

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF DUKE ENERGY)	
KENTUCKY, INC. FOR A CERTIFICATE OF PUBLIC)	
CONVENIENCE AND NECESSITY TO CONSTRUCT)	CASE NO.
PHASE TWO OF ITS WEST LANDFILL AND)	2018-00156
APPROVAL TO AMEND ITS ENVIRONMENTAL)	
COMPLIANCE PLAN FOR RECOVERY BY)	
ENVIRONMENTAL SURCHARGE MECHANISM)	

ORDER

On June 15, 2018, Duke Energy Kentucky, Inc. (Duke Kentucky), filed an application pursuant to KRS 278.020(1), KRS 278.183, and 807 KAR 5:001, Sections 14 and 15, requesting a Certificate of Public Convenience and Necessity (CPCN) to construct Phase Two of Duke Kentucky's West Landfill (Phase Two) located at its East Bend Generating Station (East Bend). The estimated total cost associated with Phase Two is approximately \$23.3 million, with no incremental increase in operation and maintenance costs.¹ Duke Kentucky also requests approval to amend its Environmental Compliance Plan (ECP) to include the proposed Phase Two expansion and to recover the cost of that construction through Duke Kentucky's Environmental Surcharge Mechanism (ESM).

On July 17, 2018, the Commission issued an Order establishing a procedural schedule for the processing of this matter. The procedural schedule established a deadline for requests to intervene, and provided for two rounds of discovery on Duke

¹ Application at 7.

Kentucky's application, the opportunity for the filing of intervenor testimony, discovery upon intervenor testimony, and the opportunity for Duke Kentucky to file rebuttal testimony. The Attorney General of the Commonwealth of Kentucky, by and through the Office of Rate Intervention (Attorney General), petitioned for, and was granted, intervention. The Attorney General engaged in discovery, but did not file any testimony. On November 16, 2018, Duke Kentucky filed a motion requesting that the matter be submitted for a decision based upon the existing record and waived its right to a hearing. Duke Kentucky states that the Attorney General does not object to this motion and request. The Commission finds that, by either requesting that the matter be decided upon the evidentiary record or not objecting thereto, the parties to this matter have waived their right to a formal hearing. Accordingly, this matter is now submitted for a decision based upon the existing record.

BACKGROUND

Duke Kentucky is a utility engaged in the electric and natural gas business. Duke Kentucky purchases, sells, stores, and transports natural gas in Boone, Bracken, Campbell, Gallatin, Grant, Kenton, and Pendleton counties.² Duke Kentucky also generates electricity, which it distributes and sells in Boone, Campbell, Grant, Kent, and Pendleton counties.³

East Bend is located along the Ohio River in Boone County, Kentucky.⁴ The generating station consists of one base-load coal unit, which was commissioned in 1981

² Application at 2.

³ *Id.*

⁴ Direct Testimony of David Renner (Renner Testimony) at 2.

and has a net rating of 600 megawatts.⁵ East Bend is equipped with the following major pollution control features: high-efficiency hot side electrostatic precipitator, a lime-based flue gas desulfurization (FGD) system, and a selective catalytic reduction control system designed to reduce nitrogen oxide emissions by 85 percent.⁶ The FGD system was upgraded in 2005 to increase sulfur dioxide emissions removal to an average of 97 percent.⁷

East Bend also has two onsite landfills used for the storage and disposal of FGD waste and other coal combustion residual materials: the East Landfill and the West Landfill.⁸ The East Landfill is permitted to receive FGD waste, fly ash, and bottom ash produced by East Bend and other generating sources and is almost at capacity.⁹ The West Landfill was recently approved by the Commission, and the first cell was completed in late 2017. Similar to the East Landfill, the West Landfill is permitted to receive FGD waste, fly ash, and bottom ash.¹⁰ Approximately 80 percent of the ash produced at the East Bend Station is dry fly ash, which is mixed with spent scrubber slurry and lime to make a stable material called Poz-o-tec that sets up like concrete and is placed in the landfills.¹¹

⁵ *Id.*

⁶ Renner Testimony at 3.

⁷ *Id.*

⁸ *Id.*

⁹ *Id.* East Bend also has an ash pond but is in the process of closing that pond.

¹⁰ Renner Testimony at 5.

¹¹ *Id.* at 4.

The West Landfill will be constructed in eight phases with a projected completion date of 2056 for the last phase.¹² The first phase of the West Landfill (Phase One) was approved by the Commission in Case No. 2015-00089¹³ and placed into service on December 15, 2017.¹⁴ Duke Kentucky notes that the construction of Phase One included all infrastructure required to operate and maintain future cell construction in the West Landfill, e.g., roads for access and operation, electric transmission line, electrical equipment for powering necessary equipment for use at the landfill as well as environmental monitoring.¹⁵

PROPOSED PROJECT

Duke Kentucky states that Phase One of the West Landfill is estimated to reach capacity in 2021.¹⁶ Duke Kentucky advises that Phase One lacks sufficient space to meet operational requirements for daily replacement of Poz-o-tec.¹⁷ Specifically, Duke Kentucky avers that the footprint of Phase One does not allow adequate space for the Poz-o-tec material to properly cure and harden before the material can be placed in the next lift.¹⁸ Duke Kentucky notes that the current operational permit allows for 55 acres of

¹² Application at 4. *See also*, Renner Testimony at 6.

¹³ 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).

¹⁴ Application at 3.

¹⁵ Application at 3–4.

¹⁶ Renner Testimony at 4.

¹⁷ *Id.*

¹⁸ Duke Kentucky's Response to Commission Staff's First Request for Information (Staff's First Request), Item 1.b.

open footprint for waste replacement.¹⁹ Because Phase One has approximately 38 acres and the East Landfill is nearing capacity, Duke Kentucky states that Phase Two is needed to allow the East Bend Station to continue to have access to a dedicated repository for generator waste.²⁰

Duke Kentucky maintains that constructing the proposed Phase Two represents the most prudent and least-cost alternative to address waste disposal for East Bend. Duke Kentucky notes that maintaining an onsite landfill minimizes transportation expenses and disposal fees, and avoids limitations, such as volume constraints, that would be incurred for waste disposal at a third-party commercial landfill. Duke Kentucky states that Phase Two is needed to maintain sufficient landfill acreage to support current operations at East Bend and additional disposal capacity once existing landfill cells reach capacity.²¹ Duke Kentucky expects to finance the costs of construction with a combination of new debt and equity and through ongoing operations.²² The mix of debt and equity used will be determined to allow Duke Kentucky to maintain its investment-grade credit rating.²³

The West Landfill construction project includes construction of approximately 200 acres of lined landfill that is designed to accept approximately 30 years of generator waste from East Bend and other permitted sources.²⁴ The West Landfill is lined with a leachate

¹⁹ *Id.*

²⁰ *Id.* at 4–5.

²¹ Application at 6.

²² *Id.*

²³ Direct Testimony of Sarah E. Lawler (Lawler Testimony) at 3.

collection system in accordance with applicable federal, state, and local requirements, including the CCR Rule.²⁵ The fully loaded estimated cost of construction for Phase Two, including contingency, escalation, and allowance for funds used during construction, is approximately \$23.3 million.²⁶ On-site disposal expenses amount to approximately \$3.5 million per year, which reflects primarily transportation costs and is not incremental for Phase Two as those costs are already incurred for transportation to Phase One.²⁷

Duke Kentucky states that, if approved, it anticipates commencing construction on Phase Two in early 2019 and that construction should be completed by the end of 2019.²⁸ Duke Kentucky advises that Phase Two will be constructed by an outside contractor that will be procured through a competitive request for proposal process, and the construction activities will be overseen by Duke Kentucky.²⁹ The footprint for Phase Two is approximately 37 acres.³⁰ The combination of Phase One and Phase Two together provide the necessary 55-acre open footprint to properly form Poz-o-tec.³¹

Duke Kentucky rejected using a third-party landfill for waste disposal after concluding that the costs associated with this alternative were significantly greater than the cost of the proposed landfill construction. Duke Kentucky asserts that it has been

²⁴ Direct Testimony of Adam S. Deller (Deller Testimony) at 2.

²⁵ *Id.* at 2–3.

²⁶ *Id.* at 4.

²⁷ *Id.*

²⁸ *Id.* at 5.

²⁹ *Id.*

³⁰ *Id.* at 6.

³¹ Duke Kentucky's Response to Staff's First Request, Item 1.c.

unable to find a suitable alternative landfill in a reasonable proximity that could handle the nature and volume of generator waste.³² Further, from an economic perspective, based upon a recent market inquiry for transportation of generator waste offsite, Duke Kentucky estimates that the costs of transporting and disposing of the generator waste material in a commercial landfill to be approximately \$76 per ton.³³ Duke Kentucky points out that East Bend produces approximately 1 million tons of Poz-o-tec per year, which results in an annual expense for use of a third-party landfill to be approximately \$76 million, based upon today's dollars.³⁴ Duke Kentucky notes that the budgeted cost of construction for all eight phases of the West Landfill is estimated to be \$159 million, including Phase One and Two costs, and that annual on-site disposal expenses amount to approximately \$3.5 million.³⁵ Assuming a 30-year life of the West Landfill, Duke Kentucky asserts that the construction of all eight phases and annual disposal expense equates to an annual investment of approximately \$8–\$9 million per year for the next 30 years, which is well below the estimated annual expense of \$76 million to use a third-party offsite landfill for waste disposal.³⁶

³² Deller Testimony at 7.

³³ *Id.* at 8.

³⁴ *Id.*

³⁵ *Id.* at 8–9.

³⁶ *Id.* at 9.

DISCUSSION

CPCN

No utility may begin the construction of any facility to be used to provide utility service to the public without first obtaining a CPCN from the Commission, except as noted in KRS 278.020(1). That statute provides, in pertinent part, as follows:

No person, partnership, public or private corporation, or combination thereof shall . . . begin the construction of any plant, equipment, property, or facility for furnishing to the public any of the services enumerated in KRS 278.010, except retail electric suppliers for service connections to electric-consuming facilities located within its certified territory and ordinary extensions of existing systems in the usual course of business, until that person has obtained from the Public Service Commission a certificate that public convenience and necessity require the service or construction.

The Commission's standard of review of a request for a CPCN is well settled. To obtain a CPCN, the utility must demonstrate a need for such facilities and an absence of wasteful duplication.³⁷

"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.³⁸

³⁷ *Kentucky Utilities Co. v. Pub. Serv. Comm'n*, 252 S.W.2d 885 (Ky. 1952).

³⁸ *Id.* at 890.

“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.”³⁹ 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.⁴⁰ Selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.⁴¹ All relevant factors must be balanced.⁴² The statutory touchstone for ratemaking in Kentucky is the requirement that rates set by the Commission must be fair, just, and reasonable.⁴³

Having reviewed the record and being otherwise sufficiently advised, the Commission finds that Duke Kentucky has adequately demonstrated a need to expand the West Landfill to store the generator wastes produced by East Bend given that the existing East Landfill and Phase One of the West Landfill are both nearing full capacity. We also note that the evidence establishes that the current footprint of Phase One is not sufficient to allow the Poz-o-tec material to properly form. The Commission further finds

³⁹ *Id.*

⁴⁰ 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).

⁴¹ 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.

⁴² Case No. 2005-00089, *East Kentucky Power Cooperative, Inc.* (Ky. PSC Aug. 19, 2005), Final Order at 6.

⁴³ KRS 278.190(3).

that the proposed Phase Two is the most reasonable least-cost alternative to address Duke Kentucky's need for a facility to store the East Bend Station generator waste. Therefore, the Commission will grant a CPCN for the construction of Phase Two of the West Landfill.

ECP Amendment

Duke Kentucky also seeks approval to amend its ECP to include the proposed Phase Two project. Duke Kentucky states that Phase Two will enable the company to continue complying with the U.S. Environmental Protection Agency's federal Hazardous and Solid Waste Management System, Disposal of Coal Combustion Residuals from Electric Utilities final rule (CCR Rule), and other environmental compliance regulations.⁴⁴ If approved by December 2018, Duke Kentucky estimates the impact of Phase Two construction on Rider ESM to be an increase of 0.02 percent for residential and non-residential customers, increasing to a maximum of 0.83 percent in 2020.⁴⁵ For residential customers using an average of 919 kilowatt-hours per month, the initial monthly increase is expected to be \$0.02 for the expense month of December 2018, which will be billed in February 2019, upon approval by the Commission.⁴⁶ Duke Kentucky estimates that this amount will increase to a maximum of \$0.75 per month by 2020.⁴⁷ Duke Kentucky is proposing to use the 9.725 percent return on equity that was recently established by the Commission in the company's most recent rate case, Case No. 2017-00321.⁴⁸

⁴⁴ Application at 8.

⁴⁵ Lawler Testimony at 5.

⁴⁶ *Id.*

⁴⁷ *Id.*

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 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 Duke Kentucky should be allowed to recover the costs associated with the projects contained in its proposed ECP via the ESM. Here, Duke Kentucky 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 THEREFORE ORDERED that:

1. Duke Kentucky's request for a CPCN for the proposed Phase Two of the West Landfill as described in its application is granted.
2. Duke Kentucky's request to amend its ECP for purposes of recovering the costs of the West Landfill Phase Two project through its ESM is granted.
3. Duke Kentucky shall file an appropriate application and seek Commission approval for a CPCN prior to commencing construction on any future additional phases of the West Landfill.
4. This case is hereby closed and will be removed from the Commission's docket.

⁴⁸ Case No. 2017-00321, *Electronic Application of Duke Energy Kentucky, Inc. for: 1) An Adjustment of the Electric Rates; 2) Approval of an Environmental Compliance Plan and Surcharge Mechanism; 3) Approval of New Tariffs; 4) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and 5) All Other Required Approvals and Relief* (Ky. PSC Apr. 13, 2018).

By the Commission



ATTEST:


Executive Director

Case No. 2018-00156

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