

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF EAST KENTUCKY POWER)	
COOPERATIVE, INC. FOR APPROVAL TO)	
AMEND ITS ENVIRONMENTAL COMPLIANCE)	
PLAN AND RECOVER COSTS PURSUANT TO)	CASE NO.
ITS ENVIRONMENTAL SURCHARGE,)	2017-00376
SETTLEMENT OF CERTAIN ASSET)	
RETIREMENT OBLIGATIONS AND ISSUANCE)	
OF A CERTIFICATE OF PUBLIC)	
CONVENIENCE AND NECESSITY AND OTHER)	
RELIEF)	

ORDER

On November 20, 2017, East Kentucky Power Cooperative, Inc. (“EKPC”) filed an application requesting: approval of certain amendments to its Environmental Compliance Plan (“2018 Compliance Plan”); authority to recover the costs associated with the changes contained in the 2018 Compliance Plan through EKPC’s existing environmental surcharge; a Certificate of Public Convenience and Necessity (“CPCN”) to construct environmental pollution control facilities associated with the 2018 Compliance Plan; and settlement of certain Asset Retirement Obligations (“ARO”) and regulatory assets.¹ EKPC states that the proposed environmental facilities are required in order to comply with the U.S. Environmental Protection Agency’s (“EPA”) Disposal of Coal Combustion Residuals from Electric Utilities Rule (“CCR Rule”); the EPA’s Effluent Limitation Guidelines and Standards for the Steam Electric Power Generating Point Source Category (“ELG Rule”); the Kentucky Pollutant Discharge Elimination System

¹ Application at 1.

(“KPDES”); and the Ohio River Valley Water Sanitation Commission (“ORANSCO”).² According to EKPC, the estimated cost for compliance with the CCR Rule and the ELG Rule at the Spurlock Generating Station (“Spurlock Station”) is \$262.4 million.³ EKPC will finance the proposed environmental compliance project through a combination of short-term financing available through its existing Credit Facility and the issuance of new long-term debt through its existing Trust Indenture.⁴

The Commission issued an Order on December 14, 2017, establishing a procedural schedule for the processing of this case. The procedural schedule provided for, among other things, a deadline for intervention requests, two rounds of discovery upon EKPC’s application, an opportunity for any intervenor to file testimony, discovery upon any intervenor testimony, and an opportunity for EKPC to file rebuttal testimony. The only intervenor in this matter is the Attorney General of the Commonwealth of Kentucky, by and through his Office of Rate Intervention (“Attorney General”). EKPC filed responses to two rounds of data requests propounded by Commission Staff and one round of data requests propounded by the Attorney General. The Attorney General did not file testimony and, hence, no discovery was conducted on any intervenor nor was there any rebuttal testimony filed by EKPC. On February 22, 2018, EKPC filed a motion requesting either a hearing be scheduled or, in the alternative, that the matter be submitted for a decision based upon the existing record. On March 2, 2018, the

² Application at 1–2, 9.

³ Application at 10. EKPC notes that its Cooper Generating Station is currently in compliance with the CCR Rule and the ELG Rule.

⁴ Application at 16.

Attorney General filed notice recommending that the matter be submitted for a decision on the existing evidentiary record. The Commission finds that the parties to this matter, either by requesting or recommending that the matter be decided upon the evidentiary record, have waived their right to a formal hearing. Accordingly, this matter is now submitted for a decision based upon the existing record.

BACKGROUND

EKPC is an electric utility that generates, transmits, and sells wholesale electricity to its 16 member distribution cooperatives.⁵ Those distribution cooperatives, in turn, distribute and sell electricity at retail to approximately 530,000 customers in all or portions of 89 counties in Kentucky.⁶

EKPC generation portfolio consisting of coal-fired baseload units, natural gas peaking units, landfill gas-to-energy facilities, a community solar facility, and purchased power agreements.⁷ EKPC owns and operates a total of approximately 2,965 megawatts (“MW”) of net summer generating capability and 3,267 MW of net winter generating capability.⁸ The two coal-fired base load assets are the Cooper Generating Station (“Cooper Station”) and the Spurlock Station. The Cooper Station has two generation units, is located in Pulaski County, Kentucky, and has a total generating capacity of 341 MW.⁹ EKPC states that the Cooper Station is currently in compliance

⁵ Application at 2.

⁶ *Id.*

⁷ Application at 3.

⁸ Direct Testimony of Don Mosier (“Mosier Testimony”) at 3.

⁹ *Id.*

with the CCR Rule and the ELG Rule.¹⁰ EKPC notes that the Cooper Station uses a dry ash collection system for bottom ash, fly ash, and sulfur dioxide scrubber waste material.¹¹ EKPC also notes that coal combustion residuals (“CCRs”) at the Cooper Station are dry when placed in the onsite permitted landfill.¹² EKPC further states that there are two ponds at the Cooper Station but that neither is classified as a CCR impoundment.¹³ Accordingly, EKPC does not anticipate any projects or modifications being necessary to continue operating both of the Cooper Station units in order to comply with the CCR Rule and the ELG Rule.¹⁴

The Spurlock Station is located in Mason County, Kentucky and has four coal-fired units totaling 1,346 MW capacity.¹⁵ Spurlock Units 1 and 2 are each equipped with low nitrogen oxide burners, selective catalytic reduction technology, electrostatic precipitators (“ESP”),¹⁶ wet flue gas desulfurization (“FGD”) scrubbers, and wet ESPs.¹⁷

¹⁰ EKPC’s response to Commission Staff’s First Request for Information (“Staff’s First Request”), Item 10.

¹¹ EKPC’s response to the Attorney General’s Request for Information, Item 8.

¹² *Id.*

¹³ *Id.* One of the pond collects coal pile and plant water runoff. The other is a sedimentation pond used to collect landfill storm water runoff.

¹⁴ EKPC’s response to Staff’s First Request, Item 10.

¹⁵ Direct Testimony of Craig A. Johnson (“Johnson Testimony”) at 2. Spurlock Unit 1 began commercial operation on September 1, 1977, and has a net capacity of 300 MW. Spurlock Unit 2 became operational on March 2, 1981, and has a net capacity of 510 MW. Spurlock Unit 3, or the Gilbert Unit, and Spurlock Unit 4 both utilizes a Circulating Fluidized Bed (“CFB”) technology and each unit has 268 MW of generating capacity. The Gilbert Unit became operational on March 1, 2005, and Spurlock Unit 4 began commercial operation on April 1, 2009. See Johnson Testimony at 2.

¹⁶ Spurlock Unit 1 has a cold-side ESP, whereas Spurlock Unit 2 has a hot-side ESP.

¹⁷ Johnson Testimony at 3.

The Gilbert Unit and Spurlock Unit 4 utilize CFB combustion technology, which in itself is an environmental control technology; both are equipped with selective non-catalytic reduction technology, flash dry absorber, dry FGD scrubbers, and baghouses.¹⁸

EKPC describes the Spurlock Station units as the “workhorses of the EKPC electric generation fleet”¹⁹ because of their high capacity factors and low-cost operations.²⁰ The Spurlock Station, primarily Spurlock Unit 2, also supplies steam to International Paper Company, which is located adjacent to the power station.²¹ The steam generated by Spurlock Unit 2 is needed by International Paper Company to continually operate its recycling facility that manufactures corrugated paper on a continuous year-round basis.²²

EKPC asserts that the Spurlock Station will need to be retrofitted with pollution control equipment to comply with the CCR Rule and the ELG Rule. The CCR Rule, which became effective on October 19, 2015, classifies CCRs as non-hazardous solid waste.²³ The CCR Rule applies to owners and operators, such as EKPC, of new and existing landfills and new and existing surface impoundments into which CCR material is disposed.²⁴ According to EKPC, the principle objectives of the CCR Rule are: 1) to

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.*

²¹ Johnson Testimony at 4.

²² *Id.*

²³ Direct Testimony of Jerry B. Purvis (“Purvis Testimony”), at 5.

²⁴ *Id.*

impose structural integrity requirements to mitigate against catastrophic failures of CCR landfills and impoundments; 2) protecting groundwater through monitoring, location restrictions, and liner design criteria for landfills and impoundments; 3) to impose operating protocols for CCR landfills and impoundments; 4) require record keeping, notification, and online posting obligations; 5) obligations for inactive CCR impoundments; 6) administration of state programs to implement the CCR Rule; 7) closure requirements for CCR landfills and impoundments; and 8) guidelines for beneficial reuse of CCR materials.²⁵ EKPC states that the goal of the CCR Rule is to close ash ponds and landfills that pose a threat to the public, health, and welfare.²⁶

The ELG Rule became effective on January 4, 2016, and establishes revised effluent limitations and standards for various wastewater streams from several processes and byproducts at coal-fired steam electric generating plants.²⁷ EKPC states that the ELG Rule establishes the best-available-technology-economically-achievable requirements for existing facilities.²⁸ In addition to the CCR Rule and the ELG Rule, EKPC asserts that the KPDES permitting process will likely require stricter metal limitations in effluent sources.²⁹ EKPC further asserts that the same control equipment used to meet federal effluent limitation guidelines will also ensure compliance with water quality-based effluent limitations as required under state regulations as administered by

²⁵ Purvis Testimony at 6.

²⁶ *Id.* at 7.

²⁷ *Id.* at 18.

²⁸ *Id.*

²⁹ *Id.* at 20–21.

the Kentucky Division of Water (“KDOW”).³⁰ EKPC avers that its existing KPDES permit is implicated in both a planned expansion of its existing landfill, or a proposed new landfill, pursuant to the CCR Rule and 401 KAR Chapter 46, with increased location restrictions, liner requirements, leachate collection requirements, groundwater monitoring, and other technical requirements that are anticipated to apply.³¹ Lastly, EKPC maintains that it is also subject to the authority of ORANSCO,³² which was established to control and abate pollution in the Ohio River basin. EKPC states that ORANSCO plans to implement additional limitations on the level of certain bacteria and certain chemical constituents to be met outside the mixing zone.³³

In order to comply with the CCR Rule and the ELG Rule, EKPC states that it must make investments at the Spurlock Station to change the way it handles and disposes of CCR materials while also managing the effluent from its coal-fired electric generation processes.³⁴ EKPC further states that the proposed environmental compliance projects also will position the company to comply with anticipated mandates in its pending water permit from KDOW.³⁵

³⁰ *Id.* at 21.

³¹ *Id.*

³² ORANSCO is an interstate commission representing the states of Indiana, West Virginia, New York, Illinois, Kentucky, Pennsylvania, Virginia, and Tennessee and the federal government to protect the drainage area basin of the Ohio River and to improve the water quality in the Ohio River and its tributaries. See Purvis Testimony at 23.

³³ Purvis Testimony at 23–24.

³⁴ Purvis Testimony at 25.

³⁵ *Id.*

PROPOSED 2018 COMPLIANCE PLAN

EKPC states that, in developing its compliance strategy, it took into account not only cost, which is a critical factor, but also whether the measures will maximize returns on capital investments while also mitigating exposure to stranded costs, in order to limit the impact on system reliability and exposure to future regulatory changes, which is consistent with EKPC's strategic plan.³⁶ EKPC states that it also focused on protecting its existing investment in the Spurlock Station because the station provides significant economic value to EKPC and its members.³⁷ EKPC retained Navigant Consulting, Inc. ("Navigant") to perform a study to analyze the economic vitality of Spurlock Units 1 and 2 as coal-fired generation resources and as units converted to natural gas-fired generation resources.³⁸ Navigant also analyzed an alternative in which Spurlock Units 1 and 2 were replaced entirely with a new natural gas combined-cycle unit.³⁹ The analysis assisted EKPC in determining whether proceeding with installing pollution control equipment at the Spurlock Station would be the best option over the long term, i.e., 20 years, by assessing whether the continued operation of Spurlock Units 1 and 2 as coal-fired generation resources offered value to EKPC and its members.⁴⁰ The three alternatives were modeled across the following five scenarios: base case,⁴¹ high

³⁶ Johnson Testimony at 6. *See also* Mosier Testimony at 6.

³⁷ Mosier Testimony at 9–10.

³⁸ Direct Testimony of Ralph L. Luciani ("Luciani Testimony") at 2–3.

³⁹ Luciani Testimony at 3.

⁴⁰ *Id.*

⁴¹ The base case uses a reasonable estimate of future fuel costs and load growth, but excludes any future pricing for carbon dioxide emissions as was proposed under the Clean Power Plan. Luciani Testimony, Exhibit RL – 2, at 3–4.

fuel, low fuel, Clean Power Plan (“CPP”), and low load.⁴² The Navigant study indicates that retaining Spurlock Units 1 and 2 as coal-fired generation resources has higher average 20-year capacity factors and higher average operating margins than the other two alternatives in the base, low-load, and high-fuel scenarios.⁴³ The energy market operating margins range from \$29.34 per kW-year (low-load scenario) to \$145.03 per kW-year (high-fuel scenario) for Spurlock Unit 1 and from \$36.97 per kW-year (low-load scenario) to \$150.89 per kW-year (high-fuel scenario) for Spurlock Unit 2.⁴⁴ The new combined-cycle alternative had higher average capacity factors and higher average operating margins in the low-fuel and CPP scenarios.⁴⁵ The energy market operating margins associated with the new combined-cycle alternative were \$47.08 per kW-year and \$42.82 per kW-year for the low-fuel scenario and the CPP scenario, respectively.⁴⁶ Under the base case scenario, the projected energy market operating margins for Spurlock Units 1 and 2 are \$47.32 per kW-year and \$54.93 per kW-year, respectively.⁴⁷ The new combined-cycle alternative’s energy market operating margin under the base case scenario is \$31.92 per KW-year.⁴⁸

EKPC asserts that its 2018 Compliance Plan allows for the modification of the existing Spurlock Station facilities to comply primarily with the CCR Rule and the ELG

⁴² Luciani, Exhibit RL – 2, at 3.

⁴³ *Id.* at 2.

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.*

Rule while preserving the long-term usefulness of the four generating units that have been, and continue to be, the mainstay of the EKPC generation fleet.⁴⁹ EKPC's 2018 Compliance Plan consists of the following components:

1. Bottom Ash Handling System – The existing bottom ash system will be converted from a wet sluicing system to a dry ash system. A separate pyrites handling system with dewatering bins and settling basin will also be installed.⁵⁰ The new dry ash system will eliminate the use of water to transport bottom ash to the ash pond. The bottom ash system for each unit will be replaced with a dry bottom ash collection system, which will pneumatically convey the bottom ash to a new silo located adjacent to the units. From the silo, the bottom ash will be loaded onto trucks and hauled to EKPC's onsite landfill.⁵¹ The estimated cost for this component is \$26.9 million.⁵²
2. Wastewater Treatment System – A new wastewater treatment plant will be constructed to process FGD blowdown wastewater⁵³ from Spurlock Units 1 and 2.⁵⁴ The wastewater treatment plant will provide a physical/chemical treatment of the FGD blowdown, which is required

⁴⁹ Johnson Testimony at 6.

⁵⁰ *Id.* at 11.

⁵¹ *Id.* at 14.

⁵² Direct Testimony of Sam Yoder, Exhibit SY – 2, at Appendix F, page 1 of 1.

⁵³ EKPC explains that a certain amount of waste water, or FGD blowdown water, is produced during the wet scrubbing process. FGD blowdown water contains solids from the scrubbing process and it is currently conveyed to the ash pond. See Johnson Testimony at 15.

⁵⁴ Johnson Testimony at 11.

because of the proposed closure of the ash pond.⁵⁵ The physical/chemical treatment removes solids and conditions the wastewater for certain usage.⁵⁶ The sludge produced by the physical/chemical process will be dewatered and will ultimately be transported by truck to the onsite landfill, with the water being recycled through the system.⁵⁷ The estimated cost for this component is \$83.1 million.⁵⁸

3. Fly Ash Handling System – A new fly ash storage silo will be constructed to handle fly ash generated by Spurlock Units 1 and 2.⁵⁹ The new fly ash storage silo is necessary to ensure redundancy for fly ash removal because sluicing the ash to the ash pond will no longer be available.⁶⁰ The estimated cost for this component is \$25.6 million.⁶¹
4. Ash Pond Closure – Because the ELG Rule prohibits sluicing of CCR materials after December 31, 2023, the existing ash pond will be clean closed by removing all of the approximately 1.75 million cubic yards of

⁵⁵ *Id.* at 15.

⁵⁶ *Id.* Those uses are: 1) to condition fly ash prior to loading into trucks; 2) to spray the wastewater into the Gilbert Unit or Spurlock Unit 4 dry scrubbing process to evaporate it; or 3) to distill the wastewater in the optimized mechanical vapor compression system.

⁵⁷ Johnson Testimony at 15.

⁵⁸ Exhibit SY – 2, Appendix F, page 1 of 1.

⁵⁹ Johnson Testimony at 12.

⁶⁰ *Id.*

⁶¹ Exhibit SY – 2, Appendix F, page 1 of 1.

CCR material from the 67-acre ash pond.⁶² The CCR material will be transported and placed into the onsite landfill. EKPC states that is in the process of expanding its existing landfill to provide additional storage capacity.⁶³ After CCR materials are removed, the ash pond's existing dams will be left in place, new topsoil and seed will be applied over disturbed areas, and, as discussed below, a new water mass balance pond will be established within the footprint of the original impoundment.⁶⁴ The estimated cost for this component is \$43.4 million.⁶⁵

5. Water Mass Balance ("WMB") Pond Chemical Treatment System – EKPC will repurpose 17 acres of the existing ash pond as a new lined WMB Pond, which will aid in settling constituents from various plant process

⁶² Johnson Testimony at 13, 17. According to EKPC, clean closure of the ash pond is required because it is located within a 100-year flood plain of the Ohio River.

⁶³ Johnson Testimony at 13.

⁶⁴ Johnson Testimony at 13.

⁶⁵ Exhibit SY – 2, Appendix F, page 1 of 1.

flows including coal pile runoff stream, neutralization basins, clarifiers and air heater wash wastewater, non-chemical metal cleaning wastes, and storm water.⁶⁶ The WMB Pond is needed because the existing ash pond, which received all plant process water, will be closed and the treatment provided by WMB Pond will allow EKPC to remain in compliance with its KPDES discharge permit.⁶⁷

6. Balance of Plant System – New piping, controls, instrumentation, and electrical and mechanical equipment will be installed to operate the various components associated with the 2018 Compliance Plan project.⁶⁸ The added parasitic load is expected to be between 5 and 6 MWs.⁶⁹ The estimated cost for this component is \$3.4 million.⁷⁰

The estimated total cost of the 2018 Compliance Plan is \$262.4 million,⁷¹ with expected incremental annual operation and maintenance cost of \$4.2 million.⁷² EKPC estimates that \$3.1 million in existing assets will be considered stranded as a result of

⁶⁶ Johnson Testimony at 13.

⁶⁷ Johnson Testimony at 18.

⁶⁸ Johnson Testimony at 12.

⁶⁹ Johnson Testimony at 17.

⁷⁰ Exhibit SY – 2, Appendix F, page 1 of 1.

⁷¹ The total cost consists of \$188.9 in total direct costs; \$41.9 million in indirect costs; \$23.1 in contingency costs; and \$8.5 million in owner's costs. See, Exhibit SY – 2, Appendix F, page 1 of 1. See also Direct Testimony of Isaac S. Scott ("Scott Testimony") at 3. Based upon estimates provided by Burns and McDonnell, EKPC will spend the following approximate amounts over the next seven years: \$40 million through the end of 2018; \$96 million in 2019; \$70 million in 2020; \$18 million in 2021; \$12 million in 2022; \$20 million in 2023; and \$6 million in 2024. See Direct Testimony of Tom Stachnik at 5–6.

⁷² Exhibit SY – 2, Appendix F, unnumbered page 2. The annual operating and maintenance cost consists of \$1.7 million for labor, \$1.4 million for incremental chemical and electrical costs, and \$1.1 million for additional hauling cost. See Johnson Testimony at 23.

the proposed environmental compliance project.⁷³ If it is granted a CPCN, EKPC anticipates placing long-lead equipment orders and letting contracts shortly after May 2018.⁷⁴ Actual construction will begin in January 2019 and the project is expected to be completed by November 2024.⁷⁵ Although the compliance deadline for the ELG Rule is December 31, 2023, EKPC anticipates that it will be able to comply with the requirements of the ELG Rule on a timely basis and that any work in 2024 would only involve measures needed to wrap up the project.⁷⁶

Due to the proposed closure of the Spurlock ash pond, EKPC states that it intends to expand the existing onsite landfill by 2020 in order to accommodate the transfer and disposal of the CCR materials from the ash pond and to allow EKPC to dispose of CCR materials that will be generated by the Spurlock Station in the future. EKPC asserts that it is in the process of permitting additional space adjacent to the existing landfill.⁷⁷ EKPC further asserts that the design and construction of the new landfill, known as Peg's Hill Landfill, will meet all design requirements contained in the CCR Rule.⁷⁸ The Peg's Hill Landfill is being permitted for a total of 181 acres of disturbance, which will accommodate 25 million cubic yards of waste material and will have an estimated capacity limit of 14 years. The estimated total cost of the Peg's Hill Landfill is approximately \$10.3 million, of which \$5.2 million is associated with the phase

⁷³ Johnson Testimony at 11.

⁷⁴ *Id.* at 19.

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ Application at 15.

⁷⁸ EKPC's response to Commission Staff's First Request for Information, Item 16.

one cell construction. EKPC states that it is not seeking a CPCN for the Peg's Hill Landfill.⁷⁹

In addition to the proposed environmental compliance plan project, EKPC evaluated the following four options.⁸⁰

1. Converting Spurlock Units 1 and 2 to natural gas-fired units ("Option 1") – Although the conversion option would allow EKPC to avoid much of the cost of complying with the CCR Rule and the ELG Rule, EKPC states that any cost savings would be more than offset by the capital cost needed to convert the units from coal to natural gas and the cost associated with having to construct a dedicated natural gas transmission line to connect the Spurlock Station to an interstate natural gas pipeline.⁸¹ Also, EKPC states that it would have to procure power during the period when reconstruction of the units would be occurring, which could result in significant costs.⁸² The estimated cost of this option is approximately \$306.6 million.⁸³ EKPC notes that this option would also incur significant costs associated with stranded assets requiring rate recovery.⁸⁴ Specifically, EKPC states that the estimated net book value as of

⁷⁹ Subsequent to the filing of the instant application, EKPC submitted a request for a Staff opinion regarding the need for a CPCN for the Peg's Hill portion of the Spurlock landfill. However, in PSC Staff Opinion 2018-007, Staff declined to issue an advisory opinion on the issue, noting that the issue presented in the letter request was closely related to matters at issue in the instant case and would likely be addressed therein.

⁸⁰ Johnson Testimony at 7.

⁸¹ *Id.*

⁸² *Id.*

⁸³ Johnson Testimony at 8.

⁸⁴ *Id.* at 7.

December 31, 2022 of stranded assets contemplated in converting Spurlock Units 1 and 2 to natural gas would be \$79.9 million.⁸⁵

2. Retiring Spurlock Units 1 and 2 and constructing a new 600 MW combined-cycle natural gas unit at the Smith Generating Station and purchasing 200 MW of power from the wholesale market through a bilateral power purchase agreement (“Option 2”) – EKPC states that the cost of constructing a new natural gas combined-cycle unit would be cost prohibitive and would also leave EKPC with significant stranded costs at the Spurlock Station.⁸⁶ EKPC states that the purchased power agreement component of this option exposes it to price risk in the future.⁸⁷ The estimated cost for this option is approximately \$560 million.⁸⁸ Additionally, EKPC states that the net book value as of December 31, 2022 of the assets stranded in retiring Spurlock Units 1 and 2 would be in excess of \$460 million.⁸⁹

3. Retire Spurlock Units 1 and 2 and enter into long-term market purchase of 800 MW of capacity and energy (“Option 3”) – EKPC states that the estimated cost of power for this option would be the price as established by the PJM Interconnection LLC (“PJM”) wholesale market plus a premium for capacity and energy at transaction dates.⁹⁰ EKPC is of the opinion that this option is not favorable for many of the same reasons as Option 2, including the exposure to market risks and lack of forward market

⁸⁵ EKPC’s response to Commission Staff’s Second Request for Information, Item 3.

⁸⁶ Johnson Testimony at 8.

⁸⁷ *Id.* at 8–9.

⁸⁸ *Id.* at 9.

⁸⁹ EKPC’s response to Commission Staff’s Second Request for Information, Item 3.

⁹⁰ Johnson Testimony at 9.

price transparency as one moves further out in time.⁹¹ In addition, EKPC maintains that this option would eliminate a key benefit of its membership in PJM, i.e., EKPC's ability to participate in PJM's capacity market to its economic advantage because EKPC is a winter peaking system and PJM is a summer peaking system.⁹² EKPC states that the cost for the ash pond closure would still need to be incurred and it would still have to incur stranded cost of at least \$460 million due to the retirement of Spurlock Units 1 and 2.⁹³

4. Replace Spurlock Units 1 and 2 wet FGD scrubbers with a new dry scrubber system ("Option 4") – EKPC estimates the cost for this option is approximately \$535 million, which does not include the cost of recovering certain stranded assets associated with the demolished wet scrubber system, the required ash pond closure costs, or purchases of up to 800 MW in required interim capacity and energy.⁹⁴

EKPC states that it selected a wide range of technical options for complying with the CCR Rule and the ELG Rule to identify any unique advantages or disadvantages related to future market or environmental regulatory conditions.⁹⁵ EKPC further states that all options it considered were required to deliver 800 MW of reliable generation and comply with the known requirements of both federal environmental rules.⁹⁶ EKPC asserts that the primary factors that it considered in evaluating the options were total

⁹¹ *Id.*

⁹² Application at 12.

⁹³ *Id.* See also, EKPC's response to Commission Staff's Second Request for Information, Item 3.

⁹⁴ Johnson Testimony at 10.

⁹⁵ *Id.*

⁹⁶ *Id.*

cost, operations and maintenance costs and impacts, flexibility and robustness in the face of changing market and environmental regulatory conditions, alignment with EKPC's strategic plan, and consideration of the impact of the operations of International Paper.⁹⁷ Based on EKPC's evaluation taking into consideration the above-mentioned factors, the company states that Options 3 and 4 were eliminated due to excessive cost and/or questionable viability.⁹⁸ EKPC then conducted an economic analysis comparing the proposed 2018 Compliance Plan and Option 1.⁹⁹ The economic analysis consists of a net present value evaluation comparing the two options for the period from 2017–2035 to determine the least-cost option to EKPC.¹⁰⁰ The results of EKPC's economic evaluation indicate that the 2018 Compliance Plan has a significantly lower cost than Option 4, or the natural gas conversion alternative.¹⁰¹

EKPC notes that upon the completion of the proposed 2018 Environmental Compliance Plan the ARO associated with the Spurlock ash pond would be eliminated.¹⁰² EKPC estimates the current cost of the Spurlock ash pond ARO to be approximately \$35.2 million as of December 31, 2017.¹⁰³ EKPC states that this balance

⁹⁷ *Id.*

⁹⁸ Johnson Testimony at 6, 10.

⁹⁹ Direct Testimony of Robin Hayes (“Hayes Testimony”) at 3.

¹⁰⁰ *Id.*

¹⁰¹ Hayes Testimony at 4.

¹⁰² Scott Testimony at 8.

¹⁰³ EKPC's response to Commission Staff Second Request for Information, Item 1.

is scheduled to accrete to \$41.8 million by December 31, 2024.¹⁰⁴ EKPC asserts that, under the relevant accounting rules, the precise amount of the ARO will be determined as EKPC expends dollars towards the ash pond closure.¹⁰⁵ EKPC also asserts that these expenditures will also reduce the value of the ARO on a dollar-for-dollar basis until such time as the closure is completed and the ARO is eliminated entirely, with any gain or loss transferred to the regulatory asset.¹⁰⁶ Lastly, EKPC points out that because the regulatory asset for accretion and depreciation expense approved in Case No. 2014-00432¹⁰⁷ is associated with the ARO, the completion of the proposed environmental compliance project will also allow EKPC the opportunity to amortize and recover the cost of the regulatory asset and eventually eliminate it from its balance sheet.¹⁰⁸ Accordingly, EKPC is proposing to allow the revenues from the 2018 Compliance Plan to offset the amortization of the regulatory asset associated with the proposed environmental compliance project.¹⁰⁹

Because the components of the 2018 Compliance Plan project will go into service at various times during the seven-year construction period, EKPC states that the annual revenue requirement impact will fluctuate from year to year.¹¹⁰ According to

¹⁰⁴ *Id.*

¹⁰⁵ Scott Testimony at 8.

¹⁰⁶ *Id.*

¹⁰⁷ Case No. 2014-00432, *Application of East Kentucky Power Cooperative, Inc. for an Order Approving the Establishment of Regulatory Assets for the Depreciation and Accretion Expenses Associated with Asset Retirement Obligations* (Ky. PSC March 6, 2015 and July 21, 2015).

¹⁰⁸ Scott Testimony at 8.

¹⁰⁹ *Id.* at 8–9.

¹¹⁰ *Id.* at 13.

EKPC, the estimated increase in average residential monthly bill is as follows: \$0.17 for 2018; \$0.56 for 2019; \$1.29 for 2020; \$2.12 for 2021; \$2.48 for 2022; \$2.64 for 2023; \$2.09 for 2024; and \$1.66 for 2025.¹¹¹

With respect to the \$3,117,497 in stranded cost resulting from the proposed 2018 Compliance Plan, EKPC states that \$2,141,127 of the total is related to assets currently recovered through base rates while the balance of \$976,370 is related to assets currently recovered through the environmental surcharge.¹¹² Because EKPC is required to remove these stranded assets from utility plant in service when retirement becomes probable or likely to occur, EKPC states that this could result in EKPC's recording a loss on its books in the retirement year of 2020.¹¹³ EKPC anticipates seeking a deferral of the loss and the creation of a regulatory asset and will file an application requesting such relief in a timely manner.¹¹⁴

DISCUSSION

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

¹¹¹ *Id.*

¹¹² *Id.* at 10.

¹¹³ *Id.*

¹¹⁴ *Id.* at 11.

public until it has obtained a CPCN from this Commission.¹¹⁵ To obtain a CPCN, the utility must demonstrate a need for such facilities and an absence of wasteful duplication.¹¹⁶

“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.¹¹⁷

“Wasteful duplication” is defined as “an excess of capacity over need” and “an excessive investment in relation to productivity or efficiency, and an unnecessary multiplicity of physical properties.”¹¹⁸ To demonstrate that a proposed facility does not result in wasteful duplication, we have held that the applicant must demonstrate that a thorough review of all reasonable alternatives has been performed.¹¹⁹ Selection of a proposal that ultimately costs more than an alternative does not necessarily result in

¹¹⁵ KRS 278.020(1). Although the statute exempts certain types of projects from the requirement to obtain a CPCN, the exemptions are not applicable.

¹¹⁶ *Kentucky Utilities Co. v. Pub. Serv. Comm’n*, 252 S.W.2d 885 (Ky. 1952).

¹¹⁷ *Id.* at 890.

¹¹⁸ *Id.*

¹¹⁹ 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).

wasteful duplication.¹²⁰ All relevant factors must be balanced.¹²¹

EKPC contends that the proposed 2018 Compliance Plan project satisfies the criteria for issuing a CPCN under KRS 278.020(1) because the project is needed to allow EKPC to comply with the ELG Rule and the CCR Rule as well as stringent effluent limitation to be imposed by KDOW and will not result in wasteful duplication.

Having reviewed the record and being otherwise sufficiently advised, the Commission finds that EKPC has sufficiently demonstrated that there is a need for the project contained in the 2018 Compliance Plan. We note that the closure of the ash pond at the Spurlock Station is required under the CCR Rule and that the combination of the ash pond closure and the requirements imposed by the ELG Rule will force EKPC to convert from a wet process to a dry process regarding the future treatment and disposal of CCR materials generated at the Spurlock Station.

The Commission further finds that the proposed alternative reflects the most reasonable least-cost alternative to comply with the CCR Rule and the ELG Rule. The project contained in the 2018 Compliance Plan was the least expensive option, ranging from approximately \$44.2 million to \$272.6 million lower, as compared to the alternatives evaluated and considered by EKPC. Accordingly, the Commission finds that EKPC should be granted a CPCN for the construction of the project contained in the 2018 Compliance Plan.

¹²⁰ See *Kentucky Utilities Co. v. Pub. Serv. Comm'n*, 390 S.W.2d 168, 175 (Ky. 1965). See also Case No. 2005-00089, *Application of East Kentucky Power Cooperative, Inc. for a Certificate of Public Convenience and Necessity for the Construction of a 138 kV Electric Transmission Line in Rowan County, Kentucky* (Ky. PSC Aug. 19, 2005), final Order.

¹²¹ Case No. 2005-00089, *East Kentucky Power Cooperative, Inc.* (Ky. PSC Aug. 19, 2005), final Order at 6.

With respect to the Peg's Hill Landfill, the Commission finds that a CPCN is required prior to the construction of the expansion of the existing Spurlock landfill. The Commission has recently expressed our concerns over potential cost escalation¹²² and uncertainty surrounding cost estimates in connection with multi-phase landfill projects¹²³ and has required an electric utility to obtain a CPCN for each of the future phases of a landfill prior to commencing construction on that particular phase of the landfill. Given that EKPC anticipates expanding the onsite landfill at the Spurlock Station every other year until full construction of permitted waste limits has been achieved, EKPC will be required to obtain a CPCN prior to commencing construction on each of the future phases of the Spurlock landfill. As for the Peg's Hill Landfill expansion, the Commission finds that the expansion is needed for the continued operation of the Spurlock Station and that the expansion represents the least-cost option of complying with the CCR Rule and the ELG Rule.¹²⁴

KRS 278.183

KRS 278.183(1) provides, in relevant part, as follows:

a utility shall be entitled to the current recovery of its costs of complying with the Federal Clean Air Act as amended and those federal, state, or local environmental requirements which apply to coal combustion wastes and by-products from

¹²² See Case No. 2015-00194, *Investigation of Kentucky Utilities Company and Louisville Gas & Electric Company's Respective Need for and Cost of Multiphase Landfills at the Trimble County and Ghent Generating Stations* (Ky. PSC Dec. 15, 2015).

¹²³ See Case No. 2015-00089, *Application of Duke Energy Kentucky, Inc. for a Declaratory Order that the Construction of a New Landfill Constitutes an Ordinary Extension in the Usual Course of Business or, in the Alternative, for a Certificate of Public Convenience and Necessity* (Ky. PSC July 24, 2015).

¹²⁴ We note that in Case No. 2015-00089, the market price of transporting and disposing of CCR materials in a commercial landfill was approximately \$33-\$35 per ton. A similar rate of \$39 per ton was utilized in Case No. 2014-00252 by EKPC. EKPC states in the instant matter that the Spurlock Station generates approximately 2.4 million tons of CCR materials per year, which would result in an annual expense of approximately \$78 million to use a commercial landfill.

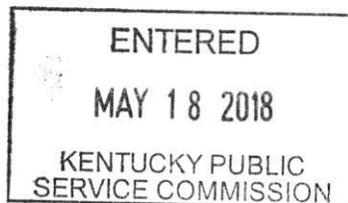
facilities utilized for production of energy from coal in accordance with the utility's compliance plan

Having reviewed the record and being otherwise sufficiently advised, the Commission finds that EKPC should be allowed to recover the costs associated with the projects contained in its proposed 2018 Compliance Plan via the environmental surcharge mechanism. Here, EKPC proposes a plan that would allow it to be in compliance with federal and state environmental requirements applicable to coal-combustion wastes, by-products, and effluents from facilities utilized for production of energy from coal.

IT IS HEREBY ORDERED that:

1. EKPC is granted a CPCN to construct the environmental compliance projects discussed herein, including the Peg's Hill Landfill, to comply primarily with the CCR Rule and the ELG Rule.
2. EKPC's request to amend its Environmental Compliance Plan as reflected in the 2018 Compliance Plan for purposes of recovering the costs of the proposed project through its environmental surcharge is granted.
3. EKPC's request to approve the settlement of the Spurlock ash pond ARO and associated regulatory asset as set forth in its application is granted.
4. EKPC shall file an appropriate application and seek Commission approval for a CPCN prior to commencing construction of any additional phases of landfill expansions at Spurlock.

By the Commission



ATTEST:


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