COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

ELECTRONIC APPLICATION OF KENTUCKY-	**)**	
AMERICAN WATER COMPANY FOR A	**)**	
CERTIFICATE OF PUBLIC CONVENIENCE	**)**	**CASE NO. 2025-00240**
AND NECESSITY TO INSTALL	**)**	
ADVANCED METERING INFRASTRUCTURE	**)**	

DIRECT TESTIMONY OF JUSTIN SENSABAUGH

July 11, 2025

Q. Please state your name and business address.

A. My name is Justin Sensabaugh. My business address is 2300 Richmond Road, Lexington, Kentucky 40502.

Q. By whom are you employed and in what capacity?

A. I am employed by Kentucky-American Water Company ("KAWC," "Kentucky-American" or "Company") as Senior Manager Operations.

Q. On whose behalf are you submitting this testimony?

A. I am submitting this testimony on behalf of KAWC, a wholly-owned subsidiary of American Water Works Company Inc. ("AWK" or "American Water").

Q. What are your responsibilities in your current position?

A. My responsibilities include developing and implementing operational strategies aligned with organizational goals throughout all KAWC Districts and managing daily operations of field services (distribution), and metering. I am also responsible for monitoring system performance, implementing improvements to support efficiency and reliability, and ensuring compliance with federal, state, and local water quality regulations. Managing the metering team includes meter reading, testing, customer appointments, and length of service replacement. One of my current focuses also includes evaluating metering strategies in relation to technology, efficiency, and customer experience.

Q. Please state your educational and professional background.

A. I have a total of twenty-seven years within the water utility industry, seventeen of which have been with KAWC in various roles within operations. I received my

undergraduate business management degree and M.B.A. from Midway University, in Midway, Kentucky both with emphasis on overall business management and finance. I also hold the Kentucky Energy and Environment Cabinet operator certification in Wastewater Treatment I, Wastewater Collection I, Water Treatment IV, and Water Distribution IV.

Q. Have you previously filed testimony before this Commission or any other regulatory commission?

A. No.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to explain KAWC's plan to replace its existing metering infrastructure, demonstrate the need to move to advanced metering infrastructure ("AMI") as the current meters become obsolete, including key benefits, and to demonstrate that moving to AMI will not result in wasteful duplication. As such, I support those portions of the comprehensive Advanced Metering Infrastructure Plan submitted as Exhibit A to the Petition ("Exhibit A").

Q. Please describe the Company's currently deployed metering infrastructure.

A. The Company presently has approximately 143,720 meters and endpoints in service as of March 2025, almost all of which are equipped with automatic meter reading ("AMR") endpoints, across all or portions of 14 counties throughout the Commonwealth of Kentucky.

Q. Does the Company have a plan to replace metering infrastructure as it reaches the end of its useful life?

A. Yes. As more fully addressed in Exhibit A, the Company generally replaces its metering infrastructure based on its length of service ("LOS") schedule unless the meter fails prior to reaching the end of its LOS.

Q. Does replacing a meter at the end of its LOS help the Company provide safe, reliable and adequate service to KAWC's customers?

A. Yes. Meters and endpoints wear out, and batteries in the endpoints deplete. When this happens, meter performance is diminished. Diminishing performance is usually caused by several factors with the environment surrounding the installed equipment. The meters and endpoints are usually in covered pits outside of the premises that they serve. The meter pits are subject to extreme heat, cold, condensation, and being submerged in water. Diminishing performance is seen by the meter reading team when monthly reading meters for customer bills. This diminished performance is usually seen when reads do not pick up with the reading equipment, usually caused by battery life failure. If a reading for an AMR meter cannot be obtained with the drive by technology in the meter truck, an attempt for a manual read is made by physically looking at numbers and dials on the meter itself. This process would need to be repeated monthly for customer bill data until the meter and endpoint are replaced.

Q. Please describe the LOS schedules.

A. The Company follows a periodic meter replacement program to replace aging meters and endpoints that is informed in large part by the meter testing regulations found in 807 KAR 5:066 Sec. 16(1). For large meters (3-inch meters and larger), the testing frequency range is 1-2 years. For the smaller residential meters (5/8-inch meters) that constitute over 90% of KAWC's deployed metering infrastructure, KAWC had been targeting a 15-year LOS since 2011.[1] However, since that time, the Company observed an increase in meter reading challenges as well as an increase in associated unscheduled meter and endpoint replacements. As a result, KAWC returned to a 10-year target LOS for those meters consistent with the meter testing regulations.

Q. When a meter and endpoint reach the end of their LOS, are they obsolete?

A. Yes. From an operations and efficiency perspective, when a meter needs to be replaced, via reaching the end of its LOS or by premature failure, it becomes obsolete. It is only in certain limited instances, usually for 2'' meters, that KAWC can test the meter, make necessary repairs, and recertify the meter accuracy for another prescribed LOS cycle. Even when that is the case, however, that process

[1] KAWC was granted a deviation in Case No. 2009-00253, permitting the Company to keep its 5/8-inch meters in service for 15 years without testing for accuracy. *In the Matter of Kentucky-American Water Company's Request for Permission to Deviate from 807 KAR 5:066, Section 16(1),* Case No. 2009-00253, Order October 5, 2011.

requires additional investment, including endpoint and battery replacement, to renew the lifecycle.

Q. If a meter and endpoint set in the ground reaches the end of its LOS and the Company replaces that meter in the normal course of business, does wasteful duplication occur?

A. No. Replacing a meter at the end of its useful life does not create wasteful duplication because the meter and endpoint being replaced are removed from service, and meters are necessary to provide service. It merely replaces the meter and endpoint with a new meter and endpoint because the earlier meter and endpoint had reached the end of their useful lives. When a meter and/or endpoint fails prematurely and is replaced, the LOS cycle starts over on installation of the new meter.

Q. If a meter and endpoint need to be replaced, are they providing adequate service?

A. The reason that meters and endpoints are replaced on the LOS schedule is to maintain reliable service for our customers. The Company has found that the batteries in the endpoints are failing at the LOS mark. Meters that fail do not provide adequate service. Meters need to consistently provide the ability for meter readers to obtain reads to ensure timely and accurate billing.

Q. When a meter fails, is it obsolete?

A. Yes, it is obsolete from the perspective that it lacks the ability to provide service for the customers.

Q. Does the Company track how often meters are replaced before the meter reaches its LOS?

A. Yes.

Q. How often is a meter replaced before it reaches the end of its LOS?

A. The following is based on data from 2023 to July 2025 information: An average of 8% of 5/8'' meters were changed in 8 years lifespan or fewer in those years.

Q. What is the most common reason for those failures?

A. The most common failures are related to meter and/or endpoint communication issues due to battery failure.

Q. Is the Company proposing to accelerate the replacement of its current metering infrastructure?

A. No. The Company will continue to replace meters following the current meter replacement schedule when a meter reaches its LOS or when a meter fails prior to reaching its LOS.

Q. Please describe what the Company seeks through this CPCN.

A. KAWC seeks to begin replacing existing meters that reach the end of their LOS or that fail prior to reaching the end of their LOS with AMI technology.

Q. Has the Company reviewed current AMI technology?

A. Yes, and the details of that process are found in Exhibit A to the Application in this case.

Q. How did the Company review the current state of AMI technology?

A. In mid-2024 through mid-2025, American Water's Service Company ("Service Company") issued a request for information ("RFI") to twelve meter/endpoint vendors to identify and survey suppliers currently in the market that could meet the meter needs of American Water across its footprint. The goal of the RFI was to identify potential vendors whose products, capabilities, features, capacity, and services would be a good fit for American Water's customers. In addition, exercising diligence, validating vendor capacity, and refreshing pricing, contractual terms and product offerings for both metering and AMI technology (hardware, communication network, software, integration capabilities) were priorities during this process.

Q. What was the next step in the meter selection process?

A. The Service Company issued a request for proposals ("RFP").

Q. Why did the Service Company issue the RFP?

A. The RFP was designed to identify and award business to a strategic partner or partners within the metering space to provide meters moving forward. The goal of the RFP was utilizing American Water's supply chain capability to secure optimum enterprise-wide pricing, delivery and support terms, as well as validating technical

capabilities that will lead to reduced field visits, improved customer satisfaction and reduced complexity.

Q. Did the Service Company select a meter vendor or vendors based on this process?

A. Yes. As a result of this process, the Service Company narrowed the vendors down from twelve potential candidates to two strategic partner vendors. The process of finalizing the terms of the contract with one of the chosen vendors is now complete and the process of finalizing the terms with the remaining selected vendor is presently underway.

Q. Please describe the difference between the existing meter infrastructure and AMI?

A. The current AMR endpoints allow for the automatic collection of consumption data from the meter and then converts that data into a digital format that can be communicated remotely to a meter reading device. While this reduces or eliminates the need for a manual meter reading, it does still require a meter reader to drive by the meter to pick up the consumption data. In addition, these meters provide only one-way communication.

The AMI meters will provide two-way communication that allows for far more information to be communicated to the customer and to the Company. In addition to allowing for remote meter reading capability (without requiring a drive by), the

AMI meters allow usage monitoring, remote connections/disconnections, leak detection, and greater operational efficiencies, among other benefits.

Q. What benefits will a customer see with AMI technology?

A. The AMI system will provide much more detailed information to customers than available with AMR. AMI offers customers the ability to monitor their water usage in near real time, which in turn enables customers to make informed decisions about their water usage that will help them control their water bills. It also helps customers identify potential issues in a timely manner in order to prevent high water bills. Additionally, AMI technology can also provide customer alerts and alarms associated with excessive usage that can help detect leaks on the customer side of the meter. It will also improve customer service by providing more information to the customer service operators during customer service calls.

Application Exhibit A's section on real world examples shows how a customer concern about a high bill can be addressed with AMI. The meter can be analyzed in 15 minute read increments allowing visibility to any leak present and when the leak started. Fire service accounts with AMI installed can easily see issues within the fire system by analyzing the AMI data. Fire service lines should show zero flow unless testing the system or extinguishing a fire. Any other usage present notes a leak within the fire system. Exhibit A also explains how Toyota Motor Manufacturing (TMMK) and the University of Kentucky (UK) both realize AMI

benefits. Toyota uses AMI data for production process changes and improvements with data that can be obtained through a customer portal. UK uses AMI data for bills and finding potential leaks due to their vast campus and multiple meters in various locations. KAWC has also helped identify a large leak at UK, with AMI, when it was not found by other leak finding efforts. KAWC pinpointed the time the leak started, current usage, and duration of the leak.

Q. Will the Company experience benefits from AMI technology?

A. Yes. AMI will enable strategic and permanent improvements in safety, customer experience, operational efficiencies, and environmental benefits. The Company looks forward to leveraging AMI to empower customers with near real-time consumption data to enable smart water use choices, enhance customer communication regarding customer water consumption patterns and unusually high-water use, optimize KAWC's ability to measure and address non-revenue water, and improve water system operations and management, among other things. AMI provides a variety of benefits by allowing the Company to collect hourly consumption data from the meter and transmit it to a computer network. This will improve safety, operational efficiency, and customer service. With AMI, it is no longer necessary for employees to walk or drive by meter routes in order to gather consumption data. This will make our meter reading more efficient, reduce work site safety hazards associated with meter reading, reduce our environmental impact

by reducing monthly trips taken to obtain meter readings, and shift our employees time spent reading meters to activities related to customer service requests. AMI meters on large campuses, such as UK, also provide the benefit of not needing to drive in densely populated pedestrian areas. This safety improvement is a benefit to both the Company and customers.

The implementation of AMI will increase billing accuracy and reduce the likelihood of estimated bills (e.g., due to weather events or other obstacles to accessing customer meters) by automatically providing timely, accurate reads through the network. The Company will also be able to more efficiently collect, organize, analyze, and communicate large quantities of meter data. AMI data can also be used to uncover irregularities that may signal a leak, meter tampering or water theft. Water loss could potentially be reduced due to more timely meter readings, including on demand readings to help with potential issues and leaks. Readings currently are taken around every 30 days. AMI has the ability to read every few minutes or when needed. This greatly improves the response time to potential leak issues. As discussed above, customers will have more timely access to water usage data which will allow them to identify opportunities for conservation and bill reducing tips to enable smart water use choices, and to identify and address unusually high usage.

Q. Does this conclude your prepared direct testimony?

A. Yes, it does.

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF FAYETTE)

The undersigned, Justin Sensabaugh, being duly sworn, deposes and says that he is Senior Manager Operations of Kentucky-American Water Company, that he has personal knowledge of the matters set forth in the accompanying testimony for which he is identified as the responsible witness, and that the answers contained therein are true and correct to the best of his information, knowledge and belief.

Justin D. Sensabaugh

Justin Sensabaugh

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 8th day of July, 2025.

Molly McCleese Van Over

Notary Public

My Commission Expires:

July 31, 2029

Notary ID: KYNP26988