

421 West Main Street
P.O. Box 634
Frankfort, KY 40602-0634
(502) 223-3477
(502) 560-5377 FAX

March 3, 2025

Katie M. Glass
(502) 209-1212
kglass@stites.com

DELIVERED VIA EMAIL TO PSCED@KY.GOV

Linda C. Bridwell
Executive Director
Public Service Commission
211 Sower Boulevard
P.O. Box 615
Frankfort, KY 40602-0615

RECEIVED

MAR 03 2025

PUBLIC SERVICE
COMMISSION

RE: **Case No. 2012-00578** (Post-Case Correspondence File)

Dear Ms. Bridwell:

Please accept for filing Kentucky Power Company's 2024 Mitchell Generating Plant Annual Performance Report. The report is being filed in conformity with the Commission's October 7, 2013 order in Case No. 2012-00578.

A copy of the report and this letter is being served on counsel of record in the case.

Very truly yours,

STITES & HARBISON PLLC



Katie M. Glass

KMG

cc: Michael L. Kurtz
Larry W. Cook
Joe F. Childers
Kristin Henry
Shannon Fisk

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing letter and accompanying report were served by first class mail, postage prepaid upon the following parties of record, the 3rd day of March, 2025:

Michael L. Kurtz
Jody Kyler Cohn
Boehm, Kurtz & Lowry Suite 1510
36 East Seventh Street
Cincinnati, OH 45202

Joe F. Childers
Childers & Baxter PLLC
300 Lexington Building
201 West Short Street
Lexington, KY 40507

Kristin A. Henry
Sierra Club
2101 Webster St., Ste. 1300
Oakland, CA 94612

Shannon Fisk
Earthjustice
1617 JFK Boulevard, Suite 1675
Philadelphia, PA 19103

John G. Horne II
Lawrence W. Cook
J. Michael West
Angela M. Goad
Assistant Attorneys General
Office for Rate Intervention
Capitol Building, Suite 20
Frankfort, KY 40601-8204



Katie M. Glass

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

The Application Of Kentucky Power Company For:)
(1) A Certificate Of Public Convenience And Necessity)
Authorizing The Transfer To The Company Of An)
Undivided Fifty Percent Interest In The Mitchell)
Generating Station And Associated Assets; (2) Approval)
Of The Assumption By Kentucky Power Company Of)
Certain Liabilities In Connection With The Transfer Of)
The Mitchell Generating Station; (3) Declaratory Rulings;)
(4) Deferral Of Costs Incurred In Connection With The)
Company's Efforts To Meet Federal Clean Air Act And)
Related Requirements; And (5) For All Other Required)
Approvals And Relief)

Case No. 2012-00578

MITCHELL GENERATING PLANT: MARCH 3, 2025 ANNUAL PERFORMANCE
REPORT AND REPORT ON POTENTIAL IMPACTS OF FUTURE ENVIRONMENTAL
REGULATIONS

Table of Contents

1) Introduction.....	3
2) Mitchell Plant Performance	3
3) Mitchell Plant Unplanned Outages	3
4) Mitchell Plant Operations & Maintenance ("O&M") Expense.....	4
5) Mitchell Plant Capital Investments	4
6) Discussion of Environmental Regulations and Potential Future Impacts	5

1) **Introduction**

Kentucky Power Company (“Kentucky Power” or “the Company”) files this report in conformity with the Public Service Commission of Kentucky’s (“Commission”) October 7, 2013 Order in Case No. 2012-00578. Portions of the required information are provided in the following attachments:

Attachment 1: 2024 Plant Performance Data

- i. Forced Outage Rate
- ii. Equivalent Forced Outage Rate
- iii. Equivalent Availability Factor
- iv. Net Capacity Factor
- v. Net Unit Heat Rate

Attachment 2: 2024 Planned and Unplanned Outages

2) **Mitchell Plant Performance**

Attachment 1 to this report includes 2024 performance data for Mitchell Unit 1 and Unit 2. Annual Net Capacity Factors were 29.15% for Unit 1 and 30.51% for Unit 2. Annual Equivalent Availability Factors¹ were 64.73% for Unit 1 and 66.48% for Unit 2. The 2024 Forced Outage Rate was 15.06% for Unit 1 and 3.11% for Unit 2. The 2024 Equivalent Forced Outage Rate² was 18.77% for Unit 1 and 5.00% for Unit 2.

3) **Mitchell Plant Unplanned Outages**

Attachment 2 to this report identifies the planned and unplanned outage events that occurred at Mitchell Units 1 and 2 during the 2024 calendar year. For purposes of Attachment 2, planned outages include Planned and Maintenance Outages. Unplanned outages include Forced Outages and Startup Failures.

A Planned Outage is an outage lasting several weeks and is taken to permit the Company to perform work on major equipment groups that are not immediately required for the safe operation of the unit. Planned Outages are scheduled approximately a year in advance. Maintenance Outages require shorter lead time for notifying PJM and are taken to perform repair and maintenance work. Maintenance Outages may be initially scheduled for up to nine days, although they may be extended once underway. The dates of the Planned and Maintenance Outages are pre-approved by PJM. A Forced Outage is an unplanned outage to address an immediate operational or safety concern at the generation facility. Forced Outages typically last from a few hours to several days depending on the situation.

¹ The Equivalent Availability Factor is an unweighted (time based) performance metric defined in Appendix F of the NERC’s 2022 GADS Data Reporting Instructions as the ratio of a generating unit’s available hours to the number of hours in the period being measured, expressed as a percentage.

² The PJM Glossary defines Equivalent Forced Outage Factor (Rate) as the equivalent forced outage factor is the proportion of hours in a year that a unit is unavailable because of forced outages.

The longest unplanned outage event in 2024 at Mitchell Unit 1 began in December 2023 and lasted until January 28, 2024. This outage was caused by a standpipe fire valve failure that caused severe damage, and which was reported to the Commission initially on January 4, 2024.

The longest unplanned outage event in 2024 at Mitchell Unit 2 occurred in November and lasted from November 12, 2024 through November 18, 2024. The reason for this forced outage was deaerator level issues.

4) Mitchell Plant Operations and Maintenance (“O&M) Expense

Kentucky Power’s share of the 2024 budgeted and actual O&M expenses for the Mitchell Plant, as well as the Company’s share of the budgeted O&M expenses for 2025, are included in Table 1 below. The Company’s share of actual O&M expense in 2024 was \$28.7 million, compared to a budgeted amount of \$28.9 million.

Table 1

Mitchell Plant O&M Expense		
2024		2025
Actuals	Budget	Budget
\$28,642,353	\$28,987,427	\$25,336,234
NOTES:		
Totals reflect Kentucky Power’s 50% ownership share of the Mitchell Plant.		

Kentucky Power’s share of the 2025 budgeted O&M expense of \$25.3 million reflects a 12% decrease when compared to the 2024 budget amount, largely due to a decrease in forced outage costs.

5) Mitchell Plant Capital Investments

Kentucky Power’s share of the 2024 actual and budgeted level of capital investment for the Mitchell Plant, as well as the Company’s forecasted share of capital investment for 2025, are included below in Table 2.

In 2024, the Company’s share of capital spending at the Mitchell Plant was \$9.4 million compared to a budget of \$7.6 million. Capital spending in 2024 was more than budgeted due to the Unit 2 cooling tower reinforcement and the installation of the Unit 1 cooling tower canopy beams.

Table 2

Mitchell Plant Capital Investment		
2024		2025
Actuals	Budget	Budget
\$9,416,459	\$7,634,613	\$5,386,425
NOTES:		
Totals reflect Kentucky Power’s 50% ownership share of the Mitchell Plant.		

Kentucky Power’s share of the 2025 budgeted capital investment of \$5.4 million reflects an approximately 29% decrease when compared to the 2024 budget amount, largely due to lower capital environmental costs as the CCR work was completed in 2024.

6) Discussion of Environmental Regulations and Potential Future Impacts

Kentucky Power is currently subject to regulation by federal, state and local authorities with regard to air and water-quality control, solid and hazardous waste disposal and other environmental matters, and are subject to zoning and other regulation by local authorities. The current and proposed environmental laws and regulations discussed below will have an impact on the Company’s operations. Management continues to monitor developments in these regulations and evaluate the economic feasibility and refine cost estimates for compliance. Kentucky Power is unable to predict changes in regulations, regulatory guidance, legal interpretations, policy positions and implementation actions that may result from the change in Presidential administrations.

Both Mitchell units are fully controlled units with respect to current air emissions. They are equipped with Electrostatic Precipitators (“ESPs”) for the removal of approximately 99% of Particulate Matter (“PM”); Selective Catalytic Reduction (“SCR”) systems for reduction of approximately 90% of nitrogen oxide (“NOx”) emissions; and Flue Gas Desulfurization (“FGD”) systems for the reduction of sulfur dioxide (“SO2”) emissions by approximately 97%. These systems are instrumental in maintaining compliance with existing air pollution regulations. The Mitchell Plant operates in compliance with all applicable environmental regulations.

Clean Air Act (“CAA”) Requirements

The CAA establishes a comprehensive program to protect and improve the nation’s air quality and control sources of air emissions. The states implement and administer many of these programs and could impose additional or more stringent requirements. The primary regulatory programs that continue to drive investments in AEP’s existing generating units include: (a) periodic revisions to the National Ambient Air Quality Standards (“NAAQS”) and the development of State Implementation Plans (“SIPs”) to achieve more stringent standards, (b) implementation of the regional haze program by the states and the Federal EPA, (c) regulation of hazardous air pollutant emissions under Mercury and Air Toxics Standards (“MATS”), (d) implementation and review of Cross-State Air Pollution Rule (“CSAPR”) and (e) the Federal EPA’s regulation of Greenhouse Gas (“GHG”) emissions from fossil generation under Section 111 of the CAA.

National Ambient Air Quality Standards

The Federal EPA periodically reviews and revises the NAAQS for criteria pollutants under the CAA. Revisions tend to increase the stringency of the standards, which in turn may require Kentucky Power to make investments in pollution control equipment at existing generating units, or, since most units are already well controlled, to make changes in how units are dispatched and operated. In February 2024, the Federal EPA finalized a new more stringent annual primary PM2.5 standard. Areas with air quality that does not meet the new standard will be designated by the Federal EPA as “nonattainment,” which will trigger an obligation for states to revise their SIPs to obtain further emission reductions to ensure that the new standard will be met. Areas around some of the Company’s generating facilities may be deemed nonattainment, which may subject those facilities to additional pollution controls or operational constraints. The nonattainment designations by the Federal EPA and the subsequent SIP revisions by the affected states will take some time to complete, therefore, it is too soon to predict how SIP requirements may impact the Company’s operations. Kentucky Power will continue to monitor the issue.

Cross-State Air Pollution Rule

CSAPR is a regional trading program that the Federal EPA began implementing in 2015, which was designed to address interstate transport of emissions that contribute significantly to non-attainment and interfere with maintenance of the 1997 ozone NAAQS and the 1997 and 2006 PM NAAQS in downwind states. CSAPR relies on SO₂ and NO_x allowances and individual state budgets to compel further emission reductions from electric utility generating units. Interstate trading of allowances is allowed on a restricted basis. The Federal EPA has revised, or updated, the CSAPR trading programs several times since they were established.

In January 2021, the Federal EPA finalized a revised CSAPR, which substantially reduced the ozone season NO_x budgets beginning in ozone season 2021. In addition, in February 2023, the Federal EPA Administrator finalized the disapproval of interstate transport SIPs submitted by 19 states – including Kentucky -- addressing the 2015 Ozone NAAQS. Disapproval of the SIPs provides the Federal EPA with authority to impose a Federal Implementation Plan (“FIP”) for those states, replacing the SIPs that were disapproved. In August 2023, a FIP went into effect that further revises the ozone season NO_x budgets under the existing CSAPR program in states to which the FIP applies. Courts have stayed Federal EPA’s SIP disapprovals in several states, including Kentucky, which prevents the FIP from being implemented at this time. Kentucky Power will continue to monitor the outcome of this litigation and any potential impact to operations.

Climate Change, CO₂ Regulation, and Energy Policy

In April 2024, the Administrator of the Federal EPA signed new GHG standards and guidelines for new and existing fossil-fuel fired sources. The rule relies on carbon capture and sequestration and natural gas co-firing as means to reduce CO₂ emissions from coal fired plants and carbon capture and sequestration or limited utilization to reduce CO₂ emissions from new gas turbines. The rule also offers early retirement of coal plants in lieu of carbon capture and storage as an alternative means of compliance. A number of parties filed petitions for review of the rule in the U.S. Court of Appeals for the D.C. Circuit. AEP is in the early stages of evaluating and identifying the best strategy for complying with this rule while ensuring the adequacy of resources to meet customer needs. The Federal EPA’s new GHG rule is directed at the fossil-fuel fired electric utility industry and could force AEP to close additional coal-fired generation facilities earlier than their

estimated useful life. If AEP is unable to recover the costs of its investments, it would reduce future net income and cash flows and impact financial condition.

Coal Combustion Residuals (“CCR”) Rule

The Federal EPA’s CCR rule regulates the disposal and beneficial re-use of CCR, including fly ash and bottom ash created from coal-fired generating units and FGD gypsum generated at some coal-fired plants. The rule, as originally promulgated, applies to active and inactive CCR landfills and surface impoundments at facilities of active electric utility or independent power producers.

In April 2024, the Federal EPA finalized revisions to the CCR Rule to expand the scope of the rule to include inactive impoundments at inactive facilities (“legacy CCR surface impoundments”) as well as to establish requirements for currently exempt solid waste management units that involve the direct placement of CCR on the land (“CCR management units”). The Federal EPA is requiring that owners and operators of legacy surface impoundments comply with all of the existing CCR Rule requirements applicable to inactive CCR surface impoundments at active facilities, except for the location restrictions and liner design criteria. The rule establishes compliance deadlines for legacy surface impoundments to meet regulatory requirements, including a requirement to initiate closure within five years after the effective date of the final rule. The rule requires evaluations to be completed at both active facilities and inactive facilities with one or more legacy surface impoundments. Closure may be accomplished by applying an impermeable cover system over the CCR material (“closure in place”) or the CCR material may be excavated and placed in a compliant landfill (“closure by removal”). Groundwater monitoring and other analysis over the next three years will provide additional information on the planned closure method. The rule has been appealed by numerous parties– including AEP – and that legal challenge remains pending before the court at this time.

Kentucky Power’s Mitchell Plant is equipped with a dry fly ash handling system and dry ash landfill to meet current permit requirements. On July 15, 2021, in Case No. 2021-00004, the Public Service Commission of Kentucky granted Kentucky Power’s application for a Certificate of Public Convenience and Necessity to construct environmental projects at the Mitchell Plant to comply with the CCR rule, but not the ELG Rule. Kentucky Power has converted the units to dry bottom ash handling and has begun closure of the Bottom Ash Pond. Closure was completed in 2024.

Clean Water Act Regulations

The Federal EPA’s ELG rule for generating facilities establishes limits for FGD wastewater, fly ash and bottom ash transport water and flue gas mercury control wastewater, which are to be implemented through each facility’s wastewater discharge permit. In April 2024, the Federal EPA finalized further revisions to the ELG rule that establish a zero liquid discharge standard for FGD wastewater, bottom ash transport water, and managed combustion residual leachate, as well as more stringent discharge limits for unmanaged combustion residual leachate. The revised rule provides a new compliance alternative that would eliminate the need to install zero liquid discharge systems for facilities that comply with the 2020 rule’s control technology requirements and commit by December 31, 2025 to retire by 2034. Management is evaluating the compliance alternatives in the rule, taking into consideration the requirements of the other new rules and their combined impacts to operations. Several appeals have been filed with various federal courts challenging the 2024 ELG rule.