

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF KNOX COUNTY)	
UTILITY COMMISSION FOR AUTHORIZATION TO)	
EXECUTE AN ASSISTANCE AGREEMENT WITH)	
THE KENTUCKY INFRASTRUCTURE)	CASE NO.
AUTHORITY AND FOR A CERTIFICATE OF)	2023-00003
PUBLIC CONVENIENCE AND NECESSITY TO)	
CONSTRUCT THE BARBOURVILLE)	
CONNECTION-KY 225 PROJECT)	

ORDER

On January 24, 2023, Knox County Utility Commission (Knox County Commission) filed an application pursuant to KRS 278.020 and 807 KAR 5:001E, Section 15, seeking a Certificate of Public Convenience and Necessity (CPCN) to construct a water main, a pumping station, master meter pit, telemetry, and appurtenances to increase its capacity to purchase water from Barbourville Utility Commission (Barbourville Commission). The application also sought approval for financing of this project pursuant KRS 278.300. The application was accepted for filing on January 30, 2023, and was deemed filed as of January 24, 2023. No party requested intervention in this proceeding. Knox County Commission responded to two sets of requests for information from Commission Staff. 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:

[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

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).

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.

alternative does not necessarily result in wasteful duplication.⁶ All relevant factors must be balanced.⁷

Regarding the financing approval request, KRS 278.300(3) requires “that the issue or assumption [of debt] is for some lawful object within the corporate purposes of the utility, is necessary or appropriate for or consistent with the proper performance by the utility of its service to the public and will not impair its ability to perform that service, and is reasonably necessary and appropriate for such purpose.”

BACKGROUND

Knox County Commission currently obtains water via four sources, with percentage of usage from 2021 as follows: Knox County Commission’s water treatment plant (48.8 percent), Corbin City Utilities Commission (Corbin Commission) (42.9 percent), city of Pineville (Pineville) (6.4 percent), and Barbourville Commission (1.9 percent).⁸ Knox County Commission’s construction proposal would shift these percentages as follows: Corbin Commission (42.9 percent), Barbourville Commission (39.1 percent), Knox County Commission’s water treatment plant (11.6 percent), and Pineville (6.4 percent).⁹

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, *East Kentucky Power Cooperative, Inc.* (Ky. PSC Aug. 19, 2005), final Order at 6.

⁸ Application at 3; Knox County Commission’s Response to Commission Staff’s First Request for Information (Response to Staff’s First Request) (filed Feb. 2, 2023), Item 6(d).

⁹ Response to Staff’s First Request, Item 3(b).

Knox County Commission's reasoning for reducing its reliance on its water treatment plant and increasing its purchasing from Barbourville Commission is based on a desire to maintain greater redundancy and flexibility regarding its water supply. Knox County Commission noted that its water treatment plant was constructed over 50 years ago and will eventually require additional investment to continue operations.¹⁰ The useful life of such a plant is 40 years according to the National Association of Regulatory Utility Commissioners (NARUC) *Depreciation Practices for Small Water Utilities* (Aug. 15, 1979).¹¹ The plant has never received any significant upgrades or refurbishing.¹² The plant is presently operating at approximately 81 percent capacity.¹³ Knox County Commission alleged that continued operation at this level would likely result in significant and frequent mechanical and operational problems, less reliable service, degraded water quality, and would necessitate significant and costly improvements or replacement if it were to continue to operate at current levels.¹⁴

The plant currently employs three certified operators and two uncertified operators. Under 401 KAR 8:030, Section 1(3)(c)(1), when water is being treated at a Class IIA water treatment plant such as this one, a certified operator must be present at the water treatment plant or performing system duties. Normally, this would result in each certified operator working 50.4 hours per week to meet Knox County Commission's water supply

¹⁰ Application at 5.

¹¹ Knox County Commission's Supplemental Response to Commission Staff's Second Request for Information (Supplemental Response to Staff's Second Request) (filed Mar. 15, 2023), Item 1(d).

¹² Supplemental Response to Staff's Second Request, Item 1(d).

¹³ Response to Staff's First Request, Item 5(d-e)

¹⁴ Supplemental Response to Staff's Second Request, Item 1(d).

needs. However, Knox County Commission has obtained the Division of Water's (DOW) approval for a temporary alternative staffing plan that involves the certified operators working 40 hours per week, but also requires them to be available by telephone at all times the plant is in operation under the supervision on an uncertified operator and to be able to respond on-site within 30 minutes.¹⁵

In addition to the plant age and staffing issues, the treatment plant became unusable twice in 2020 due to the Cumberland River flooding the treatment plant's raw water pumps and resulting in the emptying of storage tanks and low pressure conditions.¹⁶ In the past decade, Knox County Commission's overall water supply needs have grown by over 16 percent.¹⁷ Knox County Commission noted that purchasing water from Barbourville Commission is also consistent with Kentucky's policy for regionalization of water supplies allowing both Knox County Commission and Barbourville Commission to benefit from greater economies of scale in water production while eliminating the need for construction of a new replacement water treatment plant.¹⁸

Knox County Commission's proposal for remedying these issues is to shift its water supply burden from its treatment plant to purchasing more water via its contract with Barbourville Commission. Knox County Commission asserted that in order to obtain the necessary volume of water from Barbourville Commission, it must replace approximately 14,610 linear feet of 6- and 4-inch PVC water mains running to Barbourville Commission

¹⁵ Knox County Commission's Response to Staff's Second Request for Information (Response to Staff's Second Request) (filed Mar. 9, 2023), Item 1(b-c).

¹⁶ Application at 4; Response to Staff's First Request, Item 4(e).

¹⁷ Response to Staff's First Request, Item 5(f).

¹⁸ Supplemental Response to Staff's Second Request, Item 1(d).

with 8-inch PVC main and construct 1,620 linear feet of 4-inch PVC water main, 840 linear feet of 3-inch PVC water main, a 300 gallon per minute (GPM) pump station, master meter pit, telemetry, and appurtenances.¹⁹ Under its contract with Barbourville Commission, Knox is permitted to draw 7.5 million gallons per month from Barbourville Commission.²⁰

Knox County Commission also proposes to replace 2,100 linear feet of 59-year-old 4- and 3-inch main during the same project, as a ten percent discount would be available for initiating this construction concurrently with the main project.²¹ These pipes were assigned a useful life of 40 years and repairs to these pipes totaled \$4,102 in 2021.²²

The estimated cost of the proposed construction is \$2,336,833.²³ This sum includes the winning bid for \$1,656,910, obtained after Knox County Commission published an advertisement for bids in *The Mountain Advocate* newspaper, received two bids, and the winning bidder was approved by the project engineer.²⁴ Estimated annual operations and maintenance (O&M) expense, including purchasing and pumping water from Barbourville Commissions is \$173,010.²⁵ Knox County Commission calculated that offsetting the O&M expense with the savings from running the treatment plant less will

¹⁹ Application at 3-4.

²⁰ Response to Staff's First Request, Item 3(a), Exhibit 2.

²¹ Application at 4.

²² Response to Staff's Second Request, Item 5.

²³ Application at 7.

²⁴ Application at 6.

²⁵ Application, Exhibit 17.

result in a net savings of \$35,704.²⁶ Knox County Commission did not include the effect of depreciation recovery in its savings calculations.

Knox County Commission stated that it did not consider drawing greater volumes of water from Corbin Commission or Pineville because Corbin's facilities were too far from the service area and Pineville has historically limited the amount of water available to Knox County Commission.²⁷ Knox County Commission did not provide any methodology for how it determined what amount of water it would purchase under normal conditions, although it did state that its calculation of water treatment plant savings was based on the desire to reduce running the plant for a single shift per day.²⁸

Regarding financing, the proposed project is to be funded by a \$1,193,000 Kentucky Infrastructure (KIA) Authority Federally Assisted Drinking Water Revolving Loan Program loan and a \$1,143,833 KIA Cleaner Water Grant.²⁹ The loan has a 20-year term with a 0.25 percent per annum interest rate. KIA has agreed to forgive approximately \$596,500 of the principal amount upon release of liens on all contracts for construction of the proposed facilities and disbursement of the final draw request on assistance funds.³⁰

DISCUSSION AND FINDINGS

Having considered the application and all evidence in the record, the Commission finds that the CPCN and financing application should be granted. Knox County Commission's water treatment plant is currently being used beyond the recommended

²⁶ Response to Staff's Second Request, Item 1(d), Exhibit 3.

²⁷ Response to Staff's First Request, Item 3(c).

²⁸ Application at 4.

²⁹ Application at 7.

³⁰ Application at 8.

capacity for a facility of its age and condition. The need for repairs to the plant will be expedited by overuse. Decreasing reliance on the treatment plant will slow its further deterioration, ameliorate the perceived certified operator shortage, allow a redundancy in the event the plant breaks down or is flooded, account for increased water usage resulting from growth in the area, give more flexibility to Knox County Commission to use either the plant or water from Barbourville more as needed, and reduce water treatment expense. The contract with Barbourville Commission allows Knox County Commission to purchase enough water to meet current water supply needs in relation to Knox County Commission's proposed percentages of water supply sources.³¹ Knox County Commission has established a need for upgrading its connection to Barbourville Commission to maintain the redundancy and flexibility required to protect the reliability of its water supply.

Regarding alternative methods of achieving the goal of maintaining water supply without overusing the treatment plant, Knox County Commission established that increased purchasing from Corbin Commission or Pineville was not possible. Building a new treatment plant or completing major upgrades to the existing plant would be extremely expensive and would not address the pump flooding problem. Although Knox County Commission did not provide any methodology for how it determined how much water to purchase from Barbourville Commission, reducing water treatment usage to one shift per day would allow the certified operators to work no more than 40 hours per week

³¹ The maximum monthly purchase allowed under the contract with Barbourville Commission is 7.5 million gallons per month. Response to Staff's First Request, Item 3(a), Exhibit 2. Knox County Commission used 213,246,000 gallons of water in 2022, so 42.2% of the 2022 usage could be supplied by Barbourville Commission. Response to Staff's First Request, Item 5(f). Under the proposal, Knox County would obtain 39.1% of its water supply from Barbourville Commission. Response to Staff's First Request, 3(b)

without reliance on the DOW temporary alternative staffing plan that required the certified operators to be on call. Considering that part of the justification for this project is allowing Knox County Commission more flexibility to adjust its water sources as needed, the Commission does not want to discourage Knox County Commission from making reasonable changes to its water supply sourcing percentages.

The net annual cost for the first full year of service for the proposed project, including depreciation recovery and savings from reduced treatment plant usage, is \$22,256:

Proposed		Abandoned / Reduced	
O&M	173,010 (1)	Treatment	222,574 (1)
Depreciation	62,110 (2)	Pumping	14,740 (1)
Debt Service	32,100 (1)	Trans & Dist	3,500 (1)
Debt Coverage (10%)	3,210 (3)	Depreciation	7,360 (4)
Proposed Costs	<u>\$ 270,430</u>	Alternative	<u>\$ 248,174</u>

Net Reporting Financial Benefit / (Cost) \$ (22,256)

Notes

- (1) Application Exhibit 17
- (2) NARUC Depreciation Lives average estimate with proposed equipment/infrastructure
- (3) KIA required debt service
- (4) Response to Commission Staff’s Second Request for Information A-2

The Commission finds that the construction of the proposed equipment to upgrade the connection to Barbourville Commission is the least-cost reasonable alternative for providing the needed redundancy and flexibility for Knox County Commission’s water supply.

The 2,100 linear feet of main that Knox County Commission sought to replace during the construction project in order to take advantage of the ten percent discount, should also be approved. This infrastructure is at the end of its useful life and the current

cost of annual O&M, including repairs, is greater than the annual capital improvement cost recovery:

<i>Proposed Investment / Annual Cost</i>		<i>Annual Repair Cost - Abandoned / Reduced</i>	
Construction Cost	<u>\$ 72,765 (1)</u>		
Annual O&M	220 (1)	Materials	1,925 (3)
Depreciation (37.5 Years)	1,940 (2)	Payroll	1,177 (3)
		Equipment	1,000 (3)
		Depreciation	0 (4)
Proposed Annual Costs	<u>\$ 2,160</u>	Alternative Annual Cost	<u>\$ 4,102</u>
<i>Net Reporting Financial Benefit / (Cost)</i>		<i>\$ 1,942</i>	

Notes

- (1) Response to Commission Staff’s First Request for Information A-2 c
- (2) NARUC Depreciation Lives
- (3) Response to Commission Staff’s First Request for Information A-2 d
- (4) Response to Commission Staff’s First Request for Information A-2 a

Knox County Commission’s unaccounted-for water loss rate is 14.7 percent,³² just below the maximum permitted by 807 KAR 5:066, Section 6(3), and this part of the project will help keep the utility compliant with this requirement. Replacing the pipes will be more cost-effective than continuing to repair them, and the discount further increases the cost-effectiveness.

For the reasons discussed above, the Commission finds that the activities described in Knox County Commission’s CPCN application reflect need and a lack of wasteful duplication due to adoption of reasonable and cost-effective alternatives. However, in order to protect customers from unforeseen costs, any material deviation from the construction approved by this Order shall be undertaken only with the prior approval of the Commission.

³² *Knox County Commission’s Annual Report to the Kentucky Public Service Commission for the Year Ending December 31, 2021* at 57.

The Commission also finds that Knox County Commission's request for approval of financing for this project should be approved. The partial financing of this project by a low-interest loan is lawful, reasonably necessary, and appropriate for maintaining the redundancy and flexibility of the water system, necessary and appropriate for the proper performance by Knox County Commission of its service to the public in the form of a project solidifying its water supply, and will not impair its ability to provide service.

IT IS THEREFORE ORDERED that:

1. Knox County Commission's request for a CPCN for the proposed project described in its application is granted.
2. Knox County Commission 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. Knox County Commission 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 electric utilities as prescribed by the Commission.
5. Knox County Commission 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. Knox County Commission is authorized to execute the KIA loan described in its application.

7. The proceeds from the KIA loan authorized herein shall be used only for the lawful purposes set out in the application.

8. Knox County Commission, within ten days of execution of the KIA loan described in its application, shall file a copy of the executed contract with the Commission.

9. Any documents filed in the future pursuant to ordering paragraph 2 through 8 shall reference this case number and shall be retained in the post-case correspondence file for this proceeding.

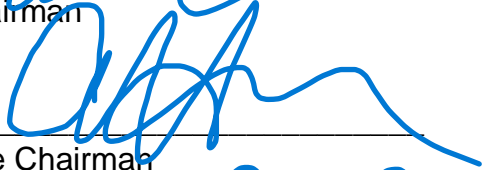
10. The Executive Director is delegated authority to grant reasonable extensions of time for filing any documents required by this Order upon Knox County Commission's showing of good cause for such extension.

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


PUBLIC SERVICE COMMISSION



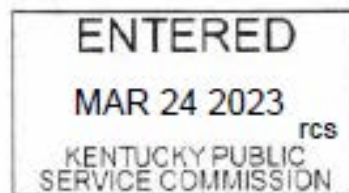
Chairman



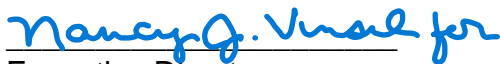
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