PENNSYLVANIA
PUBLIC UTILITY COMMISSION
Harrisburg, PA 17105-3265

Public Meeting held August 25, 2022

Commissioners Present:

Gladys Brown Dutrieuille, Chairman
John F. Coleman, Jr., Vice Chairman
Ralph V. Yanora

Petition of Philadelphia Gas Works for Approval of its Third Long-Term Infrastructure Improvement Plan	Docket No. P-2022-3032303

OPINION AND ORDER

BY THE COMMISSION:

Before the Commission for consideration is the Petition of Philadelphia Gas Works (PGW) for approval of its Third Long-Term Infrastructure Improvement Plan (Third LTIIP). PGW filed its Third LTIIP on May 3, 2022. Copies of the Third LTIIP were served on the statutory advocates and the parties of record from PGW's most recent base rate case proceeding[1] and the parties of record from PGW's Second LTIIP petition.[2] PGW also served a copy of the Third LTIIP on the parties of record for its petition

[1] *See* Docket No. R-2020-3017206.
[2] *See* Docket No. P-2017-2602315.

regarding its request to increase its Distribution System Improvement Charge (DSIC) cap.[3]

The Office of Consumer Advocate (OCA) filed comments on June 2, 2022. OCA did not oppose the Third LTIIP but stated that it thought a breakdown of how many additional bare steel service lines would be replaced incidental to PGW's accelerated main replacement program would be helpful to the Commission in evaluating the instant petition.

On June 21, 2022, PGW filed a letter (June 21 Letter) in response to OCA's Comments. In the June 21 Letter, PGW provided estimates for its additional bare steel service replacements incidental to its accelerated main replacements for FY 2022 and 2023. Based on these projections, PGW noted that it expects an approximately 30% increase in bare steel service replacements in conjunction with its accelerated main replacements beyond its baseline replacement program. PGW in the June 21 Letter also stated that no revisions to PGW's Third LTIIP are necessary at this time.

No other comments were received. For the reasons expressed in this Opinion and Order we will approve PGW's Third LTIIP.

BACKGROUND

Effective February 14, 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 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.

[3] *See* Docket No. P-2015-2501500.

Act 11 states that as a precondition to the implementation of a DSIC, a utility must file a LTIIP with the Commission that is 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, a city natural gas distribution operation must include the following elements in its LTIIP:[4]

(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.

PGW'S FIRST LTIIP

PGW's First LTIIP was approved on April 4, 2013 and covered the fiscal years 2013 through 2017.[5] PGW's 2017 fiscal year ended on August 31, 2017. PGW's DSIC

[4] *See* 52 Pa. Code § 121.3.
[5] *See, Petition of Philadelphia Gas Works for Approval of its Long-Term Infrastructure Plan,* Order entered April 4, 2013, at Docket No. P-2012-2337737.

was approved on May 9, 2013.[6] On September 1, 2015, PGW filed its Petition for Waiver of Provisions of Act 11 to Increase the Distribution System Improvement Charge Cap and Permit Levelization of DSIC Charges (DSIC Cap Increase Petition) at Docket No. P-2015-2501500.

The DSIC Cap Increase Petition sought, *inter alia*, approval to increase the DSIC cap and to permit PGW to use an annualized, levelized charge as the basis for establishing a DSIC. The Commission issued an Order on January 28, 2016, which, *inter alia*, authorized PGW to increase its DSIC cap to 7.5% of distribution revenues (including any reconciliation recovery); and directed PGW to file a petition to amend (referenced in the regulation as a petition to modify) its LTIIP detailing PGW's proposed accelerated main replacement program and how it planned to expend the additional DSIC revenues.[7] PGW filed its petition for a Modified LTIIP on February 12, 2016. The Modified LTIIP was approved on June 9, 2016 and replaced PGW's First LTIIP and continued by its terms until August 31, 2017.[8]

PGW'S SECOND LTIIP

PGW's Second LTIIP was approved by the Commission on August 31, 2017 and covered the five-year period September 1, 2017 through August 31, 2022 (PGW's Fiscal Years 2018 through 2022). On September 1, 2020, the Commission initiated a Periodic Review of PGW's Second LTIIP pursuant to 52 Pa. Code § 121.7(a). By Commission Order entered December 17, 2020, the Commission found that PGW's Second LTIIP was designed to ensure and maintain safe, adequate, reasonable, and reliable service and that

[6] *See, Petition of Philadelphia Gas Works for Approval of a Distribution System Improvement Charge*, Order entered May 9, 2013 at Docket No. P-2012-2337737.
[7] *See* Docket No. P-2015-2501500.
[8] *See, Petition of Philadelphia Gas Works for Approval of a Modified Long-Term Infrastructure Improvement Plan*, Order entered June 9, 2016, at Docket No. P-2015-2501500.

Philadelphia Gas Works had substantially adhered to its plan.[9] PGW managed to meet or exceed the main replacement goals set forth in its Second LTIIP.

PGW'S THIRD LTIIP

PGW is owned by the City of Philadelphia and is the largest municipally owned gas utility in the country. PGW is in the business of selling and distributing natural gas to retail customers within the Commonwealth of Pennsylvania and is therefore a "city natural gas distribution operation" within the meaning of Section 102 of the Public Utility Code, 66 Pa. C.S. § 102, subject to the regulatory jurisdiction of the Commission.[10] PGW manages a distribution system of approximately 6,000 miles of gas mains and service lines supplying approximately 500,000 customers.[11]

PGW's Third LTIIP is a five-year plan covering the fiscal years 2023 through 2027. PGW has removed or replaced approximately 133 miles of cast iron main with plastic and protected coated steel main over the last four years, which is an average of approximately 33 miles per year. PGW averred that the accelerated main replacement set forth in the Third LTIIP will, over time, reduce risk and costs compared to that which PGW would experience if it did not accelerate its pipeline replacement program. PGW noted that the Third LTIIP would also result in more adequate, efficient, safe, reliable, and reasonable natural gas distribution service.

PGW identified categories of cast iron main that would be most suitable for replacement based on its risk management analysis programs. PGW stated that the

[9] *See, Periodic Review of Philadelphia Gas Works' Long-Term Infrastructure Improvement Plan*, Order entered December 17, 2020, at Docket No. M-2020-3019711.
[10] *See also,* 66 Pa. C.S. § 2212, relating to city natural gas distribution operations.
[11] PGW owns and operates all the service lines from the mains to the meters. There are no customer-owned service lines in the PGW territory. Service lines are also referred to as services.

information used to formulate its Third LTIIP was primarily drawn from its Distribution Integrity Management Plan (DIMP).

Based on the DIMP and the gas main replacement prioritization model, PGW identified property for replacement in its Third LTIIP as shown in Table 1 below.

Table 1: Property Classes Targeted for Replacement

Asset Group	Material	Size	Pressure
Services	Steel	1" - 1/4" and smaller	Low
Mains	Cast Iron	6" and smaller	Low
Mains	Cast Iron	12" and larger	All Pressure

PGW uses a Mains Replacement Prioritization (MRP) software package to determine the specific segments of the company's system that will be replaced in each year. The relative risk rankings from PGW's DIMP are used to inform this software package and produce the appropriate mix of assets for replacement or removal from service. If PGW's Third LTIIP is approved, PGW estimates that it will remove cast iron main from its inventory at a rate of approximately 31 miles per year, for a total of just over 155 miles over the span of the entire Third LTIIP.

PGW, 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

PGW's Position

PGW's distribution system contains approximately 3,000 miles of gas mains and 478,000 service lines. The total inventory mileage by age range for the cast iron main categories that PGW plans to target during the Third LTIIP is summarized in Table 2, below. As seen in Table 2 below, PGW's targeted cast iron main inventory totals approximately 1,232 miles. PGW's Third LTIIP is expected to replace over 155 miles of the target cast iron main. PGW replaces bare steel service lines along with the coincident section of main as the main is being replaced.

Table 2: Mileage of PGW's Cast Iron Inventory by Age Range

Year Range	**12" and Larger Cast Iron HP[12] (10-35 psig)**	**12" and Larger Cast Iron LP[13] (4.5" WC[14] - 14" WC)**	**8" and Smaller Cast Iron (4.5 inches WC - 5 psig[15])**
1971-2010	0	0	0
1961-1970	0.30	0.99	10.43
1951-1960	4.41	21.14	129.81
1941-1950	6.69	29.19	134.92
1931-1940	4.70	6.66	69.20
1921-1930	11.49	23.30	197.71
1911-1920	2.09	11.39	113.81
1900-1910	3.00	20.86	170.78
Pre 1900	9.53	66.61	183.85
Total	42.21	180.14	1,010.51

Comments

No comments were received regarding types and ages of eligible property.

Resolution

Upon review of PGW's Third LTIIP, the Commission finds that PGW's Third LTIIP 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.

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[12] HP = High Pressure.
[13] LP = Low Pressure.
[14] WC = Inches Water Column.
[15] Psig = Pounds per Square Inch Gauge.

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

PGW's Position

PGW's replacement program, beginning with PGW's 2023 fiscal year (FY), is detailed in Table 3, below. As explained in Element 4 below, this main mileage includes PGW's baseline replacements.

Table 3: PGW's Schedule for Miles of Main Replacement, FY 2023-2027

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	Total
8" and Smaller LP/IP[16]	25.00	25.00	26.25	26.25	26.25	128.75
12" and Larger All Pressure	5.49	5.40	5.30	5.10	5.00	26.29
Abandonment for Non-Use	0.00	0.00	0.00	0.00	0.00	0.00
Total	**30.49**	**30.40**	**31.55**	**31.35**	**31.25**	**155.04**

Comments

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

Resolution

Upon review of PGW's Third LTIIP, the Commission finds that PGW'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.

[16] LP/IP = Low Pressure/Intermediate Pressure.

(3) LOCATION OF THE ELIGIBLE PROPERTY

PGW's Position

Eligible property for PGW's Third LTIIP is located throughout the City of Philadelphia as follows:

- Approximately 222 miles of 12" and larger cast iron main (4.5" WC to 35 psig). PGW plans to remove 26.29 miles during the Third LTIIP period.
- Approximately 1,010 miles of 8" and smaller LP/Intermediate Pressure (IP) cast iron main (4.5" WC to 5 psig). PGW plans to remove 128.75 miles during the Third LTIIP period.

Comments

No comments were received regarding the location of eligible property.

Resolution

Upon review of PGW's Third LTIIP, the Commission finds that PGW'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

(6) ACCELERATED REPLACEMENT AND MAINTAINING SAFE AND RELIABLE SERVICE

PGW's Position

PGW's baseline main replacement program removes 18 miles of 8" or smaller cast iron main annually. PGW will seek recovery, via its DSIC mechanism, for expenditures above the cost of the baseline program on a pay-as-you-go basis. The DSIC mechanism is normally used to recover the return on capital placed in service by a utility. PGW does not operate under the normal rate of return regulatory framework and had been recovering actual one-for-one expenditures through its DSIC. However, PGW found that the construction season, typically Spring and Summer, did not match the high gas usage times of late Fall and Winter. PGW noted that this made it difficult for PGW to capture the required revenues as customer bills, for those not on budget billing, are much lower in Spring and Summer. With its DSIC cap waiver, PGW was granted the ability to charge a levelized DSIC throughout the year.[17] PGW states that it will utilize its approved 7.5% DSIC surcharge for the recovery of approximately $33 million per year. PGW does not plan to issue any long-term debt to fund its accelerated main replacement program at this time. Tables 4 and 5, below, detail the quantities of property to be improved for each year of the Third LTIIP and the projected expenditures, respectively.

Table 4: Quantity of Property to Be Improved (Miles), FY 2023-2027

	FY 2023	FY2024	FY 2025	FY 2026	FY 2027	Total
CURRENT BASELINE PROGRAM						
8" and Smaller LP/IP	18.00	18.00	18.00	18.00	18.00	90.00
ACCELERATED PROGRAM						
8" and Smaller LP/IP	7.00	7.00	8.25	8.25	8.25	38.75
12" and Larger All Pressures	5.49	5.40	5.30	5.10	5.00	26.29
Abandonment for Non-Use	0.00	0.00	0.00	0.00	0.00	0.00
Accelerated Total	**12.49**	**12.40**	**13.55**	**13.35**	**13.25**	**65.04**
Annual Total	**30.49**	**30.40**	**31.55**	**31.35**	**31.25**	**155.04**

[17] *See* Docket No. P-2015-250150.

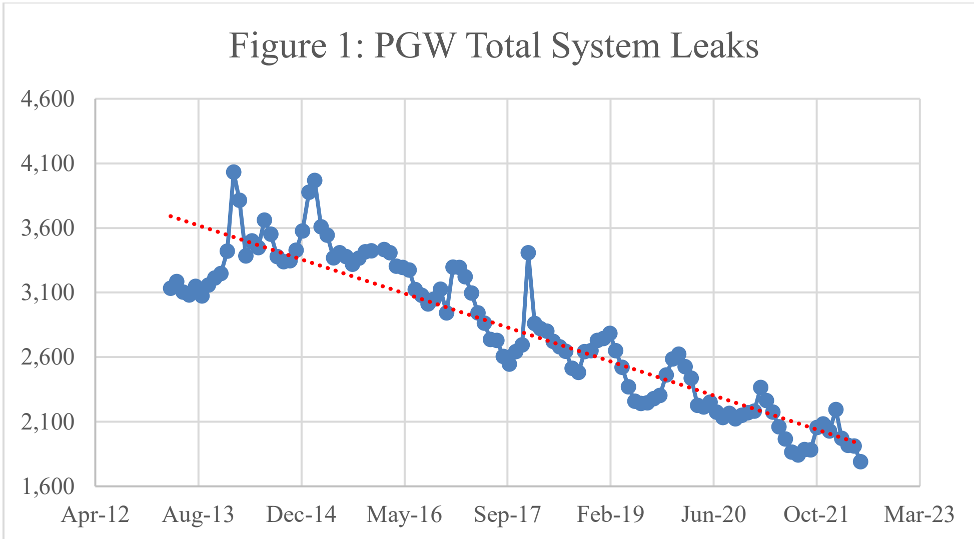
Table 5: Annual Projected Expenditures on Main Replacement, FY 2023-2027

	FY 2023	FY2024	FY 2025	FY 2026	FY 2027	Total
CURRENT BASELINE PROGRAM						
8" and Smaller LP/IP	$25,660,800	$26,558,928	$27,488,490	$28,450,588	$29,446,358	$137,605,164
ACCELERATED PROGRAM						
8" and Smaller LP/IP	$9,979,200	$10,328,472	$12,598,891	$13,039,853	$13,496,248	$59,442,664
12" and Larger All Pressure	$28,906,416	$28,481,991	$26,146,588	$25,508,937	$25,250,555	$134,294,487
Abandonment for Non-Use	$0	$0	$0	$0	$0	$0
Accelerated Total	**$38,885,616**	**$38,810,463**	**$38,745,479**	**$38,548,790**	**$38,746,803**	**$193,737,151**
Annual Total	**$64,546,416**	**$65,369,391**	**$66,233,969**	**$66,999,378**	**$68,193,161**	**$331,342,315**

PGW contends that its pay-as-you-go method is the most cost-effective way to fund its main replacement program, as compared to the issuance of long-term bonds. PGW explains that it utilizes a competitive bidding process for all relevant aspects of its pipeline replacement program, and prioritizes work based on those segments of main that are most likely to leak and/or break while in service. The company also avers that its program is cost effective by reducing PGW's maintenance costs over time, as the number of leaks and breaks in mains is reduced by replacing the sections of main before they fail.

The approval of PGW's first LTIIP required PGW to file quarterly reports detailing certain reliability and safety metrics, including information on leaks and leak repairs.[18] Figures 1 and 2, below, are based on the data in these reports and show a significant downward trend in total leaks on PGW's system, as well as the number of leaks repaired.

[18] *See, Petition of Philadelphia Gas Works for Approval of Its Long-Term Infrastructure Improvement Plan*, Order entered April 4, 2013, at Docket No. P-2012-2337737.



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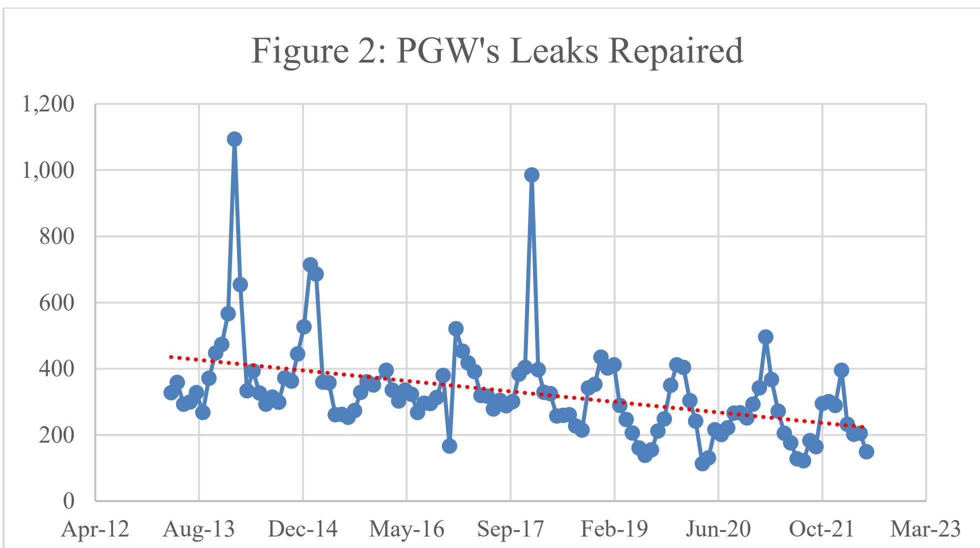

Comments

OCA noted that information regarding the amount of bare steel services PGW intends to replace would be helpful in the Commission's evaluation of the Third LTIIP. OCA Comments at 3. In its June 21 Letter, PGW provided estimates for incidental bare steel service reductions to result from PGW's main replacements in FY 2022 and 2023.

Resolution

Additional information is always welcomed by the Commission in its evaluation of an LTIIP. PGW's Third LTIIP and June 21 Letter provided information on how PGW focuses its LTIIP programs on the replacement of targeted mains. PGW noted that services are replaced incidental to the main replacements, but PGW does not identify a specific target number of services to be replaced as that is dependent on the number of services associated with main replacement projects. PGW supplied estimates for its Third LTIIP services replacements for FY 2022 and 2023. Therefore, the concerns of the OCA have been addressed.

Upon review of PGW's Third LTIIP and supplemental information provided, the Commission finds that PGW's Third LTIIP fulfills the requirements of 52 Pa. Code § 121.3(a)(4)-(6) by providing reasonable estimates of the quantity of property to be improved, the projected annual expenditures and means to finance the expenditures, and 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

PGW's Position

PGW's Third LTIIP outlines the measures PGW undertakes to ensure it has a skilled work force to perform operations, maintenance, and construction activities on the company's distribution system. PGW states that their employees are trained and qualified to the standards set forth by the US Department of Transportation's Pipeline and Hazardous Materials Safety Administration.[19]

PGW explains that they have a dedicated Training Section, with a program that ensures employee competence through evaluations. PGW notes that it makes sure that each employee can perform the necessary tasks and recognize and respond appropriately to abnormal operating conditions. PGW also notes that it maintains necessary records of the employees' work.

PGW explains that it has a rigorous screening process for contractors before the bidding process begins, and after acceptance. In addition, all contractors on main replacement projects are closely monitored by PGW personnel to ensure quality and timeliness of work.

Further, PGW details that in addition to the current workforce structure for main replacement, proactive measures have been taken to increase the probability of a successful accelerated main replacement program. For example, PGW notes that it has contracts with multiple consultants for the majority of main replacement design work to prepare construction drawings and associated documents. PGW explains that use of these design consultants has helped with the increased drawing/document preparation workload related to the accelerated main replacement program. PGW also notes that it has successfully solicited the services of additional outside contractors to perform main installation and continues to qualify additional contractors on smaller "pilot" projects in order to assess the performance of these contractors. PGW notes that it believes that the introduction of new contractors will keep contract costs competitive. Additionally, PGW states that it currently utilizes six qualified contractor companies trained to work on live gas.

[19] *See* 49 CFR 192 Subpart N.

PGW states that it has a dedicated Training Section which provides classroom training as well as simulated and/or actual field training for each PGW promotional job title. PGW notes that every employee is tested on their ability to perform every assigned task within an associated job title. Employees are evaluated on their knowledge, skill and ability related to each task as well as their ability to react to abnormal operating conditions.

Comments

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

Resolution

Upon review of the Third LTIIP, the Commission finds that PGW'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 PGW 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

PGW's Position

PGW describes its coordination with outside agencies in conjunction with its replacement of mains and services affected by others. PGW specifically notes that it frequently coordinates work with the Philadelphia Water Department's water and sewer main replacements, PennDOT's highway construction projects, and the City of Philadelphia's paving projects. PGW explains that they have several checks and balances to help avoid potential conflicts for each project. PGW cites examples including Design One Calls, the City of Philadelphia's Gas Plant Information System (GPIS) permitting system, and meetings with the Committee of Highway Supervisors.

PGW states that they utilize the City's GPIS permitting system to identify conflicts with various paving programs. PGW describes how it enters multiple years of proposed replacement projects at a very preliminary stage, which allows the identification of conflicts far in advance.

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

PGW'S THIRD LTIIP SUMMARY

The Commission's review of an LTIIP must determine if the LTIIP:[20]

- 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.[21]

The Commission has reviewed PGW's Third LTIIP and any resulting comments. The Commission finds that PGW 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, PGW's Third LTIIP is approved.

The Commission finds PGW's Third Long-Term Infrastructure Improvement Plan and 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 and

[20] *See* 52 Pa. Code § 121.4(e).
[21] *See* 52 Pa. Code § 121.4(d).

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

IT IS ORDERED:

1. That the Petition of Philadelphia Gas Works for Approval of its Third Long-Term Infrastructure Improvement Plan is approved, consistent with this Order.

2. That the proceeding at Docket No. P-2022-3032303 be closed.

BY THE COMMISSION,

Rosemary Chiavetta
Secretary

(SEAL)

ORDER ADOPTED: August 25, 2022

ORDER ENTERED: August 25, 2022