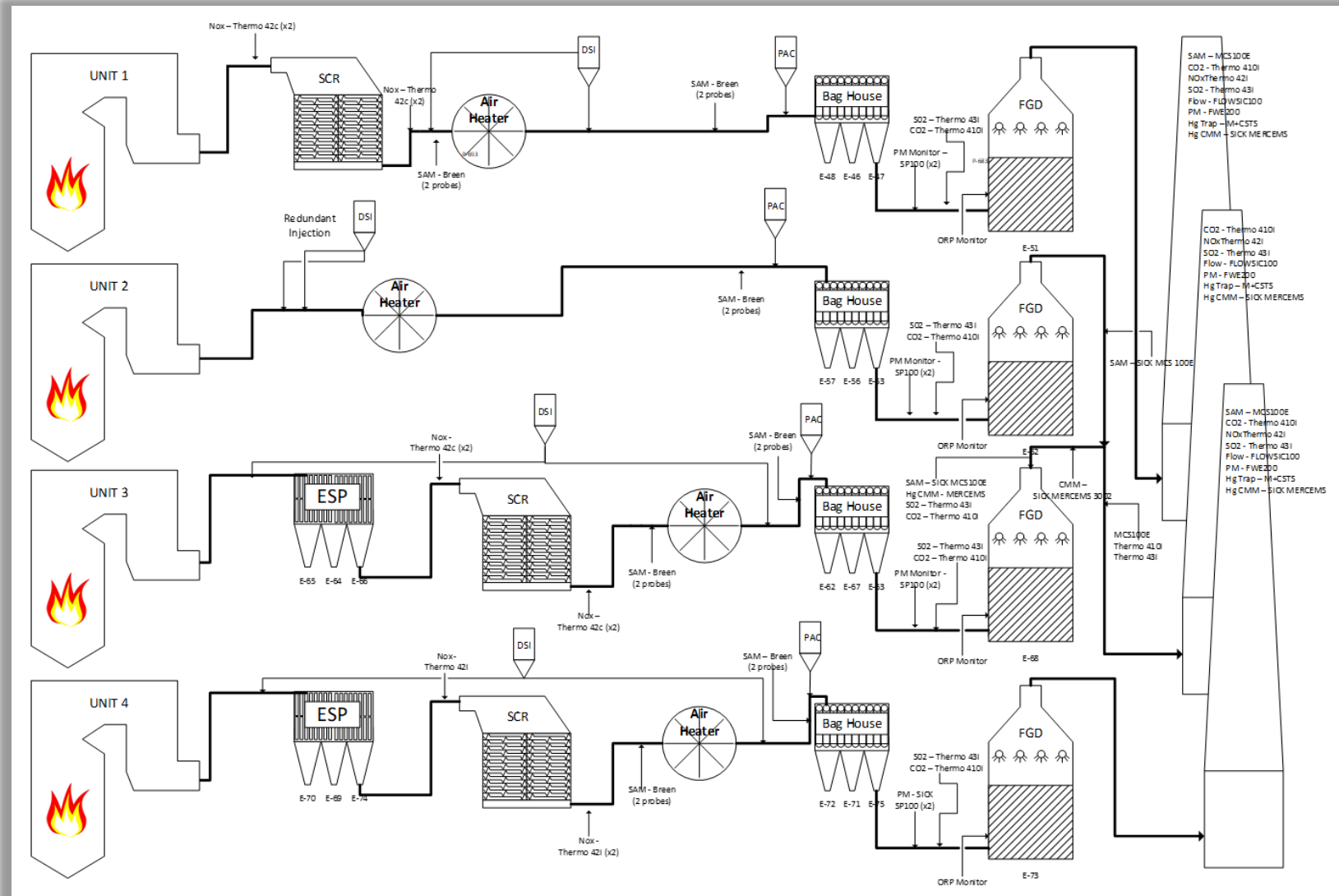
Intended Impact:

- Install industry-standard SCR technology to reduce NOx emissions and enable year-round high-load operation.
- Maximize use of a lower-cost baseload unit and reduce reliance on higher-cost generation.
- Support jobs through a \$187M infrastructure investment and strengthen domestic supply chains.
- Enhances grid reliability, supports economic development and projected load growth, preserves fuel diversity, and helps maintain affordable electricity service across the region.

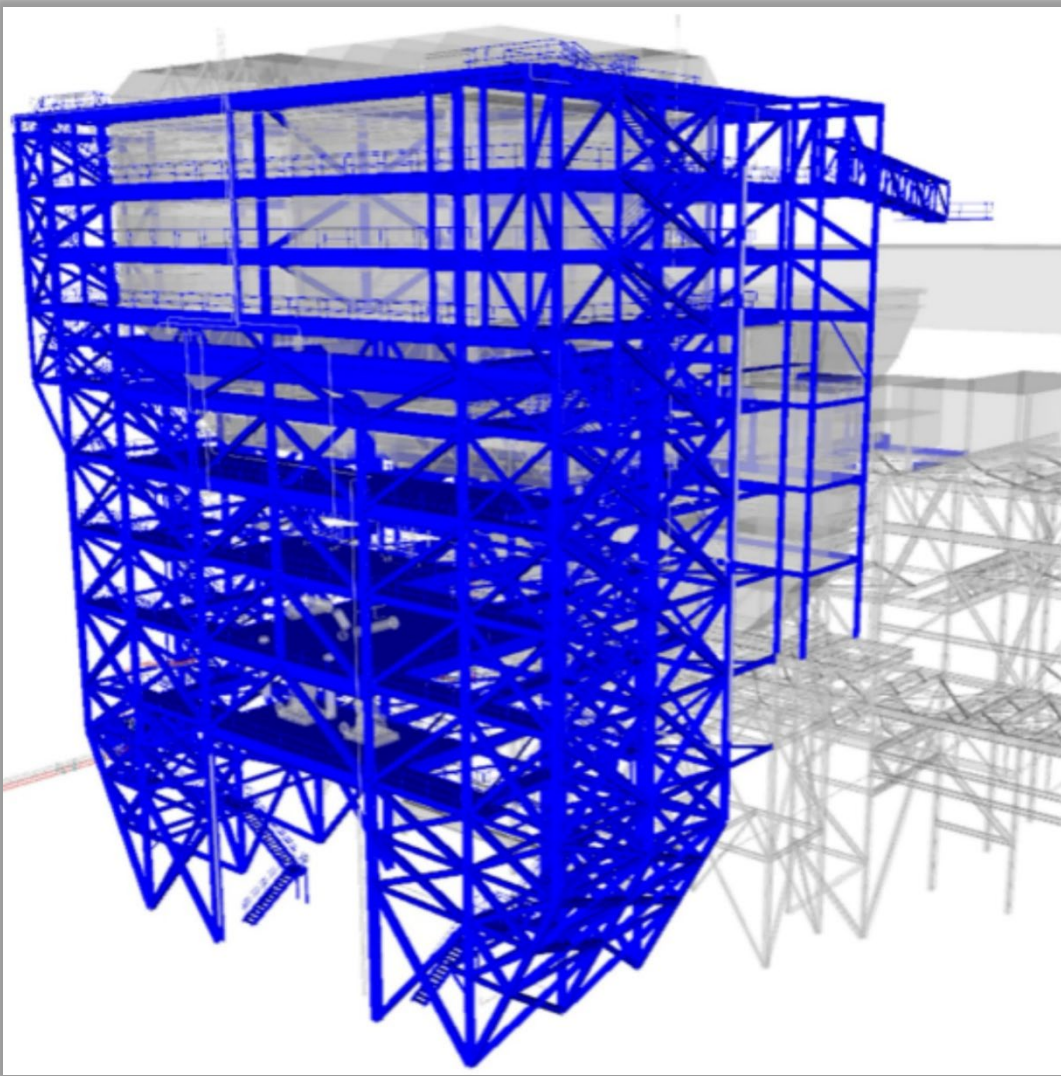
Funding Summary:

- Federal Grant- \$35M
- Recipient Cost Share- \$152M
- Total cost- \$187M

Block Flow Diagram of Ghent Generating Station



PROJECT SCOPE & TECHNICAL APPROACH



Front End Eng. Study completed on 12/23/2025

EqPA finalized by 12/31/2026

EPC Contract finalized by end of 2Q27

Construction commences Fall 2027

PJFF ductwork reroute outage: Fall 2028

Construction of SCR structure while Unit 2 is online

Tie-in outage: Spring 2029

Commercial Operation: Spring 2029

RISK MANAGEMENT

Risk Category	Description	Likelihood / Potential Impact	Mitigation Strategy
1. Commercial	Contracts in place with vendors	Medium - Delay in Commercial Operation Date and increase costs	Utilize experienced resources and issue RFP
2. Technical	SCR performance challenges	Low - Performance Objectives not achieved	Contractual guarantees to ensure objectives are achieved.
3. Management	Loss of a key person	Low - Quality, Cost and Continuity Disruptions	Another skilled, experienced member of the Project Engineering Group will be assigned to the project.
4. Resources	Labor availability and supply chain constraints may affect project execution	Medium - Quality Impact, and Schedule delays	Implement proactive workforce planning, engage experienced contractors, and utilize established procurement practices.

ACKNOWLEDGMENT & DISCLAIMER

Acknowledgment:

This presentation is based upon work supported by the Department of Energy under Award Number DE-CD0000167

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Thank you



PPL companies