

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF DUKE ENERGY)	
KENTUCKY, INC. FOR A CERTIFICATE OF)	CASE NO.
PUBLIC CONVENIENCE AND NECESSITY)	2023-00210
AUTHORIZING THE PHASE TWO)	
REPLACEMENT OF THE AM07 PIPELINE)	

ORDER

On June 28, 2023, Duke Energy Kentucky, Inc. (Duke Kentucky) filed an application pursuant to KRS 270.020 and 807 KAR 5:001, Section 15, seeking a Certificate of Public Convenience and Necessity (CPCN) to construct phase two of a five-phase project to replace its AM07 natural gas pipeline. No party requested intervention in this proceeding. Duke Kentucky responded to three sets of requests for information from Commission Staff. On October 5, 2023, Duke Kentucky requested that this matter be submitted on the written record. This matter stands submitted for a decision based on the written record.

LEGAL STANDARD

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.¹ To obtain a CPCN, the utility must demonstrate a need for such facilities and an absence of wasteful duplication.²

“Need” requires:

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

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

[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.³

“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.”⁴ 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.⁵ Although cost is a factor, selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.⁶ All relevant factors must be balanced.⁷

³ *Kentucky Utilities Co.*, 252 S.W.2d at 890.

⁴ *Kentucky Utilities Co.*, 252 S.W.2d at 890.

⁵ 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), Order at 11.

⁶ 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.

⁷ Case No. 2005-00089, Aug. 19, 2005 final Order at 6.

BACKGROUND

Duke Kentucky’s plan to replace the AM07 gas pipeline was described in its prior rate proceeding, Case No. 2021-00190.⁸ Duke Kentucky intended a five-phase construction plan involving the replacement of approximately 13.7 miles out of approximately 16 miles of pipeline in Boone County and Kenton County, Kentucky.⁹ Duke Kentucky obtained a CPCN for Phase One in Case No. 2022-00084.¹⁰ In the present case, Duke Kentucky sought a CPCN for Phase Two, consisting of replacement of approximately 3.25 miles of transmission pipeline with 24-inch diameter steel pipeline.¹¹ Duke Kentucky plans to abandon the existing pipeline,¹² which was constructed from steel pipe and installed in 1956.¹³

Duke Kentucky provided the estimated costs of each phase of construction as follows:

	Construction Cost ¹⁴
Phase 1	\$42,600,000

⁸ Case No. 2021-00190, *Electronic Application of Duke Energy Kentucky, Inc. for: 1) An Adjustment of The Natural Gas Rates; 2) Approval of New Tariffs, and 3) All Other Required Approvals, Waivers, and Relief* (Ky. PSC Dec. 28, 2021), final Order at 6.

⁹ Application at 2.

¹⁰ Case No. 2022-00084, *Electronic Application of Duke Energy Kentucky, Inc. for a Certificate of Public Convenience and Necessity Authorizing the Phase One Replacement of the AM07 Pipeline* (Ky. PSC Feb. 24, 2023), Order at 7.

¹¹ Application at 2.

¹² Direct Testimony of Neil M. Moser (Moser Direct Testimony) at 7.

¹³ Application at 4.

¹⁴ Moser Direct Testimony at 6. Duke Kentucky filed a notice on June 14, 2023, in Case No. 2022 indicating that the actual cost of Phase One increased from an estimated \$32.25 million to \$42.6 million industry wide increases in materials, construction, and easement costs. The cost estimates provided in the present case have increased compared to the \$39.35 million estimate provided in Case No. 2022-00084.

Phase 2	\$49,300,000
Phase 3	\$47,210,100
Phase 4	\$32,101,000
Phase 5	\$30,388,000
Total:	\$201,599,100

The cost estimate for Phase Two includes the cost of required testing of abandoned pipeline for contaminants at approximately \$1,463,600.¹⁵ The estimated annual operations and maintenance cost for the new stretch of pipeline is less than \$10,000,¹⁶ Testing required by the federal Pipeline and Hazardous Materials Safety Administration (PHMSA) would be required ten years after the construction of the new pipeline and every seven years afterwards¹⁷ at a cost of \$400,000 to \$500,000 using the Inline Inspection (ILI) tool.¹⁸

Duke Kentucky's stated purposes for the replacement of the AM07 pipeline were twofold. First, Duke Kentucky claimed that the existing, aging A.O. Smith (AOS) steel pipe has a long history of failures due to hard spots in the pipe body along with failures on the longitudinal seam.¹⁹ Duke Kentucky asserted that replacement of this 68-year-old

¹⁵ Direct Testimony of Bradley A. Seiter (Seiter Direct Testimony), Exhibit BAS-1.

¹⁶ Application at 9.

¹⁷ 49 C.F.R. § 192.939(b)(6).

¹⁸ Duke Kentucky's Response to Commission Staff's First Request for Information (Staff's First Request) (filed Aug. 25, 2023), Item 4(d).

¹⁹ Moser Direct Testimony at 4.

pipe will increase safety and reliability of the pipeline, support future load growth, and maintain pressures.²⁰ Second, the new pipeline would allow the use of the ILI tool.²¹

Absent the use of the ILI tool for PHMSA testing, Duke Kentucky would be required to perform pressure testing.²² Duke Kentucky estimated that the cost of pressure testing the existing portion of pipeline to be replaced in the Phase Two segment would be \$12,350,000 every seven years.²³ This would include providing a mobile source of temporary liquid natural gas while bypassing portions of the existing pipeline, so service would not be interrupted for lengthy periods of time.²⁴

Another option to comply with PHMSA testing requirements would be retrofitting existing pipeline for use with the ILI tool. This would also require using temporary gas during the retrofit but would prevent the future need for bypassing during testing because the ILI tool allows testing without pipeline interruption.²⁵ The estimated cost of this option is \$23,725,000.²⁶

Duke Kentucky stated that the estimated costs for both pressure testing and ILI retrofit would not include the cost of remedying deficiencies in the aging pipeline discovered during pressure testing or ILI testing after retrofit, which cannot be predicted,

²⁰ Application at 5.

²¹ Application at 5.

²² 49 C.F.R. § 192.921(a)(2).

²³ Duke Kentucky's Response to Staff's First Request, Item 9.

²⁴ Duke Kentucky's Response to Staff's First Request, Item 9.

²⁵ Duke Kentucky's Response to Commission Staff's Third Request for Information (Staff's Third Request) (filed Jan. 19, 2024), Item 1(b).

²⁶ Duke Kentucky's Response to Staff's Third Request, Item 1(c).

and which would also increase the downtime of the pipeline and therefore increase temporary gas cost.²⁷

DISCUSSION AND FINDINGS

Having considered the application and all evidence in the record, the Commission finds that the CPCN should be granted. One of the following is necessary to comply with PHMSA regulations: (1) replacement of the AM07 pipeline and use of ILI testing; (2) retrofitting the existing AM07 pipeline for ILI use; or (3) bypassing the pipeline for pressure testing. Although the \$42.6 million in known costs involved in replacement exceeds the \$15 million in known pressure testing costs, the pressure testing would be required every seven years. As a result, the cost of pressure testing would exceed the cost of replacement and ILI testing after 21 years:²⁸

	Proposed Replacement and Maintenance Costs	ILI Retrofitting (Does not include remedial work cost)	Pressure Testing Costs (Not including remedial)
Year 0	\$49,300,000.00	\$23,725,000.00	
Year 7		\$500,000.00	\$13,000,000.00
Year 10	\$500,000.00		
Year 14		\$500,000.00	\$13,000,000.00
Year 17	\$500,000.00		
Year 21		\$500,000.00	\$13,000,000.00
Year 25	\$500,000.00		
Year 28		\$500,000.00	\$13,000,000.00

²⁷ Duke Kentucky's Response to Staff's First Request, Item 9.

²⁸ The useful life of the replacement pipeline is approximately 66 years. Duke Kentucky's Response to Staff's First Request, Item 1(a), stating 1.49% depreciation rate.

Total	\$50,800,000.00	\$25,725,000.00	\$52,000,000.00
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Although retrofitting for ILI use would be cheaper than replacement looking only at capital expenditures and PHMSA testing costs, neither the retrofitting nor pressure testing options account for the uncertain cost of repairing leaks or other deficiencies in the aging pipe that would be necessary every time testing is conducted. These uncertain costs would almost certainly eventually outweigh the capital cost difference as the existing pipeline has already been used beyond its expected useful life.

Replacement also has additional benefits beyond meeting PHMSA requirements and reducing the cost of maintenance required due to continued use of aging pipeline. Fewer leaks as a result of installing new pipeline adds to the reliability of the system as a whole, reducing interruptions. Volatility of natural gas prices could add cost to temporary gas used during pressure testing or ILI retrofitting in the future. Compared to pressure testing, use of the ILI tool also allows for a more detailed inspection.

Regarding abandonment of the existing pipeline, Duke Kentucky stated that the estimated removal cost would exceed the cost of abandonment.²⁹ Abandonment addresses the issue of environmental contamination by requiring grouting of any contaminated pipeline. Therefore, abandonment is the least-cost reasonable alternative compared to removal.

Duke Kentucky has therefore demonstrated the need for an expenditure allowing it to comply with PHMSA regulations and has met its burden to establish that replacement of the A07 pipeline is the least-cost most reasonable alternative to meet that need.

²⁹ Duke Kentucky's Response to Staff's First Request, Item 7(e).

IT IS THEREFORE ORDERED that:

1. Duke Kentucky's request for a CPCN for Phase Two of the proposed project described in its application is granted.

2. Duke Kentucky shall immediately notify the Commission upon knowledge of any material changes to the project, including, but not limited to, a material increase in costs and any significant delays in construction.

3. Any material deviation from the construction approved by this Order shall be undertaken only with the prior approval of the Commission.

4. Duke Kentucky shall file with the Commission documentation of the total costs of the projects, including the cost of construction and all other capitalized costs, (e.g. engineering, legal, administrative, etc.) within 60 days of the date that construction authorized under this CPCN is substantially completed. Construction costs shall be classified into appropriate plant accounts in accordance with the Uniform System of Accounts for gas utilities as prescribed by the Commission.

5. Duke Kentucky shall file a copy of the "as-built" drawings, if any, and a certified statement that the construction has been satisfactorily completed in accordance with the plans and specifications within 60 days of the substantial completion of the construction certificated herein.

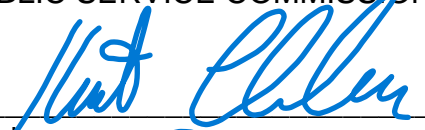
6. Any documents filed in the future pursuant to ordering paragraph 2 through 5 shall reference this case number and shall be retained in the post-case correspondence file for this proceeding.

7. The Executive Director is delegated authority to grant reasonable extensions of time for filing any documents required by this Order upon Duke Kentucky's showing of good cause for such extension.

8. This case is closed and is removed from the Commission's docket.

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PUBLIC SERVICE COMMISSION


Chairman


Vice Chairman


Commissioner

ENTERED
APR 02 2024 bsb
KENTUCKY PUBLIC
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