

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF BLUEGRASS)	
WATER UTILITY OPERATING COMPANY, LLC)	CASE NO.
FOR CERTIFICATES OF PUBLIC CONVENIENCE)	2022-00046
AND NECESSITY FOR PROJECTS AT THE)	
PERSIMMON RIDGE SITE)	

ORDER

On February 24, 2022, Bluegrass Water Utility Operating Company, LLC (Bluegrass Water) 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 install a moving bed biofilm reactor (MBBR) treatment system at its wastewater treatment plant (WWTP) at the Persimmon Ridge subdivision in Shelby County, Kentucky. No party requested intervention in this proceeding. Bluegrass Water responded to two sets of requests for information from Commission Staff. On May 24, 2022, Bluegrass Water filed a notice of request for the matter to be submitted on the written record. The matter now stands submitted for a decision.

BACKGROUND

Bluegrass Water is a Class B sewer utility organized and existing under the laws of the Commonwealth of Kentucky.¹ Bluegrass Water acquired the wastewater treatment plant and collection system at the Persimmon Ridge subdivision (Persimmon Ridge

¹ Application, Exhibit C.

System) after the transfer was approved by the Commission in Case No. 2019-00104.² The Persimmon Ridge System provides wastewater collection and treatment service to 358 residential customers and three commercial customers in the Persimmon Ridge subdivision in Shelby County, Kentucky.³

Bluegrass Water reported that the Persimmon Ridge wastewater treatment plant (WWTP) was cited for seven permit limit effluent exceedances from January 2019 to March 2021,⁴ including three ammonia exceedances and one biochemical oxygen demand (BOD) exceedance.⁵

Bluegrass Water's third-party engineering firm inspected the Persimmon Ridge System before it purchased the system and prepared a report indicating that the aeration system was not fully functional.⁶ Bluegrass Water entered into an Agreed Order with the Kentucky Energy and Environment Cabinet's Division of Water (DOW) that required it to file a Corrective Action Plan (CAP) describing how it would correct any deficiencies at the plant and cure the exceedances.⁷ Bluegrass Water supplied the DOW with a CAP on

² Case No. 2019-00104, *Electronic Proposed Acquisition by Bluegrass Water Utility Operating Company, LLC and the Transfer of Ownership and Control of Assets by P.R. Wastewater Management, Inc., Marshall County Environmental Services, LLC, LH Treatment Company, LLC, Kingswood Development, Inc., Airview Utilities, LLC, Brocklyn Utilities, LLC, Fox Run Utilities, LLC, and Lake Columbia Utilities, Inc.* (Ky. PSC Aug. 14, 2019), Order at 25.

³ Case No. 2019-00104, *Bluegrass Water Utility Operation Company, LLC* (Ky. PSC Aug. 14, 2019), Order at 3.

⁴ Bluegrass Water's Response to Commission Staff's First Request (Staff's First Request) (filed Apr. 21, 2022), Item 6, KY2022-00046_BW_0333 to KY2022-00046_BW_0340.

⁵ The additional exceedances included two for chlorine and two for *E.coli*, which are not addressed by this project.

⁶ Bluegrass Water's Response to Staff's First Request, Item 2, KY2022-00046_BW_0317 to KY2022-00046_BW_0320.

⁷ Bluegrass Water's Response to Staff's First Request, Item 2, KY2022-00046_BW_0305 to KY2022-00046_BW_0315.

December 13, 2019, referencing ammonia and BOD exceedances resulting from lack of aeration functionality and recommending repair of existing aeration equipment.⁸ Bluegrass Water subsequently amended its CAP, outlining multiple options for addressing ongoing ammonia exceedances, including the MBBR system.⁹ The proposed project for which Bluegrass Water requests a CPCN is consistent with the amended CAP Bluegrass Water submitted to the DOW on July 29, 2020 and is intended to cure the exceedances.

PROPOSED PROJECT

The Persimmon Ridge WWTP previously regulated total suspended solids (TSS), ammonia, and BOD levels by means of a lagoon made of three cells, using blowers to aerate and move the wastewater to allow ammonia and TSS breakdown.¹⁰ Following acquisition, Bluegrass Water installed an improved aerator in the first cell of the lagoon. However, in winter months with cooler temperatures, the facility was still unable to consistently comply with ammonia limits.¹¹

Bluegrass Water has proposed constructing a MBBR treatment system in which free floating media is contained in tanks with vigorous aeration in order to provide exponentially increased surface area for the formation of biofilm while increasing the mechanical breakdown of TSS through the movement of the media.¹² This increased

⁸ Bluegrass Water's Response to Staff's First Request, Item 2, KY2022-00046_BW_0321 to KY2022-00046_BW_0322.

⁹ Bluegrass Water's Response to Staff's First Request, Item 2, KY2022-00046_BW_0324.

¹⁰ Bluegrass Water's Response to Staff's First Request, Item 4.

¹¹ Bluegrass Water's Response to Staff's First Request, Item 4.

¹² Bluegrass Water's Response to Staff's First Request, Item 1.

level of biofilm encourages more microorganism growth as well as a wider variety of microorganisms capable of breaking down a larger amount of and a wider range of pollutants and nutrients, reducing levels of ammonia and BOD.¹³ Bluegrass Water has provided engineering data that supports its claim that this system will be sufficient to meet permitted limits for ammonia and BOD.¹⁴ The estimated cost of construction of the MBBR system is \$253,000.¹⁵

Bluegrass Water addressed alternative methods of reducing ammonia and BOD levels. One option was to add more aeration blowers.¹⁶ However, Bluegrass Water determined that this option was not feasible because additional aeration would not prevent ammonia exceedances during colder winter months.¹⁷ Another mechanical treatment alternative considered was an algae wheel. However, the algae wheel would be more costly and take longer to implement, because it would require construction of a greenhouse enclosure and new technology testing required by the DOW.¹⁸ Bluegrass Water also rejected building a new treatment plant due to cost.¹⁹

¹³ Bluegrass Water's Response to Staff's First Request, Item 1.

¹⁴ Bluegrass Water's Response to Staff's First Request, Item 7, KY2022-00015_BW_0341 to KY2022-00015_BW_0343.

¹⁵ Application at 4.

¹⁶ Bluegrass Water's Response to Staff's First Request, Item 8.

¹⁷ Bluegrass Water's Response to Staff's First Request, Item 8.

¹⁸ Bluegrass Water's Response to Staff's First Request, Item 8; Response to Staff's First Request, Item 9 (Estimated algae wheel cost over \$300,000).

¹⁹ Bluegrass Water's Response to Staff's First Request, Item 9 (Estimated cost of \$1.42 million to \$1.704 million). Bluegrass Water has discussed replacing the disinfection system with a peroxyacetic acid system to reduce *E.Coli* and chlorine levels (See Bluegrass Water's Response to Staff's First Request, Item 2, KY2022-00046_BW_0325), but the cost of this combined with the MBBR system would still be less than the cost of replacing the facility.

The nearest sewer system that the Persimmon Ridge system could have attached to is located 1.43 miles away at the KJC Correction Institute for Women (KJC).²⁰ That treatment facility handles only the maximum 125,000 gallon per day used by the prison complex and would require significant construction to handle Persimmon Ridge's added flow.²¹ Bluegrass Water explored this as an alternative but rejected it because it would have cost several million dollars.²² This estimated cost was tied to the determination that this alternative would have required construction of 3.4 miles of sewer main, two lift stations, and significant upgrades to the prison's treatment facility.²³

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.²⁴ To obtain a CPCN, the utility must demonstrate a need for such facilities and an absence of wasteful duplication.²⁵

"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.

²⁰ Bluegrass Water's Response to Commission Staff's Second Request for Information (Staff's Second Request) (filed May 24, 2022), Item 4.

²¹ Bluegrass Water's Response to Staff's Second Request, Item 4.

²² Bluegrass Water's Response to Staff's Second Request, Item 4.

²³ Bluegrass Water's Response to Staff's Second Request, Item 4.

²⁴ KRS 278.020(1). Although the statute exempts certain types of projects from the requirement to obtain a CPCN, the exemptions are not applicable.

²⁵ *Kentucky Utilities Co. v. Pub. Serv. Comm 'n*, 252 S.W.2d 885 (Ky. 1952).

[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.²⁶

“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.”²⁷ 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.²⁸ Although cost is a factor, selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.²⁹ All relevant factors must be balanced.³⁰

DISCUSSION AND FINDINGS

Having considered the application and all evidence in the record, the Commission finds that the CPCN should be granted for the following reasons. First, the evidence of record supports the conclusion that there is a need for the proposed project. The evidence

²⁶ *Kentucky Utilities Co.*, 252 S.W.2d at 890.

²⁷ *Kentucky Utilities Co.*, 252 S.W.2d at 890.

²⁸ 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.

²⁹ 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.

³⁰ Case No. 2005-00089, *East Kentucky Power Cooperative, Inc.* (Ky. PSC Aug. 19, 2005), final Order at 6.

indicates that the Persimmon Ridge System has exceeded permit limits for a number of months or years with respect to ammonia and BOD, and that, according to DOW, action is needed to ensure compliance with applicable laws. Further, Bluegrass Water entered into an Agreed Order with the DOW that, among other things, required Bluegrass Water to file a CAP describing how it would cure the deficiencies causing the system to exceed permit limits. The proposed project as described in the application is consistent with the amended CA and is necessary to meet permitted limits for ammonia and BOD.

There are alternative projects that would address the need to be satisfied by the proposed project, but the evidence indicates that those projects would be more costly than the MBBR system or would not resolve all exceedances. Additional aeration would not prevent ammonia exceedances during colder winter months. An algae wheel would be more costly and take longer to implement due to DOW testing requirements. Building a new treatment plant would be more costly and would waste existing facility components. Connecting to KJC would also be more costly than implementing the MBBR system.

For the reasons discussed above, the Commission concludes that the MBBR system is the least cost reasonable alternative for correcting ammonia and BOD exceedances.

Bluegrass Water plans to use competitive bidding to reduce construction costs. The bid process will be invitation only, with bids solicited from at least three contractors, identified as having experience in wastewater construction.³¹ The Commission has

³¹ Bluegrass Water's Response to Staff's First Request, Item 14.

previously determined that this is an acceptable method for implementing competitive bidding for a small, neighborhood sewer facility.³²

For the reasons discussed above, the Commission finds that the construction activities described in Bluegrass Water's CPCN application reflect a need and a lack of wasteful duplication due to adoption of a reasonable and cost-effective alternative. 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.

Finally, Bluegrass Water indicated in its application that it would fund the proposed projects with equity capital,³³ but it stated in response to requests for information that it expected to request approval for debt financing in 2022 and that it may then utilize debt to finance the proposed project.³⁴ In Case No. 2019-00104, in which Bluegrass Water was first authorized to acquire systems in Kentucky, Bluegrass Water supported its request by indicating its intent to maintain a capital structure with at least 50 percent debt financing.³⁵ Bluegrass Water later stated that it would meet that commitment, on which

³² Case No. 2022-00015, *Electronic Application of Bluegrass Water Utility Operating Company, LLC for a Certificate of Public Convenience and Necessity for Projects at the Woodland Acres Site* (Ky. PSC), Order at 14.

³³ Application at 4.

³⁴ Bluegrass Water's Response to Staff's Second Request, Item 8.

³⁵ Case No. 2019-00104, *Electronic Proposed Acquisition by Bluegrass Water Utility Operating Company, LLC and the Transfer of Ownership and Control of Assets by P.R. Wastewater Management, Inc., Marshall County Environmental Services, LLC, LH Treatment Company, LLC, Kingswood Development, Inc., Airview Utilities, LLC, Brocklyn Utilities, LLC, Fox Run Utilities, LLC, Brocklyn Utilities, LLC, and Lake Columbia Utilities, Inc.* (Ky. PSC. Aug. 14, 2019), Order at 18.

its acquisitions have been conditioned,³⁶ by financing overall plant additions with a mix of debt and equity to achieve a capital structure with at least 50 percent debt.³⁷ While this Order should not be construed as approving or disapproving the use of any particular financing mix for the proposed projects, it also should not be interpreted as eliminating any conditions established in Case No. 2019-00104 and other cases.

IT IS THEREFORE ORDERED that:

1. Bluegrass Water's request for a CPCN for the proposed project described in its application is granted.
2. Bluegrass Water 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. Bluegrass Water 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

³⁶ See Case No. 2020-00297 *Electronic Proposed Acquisition by Bluegrass Water Utility Operating Company, LLC and the Transfer of Ownership and Control of Assets by: Delaplain Disposal Company; Herrington Haven Wastewater Company, Inc.; Springcrest Sewer Company, Inc; and Woodland Acres Utilities, LLC* (Ky. PSC Jan. 14, 2021), Order at 10; Case No. 2019-00360, *Electronic Proposed Acquisition by Bluegrass Water Utility Operating Company, LLC and the Transfer of Ownership and Control of Assets by Center Ridge Water District, Inc.; Joann Estates Utilities, Inc.; and River Bluffs, Inc.* (Ky. PSC Feb. 17, 2020), Order at 12; Case No. 2019-00104, *Bluegrass Water Utility* (Ky. PSC. Aug. 14, 2019), Order at 18.

³⁷ Case No. 2019-00104, *Bluegrass Water Utility* (filed Oct. 31, 2019), Notice and Plan Re: Capital Structure.

classified into appropriate plant accounts in accordance with the Uniform System of Accounts for sewer utilities as prescribed by the Commission.

5. Bluegrass Water 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 Bluegrass Water’s showing of good cause for such extension.


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

PUBLIC SERVICE COMMISSION



Chairman

Vice Chairman



Commissioner



ATTEST:



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