

**PENNSYLVANIA
PUBLIC UTILITY COMMISSION
Harrisburg, PA 17105-3265**

Public Meeting held June 13, 2024

Commissioners Present:

Stephen M. DeFrank, Chairman
Kimberly Barrow, Vice Chair
Ralph V. Yanora
Kathryn L. Zerfuss
John F. Coleman, Jr

Petition of Aqua Pennsylvania, Inc. for Approval of its
Third Long-Term Infrastructure Improvement Plan

Docket Number:
P-2023-3043755

OPINION AND ORDER

BY THE COMMISSION:

Before the Pennsylvania Public Utility Commission (Commission) for consideration is the Petition of Aqua Pennsylvania, Inc. (Aqua) for approval of its Third Long-Term Infrastructure Improvement Plan (Third LTIIP). On October 23, 2023, Aqua filed a Petition for Approval of its Third LTIIP and its Lead Service Line Replacement Program (LSLRP). Aqua's Third LTIIP was attached as Exhibit A to the Petition and the Third LTIIP contained a Lead Service Line Replacement Plan (LSLR Plan) as Attachment A. Copies of the Petition were served on the statutory advocates and the parties of record from Aqua's most recent base rate case proceeding.¹ No other

¹ See, Docket No. R-2021-3027385.

comments were received. For the reasons expressed in this Opinion and Order we will approve Aqua's Third LTIP.

PROCEDURAL HISTORY

On November 15, 2023, the Office of Small Business Advocate filed a Notice of Appearance and a Notice of Intervention, Public Statement, and Verification. On November 20, 2023, the Office of Consumer Advocate (OCA) filed comments. On November 21, 2023, OCA filed a Notice of Intervention and Public Statement. On November 22, 2023, the Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA) filed comments. The OCA and CAUSE-PA comments were directed towards elements of the LSLRP and LSLR Plan. No other comments were received.

Based upon concerns expressed by staff in the Commission's Bureau of Technical Utility Services (TUS), on November 27, 2023, Aqua filed a separate Petition for approval of its LSLRP at Docket No. P-2023-3044459. The Commission notes that Aqua's LSLRP Petition has been assigned to the Office of Administrative Law Judge (ALJ) for adjudication.

On February 5, 2024, via a Secretarial Letter, the Commission extended the review period for Aqua's Third LTIP until March 20, 2024. On March 14, 2024, in response to a data request from TUS, Aqua filed an updated version of its Third LTIP. On March 15, 2024, via Secretarial Letter, the Commission extended the review period for Aqua's LTIP until May 30, 2024. On May 28, 2024, via Secretarial Letter, the Commission further extended the review period for Aqua's Third LTIP to June 30, 2024.

BACKGROUND

Effective April 16, 2012, Act 11 of 2012, (Act 11) provides jurisdictional water and wastewater utilities, electric distribution companies (EDCs), and natural gas distribution companies (NGDCs) or a city natural gas distribution operation with the ability to implement a Distribution System Improvement Charge (DSIC) to recover reasonable and prudent costs incurred to repair, improve, or replace certain eligible distribution property that is part of the utility's distribution system. The eligible property for the utilities is defined in 66 Pa. C.S. §1351. Act 11 states that as a precondition to the implementation of a DSIC, a utility must file an LTIIP with the Commission consistent with 66 Pa. C.S. §1352.

The Commission promulgated regulations relating to LTIIPs at 52 Pa. Code §§ 121.1 – 121.8 that became effective December 20, 2014. In accordance with the regulations, DSIC-eligible utilities must include the following elements in its LTIIP:²

- (1) Types and age of eligible property;
- (2) Schedule for its planned repair and replacement;
- (3) Location of the eligible property;
- (4) Reasonable estimates of the quantity of property to be improved;
- (5) Projected annual expenditures and measures to ensure that the plan is cost effective;
- (6) Manner in which replacement of aging infrastructure will be accelerated and how repair, improvement or replacement will maintain safe and reliable service;
- (7) A workforce management and training program; and
- (8) A description of a utility's outreach and coordination activities with other utilities, PennDOT and local governments on planned maintenance/ construction projects.

² See, 52 Pa. Code § 121.3.

AQUA'S FIRST LTIIP

Aqua is a corporation organized and existing under the laws of the Commonwealth of Pennsylvania and is owned by Essential Utilities, Inc. Aqua is a public utility as defined by the Public Utility Code, 66 Pa. C.S. §102, and is subject to the regulatory jurisdiction of the Commission. Aqua owns and operates water treatment facilities including water treatment plants, wells, storage, distribution, and transmission systems throughout Pennsylvania serving approximately 450,000 customers in 32 counties. Aqua's distribution system includes approximately 5,928 miles of pipe, 25,210 hydrants, 85,135 valves, and 449,298 customer meters. Aqua's service territory is divided into its Southeast Pennsylvania (SEPA) region, which includes a contiguous distribution system within portions of Bucks, Chester, Delaware, and Montgomery counties and separate smaller systems in portions of Berks, Bucks, Chester, and Montgomery counties, and its Greater Pennsylvania (GPA) region, which includes Aqua's service territories outside of SEPA.

On January 20, 2017, Aqua filed its first LTIIP (First LTIIP) that spanned the years 2017 through 2021. Aqua's First LTIIP was approved in a Commission Order entered on May 18, 2017, at Docket No. P-2017-2584953. During the review of Aqua's Annual Asset Optimization Plan (AAOP) for 2018, Aqua indicated to TUS staff that it would file a petition for an amended LTIIP by October 2019 in order to incorporate the eligible property from its former wholly owned subsidiary, Superior Water Company (Superior).³

³ AAOPs are required pursuant to 52 Pa. Code § 121.6 and must detail the actual DSIC-eligible infrastructure replaced or upgraded in the past year, as well as a projection for the infrastructure replacements for the next year. Aqua's AAOPs can be found at Docket Nos. M-2019-3008336, M-2020-3018995, M-2021-3024369, M-2022-3031193, and M-2023-3038645.

AQUA’S SECOND LTIIIP

On October 31, 2019, Aqua filed a petition for a revised LTIIIP (Second LTIIIP), which replaced and superseded its First LTIIIP.⁴ Aqua’s Second LTIIIP that was approved in a Commission Order entered on February 27, 2020, at Docket No. P-2019-3013940. Aqua’s Second LTIIIP spanned the years 2020 through 2024. Aqua’s Second LTIIIP addressed the incorporation of several smaller acquisitions undertaken since the approval of Aqua's First LTIIIP.

Table 1, below, shows Aqua’s DSIC-eligible expenditures and main replacements according to Aqua’s AAOPs. It is noted that Aqua’s spending for the years 2018 through 2022 was projected to be approximately \$869.29 million, while it actually spent \$1.05 billion. This is an approximate 21% increase in spending from the projected amounts in its AAOPs. Aqua also reported that it replaced 636 miles of main during this time period, nearly meeting its projection of 652 miles.

Table 1: DSIC-Eligible Expenditures and Replacements for 2018 through 2022

Year	Projected Exp.	Actual Exp.	Main Projected	Main Actual
2022	\$169.37 Million	\$199.60 Million	113 Miles	92 Miles
2021	\$154.74 Million	\$208.03 Million	150 Miles	134 Miles
2020	\$186.82 Million	\$207.34 Million	122 Miles	152 Miles
2019	\$185.50 Million	\$229.19 Million	128 Miles	106 Miles
2018	\$172.86 Million	\$201.06 Million	139 Miles	152 Miles
	TOTAL	TOTAL	TOTAL	TOTAL
	\$ 869.29 Million	\$1.05 Billion	652 Miles	636 Miles

⁴ Normally a petition for a revised LTIIIP would be docketed to the current LTIIIP docket. However, Aqua’s Petition filed on October 19, 2019, effectively replaced and superseded Aqua’s current LTIIIP. Thus, we treated Aqua’s Petition as a petition for a new LTIIIP and docketed the Petition to a new docket number. *See, Petition of Aqua Pennsylvania, Inc. for Approval of a Revised Long-Term Infrastructure Improvement Plan*, Order entered February 27, 2020, at Docket No. P-2019-3013940.

PERIODIC REVIEW OF AQUA’S LTIIIP

On March 31, 2022, via a Secretarial Letter at Docket No. M-2022-3031218, the Commission initiated the periodic review of Aqua’s Second LTIIIP, as required by the Public Utility Code and Commission regulations. 52 Pa. Code § 121.7(a). In a Commission Order entered on December 21, 2023, at Docket No. M-2022-3031218 (Review Order), the Commission found that Aqua’s Second LTIIIP was designed to ensure and maintain safe, adequate, reasonable, and reliable service and that Aqua has substantially adhered to its plan. However, the Commission noted in the Review Order that Aqua was trending to be approximately 22.5% above its projected total spending by the end of 2023.

AQUA’S THIRD LTIIIP

Aqua’s Third LTIIIP spans the years 2023 through 2027 and includes approximately \$1 billion in DSIC-eligible funding and the replacement of 324 miles of main. Aqua’s Third LTIIIP is being submitted pursuant to a commitment made as a part of a Commission-approved settlement that required Aqua to amend its water LTIIIP to include the DSIC-eligible assets of the Borough of Shenandoah and any other water systems that have been acquired under Section 1329 of the Pennsylvania Public Utility Code, but not included in Aqua’s current LTIIIP, and which does not re-prioritize other existing commitments in other service areas.⁵

In supplemental information filed with the Commission, Aqua states that its goals for its Third LTIIIP include the replacement of aging distribution pipe and appurtenances, improved system reliability, the consistent availability of increased fire flow throughout

⁵ See, *Application of Aqua Pennsylvania, Inc. pursuant to Sections 1102, 1329, and 507 of the Public Utility Code for Approval of its Acquisition of the Water System Assets of Shenandoah Borough and the Municipal Authority of the Borough of Shenandoah*, Order entered July 13, 2023, at Docket No. A-2022-3034143, Ordering Paragraph 11.

its systems, replacement of customer-owned lead service lines (COLSLs), and improved service to customers. Aqua notes that during the course of its Third LTIIP, it will continue to target its candidate pool of pipe to replace aged mains and mains made of certain materials which in turn will improve overall system reliability, reduce water loss, reduce purchased power and chemical expense, and reduce customer impacts through decreased outages due to main breaks.

Aqua also maintains that it will track its progress by tracking its main breaks and non-revenue water (NRW) information in its SEPA and GPA regions and submitting this information through its AAOPs. Aqua notes that it is also working to achieve the replacement of all its lead service lines including galvanized service lines requiring replacement throughout its system in compliance with the Commission's regulations and the United States Environmental Protection Agency's Lead and Copper Rule Revisions.

Aqua, in its petition, addressed the eight LTIIP elements required by 52 Pa. Code§ 121.3, as discussed below:

(1) TYPES AND AGE OF ELIGIBLE PROPERTY

Aqua's Position

Aqua confirms that DSIC-eligible assets include water mains, valves, hydrants, services, and meters, capitalized main breaks, tie-in of dead-end mains, cleaning and lining, and highway relocations. Aqua notes that it has developed a Geographic Information System (GIS) for its water systems in 2005. Aqua maintains that its GIS stores data on water mains, valves, and hydrants and is continually updated as the systems change with the addition of new assets and the replacement of older assets.

Aqua, in Tables 2 through 13 of its Third LTIP, provides substantial details on the material composition and age of their pipes, mains, services, meters, valves, and hydrants. Aqua notes that ownership of its service lines is split between the company and the customer. Aqua confirms that it owns the service line from its connection at the water main to the curb stop, which is typically located near the customer's property line, and that the customer is then responsible for the service line from the curb stop to the premise.

Aqua acknowledges that service lines need to be addressed during water main replacement projects, and states that the entire company portion of the service line, both short side and long side, are replaced during a main replacement project. Aqua maintains that in some circumstances, plastic pipe is installed instead of copper when corrosive conditions are present. Aqua notes that in both situations the customer portion of the service line currently is not replaced during the main replacement project. Aqua maintains that the exception to this is when a COLSL is known or discovered. While Aqua's Third LTIP includes estimates for the number and cost of the replacement of COLSLs, Aqua's LSLR Plan details the parameters for replacement of COLSL replacement such as reimbursements and notifications.

Comments

No comments were received regarding the types and age of eligible property.

Resolution

Upon review of Aqua's Third LTIP and supplemental information filed, the Commission finds that Aqua's Third LTIP fulfills the requirements of 52 Pa. Code § 121.3(a)(1) by identifying the types and ages of eligible property for which it seeks DSIC recovery.

(2) SCHEDULE FOR PLANNED REPAIR AND REPLACEMENT OF ELIGIBLE PROPERTY

Aqua's Position

Aqua notes that with the implementation of its GIS system, it was able to effectively extend its long-term water main replacement program planning. Aqua maintains that prior to the GIS, project selection was done on an annual process, relying on various spreadsheets and paper notes maintained by various groups and individuals. Aqua acknowledges that this approach did not allow for a broader, more long-term view of the program. Aqua maintains that since the GIS has been in place, a significant amount of pipe that is not ductile iron, or that is more than 50 to 60 years old, has been captured for future replacement projects. Aqua states that this approach recognizes the fact that all pipes will eventually need to be replaced and ensures that no pipe will be missed.

Aqua notes that it utilizes a macro and micro planning approach in its pipeline replacement program. Aqua avers that the program methodology was detailed in an Appendix included in the supporting materials for its 2008 request to increase its DSIC surcharge (2008 Report).⁶ Aqua's 2008 Report identified a candidate pool of approximately 1,500 miles of pipe in its distribution system to be targeted for replacement. Aqua confirms that this approach continues to be applied today, with some additional candidate pipe targets being added over the years. Aqua maintains that since that time, it has replaced more than 1,000 miles of pipe, but not all of this pipe was from that candidate pool since other replacement needs such as opportunistic coordination with municipal repaving projects arise each year. Aqua affirms that it has refined its estimate

⁶ See, Docket No. R-2008-2079310.

of its original candidate pool through continued data gathering and a better understanding of pipe inventories outside of SEPA.

Aqua in its Third LTIP provides a summary of an updated current candidate pool and details the selection of specific replacement projects in a given year, noting that the process is slightly different outside of SEPA as the characteristics of those systems require a different approach. Aqua avers that because its GPA systems tend to be smaller, a relatively small project can have a significant impact on its overall system. Therefore, Aqua states that the selection of specific projects is driven by local knowledge of the operators and engineers that work closely with those systems. Aqua maintains that its projects are selected to address pipes with high break frequencies or areas with ongoing water quality or hydraulic issues. Aqua notes that it will continue to monitor break rates for these cohorts as they age and that valves, services, and hydrants are replaced generally as part of its main replacement schedule and that its meters are replaced on a 20-year replacement schedule.

In supplemental information filed with the Commission, Aqua notes that for the later years of its LTIP, the planning process for its DSIC-eligible main replacements may include identification of projects for the following year during the current year. Aqua states that it then establishes and finalizes a budget for the DSIC-eligible projects and then categorizes them into its GIS system. Aqua maintains that its larger or long-term projects are identified and included in its five-year projected budget and categorized as DSIC eligible. Aqua affirms that in addition to known projects scheduled in the out years of the five-year budget, it includes estimates for additional projects based on pipe age, material, and break rates. Aqua confirms that these estimates are then refined in the year prior to the year they are implemented. In a supplemental response to a TUS data request (TUS-1-

2) filed on March 14, 2024, Aqua provided a detailed table of its planned infrastructure improvement amounts by each of its discrete systems for planning years 2023 and 2024.

Aqua notes in supplemental information filed with the Commission that while both main breaks and NRW provide valuable data toward measurement of success, main breaks may also be influenced by specific weather fluctuations during the year and NRW may be influenced by system requirements or changes in operations. For hydrant projects, Aqua affirms its goal of ensuring the consistent availability of, and in some areas increasing, fire flow throughout its systems through replacing aged mains or upsizing mains. Aqua notes that it has continued to track flow rates at any hydrants that do not provide 500 gallons per minute at 20 pounds per square inch. Aqua adds that it marks these hydrants until the hydrant can be relocated, eliminated, or incorporated into a project to improve fire flow to that hydrant.

Comments

No comments were received regarding the schedule for planned repair and replacement of eligible property.

Resolution

Upon review of Aqua's Third LTIIP and supplemental information filed, the Commission finds that Aqua's Third LTIIP fulfills the requirements of 52 Pa. Code § 121.3(a)(2) by providing a schedule for planned repair and replacement of eligible property.

(3) LOCATION OF THE ELIGIBLE PROPERTY

Aqua's Position

Aqua reports that it has water systems located in several parts of the state, but most are within the SEPA region. Aqua notes that the SEPA region accounts for 77% of its pipe in Pennsylvania. Aqua contends that its SEPA region includes an adjoining distribution system within Bucks, Chester, Delaware, and Montgomery counties and that there are separate smaller systems in Berks, Bucks and Montgomery counties. Aqua maintains that its SEPA distribution system ranges from urbanized areas surrounding the City of Philadelphia to suburban areas heading away from the city to rural areas at the outer edges of the system and into the satellite systems.

Aqua notes that systems outside of SEPA, designated as the GPA region, are considerably smaller and that they range in size from systems like Canal Acres in Pike County, with fewer than 15 customers and less than one mile of pipe, to the Shenango system in Mercer and Lawrence counties, with nearly 300 miles of pipe serving approximately 20,000 customers. In supplemental information filed with the Commission, Aqua provided a list of all of the water systems in each operating district (GPA, SEPA), that are eligible to have infrastructure replaced in the Third LTIP.

Comments

No comments were received regarding the location of eligible property.

Resolution

Upon review of Aqua’s Third LTIIP and supplemental information filed, the Commission finds that Aqua’s Third LTIIP fulfills the requirements of 52 Pa. Code § 121.3(a)(3) by providing a general description of the location of eligible property.

(4) REASONABLE ESTIMATES OF THE QUANTITY OF PROPERTY TO BE IMPROVED and

(5) PROJECTED ANNUAL EXPENDITURES AND MEASURES TO ENSURE THAT THE PLAN IS COST EFFECTIVE

Aqua’s Position

Aqua states that its five-year main replacement projections demonstrate a continued accelerated replacement rate. Aqua notes that in addition to its planned water main replacements, its DSIC budget also addresses the capital cost of water main breaks, highway relocations, tie-ins to eliminate dead ends, and COLSLs. Table 2, below, details the amount of main Aqua plans to replace during the course of its Third LTIIP.

Table 2: Third LTIIP Amount of Main to be Replaced per Year

Year	Miles of Main to be replaced
2023	83
2024	64
2025	60
2026	58
2027	59

Table 3, below, details the amount of eligible property to be replaced during the course of the LTIIP, including COLSLs.

Table 3: Third LTIIP Amounts of Eligible Property to be Replaced per Year

Year	Services	COLSL	Valves	Hydrants	Meters
2023	6,049	288	1,418	231	22,442
2024	4,191	1,200	867	162	53,100
2025	3,060	1,500	900	120	21,730
2026	2,958	1,500	870	116	11,175
2027	3,009	1,500	885	118	7,419

Aqua affirms that the budgets for its DSIC-eligible replacements associated with water main breaks and other eligible distribution system work are based upon past experience, while its meter replacement budgets consider meter age, and Commission-mandated meter replacement intervals. Aqua avows that investment in these capital expenditures will be financed by a mix of equity and borrowed funds. Aqua declares that its SEPA region has utilized a long-standing program of bidding and awarding multi-year construction contracts in each of its operating divisions, while its GPA region does not utilize multi-year contracts. Table 4, below, details Aqua’s projected annual expenditures by project group for 2023 through 2027.

Table 4: Projected Annual Third LTIP Expenditures by Year

Project Group	2023	2024	2025	2026	2027
Main Replacements	\$158,130,781.00	\$124,910,049.00	\$128,786,868.00	\$121,245,137.00	\$121,585,291.00
Tie-In Dead End Mains	\$6,466,087.00	\$15,444,708.00	\$6,850,000.00	\$16,760,000.00	\$22,760,000.00
Capitalized Main Breaks	\$4,489,597.00	\$4,085,000.00	\$4,560,000.00	\$4,261,000.00	\$4,941,000.00
Highway Relocations	\$2,336,581.00	\$1,271,800.00	\$675,000.00	\$1,056,800.00	\$1,806,800.00
Valve Replacements	\$824,861.00	\$1,356,000.00	\$1,211,000.00	\$1,311,000.00	\$1,371,000.00
Other Main/DistrSysImpr	\$2,374,806.00	\$2,198,400.00	\$1,860,800.00	\$4,176,700.00	\$6,650,299.00
Eligible Meters	\$6,692,629.00	\$12,499,834.00	\$6,159,995.00	\$4,243,289.00	\$2,619,340.00
ERT Devices	\$861,074.00	\$3,637,222.00	\$1,532,977.00	\$812,047.00	\$555,285.00
Renewal Services - Regular	\$4,568,392.00	\$4,695,000.00	\$4,495,000.00	\$4,425,000.00	\$4,405,000.00
Renewal Services Main Rehab	\$16,969,011.00	\$18,510,649.00	\$18,070,062.00	\$17,014,219.00	\$17,061,841.00
Replace/Relocate Hydrants	\$5,702,755.00	\$4,251,568.00	\$4,057,156.00	\$3,775,904.00	\$3,786,109.00
COLSLs	\$2,106,359.00	\$9,782,664.00	\$14,580,928.00	\$15,018,356.00	\$15,468,906.00
TOTAL DSIC ELIGIBLE	\$211,522,931	\$202,642,894	\$192,839,786	\$194,099,452	\$203,010,870

In supplemental information filed with the Commission, Aqua maintains that it uses national contract pricing and bidding for the procurement of materials used in its DSIC program. Aqua maintains that these contracts include the procurement of pipes, services, hydrants, valves, cathodic protection, and meters at competitive prices. Aqua affirms that these contracts are generally awarded for two years and then evaluated and bid on as necessary. Aqua notes that vendors are then chosen to bid based on their qualifications and pricing, and that national contracts allow it to utilize the purchasing power of the combined organization and pass these benefits and savings onto its customers.

Aqua also confirms that it uses Master Service Agreements (MSA) with engineering consultants to establish rates for a two-year period, thereby effectively planning and locking in rates for various DSIC projects. Aqua notes that it often employs

alternatives analysis in its project planning to determine if there is a more cost-effective way to perform a DSIC project, while taking into consideration operations and system reliability. Aqua maintains that it has also evaluated its DSIC projects to reduce operational costs through consolidation of sources of supply.

Comments

No comments were received regarding the reasonable estimates of the quantity or expenditures of property to be improved, and cost effectiveness of the plan.

Resolution

The Commission's regulations require an entity that has a Commission-approved LTIP to include with its LSLR program petition a modified LTIP containing an LSLR plan "as a separate and distinct component of the entity's LTIP." 52 Pa. Code § 65.54(b). While an LSLR plan is intended to be a component of an LTIP, an LSLR program and LTIP each require individual Commission-approval. In the Final Rulemaking Order to implement Act 120 of 2018, we reminded stakeholders that the LSLR program petition process does *not* change existing LTIP modification procedures.⁷ Thus, we remind Aqua here that this Order pertains only to its Third LTIP Petition and does not constitute approval of its LSLRP Petition. Tables 18 and 19 in Aqua's Third LTIP include projected five-year replacement schedules for COLSLs, which are subject to modification by the Commission as part of its consideration of Aqua's LSLRP. Any modifications to the replacement schedules for COLSLs through the adjudication process for Aqua's LSLRP that occur subsequent to this order may require Aqua to modify its Third LTIP projections through either an AAOP or a petition for modification, depending on whether such modifications would meet the definition of

⁷ See, *Rulemaking to Implement Act 120 of 2018 at 52 Pa. Code Chapter 65 and 66*, Order entered March 14, 2022, at Docket No. L-2020-3019521, at 23.

a major modification.⁸ The Commission will address Aqua's LSLR Plan (Attachment A to Aqua's Third LTIP), and LSLRP Petition by separate order at Docket No. P-2023-3044459.

Upon review of Aqua's Third LTIP and supplemental information filed, the Commission finds that Aqua's Third LTIP fulfills the requirements of 52 Pa. Code §§ 121.3(a)(4)-(5) by providing reasonable estimates of the quantity of property to be improved and the projected annual expenditures and means to finance the expenditures and ensure cost effectiveness.

(6) ACCELERATED REPLACEMENT AND MAINTAINING ADEQUATE, EFFICIENT, SAFE, RELIABLE AND REASONABLE SERVICE TO CUSTOMERS

Aqua's Position

Aqua states that it has utilized the DSIC mechanism to renew its distribution system since 1997 and that since 1997, over 46% of the pipe (2,676 miles) in their system has been renewed. Aqua notes that this amounts to an average of 100 miles per year. Aqua reports that this accelerated rate of renewal is nearly twice that of what a one-percent-per-year renewal rate would have accomplished (1,384 miles). Aqua considers a one-percent-per-year renewal rate to be a baseline replacement rate. Aqua maintains that it has far surpassed that baseline replacement rate and will continue to maintain its accelerated rate of replacement.

Aqua states that its DSIC program has been successful in improving reliability (main breaks), efficiency (non-revenue water), and water quality. Aqua avers that

⁸ See, 52 Pa. Code § 121.2 (definition of major modification) and § 121.5 (relating to modifications to and expiration of an LTIP).

another way to examine its declining main break trend is to consider the total number of breaks each year, rather than the break rate. Aqua affirms, for example, that in 2003 there were a total of 998 break events in SEPA, as compared to 2022 when the number of breaks was a new low of 171. Aqua states that for the past twelve years, its SEPA break rate has been below the American Water Works Association (AWWA) nationally acceptable main breakage rate of 15 breaks per 100 miles.

Aqua states that its NRW is also declining and notes that the replacement of older, potentially leaky pipes with newer pipes should result in lower leakage. Aqua notes that applying more current approaches to analyzing and managing NRW has been a particular part of its focus in recent years, including the AWWA water audit method. Aqua confirms that as a result of a 2013 study, it has identified and continues to pursue several business cases addressing the efficient, sustainable distribution of water. Aqua notes that these include standardization of customer meter testing, application of theft reduction techniques, calibration of production meters, and standardization of leak detection practices.

Aqua avers that in addition to its NRW analysis, it has increased its efforts in proactive leak detection, including lift-and-shift acoustic surveys, a pilot satellite leak detection program, a pilot real-time leak and transient monitoring program on critical infrastructure, and investigations directed by a partial theft-of-service algorithm. Aqua notes that its water quality complaints have declined over time in SEPA and have shown significant reductions in taste and odor and discolored water service orders since 2000. Aqua affirms that both taste and odor and discolored water service orders have also been reduced in GPA. Aqua asserts that this is another achievement of its DSIC program.

Aqua notes that as old, unlined cast iron pipes are replaced or cleaned and lined, it has experienced reduced complaints about water quality associated with the corrosion of the interior pipe walls. Aqua notes that its cleaning and lining program also contributed

to improved water quality as the cement mortar lining applied to the walls of the unlined cast iron pipe prevents the interior corrosion of the iron. Aqua cautions, however, that the cleaning and lining process can only allow it to maintain the useful life of a cast iron pipe, but that the pipe will still need to be replaced due to age. Aqua notes that its cleaning and lining program was limited to the more urban areas in SEPA and ended after 2014. Aqua maintains that as the population of this candidate pipe declined and became more geographically dispersed, the efficiencies of cleaning and lining were lost, and the cost savings compared to pipe replacement became much less. Aqua states that as a result, it has not included the cleaning and lining of mains in its current LTIIP budget.

In supplemental information filed with the Commission, Aqua maintains that it will continue to reduce its candidate pool of pipes, which in turn will reduce main breaks, NRW, and water quality complaints throughout its systems. Aqua affirms that through its main replacements, it increases the number of valves on an installed replacement main from what was present on the previous main. Aqua notes that this improvement reduces the areas that need to be shut off for planned or unplanned outages, thereby reducing customer impact. Aqua affirms that it continues to evaluate how it can improve safety for the system and its employees. Aqua notes that it works cooperatively with local fire companies to discuss installation of additional fire hydrants where system characteristics allow, thereby providing additional fire flow and increasing community safety. Aqua states that it is evaluating vault locations to possibly move vaults out of the middle of the roadway and to increase the size of the vault entrance to allow for safer and easier access. Aqua maintains that this improvement will allow its employees to access vaults from the side of the road, reducing the extent of road closures and impact to customers.

Comments

No comments were received regarding the manner in which the infrastructure replacement will be accelerated.

Resolution

Aqua provided useful information in regard to its reduction in main break events and NRW in both its petitions for its Second LTIP and Third LTIP. So that the Commission may be appraised of Aqua's continued improvements in these areas, we direct Aqua to include information on main break events and NRW by operating district (SEPA and GPA) in its AAOPs, beginning with the AAOP for calendar year 2024.⁹

Upon review of Aqua's Third LTIP and supplemental information filed, the Commission finds that Aqua's Third LTIP fulfills the requirements of 52 Pa. Code §§ 121.3(a)(6) by providing a description of the manner in which infrastructure replacement will be accelerated and how repair, improvement, or replacement will ensure and maintain adequate, efficient, safe, reliable, and reasonable service to customers.

(7) WORKFORCE MANAGEMENT AND TRAINING PROGRAM

Aqua's Position

Aqua notes that it utilizes construction inspectors to provide numerous services during the installation of mains, services, and hydrants in its distribution system. Aqua states that its inspectors are also required to coordinate all service outages or main outages with contractors and other personnel, including notifying the customers. Aqua notes that the inspectors perform the following tasks listed below, as well as any other work that may be necessary:

- Monitor the installation of the lines to confirm that they are properly bedded and installed to Aqua specifications.

⁹ See, Ordering Paragraph 3.

- Monitor the backfill of the project for proper compaction as per Aqua specifications.
- Confirm that all materials such as pipe, fittings, backfill, concrete, etc. in the project meet the Aqua specifications.
- Capture the quantities of pipe and other materials for proper record keeping, plans, etc.
- Capture the quantities of pipe and other materials, labor, etc. for accurate billing and payments.
- Document all locations of pipes, fittings, valves, service lines, etc. for accurate mapping and recordkeeping.
- Work with residential customers to lessen the impact of the project and answer or address any issues that occur within the project.
- Work with businesses that are impacted by the project to ensure deliveries, access, and service outages do not disrupt business.
- Coordinate contractors with school districts, municipalities, and emergency services so that bus routes, trash pick-up, mail delivery, and emergency response are not impacted.
- Monitor the temporary restoration during the project to make certain that roads are safely traveled.
- Monitor the restoration required in projects to make certain they are done to state or municipal specifications and ensure that proper payment is achieved.
- Observe contractor's implementation of contractor safety plans and advise contractor of any observed conditions of imminent danger. Inspectors can shut down a project until an imminent danger situation is addressed.

Aqua affirms that it requires its employees involved in construction and the distribution system to have mandatory safety training throughout the year. Aqua also notes that aside from the required annual training, there is additional training that also

takes place, including annual training for confined space, traffic safety, excavation/trenching, general safety hazards, and hazard communications. Aqua maintains that there are other training programs that are required, but not on an annual basis, which include personal protection equipment (PPE), electrical hazard, competent person, etc. Aqua affirms that training in first aid, CPR and automated external defibrillators is also offered yearly to maintain certifications and proficiency.

Aqua states that safe driving of company vehicles continues to be an integral part of its training and notes that in 2019 it developed a training program to educate drivers and reduce the frequency of accidents occurring when backing up vehicles. Aqua states that its driving program has since been improved and updated with additional training modules. Aqua maintains that it routinely sends out “Toolbox Talks” on safety topics such as tripping hazards, electrical hazards, tool safety, and seasonal safety topics such as weather, holidays, and back-to-school. Aqua notes that its safety department also issues “Safety Alerts” that review incidents and near misses. Aqua states that it has also instituted a “Near Miss” (Safety Learning Opportunities) initiative where hazards are identified and resolved within 30 days.

Aqua asserts that all employees involved in construction and the distribution system are required to wear PPE whenever they exit their vehicles on a jobsite. Aqua notes that its company-supplied PPE includes a hard hat, safety vest, safety glasses, and steel toe shoes. Aqua states that for safety reasons, it instituted a change in policy for cutting pipes in a trench. Specifically, Aqua notes that the use of cut-off saws, sometimes called demo saws, is prohibited from use in a trench. Aqua affirms that it requires all of its employees and contractors to immediately report any injury that takes place. Aqua maintains that it also requires its employees and contractors to report any damage to utilities during the excavation process.

Aqua notes that to supplement its employee workforce, it utilizes outside contractors for main replacement projects, including the service and hydrant connections that go along with the project. Aqua affirms that contractors are required to provide their safety policy and documentation of training for their employees, including but not limited to competent person, utility damage prevention, and traffic safety. Aqua states that it requires its contractors to follow all state, federal, and Occupational Safety and Health Administration (OSHA) rules and regulations in the implementation of a project. Aqua confirms that it utilizes a third-party safety consultant to perform site inspections on a regular basis for its contractors. Aqua notes that its contractors are required to fill out a Job Hazard Awareness form daily and are also required to provide the PPE for their employees and are responsible for reporting any injuries sustained on a project. Aqua maintains that contractors are also required to report any utility damage that occurs on the jobsite.

Comments

No comments were received regarding the workforce management and training program.

Resolution

Upon review of the Aqua's Third LTIIP and supplemental information filed, the Commission finds that Aqua's Third LTIIP fulfills the requirements of 52 Pa. Code § 121.3(a)(7) by providing a workforce management and training program that is designed to ensure that Aqua will have access to a qualified workforce to perform the work in a cost-effective, safe, and reliable manner.

(8) DESCRIPTION OF OUTREACH AND COORDINATION ACTIVITIES WITH OTHER UTILITIES, PENNDOT AND LOCAL GOVERNMENTS ON PLANNED PROJECTS

Aqua's Position

Aqua states that it has developed an inventory of pipe replacement candidates throughout its footprint and notes that between the months of May and October, replacement candidates are typically chosen and prioritized for replacement in the subsequent budget year. Aqua notes that each potential replacement project is analyzed for feasibility of construction in the coming budget year and as part of the analysis process. Aqua also states that it collects information from PennDOT, counties and municipalities as to their intentions to undertake paving and other public works projects during the budget year.

Aqua notes that paving projects that are known in advance of replacement project selection are posted to the GIS alongside candidate replacement projects and utilized in prioritizing specific projects for selection and refining of specific project scopes. Aqua notes that when it chooses to undertake a pipe replacement project on a road pre-scheduled for paving, the project will be coordinated with the affected state, county, or municipal entity. Aqua affirms that they will work with the government agencies to ensure that the design, permitting and construction of the pipe project will be completed in time to allow for the road to be paved. Aqua acknowledges that in some cases, where pipe replacement projects are large, the government agencies will agree to postpone paving of its roads to the following year.

Aqua maintains that its Engineering Department meets several times a year with Permits, Traffic and Maintenance officials from PennDOT and formally presents plans for pipe replacement projects in state roads for the coming year or longer. Aqua affirms

that as a result of these meetings, PennDOT may adjust its paving plans and other construction project schedules for Aqua's benefit. Aqua notes that where PennDOT schedules cannot accommodate its projects, it will defer its project a minimum of five years. Aqua states that typically when it undertakes a project where paving has been pre-planned by the government agency, it and its rate payers will benefit financially through the avoidance of road surface restoration, usually in the form of full-lane or half-road milling and macadam overlay.

Aqua notes that, unfortunately, most municipalities do not identify their paving plans in advance of its project selection and that annual municipal budgets may not be approved until early in the budget year, resulting in paving projects not being formalized until well into the budget year. Aqua states that in these instances, it must be proactive in identifying opportunities to coordinate pipe replacement and road paving. Aqua confirms that following the selection of pipe replacement projects in early Fall preceding its budget year, its construction division managers and superintendents visit each municipality in which pipe projects are planned. Aqua states that in many instances, municipal officials and engineers will identify roads where repaving can be coordinated with its project. Aqua advises that a sharing of costs is then negotiated, and the municipality will undertake the milling and paving of the entire road with a monetary contribution from Aqua.

Aqua notes that after Act 11 permitted natural gas distribution companies to have a DSIC program, additional coordination opportunities for joint water-main and gas-main replacements have substantially increased with the PECO Energy Company (PECO) in SEPA. Aqua confirms that beginning in 2013, it undertook a sharing of asset data with PECO, including the high-priority candidate replacement of water and gas mains. Aqua states that joint project review meetings have been held every six to eight weeks to

coordinate replacement schedules where water and gas main replacement projects intersect in each municipality.

Aqua confirms that it also has met jointly with PECO and municipal officials, residents, and businesses to present the timing and coordination plans of each utility's projects. Aqua maintains that working together benefits the general public through greater efficiency, coordinated traffic control and the avoidance of wasteful demolition of recently paved roads by the second utility to construct. Aqua notes that this coordination also results in nominal cost savings to the utilities due to economies of scale because installation of both water and gas mains usually requires repaving of the full road.

Comments

No comments were received regarding the description of outreach and coordination activities with other utilities, PennDOT and local governments on planned projects.

Resolution

Upon review Aqua's Third LTIP and supplemental information filed, the Commission finds that Aqua's Third LTIP fulfills the requirements of 52 Pa. Code § 121.3(a)(8) by providing a description of Aqua's outreach and coordination activities with other utilities, PennDOT and local governments on planned projects and roadways that may be impacted by the Second LTIP.

THIRD LTIIP SUMMARY

The Commission's review of an LTIIP must determine if the LTIIP:¹⁰

- Contains measures to ensure that the projected annual expenditures are cost-effective.
- Specifies the manner in which it accelerates or maintains an accelerated rate of infrastructure repair, improvement, or replacement.
- Is sufficient to ensure and maintain adequate, efficient, safe, reliable, and reasonable service.
- Meets the requirements of 52 Pa. Code § 121.3(a).

The utility has the burden of proof to demonstrate that its proposed LTIIP and associated expenditures are reasonable, cost effective and designed to ensure and maintain efficient, safe, adequate, reliable, and reasonable service to consumers.¹¹

The Commission has reviewed Aqua's Third LTIIP and any resulting comments. The Commission finds that Aqua has meet its burden of proof by demonstrating that its Third LTIIP contains measures to ensure that the projected annual expenditures are cost-effective, specifies the manner in which it accelerates or maintains an accelerated rate of infrastructure repair, improvement, or replacement, is sufficient to ensure and maintain safe, adequate, reliable, and reasonable service, and meets the requirements of 52 Pa. Code § 121.3(a). Accordingly, Aqua's Third LTIIP is approved.

The Commission finds Aqua's Third LTIIP and the manner in which it was filed conforms to the requirements of Act 11 and our Regulations. The plan, as approved herein, is designed to maintain safe, adequate, reliable, and reasonable service and, as

¹⁰ See 52 Pa. Code § 121.4(e).

¹¹ See 52 Pa. Code § 121.4(d).

such, Aqua shall be required to comply with the infrastructure replacement schedule and elements of that plan; **THEREFORE,**

IT IS ORDERED:

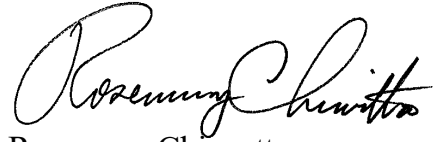
1. That the Petition of Aqua Pennsylvania, Inc. for Approval of its Third Long-Term Infrastructure Improvement Plan is approved, consistent with this Order and with the updated version of the Long-Term Infrastructure Improvement Plan as filed on March 14, 2024.

2. That this Order pertains only to Aqua Pennsylvania, Inc.'s Third Long-Term Infrastructure Improvement Plan as filed on March 14, 2024, and does not constitute approval of its Lead Service Line Replacement Program Petition. The Commission will address the Lead Service Line Replacement Program Petition by a separate Order at Docket No. P-2023-3044459.

3. That consistent with the directives in this Order, Aqua Pennsylvania, Inc. shall include information in regard to main breaks and non-revenue water for its two main service areas, Southeast Pennsylvania, and Greater Pennsylvania, in its Annual Asset Optimization Plans, beginning with the Annual Asset Optimization Plan for calendar year 2024.

4. That the proceeding at Docket No. P-2023-3043755 be closed.

BY THE COMMISSION,

A handwritten signature in black ink, appearing to read "Rosemary Chiavetta". The signature is written in a cursive, flowing style.

Rosemary Chiavetta
Secretary

(SEAL)

ORDER ADOPTED: June 13, 2024

ORDER ENTERED: June 13, 2024