BEFORE THE
PHILADELPHIA GAS COMMISSION

COMMENTS SUBMITTED ON BEHALF OF PHILADELPHIA GAS WORKS IN SUPPORT OF ITS PROPOSED FY 2027 CAPITAL BUDGET AND FIVE-YEAR FORECAST (FY 2028-2032)

Andre C. Dasent, Esquire
2001 Market Street, 25th Floor
Philadelphia, PA 19103

Brooke Darlington, Esquire
1950 Butler Pike, Suite 126-215
Conshohocken, PA 19428

Attorneys for Philadelphia Gas Works

Of Counsel:

Robert H. Hoaglund, II, Esquire
Office of General Counsel
Philadelphia Gas Works
800 W. Montgomery Avenue
Philadelphia, PA 19121

Date: March 4, 2026

TABLE OF CONTENTS

I. INTRODUCTION.

Philadelphia Gas Works ("PGW" or "Company") requests that the Philadelphia Gas Commission ("Commission" or "PGC") recommend the approval of its proposed FY 2027 Capital Budget and Forecast (FY 2028-2032) to Philadelphia City Council. The budget, as originally filed, proposed $390.561 million in planned expenditures to replace and acquire additional assets to ensure safe and reliable utility operations within the constraints of current resources. Based upon the adjustments agreed to by PGW (as set forth in the Company's response to TR-4 and this brief), the original budget can be reduced by $0.559 million together with adjustments for conditional funding.[1] The proposed budget, as modified, is now before the Commission for its consideration.

II. HISTORY OF THE PROCEEDINGS.

These proceedings were convened pursuant to the Commission's authority under the Agreement between Philadelphia Facilities Management Corporation ("PFMC") and the City of Philadelphia ("Management Agreement").[2] The following documents were submitted as a part of the budget filing and are marked for identification as PGW Exhibit 3.

- PGW's Proposed FY 2027 Capital Budget Filing including, Introduction, Capital Budget Narrative, Statement of Support, FY 2027 Capital Budget and Forecast (FY 2028-2032);
- Supporting Documentation for Individual Projects, Appendix and PFMC Board Resolution; and
- Director of Finance letter approving the Capital Budget as to form and extent.[3]

PGC Executive Director Gemela N. McClendon, Hearing Examiners Heidi L. Wushinske and Roslyn Bell presided over the budget proceedings (hereafter referred to as the "Hearing Examiners").[4] The Public

---

1 See, Appendix A hereto for the original budget request filed in this proceeding.

2 Philadelphia City Council, by Ordinance, dated December 29, 1972, enacted the Agreement between the Philadelphia Facilities Management Corporation and the City of Philadelphia ("City").

3 The Company also filed a letter explaining that the Disadvantaged Business Enterprise ("DBE") forecast would be delayed due to anticipated changes in that program. See, PGW Exhibit 4.

4 Anna C. Rowe and Timothy Murtha also participated in the discovery and hearing process.

Advocate ("Advocate" or "PA") was the only active participant this year.[5] Most of the proceedings were conducted virtually.[6] One public hearing was required this year which took place on February 19, 2026 (in-person and via Microsoft Teams). Hearing transcripts of 228 pages were produced in this proceeding, including informal discovery ("ID") sessions. In addition, 37 exhibits were marked for identification and incorporated into the record.

III. GOVERNING LEGAL STANDARD.

A. Authorization for Capital Budget and Forecast.

The Commission's review of PGW's annual Capital Budget and Forecast is authorized pursuant to Section IV of the Management Agreement. As provided in Section IV, the annual capital budget and forecast shall be (i) prepared by the Company consistent with the accounting methods prescribed in Section IV(1); and (ii) be in form and extent satisfactory to the Director of Finance and the Gas Commission.[7]

In addition, Section IV (2)(b) requires that the annual capital budget and forecast include:

- a showing of the nature of the proposed capital additions and replacements;
- the amounts needed therefor; and
- how the funds required are to be supplied as between (i) funds generated within the business through charges to customers or otherwise; and (ii) funds to be obtained through capital loans.[8]

Capital spending amounts and sources of funding for FY 2027 ("Capital Financing Plan") are set forth in Section III.B of this brief.

---

5 The Public Advocate was represented by Robert W. Ballenger, Esquire (Community Legal Services, Inc.). The Advocate proffered the testimony of Lafayette K. Morgan, Jr. (Exeter Associates, Inc.). PA Statement 1.

6 The PGC conducted a hybrid proceeding where interested parties could participate in-person or online.

7 Management Agreement at Section IV(2)(b).

8 *Id.*

B. Capital Financing Plan.

The Capital Financing Plan is provided with the budget filing consistent with the requirements of Section IV (2)(b) of the Management Agreement and the Commission's directives.[9] This Section requires the identification of the broad parameters of capital spending and associated funding with regard to funds generated within the business (rates, charges) as well as through capital loans. The table below sets forth capital spending and projected funding sources for FY 2027.[10]

FY 2027 Capital Spending

Spending for FY 2027 Capital Program	$199,205,000
Spending Carryover from FY 2026	105,436,000
Total FY 2027 Capital Spending	304,641,000
Projected Reimbursement	8,478,000
Salvage	269,000
Construction Contributions	1,846,000
Net FY 2027 Capital Spending	**$294,048,000**

FY 2027 Capital Funding Sources

Capital Bond Proceeds	$ 147,024,000
Distribution System Improvement Charge (DSIC)	42,551,000
Federal Grant Reserve (PHMSA)	29,703,000
Internally Generated Funds	74,770,000
Total FY 2027 Capital Funding	**$ 294,048,000**

[9] The PGC directed PGW to include a capital financing plan with Capital Budget filings beginning with the FY 2012 Capital Budget filing. See, PGC Resolution and Order, dated November 16, 2010 at 12 (FY 2011 Operating Budget).

[10] See, PGW Exhibit 3 at 586.

The funding plan stated above is based on current financial projections and is subject to change based on PGW's financial condition at the time funds are required to support the FY 2027 Capital Program.

IV. PROPOSED FY 2027 CAPITAL BUDGET SPENDING PARAMETERS ARE REASONABLE AND SHOULD BE APPROVED.

Planned spending parameters for the coming fiscal year are reasonable and should be approved for the following budget areas: (a) Gas Processing; (b) Distribution; (c) Field Services; (d) Fleet Operations; (e) Facilities; and (f) Information Services together with other requirements – all of which are discussed below.[11]

Spending programs in the budget primarily focus upon initiatives that ensure safety and reliability. The following table depicts spending by budget priority, as proposed in the original budget filing.[12]

Capital Budget Priorities

Priority	Description	Budgeted Amounts	Percent of Budget
1	Safety	$139,663,000	35.8%
2	Reliability	199,716,000	51.1%
3	Enforced Relocation	13,257,000	3.4%
4	Revenue Producing	18,102,000	4.6%
5	Business Improvement	19,823,000	5.1%
Total		$390,561,000	100.0%

As shown in the table above, Priority 1-3 programs constitute 90.3% of overall budgeted expenditures. The emphasis on Priority 1-3 programs correlates with requested approval of major programs to be undertaken in FY 2027 which include: (i) the Replacement of the LNG Liquefier at Richmond Plant; (ii)

[11] Proposed modifications to the FY 2027 Capital Budget, acceptable to the Company, are set forth in Section V hereof.

[12] PGW Exhibit 3 at 23.

PGW's traditional Cast Iron Main Replacement Program ("CIMR Program"); (iii) the Distribution System Improvement Charge ("DSIC") Incremental Replacement Program; (iv) the Pipeline and Hazardous Materials Safety Administration's ("PHMSA") Infrastructure Grant; (v) Replacement of Meters and Regulators; (vi) Addition of Meters and Regulators — New Customers; (vii) Vehicle Replacements; and (viii) Computer Hardware/Software Requirements. The Company believes that, given the record of this proceeding and the high priority of planned expenditures in the FY 2027 Capital Budget, the spending programs should be approved, subject to the modifications specified herein.

The following discussion provides an overview of FY 2027 proposed capital expenditures by budget area, based upon the original budget filing.

A. Gas Processing.

The proposed Gas Processing budget for FY 2027 is $188.823 million which is $174.247 million more than the $14.576 million approved in the FY 2026 budget for this department. The majority of planned expenditures are targeted to fund improvements in the area of Supplemental Gas Facilities. The most significant project in this area is at the Richmond Plant: Replacement of LNG Liquefier ($181.992 million) — which is sometimes referred to herein as the "LNG Project." Replacement of the LNG Liquefier is critical to meeting design winter peak demand requirements and must be funded this fiscal year to replace the existing LNG Liquefier which is at the end of its useful life.[13] Additional Gas Processing projects are also planned for the Richmond Plant including: Gate 5 Modifications ($1.867 million); and Upgrade PA System ($1.198 million). Further, expenditures are planned for New Heater, Generator, Station Modifications ($1.777 million); Install New Odorant System at Penrose ($1.652 million); and Miscellaneous Additions and Replacements ($0.337 million).

B. Distribution.

The FY 2026 Distribution budget is $160.682 million which is $14.449 million more than the $146.233 million approved in FY 2026. The largest components of planned spending, in this budget area,

[13] PGW Exhibit 3 at 590. See discussion *infra*. (Section VI of this brief).

are to fund (i) the historic CIMR Program[14] ($65.646 million); (ii) incremental DSIC Replacement Program ($42.551 million); and (iv) infrastructure grant funding from U.S. Pipeline and Hazardous Materials Safety Administration ("PHMSA") ($29.593 million). In addition, budgeted expenditures are planned for main and service additions for new customers ($14.834 million); and miscellaneous items ($3.378 million).[15] Also included in the Distribution budget is a request for Conditioned Funding in the amount of $4.680 million. This request is consistent with the revised Capital Program Protocols approved by the Commission in November 2019 and thereafter.

C. Field Services.

The FY 2027 Field Services budget is $20.506 million, which is $11.807 million more than the $8.699 million approved in the FY 2026 Capital Budget. The budget authorization request primarily supports (i) the replacement of meters and regulators ($16.899 million); (ii) the addition of regulators and meters - new customers ($2.826 million); (iii) C&I Telemetering ($0.627 million); and (iv) replacement of Meter Shop equipment ($0.154 million). It should be noted that funding requested for the replacement of meters and regulators is necessary to ensure the delivery of safe and reliable service and to support the implementation of PGW's AMI program.[16]

D. Fleet Operations.

The FY 2027 Capital Budget request for Fleet Operations is $13.146 million, which is $2.775 million more than the $10.371 million approved in FY 2026. The budget is comprised of (i) $10.810 million in planned expenditures for vehicle replacements; and (ii) $2.336 million for mobile equipment additions/replacements.[17] Vehicles and mobile equipment targeted for replacement are at or past their respective optimal replacement dates as identified through PGW's Fleet Operations Lifecycle Analysis procedures. The Commission will recall that the aforesaid procedures expanded the vehicle replacement

---

14 It should be noted that a portion of planned CIMR Program expenditures represent enforced relocation spending which is subject to partial reimbursement. It is estimated that such reimbursement for enforced relocation will total $5.546 million. See, PGW Exhibit 3 at 17.

15 See, PGW Exhibit 3 at 591 (PGW Statement 1).

16 See discussion *infra*. (Section VI(A) of this brief).

17 PGW Exhibit 3 at 592 (PGW Statement 1).

decision criteria – using mileage, age and cost considerations as well as other pertinent factors to determine a given year's replacement needs. These procedures have been vetted, at length, in previous budget proceedings.[18]

E. Facilities.

The FY 2026 Capital Budget request for Facilities is $1.285 million, which is $0.696 million more than the $0.589 million approved in FY 2026. The department's budget for the coming year includes expenditures related to the following projects: (i) miscellaneous building infrastructure ($0.435 million); (ii) NOC Outdoor Material Yard Paving ($0.410 million); (iii) 800 Building Chiller Plant (Sequencing/ Optimization) ($0.340 million); and (iv) Replace Carpets and Furniture ($0.100 million).

F. Information Services.

The FY 2027 budget request for Information Services is $6.025 million, which is a decrease of $28.719 million compared to the approved FY 2026 budget. The department's budget for the coming year includes planned expenditures for: (i) miscellaneous hardware requirements ($4.188 million); (ii) miscellaneous software requirements ($0.600 million); (iii) security camera additions/replacements ($1.032 million); and (iv) expense management software ($0.205 million).

V. PGW ACCEPTS CERTAIN MODIFICATIONS TO THE PROPOSED BUDGET BASED UPON THE RECORD OF THE PROCEEDING.

The following table and accompanying discussion specifically describe adjustments to the FY 2027 Capital Budget that are acceptable to the Company, as detailed in its response to TR-4.

Table 1

Proposed Adjustments to FY 2027 Capital Budget Based on Record of Proceeding

Description of Adjustment	**Amount of Adjustment**	**Citation to Record**
Conditional Expenses		
1. Fleet Operations - Vehicle Replacements	$646,000	PA Statement 1 at 13-14.

[18] See discussion, Recommended Decision (FY 2016 Capital Budget) at 43-47.

Adjustments to Expenses		
2. Information Services - SAN Storage	($354,000)	PA Statement 1 at 15
3. Information Services - Expense Reimbursement Management System	($205,000)	PA Statement 1 at 15.
Other Adjustments		
4. Information Services - IP Cameras for M&R Stations	$914,000	PA Statement 1 at 15-16

The Advocate proposes four adjustments related to Fleet and Information Services planned expenditures which are included in Table 1. Each adjustment and the stipulated resolution are explained below.

1. *Vehicle Replacements* (Project #73-01-2-03) — PGW proposes the following stipulation to address PA concerns regarding the purchase of SUVs versus sedans as stated in PA Statement 1 at 13-14. See also, PGW Exhibit 3 at 281 for project detail.

PGW proposes that Fleet Operations budgeted expenditures for vehicle replacements (20 sedans or SUVs) be conditionally approved subject to PGW providing a report showing the economics and operational need for purchasing sedans and/or SUVs prior to spending any funds. This report will include a life cycle analysis of initial costs, operation costs, salvage costs and will explain operational considerations for the planned expenditures. PGW will identify the amount of spending (not to exceed $646,000) that it requests to be released based on this report.

2. *SAN Storage (Project #47-01-1-03)* — PGW agrees to withdraw planned spending for SAN storage from the FY 2027 Capital Budget. This expenditure will be budgeted in the next capital budget. See, PA Statement 1 at 15; PGW Exhibit 3 at 512.

3. *Expense Reimbursement Management System (Project #47-01-1-04)* — PGW agrees to withdraw this planned expenditure from the FY 2027 Capital Budget. See, PA Statement 1 at 15; PGW Exhibit 3 at 517.

4. *IP Cameras (Project #47-01-1-05)* — PGW agrees to use a twenty-four month lifespan for this project as opposed to the proposed thirty-six month lifespan in the budget in response to Public Advocate concerns stated at PA Statement 1 at 15-16.

The only remaining PA adjustment relates to the Replacement of the LNG Liquefier at Richmond Plant ("LNG project"). The justification for the aforesaid project is provided in Section VI below.

VI. THE REMAINING FY 2027 PROPOSED CAPITAL BUDGET EXPENDITURES SHOULD BE APPROVED.

A. LNG Project Must Be Approved in FY 2027 Capital Budget.

The FY 2027 Capital Budget includes funding to support the replacement of the LNG Liquefier at Richmond Plant ($181.992 million). Approval for this project is necessary as the existing liquefier is near the end of its useful life; and an unplanned outage or LNG equipment failure would cause serious service reliability problems for gas customers.

By way of background, the existing LNG Liquefier was installed in 2002 and (after testing) accepted by PGW in 2005.[19] During its history, the existing liquefier has been operated as a peak-shaver and has been subject to operational constraints (on again, off again) which created more fatigue on the facility. More pointedly, this plant has been operated at five-times the thermal cycling rate experienced at comparable LNG plants (because of APCI plant design, design capacity and system operating requirements).[20] The Company believes that the operating history of the LNG plant has adversely impacted (reduced) its useful life. CH-IV (the consultant engaged by PGW to, among other things, assess the life cycle expectation of the existing LNG plant) concurs with this assessment. The Company also indicates in this record that the maintenance history at the existing plant suggests that there may be problems (maintenance outages) ahead.[21] Taken together, PGW reasonably concludes that the existing LNG Liquefier should be replaced.[22]

---

[19] The LNG Expander Plant construction was completed in the summer of 2002. Operational testing started in September 2002. Operational testing concluded in March 2005 at which time the plant was accepted by PGW for full production. See, PGW Exhibit 8 (PA-CB-1).

[20] Tr. 23; PGW Exhibit 8 PA-CB-49).

[21] See, PGW Exhibit 7 (HE-6); PGW Exhibit 8 (PA-CB-47).

[22] As noted in the record, the service life of an LNG plant, if operated in a steady state, can exceed 40 years. See, PGW's experience in operating its LNG plant has been different given its unique system requirements. As a consequence, it has operated its plant at five times the thermal cycling rate of other comparable plants. PGW reasonably concludes that this has impacted (reduced) the useful life of the facility. Tr. 23; PGW Exhibit 8 (PA-CB-49).

As established in this record, a critical component of the LNG plant is the cold box. The cold box at PGW's LNG plant is twenty-three (23) years in service at present and will be twenty-eight (28) years in service by the time construction of the proposed LNG facility is completed in FY 2030.[23] A cold box maintenance issue could cause an extended outage or LNG plant failure together with potential service interruptions or curtailments. To avoid the foregoing, the Company has determined that it must replace the existing LNG Liquefier at the earliest possible time.[24]

PGW Vice President, Daniel Cassidy testified in support of this project.[25] He opined that the existing LNG Liquefier should be replaced as soon as possible to avoid operational failure — given the plant's age and operating history. Mr. Cassidy urges the Commission to approve the LNG Project based on (i) his knowledge and professional experience with LNG operations; (ii) together with that of his operating/engineering staff; and (iii) the input of PGW's consultant CH-IV which compiled a report regarding the life cycle expectations of the existing LNG Liquefier and other comparable facilities (the "CH-IV Report").[26] The findings of the CH-IV Report, together with Mr. Cassidy's testimony, supporting documentation provided with the budget filing and discovery responses, provide a persuasive case for funding this project.[27]

B. CH-IV Report Confirms That Replacement of the Existing LNG Liquefier Is Prudent.

The Company engaged CH·IV to assess the life cycle expectations of small-scale natural gas liquefiers and identify specific risks associated with PGW's operations. As a part of its assessment, CH-IV identified eleven similar LNG peak-shaving facilities in the United States that were used for comparative

---

23 See, PGW Exhibit 8 (PA-CB-5).

24 The construction time-line for this project is four years. Therefore, a decision authorizing the project is necessary for the coming fiscal year (FY 2027) so that the new plant can be constructed by FY 2030. See discussion, *infra*.

25 Mr. Cassidy is an engineer and is responsible for the operation of PGW Gas Processing facilities, including the existing LNG Liquefier.

26 The PGW Richmond Life Cycle Assessment Report (December 2025), authored by CH-IV, is referred to herein as the CH-IV Report.

27 PGW arrives at the decision to replace this LNG Liquefaction Plant with a background that includes many decades of collective experience in engineering and operations. Additionally, PGW professionals work closely with external LNG consultants (including CH-IV) and other industry operations and engineering experts who have shared learned best practices and insights with PGW for many years.

purposes.[28] Of the eleven plants identified, CH-IV determined that PGW's expander liquefier was the largest and unique in design and operating experience. More specifically, (i) PGW's LNG Liquefier was the only APCI-designed[29] liquefier identified in the report; and (ii) it had a throughput of 16 MMSCFD[30] which was significantly higher than the average of 5 MMSCFD for the other facilities identified in the report.[31] PGW's LNG Liquefier was also operated much differently than the other LNG plants examined given its APCI design, plant design capacity and PGW system operating requirements.

The CH-IV Report observed that PGW's LNG Liquefier was an outlier in the universe of LNG peak shaving facilities operating in this country. That is, due to the PGW LNG Liquefier's larger capacity and dependency on seasonal takeaway capabilities, it had less operational flexibility than other utility LNG plants. This factor contributed to increased thermal cycling.[32] PGW's LNG plant also needs to start-up and shut-down frequently due to tail-gas limitations (not enough demand in the PGW distribution system). Taken together, the existing LNG liquefier has been operated differently than other plants identified in the report (with five times the annual thermal cycles experienced in other LNG plants).[33] CH-IV indicates that the aforesaid operating history is a risk to PGW's existing LNG expander liquefier system and will likely shorten its service life. PGW concurs.

More specifically, CH-IV indicates that PGW's existing LNG Liquefier faces challenges related to critical component (cold box) failure.[34] The cold box at the existing LNG Liquefier has been in service

---

[28] Please note that of the these eleven LNG plants, three plants have been taken out of service and four plants will be retired during the next five years. See, PGW Exhibit 3 (CH-IV Report) at 115.

[29] APCI (Air Products and Chemicals, Inc.) refers to the plant designer for the existing LNG facility.

[30] The acronym "MMSCFD" means million standard cubic feet per day.

[31] See, PGW Exhibit 3 (CH-IV Report) at 116.

[32] *Id*.

[33] As explained in the record, annual operation of a peak-shaving LNG plant would include (i) start-up of liquefaction in the spring to replenish LNG storage, then (ii) restart liquefaction in the fall to top-off the tanks, with allowance for (iii) an additional start-up in the summer. Also, note that LNG peak-shaving plants operate for several months uninterrupted. In contrast, PGW's LNG plant needs to start-up and shut-down frequently due to tail-gas limitations (not enough demand in the PGW distribution system). See, PGW Exhibit 14 (PA-CB-49); PGW Exhibit 8 (PA-CB-4).

[34] The cold box is a critical factory assembled insulated container that houses cryogenic heat exchangers (usually Brazed Alluminum Heat Exchangers (BAHX)) to liquefy natural gas at roughly -260 degrees Fahrenheit. The cold box minimizes heat loss and enables efficient liquefaction.

for twenty-three (23) years; and will be twenty-eight (28) years in service by the time construction of the new LNG Liquefier is completed. As stated in the CH-IV Report, in the event of a cold box failure, PGW faces significant risks, including declining support from the original equipment manufacturer (APCI) and a lengthy replacement process estimated at 2.5 years.[35] The recent acquisition of APCI by Honeywell also raises concerns about ongoing support for PGW's unique liquefier.[36]

Please further note that any extended maintenance outage or repair scenario is further complicated by PGW's potential need to purchase LNG from the spot market, incurring substantial costs (assuming LNG availability) and operational challenges.

Taking all of the above into account, PGW reasonably plans for the replacement of the existing LNG Liquefier. The CH-IV Report emphasizes the need for strategic planning to address all risks and ensure reliable LNG supply for gas customers.[37] This report is uncontroverted in the record of this proceeding. The Public Advocate produced no comparable engineering analysis to support its position.

C. Existing LNG Liquefier Must Be Replaced for Service Reliability.

PGW's plan to replace the existing LNG Liquefier is timed to allow for the construction of a replacement liquefier before the existing LNG Liquefier becomes inoperable (due to a cold box or other component failure). As stated above, cold box failure is a major concern because of the thermal cycling at the LNG Expander Plant which has operated at five times the rate of similar plants during its history. A failure at the aforesaid plant could result in significant sendout challenges and customer interruption due to a lack of LNG to vaporize on colder winter days. Stated differently, PGWs ability to liquify natural gas for storage in the LNG tanks to support peak-shaving (and supply as much as 30% of sendout requirements to the City on a design winter day) could be curtailed or eliminated by a plant outage of

---

35 See, PGW Exhibit 3 (CH-IV Report) at 118.

36 *Id.* at 119.

37 Also note that the existing LNG facility's current production capacity does not meet inventory requirements (producing 2.2 Bcf annually with system requirements of 3.2 Bcf), exposing PGW to operational challenges during peak demand periods. PGW Exhibit 8 (PA-CB-16). See discussion *infra* (Section VI.D of the brief).

significant duration. PGW's proposal to timely replace the LNG Liquefier is its best protection against experiencing a plant failure and related service interruption.[38]

D. Existing LNG Liquefier Should Be Replaced to Meet Current System Requirements.

The size of the replacement facility for the existing LNG Liquefier is based upon system requirements in a design winter. The volume of LNG necessary to meet design winter requirements is 3.2 Bcf annually. The existing LNG Liquefier can only produce 2.2 Bcf (annual 1 Bcf shortfall). Any additional needed LNG is purchased and delivered by truck.

The replacement LNG Liquefier will be able to meet system requirements without the need to secure and deliver additional LNG by truck. As stated in the record, the new LNG Plant (10,000 MSCFD) will be able to produce a maximum of 3.3 Bcf of LNG annually. The new plant will also not have seasonal operating limits like the existing LNG Liquefier (it will be able to operate year round). By design, the new LNG plant will meet current system requirements without trucking LNG. This is a clear operational advantage.

E. Alternatives to Replacement of Existing LNG Liquefier Are Not Economically Viable.

PGW has evaluated alternatives to replacement of the existing LNG Liquefier to determine the optimal solution for PGW's LNG replacement needs. None of the options evaluated were determined to be economically viable (i.e., either too costly or sufficient alternative gas volumes are unlikely to be available during severe winter weather when needed). The options evaluated are summarized below.

1. Upgrade LNG Trucking Facilities.

One option evaluated to avoid the replacement of the existing LNG Liquefier was to upgrade LNG facilities at the Richmond Plant to safely receive more LNG truck deliveries. Trucking deliveries, at present, are limited. If PGW trucked a significant amount of LNG, facility upgrades would be needed. Such improvements were estimated to cost $30 million.[39] Under this approach, 1,200 deliveries of LNG would be required per Bcf. A design winter would require roughly three times as many deliveries (3.2

---

[38] In addition to providing service reliability in design winter conditions, PGW uses LNG to support potential system failure scenarios. That is, PGW plans for various failure scenarios, including pipeline supplier curtailments and M&R Station failures when reviewing winter operations plans. LNG is a critical component for providing vaporized gas during these potential events. Tr. 26.

[39] See, PGW Exhibit 3 (Budget Narrative) at 11-12.

Bcf). In this context, PGW estimates the costs for trucking LNG at up to $15 million per Bcf (or roughly $48 million for 3.2 Bcf annually). For this option to work, sufficient volumes of LNG must be available during severe winter weather from outside sources. Also note that trucking at the level described above has attendant risks for the surrounding community. PGW views this option as "at best" a stop-gap measure to address a short LNG plant outage.

2. Spot Market Purchases

A second option evaluated was to purchase pipeline gas in lieu of using LNG for peak shaving. This approach is completely market-dependent, as spot gas purchases are normally significantly higher than the average price for gas during the coldest winter days (when pipeline purchases would be needed). Also, on many of the coldest winter days, gas may not be available to PGW depending on the severity of the weather and market conditions. To be sure, there is uncertainty with this approach as PGW would have to enter the market annually (for spot purchases in severe winter weather). It is difficult to quantify the cost of this option, but it will likely cost tens of millions of dollars annually, assuming gas supply is available.[40]

3. Expand Pipeline Capacity

A third option evaluated was to secure additional pipeline capacity. An additional 220,000 MCFD would be necessary. The cost of this additional gas supply is estimated to be $60 million annually. Please also note that the above stated additional pipeline capacity is not currently available.[41]

It bears emphasis that in every instance the options evaluated were economically non-viable because the option was significantly more costly than the replacement of the LNG Liquefier or sufficient alternative gas supply was unavailable.[42]

F. Public Private Partnership Negotiations Have Been Initiated.

As explained in the record, PGW is also negotiating a public-private partnership (P3) transaction. This is yet another way PGW is exploring its options to meet customer requirements on a least cost basis.

---

[40] PGW Exhibit 3 (Budget Narrative) at 14.

[41] *Id.*

[42] The Public Advocate incorporates the options evaluated by PGW in its testimony without criticism. See, PA Statement 1 at 7-8. The Advocate also does not suggest any additional options to be evaluated.

Please note that the P3 negotiations would yield an independent project which, if successfully negotiated, would substantially reduce the need for capital funding from gas customers. PGW informed the PGC of this negotiation to be transparent.

To be clear, PGW is requesting immediate capital funding for the LNG Project in the FY 2027 Capital Budget. However, in light of these ongoing negotiations, PGW is open, in the alternative, to conditional funding authorization for the LNG project. Assuming conditional funding is approved, PGW suggests the following conditions for release of conditional funding:

(a) If the P3 negotiations have concluded with no deal, funding for the liquefier shall be released.

(b) If the P3 negotiations are ongoing, the PGC may withhold the funding pending further updates from PGW senior management.

G. Recommendations to Disapprove or Delay LNG Project Should Be Rejected.

Public Advocate witness, Lafayette Morgan, recommends the rejection of budgeted expenditures for the replacement of the LNG Liquefier. The Advocate's recommendation is based on three primary concerns (i) its belief that the existing LNG Liquefier is not at the end of its useful life;[43] (ii) its contention that falling customer demand was not sufficiently considered in deciding to proceed with this project;[44] and (iii) its assessment that the timing/logistics of P3 negotiations make an informed decision more difficult in this proceeding.[45] Each of the Advocate's concerns is addressed in the narrative below.

1. Useful Life of Existing Liquefier.

Mr. Morgan contends that PGW has <u>not</u> provided sufficient evidence that the existing LNG Liquefier is at the end of its useful life.[46] Such contention is based on his view (without substantiation) that a longer service life can be expected for the existing LNG Liquefier.

---

43 See, PA Statement 1 at 9-10.

44 *Id*. at 11.

45 *Id.* at 11-12.

46 *Id*. at 9-10.

(a) Reduced Service Life of 20-25 Years Questioned.

In the first instance, Mr. Morgan indicates that although the existing LNG Liquefier was constructed in September 2002, it was not placed in service until March 2005. Presumably, he calculates that the existing LNG Liquefier is roughly twenty-one (21) years old at present and will be approximately twenty-five (25) years old in 2030 (when construction of the proposed LNG Liquefier is anticipated to be completed). In short, he anticipates the existing LNG Liquefier has additional years of operation before it needs to be replaced.

PGW disagrees with the premise of Mr. Morgan's finding. That is, APCI and PGW operated the existing LNG Liquefier during 2002-2005 in a testing mode. As this plant was a first (prototype) for APCI, they had issues meeting the guaranteed capacity (20 MMSCFD), so the plant was started and stopped numerous times during the testing period (by APCI) to make adjustments and increase output. During this period, PGW believes that thermal cycling occurred at a higher rate than during subsequent operating years.[47] As noted previously, after accepting the existing LNG Liquefier in March 2005, the LNG Liquefier was also operated differently than the industry norm (five times the thermal cycling of other LNG plants) given APCI design, design capacity and operating system requirements.[48] Based on the aforesaid extensive thermal cycling of the facility, PGW reasonably expects a reduced useful life for its existing LNG Liquefier. With this in mind, PGW is making every effort to gain budget authorization to construct a new plant before the existing plant fails, rather than the other way around. The bottom line is that PGW needs to get a new LNG Liquefier installed as soon as possible. Given the projected four year construction schedule, time is of the essence.

In this context, Mr. Morgan also emphasizes that certain LNG peak-shaving plants identified in the CH-IV report had service lives of 40-50 years — thereby questioning the reduced service life for the existing LNG Liquefier. In response, PGW submits that the plants cited in the CH-IV Report are similar, but not the same as PGW's LNG plant. That is, all are lower capacity plants than PGW's facility (16

---

47 Tr. 19

48 CH-IV indicates that the combination of the APCI plant design (larger capacity) and PGW system operating requirements (tail-gas limitations) result in less operational flexibility and contribute to the greater thermal cycling in the operation of the existing LNG Liquefier. See, PGW Exhibit 3 (CH-IV Report) at 116; PGW Exhibit 14 (PA-CB-49); PGW Exhibit 8 (PA-CB-4). This has been true during much of the operating history of the existing LNG Liquefier. This cadence of operation is more fatiguing than normal industry practice.

MMSCFD) with eight being well less than half of that capacity. Plant capacity is noted here because the other LNG plants identified in the CH-IV Report were smaller (operationally more flexible) and not limited in operation by distribution system sendout as is the case at PGW's LNG plant. Of necessity, PGW operated the existing LNG Liquefier differently than the industry norm (five times the thermal cycling of other LNG plants) given its plant design, capacity and system operating requirements.[49] Such wear and tear is fatiguing and is reasonably expected to reduce service life. The existing LNG plant's maintenance history also signals problems to come.[50] In view of the above, PGW believes that 25-30 years is a conservative estimated useful life for its existing LNG Liquefier.[51]

(b) Impact of Thermal Cycling on Existing LNG Liquefier Service Life Questioned.

Mr. Morgan also maintains that PGW concerns regarding a reduced lifespan for the existing LNG Liquefier (because of the increased frequency of thermal cycling during its operating history) are over-stated.[52] PGW disagrees. As stated earlier, cold box life expectancy is a major PGW concern. The cold box in this context has experienced five times more thermal cycling than the industry norm. Note that the cold box has already been in service for twenty-three (23) years at present and will be twenty-eight (28) years in service by FY 2030 (when construction of the new LNG Liquefier is to be completed). An outage associated with a cold box failure is estimated to be 2.5 years.[53]

The Commission will recall that PGW cancelled earlier plans to replace the cold box in FY 2023 and is concerned that postponement of the new LNG Liquefier will put customers at risk. The cold box was approved for replacement in FY 2023 when the PGC agreed that it was approaching the end of its useful life. As shown this winter, in colder than normal weather, PGW relies on LNG for peak shaving. Over the past few decades, because of PGW's ability to produce and store LNG, we have provided

---

49 Mr. Morgan suggests that the increased thermal cycling at the existing LNG Liquefier is a theoretical assumption. PA Statement 1 at 10. PGW responds that its findings (with regard to thermal cycling) are based on its knowledge of the operation and history of the existing LNG Liquefier. This knowledge in combination with that of CH-IV is the basis for the assumption that the existing LNG Liquefier will have a reduced service life compared to other plants cited in the CH-IV Report (with a starkly different operating history).

50 PGW Exhibit 14 (PA-CB-46).

51 Tr. 21-22.

52 PA Statement 1 at 11.

53 PGW Exhibit 3 (CH-IV Report) at 118.

reliable natural gas to our customers' homes and businesses and, while doing so, have accrued substantial savings for gas customers. During this winter alone (15 day cold snap), PGW has saved gas customers over $90 million because it has the LNG Liquefier in operation.[54] The above amount represents the avoided cost of purchasing natural gas in absence of LNG. PGW requests funding to replace the existing LNG Liquefier so that we can reliably serve our customers and continue to accrue savings for them in the future.

2. Customer Demand Considerations.

Mr. Morgan also indicates that PGW may not have fully considered falling customer demand in its analysis of the need to replace the existing LNG Liquefier.[55] PGW responds that Mr. Morgan is mistaken. First, the Company states in this record that it included average customer load in its analysis of design winter needs. It also included winter peak day demand, which is more relevant and critical in this analysis than average customer consumption.[56] Second, PGW notes that even if customer demand is falling, LNG is critical to address other operational needs including e.g., pipeline curtailment, metering station failure, cyber security interruptions.[57] Finally, all indications this winter inform PGW that a design day would require PGW to supply about 200,000 DTHD (or roughly 0.2 Bcf) via LNG vaporization. Using this winter as an example, PGW vaporized about 1.15 Bcf between January 19 and February 2.[58] If this LNG was not available, PGW would have had to curtail or shut off firm gas customers.[59]

---

54 See, response to TR-1. An increase in gas expenditures of $90 million would increase the average residential customer bill by approximately $179 (12.6%) annually. To provide more context to a $90 million increase, the total expenditure by PGW in FY 2025 for natural gas purchases was approximately $135 million.

55 PA Statement 1 at 11. The Advocate also argues that approval of the LNG project does not align with City environmental policy goals. PA Statement 1 at 12-13. PGW disagrees. The replacement of the LNG Liquefier will result in continued lower emissions for the City versus other heating options and is aligned with the City goal of reducing emissions. See, PGW response to PH-2.

56 Tr. 24.

57 Tr. 26.

58 Tr. 24.

59 Tr. 24. Please further note that the demand of Interruptible Transportation (IT) customers is not considered for LNG sizing and design day/design winter calculations. PGW's Design Day and Design Winter calculations are based on firm customers, and it is those firm customers (primarily Philadelphia homeowners who depend on PGW to heat their homes) who would suffer service interruption in the absence of PGW's ability to liquify LNG and vaporize it on cold winter days. See, Tr. 25-26; PGW Exhibit 8 (PA-CB-20).

3. Public-Private Partnership Negotiations.

Mr. Morgan finally indicates that the Commission cannot be fully informed as to the need to approve capital dollars in the FY 2027 Capital Budget until public-private partnership (P3) negotiations are completed.[60] Once again, PGW disagrees. The Company informed the Commission of the P3 partnership to be transparent about that possibility. It is possible that PGW and a P3 partner will reach an agreement that substantially reduces the need for capital funding. However, there is no guarantee of that outcome. And as noted in the record, the LNG project (proposed in this proceeding) and the P3 negotiations are independent efforts. PGW does not want to delay either option as it must meet its goal to install a new liquefier by FY 2030. As noted in the proceeding, PGW is open, in the alternative, to conditional funding for this project.

4. Project Approval is Essential.

Mr. Morgan's over-arching recommendation suggests that delay is an option for the LNG Project — when it clearly is not. Mr. Cassidy has made the case that the LNG Project should be approved at the earliest possible time. PGW is concerned that delay will put gas customers at risk. As demonstrated this winter (in colder than normal weather), PGW relies on LNG for peak shaving. Utilization of LNG is essential for service reliability. It also saves our customers hundreds of millions of dollars over the service life of the LNG plant. This conclusion can be easily seen from the cold snap this winter. Because of LNG, customers were spared an estimated $90 million in additional costs for natural gas. This translates to a savings of $179 for a typical residential customer. More importantly, it means there were no curtailments in service. PGW requests funding for the LNG project to ensure a similar outcome in future years.

---

60 PA Statement 1 at 11-12.

VII. CONCLUSION

For all the foregoing reasons, PGW requests that this Commission recommend the approval of the FY 2027 Capital Budget and Forecast (FY 2028-2032) by City Council, with the modifications set forth above and consistent with the underlying requirements of the Management Agreement.

Respectfully submitted,

/s/ Andre C. Dasent

Andre C. Dasent, Esquire

Commerce Square
2001 Market Street, 25th Floor
Philadelphia, PA 19103
(267) 624-3503

Brooke Darlington, Esquire
1950 Butler Pike, Suite 126-215
Conshohocken, PA 19428

Of Counsel:

Robert H. Hoagland, II, Esquire
Office of General Counsel
Philadelphia Gas Works
800 W. Montgomery Avenue
Philadelphia, PA 19122

Date: March 4, 2026

Appendix A

Functional Area	Programs	Budget Amount
Gas Processing	• Replace Liquefier - Richmond • Gate 5 Modifications - Richmond • New Heater, Generator, Station Modifications • Install New Odorant System at Penrose • Upgrade PA System - Richmond • Miscellaneous Additions and Replacements	$181,992,000 $1,867,000 $1,777,000 $1,652,000 $1,198,000 $337,000 **$188,823,000**
Distribution	• Main and Service Additions - New Revenue • 18-Mile Replacement Program • DSIC Incremental Replacement Program • Infrastructure Grant ("PHMSA") • Conditioned Funding • Miscellaneous Items	$14,834,000 $65,646,000 $42,551,000 $29,593,000 $4,680,000 $3,378,000 **$160,682,000**
Field Services	• Replacement Regulators and Meters • Additional Meter and Regulator - New Customers • C&I Telemetering • Meter Shop Equipment	$16,899,000 $2,826,000 $627,000 $154,000 **$20,506,000**
Fleet Operations	• Mobile Equipment Addition & Replacements • Vehicle Replacements	$2,336,000 $10,810,000 **$13,146,000**
Facilities	• Miscellaneous Building Infrastructure • NOC Outdoor Material Laydown Yard Paving • 800 Building Chiller Plant Sequencing/Optimization • Repl. Carpets and Furniture	$435,000 $410,000 $340,000 $100,000 **$1,285,000**
Information Services	• Hardware Requirements • Software Requirements • Security Camera Additions • Expense Management Software • Security Camera Replacements	$4,188,000 $600,000 $914,000 $205,000 $118,000 **$6,025,000**
Other Requirements	• Chromatograph Replacements (Chem Lab)	$94,000 **$94,000**
Total		**$390,561,000**