

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF BIG SANDY)	
WATER DISTRICT FOR A CERTIFICATE OF)	
PUBLIC CONVENIENCE AND NECESSITY TO)	
DEPLOY AN ADVANCED METERING)	CASE NO.
INFRASTRUCTURE AND GEOGRAPHIC)	2023-00163
INFORMATION SYSTEM, ISSUANCE OF)	
EVIDENCE OF INDEBTEDNESS, AND REQUEST)	
FOR EXPEDITED RELIEF)	

ORDER

On May 24, 2023, Big Sandy Water District (Big Sandy District) filed an application, pursuant to KRS 278.020, KRS 278.300, and 807 KAR 5:001, Section 15, seeking a Certificate of Public Convenience and Necessity (CPCN) for a leak-reduction project and the purchase and installation of advanced metering infrastructure (AMI) meters to address its unaccounted-for water loss. Big Sandy District also requested approval of a \$4,060,000, 20-year bond to finance the proposed project. No party requested intervention in this proceeding. Big Sandy District responded to two requests for information from Commission Staff. This matter stands submitted for a decision by the Commission.

BACKGROUND

Big Sandy District is a water district organized under KRS Chapter 74¹ and provides retail water service to approximately 4,820 customers² in Boyd, Carter, Johnson, and Lawrence counties, Kentucky.³ Big Sandy District's plant in service as of December 21, 2022, was \$24,157,504.⁴ Big Sandy District had approximately \$2,688,250 in Operating Revenues and \$332,153 in Net Income in 2022.⁵ In Big Sandy District's most recent rate adjustment filing was in Case No. 2022-00044, the Commission approved a rate increase and water loss surcharge, and established a water loss surcharge monitoring case.⁶

Case No. 2022-00301 was established to monitor the water loss surcharge approved by the Commission in Case No. 2022-00044.⁷ Case No. 2022-00301 requires, among other things, that Big Sandy District file a Qualified Infrastructure Improvement Plan (QIIP) outlining Big Sandy District's plan for reducing water loss and prior approval before any use of the surcharge funds.⁸ Consistent with those requirements, Big Sandy District filed the QIIP and requested to use the surcharge funds to purchase 1,000

¹ Application at 3.

² *Annual Report of Lyon District to Public Service Commission for the year end December 21, 2022* (2022 Annual Report) at 49.

³ 2022 Annual Report at 12.

⁴ 2022 Annual Report at 24.

⁵ 2022 Annual Report at 20–21.

⁶ Case No. 2022-00044, *Electronic Application of Big Sandy Water District for an Adjustment of its Water Rates Pursuant to 807 KAR 5:076* (Ky. PSC Sept. 12, 2022), Order.

⁷ Case No. 2022-00301, *Electronic Big Sandy Water District's Unaccounted for Water Loss Reduction Plan, Surcharge and Monitoring* (Ky. PSC Sept. 13, 2022).

⁸ Case No. 2022-00301, Sept. 13, 2022 Order.

customer meters.⁹ The Commission authorized Big Sandy District to use the surcharge funds to purchase 1,000 customer meters in the monitoring case.¹⁰

However, in this case, Big Sandy District requested to issue bonds to finance the purchase and installation of AMI meters instead of using surcharge funds.¹¹

LEGAL STANDARD

The Commission's standard of review regarding a CPCN is well settled. No utility may construct or acquire any facility to be used in providing utility service to the public until it has obtained a CPCN from this Commission.¹² To obtain a CPCN, the utility must demonstrate a need for such facilities and an absence of wasteful duplication.¹³

"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.¹⁴

⁹ Case No. 2022-00301, *Electronic Big Sandy Water District's Unaccounted for Water Loss Reduction Plan, Surcharge and Monitoring* (filed Dec. 16, 2022).

¹⁰ Case No. 2022-00301, May 30, 2023 Order.

¹¹ Big Sandy District's Response to Commissions Staff's First Request for Information (Staff's First Request) (filed on Aug. 15, 2023), Items 1, 21, and 22.

¹² KRS 278.020(1). Although the statute exempts certain types of projects from the requirement to obtain a CPCN, the exemptions are not applicable.

¹³ *Kentucky Utilities Co. v. Pub. Serv. Comm'n*, 252 S.W.2d 885 (Ky. 1952).

¹⁴ *Kentucky Utilities Co.*, 252 S.W.2d 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.”¹⁵ 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.¹⁶ Although cost is a factor, selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.¹⁷ All relevant factors must be balanced.¹⁸

KRS 278.300 requires Commission authorization before a utility may “issue any securities or evidence of indebtedness or assume any obligation or liability in respect to the securities or evidence of indebtedness of any other person.”¹⁹ KRS 278.300(3) establishes the legal standard and clarifies the scope of Commission review with three prongs that must be met: (1) the issue of indebtedness is for some lawful object within the corporate purposes of the utility; (2) 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

¹⁵ *Kentucky Utilities Co.*, 252 S.W.2d at 890.

¹⁶ 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.

¹⁷ 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), Order at 6.

¹⁸ Case No. 2005-00089, Aug. 19, 2005 Order at 6.

¹⁹ KRS 278.300(1).

to perform that service; and (3) is reasonably necessary and appropriate for such purpose.

PROPOSED PROJECT

Big Sandy District asserted that the proposed project is needed to address its unaccounted-for water loss, which was approximately 42 percent in 2022.²⁰ If the Commission approves the project, Big Sandy District will enter into a contract with Integrity Water and Energy, LLC (Integrity), with Integrity implementing the leak reduction project with a cost of \$3,991,369.²¹ The agreement with Integrity includes a guaranteed decrease of water loss from 42 percent to 29 percent during the first 14 months of the contract.²²

Big Sandy District issued a request for proposals (RFP) for the leak reduction project with a “Guaranteed Energy Savings Contract,” publicizing the RFP through a newspaper advertisement published on January 27, 2023.²³ Big Sandy District stated that Integrity provided the only response to its RFP.²⁴ Big Sandy District stated that it did not perform a cost benefit analysis of the AMI meters because Integrity would not enter into the contract without AMI in place and that, prior to submitting its bid, Integrity analyzed other AMI systems prior to proposing Neptune Mach 10 meters in its bid.²⁵ Big Sandy

²⁰ Application at 2.

²¹ Application at 9 and 15; Big Sandy District’s Response to Commission Staff’s Second Request for Information (Staff’s Second Request) (filed on Aug.15, 2023), Item 4.

²² Big Sandy District’s Response to Staff’s Second Request, Item 16.

²³ Application, Exhibit 1.

²⁴ Application at 4.

²⁵ Big Sandy’s Response to Staff’s Second Request, Item 9.

District asserted that, as a result of Integrity's analysis, "Integrity proposed Neptune Mach 10 meters based on the value and class accuracy, and Big Sandy District's long-term service relationship with the local Neptune office."²⁶

The proposed project consists of leak detection, repair of leaking infrastructure, replacing its existing 4,600 residential meters and 168 commercial meters with Neptune Mach 10 AMI meters, geographic information system (GIS) mapping each meter as it is installed, installing additional zone meters for a total of 27 distinct metering zones, and building and installing a daily leak detection notification tool, all conducted in phases.²⁷

Big Sandy District explained that in the first phase, Integrity will use acoustic leak detection equipment to detect audible leaks and begin mapping the system using GIS.²⁸ The acoustical listening devices will be owned by Integrity, but Big Sandy District has contracted with Integrity for Big Sandy District to be provided similar equipment upon request after the contract has been completed and presented multiple manufacturers products to Big Sandy District for selection.²⁹

Big Sandy District stated that the second phase of the project will focus on repairing the discovered leaks starting with the largest leaks that require more extensive technical work.³⁰

²⁶ Big Sandy District's Response to Commission Staff's First Request for Information (filed July 11, 2023), Item 25.

²⁷ Application at 1.

²⁸ Application at 4.

²⁹ Big Sandy District's Response to Staff's Second Request for Information, Item 4.

³⁰ Application at 5.

Big Sandy District stated the third phase of the project will consist of creating a total of 27 district metering areas (DMAs) that will allow Big Sandy District to better target and locate leaks on its system by narrowing down the region in which the leaks occur.³¹

Big Sandy District stated the last phase in the project is replacing all of its current meters with Neptune Mach 10 AMI meters.³² The majority of Big Sandy District's current meters were purchased between 2014 and 2019, but an additional 1,100 meters were purchased in 2020.³³ In support of replacing the meters purchased in 2020, Big Sandy District asserted that the meters are experiencing failures and errors that warrant early replacement of the meters.³⁴ Big Sandy District noted that the manufacturer replaced approximately 21 meters deemed defective, but the remainder of the malfunctioning meters are not covered under warranty, and thus Big Sandy District has to pay the cost to replace those meters malfunctioning due to debris clogging the meter.³⁵ Big Sandy District emphasized that the proposed AMI meters are all covered by a manufacturer's warranty and, unlike the meters purchased in 2020, do not contain moving parts that can be clogged by debris.³⁶

In addition to a 20-year manufacturer's warranty, Big Sandy District asserted that the AMI meters will be accurate for up to a 20-year period and are capable of remote

³¹ Application at 5 and 6.

³² Application at 6.

³³ Big Sandy District's Response to Staff's First Request, Item 2; and Big Sandy District's Response to Staff's Second Request, item 13.

³⁴ Application at 24; Big Sandy District's Response to Staff's First Request, Item 2; and Big Sandy District's Response to Staff's Second Request, item 13.

³⁵ Big Sandy District's Response to Staff's First Request, Item 2.

³⁶ Big Sandy District's Response to Staff's First Request, Item 2.

reading through cellular technology, but due to the geography of Big Sandy District's territory, only 83 percent of the Neptune Mach 10 meters will be able to be read via cellular technology.³⁷ Big Sandy District claimed that the use of the AMI meters will provide real-time notifications including customer leak notification, reverse flow alerts, empty pipe alerts and low battery.³⁸

Big Sandy District stated that Integrity will also provide training to Big Sandy District employees in leak detection, utilizing the implemented technology and equipment.³⁹ Big Sandy District argued that the new AMI meters will reduce costs by reducing the need to have a person drive to each meter to read it and increase revenues by the improved accuracy of the meters. Big Sandy District explained that employees who currently read each meter would be assigned to other responsibilities and maintenance.⁴⁰

Big Sandy District provided evidence that, as of December 31, 2022, its current meters, which were purchased between 2014 and 2019, had a net book value of \$142,273, and the meters purchased in 2020 had a net book value of \$188,885.⁴¹ Big Sandy District stated that the useful life for those meters is ten years.⁴² Big Sandy District stated that if the CPCN is granted, a vendor has offered to purchase the retired meter purchased in 2020 for \$3.50 each, regardless of how each meter tests.⁴³ Big Sandy

³⁷ Application at 6 and 7.

³⁸ Application at 7.

³⁹ Application at 8.

⁴⁰ Big Sandy District's Response to Staffs Second Request, Item 8.

⁴¹ Big Sandy District's Response to Staff's First Request, Item 3.

⁴² Big Sandy District's Response to Staffs First Request, item 3.

⁴³ Big Sandy District's Response to Staffs First Request, Item 3.

District maintained that the \$3.50-per-meter offer is higher than the expected scrap value for these meters.⁴⁴

Regarding the guaranteed energy savings, Big Sandy District asserted that Integrity will guarantee that the proposed AMI meters will be 90 percent accurate for up to a 20-year period, that Big Sandy District's unaccounted-for water loss will reduce from 42 percent to 29 percent during a 14-month lead reduction implementation period, and that benefits are at least equal to expenses.⁴⁵ Big Sandy District argued that the 20-year total net financial benefit of the project would be approximately \$1,358,253.⁴⁶

The guaranteed accuracy starts at 99.00 percent in the first year and reduces to 98.50 percent in the 20th year.⁴⁷ The meter accuracy increases will be measured by comparing the accuracy of sampled meters and the current accuracy of 94.37 percent, which was calculated by testing 320 randomly sampled meters.⁴⁸ The actual escalation included in the modeling increases from 1.6 percent in the first year to 1.7 percent in the 20th year.⁴⁹ The proposed agreement states that the accuracy guarantee is only for the meter accuracy and new revenue related to the increased billable consumption will be provided for informational purposes.⁵⁰

⁴⁴ Big Sandy District's Response to Staffs First Request, Item 3.

⁴⁵ Application at 25; and Big Sandy District's Response to Staff's Second Request, Items 10(b) and 16.

⁴⁶ Application, Exhibit 2 at 3.

⁴⁷ Application, Exhibit 6 at 27.

⁴⁸ Application, Exhibit 6 at 28.

⁴⁹ Application, Exhibit 2 at 22.

⁵⁰ Application, Exhibit 6 at 29.

Big Sandy District stated that the water loss reduction will result from leak repairs performed during the initial 14-month project phase primarily conducted by Integrity personnel. The proposed contract stated that water loss reductions will be estimated at the time of leak repair and any leaks repaired by Big Sandy District will count toward the leak reduction guarantee.⁵¹ The guarantee is stated in gallons and the savings will be calculated using an assumed wholesale rate of \$2.50/Kgal, which will escalate 2.5 percent annually.⁵² Essentially, all leaks repaired in the 14-month project period will be assumed to generate savings for the entire 20-year term. At the end of the 1-year warranty period, Big Sandy District will be responsible for maintaining leak repairs and continuing to reduce water loss to acceptable levels.

PROPOSED FINANCING

Big Sandy District requested to finance the total \$3,991,369 cost of the project, by issuing bonds secured through Big Sandy District's obligation with the Kentucky Bond Corporation (KBC).⁵³ Based upon market conditions at the time of the application, the estimated principal balance is \$4,060,000, including issuance costs, underwriter's discount, and rounding of \$140,176.⁵⁴ Also based upon market conditions, the estimated interest rate ranges from 3.1 percent to 4.25 percent, which will yield interest expense of

⁵¹ Application, Exhibit 6 at 33.

⁵² Application, Exhibit 6 at 33.

⁵³ Application at 9 and 46.

⁵⁴ Application at 45 and Exhibit 5 at 2.

\$1,977,496 over the 20 year term of the bonds.⁵⁵ However, the final terms of the bonds will not be determined until closing.⁵⁶

Big Sandy District agreed to a payment schedule to Integrity for the \$3,991,369 cost of implementing the leak reduction project over 14 months, starting at the beginning of the project.⁵⁷ Big Sandy District asserted that the project and financing will not require an adjustment to its rates for service due to the guaranteed savings included in the proposal.⁵⁸

DISCUSSION AND FINDINGS

Based upon a review of the case record and being otherwise sufficiently advised, the Commission finds that Big Sandy District failed to meet the absence of wasteful duplication standard, and therefore its application should be denied. As noted above, the Commission cannot approve a CPCN unless both the “need” and “absence of wasteful duplication” prongs are satisfied. Here, Big Sandy District has not demonstrated that a thorough review of all reasonable alternatives has been performed. While the high rate of annual water loss experienced by Big Sandy District demonstrates a need for water loss reduction, Big Sandy District only considered one possible solution when soliciting bids and filing the application in this case. Big Sandy District failed to explain why it did not select other meter options or the possible solutions considered by Big Sandy District. Further, Big Sandy District did not demonstrate that it considered addressing its high level

⁵⁵ Application, Exhibit 5 at 3.

⁵⁶ Application at 45.

⁵⁷ Big Sandy District’s Response to Staff’s Second Request, Item 2.

⁵⁸ Application at 2.

of water loss through any other means besides deployment of AMI meters. In summary, Big Sandy District failed to consider any alternatives to the proposed plan and did not adequately explore other options for meter replacement or additional means to reduce water loss.

Additionally, the Commission is not convinced that the economic analysis provided for the proposed project is reasonable or that the project would result in overall savings to Big Sandy District's customers. Big Sandy District asserted that Integrity will be required to guarantee that savings will meet or exceed the cost of the project and will reimburse Big Sandy District for any shortfall.⁵⁹ However, the proposed agreement and the guarantees as stated do not accomplish this goal. The guarantees do not provide certainty or a surety of the savings projections. It is unclear how the meter accuracy guarantee will be rectified if sampled meters do not meet the accuracy guarantee, and it is also unclear how the increased billing will escalate over the 20-year term given the declining accuracy guarantee. While Big Sandy District and Integrity use the term "guarantee" for the leak repairs and stated that the guarantee will cover the 20-year contract term,⁶⁰ there is no ongoing measurement and verification for the 20-year term and there does not appear to be any formula for determining damages. In addition, meters over three inches have an estimated useful life of 10 years, with a 5-year full manufacturer's warranty.⁶¹ Big Sandy District did not include replacement costs for these meters in year 10 of the cost-benefit analysis, and it is unclear whether the replacement

⁵⁹ Big Sandy District's Response to Staff's Second Request, Item 10(b).

⁶⁰ Big Sandy District's Response to Staff's First Request, Item 14.

⁶¹ Big Sandy District's Response to Staff's Second Request, Item 22.

costs are included in the project total. Lastly, there is uncertainty regarding the actual construction and equipment included in the project cost such that those costs are not reasonably known for the comparison.⁶²

Having reviewed the record and being otherwise advised, the Commission finds that Big Sandy District's application should be denied for failing to demonstrate that a thorough review of all reasonable alternatives has been performed. The Commission also finds that Big Sandy District's request for approval of financing should be denied, as the purpose of the proposed financing was solely to fund the proposed project.

IT IS THEREFORE ORDERED that:

1. Big Sandy District's application for a CPCN for its proposed leak-reduction project that included the purchase and installation AMI meters and request for approval of related financing is denied.
2. This case is closed and removed from the Commission's docket.

⁶² Big Sandy District's Response to Staff's First Request, Item 19(c), and Big Sandy District's Response to Staff's Second Request, Item 4.


PUBLIC SERVICE COMMISSION



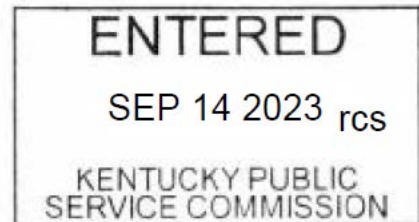
Chairman



Vice Chairman



Commissioner



ATTEST:



Executive Director

*Big Sandy Water District
18200 Kentucky Route #3
Catlettsburg, KY 41129

*R. Brooks Herrick
Dinsmore & Shohl, LLP
101 South Fifth Street
Suite 2500
Louisville, KENTUCKY 40202

*Easton B. Depp
Dinsmore & Shohl, LLP
101 South Fifth Street
Suite 2500
Louisville, KENTUCKY 40202

*Honorable Kerry E Ingle
Attorney at Law
Dinsmore & Shohl, LLP
1400 PNC Plaza
500 West Jefferson Street
Louisville, KENTUCKY 40202