

**COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

ELECTRONIC APPLICATION OF BLUEGRASS)	
WATER UTILITY OPERATING COMPANY, LLC)	
FOR A CERTIFICATE OF PUBLIC CONVENIENCE)	
AND NECESSITY FOR THE INSTALLATION OF)	CASE NO. 2022-00216
MONITORING EQUIPMENT AND FOR A)	
CORRESPONDING LIMITED WAIVER OF DAILY)	
INSPECTION REQUIREMENTS)	

**BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC’S
RESPONSES TO COMMISSION STAFF’S THIRD REQUEST FOR INFORMATION**

Bluegrass Water Utility Operating Company, LLC, (“Bluegrass Water” or the “Company”) by counsel, files its responses to the Commission Staff’s Third Request for Information, issued in the above-captioned case on December 15, 2022.

FILED: January 6, 2023

ELECTRONIC APPLICATION OF BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE INSTALLATION OF MONITORING EQUIPMENT AND FOR A CORRESPONDING LIMITED WAIVER OF DAILY INSPECTION REQUIREMENTS
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REQUEST NO. 3-1: Refer to the Application, paragraph 50, in which it states that High Tide offers satellite connections which make it easier to receive communications from rural areas.

a. State which facilities identified in the Application, if any, require satellite communications in order to provide remote data.

b. For facilities that do not require satellite communications in order to provide remote data, explain in detail what is meant by satellite communications making it easier to receive communications from rural areas.

c. Explain how the remote monitoring system obtains data from facilities if satellite communication is not available. If different facilities' data is collected in different ways, explain the differences and which facilities' data is collected each way.

RESPONSE:

a. **Although it is unclear at this time if any of the facilities identified in the Application will always require satellite communications in order to provide remote data, satellite connectivity enables a more reliable connection than cell service does, which is why satellite connectivity was a factor, among many, behind Bluegrass Water's decision to choose High Tide over Mission. Losing a satellite connection occurs far less frequently than losing cell service. Aside from the basic cost advantages of the High Tide system, the satellite communication capabilities provide a potential safeguard that can be leveraged to improve communication reliability and functionality if needed in the future.**

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b. Satellite connectivity is a tool for maintaining reliable service when cell service fails or degrades. Satellite connectivity therefore offers a backup communication capability that offers more reliable communication with field equipment in those scenarios when cell service may prove unreliable in practice. With satellite connectivity, Bluegrass Water is not solely dependent upon cellular communication capabilities for remote monitoring. Consequently, the satellite communication capability helps ensure that Bluegrass Water will be able to (even in instances of unreliable cell service) effectively monitor its equipment in real-time and respond more quickly and effectively to customer needs in areas where cell service may be unreliable.

c. The remote monitoring system obtains data from a remote terminal unit (RTU) installed at the site of the monitored equipment. Absent activation of the satellite communication capability at a particular RTU, the RTU utilizes cellular service and transfers the remote monitoring data from the field to the web application for Bluegrass Water's operations team to use. Field staff and Bluegrass Water personnel monitor the connection. If the RTU experiences connectivity issues, Bluegrass Water would first attempt to install an antenna with a larger range; if an antenna with a larger range did not solve the connectivity issues, Bluegrass Water would then switch to a satellite connection, which offers a more reliable communication capability. In the rare event that both satellite communication and cell service were to fail, the system would immediately notify Bluegrass Water of the communication failure, and Bluegrass Water would send someone to assess the

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situation as quickly as possible. Similarly, if no satellite communication capability has been installed at a particular RTU, a cellular service communication failure would likewise immediately notify Bluegrass Water of the communication failure, and Bluegrass Water would send someone to assess the situation as quickly as possible.

Because the High Tide system has not been installed and implemented, and because even "good" cell service can come in go, Bluegrass Water does not yet know which RTUs, if any, will require a satellite connection for maximum communication capability. Ultimately, Bluegrass Water believes having that capability is important for service reliability so that all its Kentucky systems can communicate at their maximum capacity, using satellite if necessary.

Witness: Aaron Silas

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REQUEST NO. 3-2: Refer to the Application, paragraph 46, identifying the three available remote monitoring manufacturers, and Bluegrass Water's Response to Commission Staff's First Request for Information (Staff's First Request), Item 15. The information provided in the response to Staff's First Request, Item 15 is nonresponsive.

a. For Omni and Mission, state the estimated cost to purchase and install the remote monitoring system most comparable to the High Tide system selected by Bluegrass Water.

b. State what expenditure, if any, is necessary to add the existing Mission remote monitoring equipment to the High Tide system.

c. For all three manufacturers, provide an estimated itemized annual operations and maintenance expense, including costs of electric use, any software licenses, service contracts, or any other repeating cost.

RESPONSE:

a. **Because Omni did not have satellite connectivity capabilities and its interface is outdated, Bluegrass Water removed it from consideration early in the evaluation; consequently, it did not gather specific pricing information for Omni, though preliminary conversations with others in the industry did suggest that Omni would likely have been significantly more expensive than either Mission or High Tide. Bluegrass Water viewed satellite connectivity capabilities and a workable user interface, which Omni did not have, as components of reliable service, and it therefore did not further gather cost data regarding**

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an Omni system that would not serve its needs, especially as it already had some experience with the Mission system that offered similar capabilities. See Application ¶ 47.

As between High Tide and Mission (and as shown in the following table), however, the High Tide system offers a cost advantage, both for the initial purchase and installation, as well as for annual subscription fees at each unit.

Pricing	High Tide	Mission
Base (Actual Price)	\$2,250.00	\$2,933.40
Expansion Board (Actual Price)	\$500.00	\$495.00
Subscription per unit (Actual Price)	\$500.00	\$623.40
Installation (Average) ¹	\$2,500.00	\$2,500.00
Total	\$5,750.00	\$6,551.80

¹ Please note that the Installation Pricing is an average that can fluctuate based on time and materials needed; regardless, the installation cost is expected to be approximately equal for the two systems and, therefore, a constant for the pricing analysis.

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The expansion board is where the inputs and outputs for the RTUs are located. *See* Response to Data Request 1-6. High Tide's expansion boards, which are roughly the same cost as Mission's, include 8 analog inputs, compared to Mission's 6 analog inputs. Having more data inputs allows the Company to monitor more conditions at plants and pump stations. *See* Response to Data Request No. 2-3.

Importantly, though, the Company did not rely solely on either a side-by-side cost comparison or a technical comparison in selecting High Tide over Mission. Its experience with Mission in other jurisdictions led it to determine that Mission's service was poor, and its technical support was unsatisfactory. *See* Response to Request 1-12. In addition, Bluegrass Water has had a positive experience with High Tide's staff, who have been better able to help meet its needs. *See* Response to Request 2-3. Ultimately, the Company determined that High Tide was a better holistic choice than Mission and would better serve all its needs.

b. To convert to High Tide, the main boards at the existing Mission units need to be replaced, at an approximate cost of \$700 per unit, for 27 units, for a total of \$18,900, a small expense compared to the \$233,000 in annual savings that will result if the Commission grants the Company's Application. *See* Application ¶ 18. Moreover, the main boards in the existing Mission enclosures are now out of warranty and thus are due for a replacement, in any event. Otherwise, High Tide's upfront hardware costs are \$500 less per RTU than Mission's. *See* Response to Data Request 1-15. Furthermore, Bluegrass Water will save

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\$3,331.80 per year² in subscription fees by using High Tide, rather than Mission. In addition to the subscription savings High Tide will provide, Bluegrass Water will also save in other upfront and ongoing expenses by choosing High Tide over Mission. See Response to Data Request 1-6 (Mission's units would require Bluegrass Water to purchase expansion packs).

c. As discussed in Response 3-2(a), Omni would not serve Bluegrass Water's operational needs; therefore, Bluegrass Water does not have operations or maintenance figures for Omni. For Mission and High Tide, recurring operations and maintenance costs on the RTUs is the same, regardless of the manufacturer. Specifically, Bluegrass Water has implemented a Preventative Maintenance Program to inspect the units and to review alarm destinations and thresholds. The cost of that program is the same regardless of the manufacturer.

As for electric usage, the High Tide equipment is also more efficient than the Mission equipment. Mission uses four times the amount of electricity (approximately 4.2 watts per unit) that High Tide (approximately 1 watt per unit) does.

As further shown in the table below, High Tide also enjoys a pricing advantage in the manufacturer's subscription pricing per unit. Mission's subscription pricing is higher than High Tide's, and includes a \$60 annual fee in its subscription cost per unit, which High Tide does not charge.

² \$123.40 subscription cost savings * 27 units = \$3,331.80.

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Recurring costs per unit		
Pricing	High Tide	Mission
Subscription (per unit) (Fees Included) ³	\$500.00	\$623.40
Maintenance (2 hours of labor estimated)	\$140.00	\$140.00
Total	\$640.00	\$763.40

If Bluegrass Water eventually determines that an RTU would benefit from a satellite connection, the High Tide subscription for that unit would increase from \$500 annually to \$660 annually. If that change occurs in the first year when the unit is under warranty, there is no additional cost; however, changing after the warranty expires will cost \$286 per unit.

As explained in Response 3-1(c), because Bluegrass Water does not yet know which RTUs will require satellite connectivity, and will not know until the system is installed and operating, it also does not yet know if the increased subscription charge will apply, if at all. Moreover, while the potential increased cost of satellite capability could put the High Tide

³ Subscription pricing includes software licensure and contracts.

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system at a slight disadvantage on a “per unit” basis, it is not anticipated that satellite capability will be needed at all (or even many) of the sites, and so the anticipated cost effect, if any, remains insignificant in total, especially considering the better customer support, user experience, operational capabilities, and other benefits offered by the High Tide system. *See Responses 3-2(a) and 3-2(b).*

Witness: Aaron Silas

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VERIFICATION

I, Aaron Silas verify, state, and affirm that the information request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

A Sil, Director of Regulatory Ops

Name

Title

Bluegrass Water Utility Operating Company, LLC

STATE OF MISSOURI

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) ss:

COUNTY OF ST. LOUIS

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SUBSCRIBED AND SWORN TO before me on this the 5th day of January, 2023.

My commission expires: OCT 14th, 2024

Reece Gilmore

Notary Public

