

KENTUCKY-AMERICAN WATER COMPANY
CASE NO. 2025-00240
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

Witness: Craig Dowell

1. Refer to Kentucky-American's response to the Attorney General's First Request for Information (Attorney General's First Request), Item 8 Attachment, 0_Inputs, line 36, 37, 39, and 40:
 - a. Explain the price difference between Badger advanced meter read (AMR) Endpoints and Neptune AMR Endpoints.
 - b. Explain why the price difference between Badger AMR Endpoints and Badger Advanced Metering Infrastructure (AMI) Endpoints is smaller than Neptune's AMR and AMI Endpoints.

Response:

- a. Badger AMR Endpoints (\$131.67) are more expensive than Neptune AMR Endpoints (\$67.32). The Badger AMR endpoint cost includes cost related to storing monthly read data (as well as data extraction data) in the vendors web-based Head End System. The Neptune AMR endpoint utilizes a legacy application that currently bypasses the vendor's web-based Head End System eliminating this added cost for the Neptune endpoint.
- b. As a result of the difference in pricing explained above in response to part (a), the gap is greater between the Neptune AMR and AMI device. The AMI device includes cost which provides access to store read data in the web-based Head End System, however the AMR endpoint does not as it is not needed.

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Witness: Krista Citron

2. Refer to Kentucky-American's response to the Attorney General's First Request, Item 8 Attachment, Costs and Benefits Comparison. Explain why the costs comparison of Badger and Neptune is different, but the benefit comparison of both is the same, comparing AMIs with AMRs.

Response:

The benefits gained by using AMI are the same regardless of meter/endpoint brand, so the benefit comparison is the same. Badger and Neptune products are priced differently, so their overall costs are different. This is why the cost-benefit analysis (CBA) utilizes an average price model between the two vendors.

AMR is not expected to provide any additional operational benefits so those amounts are \$0 in the cost-benefit analysis.

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Witness: Justin Sensabaugh

3. Refer to the Direct Testimony of Justin Sensabaugh (Sensabaugh Direct Testimony), page 7, lines 7-8. For all AMR meters that have been replaced, due to failure, during the period of calendar year 2020 through the date of this request. Provide the actual useful life (duration) for each meter at the time of failure considering the estimated ten years in service life in Lexington, Northern Division, and Southern Division separated by Brands and Models.

Response:

See KAW_R_PSCDR2_NUM003_092425_Attachment.

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Witness: Krista Citron

4. Refer to the Application, Exhibit A. Refer also to Kentucky-American's response to the Attorney General's First Request, Item 8, Attachment. Provide the following data in a table:
- a. Recurring monthly service costs for cellular endpoints from major carriers for each meter or customer.
 - b. Clarify the type of AMI Meter Kentucky American is planning to utilize upon approval, Ultrasonic Meter or Mechanical Meter.
 - c. Provide the price of each AMI Meter with the probable carrier for the endpoint.
 - d. The cost of each lid with respect to the brand and type of the meter.

Response:

- a. Negotiated pricing is between the manufacturer and the carrier and bundled into one price to American Water; the vendor provides us with one line item based on the product selected, so the monthly service costs for cellular endpoints is not separated out specifically.
- b. For AMI, nutating disc meters will be used for 5/8-inch to 1-inch meters. Meters 1.5-inches and larger could be ultrasonic or nutating disc.
- c. Refer to KAW_R_AGDR1_NUM040_082925 and see below:

	Probable Carrier for Endpoint		
AMI Endpoint Brand	Verizon	AT&T	FirstNet
Badger	\$139.73	\$139.73	-
Neptune	-	-	\$171.12

- d. The same composite lid will be used regardless of brand or type of meter, and the 2025 cost is \$36.59.

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Witness: Krista Citron

5. Refer to Kentucky-American's response to the Attorney General's First Request, Item 8, Attachment. Provide the same file with all calculations and accessible data.

Response:

The file provided in KAW_R_PSCAG1_NUM008_082925_Attachment A should be complete with all calculations and data accessible and intact. This spreadsheet is a dynamic model that allows the user to compare five different scenarios, using the Selected Scenario picker on the "0_Inputs" tab (cell B2). Note that "Enable Iterative Calculation" must be turned on in Excel in order for the scenarios to update.

If there are specific calculations of interest or if more clarification is needed in operating the model, KAW would be happy to assist.

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Witness: Dominic DeGrazia

6. Refer to Kentucky-American's response to the Attorney General's First Request, Item 19. State whether the opt-out option fee would be the same amount proposed in Case No. 2023-00191.²

Response:

At this time KAW has not decided how it would calculate a proposed opt-out fee. If and when KAW proposes to use an opt-out fee, it would submit it to the Commission for review and approval.

² Case No. 2023-00191, Electronic Application of Kentucky-American Water Company for an Adjustment of Rates, a Certificate of Public Convenience and Necessity for Installation of Advanced Metering Infrastructure, Approval of Regulatory and Accounting Treatments, and Tariff Revisions (filed July 7, 2023) at 11.

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Witness: Craig Dowell

7. Refer to Kentucky-American's response to Commission Staff's First Request for Information (Staff's First Request), Item 14(a). State how quickly Kentucky-American would be able to detect a leak on the customer side of the meter using AMI meters.

Response:

The increased interval read data from 1 monthly reading to up to 96 daily interval readings enables the ability to identify possible leaks (continuous consumption) following the installation of the endpoint and the successful activation of and transmission of interval read data from the endpoint. AMI endpoints are designed to communicate all interval readings and event and alarm data every 6 hours. KAW can review devices reporting leak detection flags within the AMI Head End System following these successful data transmissions.

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Witness: Craig Dowell

8. Refer to Kentucky-American's Response to Staff's First Request, Item 1.
- a. For all American Water subsidiaries who have already begun deploying AMI meters and endpoints throughout its service territory, state the average useful life of the AMI technology based on installations to this date, by brand of meter.
 - b. If available, provide any actual cost-benefit data from American Water subsidiaries that have begun deploying AMI to residential customers. In the response:
 - (1) Include any material financial benefits incurred as a result of the implementation; and
 - (2) Identify the brand of the meters and endpoints.

Response:

- a. The installed meter does not have an AMR or AMI distinction, the endpoint connected to the meter is what determines if a meter is read using AMR or AMI technology, therefore the average useful life of the meter is not affected by AMI technology of the endpoint. While American Water has over one million installed AMI devices, the Cellular AMI solution has been installed for approximately 6 years and continues to work successfully as aligned with their 20-year manufacturer warranty. All AMI endpoints are covered under a 20-year manufacturer warranty.
- b. AMI provides benefits by eliminating the need for truck rolls related to meter reading, move-in/move-out reading and other service orders. It ultimately leads to actual read billing by decreasing the need to estimate readings when actual reads are not able to be obtained due to inclement weather and other unavoidable situations. However, we are unable to provide actual cost benefits as the resources and time saved from metering are repurposed in other areas. For the cost benefit analysis KAW has submitted, see Exhibit A to the Application in this matter.

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Witness: Justin Sensabaugh

9. Refer to Kentucky-American's Response to Staff's First Request, Item 12. Refer also to the Application, Exhibit A, Figure 12 – KAWC Practices for Scheduled Meter Testing and Replacement.
- a. Explain what is meant by a meter and endpoint's "testing limit."
 - b. Explain why there are different operational practices for scheduled testing and replacement of meters and endpoints for 1" and 5/8" meters as opposed to meters that are 1.5"-2" or 3" and larger.
 - c. Provide the justification for the congruency between a meter and endpoint's frequency of required testing and its useful life.
 - d. Explain how Kentucky-American would handle a scenario under which a current AMR meter and endpoint are tested after ten years of use and are still in good working order.

Response:

- a. A meter and endpoint "testing limit" is referring to the length of service schedule of various dates due to size.
- b. 807 KAR 5:066, Section 16 prescribes length of service testing requirements by meter size.
- c. These parts of the meter system are installed together during the original installation and are also replaced together upon failure of one part or required length of service replacement. This helps ensure that both components last throughout the whole next replacement cycle without another repair/replacement being needed.
- d. Depending on size, 1.5" and above meters are tested per the regulation described in part b and would remain in service if in good working order. Smaller meters are removed and replaced as currently described in mentioned Exhibit A, figure 12.

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Witness: Krista Citron and Craig Dowell

10. Refer to Kentucky-American's response to Staff's First Request, Item 2.
- a. Provide that same table with a breakdown of cost identifying specifically the expense related to Verizon, FirstNet, AT&T.
 - b. Explain why the Neptune costs do not list the same cellular data providers as Badger.
 - c. Explain what the "HE" fee represents, provide the specific cost, and explain why it does not exist for Badger meters.

Response:

- a. The cost of Badger meters does not vary dependent on the cellular provider, so Badger Verizon will be the same costs as Badger AT&T. Negotiated pricing is between the manufacturer and the carrier and bundled into one price to American Water; the vendor provides us with one line item based on the product selected.
- b. Neptune and Badger utilize different cellular providers. Thus, for this cost-benefit analysis, the Neptune costs do not include Verizon or AT&T and the Badger costs do not include FirstNet.
- c. "HE Fee" is the Head-End Fee. A head-end system is the infrastructure that collects, processes, and manages data received from meters, and then communicates that data to the utility for billing and usage purposes.

There is no head-end fee associated with Badger AMR/AMI, or Neptune AMI; however, for Neptune AMR endpoints, there is an additional head-end fee that is accounted for in the total cost. It is \$0.45 per AMR meter.

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Witness: Justin Sensabaugh

11. Refer to Kentucky-American's response to Staff's First Request, Item 5(b). Confirm that Kentucky-American does not test its meters removed from service. If not confirmed, explain the response.

Response:

Confirmed. Meters are not tested when removed from service for length of service change. Refer to Exhibit A, figure 12 for testing and replacement schedule

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Witness: Dominic DeGrazia

12. Refer to Kentucky-American's response to Staff's First Request, Item 6. Refer also to the depreciation study accepted in Case No. 2023-00191, specifically AMR meters. Explain why Kentucky-American did not reconcile the useful life if the expected useful life of AMR meters is ten years.

Response:

Kentucky-American is forecasting a useful life of ten years for its meters, regardless of the type of technology used for the endpoint (AMI vs. AMR).

This is consistent with the accepted depreciation study from Case No. 2023-00191, which reflected a ten-year useful life for meters. See the depreciation study attached to Mr. Larry Kennedy's June 30, 2023 Direct Testimony, and, specifically, see pages 3-10, 3-11, 3-12, and 5-2 of that depreciation study.

This is also consistent with the Company's intended replacement cycle for its 5/8" and 1" meters (97.7% of all meters in service), as described in Exhibit A to the Application in this case (see discussion on pages 2, 16, 17, 23, and 24 as well as meters by size on page 13) and with the response to Staff's first request, item 6, which describes an expected useful life of ten years and a recent average duration in years for Kentucky of 9.59, which is just slightly shorter than this target.

To summarize, as noted in the direct testimony of Krista Citron, from page 7 line 22 to page 8 line 1, "For recognizing the cost of the investment over time, a 10% depreciation rates was used for the CBA, in order to match the costs of the investment over time with the benefits generated by the investment."

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Witness: Justin Sensabaugh

13. Refer to Kentucky-American's response to Staff's First Request, Item 8. Explain whether Kentucky-American intends to adopt new policies and procedures related to possible leak notifications with the installation of AMI meters.

Response:

KAW intends to make changes to current processes based on availability and frequency of new AMI information received. Currently, with AMR technology the meter information is monthly, and with an update in technology to AMI the meter information would be at least daily. Potential new policies and procedures could come, in the future, with this new data frequency. Exhibit A figures 1, 2, and 3 shows the new MyWater system view concerning leak data available for AMI customers.

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Witness: Dominic DeGrazia

14. Refer to Kentucky-American's response to Staff's First Request, Item 10. Reconcile the assumed useful life for both AMR and AMI meters with the current accepted depreciation rates approved for Kentucky-American. As AMI has not been approved, analyze the assumption using approved depreciation rates for other American Water subsidiaries. Include in the explanation the identification of the subsidiary.

Response:

The assumed useful life of ten years for meters (regardless of AMI or AMR endpoint technology) is consistent with the useful life assumed in the accepted depreciation study from Case No. 2023-00191. See the depreciation study attached to Mr. Larry Kennedy's June 30, 2023 Direct Testimony, and, specifically, see pages 3-10, 3-11, 3-12, and 5-2 of that depreciation study.

The useful life differs from the depreciation rate because one divided by the expected useful life of an asset (e.g. $1 / 10 \text{ years} = 10\%$) is often not equal to the requested or approved depreciation rate. Other factors considered include the booked reserve, remaining future accruals, and composite remaining useful life of the assets. This is most easily observed on page 5-2 of Larry Kennedy's depreciation study from Case No. 2023-00191.

To Kentucky-American's knowledge, AMI-enabled meters are accounted for in the same manner as AMR-enabled meters throughout the enterprise, without separate accounts or depreciation rates. That said, approved meter depreciation rates at other American Water subsidiaries range from 0% to 21% and include rates rounding to 0%, 1%, 2%, 3%, 4%, 5%, 6%, 7%, 8%, 9%, 11% and 21%. None of these necessarily equates to the assumed useful life of a meter.

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15. Refer to Kentucky-American's response to Staff's First Request, Item 14(b). Identify the subsidiary(ies) and provide the water loss percentage beginning in 2020 through the present date, by month. As part of the response, identify when the installation of AMI began and when the installation was completed.

Response:

The subsidiary referenced in Item 14(b) is Pennsylvania-American Water Company. This example relates to a specific leak in a single District Metered Area ("DMA"), which is further explained in response to AG 2-18. Installation of AMI in this DMA began in December 2019 and was completed in approximately February 2020.

Monthly water loss data for this area is only available dating back to December 2021. Additionally, data is unavailable for August-December 2023 while the main supply tank for this area was out of service. These percentages represent the difference in what was measured from Supply Meters compared to what was measured at Demand Meters (customer meters).

	MONTH												
YEAR		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
	2020	-	-	-	-	-	-	-	-	-	-	-	-
	2021	-	-	-	-	-	-	-	-	-	-	-	27.9%
	2022	28.6%	26.8%	28.1%	26.7%	27.0%	26.1%	19.8%	20.5%	27.1%	18.7%	19.7%	20.3%
	2023	23.9%	23.4%	25.6%	20.6%	22.7%	23.6%	24.2%	-	-	-	-	-
	2024	31.6%	26.7%	28.4%	30.0%	28.6%	26.3%	25.5%	29.6%	32.8%	33.9%	31.0%	28.2%
	2025	27.8%	30.4%	31.6%	34.6%	35.8%	33.6%	30.6%	23.8%	-	-	-	-

There are a number of factors impacting water loss and non-revenue water. Monthly water loss can and does fluctuate based on seasonality, water main breaks, leak detection activities, etc. In this particular DMA, a community of ~4,600 customers with a high percentage of those who reside elsewhere in the winter months, the implementation of AMI metering technology has allowed PAWC to identify and address service leaks and main breaks much more quickly.

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Witness: Justin Sensabaugh

16. Refer to Kentucky-American's response to Staff's First Request, Item 17(c). Explain "higher value work."

Response:

KAW states in response to Staff's First Request, Item 17(c) that there is no change to the number of employees expected as a result of the transition from AMR to AMI. The expectation is that benefits created by AMI can reduce certain demands on FSR/meter reader resources and thus free up bandwidth to support higher value work. Higher value work refers to tasks or activities that contribute significantly to KAW's strategic and customer service goals, generate a greater impact across KAW's service territory, support improvements in customer satisfaction, and improve operational efficiency. An example would be for meter readers to complete field service representative type work orders, such as potential customer leak orders, faster than can be currently achieved.

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Witness: Krista Citron

17. Refer to Kentucky-American's response to Staff's First Request, Item 17. Refer also to Kentucky-American's response to Staff's First Request, Item 20. Reconcile the two responses.

Response:

There is nothing to reconcile because there is no change to the number of employees expected as a result of the transition from AMR to AMI. As explained in response to Staff's First Request, Item 20: "Although KAWC expects full-time meter reading positions to decrease with the full implementation of AMI metering, **those positions will be redeployed** in other areas of need." In other words, those employees will remain with KAWC, but the expectation is that their roles may shift as "full-time meter reading" as a job classification will no longer be utilized—or will not be utilized as heavily—once the system has fully converted to AMI.

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Witness: Krista Citron

18. Refer to Kentucky-American's response to Staff's First Request, Item 20. Explain what Kentucky-American considers "greater completion of service orders."

Response:

For some service order types used in the cost-benefit analysis, the completion percent in 2024 was less than 100 percent. Being able to 1) reduce the quantity of service orders and/or 2) complete more of them in a given category is considered a benefit.

For example, KAW received 3,941 orders for "Zero Usage – See if Meter Stuck" in 2024. Of those, KAW completed 3,666 orders, for a total of 93 percent.

With AMI metering, the benefit is two-fold. Fewer of these types of orders are expected, and KAW employees will have more time to address the orders that do come through. In this example, KAW is estimating 25 percent fewer orders received (2,956 instead of 3,941) which would mean that the completion percent could be 100 if working at the same pace as 2024 when KAW completed 3,666 orders.