

RESTORING RELIABILITY: COAL RECOMMISSIONING AND MODERNIZATION

Kyger Creek Station Modernization and Resiliency Project

Ohio Valley Electric Corporation (OVEC) • Cheshire, Ohio

\$73.63M

Total Project Value

1,085 MW

Gross Generating Capacity

2026–2028

Performance Period

6

Modernization Initiatives

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Restoring Reliability at a Base-Load Coal Station

PROJECT OVERVIEW

Location & Recipient

Kyger Creek Station, Cheshire, OH — operated by OVEC

Project Goal

Six upgrades to maintain reliability and service life — one of six projects nationwide selected under DOE's \$175M Coal Modernization Grant program (Feb 2026)

Performance Period & Value

2026–2028 | \$73.63M total (Fed \$33.1M / OVEC \$40.5M)

Key Participants

OVEC, with OEM vendors Emerson, Howden, and Innomotics, and skilled trade contractors

INTENDED IMPACT & REGIONAL BENEFIT

Maintained Reliability

Enabling the facility to meet its availability projections to provide base load generation to the grid.

Modernization

Replace near end of life control system and drives to ensure supported hardware and software.

Lower Cost of Generation

Turbine and control replacements improve efficiency, cutting outage costs

Jobs & Local Economy

Sustains 200+ jobs and ~\$6M/yr in local tax revenue

Grid Security

Maintains a top-tier base-load resource as PJM's capacity market tightens

A 1955 Base-Load Plant Central to Regional Grid Reliability

5 units

217 MW each

1,085 MW

Gross capacity
973 MW net summer

1955

Year commissioned

200+

Site employees

Bituminous coal-fired station. Pollution controls: electrostatic precipitators, over-fire air, SCR, and wet scrubbers (FGD) on all units, plus an on-site wastewater treatment plant and Bioreactor.

REGION & GRID ROLE

- Gallia County — one of Ohio's five most impoverished counties (2020 Ohio Poverty Report)
- 83% ELCC rating ranks third among all PJM resource classes; Kyger Creek had 95% availability during Winter Storm Fern and 97% during the 2026 summer heat event
- PJM's procured reserve margin has fallen from 20.4% to 14.7% over five years — underscoring the value of Kyger Creek's 1,085 MW of dispatchable capacity
- ~7.7M customers across six states draw power from Kyger Creek through 2040 at below-market rates— the \$33.1M federal share is a direct, dollar-for-dollar savings to those customers
- 200+ site employees, supported by an estimated 100+ additional local craft construction jobs to execute the six modernization initiatives

Six Modernization Initiatives, One Coordinated Outage Plan

1

Turbine / Generator Performance Maintenance

Major inspections, valve repair/replacement, and new supervisory monitoring instrumentation across Units 1–5

\$36.40M total

2026 – 2028

Fed \$16.38M | OVEC \$20.02M

2

ID Fan VFD Replacement

Replace 9,000 HP near end of life water-cooled fan drives with equivalent modern air-cooled drives on all five units

\$14.00M total

2027 – 2028

Fed \$6.30M | OVEC \$7.70M

3

Flue Gas Desulfurization System Repair

Booster fan and duct/internals repairs on the plant's two scrubber systems

\$10.84M total

2026 – 2027

Fed \$4.88M | OVEC \$5.96M

4

Distributed Control System Replacement

Replace the plant proper and coal yard control systems with hardware built to support future AI-enabled analytics and operation

\$7.80M total

2026 – 2028

Fed \$3.51M | OVEC \$4.29M

5

Electrostatic Precipitator Repairs

Row gates, transformer/rectifier sets, rappers, insulators, and seal air heaters, Units 1–5

\$3.10M total

2027 – 2028

Fed \$1.40M | OVEC \$1.71M

6

Auxiliary Power Transformer Replacement

Replace two auxiliary transformers to maintain original backup power redundancy

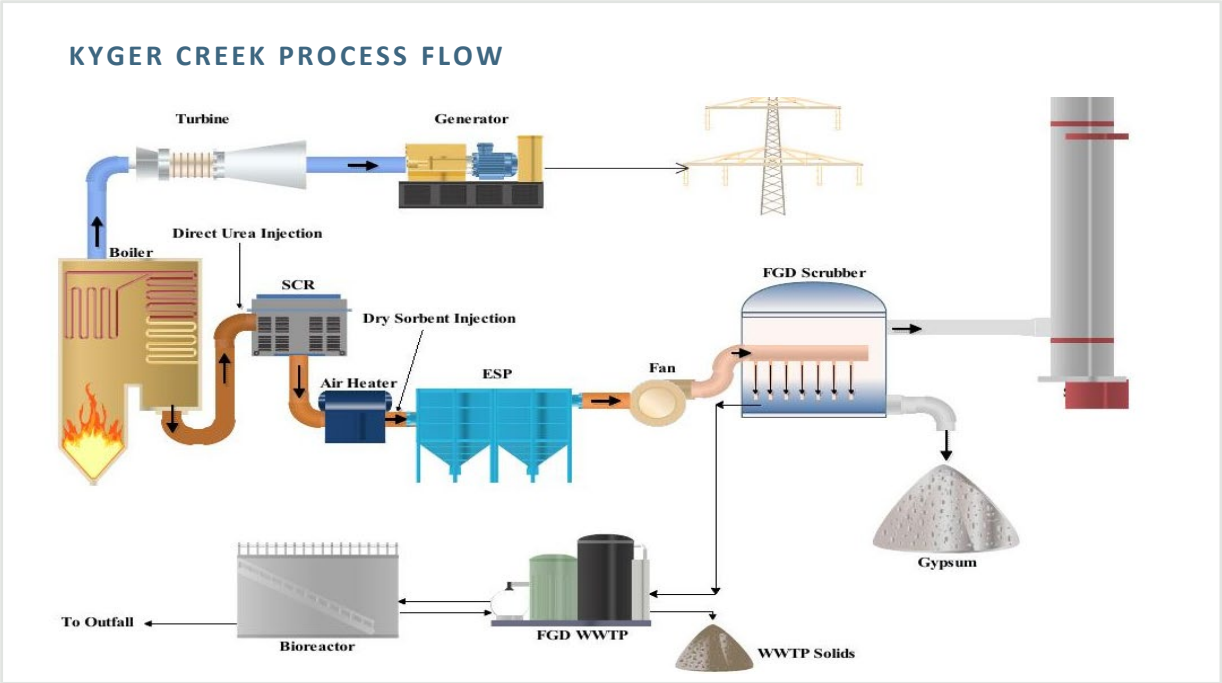
\$1.50M total

2027 – 2028

Fed \$0.68M | OVEC \$0.83M

Total Scope Investment: \$73.63M across six initiatives (Fed \$33.13M / OVEC \$40.50M) | Phased through Engineering & Design → Procurement → Construction → Testing/In-Service

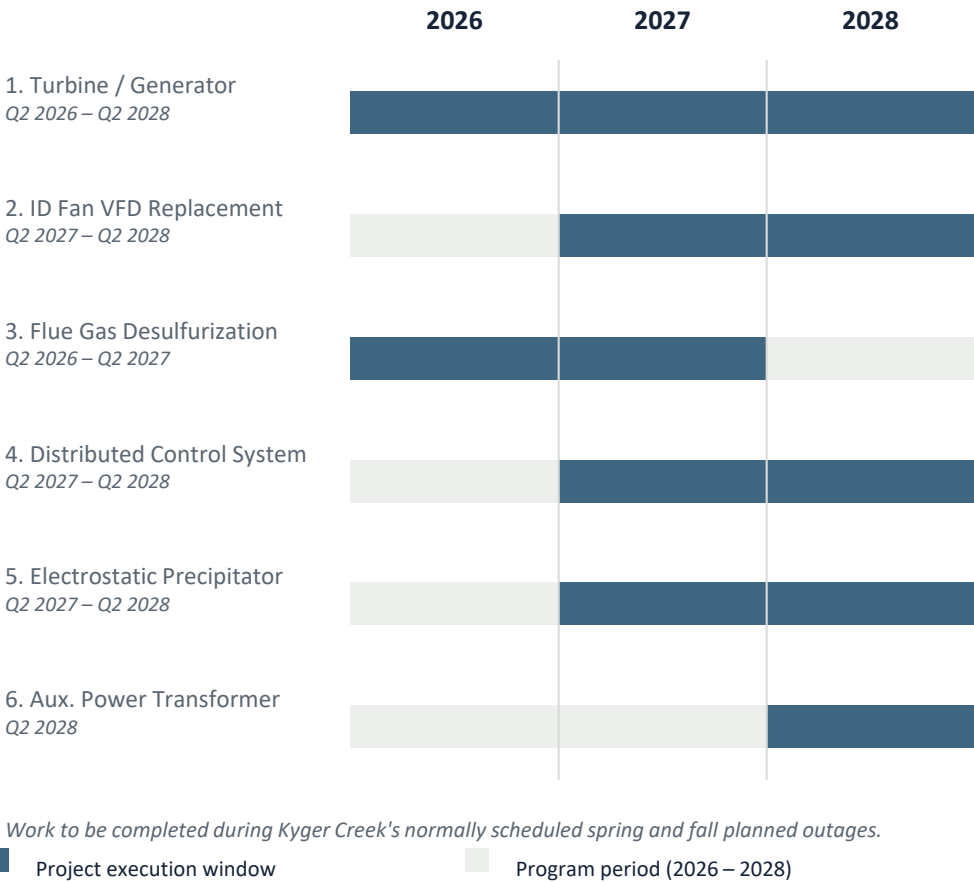
Plant Process Flow and a Phased, Outage-Coordinated Build



OUTAGE-COORDINATED EXECUTION

All six initiatives are scheduled within Kyger Creek's normal planned-outage cadence, with minimal incremental outage impact, to best preserve unit availability throughout project execution; engineering and procurement are staged ~90 days ahead of each outage window to hold the schedule.

EXECUTION TIMELINE (2026 – 2028)



Technical Objectives, Success Criteria, and Risk Management

SUCCESS METRICS

- **17 technical objectives**
Sep 2026 – Dec 2028, each tied to a specific deliverable and completion date
- **Interlock & vibration testing**
Required before startup on every turbine, generator, and booster-fan overhaul
- **Post-outage flow testing**
Confirm JBR gas cooling and prequench systems meet OEM specification
- **Site/factory acceptance testing**
Required for all DCS, coal-yard control, and VFD replacements before commissioning
- **Final inspection sign-off**
Required before unit release for startup on every major work package

TOP PROJECT RISKS & MITIGATION

Category	Prob.	Impact	Mitigation
Procurement & Supply Chain	35%	\$3.0M	Early vendor commitments; delivery-penalty contracts
Schedule	25%	\$2.0M	Rolling schedule; engineering staged 90 days ahead of procurement
Technical Integration	25%	\$1.0M	Detailed design validation; DCS simulation testing
Workforce Availability	25%	\$1.0M	Contractor agreements 12 months out; internal cross-training
Financial (cost escalation)	15%	\$1.5M	3–5% escalation contingency; quarterly budget reviews

A living Project Risk Register with quarterly reviews tracks schedule, procurement, technical, management, and financial risk across all six initiatives; a risk-based contingency is built into the \$73.63M project cost.

KEY TAKEAWAY

A \$73.63M cost-shared investment will maintain Kyger Creek Station's 1,085 MW of reliable base-load capacity for the Ohio Valley.

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