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May 31, 2024

VIA ELECTRONIC FILING

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
400 North Street
Keystone Building, 2 North
Harrisburg, PA 17120

RE: Philadelphia Gas Works' ("PGW") Annual Resource Planning Report
Forms 3 - 9; Docket No. M-2024-3045244

Dear Secretary Chiavetta:

On behalf of Philadelphia Gas Works ("PGW") enclosed please find its Annual Resource Planning Report, Forms 3 - 9. Please feel free to contact me if you have any questions.

Sincerely,



Karen O. Moury

KOM/jls
Enclosures

cc: Certificate of Service w/encs. (via email only)
Paul Diskin, Director, Bureau of Technical Utility Services (via pdiskin@pa.gov)

CERTIFICATE OF SERVICE

I hereby certify that this day I served a copy of PGW’s Annual Resource Planning Report Forms 3 - 9 upon the persons listed below in the manner indicated in accordance with the requirements of 52 Pa. Code Section 1.54.

Via Email

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Date: May 31, 2024

Karen O. Moury, Esquire

FORM-IRP-GAS-3: Historical, Current, and Forecast Number of Customers ⁽¹⁾
 REPORTING UTILITY: PHILADELPHIA GAS WORKS

	Historical Data		Current Year	Three Year Forecast			
	Index Year Fiscal Year	-2	-1	0	1	2	3
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Firm Customers							
Retail Residential		467,914	458,311	453,040	462,295	461,011	459,691
Retail Commercial		22,748	22,514	22,246	23,659	23,860	24,264
Retail Industrial		454	401	359	447	444	443
Other		-	-	-	-	-	-
Subtotal Sales Service		491,115	481,226	475,645	486,401	485,315	484,399
Electric Power Generation		-	-	-	-	-	-
Interruptible Customers		2	2	2	2	2	2
Transportation Service ⁽²⁾		25896	33413	35719	31,027	32,034	33,091
CUSTOMER TOTAL		517,014	514,641	511,366	517,430	517,351	517,492
Increase (Decrease)		(693)	(2,373)	(3,275)	6,064	(78)	140
Percent Change (%)		-0.1%	-0.5%	-0.6%	1.2%	0.0%	0.0%

⁽¹⁾ Customer Count is based on the average number of billings over the course of the year.

⁽²⁾ The increase in Transportation customers is due to customers switching to transportation.

FORM-IRP-GAS-4B: Peak Day Energy Supply Resources and Demand Requirements ⁽¹⁾
 REPORTING UTILITY: PHILADELPHIA GAS WORKS
 (Volumes in MMcf)

Index Year Actual Year	Historical Data		Current Year	Three Year Forecast		
	-2 2021-2022	-1 2022-2023	0 2023-2024	1 2024-2025	2 2025-2026	3 2026-2027
Gas Supply:						
Supply Contracts	84	65	237	241	240	240
Storage Withdraws	175	158	188	189	189	189
LNG	172	221	94	205	208	207
Subtotal Gas Supply	431	443	519	634	637	636
Transportation	151	148	33	30	31	31
TOTAL GAS SUPPLY	583	592	551	664	667	667
Requirements:						
Firm Requirements ⁽²⁾	431	442	459	568	570	569
Interruptible Requirements	1	2	2	2	2	2
Storage & LNG Fuels	-	-	8	12	12	12
Subtotal Firm & Interruptible	431	443	469	581	583	582
Transportation	151	148	82	83	84	85
Load Reductions	-	-	-	-	-	-
TOTAL GAS REQUIREMENTS	583	592	551	664	667	667
Surplus (Deficiency)	0	0	0	0	0	0

⁽¹⁾ Peak Day for the actual/estimated year is forecasted at a 5 degree temperature. For the fully forecasted years, the Peak Day is based on a 2 degree temperature.

⁽²⁾ Firm requirements for the forecast years include plant use.

FORM-IRP-GAS-5 PROGRAM DESCRIPTION

Company: Philadelphia Gas Works (PGW)

Program: Home Comfort Program

Existing [X] Proposed []

Contact Person: Steven Jerue
(215) 684-6499

Objective: Home Comfort provides free, in-home weatherization and energy conservation education services for income-qualified, single-family customers, including those enrolled in CRP. Home Comfort seeks to make the homes of eligible customers more energy efficient, which improves comfort and reduces the subsidy cost. In 2017 PGW also launched the Low Income Multifamily Efficiency pilot, which provides conservation services to multifamily buildings with low income residents.

Details of Activity and Implementation Schedule:

Eligible customers are targeted for program participation. For each participating household, PGW's contractors will perform an energy diagnostic audit, energy education, and conservation treatments such as home repairs, programmable thermostat, insulation, etc.

Actual and/or Anticipated Results:

Year	Peak Load Reduction Mcf	Energy Savings (4)			Other Results
		Electric Mwh	Gas Mcf	Oil Gallons	
2012 (2)			35		2,158 Homes w/Treatment
2013 (2)			19		2,395 Homes w/Treatment
2014 (2)			14		2,673 Home w/Treatment
2015 (2)			12		3,707 Homes w/Treatment
2016 (2)			17		3,814 Homes w/Treatment
2017 (2) (6)			23		2,118 Homes w/Treatment
2018 (2) (6)			13		2,478 Homes w/Treatment
2019 (2) (6)			12		2,996 Homes w/Treatment
2020 (2) (6)			15		1,650 Homes w/Treatment
2021 (2) (6)			14		2,057 Homes w/Treatment
2022 (2) (6)			12		1,882 Homes w/Treatment

Monetary and Personnel Resources:

Year	Personnel Est. Hrs. (3)	Categorized Program Expenses		
		Outside Services	Admin.	Total
2012 (1)	23,798	\$4,599,186	\$635,667	\$5,234,853
2013 (1)	26,345	\$7,032,750	\$1,021,654	\$8,054,404
2014 (1)	N/A	\$6,181,851	\$999,164	\$7,181,015
2015 (1) (5)	N/A	\$7,913,908	\$700,724	\$8,614,632
2016 (1) (5)	N/A	\$7,598,605	\$495,954	\$8,094,559
2017 (1) (5) (6)	N/A	\$4,876,103	\$375,680	\$5,251,783
2018 (1) (5) (6)	N/A	\$7,523,003	\$325,600	\$7,848,602
2019 (1) (5) (6)	N/A	\$7,681,082	\$287,386	\$7,968,468
2020 (1) (5) (6)	N/A	\$6,545,627	\$244,558	\$6,790,185
2021 (1) (5) (6)	N/A	\$9,070,724	\$117,560	\$9,188,284

2022 (1) (5) (6)	N/A	\$7,765,191	\$107,261	\$7,872,451
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- (1) Actual
- (2) Actual number of participants, actual expenditure, estimated energy savings
- (3) PGW no longer tracks the personnel hours involved in CRP Home Comfort treatments, and instead tracks progress relative to cost-effectiveness goals.
- (4) Average energy savings per treated home.
- (5) Pursuant to the PUC's revisions to the annual Table 1 and Table 2 LIURP evaluation reports, administrative costs include PGW internal costs and allocated portfolio implementation costs. Outside services includes all program implementation and overhead costs.
- (6) Spending total includes programmatic and administrative costs (including labor) for the single family Home Comfort program and the Low Income Multifamily Efficiency (LIME) program. Completed jobs include single family homes treated in the Home Comfort program, and multifamily buildings treated in the LIME program.

FORM-IRP-GAS-6
ENERGY USERS
COMPANY: PHILADELPHIA GAS WORKS

Fiscal Year Ending August 31, 2023

	<u>Number of</u>	<u>Sales</u>
	<u>Customers</u>	<u>(Mcf)</u>
Firm:		
Residential:		
Heating	445,345	27,472,621
Non-heating	12,966	320,605
Commercial	22,514	7,543,552
Industrial	<u>401</u>	<u>401,227</u>
Sub-total Firm	481,226	35,738,006
Interruptible		
Commercial, Industrial, & Cogen	<u>2</u>	<u>893,017</u>
Total Gas Sold	481,228	36,631,023
Unbilled Adjustment	-	-
Transportation	33,413	30,919,076
Utility Use	<u>-</u>	<u>315,456</u>
Total	<u><u>514,641</u></u>	<u><u>67,865,554</u></u>

FORM-IRP-GAS-7 PROGRAM SUMMARY

Company: Philadelphia Gas Works (PGW)

Program Name	Peak Load Reduction (Mcf)	Energy Use Change (Mcf)	Personnel Est. Hrs (2)	Categorized Program Expenses		
				Outside Services	Adm.	Total
Enhanced Low-Income Retrofit Program (ELIRP) - 2012 (1)	NA	35	23,798	\$4,599,186	\$635,667	\$5,234,853
Enhanced Low-Income Retrofit Program (ELIRP) - 2013 (1)	NA	19	26,345	\$7,032,750	\$1,021,654	\$8,054,404
Enhanced Low-Income Retrofit Program (ELIRP) - 2014 (1)	NA	14	N/A	\$6,181,851	\$999,164	\$7,181,015
CRP Home Comfort Program - 2015 (1)	NA	12	N/A	\$7,913,908	\$700,724	\$8,614,632
CRP Home Comfort Program - 2016 (1)	NA	17	N/A	\$7,598,605	\$495,954	\$8,094,559
Home Comfort Program - 2017 (1)	NA	23	N/A	\$4,876,103	\$375,680	\$5,251,783
Home Comfort Program - 2018 (1)	NA	13	N/A	\$7,523,003	\$325,600	\$7,848,602
Home Comfort Program - 2019 (1)	NA	12	N/A	\$7,681,082	\$287,386	\$7,968,468
Home Comfort Program - 2020 (1)	NA	15	N/A	\$6,545,627	\$244,558	\$6,790,185
Home Comfort Program - 2021 (1)	NA	14	N/A	\$9,070,724	\$117,560	\$9,188,284
Home Comfort Program - 2022 (1)	NA	12	N/A	\$7,765,191	\$107,261	\$7,872,451

(1) Actual

(2) PGW no longer tracks the personnel hours involved in LIURP treatments, and instead tracks progress relative to cost-effectiveness goals.

Company Name:
FORM-IRP-GAS-8

Philadelphia Gas Works (PGW)
Cost-Benefit Analysis

PROGRAM:

LIURP

t	Year	Energy Savings (1) Mcf E	Average Distribution Cost (2018\$) (2) \$/Mcf ACE	Avoided Energy Cost (2018\$) (3) \$/Mcf MCE	Participant Demand Savings (4) Mcf D	Utility Capacity Savings Mcf G	Average Demand Costs \$/Mcf ACD	Avoided Demand Costs \$/Mcf MCD	Participant Costs PC
1	2022	23,288	9.24	9.02	N/A	N/A	N/A	0	
2	2023	23,288	9.37	9.34	N/A	N/A	N/A	0	
3	2024	23,288	9.52	9.62	N/A	N/A	N/A	0	
4	2025	23,288	9.42	9.92	N/A	N/A	N/A	0	
5	2026	23,288	9.95	10.10	N/A	N/A	N/A	0	
6	2027	23,288	9.97	10.21	N/A	N/A	N/A	0	
7	2028	23,288	9.95	10.43	N/A	N/A	N/A	0	
8	2029	23,288	9.93	10.75	N/A	N/A	N/A	0	
9	2030	23,288	9.93	10.90	N/A	N/A	N/A	0	
10	2031	23,288	9.93	11.13	N/A	N/A	N/A	0	
11	2032	23,288	9.93	11.41	N/A	N/A	N/A	0	
12	2033	23,288	9.93	11.59	N/A	N/A	N/A	0	
13	2034	23,288	9.93	11.82	N/A	N/A	N/A	0	
14	2035	23,288	9.93	12.15	N/A	N/A	N/A	0	
15	2036	23,288	9.93	12.18	N/A	N/A	N/A	0	
16	2037	23,288	9.93	12.20	N/A	N/A	N/A	0	
17	2038	23,288	9.93	12.39	N/A	N/A	N/A	0	
18	2039	23,288	9.93	12.68	N/A	N/A	N/A	0	
19	2040	23,288	9.93	12.93	N/A	N/A	N/A	0	
20	2041	23,288	9.93	12.93	N/A	N/A	N/A	0	
21	2042	-	9.93	12.93	N/A	N/A	N/A	0	
22	2043	-	9.93	12.93	N/A	N/A	N/A	0	
23	2044	-	9.93	12.93	N/A	N/A	N/A	0	
24	2045	-	9.93	12.93	N/A	N/A	N/A	0	
25	2046	-	9.93	12.93	N/A	N/A	N/A	0	

(1) The Average Energy Costs are the annualized distribution costs for PGW firm ratepayers, and do not include the Weather Normalization Adjustment or Distribution System Improvement Charge.

(2) The Avoided Energy Costs used for this analysis were calculated in accordance with the avoided cost formula set forth in the DSM docket at R-2009-2139884 and P-2009-2097639.

Company Name: Philadelphia Gas Works (PGW)
 FORM-IRP-GAS-8 Cost-Benefit Analysis

PROGRAM: LIURP

t	Year	Incentive Cost I	Utility Costs UC	Discount Rates			Escalation Rate (3) % e	System Sales (4) Mcf S	Sales Ratio f
				Participant (d) %	Non-Participant (d) %	Utility (d) %			
1	2022	\$ -	\$ 7,872,502	2.92%	2.92%	2.92%	0	48,469,115	0.0059
2	2023	\$ -	\$ -	2.92%	2.92%	2.92%	0	41,670,391	0.0069
3	2024	\$ -	\$ -	2.92%	2.92%	2.92%	0	41,877,476	0.0068
4	2025	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,788,305	0.0067
5	2026	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,818,796	0.0067
6	2027	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,600,477	0.0067
7	2028	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,633,573	0.0067
8	2029	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,007	0.0067
9	2030	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0067
10	2031	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0067
11	2032	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0067
12	2033	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0067
13	2034	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0067
14	2035	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0067
15	2036	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0067
16	2037	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0067
17	2038	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0067
18	2039	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0067
19	2040	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0067
20	2041	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0067
21	2042	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0073
22	2043	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0073
23	2044	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0073
24	2045	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,090	0.0073
25	2046	\$ -	\$ -	2.92%	2.92%	2.92%	0	42,627,091	0.0073

(1) The Participant, Non-Participant and Utility discount rates are real discount rates based on PGW's long-term debt and AFUDC (Allowance for Funds Used During Construction).

(2) The System Sales are sales to ratepayers subject to the Universal Service and Energy Conservation Surcharge.

Company Name:
FORM-IRP-GAS-9

Philadelphia Gas Works (PGW)
Cost-Benefit Analysis

PROGRAM:

LIURP

Period of Analysis		Total Utility Benefits (Bu) \$	Total Utility Costs (Cu) \$	Revenue Reduction Cost (Cr) \$	Participant Revenue Requirement (Rp) \$	Total participant Benefits (Bp) \$	Total Participant Costs (Cp) \$
Beginning Year	Ending Year						
2022	2046	\$ 3,946,883	\$ 7,872,502	\$ 3,519,965	\$ 44,574	\$ 3,519,965	\$ 44,574

Discounted Payback Period Yrs.	NET PRESENT VALUE			BENEFIT COST RATIO			Rate Impact Non-Part (RIMnp) \$/Mcf
	Participant (NPVp) \$	Non-Part (NPVnp) \$	Utility (NPVu) \$	Participant (BCRp) \$	Non-Part (BCRnp) \$	Utility (BCRu) \$	
N/A	\$ 3,475,391	\$ (7,401,569)	\$ (3,925,619)	78.97	0.35	0.50	\$ 0.163

(1) This filing reports on the results of PGW's LIURP program. Results from PGW's demand side management programs are reported at docket numbers R-2009-2139884 and P-2009-2097639.

(2) The avoided costs used for this analysis were calculated in accordance with the avoided cost formula used for DSM program reporting set forth at docket numbers R-2009-2139884 and P-2009-2097639.