COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR APPROVAL TO AMEND ITS ENVIRONMENTAL COMPLIANCE PLAN AND RECOVER COSTS PURSUANT TO ITS ENVIRONMENTAL SURCHARGE, AND FOR THE ISSUANCE OF A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AND OTHER GENERAL RELIEF	)	CASE NO. 2024-00109

O R D E R

On May 17, 2024,[1] East Kentucky Power Cooperative, Inc. (EKPC), filed an application pursuant to KRS 278.020, KRS 278.183, 807 KAR 5:001 and other applicable law, and requested an Order:

> (1) approving EKPC's proposed amendment of its Environmental Compliance Plan (ECP or Compliance Plan); (2) granting EKPC authority to recover the costs associated with the said Compliance Plan amendment through its existing environmental surcharge; (3) issuing a Certificate of Public Convenience and Necessity (CPCN) for the construction of certain facilities associated with the said Compliance Plan amendment; and (4) granting all other required relief.

EKPC requested the Commission authorize an amendment to its Compliance Plan to include an additional project necessary to comply with the disposal of coal combustion residuals based on the Electric Utilities Coal Combustion Residual Rule (CCR Rule), the Clean Water Act (CWA), and other federal and state environmental requirements and

[1] Application (filed May 17, 2024).

obligations that arise from the use of coal in the generation of electric energy. In its proposed Compliance Plan, EKPC, while simultaneously seeking the requisite CPCN, sought to included:

1. A project to construct Peg's Hill (Area D) Phase 3 of the landfill at its Hugh L. Spurlock Station in Mason County, Kentucky (Spurlock Station); and

2. To recover the costs associated with this project through its environmental surcharge pursuant to KRS 278.183.[2]

EKPC's Compliance Plan was last reviewed and approved in Case No. 2023-00177.[3] EKPC plans to finance the Peg's Hill (Area D) Phase 3 project through funds available to it from normal operations, or funds available through its unsecured Credit Facility. Once completed, any short-term debt associated with the Peg's Hill (Area D) Phase 3 project is proposed to be refinanced using long-term debt available under EKPC's Trust Indenture.[4]

The Commission issued an Order on June 11, 2024, establishing a procedural schedule for the processing of this case.[5] There were no intervenors in the case. EKPC filed responses to three rounds of data requests propounded by Commission Staff.[6] On

[2] Application at 2.

[3] Case No. 2023-00177, *Electronic Application of East Kentucky Power Cooperative, Inc. for Approval to Amend Its Environmental Compliance Plan and Recover Costs Pursuant to Its Environmental Surcharge, and for Issuance of Certificates of Public Convenience and Necessity and Other Relief*, (Ky. PSC Jan. 11, 2024).

[4] Application at 11.

[5] Order (Ky PSC June 11, 2024).

[6] EKPC's Response to Staff's First Request for Information (Staff's First Request) (filed July 16, 2024). EKPC's Response to Staff's Second Request for Information (Staff's Second Request) (filed Aug. 13, 2024). EKPC's Response to Staff's Third Request for Information (Staff's Third Request) (filed Sep. 6, 2024).

September 6, 2024, EKPC filed a request that the matter be submitted for a decision based upon the existing record.[7] Accordingly, this matter is now submitted for a decision based upon the existing record.

BACKGROUND

EKPC is a not-for-profit, rural electric cooperative corporation established under KRS Chapter 279. EKPC is an electric utility that generates, transmits, and sells wholesale electricity to its 16 owner-member distribution cooperatives.[8] Those distribution cooperatives, in turn, distribute and sell electricity at retail to approximately 560,000 customers in all or portions of 89 counties in Kentucky.[9] EKPC owns and operates a total of approximately 3,100 megawatts (MW) of net summer generating capability and 3,400 MW of net winter generating capability.[10] EKPC owns and operates 1,346 MW of coal-fired generation at the Spurlock Station.[11]

Spurlock Station

EKPC's largest coal-fired electric generation facility is the Spurlock Station located a few miles west of downtown Maysville, Kentucky.[12] The Spurlock Station is situated along the Ohio River and consists of four electric generation units.[13]

[7] EKPC's Motion to Submit (filed Sept. 6, 2024).

[8] Application at 3.

[9] Application at 3.

[10] Application at 3.

[11] Application at 3.

[12] Application at 4.

[13] Application at 4.

Spurlock Unit 1 began commercial operation on September 1, 1977, and has a net generating capacity of 300 MW, utilizing conventional pulverized coal fired boilers. The unit is equipped with low Nitrogen Oxides (NOx) burners, selective catalytic reduction (SCR) technology, a cold-side electrostatic precipitator (ESP), a wet flue gas desulfurization (FGD) scrubber; and a wet ESP.[14]

Spurlock Unit 2 became operational on March 2, 1981; at 510 MW of net generating capacity, it is the largest electric generation unit at the Spurlock Station. Spurlock Unit 2 is also designed with a conventional pulverized coal fired boiler. The unit is equipped with low NOx burners, SCR technology, a hot-side ESP, wet FGD scrubber and a wet ESP.[15]

Spurlock Unit 3 is also known as the E.A. Gilbert Unit (Gilbert Unit) and began commercial operations on March 1, 2005. The Gilbert Unit has a net generating capacity of 268 MW and utilizes Circulating Fluidized Bed (CFB) technology for steam generation. The CFB combustion technology is considered an environmental control technology. The Gilbert Unit is also equipped with selective non-catalytic reduction technology, a dry FGD scrubber and baghouse.[16]

Spurlock Unit 4 is a sister unit to the Gilbert Unit, which became operational on April 1, 2009, with a net generating capacity 268 MW. Spurlock Unit 4 also employs CFB combustion technology, which is considered an environmental control technology. In

[14] Application at 4.

[15] Application at 4.

[16] Application at 5.

addition, Spurlock Unit 4 is equipped with selective non-catalytic reduction technology, a dry FGD scrubber and baghouse.[17]

The Spurlock Station primarily burns a range of eastern bituminous coals that is delivered by barge and stored on site on a 490,000 ton-capacity coal pile. Coal is transferred from the coal pile to each unit's fuel delivery system via a series of conveyors.[18] According to the application, the four units at the Spurlock Station are among the least expensive electric generation units in the EKPC fleet and have maintained favorable capacity and availability factors. The Spurlock Units participate in the PJM Reliability Pricing Model (RPM) Capacity Market.[19] Furthermore, EKPC reported that there is no planned shutdown or decommissioning scheduled for any of the four Spurlock Units through 2038.[20]

Applicable Environmental Standards

EKPC stated it complies with nearly a dozen federal rules that have been promulgated under the authority of the Clean Air Act (CAA), including: New Source 8 Performance Standards; New Source Review; Title IV of the CAA, including rules governing pollutants that contribute to acid deposition; Title V operating permit requirements; Mercury and Air Toxics Standards; summer ozone trading program requirements promulgated after the United States Environmental Protection Agency (EPA) acted upon Section 126 Petitions and the Ozone State Implementation Plan Call;

[17] Application at 5.

[18] Application at 5, paragraph 9.

[19] Application at 6, paragraph 12.

[20] EKPC's Response to Staff's First Request, Item-11.

National Ambient Air Quality Standards for Sulfur Dioxide, Nitrogen Dioxide, Carbon Monoxide, Ozone, Particulate Matter, Particulate Matter of 2.5 microns or less and Lead; the Cross State Air Pollution Rule; and the Regional Haze Rule.[21]

The EPA also promulgated the Effluent Limitation Guidelines (ELG) and Standards for the Steam Electric Power Generating Point Source Category 2016.[22] The standards set forth in the ELG Rule are incorporated into the Kentucky Pollutant Discharge Elimination System (KPDES) requirements imposed upon EKPC by the Kentucky Energy and Environment Cabinet's Division of Water (DOW).[23]

The CCR Rule governs the classification, collection, and disposal of certain by-products of the combustion of coal (fly ash, bottom ash, boiler slag, and flue gas desulfurization materials).[24] According to EKPC, the final CCR Rule, which became effective October 19, 2015, applies to owners and operators of new and existing landfills and new and existing surface impoundments (including all lateral expansions of such landfills and surface impoundments) where CCR material is disposed.[25] In addition, EKPC stated , the principal objectives of the CCR Rule are as follows:

1. Impose structural integrity requirements to reduce the risk of catastrophic failure of CCR landfills and impoundments;

2. Protect groundwater through monitoring and corrective actions, location restrictions, and landfill and impoundment liner design criteria;

[21] Application at 7–8.

[22] Application at 9.

[23] Application at 9.

[24] Application at 8.

[25] Application at 8.

3. Adopt operating criteria for CCR landfills and impoundments;

4. Impose record-keeping, notification, and publicly available internet website posting obligations;

5. Establish obligations for inactive CCR landfills and impoundments;

6. Administer state programs to implement the CCR Rule;

7. Establish CCR landfill and impoundment closure obligations; and

8. Establish guidelines for beneficial reuse of CCR materials.[26]

DISCUSSION AND FINDINGS

CPCN

The Commission's standard of review of a request for a CPCN is well settled. No utility may construct or acquire any facility to be used in providing utility service to the public until it has obtained a CPCN from this Commission. To obtain a CPCN, the utility must demonstrate a need for such facilities and an absence of wasteful duplication.[27] Need requires:

> [A] showing of a substantial inadequacy of existing service, involving a consumer market sufficiently large to make it economically feasible for the new system or facility to be constructed or operated.
> [T]he inadequacy must be due either to a substantial deficiency of service facilities, beyond what could be supplied by normal improvements in the ordinary course of business; or to indifference, poor management or disregard of the rights of consumers, persisting over such a period of time as to establish an inability or unwillingness to render adequate service.[28]

[26] Application at 8-9.

[27] *Kentucky Utilities Co. v. Pub. Serv. Comm'n*., 252 S.W.2d 885 (Ky. 1952).

[28] *Kentucky Utilities Co. v. Pub. Serv. Comm'n*., 252 S.W.2d at 890.

Wasteful duplication is defined as an excess of capacity over need, an excessive investment in relation to productivity or efficiency, and an unnecessary multiplicity of physical properties.[29] To demonstrate that a proposed facility does not result in wasteful duplication, the Commission has held that the applicant must demonstrate that a thorough review of all reasonable alternatives has been performed.[30]

Spurlock Station CPCN

EKPC proposed to construct Peg's Hill (Area D) Phase 3 landfill. EKPC has designed the Peg's Hill (Area D) Phase 3 landfill cell to be 31.47 acres and provide approximately 4,000,000 cubic yards of ash disposal capacity for the Spurlock Station.[31] Landfill cells are designed to target two to three years of CCR disposal capacity, and the landfill cells are expected to be constructed in one calendar year. The Peg's Hill (Area D) Phase 3 construction is projected to provide capacity through 2028. The design construction will comply with all state and federal regulations and will include a composite liner system and a continuous leachate collection system. Additional scope elements of the landfill cell construction include perimeter ditches and drainage features, subgrade preparation, and access roads.[32] The anticipated cost of the Peg's Hill (Area D) Phase 3 landfill cell is $24.6 million. The annual on-going operation and maintenance expense is estimated to be $242,000.[33]

[29] *Kentucky Utilities Co. v. Pub. Serv. Comm'n*., 252 S.W.2d at 890.

[30] Case No. 2005-00142, *Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity for the Construction of Transmission Facilities in Jefferson, Bullitt, Meade, and Hardin Counties, Kentucky* (Ky. PSC Sept. 8, 2005).

[31] Application at 10.

[32] Application at 10.

[33] Application at 10.

EKPC stated that the utility needed to ensure that it did not run out of landfill capacity at the Spurlock Station that is used to manage the CCR byproducts which result from burning coal during electricity generation and thus complying with federal CCR Rule requirements.[34] Federal regulations under the CCR Rule mandate the clean closure of the on-site surface impoundment at Spurlock Station, which ceased receiving CCR in October 2022. EKPC is now actively removing the remaining CCR from this impoundment, a process dictated by federal compliance, and disposing of it in the existing permitted landfill at the station. This ongoing removal effort, coupled with the daily production of CCR, has significantly increased the need for disposal capacity.[35]

At the Spurlock Station, EKPC evaluated in detail the following three onsite and offsite CCR disposal alternatives. One alternative that EKPC considered was disposal of CCR material in an existing permitted municipal solid waste landfill.[36] A second alternative that EKPC considered was construction of a new landfill to be constructed by EKPC at a site located less than ten miles from the Spurlock Station.[37] The third alternative, the preferred option, EKPC considered was the construction of an on-site CCR landfill (Area D Landfill site) at Spurlock Station in Mason County, Kentucky.[38] In addition to disposal costs, the various means of CCR transportation for each disposal

[34] Application, Exhibit 3, Direct Testimony of Jarrad Burton (Burton Direct Testimony) at unnumbered PDF page 81.

[35] Application, Exhibit 2, Direct Testimony of Jerry B. Purvis at unnumbered PDF page 35.

[36] Application at 10.

[37] Application at 10.

[38] Application at 10.

option were also considered.[39] Of the alternatives evaluated, the Peg's Hill (Area D) Phase 3 Landfill site at Spurlock Station was identified as the preferred alternative.[40]

According to EKPC, the selected proposal provides a significant cost advantage when the total disposal and transportation costs are projected over the life of the alternatives. The Total Disposal and Transportation Costs over the project life of the alternatives ranges from $108,360,000 to $796,068,000.[41] The Peg's Hill (Area D) Phase 3 alternative is the lowest projected cost. According to EKPC, the cost of the Peg's Hill (Area D), Phase 3 over its projected life was less than half of the next lowest cost alternative that EKPC evaluated and provided. EKPC concluded that the Peg's Hill (Area D) Phase 3 landfill cell is the most reasonable, least-cost option to address the Spurlock Station CCR disposal needs.[42]

Based on a careful review of assumptions and the alternatives considered,[43] the Commission finds that EKPC has produced a reasonable plan to assure its compliance with current environmental regulations. EKPC has provided sufficient evidence showing that the Peg's Hill (Area D) Phase 3 landfill cell is the most reasonable, least-cost option to address the Spurlock Station CCR disposal needs and will not result in wasteful duplication. Therefore, the Commission agrees with EKPC's conclusion and further discusses its findings below.

[39] Application at 10.

[40] Direct Testimony of Patrick Bischoff at 6.

[41] Application, Attachment JP-3 at 24.

[42] Burton Direct Testimony at unnumbered PDF page 86.

[43] EKPC's Response to Staff's First Request, Items 6-9.

For the Commission to grant a CPCN, EKPC must demonstrate need and absence of wasteful duplication associated with the project. EKPC stated that, so long as Spurlock Station is producing energy, it will need additional landfill space. This application was made in order to avoid any lapse in the availability of landfill space. The Commission finds that EKPC has provided sufficient evidence that it has an ongoing need for landfill space. In addition, the Commission finds that EKPC has provided sufficient evidence that there will be a lack of wasteful duplication. The Peg's Hill (Area D) Phase 3 landfill is located on EKPC property, the site is only available to EKPC and no other competitor, it is internal only to EKPC and its existing operations, and the site conforms to existing regulatory approvals. Therefore, this proposal is not duplicative. The proposed Spurlock Station landfill, Peg's Hill (Area D) Phase 3 presents the most reasonable, least cost option for continued operation of the Spurlock Station and ensures the safe and compliant storage of by-products from the burning of coal on the property.

Based on a review of the evidence, the Commission notes that the Spurlock Station is highly efficient, cost-effective, and plays a critical role in EKPC's energy operations as it is relied upon heavily by EKPC. The Spurlock Station stands out as EKPC's most cost-effective plant on a per MWh basis and one of its most efficient facilities. It is the primary resource for meeting the bulk of EKPC's base native load, surpassing the contributions of other units in the fleet. Additionally, the Spurlock Station's operational reliability and efficiency allow EKPC to sell off additional energy and/or capacity within the PJM market when the facility is bid into the PJM market. Therefore, based on an analysis of the Spurlock Station's performance and operating data coupled with a plant condition assessment based on a review of the major availability detractors,

there is sufficient evidence that the Spurlock facility should continue to operate well within acceptable industry standards now and into the foreseeable future which in turn supports the investment proposed by this project.

Spurlock CCR Beneficial Use

Also, based on a review of the EKPC response to the CCR disposal data request,[44] the Commission recommends that EKPC investigate the potential for modifying the CCR fly ash, gypsum, and bottom ash product handling processes to support a new beneficial reuse market. The Commission will continue to monitor the viability of this waste byproduct as a source of revenue and continue to require an update as part of this case. Updates should be provided annually with EKPC's semi-annual environmental surcharge mechanism (ESM) filing.

Environmental Surcharge Calculation

EKPC sought approval to amend its Compliance Plan to include the Peg's Hill (Area D) Phase 3 landfill cell as well as recover through its environmental surcharge the approximate cost of $24.6 million and annual ongoing operation and maintenance costs of $242,000 associated with this project.[45] The Commission has reviewed the evidence and finds EKPC's calculation of the approximate $24.6 million in costs associated with the project reasonable and finds that it should be approved.

Initially, any expenditures related to the project will be funded by general corporate cash and borrowings on the Revolving Credit Facility. EKPC intends to replace any

[44] EKPC's Response to Staff's Second Request, Item 2.

[45] Application at 23.

temporary financing with long-term debt issued under the existing trust indenture from the Rural Utilities Service or other lenders.[46]

Rate of Return and Rate Impact

The Settlement Agreement approved in Case No. 2004-00321 provided that the rate of return would be the weighted average debt cost of the debt issuances directly related to the projects in EKPC's Compliance Plan, multiplied by a Times Interest Earned Ratio (TIER) factor. The Settlement Agreement further provided that EKPC update the return and request Commission approval of the updated average cost of debt.[47]

EKPC calculated a weighted cost of debt as of December 31, 2023, of 4.396 percent.[48] EKPC calculated an updated rate of return as of December 31, 2023, of 6.484 percent, utilizing the TIER factor of 1.475 authorized in Case No. 2021-00103.[49] EKPC contended that it is reasonable to continue to use its 1.475 TIER to remain fair, just and reasonable.[50] EKPC explained that the approach of determining the rate of return using the TIER level authorized in the most recent base rate case multiplied by the weighted average cost of debt is consistent with the methodology utilized in every environmental surcharge review since the surcharge mechanism was authorized in Case No. 2004-00321.[51]

[46] Application, Exhibit 4, Direct Testimony of Thomas Stachnik (Stachnik Direct Testimony) at unnumbered PDF page 290.

[47] Case No. 2004-00321, *Application of East Kentucky Power Cooperative, Inc. for Approval of an Environmental Compliance Plan and Authority to Implement an Environmental Surcharge* (Ky. PSC Mar 17, 2005), Order Appendix A at 3.

[48] Stachnik Direct Testimony at unnumbered PDF page 291.

[49] Stachnik Direct Testimony at unnumbered PDF page 291.

[50] Stachnik Direct Testimony at unnumbered PDF page 291.

[51] See Case No. 2004-00321, Mar. 17, 2005 Order.

Finally, EKPC estimated that the annual environmental surcharge impact to its Compliance Plan on a residential customer using 1,125 kWh of electricity each month would be $0.11 in 2025, $0.18 in 2026, $0.18 in 2027, and $0.17 in 2028.[52]

The Commission has reviewed the evidence and finds EKPC's determination of the update rate of return of 6.484 percent, reflecting the updated weighted average cost of debt of 4.396 percent and a 1.475 TIER factor reasonable and finds that it should be approved. The Commission finds that EKPC should use a rate of return of 6.484 percent for all environmental surcharge monthly filings after the date of this Order. In addition, the Commission, as set forth in KRS 278.183, approves EKPC to recover the expenses related to the Commission's consultants through the environmental surcharge. Finally, the Commission has reviewed the estimated annual rate impact of the updated environmental surcharge and finds it to be reasonable. However, the Commission can re-evaluate the reasonableness of the rate impacts in EKPC's ESM 6-month or 2-year investigation cases.

IT IS THEREFORE ORDERED that:

1. EKPC is granted a CPCN to construct the Spurlock Station Phase 3 Peg's Hill landfill.

2. EKPC's request to amend its Compliance Plan, as reflected in its application, for purposes of recovering the costs of the additional environmental projects through its environmental surcharge is granted.

[52] Application, Exhibit 7, Direct Testimony of Jacob Watson, Attachment JRW-3.

3. EKPC's request to revise its monthly environmental surcharge reporting formats to reflect the inclusion of the proposed project and the consultant expenses as set forth in its application is granted.

4. EKPC's proposed rate of return is approved.

5. EKPC shall continue to provide a status update to the Commission regarding possible beneficial uses of the Cooper Station's fly ash, bottom ash, and gypsum. EKPC shall include this status update in its semi-annual ESM filing.

6. The case is closed and removed from the Commission docket.

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PUBLIC SERVICE COMMISSION

Chairman

Commissioner

Commissioner

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KENTUCKY PUBLIC SERVICE COMMISSION

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