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March 1, 2021

Via Federal Express

Rosemary Chiavetta, Secretary
PA Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265

Re: Philadelphia Gas Works 2021-2022 1307(f) Gas Cost Rate Filing
Docket No. R-2021-3023970

Dear Secretary Chiavetta:

On behalf of Philadelphia Gas Works (“PGW”), enclosed for filing is the original of PGW’s March 1, 2021 Section 1307(f) Gas Cost Rate Filing. This filing contains:

- Supplement No. 140 to PGW’s Gas Service Tariff – Pa P.U.C. No. 2;
- Supplement No. 95 to PGW’s Gas Supplier Tariff – Pa P.U.C. No. 1;
- Supporting information regarding the computation of annual purchased gas costs for the twelve months ending August 31, 2022;
- Testimony of Florian Teme (PGW St. 1);
- Testimony of Ryan E. Reeves (PGW St. 2); and
- Testimony of Gregory Stunder (PGW St. 3).

In addition to the revisions that reflect PGW’s 1307(f) Gas Cost Rate Filing, PGW’s Gas Supplier Tariff also contains a revision to the definition of “Unaccounted For Gas” to reflect a change in the Unaccounted for Gas and Retainage Percentage. PGW inadvertently failed to reflect this change in its First Quarter Filing and is including the change here for efficiency purposes.

Please contact me if you have any questions.

Sincerely,

Kristine E. Marsilio

Kristine E. Marsilio, Esq.

KEM/lww

Enclosure

cc: Cert. of Service w/enc.
Craig Berry w/enc.

PHILADELPHIA GAS WORKS
GAS SERVICE TARIFF



Issued by: Craig White
President and CEO

PHILADELPHIA GAS WORKS
800 West Montgomery Avenue
Philadelphia, PA 19122

List of Changes Made by this Tariff Supplement

TABLE OF CONTENTS (PAGE Nos. 6-7)

Updated to reflect revised page numbers for each of the changes listed below on this page

GAS COST RATE (GCR) – SECTION 1307f, II DEFINITIONS (PAGE No. 67)

In the definition of “GAC,” the GAC value effective September 1, 2021, increases from \$(0.03097) per Ccf to \$(0.00890).

GAS COST RATE (GCR) – SECTION 1307f, II DEFINITIONS (PAGE No. 67A)

In the definition of “IRC,” the IRC value effective September 1, 2021 is \$(0.00004) per Ccf. In the definition of “SSC,” the SSC value effective September 1, 2021, increases from \$0.37775 per Ccf to \$0.42247 per Ccf.

GAS COST RATE (GCR) – SECTION 1307f, III COMPUTATION OF GCR (PAGE No. 68)

The Gas Cost Rate (GCR) effective September 1, 2021 increases from \$0.34687 per Ccf to \$0.41361 per Ccf.

PRICE TO COMPARE (PAGE No. 78)

The Prices to Compare effective September 1, 2021 are: a) \$0.43254 per Ccf for Residential (GS-RES); b) \$0.43254 per Ccf for Public Housing Customers (GS-PH); (c) \$0.42133 per Ccf for Commercial (GS-COM); (d) \$0.41931 per Ccf for Industrial (GS-IND); (e) \$0.41757 per Ccf for Municipal Service (MS); (f) \$0.41757 per Ccf for Philadelphia Housing Authority (PHA); and, (g) \$0.41757 per Ccf for Natural Gas Vehicle Service (NGVS).

RESTRUCTURING AND CONSUMER EDUCATION SURCHARGE (PAGE No. 79)

The Restructuring and Consumer Education Surcharge effective September 1, 2021 increases from \$(0.00009) per Ccf to \$0.00002 per Ccf.

EFFICIENCY COST RECOVERY SURCHARGE (PAGE No. 80)

The Efficiency Cost Recovery Surcharge rates effective September 1, 2021 are: a) \$0.00276 per Ccf for Residential and Public Housing Customers on Rate GS; b) \$0.00313 per Ccf for Commercial Customers on Rate GS; c) \$(0.00063) per Ccf for Industrial Customers on Rate GS; and, d) \$0.00313 per Ccf for The Philadelphia Housing Authority on Rate PHA.

UNIVERSAL SERVICE AND ENERGY CONSERVATION SURCHARGE (PAGE No. 81)

The Universal Service and Energy Conservation Surcharge effective September 1, 2021 increases from \$0.15792 per Ccf to \$0.15864 per Ccf.

GENERAL SERVICE – RATE GS (PAGE No. 83); MUNICIPAL SERVICE – RATE MS (PAGE No. 87); PHILADELPHIA HOUSING AUTHORITY SERVICE – RATE PHA (PAGE No. 90); and, DEVELOPMENTAL NATURAL GAS VEHICLE SVC - RATE NGVS FIRM SERVICE (Page No. 135)

The Gas Cost Rate (GCR) effective September 1, 2021 increases from \$0.346874 per Ccf to \$0.41361 per Ccf.

TABLE OF CONTENTS

	<u>Page Number</u>
List of Changes Made By This Tariff_____	One Hundred and Thirty Third Revised 2
Description of Territory Served_____	5
Table of Contents_____	One Hundred and Thirty Second Revised 6
Definitions_____	Second Revised 10
<u>RULES and REGULATIONS:</u>	
1. The Gas Service Tariff_____	First Revised 15
2. Application and Contract for Gas Service_____	Sixth Revised 17
3. Credit and Deposit_____	Third Revised 21
4. Billing and Payment_____	Second Revised 26
5. Termination and/or Discontinuance of Gas Service_____	Second Revised 30
6. Termination of Service for Safety Reasons and Curtailment of Service/ Service Continuity_____	First Revised 38
7. Inquiry, Review, Dispute, and Appeals Process_____	First Revised 41
8. Customer’s Responsibility for Company’s Property_____	First Revised 44
9. Conditions of Service, Point of Delivery, and Application of Rates_____	Third Revised 47
10. Extensions and Rights-Of-Way_____	First Revised 50
11. Meters: Measurements, Readings, Errors, and Tests_____	First Revised 53
12. Service Charges and Miscellaneous Fees and Provisions_____	Second Revised 57
13. Universal Service And Energy Conservation Programs_____	Second Revised 59
14. Gas Choice Enrollment and Switching_____	First Revised 63
15. Supplier of Last Resort_____	First Revised 63

	<u>Page Number</u>
RATES (Cover Page) _____	66
Gas Cost Rate _____	Eighty Fifth Revised 67
Revenue Reconciliation Adjustment (RAA) Rider _____	70
Senior Citizen Discount _____	First Revised 72
Exit Fee Rider _____	77
Merchant Function & Gas Procurement Charges; Price to Compare _____	Forty Second Revised 78
Restructuring and Consumer Education Surcharge _____	Thirty Third Revised 79
Efficiency Cost Recovery Mechanism _____	Fifty Third Revised 80
Universal Services Surcharge _____	Eighty Eighth Revised 81
Other Post Employment Benefit Surcharge _____	Seventeenth Revised 82
General Service – Rate GS _____	Ninety Eighth Revised 83
Municipal Service – Rate MS _____	Ninety Eighth Revised 87
Philadelphia Housing Authority Service – Rate PHA _____	Ninety Eighth Revised 90
Daily Balancing Service – Rate DB _____	101
Interruptible Transportation Service – Rate IT _____	111
Gas Transportation Service – Rate GTS – Firm Service _____	118
Gas Transportation Service – Rate GTS – Interruptible _____	124
Cogeneration Service – Rate CG _____	Fifth Revised 131
Developmental Natural Gas Vehicle Service – Rate NGVS Firm Service _____	Sixty Eighth Revised 135
Developmental Natural Gas Vehicle Service – Rate NGVS Interruptible Service _____	139
SPECIAL PROVISION – Air Conditioning Rider _____	143
SPECIAL PROVISION – Compressed Natural Gas Rider _____	145
SPECIAL PROVISION – Emergency/Unauthorized Use Gas Rider _____	147
Weather Normalization Adjustment Clause _____	Fourth Revised 149
Distribution System Improvement Charge _____	Twenty Second Revised 151
Backup Service – Rate BUS _____	First Revised 154
Technology and Economic Development Rider and Micro-Combined Heat and Power Incentives _____	First Revised 155
Negotiated Liquefied Natural Gas Service – Rate LNG-N _____	First Revised 156

GAS COST RATE (GCR) -- SECTION 1307(f)

I. PROVISION FOR ADJUSTMENT

The Gas Cost Rate shall be applied to each Mcf (1,000 cubic feet) for Firm Retail Sales Service Gas supplied under Rates Schedules GS, MS, PHA, and NGVS-Firm, except for Gas usage under the Special Provisions – Air Conditioning of those rates calculated in a manner set forth below, pursuant to 66 Pa.C.S. §1307(f). Such rates for Firm Sales Service Gas may be increased or decreased from time to time under the procedures set forth in Section II.B. below to reflect changes in the level of Gas costs incurred or projected to be incurred by PGW related to Sales Service.

II. DEFINITIONS

C - The current cost of Natural Gas and other raw materials determined as follows: (a) for all types of Gas, project the cost for each purchase (adjusted for net current Gas stored) for the computation year plus (b) the of (1) the projected book value of non-current Gas at the beginning of the computation year minus (2) the projected book value of non-current Gas at the end of the computation year. In addition to any cost authorized by the Commission, the cost of Natural Gas may include any item included in the definition of Natural Gas costs set forth in 66 Pa.C.S. § 1307(h) ("Definition"). The Factor "C" includes two components -- Commodity Costs and Demand Costs which are defined as follows: Commodity Costs - the actual cost of natural gas and purchased electric for firm customers that does not include the fixed costs associated with the transportation and storage of natural gas; and Demand Costs - the fixed costs associated with the transportation and storage of natural gas for firm customers.

Effective 9/1/08, 75% of off system sales margin and capacity release credits will be allocated to the Factor "C" and 25% to the Company. Effective 9/1/09, 75% of storage asset management fees will be allocated to the Factor "C" and 25% to the Company.

Computation Year - The 12-month forecast period as identified in the Company's annual 1307(f) filing and each quarterly GCR filing.

E - Experienced net over billing (or under billing) of the cost of Natural Gas and other raw materials applicable to the GCR reported in the most recent Section 1307(f) proceeding. Such over billings (or under billings) will be made with interest at the rate and method set forth by the Pennsylvania Public Utility Commission. Additionally, supplier refunds received prior to the end of the August billing period will be included in the Factor "E." The Factor "E" includes two components -- Commodity Costs and Demand Costs which are defined above in the Factor "C" definition. Credit or recovery of the factor "E" is completed over the Company's Fiscal Year.

Firm Sales Service - The service provided to Customers who receive firm supply service from PGW. The term does not include the service provided to Customers who receive interruptible supply service from PGW.

GAC (Gas Adjustment Charge) - The "E" factor component of the GCR, representing the net overcollection or undercollection of Natural Gas and other raw materials costs. The currently effective GAC is (\$0.01950) per Ccf for Commodity Costs and \$0.010607 per Ccf for Demand Costs, for service on or after September 1, 2021. The total GAC is (\$0.00890) per Ccf. (I)

GCR - Gas Cost Rate determined to the nearest one-hundredth cent (\$0.0001) to be applied to each Mcf of Gas supplied under Rates GS, MS, PHA, and NGVS-Firm, except for Gas usage under the Special Provisions – Air Conditioning of those rates and is equal to the SSC plus the GAC minus the IRC.

(I) – Increase

IRC - Interruptible Revenue Credit - The credit defined in Subsection VI below. The currently effective IRC is \$0.00004 per Ccf for service on or after September 1, 2021.

(D)

Natural Gas or Gas - The volumes of gas purchased or manufactured by the Company that is delivered to the Company's Customers, plus such portion of the Company-used and unaccounted-for gas as the Commission permits, including, but not limited to, natural gas, liquefied natural gas, synthetic gas, liquefied propane and naphtha.

S - Projected applicable Mcf of Gas to be billed to Customers during the computation year.

SSC - Sales Service Charge - The purchased Gas costs determined to the nearest $\frac{1}{100}$ of a cent (\$0.0001). The currently effective SSC is \$0.28987 per Ccf for Commodity Costs and \$0.13260 per Ccf for Demand Costs, for service on or after September 1, 2021. The total SSC is \$0.42247 per Ccf.

(I)

(D) – Decrease, (I) – Increase

PHILADELPHIA GAS WORKS

III. COMPUTATION OF GAS COST RATE

A. The GCR shall be computed to the nearest one-thousandth cent (\$0.00001) in accordance with the formula set forth below as the terms are defined in Section II:

$$\begin{aligned} \text{SSC} &= \text{C/S} \\ \text{GAC} &= \text{E/S} \\ \text{GCR} &= \text{SSC} + \text{GAC} - \text{IRC} \end{aligned}$$

B. Each Gas Cost Rate so computed shall be applied to Customers' bills for twelve monthly billing periods commencing with September.

The currently effective Gas Cost Rate is \$0.41361 per Ccf, for service on or after September 1, 2021.

(I)

IV. REPORTING REQUIREMENTS

A. The Company's rates are subject to quarterly adjustments for recovery of the Gas Cost Rate under procedures set forth in Section 1307(f) of the Public Utility Code.

B. The filing of the Company's annual Section 1307(f) filing, annual Gas Cost Rate, effective during the billing period of September through August, shall be submitted to the Commission by March 1 of each year, with a February 1 pre-filing date.

C. The application of the Gas Cost Rate shall be subject to review and audit by the Commission at such intervals as the Commission shall determine.

D. If it shall be determined, from audit by the Commission, or by final order entered after notice and hearing, that the application of this clause has resulted in the overcollection or undercollection of revenues, then the Company shall apply such over/undercollection as a credit or debit against future Gas Cost Rates.

V. PROVISION FOR INCLUSION OF SPECIFIC NON-GAS EXPENSES

The computation of the Gas Cost Rate may include such Non-Gas expenses as may be authorized by this tariff and annually authorized by the Commission.

VI. INTERRUPTIBLE REVENUE CREDIT (IRC)

A. The GCR rate shall be credited with an Interruptible Revenue Credit (IRC) equal to the margin realized from interruptible sales under PGW's Interruptible Sales Tariff Rates: BPS, LBS; and CG (Total Margin Revenue).

B. The IRC shall be set each year in the Company's 1307(f) proceeding to reflect the Total Margin Revenue. The rate per Mcf shall be calculated by dividing the Total Margin Revenue by total applicable firm sales. For the period September 1, 2003 through August 31, 2004 the IRC shall be initially set to reflect the Total Margin Revenue authorized by the Commission in its final order at M-00021612 (entered March 31, 2003).

(I) – Increase

MERCHANT FUNCTION CHARGE (“MFC”)

The MFC is a volumetric charge, applied to firm sales service customers, which will be included in the Price to Compare. The MFC is based on Gas Cost Rate multiplied by a fixed uncollectible percentage established in the Company’s last general base rate proceeding. The MFC will not be reconciled to reflect actual results. The MFC is intended to make the Company’s Price to Compare more comparable to the gas supply services price offers of other Natural Gas Suppliers that presumably reflect anticipated uncollectible expenses. The following percentages will be applied to the quarterly Gas Cost Rate in order to calculate the quarterly MFC: 3.62% - GS Residential (“GS RES”); 3.62% - GS Public Housing (“GS PHA”); 0.91% - GS Commercial (“GS COM”); and 0.42% - GS Industrial (“GS IND”). The current MFC is set forth below in the Price to Compare table. (C)

GAS PROCUREMENT CHARGE (“GPC”)

The GPC is a volumetric charge, applied to firm sales service customers, which will be included in the Price to Compare. The GPC will remain in effect until reviewed and updated in the Company’s next general base rate proceeding.

Current Gas Procurement Charge = \$0.00400/Ccf

PRICE TO COMPARE (“PTC”)

The PTC is composed of the Sales Service Charge (“SSC”), Gas Adjustment Charge (“GAC”), the Merchant Function Charge and the Gas Procurement Charge. The PTC will change whenever any of the components of the PTC change. The current PTC is (per Ccf):

	GS-RES	GS-PH	GS-COM	GS-IND	MS	PHA	NGVS	
SSC	\$0.42247	\$0.42247	\$0.42247	\$0.42247	\$0.42247	\$0.42247	\$0.42247	
GAC	(\$0.00890)	(\$0.00890)	(\$0.03097)	(\$0.00890)	(\$0.00890)	(\$0.00890)	(\$0.00890)	(C)
MFC	\$0.01497	\$0.01497	\$0.00376	\$0.00174	\$0.00000	\$0.00000	\$0.00000	
GPC	\$0.00400	\$0.00400	\$0.00400	\$0.00400	\$0.00400	\$0.00400	\$0.00400	
PTC	\$0.43254	\$0.43254	\$0.42133	\$0.41931	\$0.41757	\$0.41757	\$0.41757	(C)

(C) – Change

RESTRUCTURING AND CONSUMER EDUCATION SURCHARGE

Non-Gas restructuring and consumer education costs, including the costs arising from implementation and administration of the Account Number Access Mechanism as specified in the Commission's Final Order entered on October 27, 2016, at Docket No. M-2015-2468991, will be recovered by a Restructuring and Consumer Education Surcharge applicable to all volumes of Gas delivered.

1. Computation of the Restructuring and Consumer Education Surcharge factors will be in accordance with the automatic adjustment procedures utilized under Section 1307 of the Public Utility Code and will be filed and approved in conjunction with the Company's annual Section 1307(f)-GCR filing.
2. Restructuring and Consumer Education costs recovered through the Surcharge mechanism are the Commission approved costs which the Company has or will incur to meet the requirements of the Natural Choice and Competition Act and applicable Commission regulations, orders and other regulatory requirements, other than those costs pertaining to universal service and energy conservation programs.
3. Once the surcharge is in place, PGW shall file reconciliation statements quarterly and shall submit a claim for over/under recovery on an annual basis, at the same time it submits its projected Restructuring costs and Restructuring Surcharge claim for the next year; provided however, that if a project for which costs were included in the Restructuring Surcharge is cancelled or delayed beyond the year in which the cost was originally scheduled to be incurred, the Company will withdraw the projected costs of that project from the Restructuring Surcharge in its next quarterly update. No interest will be included in such surcharge computations. The basic component of the surcharge will be determined by dividing the restructuring and consumer education costs approved for annual recovery by the estimated applicable throughput in Mcf.
4. The Restructuring and Consumer Education Surcharge shall remain in effect until restructuring and consumer education costs have been collected or as otherwise directed by the Commission.
5. The Restructuring and Consumer Education Surcharge is effective on and after September 1, 2008.

Current Restructuring and Consumer Education Surcharge = \$0.00002/Ccf

(I)

(D) - Decrease

EFFICIENCY COST RECOVERY SURCHARGE

The cost of the energy efficiency programs (i.e. the demand side management programs) for the firm customer rate classes listed below will be recovered by an Efficiency Cost Recovery Surcharge applicable to all volumes of Gas delivered.

- 1) The Surcharge will recover the program costs and the administrative costs of the energy efficiency program.
- 2) Computation of the Efficiency Cost Recovery Surcharge factors will be in accordance with the automatic adjustment procedures utilized under Section 1307(f) of the Public Utility Code and will be filed and approved in conjunction with the Company's annual Section 1307(f)-GCR filing.
- 3) Once the surcharge is in place, it will be automatically adjusted effective March 1, June 1, September 1, and December 1 of each year in accordance with Section 1307(f) quarterly adjustment procedures. No interest will be included in such surcharge computations. The basic component of the surcharge will be determined by dividing the total energy efficiency program costs approved for annual recovery plus (or minus) any over (or under) recovery from the prior period by the estimated applicable throughput in Mcfs. The costs related to customers other than low income residential customers are tracked and will be recovered separately from each of the following firm customer rate classes if the customer class is served by the energy efficiency program:
 - a) Residential and Public Housing Customers on Rate GS;
 - b) Commercial Customers on Rate GS;
 - c) Industrial Customers on Rate GS;
 - d) Municipal Customers on Rate MS; and
 - e) The Philadelphia Housing Authority on Rate PHA.

The surcharge shall be a cents per Ccf charge calculated to the nearest one-thousandth of a cent (0.00001) which shall be added to the distribution rates for billing purposes for all customers in each of the above rate classes. The rate shall be calculated separately for each rate class as follows:

- | | |
|---|------|
| a) \$0.00276 per Ccf for Residential and Public Housing Customers on Rate GS; | (I) |
| b) \$0.00313 per Ccf for Commercial Customers on Rate GS; | (I) |
| c) \$(0.00063) per Ccf for Industrial Customers on Rate GS; | (D) |
| d) \$0.00000 per Ccf for Municipal Customers on Rate MS; and | (NC) |
| e) \$0.00313 per Ccf for The Philadelphia Housing Authority on Rate PHA. | (I) |

The Enhanced Low Income Retrofit Program costs shall be recovered through the Universal Services Surcharge beginning on September 1, 2010.

(I) – Increase; (D) – Decrease; (NC) – No Change

UNIVERSAL SERVICE AND ENERGY CONSERVATION SURCHARGE

Universal service and energy conservation program and related costs will be recovered by a Universal Service and Energy Conservation Surcharge applicable to all volumes of Gas delivered.

1. The Surcharge will recover: 1) the discounts provided to Customers pursuant to the Customer Responsibility Program (CRP); 2) the discounts provided to Customers pursuant to the Senior Citizen Discount; 3) the costs of PGW's Low Income Usage Reduction Program (LIRUP), known as the Home Comfort Program (previously known as the Conservation Works Program (CWP), the Enhanced Low Income Retrofit Program (ELIRP) and the CRP Home Comfort Program); 4) the costs of the pilot Conservation Incentive Credit program; and, 5) for Customers entering the CRP program on or after September 1, 2003, past due arrearages forgiven pursuant to paragraph A (6) of the CRP/CAP Program Design Stipulation approved by the Commission by its order at M-00021612 (entered March 31, 2003).
2. Computation of the Universal Service and Energy Conservation Surcharge factors will be in accordance with the automatic adjustment procedures utilized under Section 1307(f) of the Public Utility Code and will be filed and approved in conjunction with the Company's annual Section 1307(f)-GCR filing.
3. Once the surcharge is in place it will be automatically adjusted effective March 1, June 1, September 1, and December 1 of each year in accordance with Section 1307(f) quarterly adjustment procedures. No interest will be included in such surcharge computations. The basic component of the surcharge will be determined by dividing the total universal service and energy conservation program costs approved for annual recovery by the estimated applicable throughput in Mcfs.
4. The Universal Service and Energy Conservation Surcharge shall take effect upon the effective date of this Tariff.

Current Universal Service and Energy Conservation Surcharge = \$0.15864/Ccf. **(I)**

(I) - Increase

GENERAL SERVICE - RATE GS

Rate: Applicable to all Retail Sales Service or Transportation Service rendered pursuant to this Rate Schedule on or after March 1, 2021.

(C)

AVAILABILITY

Available for any purpose where the Company's distribution mains adjacent to the proposed Gas Service location are, or can economically be made, suitable to supply the quantities of Gas or Transportation Services required. Not available for back-up service, refer to Rate BUS.

RATES

CUSTOMER CHARGE (per Meter (except parallel meters)):

\$ 14.10 per month for Residential and Public Housing Authority Customers.
\$ 24.00 per month for Commercial Customers
\$ 71.80 per month for Industrial Customers

Surcharge: Distribution System Improvement Charge.

Plus,

GCR (not applicable to GS Customers who transport gas through a qualified NGS):

\$0.41361 per Ccf for Residential and Public Housing (I)
\$0.41361 per Ccf for Commercial Customers (I)
\$0.41361 per Ccf for Industrial Customers (I)

Plus,

DISTRIBUTION CHARGE (consisting of items (A) and (B), below):

(A) Delivery Charge:

\$0.68642 per Ccf for Residential
\$0.59444 per Ccf for Public Housing
\$0.49570 per Ccf for Commercial and Municipal Customers
\$0.48825 per Ccf for Industrial Customers

(B) Surcharges:

Universal Service and Energy Conservation Surcharge; Restructuring and Consumer Education Surcharge; Efficiency Cost Recovery Surcharge; Other Post Employment Benefit Surcharge; and Distribution System Improvement Charge.

(I) – Increase; (C) - Change

Note: The Commodity Charge includes the Sales Service Charge, the Merchant Function Charge and the Gas Procurement Charge.

MUNICIPAL SERVICE - RATE MS

Rate: Applicable to all Retail Sales Service or Transportation Service rendered pursuant to this Rate Schedule on or after September 1, 2021.

(C)

AVAILABILITY

Available to properties owned or occupied by the City of Philadelphia or the Board of Education, or any of their respective agencies or instrumentalities, for any type of Gas Service, unless purchased for resale to others, and where the Company's distribution mains adjacent to the proposed Gas Service locations are, or can economically be made, suitable to supply the quantities of Gas required; provided, however, that the rate shall not be available to Commercial Tenants of any such property.

RATES

CUSTOMER CHARGE (per Meter (except parallel meters):

\$ 24.00 per month

Surcharge: Distribution System Improvement Charge.

Plus,

GCR (not applicable to MS Customers who transport Gas through a qualified NGS):

\$0.41361 per Ccf

(II)

Plus,

DISTRIBUTION CHARGE (consisting of items (A) and (B), below):

(A) Delivery Charge:

\$0.44159 per Ccf

(B) Surcharges:

Universal Service and Energy Conservation Surcharge; and The Restructuring and Consumer Education Surcharge; the Efficiency Cost Recovery Surcharge; Other Post Employment Benefit Surcharge; and Distribution System Improvement Charge.

(I) – Increase, (C) – Change

Note: The Commodity Charge includes the Sales Service Charge, the Merchant Function Charge and the Gas Procurement Charge.

PHILADELPHIA HOUSING AUTHORITY SERVICE - RATE PHA

Rate: Applicable to all Retail Sales Service or Transportation Services rendered pursuant to this Rate Schedule on or after September 1, 2021.

(C)

AVAILABILITY

Available for all Gas usage in multiple dwelling Residential buildings containing 10 or more dwelling units, owned and operated by the Philadelphia Housing Authority, where cooking shall be performed exclusively with Gas and where Gas Service shall be supplied through one or more single point metering arrangements at locations where the Company's distribution mains adjacent to the proposed Gas Service locations are, or can economically be made, suitable to supply the quantities of Gas required.

This rate is also available for all Gas usage in single and multiple dwelling Residential buildings, containing less than 10 dwelling units, provided, and only so long as, Gas is used exclusively for cooking, water heating and space heating for all such Residential buildings owned and operated by the Philadelphia Housing Authority, except (a) buildings operated by the Philadelphia Housing Authority, prior to the original effective date of this rate (January 1, 1969), and (b) buildings for which, in the judgment of the Company, such Gas Service cannot be provided economically.

RATES

CUSTOMER CHARGE (per Meter (except parallel meters);

\$24.00 per month

Surcharge: Distribution System Improvement Charge.

Plus,

GCR (not applicable to PHA customers who transport gas through a qualified NGS):

\$0.41361 per Ccf

(I)

Plus

DISTRIBUTION CHARGE (consisting of item (A) and (B), below):

(A) Delivery Charge:

\$0.51393 per Ccf

(B) Surcharges:

Universal Service and Energy Conservation Surcharge; and The Restructuring and Consumer Education Surcharge; the Efficiency Cost Recovery Surcharge; Other Post Employment Benefit Surcharge; and Distribution System Improvement Charge.

(I) – Increase, (C) – Change

Note: The Commodity Charge includes the Sales Service Charge, the Merchant Function Charge and the Gas Procurement Charge.

**DEVELOPMENTAL NATURAL GAS VEHICLE SERVICE - RATE NGVS
FIRM SERVICE**

Rate: Applicable to all Retail Sales Service rendered pursuant to this Rate Schedule on or after
September 1, 2021.

(C)

AVAILABILITY

This service is available to provide uncompressed Natural Gas to any Customer for the exclusive purpose of compressing such Gas for use as fuel for motor vehicles. The compression of the Natural Gas to the pressure required for use as a motor vehicle fuel will be conducted by the Customer, at the Customer's designated premises. Service shall only be available where the Company's distribution system is, or can economically be made available to supply the service. Each Customer will be required to execute a service agreement which will specify terms and conditions of service.

CHARACTER OF SERVICE

Service under this rate schedule is firm and shall only be interrupted in the case of operating emergencies experienced by the Company.

MONTHLY RATE

CUSTOMER CHARGE:

\$35.00 per month

Surcharge: Distribution System Improvement Charge.

Plus,

GCR (not applicable to NGVS customers who transport gas through a qualified NGS):

\$0.41361 per Ccf

(I)

Plus

DISTRIBUTION CHARGE (consisting of item (A) and (B), below):

(A) Delivery Charge (Updated in Supplement No. 65 – Issued: July 10, 2013; Effective: October 1, 2013):

\$0.12833 per Ccf

(B) Surcharges:

Universal Service and Energy Conversation Surcharge; The Restructuring and Consumer Education Surcharge; Other Post Employment Benefit Surcharge; and Distribution System Improvement Charge.

(I) – Increase, (C) - Change

Note: The Commodity Charge includes the Sales Service Charge, the Merchant Function Charge and the Gas Procurement Charge.

PHILADELPHIA GAS WORKS

GAS SUPPLIER TARIFF



Issued by: Craig White
President and CEO
PHILADELPHIA GAS WORKS
800 West Montgomery Avenue
Philadelphia, PA 19122

List of Changes Made by this Tariff

TABLE OF CONTENTS (Page No. 6)

Updated to reflect revised page numbers.

DEFINITIONS (page 11)

The definition of “UNACCOUNTED FOR GAS” has been modified to reflect a Lost and Unaccounted for Gas and Retainage Rate percentage of 2.6%.

9.14. LOAD BALANCING CHARGE, 9.14.A. (Page No. 39)

The load balancing charge effective September 1, 2021, is \$45.1242 per design day Mcf.

TABLE OF CONTENTS

	<u>Page Number</u>
List of Changes Made By This Tariff _____	Ninety Second Revised 2
Checksheet _____	First Revised 4
Description of Territory Served _____	5
Table of Contents _____	Ninety Second Revised 6
Table of Contents (continued) _____	7
Definitions _____	Second Revised 10
<u>RULES and REGULATIONS:</u>	
1. The Supplier Tariff _____	14
2. Availability _____	16
3. Character of Service _____	18
4. Supplier Qualification _____	20
5. Customer List _____	First Revised 23
6. Supplier Selection Procedures _____	First Revised 26
7. Supplier Obligations _____	First Revised 29
8. Operational Requirements _____	33
9. Special Provisions _____	37
10. Nomination Procedure _____	42
11. Financial Security _____	44
12. Supplier Billing and Payment _____	First Revised 46
13. Supplier Exit Procedures _____	First Revised 52
14. Breach of Obligations _____	57
15. Standards of Conduct _____	60

METER READ DATE - The date on which the Company schedules a meter to be read for purposes of producing a Customer bill in accordance with the regularly scheduled billing cycles of the Company.

NATURAL GAS SUPPLY SERVICE – Services provided by a Natural Gas Supplier as defined in section 2202 of the Gas Choice Act, 66 Pa. C.S. sec 2202.

OPERATIONAL FLOW ORDER ("OFO") - A directive issued by Company to Supplier, which is reasonably necessary to alleviate conditions that threaten the operational integrity of the Company's system on a critical day.

PURCHASE OF RECEIVABLES ("POR") – The program (and all relevant stipulations) addressed within the PUC approved Joint Petition for Settlement of Philadelphia Gas Works' Supplier of Last Resort Collaborative at Docket No. R-2008-2073938 and Philadelphia Gas Works' Purchase of Receivables Collaborative at Docket No. R-2009-2139884 as amended, modified other otherwise revised under Applicable Law.

UNACCOUNTED FOR GAS (for the purpose of calculating retainage) – Unaccounted for gas is the difference in the amount of gas delivered to the Company's distribution system and the amount billed to customers. The current Lost and Unaccounted for Gas and Retainage Rate percentage is 2.6%. The percentage changes annually on December 1st and is based upon actual data for the preceding 12 months ending August 31st. (I)

UPSTREAM CAPACITY ASSIGNMENT, RELEASE OR TRANSFER – The process to provide access to interstate pipeline capacity and storage contracts owned by Company to Supplier pursuant to Company's tariff and any applicable regulatory rules.

(I) - Increase

9.14. LOAD BALANCING CHARGE.

9.14.A. Suppliers for all gas delivered under Firm Transportation Rates, of this Suppliers Tariff shall be charged at \$45.1242 per design day Mcf that is fulfilled by PGW storage and peaking assets, for recovery of those costs for Balancing Service, calculated in the manner set forth in the Commission's Order at M-00021612 (entered March 31, 2003) and as set forth below. Such rate for Balancing Service shall be increased or decreased, from time to time, in accordance with applicable law and procedures. (I)

9.14.B. Computation of Balancing Service Costs per Dth.

9.14.B.1. Formula. Balancing Service Costs, per design day Mcf, that is fulfilled by PGW storage and peaking assets, shall be computed to the nearest one-hundredth cent (\$0.0001) in accordance with the formula set forth below:

$$\text{BSC} = (C / S_1) - (E / S_2)$$

Projected Balancing Service Costs, so computed, shall be charged to Suppliers of Firm Transportation Rates per Customer per design day Mcf that is fulfilled by PGW storage and peaking assets, for an enrollment month. The amount of those costs, per Mcf, will vary, if appropriate, based upon annual filings by the Company pursuant to Section 1307(f) of the Public Utility Code and such supplemental filings as may be required or be appropriate under Section 1307(f) or the PUC's regulations adopted pursuant thereto.

9.14.B.2. Definitions. In computing the Balancing Service Costs, per Dth, pursuant to the formula above, the following definitions shall apply:

"BSC" - Balancing Service Costs determined to the nearest one-hundredth cent (\$0.0001) to be charged to each design day Mcf that is fulfilled by PGW storage and peaking assets, under Rate Schedule Firm.

"C" - Cost in dollars: for all types of storage and related services, the fixed and variable costs for the projected period when rates will be in effect.

"E" - the net overcollection or undercollection of Balancing Service Costs. The net overcollection or undercollection shall be determined for the most recent period permitted under law, which shall begin with the month following the last month which was included in the previous overcollection or undercollection calculation reflected in rates. The annual filing date shall be the date specified by the PUC for the Company's Section 1307(f) Tariff filing.

Each overcollection or undercollection statement shall also provide for refund or recovery of amounts necessary to adjust for overrecovery or underrecovery of "E" factor amounts under the previous Balancing Service Costs Rate. Interest shall be computed monthly at the rate as provided for in Section 1307(f) of the Public Utility Code from the month that the overcollection or undercollection occurs to the effective month such overcollection is refunded or undercollection is recouped. Such over billings (or under billings) will be made with interest at the statutory rate.

"S₁" – projected Mcf of storage gas/LNG to be delivered to Customers to meet design day needs during the projected period when rates will be in effect.

"S₂" – forecasted Mcf of load balancing volumes during the projected period when rates will be in effect.

(I) – Increase

1307(f) GCR FILING

PA Code 53.64(a)

TABLE OF CONTENTS

Levelized Gas Cost Rate.....	Schedule 1
Price To Compare in MCF.....	Schedule 1(a)
Sales & Volumes.....	Schedule 2
Projected Applicable Fuel Expense.....	Schedule 3
Fiscal Year 2020-2021 Actual/Estimated Data.....	Schedule 4(a)
Fiscal Year 2020-2021 C-Factor Reconciliation	Schedule 4(b)
Fiscal Year 2020-2021 E-Factor Reconciliation.....	Schedule 4(c)
Fiscal Year 2020-2021 IRC-Factor Revenue Billed.....	Schedule 4(d)
Fiscal Year 2020-2021 Reconciliation of Demand Charges.....	Schedule 4(e)
Fiscal Year 2020-2021 Interest Calculation.....	Schedule 5(a)
Fiscal Year 2020-2021 Natural Gas Refunds.....	Schedule 5(b)
Fiscal Year 2020-2021 Demand and Commodity Interest Calculation.....	Schedule 5(c)
Load Balancing Revenue - September 2021 to August 2022.....	Schedule 6
Calculation of Recovered Charges.....	Schedule 7
Changes in Rates.....	Schedule 8
Universal Service & Energy Conservation Surcharge (USC)	Schedule 9(a)
Statement of Reconciliation – USC Surcharge – Fiscal Year 2021.....	Schedule 9(b)
Interruptible Revenue Credit – September 1, 2021.....	Schedule 10(a)
Fiscal Year 2020-2021 - Interruptible Revenue Margin.....	Schedule 10(b)
Finalized Reconciliation - Interruptible Revenue Credit - FY 2020.....	Schedule 10(c)
Other Post Employee Benefits Surcharge – FY2022	Schedule 11(a)
Other Post Employee Benefits Surcharge Reconciliation – FY2020.....	Schedule 11(b)
Efficiency Cost Recovery Surcharge – FY 2022	Schedule 12(a)
Efficiency Cost Recovery Surcharge Reconciliation – FY 2022	Schedule 12(b)
Load Balancing Charge 2021 Reconciliation.....	Schedule 13(a)
Load Balancing Expense and Interest Calculation FY 2020.....	Schedule 13(b)
Load Balancing Charge – September 1, 2021.....	Schedule 14
Natural Gas Prices	Schedule 15

Reconciliation of UFG and Retainage Percentages.....	Schedule 16
Restructuring and Consumer Education Surcharge FY 2021.....	Schedule 17(a)
Restructuring and Consumer Education Surcharge FY 2020.....	Schedule 17(b)
Restructuring and Consumer Education Expense FY 2020.....	Schedule 17(c)

Philadelphia Gas Works

Levelized Gas Cost Rate

September 1, 2021

Formula:
GCR = SSC + GAC - IRC

where:

	<u>Demand</u>	<u>Commodity</u>	<u>Total</u>	
S = Firm Sales (Mcf)			41,773,841	Schedule 2
Net Natural Gas Expense	\$ 56,099,385	\$ 121,463,141	\$ 177,562,526	
Purchased Electric & Misc Expenses	\$ 0	\$ 673,941	\$ 673,941	
Applicable GCR Expense	\$ 56,099,385	\$ 122,137,082	\$ 178,236,467	Schedule 3
Renewable Natural Gas (RNG)	\$ 0	\$ 500,000	\$ 500,000	
C = Total Applicable GCR Expense	\$ 56,099,385	\$ 122,637,082	\$ 178,736,467	
SSC = C / S	\$ 1.3429	\$ 2.9358	\$ 4.2787	

Adjustment For:

E-Factor Volumes (Mcf)			41,773,841	Schedule 2
Interest	\$ 72,600	\$ (15,433)	\$ 57,167	Schedule 5(a),5(c)
E-Factor Reconciliation	\$ 4,465,581	\$ (8,334,836)	\$ (3,869,255)	Schedule 4(b),4(c),4(e)
	\$ 4,538,181	\$ (8,350,268)	\$ (3,812,088)	
E = E-Factor	\$ 0.1086	\$ (0.1999)	\$ (0.0913)	

Interruptible Revenue Credit \$ (17,169) Schedule 10(a)

IRC = Interruptible Revenue Credit / S \$ (0.0004)

Net Applicable GCR Expenses = C + E - Interruptible Revenue Credit \$ 174,941,547

GCR = SSC + GAC - IRC \$ 4.1879

SSC in effect 9/01/21	\$ 1.3260	\$ 2.8987	\$ 4.2247	
GAC in effect 9/01/21	\$ 0.1060	\$ (0.1950)	\$ (0.0890)	
IRC in effect 9/01/21			\$ 0.0004	
GCR in effect 9/01/21			\$ 4.1361	Schedule 7

Recovery Test on:

Firm Sales (Mcf)		41,773,841	
= GCR Projected Recovery	\$	172,490,659	
= Load Balancing Revenue	\$	2,383,616	
= LNG Sales Demand Revenue	\$	67,145	
= Total Projected Recovery	\$	174,941,420	Schedule 7
Compared To			
Net Applicable GCR Expenses	\$	174,941,547	
= Net Over/(Under) Recovery	\$	(127)	

Degree Days 3,931

Philadelphia Gas Works

Price To Compare (\$ / MCF)

September 1, 2021

	GCR	GCA	SSC	MFC	MFC Charge	GPC Charge	GAC	Price to Compare
	1	2	3 = (1 - 2)	4	5 = (1* 4)	6	7	8 = (3+ 5 + 6 + 7)
Residential GS	\$4.1361	(\$0.0886)	\$4.2247	3.62%	\$0.1497	\$0.0400	(\$0.0890)	\$4.3254
Commercial GS	\$4.1361	(\$0.0886)	\$4.2247	0.91%	\$0.0376	\$0.0400	(\$0.0890)	\$4.2133
Industrial GS	\$4.1361	(\$0.0886)	\$4.2247	0.42%	\$0.0174	\$0.0400	(\$0.0890)	\$4.1931
Phila. Housing Authority (PHA)	\$4.1361	(\$0.0886)	\$4.2247	0%	\$0.0000	\$0.0400	(\$0.0890)	\$4.1757
Municipal (MS)	\$4.1361	(\$0.0886)	\$4.2247	0%	\$0.0000	\$0.0400	(\$0.0890)	\$4.1757
NGV Firm	\$4.1361	(\$0.0886)	\$4.2247	0%	\$0.0000	\$0.0400	(\$0.0890)	\$4.1757
Phila. Housing Authority (GS)	\$4.1361	(\$0.0886)	\$4.2247	3.62%	\$0.1497	\$0.0400	(\$0.0890)	\$4.3254

SALES & VOLUMES

SEPTEMBER 2021 THROUGH AUGUST 2022

MONTH	TOTAL VOLUMES	FIRM TRANSPORT VOLUMES	BILLED SALES	INTERRUPTIBLE SALES	LNG SALES	AIR CONDITIONING SALES	GCR FIRM SALES	SENIOR CITIZEN DISCOUNT SALES	APPLICABLE VOLUMES
	<u>1</u>	<u>2</u>	<u>3 = (1 - 2)</u>	<u>4</u>	<u>4A</u>	<u>4B</u>	<u>5 = (3 - 4 - 4A - 4B)</u>	<u>6</u>	<u>7 = (5 - 6 + 2)</u>
SEPTEMBER 2021	1,064,513	189,560	874,953	1,263	4,110	157	869,423	2,126	1,056,858
OCTOBER	1,511,574	272,460	1,239,114	1,305	4,247	83	1,233,480	3,218	1,502,722
NOVEMBER	3,235,093	498,754	2,736,339	1,263	4,110	-	2,730,966	8,499	3,221,222
DECEMBER	5,928,875	851,893	5,076,982	1,305	4,247	-	5,071,431	16,559	5,906,765
JANUARY 2022	10,692,633	1,393,130	9,299,503	1,305	4,247	-	9,293,951	31,487	10,655,594
FEBRUARY	8,942,230	1,167,045	7,775,185	1,179	3,836	-	7,770,170	25,972	8,911,243
MARCH	6,883,698	924,847	5,958,852	1,305	4,247	-	5,953,300	19,315	6,858,832
APRIL	4,685,323	616,182	4,069,141	1,263	4,110	-	4,063,769	12,934	4,667,016
MAY	2,177,712	322,288	1,855,424	1,305	4,247	-	1,849,872	5,259	2,166,901
JUNE	1,328,532	235,004	1,093,528	1,263	4,110	50	1,088,105	2,483	1,320,626
JULY	1,182,479	214,532	967,947	1,305	4,247	282	962,113	2,115	1,174,531
AUGUST	<u>1,091,804</u>	<u>198,892</u>	<u>892,912</u>	<u>1,305</u>	<u>4,247</u>	<u>99</u>	<u>887,262</u>	<u>1,933</u>	<u>1,084,221</u>
TOTAL	48,724,467	6,884,587	41,839,879	15,368	50,000	670	41,773,841	131,898	48,526,530

**PROJECTED APPLICABLE FUEL EXPENSE
SUMMARY
SEPTEMBER 2021 - AUGUST 2022**

	SEPTEMBER 2021	OCTOBER 2021	NOVEMBER 2021	DECEMBER 2021	JANUARY 2022	FEBRUARY 2022	MARCH 2022	APRIL 2022	MAY 2022	JUNE 2022	JULY 2022	AUGUST 2022	TOTAL
NATURAL GAS BILLED													
DEMAND CHARGE	\$2,930,811	\$2,837,843	\$3,801,039	\$4,466,822	\$4,464,990	\$4,585,313	\$5,597,456	\$5,489,321	\$5,481,687	\$5,486,656	\$5,479,323	\$5,478,125	\$56,099,385
DEMAND CHARGE CREDIT FOR LNG SALES	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
COMMODITY CHARGE	\$9,613,006	\$11,255,527	\$12,344,361	\$13,541,871	\$12,057,550	\$11,870,650	\$9,717,773	\$10,994,982	\$10,272,570	\$8,130,831	\$7,919,124	\$7,838,547	\$125,556,791
TOTAL NATURAL GAS BILLED	\$12,543,817	\$14,093,370	\$16,145,400	\$18,008,693	\$16,522,540	\$16,455,962	\$15,315,229	\$16,484,303	\$15,754,257	\$13,617,487	\$13,398,447	\$13,316,672	\$181,656,176
INTERRUPTIBLE AND FIRM A/C CREDIT	\$4,137	\$4,122	\$3,797	\$3,896	\$3,824	\$3,473	\$3,722	\$3,431	\$3,428	\$3,468	\$4,239	\$3,759	\$45,296
SENDOUT VOLUME IN MCF	1,458	1,425	1,297	1,340	1,340	1,210	1,340	1,297	1,340	1,348	1,630	1,441	16,467
DKT CONVERSION FACTOR	1.031	1.031	1.031	1.031	1.031	1.031	1.031	1.031	1.031	1.031	1.031	1.031	
PRICE \$/DKT	\$2.7523	\$2.8057	\$2.8395	\$2.8198	\$2.7680	\$2.7826	\$2.6936	\$2.5661	\$2.4812	\$2.4952	\$2.5227	\$2.5300	
GAS USED FOR UTILITY	\$25,210	\$32,963	\$70,112	\$111,886	\$137,015	\$101,091	\$78,124	\$50,453	\$35,071	\$20,245	\$15,632	\$18,864	\$696,667
NATURAL GAS TO STORAGE	(\$6,980,631)	(\$4,935,970)	\$0	\$0	\$0	\$0	\$0	(\$3,043,942)	(\$6,405,689)	(\$6,007,885)	(\$5,721,705)	(\$5,640,887)	(\$38,736,710)
FROM STORAGE PGW	\$0	\$0	\$306,428	\$7,432,672	\$12,428,272	\$8,997,159	\$6,834,135	\$58,922	\$0	\$0	\$0	\$0	\$36,057,588
FT FROM STORAGE	\$0	\$0	\$34,891	\$593,809	\$853,116	\$616,928	\$176,469	\$2,175	\$0	\$0	\$0	\$0	\$2,277,387
NET NATURAL GAS STORAGE	(\$6,980,631)	(\$4,935,970)	\$306,428	\$7,432,672	\$12,428,272	\$8,997,159	\$6,834,135	(\$2,985,020)	(\$6,405,689)	(\$6,007,885)	(\$5,721,705)	(\$5,640,887)	(\$2,679,122)
LNG TO STORAGE	(\$4,816)	(\$415,107)	(\$1,085,086)	(\$953,430)	(\$906,151)	(\$916,802)	(\$862,663)	(\$509,716)	(\$253,831)	(\$8,718)	\$0	\$0	(\$5,916,320)
FROM LNG PGW	\$235,943	\$244,104	\$237,421	\$1,184,743	\$1,139,616	\$840,270	\$253,846	\$245,570	\$253,309	\$244,862	\$253,013	\$253,013	\$5,385,709
FT FROM LNG	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
NET LNG STORAGE	\$231,127	(\$171,003)	(\$847,665)	\$231,313	\$233,465	(\$76,532)	(\$608,818)	(\$264,146)	(\$522)	\$236,143	\$253,013	\$253,013	(\$530,611)
LNG SALES FROM LNG TANK	\$11,356	\$11,735	\$11,394	\$11,895	\$12,020	\$10,971	\$12,238	\$11,863	\$12,237	\$11,820	\$12,213	\$12,213	\$141,955
SENDOUT VOLUMES (MCF)	4,110	4,247	4,110	4,247	4,247	3,836	4,247	4,110	4,247	4,110	4,247	4,247	50,000
@ AVG LNG COMMODITY RATE	\$2.7632	\$2.7633	\$2.7725	\$2.8011	\$2.8305	\$2.8603	\$2.8819	\$2.8866	\$2.8816	\$2.8763	\$2.8760	\$2.8760	
NET NATURAL GAS EXPENSE	\$5,753,610	\$8,937,577	\$15,518,860	\$25,545,001	\$29,031,418	\$25,261,054	\$21,446,462	\$13,169,390	\$9,297,310	\$7,810,211	\$7,897,671	\$7,893,961	\$177,562,526
APPLICABLE GCR EXPENSE													
NET NATURAL GAS EXPENSE	\$5,753,610	\$8,937,577	\$15,518,860	\$25,545,001	\$29,031,418	\$25,261,054	\$21,446,462	\$13,169,390	\$9,297,310	\$7,810,211	\$7,897,671	\$7,893,961	\$177,562,526
PURCHASED ELECTRIC & MISC	\$30,071	\$37,673	\$51,599	\$48,280	\$189,254	\$56,075	\$52,964	\$49,244	\$35,788	\$52,624	\$28,922	\$41,448	\$673,941
TOTAL APPLICABLE EXPENSES	\$5,783,680	\$8,975,250	\$15,570,459	\$25,593,281	\$29,220,672	\$25,317,130	\$21,499,426	\$13,218,633	\$9,333,098	\$7,862,835	\$7,926,593	\$7,935,409	\$178,236,467
TOTAL GCR FIRM SALES	869,423	1,233,480	2,730,966	5,071,431	9,293,951	7,770,170	5,953,300	4,063,769	1,849,872	1,088,105	962,113	887,262	41,773,841

**ACTUAL / ESTIMATED DATA - FISCAL YEAR 2021
PHILADELPHIA GAS WORKS**

Rate	7/1/2020	Split Month 9/1/2020	10/1/2020	Split Month 12/1/2020	1/1/2021	Split Month 3/1/2021	4/1/2021
	SSC in Effect	\$ 3.5893	\$ 3.8875	\$ 4.1857	\$ 4.3344	\$ 4.4830	\$ 4.1303
GAC in Effect	\$ 0.0208	\$ (0.3780)	\$ (0.7767)	\$ (0.7063)	\$ (0.6359)	\$ (0.4728)	\$ (0.3097)
IRC in Effect	\$ 0.0023	\$ 0.0020	\$ 0.0017	\$ 0.0015	\$ 0.0013	\$ 0.0011	\$ 0.0009
Total Effective	\$ 3.6124	\$ 3.5116	\$ 3.4107	\$ 3.6296	\$ 3.8484	\$ 3.6586	\$ 3.4687
Percentage of Total							
C-Factor	99.4%	110.7%	122.7%	119.4%	116.5%	112.9%	108.9%
E-Factor	0.6%	-10.8%	-22.8%	-19.5%	-16.5%	-12.9%	-8.9%
IRC-Factor	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100%	100%	100%	100%	100%	100%	100%

C-Factor							
Demand Charge in Effect	\$ 1.3629	\$ 1.2704	\$ 1.1779	\$ 1.4367	\$ 1.6954	\$ 1.4383	\$ 1.1812
Commodity in Effect	\$ 2.2264	\$ 2.6171	\$ 3.0078	\$ 2.8977	\$ 2.7876	\$ 2.6920	\$ 2.5963
	\$ 3.5893	\$ 3.8875	\$ 4.1857	\$ 4.3344	\$ 4.4830	\$ 4.1303	\$ 3.7775
Percentage of Total							
Demand Charge in Effect	38.0%	32.7%	28.1%	33.1%	37.8%	34.8%	31.3%
Commodity in Effect	62.0%	67.3%	71.9%	66.9%	62.2%	65.2%	68.7%
	100%	100%	100%	100%	100%	100%	100%

	C-Factor Over/(Under)	E-Factor Over/(Under)	Interest Over/(Under)	FY 2020 Final E-Factor
Fiscal Year 2020 E-Factor	\$ 29,544,521	\$ (822,994)	\$ 1,397,105	\$ 30,118,632

Actual Fiscal Year 2020-2021	Sep-2020	Oct-2020	Nov-2020	Dec-2020	Jan-2021	Feb-2021	Mar-2021	Apr-2021	May-2021	Jun-2021	Jul-2021	Aug-2021	FY2021
	Actual	Actual	Actual	Actual	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Total
GCR Firm Sales	944,050	1,163,957	2,683,868	5,478,835	7,001,198	7,174,331	5,849,809	3,997,408	1,825,404	1,078,689	957,541	886,476	39,041,567
GCR Revenue Billed	\$ 3,298,246	\$ 3,973,305	\$ 9,232,942	\$ 20,210,590	\$ 26,943,410	\$ 27,609,697	\$ 21,401,818	\$ 13,865,809	\$ 6,331,779	\$ 3,741,649	\$ 3,321,422	\$ 3,074,921	\$ 143,005,587
Migration Rider Revenue Billed	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Load Balancing Billed	\$ 184,574	\$ 202,086	\$ 216,074	\$ 208,050	\$ 188,744	\$ 189,123	\$ 191,155	\$ 191,534	\$ 191,999	\$ 192,378	\$ 192,757	\$ 193,142	\$ 2,341,616
LNG Sales Demand Charge Credit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Revenue Billed	\$ 3,482,820	\$ 4,175,391	\$ 9,449,016	\$ 20,418,640	\$ 27,132,154	\$ 27,798,819	\$ 21,592,973	\$ 14,057,343	\$ 6,523,779	\$ 3,934,028	\$ 3,514,179	\$ 3,268,062	\$ 145,347,203
Natural Gas Refunds	\$ -	\$ 2,460	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,460
Demand Charges	\$ 5,525,459	\$ 5,843,888	\$ 5,232,290	\$ 5,185,053	\$ 4,464,990	\$ 4,585,313	\$ 5,597,456	\$ 5,489,321	\$ 5,481,687	\$ 5,486,656	\$ 5,479,323	\$ 5,478,125	\$ 63,849,561
Supply Charges	\$ 1,720,479	\$ 2,271,896	\$ 7,590,608	\$ 15,866,024	\$ 24,755,682	\$ 20,731,817	\$ 15,901,970	\$ 7,729,313	\$ 3,851,411	\$ 2,376,179	\$ 2,447,270	\$ 2,457,284	\$ 107,699,932
Net Cost of Fuel	\$ 7,245,938	\$ 8,115,784	\$ 12,822,898	\$ 21,051,077	\$ 29,220,672	\$ 25,317,130	\$ 21,499,426	\$ 13,218,633	\$ 9,333,098	\$ 7,862,835	\$ 7,926,593	\$ 7,935,409	\$ 171,549,493

**FISCAL YEAR 2021
PHILADELPHIA GAS WORKS
C-FACTOR RECONCILIATION**

MONTH	NET COST	TOTAL	C FACTOR	C FACTOR	LOAD BALANCING	LNG SALES GCR	TOTAL	NATURAL GAS	OVER/	CUMULATIVE
	OF FUEL	GCR		REVENUE			REVENUE		C FACTOR	
	1	2	3	4 = (2 * 3)	5	6	7 = (4 + 5 + 6)	8	9 = (7 + 8 - 1)	10
	(\$)	(\$)		(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
SEPTEMBER 2020	7,245,938	3,298,246	110.7%	3,651,360	184,574	0	3,835,934	0	(3,410,004)	(3,410,004)
OCTOBER	8,115,784	3,973,305	122.7%	4,876,143	202,086	0	5,078,229	2,460	(3,035,095)	(6,445,099)
NOVEMBER	12,822,898	9,232,942	122.7%	11,330,907	216,074	0	11,546,981	0	(1,275,917)	(7,721,016)
DECEMBER	21,051,077	20,210,590	119.4%	24,135,160	208,050	0	24,343,210	0	3,292,133	(4,428,882)
JANUARY 2021	29,220,672	26,943,410	116.5%	31,386,370	188,744	0	31,575,114	0	2,354,442	(2,074,440)
FEBRUARY	25,317,130	27,609,697	116.5%	32,162,527	189,123	0	32,351,650	0	7,034,520	4,960,080
MARCH	21,499,426	21,401,818	112.9%	24,161,173	191,155	0	24,352,328	0	2,852,902	7,812,982
APRIL	13,218,633	13,865,809	108.9%	15,100,208	191,534	0	15,291,742	0	2,073,109	9,886,091
MAY	9,333,098	6,331,779	108.9%	6,895,464	191,999	0	7,087,463	0	(2,245,635)	7,640,456
JUNE	7,862,835	3,741,649	108.9%	4,074,749	192,378	0	4,267,127	0	(3,595,708)	4,044,748
JULY	7,926,593	3,321,422	108.9%	3,617,111	192,757	0	3,809,867	0	(4,116,726)	(71,978)
AUGUST	<u>7,935,409</u>	<u>3,074,921</u>	108.9%	<u>3,348,665</u>	<u>193,142</u>	<u>0</u>	<u>3,541,806</u>	<u>0</u>	<u>(4,393,602)</u>	(4,465,581)
Total	171,549,493	143,005,587		164,739,836	2,341,616	0	167,081,452	2,460	(4,465,581)	

**FISCAL YEAR 2021
PHILADELPHIA GAS WORKS
E-FACTOR RECONCILIATION**

		TOTAL E-FACTOR VOLUMES	TOTAL GCR REVENUE BILLED	E-FACTOR % of GCR	E-FACTOR GCR REVENUE BILLED 5=(3 * 4)	OVER/(UNDER) PROJECTED RECOVERY 6
	GCR SALES 1	(MCF) 2	(\$) 3	4	(\$)	(\$)
PRIOR YEAR E-FACTOR						\$ 30,118,632
MONTH						
SEPTEMBER 2020	Actual	944,050	944,050	\$ 3,298,246	-10.8% \$ (354,992)	\$ 29,763,640
OCTOBER	Actual	1,163,957	1,163,957	\$ 3,973,305	-22.8% \$ (904,819)	\$ 28,858,821
NOVEMBER	Actual	2,683,868	2,683,868	\$ 9,232,942	-22.8% \$ (2,102,567)	\$ 26,756,254
DECEMBER	Actual	5,478,835	5,478,835	\$ 20,210,590	-19.5% \$ (3,932,923)	\$ 22,823,332
JANUARY 2021	Estimated	7,001,198	7,001,198	\$ 26,943,410	-16.5% \$ (4,452,062)	\$ 18,371,270
FEBRUARY	Estimated	7,174,331	7,174,331	\$ 27,609,697	-16.5% \$ (4,562,157)	\$ 13,809,113
MARCH	Estimated	5,849,809	5,849,809	\$ 21,401,818	-12.9% \$ (2,765,790)	\$ 11,043,323
APRIL	Estimated	3,997,408	3,997,408	\$ 13,865,809	-8.9% \$ (1,237,997)	\$ 9,805,326
MAY	Estimated	1,825,404	1,825,404	\$ 6,331,779	-8.9% \$ (565,328)	\$ 9,239,998
JUNE	Estimated	1,078,689	1,078,689	\$ 3,741,649	-8.9% \$ (334,070)	\$ 8,905,928
JULY	Estimated	957,541	957,541	\$ 3,321,422	-8.9% \$ (296,550)	\$ 8,609,378
AUGUST	Estimated	886,476	886,476	\$ 3,074,921	-8.9% \$ (274,542)	\$ 8,334,836
Total		39,041,567	39,041,567	\$ 143,005,587	\$ (21,783,796)	

**FISCAL YEAR 2021
PHILADELPHIA GAS WORKS
IRC FACTOR REVENUE BILLED**

MONTH	TOTAL GCR REVENUE BILLED 1	IRC- FACTOR % of GCR 2	IRC-FACTOR REVENUE BILLED 3 = (1 * 2)
	\$		\$
SEPTEMBER 2020	3,298,246	0.06%	1,879
OCTOBER	3,973,305	0.05%	1,980
NOVEMBER	9,232,942	0.05%	4,602
DECEMBER	20,210,590	0.04%	8,353
JANUARY 2021	26,943,410	0.03%	9,102
FEBRUARY	27,609,697	0.03%	9,327
MARCH	21,401,818	0.03%	6,435
APRIL	13,865,809	0.03%	3,598
MAY	6,331,779	0.03%	1,643
JUNE	3,741,649	0.03%	971
JULY	3,321,422	0.03%	862
AUGUST	<u>3,074,921</u>	0.03%	<u>798</u>
TOTALS	143,005,587		49,550

**FISCAL YEAR 2021
PHILADELPHIA GAS WORKS
RECONCILIATION OF DEMAND CHARGES**

MONTH	DEMAND CHARGES LESS LOAD BALANCING CHARGE REVENUE	DEMAND REVENUE BILLED	MONTHLY DEMAND OVER/(UNDER)	CUMULATIVE DEMAND OVER/(UNDER)
	1	2	3 = (2 - 1)	4
	\$	\$	\$	\$
SEPTEMBER 2020	5,340,885	1,199,321	(4,141,563)	(4,141,563)
OCTOBER	5,641,802	1,371,025	(4,270,777)	(8,412,340)
NOVEMBER	5,016,216	3,161,329	(1,854,887)	(10,267,227)
DECEMBER	4,977,003	7,871,168	2,894,165	(7,373,062)
JANUARY 2021	4,276,247	11,869,831	7,593,584	220,522
FEBRUARY	4,396,190	12,163,361	7,767,171	7,987,694
MARCH	5,406,301	8,413,780	3,007,479	10,995,173
APRIL	5,297,787	4,721,738	(576,048)	10,419,124
MAY	5,289,688	2,156,167	(3,133,521)	7,285,603
JUNE	5,294,278	1,274,148	(4,020,130)	3,265,473
JULY	5,286,567	1,131,047	(4,155,519)	(890,046)
AUGUST	<u>5,284,983</u>	<u>1,047,106</u>	<u>(4,237,877)</u>	(5,127,923)
TOTALS	61,507,945	56,380,022	(5,127,923)	

**FISCAL YEAR 2021
PHILADELPHIA GAS WORKS
INTEREST CALCULATION**

MONTH	NET COST	TOTAL	OVER/	INTEREST	TIME	INTEREST	INTEREST	TOTAL
	OF FUEL ⁽¹⁾	C FACTOR	(UNDER)	RATE	FACTOR	EXPENSE	NATURAL GAS	INTEREST
	1	REVENUE	RECOVERY	4	5	6 = (3*4*5)	REFUNDS ⁽²⁾	8 = (6+7)
	2	3 = (2 - 1)					7	
	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
SEPTEMBER 20	7,245,938	3,835,934	(3,410,004)	3.25%	18/12	(166,238)	-	(166,238)
OCTOBER	8,115,784	5,078,229	(3,037,555)	3.25%	17/12	(139,854)	-	(139,854)
NOVEMBER	12,822,898	11,546,981	(1,275,917)	3.25%	16/12	(55,290)	-	(55,290)
DECEMBER	21,051,077	24,343,210	3,292,133	3.25%	15/12	133,743	-	133,743
JANUARY 21	29,220,672	31,575,114	2,354,442	3.25%	14/12	89,273	-	89,273
FEBRUARY	25,317,130	32,351,650	7,034,520	3.25%	13/12	247,674	-	247,674
MARCH	21,499,426	24,352,328	2,852,902	3.25%	12/12	92,719	-	92,719
APRIL	13,218,633	15,291,742	2,073,109	3.25%	11/12	61,761	-	61,761
MAY	9,333,098	7,087,463	(2,245,635)	3.25%	10/12	(60,819)	-	(60,819)
JUNE	7,862,835	4,267,127	(3,595,708)	3.25%	9/12	(87,645)	-	(87,645)
JULY	7,926,593	3,809,867	(4,116,726)	3.25%	8/12	(89,196)	-	(89,196)
AUGUST	7,935,409	3,541,806	(4,393,602)	3.25%	7/12	(83,295)	-	(83,295)
Total	171,549,493	167,081,452	(4,468,041)			(57,167)	-	(57,167)

(1) See Schedule 4(b)

(2) See Schedule 5(c)

Item 53.64(a)
Schedule 5(a)

**FISCAL YEAR 2021
PHILADELPHIA GAS WORKS
INTEREST ON NATURAL GAS REFUNDS**

<u>MONTH</u>	NATURAL GAS REFUNDS ⁽¹⁾	INTEREST RATE	TIME FACTOR	INTEREST ON REFUNDS
	1	2	3	4=(1*2*3)
	(\$)			(\$)
SEPTEMBER 20	0	6.00%	18/12	0
OCTOBER	0	6.00%	17/12	0
NOVEMBER	0	6.00%	16/12	0
DECEMBER	0	6.00%	15/12	0
JANUARY 21	0	6.00%	14/12	0
FEBRUARY	0	6.00%	13/12	0
MARCH	0	6.00%	12/12	0
APRIL	0	6.00%	11/12	0
MAY	0	6.00%	10/12	0
JUNE	0	6.00%	9/12	0
JULY	0	6.00%	8/12	0
AUGUST	0	6.00%	7/12	0
TOTAL	0			0

**FISCAL YEAR 2021
PHILADELPHIA GAS WORKS
DEMAND AND COMMODITY INTEREST CALCULATION**

MONTH	OVER/(UNDER) RECOVERY (1) 1 (\$)	DEMAND CHARGE OVER/(UNDER) RECOVERY (2) 2 (\$)	COMMODITY CHARGE OVER/(UNDER) RECOVERY 3=(1-2) (\$)	INTEREST RATE 4	TIME FACTOR 5	DEMAND INTEREST EXPENSE 6=(2*4*5) (\$)	COMMODITY INTEREST EXPENSE 7=(3*4*5) (\$)	TOTAL INTEREST EXPENSE 8=(6+7) (\$)	INTEREST ON REFUNDS (3) 9 (\$)	TOTAL INTEREST 10=(8+9) (\$)
SEPTEMBER 20	(3,410,004)	(4,141,563)	731,559	3.25%	18/12	(201,901)	35,664	(166,238)	0	(166,238)
OCTOBER	(3,037,555)	(4,270,777)	1,233,222	3.25%	17/12	(196,634)	56,780	(139,854)	0	(139,854)
NOVEMBER	(1,275,917)	(1,854,887)	578,970	3.25%	16/12	(80,378)	25,089	(55,290)	0	(55,290)
DECEMBER	3,292,133	2,894,165	397,968	3.25%	15/12	117,575	16,167	133,743	0	133,743
JANUARY 21	2,354,442	7,593,584	(5,239,142)	3.25%	14/12	287,923	(198,651)	89,273	0	89,273
FEBRUARY	7,034,520	7,767,171	(732,651)	3.25%	13/12	273,469	(25,795)	247,674	0	247,674
MARCH	2,852,902	3,007,479	(154,577)	3.25%	12/12	97,743	(5,024)	92,719	0	92,719
APRIL	2,073,109	(576,048)	2,649,157	3.25%	11/12	(17,161)	78,923	61,761	0	61,761
MAY	(2,245,635)	(3,133,521)	887,886	3.25%	10/12	(84,866)	24,047	(60,819)	0	(60,819)
JUNE	(3,595,708)	(4,020,130)	424,422	3.25%	9/12	(97,991)	10,345	(87,645)	0	(87,645)
JULY	(4,116,726)	(4,155,519)	38,793	3.25%	8/12	(90,036)	841	(89,196)	0	(89,196)
AUGUST	(4,393,602)	(4,237,877)	(155,726)	3.25%	7/12	(80,343)	(2,952)	(83,295)	0	(83,295)
TOTAL FY 2021	(4,468,041)	(5,127,923)	659,883			(72,600)	15,433	(57,167)		(57,167)

**FISCAL YEAR 2022
PHILADELPHIA GAS WORKS
LOAD BALANCING REVENUE**

<u>Month</u>		<u>Load Balancing Revenue Billed (\$)</u>
September 2021	Estimated	196,234
October	Estimated	196,619
November	Estimated	197,108
December	Estimated	197,494
January 2022	Estimated	198,062
February	Estimated	198,450
March	Estimated	198,922
April	Estimated	199,306
May	Estimated	199,778
June	Estimated	200,162
July	Estimated	200,546
<u>August</u>	Estimated	<u>200,936</u>
Total		2,383,616

CALCULATION OF RECOVERED CHARGES
1307F Filing
September 1, 2021

	<u>50% September</u>	<u>11.5 Months</u>	<u>Total</u>
			(MCF) (\$)
S - Firm Sales (Mcf)	434,712	41,339,130	41,773,841
C-Factor	<u>\$ 3.7775</u>	<u>\$ 4.2247</u>	
Projected Recovery	1,642,123	174,645,421	\$ 176,287,545
S - Firm Sales (Mcf)	434,712	41,339,130	41,773,841
IRC-Factor	<u>\$ 0.0009</u>	<u>\$ 0.0004</u>	
Projected Recovery	391	16,536	\$ 16,927
E-Factor Volumes (Mcf)	434,712	41,339,130	41,773,841
E-Factor	<u>\$ (0.3097)</u>	<u>\$ (0.0890)</u>	
Projected Recovery	(134,630)	(3,679,183)	\$ (3,813,813)
GCR (\$ / Mcf)	\$ 3.4687	\$ 4.1361	
<hr/>			
GCR Projected Recovery			\$ 172,490,659
Load Balancing Revenue			\$ 2,383,616
LNG Sales Demand Revenue			<u>\$ 67,145</u>
TOTAL PROJECTED RECOVERY			\$ 174,941,420

Change In Rates
1307F Filing
Rates Effective September 1, 2021

Current Rates

	<u>03/01/21</u> <u>Distribution Charge</u> (1)	<u>03/01/21</u> <u>GCR</u> (2)	<u>03/01/21</u> <u>MFC</u> (3)	<u>03/01/21</u> <u>GPC</u> (4)	<u>03/01/21</u> <u>Commodity</u> <u>Rate</u> (5)=(1)+(2)+(3)+(4)
Residential GS	\$8.8096	\$3.4687	\$0.1256	\$0.0400	\$12.4439
Commercial GS	\$6.9105	\$3.4687	\$0.0316	\$0.0400	\$10.4508
Industrial GS	\$6.7934	\$3.4687	\$0.0146	\$0.0400	\$10.3167
Phila.Housing Authority (PHA)	\$7.0928	\$3.4687	\$0.0000	\$0.0400	\$10.6015
Municipal (MS)	\$6.3426	\$3.4687	\$0.0000	\$0.0400	\$9.8513
Phila.Housing Authority (GS)	\$7.8898	\$3.4687	\$0.1256	\$0.0400	\$11.5241

September 1, 2021 - Distribution Charge

	<u>Delivery</u>	<u>Surcharges</u>				<u>Total</u>	
	<u>Delivery</u> <u>Charge</u> (6)	<u>Other Post</u> <u>Employment</u> <u>Benefit</u> (7)	<u>Efficiency</u> <u>Cost</u> <u>Recovery</u> (8)	<u>Universal</u> <u>Service &</u> <u>Ener. Cons.</u> (9)	<u>Restructuring &</u> <u>Consumer</u> <u>Education</u> (10)	<u>Total</u> <u>Surcharges</u> (11)=(7)+(8)+(9)+(10)	<u>Distribution</u> <u>Charge / Mcf</u> (12)=(11)+(6)
Residential GS	\$7.0318	\$0.3565	\$0.0276	\$1.5864	\$0.0002	\$1.9707	\$9.0025
Commercial GS	\$5.0488	\$0.3565	\$0.0313	\$1.5864	\$0.0002	\$1.9744	\$7.0232
Industrial GS	\$4.9951	\$0.3565	(\$0.0063)	\$1.5864	\$0.0002	\$1.9368	\$6.9319
Phila.Housing Authority (PHA)	\$5.2623	\$0.3565	\$0.0313	\$1.5864	\$0.0002	\$1.9744	\$7.2367
Municipal (MS)	\$4.5596	\$0.3565	\$0.0000	\$1.5864	\$0.0002	\$1.9431	\$6.5027
Phila.Housing Authority (GS)	\$6.1783	\$0.3565	\$0.0276	\$1.5864	\$0.0002	\$1.9707	\$8.1490

Proposed Rates

	<u>09/01/21</u> <u>Distribution Charge</u> (12)	<u>09/01/21</u> <u>GCR</u> (13)	<u>09/01/21</u> <u>MFC</u> (14)	<u>09/01/21</u> <u>GPC</u> (15)	<u>09/01/21</u> <u>Commodity</u> <u>Rate</u> (16)=(12)+(13)+(14)+(15)	<u>Difference</u> (17)=(16)-(5)
Residential GS	\$9.0025	\$4.1361	\$0.1497	\$0.0400	\$13.3283	\$0.8844
Commercial GS	\$7.0232	\$4.1361	\$0.0376	\$0.0400	\$11.2369	\$0.7861
Industrial GS	\$6.9319	\$4.1361	\$0.0174	\$0.0400	\$11.1254	\$0.8087
Phila.Housing Authority (PHA)	\$7.2367	\$4.1361	\$0.0000	\$0.0400	\$11.4128	\$0.8113
Municipal (MS)	\$6.5027	\$4.1361	\$0.0000	\$0.0400	\$10.6788	\$0.8275
Phila.Housing Authority (GS)	\$8.1490	\$4.1361	\$0.1497	\$0.0400	\$12.4748	\$0.9507

PHILADELPHIA GAS WORKS
SEPTEMBER 1, 2021
UNIVERSAL SERVICE & ENERGY CONSERVATION SURCHARGE

	Expenses in the Surcharge	
Enhanced Low Income Retrofit Program (ELIRP)	\$ 8,395,146	
Customer Responsibility Program (CRP)	\$ 68,184,770	
Senior Citizen Discount *	\$ 1,911,584	
<u>August 2021 Over Collection</u>	<u>\$ (1,554,843)</u>	
Total \$ to be Recovered	\$ 76,936,656	
Total Applicable Volumes	Mcf 48,499,156	
Universal Service & Energy Conservation Surcharge	<u>\$ 1.5864</u>	

* This is the Senior Citizen Discount based on the Distribution Charge without the Universal Services Surcharge plus the GCR. This is used to calculate the Universal Services Surcharge. The total senior citizen discount is \$2,132,905.

**STATEMENT OF RECONCILIATION
UNIVERSAL SERVICES & ENERGY CONSERVATION SURCHARGE
SEPTEMBER 2020 THROUGH AUGUST 2021**

<u>Month</u>		<u>USC Applicable Volumes</u>	<u>USC Charge</u>	<u>USC Revenue Billed</u>	<u>USC Expenses</u>	<u>Monthly Over/(Under) Recovery</u>	<u>Cumulative Over/(Under) Recovery</u>
FY 20 Reconciliation							<u>(\$9,448,186)</u>
September 2020	Actual	1,133,164	\$ 1.4085	\$ 1,596,062	\$ (592,982)	\$ 2,189,044	(\$7,259,143)
October	Actual	1,401,507	\$ 1.6397	\$ 2,298,051	\$ 1,362,442	\$ 935,609	(\$6,323,534)
November	Actual	3,139,376	\$ 1.6397	\$ 5,147,635	\$ 4,984,526	\$ 163,109	(\$6,160,425)
December	Actual	6,248,495	\$ 1.7832	\$ 11,142,004	\$ 9,472,609	\$ 1,669,395	(\$4,491,030)
January 2021	Estimated	8,030,099	\$ 1.9266	\$ 15,470,790	\$ 14,264,021	\$ 1,206,769	(\$3,284,261)
February	Estimated	8,235,806	\$ 1.9266	\$ 15,867,103	\$ 15,098,846	\$ 768,257	(\$2,516,004)
March	Estimated	6,728,490	\$ 1.7529	\$ 11,794,370	\$ 11,554,746	\$ 239,624	(\$2,276,380)
April	Estimated	4,580,785	\$ 1.5792	\$ 7,233,976	\$ 7,431,169	\$ (197,192)	(\$2,473,572)
May	Estimated	2,131,805	\$ 1.5792	\$ 3,366,547	\$ 2,664,765	\$ 701,782	(\$1,771,791)
June	Estimated	1,303,792	\$ 1.5817	\$ 2,062,207	\$ 921,406	\$ 1,140,801	(\$630,990)
July	Estimated	1,163,021	\$ 1.5792	\$ 1,836,643	\$ 719,597	\$ 1,117,046	\$486,056
August	Estimated	1,076,843	\$ 1.5792	\$ 1,700,551	\$ 631,763	\$ 1,068,788	\$1,554,843

<u>USC Expenses</u>	<u>Sep-20</u>	<u>Oct-20</u>	<u>Nov-20</u>	<u>Dec-20</u>	<u>Jan-21</u>	<u>Feb-21</u>	<u>Mar-21</u>	<u>Apr-21</u>	<u>May-21</u>	<u>Jun-21</u>	<u>Jul-21</u>	<u>Aug-21</u>	<u>FY21 TOTAL</u>
ELIRP Expense	\$ 1,661	\$ 694,650	\$ 911,900	\$ 5,768	\$ 890,890	\$ 890,890	\$ 890,890	\$ 890,890	\$ 890,890	\$ 890,890	\$ 890,890	\$ 890,890	\$ 8,741,102
ELIRP Labor	\$ 8,143	\$ 8,815	\$ 6,628	\$ 6,649	\$ 13,221	\$ 13,221	\$ 13,221	\$ 13,221	\$ 13,221	\$ 13,221	\$ 13,221	\$ 13,221	\$ 136,001
Concervation Incentive Credit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CRP Discount	\$ (1,656,782)	\$ (430,516)	\$ 3,202,962	\$ 8,297,918	\$ 12,084,222	\$ 12,895,026	\$ 9,436,888	\$ 5,407,426	\$ 750,428	\$ (946,703)	\$ (1,144,632)	\$ (1,234,358)	\$ 46,661,879
CRP Forgiveness	\$ 989,799	\$ 998,895	\$ 674,746	\$ 827,227	\$ 882,149	\$ 894,380	\$ 893,820	\$ 901,957	\$ 905,459	\$ 900,308	\$ 901,537	\$ 905,848	\$ 10,676,125
Senior Citizen Discount	\$ 64,197	\$ 90,598	\$ 188,291	\$ 335,047	\$ 393,538	\$ 405,329	\$ 319,927	\$ 217,674	\$ 104,768	\$ 63,690	\$ 58,581	\$ 56,163	\$ 2,297,802
Bad Debt Expense Offset*	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ (592,982)	\$ 1,362,442	\$ 4,984,526	\$ 9,472,609	\$ 14,264,021	\$ 15,098,846	\$ 11,554,746	\$ 7,431,169	\$ 2,664,765	\$ 921,406	\$ 719,597	\$ 631,763	\$ 68,512,909

<u>CRP Participation</u>				
Rate Case Participation Rate		60,000	60,000	60,000
Actual Participation Rate*		55,748	55,925	56,226
CRP Under/(Over) Participation		4,252	4,075	3,774
<u>Average Shortfall Per CRP Participant</u>				
CRP Discount	\$ (1,656,782)	\$ (430,516)	\$ 3,202,962	\$ 8,297,918
Actual Participation Rate		55,748	55,925	56,226
Average Shortfall per CRP Participant	\$ (30)	\$ (8)	\$ 57	\$ 147
Shortfall*	\$ -	\$ -	\$ -	\$ -
Bad Debt Expense Offset* 7.5%	\$ -	\$ -	\$ -	\$ -

*Bad Debt Expense Offset Applicable When Actual CRP Participation Exceeds 60,000

INTERRUPTIBLE REVENUE CREDIT
September 1, 2021

Fiscal Year 2020 Reconciliation (8/31/20) \$ (89,542) Schedule 10(c)

<u>MONTH</u>	<u>IRC CREDIT</u>	<u>MARGIN</u>	
September-20	Actual \$ 1,873	\$ 930	
October	Actual \$ 1,980	\$ 855	
November	Actual \$ 4,602	\$ 751	
December	Actual \$ 8,353	\$ 1,094	
January-21	Estimated \$ 9,102	\$ 979	
February	Estimated \$ 9,327	\$ 884	
March	Estimated \$ 6,435	\$ 979	
April	Estimated \$ 3,598	\$ 947	
May	Estimated \$ 1,643	\$ 979	
June	Estimated \$ 971	\$ 947	
July	Estimated \$ 862	\$ 979	
August	Estimated \$ 798	\$ 979	
Act/Est IRC Credit September 2020 to August 2021	\$ 49,544		
Act/Est Margin September 2020 to August 2021		\$ 11,304	\$ 11,304
FY 2020 Reconciliation Plus Act/Est Margin September 2020 to August 2021			\$ (78,238)
FY 2020 Reconciliation Plus Act/Est Margin September 2020 to August 2021			\$ (78,238)
Act/Est IRC Credit September 2020 to August 2021			\$ 49,544
Reconciliation as of August 31, 2021			\$ (28,694)
Margin - September 2021 through August 2022			\$ 11,526 Schedule 10(b)
August 31, 2021 Interruptible Revenue Credit			\$ (17,169)

GCR Firm Sales **41,773,841** Schedule 2

September 1, 2021 IRC/Mcf **\$ (0.0004)**

INTERRUPTIBLE REVENUE MARGIN
1307F

<u>MONTH</u>		<u>MARGIN</u>
September-21	Estimated	\$ 947
October	Estimated	\$ 979
November	Estimated	\$ 947
December	Estimated	\$ 979
January-22	Estimated	\$ 979
February	Estimated	\$ 884
March	Estimated	\$ 979
April	Estimated	\$ 947
May	Estimated	\$ 979
June	Estimated	\$ 947
July	Estimated	\$ 979
August	Estimated	\$ 979
Total		\$ <u>11,526</u>

**INTERRUPTIBLE REVENUE CREDIT
FINALIZED RECONCILIATION FY 2020**

Fiscal Year 2019 Reconciliation (8/31/19) \$ (248,944)

<u>MONTH</u>	<u>IRC CREDIT</u>	<u>MARGIN</u>	
September-19	Actual \$ (3,621)	\$ 950	
October	Actual \$ (3,963)	\$ 991	
November	Actual \$ (11,568)	\$ 6,559	
December	Actual \$ 9,580	\$ 1,068	
January-20	Actual \$ 48,100	\$ 1,654	
February	Actual \$ 44,240	\$ 1,292	
March	Actual \$ 23,777	\$ 6,372	
April	Actual \$ 11,223	\$ 853	
May	Actual \$ 8,069	\$ 315	
June	Actual \$ 3,336	\$ 4,416	
July	Actual \$ 1,983	\$ 1,194	
August	Actual \$ 1,859	\$ 722	
Actual IRC Credit September 2019 to August 2020	<u>\$ 133,015</u>		
Actual Margin September 2019 to August 2020		<u>\$ 26,387</u>	\$ 26,387
FY 2019 Reconciliation Plus Actual Margin September 2019 to August 2020			<u>\$ (222,557)</u>
<hr/>			
FY 2019 Reconciliation Plus Actual Margin September 2019 to August 2020			\$ (222,557)
Actual IRC Credit September 2019 to August 2020			<u>\$ 133,015</u>
Reconciliation as of August 31, 2020			\$ (89,542)

**OTHER POST EMPLOYMENT BENEFIT (OPEB) SURCHARGE
FISCAL YEAR 2022**

FY 2020 Over/(Under) Recovery (\$1,071,724)

<u>Month</u>		<u>OPEB Volumes</u>	<u>OPEB Surcharge</u>	<u>Revenue Billed</u>
September 2020	Actual	1,135,929	\$0.3418	\$388,204
October	Actual	1,406,052	\$0.3473	\$488,322
November	Actual	3,150,634	\$0.3473	\$1,094,215
December	Actual	6,270,813	\$0.3473	\$2,177,853
January 2021	Estimated	8,057,383	\$0.3473	\$2,798,329
February	Estimated	8,263,546	\$0.3473	\$2,869,929
March	Estimated	6,750,606	\$0.3473	\$2,344,486
April	Estimated	4,595,618	\$0.3473	\$1,596,058
May	Estimated	2,137,843	\$0.3473	\$742,473
June	Estimated	1,306,645	\$0.3473	\$453,798
July	Estimated	1,165,455	\$0.3473	\$404,762
<u>August</u>	Estimated	<u>1,079,072</u>	\$0.3473	<u>\$374,762</u>
Total		45,319,594		\$15,733,191

FY 2021 Act/Est OPEB & FY 2019 Reconciliation	\$14,661,467
FY 2021 Permitted Recovery	<u>\$16,000,000</u>
Over/(Under) Recovery	(<u>\$1,338,533</u>)

FY 2021 Under Recovery	\$1,338,533
FY 2022 Permitted Recovery	<u>\$16,000,000</u>
FY 2022 Recovery	\$17,338,533

FY 2022 Volumes	48,632,055
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FY 2022 OPEB Surcharge / Mcf	\$0.3565
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**OTHER POST EMPLOYMENT BENEFIT (OPEB) SURCHARGE
FISCAL YEAR 2021**

FY 2019 Over/(Under) Recovery (\$176,056)

<u>Month</u>		<u>OPEB Volumes</u>	<u>OPEB Surcharge</u>	<u>Revenue Billed</u>
September 2019	Actual	1,141,774	\$0.3228	\$368,565
October	Actual	1,363,289	\$0.3362	\$458,338
November	Actual	3,767,742	\$0.3362	\$1,266,715
December	Actual	7,076,152	\$0.3362	\$2,379,002
January 2020	Actual	8,185,552	\$0.3362	\$2,751,982
February	Actual	7,537,547	\$0.3362	\$2,534,123
March	Actual	5,596,295	\$0.3362	\$1,881,474
April	Actual	4,041,596	\$0.3362	\$1,358,785
May	Actual	2,868,396	\$0.3362	\$964,355
June	Actual	1,410,071	\$0.3362	\$474,066
July	Actual	1,031,552	\$0.3362	\$346,808
<u>August</u>	Actual	<u>952,170</u>	\$0.3362	<u>\$320,120</u>
Total		44,972,134		\$15,104,332

FY 2020 Act/Est OPEB & FY 2019 Reconciliation	\$14,928,276
FY 2020 Permitted Recovery	<u>\$16,000,000</u>
Over/(Under) Recovery	(<u>\$1,071,724</u>)

EFFICIENCY COST RECOVERY (ECR) SURCHARGE
1307F FILING-FISCAL YEAR 2022

<u>Program</u>	<u>Residential & PHA GS</u>	<u>Commercial & PHA</u>	<u>Industrial</u>	<u>Total</u>
Residential Heating Equipment Rebate (RHER)				
Program Expense	\$664,515	\$25,089	\$718	\$690,322
Labor Expense	\$68,745	\$2,595	\$74	\$71,414
Commercial & Industrial Retrofit Incentive (CIRI)				
Program Expense	\$0	\$0	\$0	\$0
Labor Expense	\$0	\$0	\$0	\$0
Commercial & Industrial Equipment Rebate (CIER)				
Program Expense	\$39,253	\$262,522	\$3,884	\$305,660
Labor Expense	\$4,061	\$27,158	\$402	\$31,621
High-Efficiency Construction Incentive (HECI)				
Program Expense	\$138,251	\$0	\$0	\$138,251
Labor Expense	\$14,302	\$0	\$0	\$14,302
EnergySense Smart Thermostat (TSTAT)				
Program Expense	\$173,838	\$6,563	\$0	\$180,402
Labor Expense	<u>\$17,984</u>	<u>\$679</u>	<u>\$0</u>	<u>\$18,663</u>
Total Expense	\$1,120,949	\$324,608	\$5,078	\$1,450,635
Prior Period Reconciliation (8/31/20)	<u>\$ (139,533)</u>	<u>\$ 24,493</u>	<u>\$ (10,723)</u>	<u>\$ (125,762)</u>
Total	\$981,417	\$349,101	-\$5,644	\$1,324,873
Volumes - Mcf (GCR Firm & Firm Transportation)	35,571,921	11,166,293	895,903	

Efficiency Cost Recovery Surcharge / Mcf	\$0.0276	\$0.0313	(\$0.0063)
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**EFFICIENCY COST RECOVERY (ECR) SURCHARGE
STATEMENT OF RECONCILIATION
FISCAL YEAR 2021**

		<u>Actual Sep-20</u>	<u>Actual Oct-20</u>	<u>Actual Nov-20</u>	<u>Actual Dec-20</u>	<u>Estimated Jan-21</u>	<u>Estimated Feb-21</u>	<u>Estimated Mar-21</u>	<u>Estimated Apr-21</u>	<u>Estimated May-21</u>	<u>Estimated Jun-21</u>	<u>Estimated Jul-21</u>	<u>Estimated Aug-21</u>
RESIDENTIAL & PHA GS													
FY 2020 Over-Collection	\$ 335,810												
Volume Billed		729,359	917,832	2,250,407	4,629,612	6,062,344	6,213,172	5,044,827	3,459,507	1,507,808	814,151	713,692	660,877
ECR Surcharge		\$ 0.0257	\$ 0.0299	\$ 0.0299	\$ 0.0257	\$ 0.0215	\$ 0.0215	\$ 0.0201	\$ 0.0187	\$ 0.0187	\$ 0.0187	\$ 0.0187	\$ 0.0187
Revenue Billed		\$ 18,708	\$ 27,443	\$ 67,287	\$ 118,981	\$ 130,340	\$ 133,583	\$ 101,401	\$ 64,693	\$ 28,196	\$ 15,225	\$ 13,346	\$ 12,358
RHER Expense		\$ 638	\$ 58,390	\$ (11,253)	\$ 29,912	\$ 51,489	\$ 51,489	\$ 51,489	\$ 51,489	\$ 51,489	\$ 51,489	\$ 51,489	\$ 51,489
RHER Labor		\$ 3,131	\$ 3,389	\$ 890	\$ 2,556	\$ 5,290	\$ 5,290	\$ 5,290	\$ 5,290	\$ 5,290	\$ 5,290	\$ 5,290	\$ 5,290
HECI Expense		\$ 183	\$ 3,945	\$ (4,128)	\$ 4,375	\$ 16,958	\$ 16,958	\$ 16,958	\$ 16,958	\$ 16,958	\$ 16,958	\$ 16,958	\$ 16,958
HECI Labor		\$ 895	\$ 969	\$ (1,865)	\$ 731	\$ 1,778	\$ 1,778	\$ 1,778	\$ 1,778	\$ 1,778	\$ 1,778	\$ 1,778	\$ 1,778
CIRI Expense		\$ 22	\$ 452	\$ (474)	\$ 521	\$ 2,018	\$ 2,018	\$ 2,018	\$ 2,018	\$ 2,018	\$ 2,018	\$ 2,018	\$ 2,018
CIRI Labor		\$ 107	\$ 115	\$ (222)	\$ 87	\$ 212	\$ 212	\$ 212	\$ 212	\$ 212	\$ 212	\$ 212	\$ 212
CIER Expense		\$ 41	\$ 1,997	\$ (2,039)	\$ 4,015	\$ 3,471	\$ 3,471	\$ 3,471	\$ 3,471	\$ 3,471	\$ 3,471	\$ 3,471	\$ 3,471
CIER Labor		\$ 203	\$ 220	\$ (423)	\$ 166	\$ 404	\$ 404	\$ 404	\$ 404	\$ 404	\$ 404	\$ 404	\$ 404
TSTAT Expense		\$ 209	\$ 4,348	\$ (4,557)	\$ 5,005	\$ 19,402	\$ 19,402	\$ 19,402	\$ 19,402	\$ 19,402	\$ 19,402	\$ 19,402	\$ 19,402
TSTAT Labor		\$ 1,025	\$ 1,109	\$ (2,134)	\$ 837	\$ 2,034	\$ 2,034	\$ 2,034	\$ 2,034	\$ 2,034	\$ 2,034	\$ 2,034	\$ 2,034
Total		\$ 6,454	\$ 74,935	\$ (26,204)	\$ 48,205	\$ 103,056	\$ 103,056	\$ 103,056	\$ 103,056	\$ 103,056	\$ 103,056	\$ 103,056	\$ 103,056
Monthly Over/(Under)		\$ 12,254	\$ (47,492)	\$ 93,492	\$ 70,776	\$ 27,284	\$ 30,527	\$ (1,655)	\$ (38,363)	\$ (74,860)	\$ (87,832)	\$ (89,710)	\$ (90,698)
Cumulative Over/(Under)		\$ 348,064	\$ 300,572	\$ 394,063	\$ 464,839	\$ 492,123	\$ 522,651	\$ 520,995	\$ 482,632	\$ 407,772	\$ 319,940	\$ 230,230	\$ 139,533
COMMERCIAL & PHA													
FY 2020 Over-Collection	\$ 281,639												
Volume Billed		365,158	437,492	781,477	1,403,840	1,680,457	1,721,873	1,447,784	968,933	552,720	439,779	402,902	372,971
ECR Surcharge		\$ (0.0206)	\$ (0.0248)	\$ (0.0248)	\$ 0.0015	\$ 0.0277	\$ 0.0277	\$ 0.0273	\$ 0.0268	\$ 0.0268	\$ 0.0268	\$ 0.0268	\$ 0.0268
Revenue Billed		\$ (7,522)	\$ (10,850)	\$ (19,381)	\$ 2,036	\$ 46,549	\$ 47,696	\$ 39,452	\$ 25,967	\$ 14,813	\$ 11,786	\$ 10,798	\$ 9,996
RHER Expense		\$ 24	\$ 2,205	\$ 82,421	\$ 1,129	\$ (8,412)	\$ (8,412)	\$ (8,412)	\$ (8,412)	\$ (8,412)	\$ (8,412)	\$ (8,412)	\$ (8,412)
RHER Labor		\$ 118	\$ 128	\$ 12,883	\$ 97	\$ (1,406)	\$ (1,406)	\$ (1,406)	\$ (1,406)	\$ (1,406)	\$ (1,406)	\$ (1,406)	\$ (1,406)
CIRI Expense		\$ 253	\$ 5,272	\$ (5,525)	\$ 6,069	\$ 23,526	\$ 23,526	\$ 23,526	\$ 23,526	\$ 23,526	\$ 23,526	\$ 23,526	\$ 23,526
CIRI Labor		\$ 1,242	\$ 1,345	\$ (2,587)	\$ 1,014	\$ 2,467	\$ 2,467	\$ 2,467	\$ 2,467	\$ 2,467	\$ 2,467	\$ 2,467	\$ 2,467
CIER Expense		\$ 277	\$ 13,357	\$ 6,006	\$ 26,853	\$ 20,762	\$ 20,762	\$ 20,762	\$ 20,762	\$ 20,762	\$ 20,762	\$ 20,762	\$ 20,762
CIER Labor		\$ 1,359	\$ 1,472	\$ 215	\$ 1,110	\$ 2,319	\$ 2,319	\$ 2,319	\$ 2,319	\$ 2,319	\$ 2,319	\$ 2,319	\$ 2,319
TSTAT Expense		\$ 8	\$ 164	\$ (172)	\$ 189	\$ 733	\$ 733	\$ 733	\$ 733	\$ 733	\$ 733	\$ 733	\$ 733
TSTAT Labor		\$ 39	\$ 42	\$ (81)	\$ 32	\$ 77	\$ 77	\$ 77	\$ 77	\$ 77	\$ 77	\$ 77	\$ 77
Total		\$ 3,321	\$ 23,984	\$ 93,161	\$ 36,493	\$ 40,064	\$ 40,064	\$ 40,064	\$ 40,064	\$ 40,064	\$ 40,064	\$ 40,064	\$ 40,064
Monthly Over/(Under)		\$ (10,843)	\$ (34,834)	\$ (112,542)	\$ (34,457)	\$ 6,485	\$ 7,632	\$ (612)	\$ (14,097)	\$ (25,251)	\$ (28,278)	\$ (29,266)	\$ (30,068)
Cumulative Over/(Under)		\$ 270,796	\$ 235,962	\$ 123,420	\$ 88,963	\$ 95,448	\$ 103,079	\$ 102,468	\$ 88,371	\$ 63,120	\$ 34,842	\$ 5,575	\$ (24,493)
INDUSTRIAL													
FY 2020 Over-Collection	\$ 35,745												
Volume Billed		31,008	38,199	55,097	107,575	130,627	135,295	113,841	71,353	42,934	36,207	33,466	30,980
ECR Surcharge		\$ (0.0204)	\$ (0.0337)	\$ (0.0337)	\$ (0.0316)	\$ (0.0294)	\$ (0.0294)	\$ (0.0226)	\$ (0.0158)	\$ (0.0158)	\$ (0.0158)	\$ (0.0158)	\$ (0.0158)
Revenue Billed		\$ (631)	\$ (1,287)	\$ (1,857)	\$ (3,394)	\$ (3,840)	\$ (3,978)	\$ (2,573)	\$ (1,127)	\$ (678)	\$ (572)	\$ (529)	\$ (489)
RHER Expense		\$ 1	\$ 63	\$ (64)	\$ 32	\$ 62	\$ 62	\$ 62	\$ 62	\$ 62	\$ 62	\$ 62	\$ 62
RHER Labor		\$ 3	\$ 4	\$ (7)	\$ 3	\$ 7	\$ 7	\$ 7	\$ 7	\$ 7	\$ 7	\$ 7	\$ 7
CIER Expense		\$ 4	\$ 198	\$ (202)	\$ 397	\$ 343	\$ 343	\$ 343	\$ 343	\$ 343	\$ 343	\$ 343	\$ 343
CIER Labor		\$ 20	\$ 22	\$ (42)	\$ 16	\$ 40	\$ 40	\$ 40	\$ 40	\$ 40	\$ 40	\$ 40	\$ 40
Total		\$ 28	\$ 286	\$ (314)	\$ 449	\$ 452	\$ 452	\$ 452	\$ 452	\$ 452	\$ 452	\$ 452	\$ 452
Monthly Over/(Under)		\$ (659)	\$ (1,573)	\$ (1,542)	\$ (3,843)	\$ (4,293)	\$ (4,430)	\$ (3,025)	\$ (1,580)	\$ (1,131)	\$ (1,024)	\$ (981)	\$ (942)
Cumulative Over/(Under)		\$ 35,086	\$ 33,513	\$ 31,970	\$ 28,128	\$ 23,835	\$ 19,405	\$ 16,380	\$ 14,800	\$ 13,670	\$ 12,645	\$ 11,664	\$ 10,723

*REVISED

Schedule 12(b)

**PHILADELPHIA GAS WORKS
LOAD BALANCING CHARGE RECONCILIATION
CALENDAR YEAR 2020**

		<u>2020</u>
Actual Storage and Peaking Cost		\$ 17,537,995
Prior Year Carryover		<u>\$ (224,347)</u>
		\$ 17,313,648
Design Day Requirements	Annual Mcf	698,361
Fulfilled from FT Capacity	Annual Mcf	<u>298,152</u>
Fulfilled from Storage and Peaking Assets	Annual Mcf	400,209
Annual Load Balancing Cost per Excess Mcf	Annual \$ / Mcf	\$ 43.2615
BTU Conversion		1.031
	Annual \$ / Dth	<u>\$ 41.9607</u>
Monthly Charge /Dth		\$ 3.4967
Over/(Under) Recovery		\$ 245,731
Interest		<u>\$ 13,616</u>
Carryover		\$ 259,347

LOAD BALANCING CHARGE

2020 EXPENSE

	<u>Jan-20</u>	<u>Feb-20</u>	<u>Mar-20</u>	<u>Apr-20</u>	<u>May-20</u>	<u>Jun-20</u>	<u>Jul-20</u>	<u>Aug-20</u>	<u>Sep-20</u>	<u>Oct-20</u>	<u>Nov-20</u>	<u>Dec-20</u>	<u>Total</u>
Transco	\$ 500,333	\$ 487,810	\$ 480,914	\$ 464,665	\$ 456,593	\$ 391,541	\$ 409,336	\$ 412,172	\$ 400,709	\$ 400,486	\$ 388,899	\$ 418,134	\$ 5,211,592
Tetco	\$ 1,096,629	\$ 1,079,244	\$ 1,078,519	\$ 815,824	\$ 778,661	\$ 774,745	\$ 778,851	\$ 769,032	\$ 762,284	\$ 788,572	\$ 828,726	\$ 810,181	\$ 10,361,267
Dominion	\$ 130,954	\$ 131,214	\$ 126,293	\$ 127,715	\$ 128,371	\$ 128,402	\$ 124,835	\$ 130,115	\$ 129,805	\$ 129,434	\$ 128,653	\$ 133,867	\$ 1,549,658
WSS /Transportation *	\$ 3,096	\$ 2,541	\$ 194	\$ 315	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 45	\$ 415	\$ 6,605
Purchased Electric	\$ 63,603	\$ 54,721	\$ 46,420	\$ 37,538	\$ 37,538	\$ 34,779	\$ 22,519	\$ 60,746	\$ (4,231)	\$ 23,358	\$ 31,882	\$ -	\$ 408,873
Total	\$ 1,794,616	\$ 1,755,529	\$ 1,732,340	\$ 1,446,058	\$ 1,401,162	\$ 1,329,467	\$ 1,335,540	\$ 1,372,065	\$ 1,288,566	\$ 1,341,850	\$ 1,378,205	\$ 1,362,596	\$ 17,537,995

2020 INTEREST CALCULATION

<u>MONTH *</u>	<u>LOAD BALANCING VOLUME (1) (DTH)</u>	<u>RATE (2) (\$)</u>	<u>LOAD BALANCING CHARGE (3)=(1)*(2) (\$)</u>	<u>CHARGES BILLED (4) (\$)</u>	<u>OVER/(UNDER) RECOVERY (5)=(4)-(3) (\$)</u>	<u>TIME FACTOR (6)</u>	<u>INTEREST RATE (7)</u>	<u>INTEREST EXPENSE (8)=(5)*(6)*(7) (\$)</u>
Jan-20	48,897	3.4967	170,978	217,993	47,014	18/12	4.50%	3,173
Feb-20	48,474	3.4967	169,499	216,107	46,608	17/12	4.50%	2,971
Mar-20	49,230	3.4967	172,143	218,025	45,882	16/12	4.50%	2,753
Apr-20	50,147	3.4967	175,349	222,086	46,737	15/12	4.25%	2,483
May-20	50,001	3.4967	174,839	221,439	46,601	14/12	3.75%	2,039
Jun-20	51,757	3.4967	180,979	176,662	(4,317)	13/12	3.50%	(164)
Jul-20	53,029	3.4967	185,427	181,004	(4,423)	12/12	3.50%	(155)
Aug-20	54,075	3.4967	189,084	184,574	(4,510)	11/12	3.75%	(155)
Sep-20	55,708	3.4967	194,794	202,086	7,292	10/12	3.50%	213
Oct-20	59,564	3.4967	208,277	216,074	7,797	9/12	3.50%	205
Nov-20	57,352	3.4967	200,543	208,050	7,507	8/12	3.50%	175
Dec-20	53,657	3.4967	187,622	191,164	3,541	7/12	3.75%	77
Total	631,891		2,209,533	2,455,265	245,731			13,616

**PHILADELPHIA GAS WORKS
LOAD BALANCING CHARGE
SEPTEMBER 1, 2021**

Storage and Peaking Asset Cost **\$ 19,821,504**

Design Day Requirements (Mcf) **698,361**
WSS Storage Withdrawal Volumes MCF **35,115**
Fulfilled from FT Capacity (Mcf) **298,152**
Fulfilled from Storage and Peaking Assets (Excess Mcf) **435,323**

Annual Storage and Peaking Cost per Excess Mcf **\$ 45.5328**
Per Mcf Over / (Under) Adjustment **\$ 0.4086**
Load Balancing Charge **\$ 45.1242**

Over / (Under) Recovery	\$ 245,731
Interest	\$ <u>13,616</u>
Total Over/(Under) Recovery	\$ 259,347
Forecasted SSPC Volumes	634,734
Per Mcf Over / (Under) Adjustment	\$ 0.4086

Natural Gas Prices March 1, 2021 1307f GCR Filing

Basis Differentials

Prices Used For Gas Cost Inputs

	NYMEX	TRANSCO				TETCO							TRANSCO				TETCO							
		Futures																						
		01/14/21	Sta 30	Sta 45	Sta 65	Sta. 85	ELA	WLA	ETX	STX	Average ELA/ETX	M-1	M-2	Sta 30	Sta 45	Sta 65	Sta 85	ELA	WLA	ETX	STX	ELA/ETX	M-1	M-2
Close																								
Jan-21	2.467												2.41	2.43	2.43	2.44	2.27	2.38	2.29	2.44	2.28	2.31	1.93	
Feb-21	2.666	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.56	2.53	2.65	2.66	2.61	2.59	2.53	2.54	2.57	2.57	2.57	
Mar-21	2.630	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.52	2.49	2.61	2.62	2.57	2.55	2.49	2.50	2.53	2.53	2.53	
Apr-21	2.633	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.52	2.49	2.61	2.62	2.57	2.55	2.49	2.50	2.53	2.53	2.53	
May-21	2.661	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.55	2.52	2.64	2.65	2.60	2.58	2.52	2.53	2.56	2.56	2.56	
Jun-21	2.727	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.62	2.59	2.71	2.72	2.67	2.65	2.59	2.60	2.63	2.63	2.63	
Jul-21	2.802	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.69	2.66	2.78	2.79	2.74	2.72	2.66	2.67	2.70	2.70	2.70	
Aug-21	2.823	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.71	2.68	2.80	2.81	2.76	2.74	2.68	2.69	2.72	2.72	2.72	
Sep-21	2.811	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.70	2.67	2.79	2.80	2.75	2.73	2.67	2.68	2.71	2.71	2.71	
Oct-21	2.829	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.72	2.69	2.81	2.82	2.77	2.75	2.69	2.70	2.73	2.73	2.73	
Nov-21	2.887	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.78	2.75	2.87	2.88	2.83	2.81	2.75	2.76	2.79	2.79	2.79	
Dec-21	3.014	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.90	2.87	2.99	3.00	2.95	2.93	2.87	2.88	2.91	2.91	2.91	
Jan-22	3.103	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.99	2.96	3.08	3.09	3.04	3.02	2.96	2.97	3.00	3.00	3.00	
Feb-22	3.043	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.93	2.90	3.02	3.03	2.98	2.96	2.90	2.91	2.94	2.94	2.94	
Mar-22	2.899	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.79	2.76	2.88	2.89	2.84	2.82	2.76	2.77	2.80	2.80	2.80	
Apr-22	2.557	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.45	2.42	2.54	2.55	2.50	2.48	2.42	2.43	2.46	2.46	2.46	
May-22	2.500	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.39	2.36	2.48	2.49	2.44	2.42	2.36	2.37	2.40	2.40	2.40	
Jun-22	2.522	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.41	2.38	2.50	2.51	2.46	2.44	2.38	2.39	2.42	2.42	2.42	
Jul-22	2.552	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.44	2.41	2.53	2.54	2.49	2.47	2.41	2.42	2.45	2.45	2.45	
Aug-22	2.560	(0.11)	(0.14)	(0.02)	(0.01)	(0.06)	(0.08)	(0.14)	(0.13)	(0.10)	(0.10)	(0.10)	2.45	2.42	2.54	2.55	2.50	2.48	2.42	2.43	2.46	2.46	2.46	

Philadelphia Gas Works Calculation of UFG and Retainage Percentages Twelve Months Ending August 31,2020		
	<u>UFG</u>	<u>RETAINAGE</u>
	Total Distribution System (MCF)	Firm Sales Sales Only (MCF)
A. Gas Received For Delivery To Customers		
From Interstate Pipelines directly into the Distribution System	72,021,207	72,021,207
Less gas delivered for Interruptible Customers sendout		25,694,664
From Interstate Pipelines directly into the Distribution System for Firm Customers Only		46,326,543
B. Gas Delivered		
To Customers	70,324,178	
To Customers - Delivered to Firm Customers Only		44,964,850
C. Adjustment		
Adjustment for PUC UFG Report and Retainage		
- Company use	209,460	209,460
- Unbilled Sales		(20,584)
Adjustment for PUC UFG Report Only		
- Maintenance and Construction	461.05	
- Gate station bleeds	7,743	
- Correction for 6" w.c.	544,906	
- Third party damage	-	-
Total Adjustments	762,570	188,876
D. Distribution UFG and Retainage Rate		
Total Distribution System Unaccounted for Gas	934,459	
Unaccounted For and Accounted For Volumes Applicable to Retainage % Calculation		1,131,650
E. Percent UFG and Retainage		
UFG Percentage	1.30%	
Retainage Percentage		2.4%

**Philadelphia Gas Works
Restructuring & Consumer Education Surcharge
FISCAL YEAR 2022**

FY 2020 Over/(Under) Recovery \$19,650 Schedule 17(b)

<u>Month</u>		<u>R&CE Volumes</u>	<u>R&CE Surcharge</u>	<u>Revenue Billed</u>
September 2020	Actual	1,141,774	\$0.0017	\$1,941
October	Actual	1,363,289	(\$0.0009)	(\$1,227)
November	Actual	3,767,742	(\$0.0009)	(\$3,391)
December	Actual	7,076,152	(\$0.0009)	(\$6,369)
January 2021	Estimated	8,185,552	(\$0.0009)	(\$7,367)
February	Estimated	7,537,547	(\$0.0009)	(\$6,784)
March	Estimated	5,596,295	\$0.0002	\$1,248
April	Estimated	4,041,596	\$0.0002	\$901
May	Estimated	2,868,396	\$0.0002	\$640
June	Estimated	1,410,071	\$0.0002	\$315
July	Estimated	1,031,552	\$0.0002	\$230
<u>August</u>	Estimated	<u>952,170</u>	\$0.0002	\$212
Total		44,972,134		(\$19,650)

FY 2021 Act/Est R&CE & FY 2020 Reconciliation \$0

FY 2021 Permitted Recovery \$0 Schedule 17(c)
Over/(Under) Recovery \$0

**Philadelphia Gas Works
Restructuring & Consumer Education Surcharge
FISCAL YEAR 2020**

FY 2018 Over/(Under) Recovery (\$147,623)

<u>Month</u>		<u>R&CE Volumes</u>	<u>R&CE Surcharge</u>	<u>Revenue Billed</u>
September 2019	Actual	1,141,774	\$0.0060	\$6,851
October	Actual	1,363,289	\$0.0043	\$5,862
November	Actual	3,767,742	\$0.0043	\$16,201
December	Actual	7,076,152	\$0.0043	\$30,427
January 2020	Actual	8,185,552	\$0.0043	\$35,198
February	Actual	7,537,547	\$0.0043	\$32,411
March	Actual	5,596,295	\$0.0043	\$24,064
April	Actual	4,041,596	\$0.0043	\$17,379
May	Actual	2,868,396	\$0.0043	\$12,334
June	Actual	1,410,071	\$0.0043	\$6,063
July	Actual	1,031,552	\$0.0043	\$4,436
<u>August</u>	Actual	<u>952,170</u>	\$0.0043	<u>\$4,094</u>
Total		44,972,134		\$195,321

FY 2020 Act/Est R&CE & FY 2019 Reconciliation \$47,698

FY 2020 Permitted Recovery \$28,049

Over/(Under) Recovery \$19,650

**Philadelphia Gas Works
Restructuring & Consumer Education Surcharge
Expense**

Fiscal Year Month	FY 2020												FY21 Est
	Sep-19 Actual	Oct-19 Actual	Nov-19 Actual	Dec-19 Actual	Jan-20 Actual	Feb-20 Actual	Mar-20 Actual	Apr-20 Actual	May-20 Actual	Jun-20 Actual	Jul-20 Actual	Aug-20 Actual	
Capital													
POR Build (90%)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 28,049	\$ -
Access. Mech. (100%)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operating													
Mailers (50%)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Access Mech. (100%)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Monthly Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 28,049	\$ -
Cumulative Total	\$ 823,203	\$ 823,203	\$ 823,203	\$ 823,203	\$ 823,203	\$ 823,203	\$ 823,203	\$ 823,203	\$ 823,203	\$ 823,203	\$ 823,203	\$ 851,251	\$ 851,251

Schedule 17(c)

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

DIRECT TESTIMONY OF

Florian Teme

ON BEHALF OF
PHILADELPHIA GAS WORKS

Docket No. R-2021-3023970

Philadelphia Gas Works
Proposed 2021-22 Annual GCR Adjustment

March 1, 2021

Table of Contents

I.	INTRODUCTION.....	3
II.	RATE IMPACTS AND SUPPORTING DOCUMENTS	5
III.	RATE DESIGN AND GCR CALCULATION METHODOLOGY	9
IV.	LEVEL OF HEATING DEGREE DAYS	12
V.	METHODOLOGY FOR DETERMINING NUMBER OF CUSTOMERS AND CALCULATING FIRM SALES.....	12
VI.	CALCULATION OF UNACCOUNTED FOR ADJUSTMENT FACTOR	14
VII.	OFF SYSTEM SALES AND CAPACITY RELEASE CREDITS.....	14
VIII.	REASONABLENESS OF GAS COSTS.....	15
IX.	CONCLUSION.....	15

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND POSITION WITH THE COMPANY.**

3 A. My name is Florian Teme. My position is Vice President, Marketing, Sales and
4 Energy Planning at the Philadelphia Gas Works.

5 **Q. HOW LONG HAVE YOU HELD THIS POSITION?**

6 A. I assumed my present position in December 2020. Prior to this position, I was
7 Vice President, Marketing and Sales.

8 **Q. AS IT PERTAINS TO ENERGY PLANNING AND RATEMAKING,
9 WHAT ARE YOUR JOB RESPONSIBILITIES?**

10 A. In my present position, I am responsible for the short and long term planning of
11 gas demand, gas supply, raw material expense and revenue; overseeing the
12 preparation of sales, sendout, revenue and fuel expense projections; developing
13 peak day/hour load projections; overseeing the development of the various filings
14 before the Pennsylvania Public Utility Commission (PUC) and Philadelphia Gas
15 Commission (PGC), including the quarterly and annual Gas Cost Rate (GCR)
16 filings; preparing the Integrated Resource Planning Report; and providing
17 supporting documentation for gas costs related to PGW's Operating Budget
18 before the PGC.

19 **Q. PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.**

20 A. I have been employed with PGW since August 2003. I became PGW's Vice
21 President, Marketing, Sales and Energy Planning in December 2020. Prior to
22 that, I had various positions with PGW: Vice President, Marketing and Sales
23 (September 2016 – December 2020), Director, Marketing and Sales (April 2013 –
24 September 2016), Manager, Residential and Commercial Sales, Marketing

1 (March 2012 – April 2013); Manager, Controls and Analytics, Supply Chain
2 (January 2010 – March 2012); Project Manager, Information Services (January
3 2007 – January 2010); Supply Analyst, Gas Planning (April 2005 – January
4 2007); and Technical Project Administrator, Marketing (August 2003 – March
5 2005).

6 I received my Bachelor of Business Administration (Management
7 Information Systems) from Temple University - Fox School of Business and
8 Management in 2003 and my Master of Business Administration (Business
9 Intelligence, Six Sigma) from Saint Joseph's University - Erivan K. Haub School
10 of Business in 2011.

11 **Q. HAVE YOU EVER PROVIDED TESTIMONY BEFORE THIS**
12 **COMMISSION?**

13 A. Yes, I have provided testimony in PGW's last two base rate cases (Docket No. R-
14 20120-3017206 and R-2017-2586783) and in PGW's 2019-2020 Gas Cost Rate
15 proceeding (Docket No. R-2019-3007636).

16 **Q. HOW IS YOUR TESTIMONY STRUCTURED?**

17 A. First, I describe PGW's rate design and Gas Cost Rate (GCR) calculation
18 methodology. Second, I describe the level of heating degree-days utilized in this
19 filing. Third, I identify the methodology for determining the number of customers
20 and calculating firm sales. Fourth, I discuss the calculation for the Unaccounted
21 for Adjustment Factor (UAF). Fifth, I discuss Off System Sales and Capacity
22 Release credits. Sixth, I discuss the updated study that supports the validity of its
23 peak day methodology. Lastly, I will discuss the reasonableness of PGW's gas
24 costs.

1 **II. RATE IMPACTS AND SUPPORTING DOCUMENTS**

2 **Q. PLEASE DESCRIBE THE IMPACT OF THE PROPOSED CHANGE IN**
3 **PGW'S GCR IN THIS PROCEEDING.**

4 A. PGW's GCR on September 1, 2020 was \$3.4107/Mcf and this rate was increased
5 in the Company's first quarterly GCR filing on December 1, 2020 to \$3.8484.
6 PGW's second quarter GCR filing, also submitted to the PUC concurrently with
7 this filing, decreases the GCR to \$3.4687 effective March 1, 2021. The proposed
8 rate to be effective September 1, 2021 is \$4.1361.

9 **Q. PLEASE SUMMARIZE THE EVIDENCE THAT PGW IS SUBMITTING**
10 **IN SUPPORT OF ITS PROPOSED GCR ADJUSTMENT.**

11 A. This filing contains the schedules supporting the filing requirements of Section
12 53.64(a) for the proposed GCR for the period September 1, 2021 through August
13 31, 2022.

- 14 • Schedule 1 identifies the Levelized Gas Cost Rate. Specifically, this
15 schedule identifies the GCR Firm Sales Volumes in Mcfs ("S"), Total
16 Applicable GCR Expense ("C"), and adjustments for Prior Year
17 Reconciliation and Interest ("E"). An adjustment is also included for the
18 Interruptible Revenue Credit (IRC). Additionally, this schedule calculates
19 the company's total projected recovery plus the load balancing revenue
20 and LNG sales demand revenue to determine if these rates adequately
21 cover the Net Applicable GCR Expense (a Net Over/Under Recovery
22 amount is displayed to prove the calculation). Schedule 1a details the
23 Price to Compare for the PGW rate classes.
- 24 • Schedule 2 identifies the calculation of GCR Firm Sales in Mcfs ("S") and
25 the Applicable Volumes. The company utilizes Total Volumes and

1 subtracts the volumes associated with Firm Transportation, Interruptible
2 Sales, LNG Sales and AC Sales to arrive at GCR Firm Sales (“S”). Also
3 included in Schedule 2 are the Applicable Volumes which is comprised of
4 GCR Firm Sales less 20% of the sales attributable to Senior Citizens
5 (Senior Citizen Discount Sales) plus the Firm Transportation Volumes.

- 6 • Schedule 3 identifies the Projected Applicable Fuel Expense. Specifically,
7 this schedule identifies PGW’s Net Natural Gas Expense and Total
8 Applicable Expenses. To arrive at the Net Natural Gas Expense, the total
9 cost of commodity and pipeline charges for firm sales are calculated per
10 month. Two credits are then applied for the portion of gas costs recovered
11 from PGW’s Interruptible Sales customers (i.e. the “Interruptible & Firm
12 A/C Credit”) and for gas used by PGW (i.e. “Gas Used by Utility”). Next,
13 the Company calculates the net effect of gas supplies being transferred
14 into and out of storage and LNG. The result is the Net Natural Gas
15 Expense. To arrive at the Total Applicable Expenses in Schedule 3, the
16 fuel expenses for Purchased Electric and miscellaneous are added to the
17 Net Natural Gas Expenses to arrive at Total Applicable Expenses.
- 18 • Schedule 4(a) is the actual/estimated data for FY 21. Schedule 4(b) is the
19 C factor Reconciliation for FY 21. Schedule 4(c) is the E factor
20 Reconciliation for FY 21. Schedule 4(d) is the IRC Revenue Billed for
21 FY 21. Schedule 4(e) is the Reconciliation of Demand Charges for FY 21.
- 22 • Schedule 5(a) (“Interest Calculation”) provides the calculation of the
23 interest expense or credit for the period of September 2020 through

1 August 2021 for the under/over recovery of fuel costs and the interest for
2 the natural gas refunds. Schedule 5(b) (“Interest on Natural Gas
3 Refunds”) provides information on historic refunds that have been
4 received by the Company resulting from various cases before the Federal
5 Energy Regulatory Commission and the interest on these refunds.

6 Schedule 5(c) provides the calculation of the interest for the demand and
7 commodity charges.

- 8 • Schedule 6 presents the load balancing revenue for the forecast period of
9 September 2021 to August 2022.
- 10 • Schedule 7 calculates total projected recovery with the proposed GCR.
- 11 • Schedule 8 shows the changes in rates identifying the proposed changes to
12 the GCR and distribution charge and the impact on the proposed total
13 commodity rate.
- 14 • Schedule 9(a) shows the calculation of the Universal Service & Energy
15 Conservation Surcharge to be effective September 1, 2021. Schedule 9(b)
16 is the reconciliation of the Universal Service & Energy Conservation
17 Surcharge for the period September 2020 to August 2021.
- 18 • Schedule 10(a) shows the calculation of the Interruptible Revenue Credit
19 to be effective September 1, 2021. Schedule 10(b) is the forecasted
20 Interruptible Revenue Margin for Fiscal Year 2022. Schedule 10(c) is the
21 reconciliation of the Interruptible Revenue Credit for Fiscal Year 2020.

- 1 • Schedule 11(a) shows the calculation of the Other Post Employment
2 Benefit (OPEB) Surcharge to be effective September 1, 2021. Schedule
3 11(b) is the reconciliation of the OPEB Surcharge for Fiscal Year 2021.
- 4 • Schedule 12(a) shows the calculation of the Efficiency Cost Recovery
5 Surcharge to be effective September 1, 2021. Schedule 12(b) shows the
6 reconciliation of the Efficiency Cost Recovery Surcharge for the Fiscal
7 Year 2021.
- 8 • Schedule 13(a) is the calendar year 2020 reconciliation of the Load
9 Balancing Charge and Schedule 13(b) is the 2020 Load Balancing
10 Expense and Interest Calculation.
- 11 • Schedule 14 sets the load balancing charge to be effective September 1,
12 2021 which is a decrease from last year.
- 13 • Schedule 15 identifies the natural gas prices that were used in the
14 preparation of this filing.
- 15 • Schedule 16 is the annual reconciliation of the retainage rate and lost and
16 unaccounted for rate.
- 17 • Schedule 17(a) is the forecasted over/(under) recovery of the
18 Restructuring and Consumer Education Surcharge on September 1, 2021;
19 Schedule 17(b) is the Restructuring and Consumer Education Surcharge
20 FY 2020 Reconciliation; and Schedule 17(c) is the Restructuring and
21 Consumer Education Expense.

1 **Q. WHAT IS THE TIME PERIOD FOR FORECASTING PGW'S FUTURE**
2 **GAS COSTS?**

3 A. PGW's forecast period is a twenty (20) month period that commences on January
4 1, 2021 (two months before this filing) and eight months before the effective date
5 of the tariff on September 1, 2021. The 2021-22 GCR year is from September 1,
6 2021 to August 31, 2022, however, since the required forecast covers 20 months,
7 it must begin eight months earlier, consistent with Commission regulations.

8 **III. RATE DESIGN AND GCR CALCULATION METHODOLOGY**

9 **Q. PLEASE PROVIDE A GENERAL DESCRIPTION OF PGW'S RATE**
10 **DESIGN AND GCR CALCULATION METHODOLOGY.**

11 A. The volumetric rates charged to PGW's customers are the distribution charge and
12 the Gas Cost Rate plus the Merchant Function Charge (MFC) and Gas
13 Procurement Charge (GPC). The distribution charge consists of the Delivery
14 Charge; the Universal Service and Energy Conservation Surcharge; the Other Post
15 Retirement Benefit Surcharge; the Efficiency Cost Recovery Surcharge; and
16 Restructuring and Consumer Education Surcharge. The Universal Service and
17 Energy Conservation Surcharge provides for the recovery of Customer
18 Responsibility Program (CRP) discounts; Senior Citizen Discounts; the costs of
19 the Enhanced Low Income Retrofit Program (ELIRP); CRP arrearage forgiveness
20 and the Conservation Incentive Credit. The Other Post Retirement Benefit
21 Surcharge recovers the amount to fund these obligations. The Efficiency Cost
22 Recovery Surcharge recovers the cost of the energy efficiency programs.

23 The second element of the rate is the Gas Cost Rate or GCR factor. This
24 charge is a mechanism used to flow through the costs of natural gas costs and
25 other raw materials in a timely and equitable manner. The specific elements of

1 PGW's GCR are set forth in PGW's Tariff.

2 Generally, the cost of gas purchased to serve the requirements of PGW's
3 customers constitutes the largest single item in the delivered price of gas. In the
4 past, all natural gas costs were recovered through base rates (distribution charge).
5 However, in the early 1970's, the price of gas lost its stability and underwent rapid
6 escalation during and after a worldwide oil crisis. To combat this instability and
7 prevent the economic harm to all parties caused by regulatory lag in reflecting
8 these price fluctuations in base rates, the concept of a fuel adjustment surcharge
9 mechanism was introduced by PGW. This mechanism provides the flexibility to
10 rapidly reflect current conditions without the time delay inherent in a full-scale
11 base rate alteration. The intent is to achieve an annual balance of the costs
12 incurred for fuel and its pass-through to customers. The costs for pipeline
13 transportation, storage capacity and related fuel prices charged by the interstate
14 pipeline suppliers are largely outside of distributor control. The PUC oversees the
15 pass-through of these charges and the balancing activity. The Gas Cost Rate
16 Section in PGW's Tariff identifies the appropriate formula for such a balance and
17 the charges that may be recovered through this mechanism. Charges for natural
18 gas and other raw materials are included in the GCR. In addition, the interest
19 expense for the over or under recovery of gas costs and natural gas refunds are
20 also included in the GCR. No labor or profit component is added by PGW. The
21 GCR represents the direct pass-through of actual costs incurred.

22 Only costs related to meeting customer sendout requirements, including
23 associated plant fuel, may be included as a fuel expense for GCR purposes.

1 Purchases diverted into storage and/or LNG become an expense only when
2 withdrawn for customer delivery. Costs associated with purchases made to
3 supply interruptible customers are excluded from the Total Applicable GCR
4 Expenses used to calculate the GCR. Also, demand costs for pipeline
5 transportation for the firm transportation customers are excluded from the GCR.

6 Various adjustments are then made to the total applicable expenses
7 eligible for the GCR. Natural gas refunds and interest on the refunds are credited
8 in the calculation of the GCR in the fiscal year received. An adjustment is made
9 to correct for any over or under recovery during the previous period resulting
10 from differences between rates used to project the prior GCR and those actually
11 experienced. The interest expense or credit on the over or under recovery is
12 applied to calculate the total adjustment. An additional adjustment is also made
13 for the Interruptible Revenue Credit which is a credit that firm sales customers
14 receive for the interruptible sales margin.

15 To determine the unit level of the GCR, the remaining total expenses must
16 be divided by the sum of the volumes over which they can be effectively
17 distributed.

18 **Q. WHAT IS THE BASIS FOR THE PRICES USED IN DETERMINING THE**
19 **GAS COSTS USED IN THIS FILING?**

20 A. The pricing methodology utilized by the Company is consistent with that used in
21 the recent quarterly filings with the inclusion of the additional months in the 20-
22 month forecast. Specifically, the company utilized actual prices for January 2021
23 and the NYMEX Futures close data (as of January 15, 2021) for the 19 forecast
24 months of February 2021 through August 2022.

1 **Q. HOW DOES THE GCR FOR THE FORECAST PERIOD COMPARE**
2 **WITH THE GCR FORECASTED IN THE COMPANY'S LAST ANNUAL**
3 **GCR FILING?**

4 A. The GCR forecasted for 2021-2022 is lower than the level PGW had forecasted
5 for the 2020-2021 GCR. The level of costs in the 2021-2022 period are being
6 influenced by the decrease in costs compared to the prior year.

7 **IV. LEVEL OF HEATING DEGREE DAYS**

8 **Q. DESCRIBE THE LEVEL OF HEATING DEGREE-DAYS THAT WERE**
9 **USED IN YOUR ANALYSIS.**

10 A. The Company utilizes the temperatures recorded at the PGW Richmond Plant to
11 calculate the average temperature for a given day. The Company subtracts the
12 average temperature from 65 degrees to calculate the number of degree-days for
13 the day. The degree-days for all of the days in the year are aggregated to arrive at
14 the total number of degree-days for the year. Next, the Company calculates the
15 average heating degree-days for the past 20 years to arrive at the forecasted
16 heating degree-days in a normal year, and in this filing PGW is using the 20 year
17 average of 3,931 degree days.

18 **V. METHODOLOGY FOR DETERMINING NUMBER OF CUSTOMERS**
19 **AND CALCULATING FIRM SALES**

20 **Q. HOW HAS THE COMPANY CALCULATED THE NUMBER OF**
21 **CUSTOMERS IN EACH RATE CLASS?**

22 A. PGW determined the actual number of customer billings on December 31, 2020
23 using the PGW Gas Sales and Revenue Reports. Next, the Marketing Department
24 load forecast was used to factor in the addition and loss of customers. Finally, the
25 customer numbers were adjusted for the loss of customers due to non-payment
26 terminations.

1 **Q. WHAT IS THE METHODOLOGY FOR CALCULATING THE WEATHER**
2 **NORMALIZED BILLED SALES?**

3 A. PGW used a two-step process to arrive at the appropriate level of usage per
4 customer. First, a trial domestic factor is developed by class of customers from
5 sales reported for the previous year's summer months. This average factor is then
6 utilized in the sendout formula with the customer counts for the months of July,
7 August and September. A comparison between what the formula calculates and
8 the actual experienced for those three months is ascertained and the trial domestic
9 factors are finalized to replicate the total sendout experienced. The finalized
10 domestic factors (DOMS) are then utilized in conjunction with the actual sales
11 and customer counts for the months of December, January and February to
12 determine the average Mcf per degree day for each of the individual months for
13 the remaining temperature sensitive load. The results are weighted by degree-
14 days to give an average value which is utilized as a trial value for the heating
15 factor.

16 The finalized domestic factor and the trial heating factor developed, as
17 such, are then applied in the sendout calculations together with customer counts
18 for the months of December, January and February (the peak winter cold period)
19 to project an estimated sendout for each of these months. The projected sendout
20 is then compared with the actual sendout experienced. Any variation between the
21 projected and actual is adjusted to force the replication of the actual sendout
22 experience, thus resulting in the determination of a finalized heating factor.

23 Utilizing these domestic and heating factors, billed sales are then
24 forecasted using 3,931 degree days and the number of customers.

1 **VI. CALCULATION OF UNACCOUNTED FOR ADJUSTMENT FACTOR**

2 **Q. WHAT IS THE UNACCOUNTED FOR GAS PERCENTAGE USED IN**
3 **THIS FILING?**

4 A. The level of unaccounted for gas and retainage rate used in this filing is 2.6 % and
5 is based on a 3-year average.

6 **VII. OFF SYSTEM SALES AND CAPACITY RELEASE CREDITS**

7 **Q. WHAT IS THE TOTAL AMOUNT OF OFF SYSTEM SALES, CAPACITY**
8 **RELEASE CREDITS, AND ASSET MANAGEMENT CREDITS THAT**
9 **ARE INCORPORATED INTO THE GCR?**

10 A. PGW has projected the amount of off system sales, capacity release credits, and
11 asset management credits within the GCR period of 2021-22. This amount is
12 based on a 3 year average. Of that amount, \$12,237,121 was credited to the GCR.

13 **IX TED RIDER AND MICRO-CHP INCENTIVE PROGRAM**

14 **Q. AS PART OF THE SETTLEMENT OF PGW'S MOST RECENT BASE**
15 **RATE CASE (R-2020-3017206), PGW AGREED TO PROVIDE DATA ON**
16 **THE NUMBER OF CUSTOMERS, SALES LEVEL AND COSTS IN ITS**
17 **MARCH 1, 2021 ANNUAL GCR FILING FOR THE TED RIDER, ITS**
18 **MICRO-CHP INCENTIVE PROGRAM AND RATE BUS. CAN YOU**
19 **PROVIDE THOSE DATA?**

20 A. Yes. The information pertaining to the number of customers, sales level and costs
21 as it pertains to customers utilizing the TED Rider and/or the Micro-CHP
22 Incentive Program is provided below:

23

Tariff Rate	Total Customer Count	Total Annual Sales Volume (MCF)	Total Annual Revenue	Total Customer Capital Cost	Total Micro-CHP Incentive	Comments
TED Rider	2	15,566	38,601	183,250	31,250	There are two TED Rider customers. One of Two was a recipient of Micro-CHP incentive

1 Additionally, information pertaining to the number of customers, sales levels,
 2 revenues, and the costs incurred to provide service under Rate BUS is provided
 3 below:

Tariff Rate	Total Customer Count	Total Annual Sales Volume (MCF)	Total Annual Revenue	Total Customer Capital Cost
Back-Up Service – Rate BUS	32	1,231	132,797	907,360

4

VIII. REASONABLENESS OF GAS COSTS

6 **Q. BASED UPON THE ABOVE SUPPORTING DATA, DO YOU BELIEVE**
 7 **THAT PGW’S GAS COSTS ARE REASONABLE?**

8 **A. Yes, PGW’s GCR only contains the direct pass-through of actual costs incurred**
 9 **and projections of the same (for both gas costs and certain non-gas costs that were**
 10 **previously approved by the PUC). As stated by Mr. Zuk in his testimony, PGW**
 11 **follows a least cost gas procurement strategy.**

12 **IX. CONCLUSION**

13 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

14 **A. Yes.**

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

DIRECT TESTIMONY OF

Ryan E. Reeves

ON BEHALF OF
PHILADELPHIA GAS WORKS

Docket No. R-2021-3023970

Philadelphia Gas Works
Proposed 2021-2022 Annual GCR Adjustment

March 1, 2021

Table of Contents

I. INTRODUCTION.....	1
II. GAS PURCHASING POLICIES AND SUPPLY STRATEGY	2
III. CAPACITY RELEASE, OFF-SYSTEM SALES MARGIN AND ASSET MANAGEMENT CREDITS/FEES	7
IV. PRICE ANALYSIS AND BUYING ADVISORY SERVICE	10
V. GAS SUPPLY PURCHASES.....	11
VI. CONCLUSION	12

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND CURRENT POSITION WITH PGW.**

3 A. My name is Ryan E. Reeves. My position with Philadelphia Gas Works (“PGW” or
4 “Company”) is Director of Gas Supply, Transportation and Control.

5 **Q. PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.**

6 A. I received a Bachelor of Science degree in Chemical Engineering from Drexel University
7 in 2009 and a Master’s degree in Business Administration from Villanova University in
8 2016. I have held the following positions at PGW: Staff Engineer and Operations
9 Engineer at Richmond LNG Plant, and Manager of Special Projects.

10 **Q. PLEASE DESCRIBE YOUR DUTIES IN YOUR PRESENT POSITION.**

11 A. I develop and monitor PGW’s long-term Gas Supply Strategic Plan that ensures PGW
12 has the financial resources and assets to execute its business strategy. I advance policies,
13 procedures and practices that ensure safe, reliable, competitively priced gas supplies and
14 other energy resources to meet current and future demands on PGW’s systems, and I
15 analyze the overall long-term capital and operating budget plans for Gas Supply.

16 **Q. HAVE YOU EVER PROVIDED TESTIMONY BEFORE THIS**
17 **COMMISSION?**

18 A. No

19 **Q. WHAT IS THE FOCUS OF YOUR TESTIMONY IN THIS PROCEEDING?**

20 A. My testimony discusses:

- 21 • PGW’s gas purchasing policies and strategies applicable to FY 2022 (September
22 1, 2021 through August 31, 2022) and those utilized in FY 2021 (September 1,
23 2020 through August 31, 2021);
24
25 • Price analysis and buying advisory service.

26

1 **Q. PLEASE PROVIDE A GENERAL DESCRIPTION OF PGW'S GAS**
2 **DISTRIBUTION SYSTEM.**

3 A. PGW's gas distribution system is located in Southeastern Pennsylvania in the County and
4 City of Philadelphia. Since this is not a gas-producing area, PGW and its natural gas
5 customers are dependent upon the interstate gas pipeline system to deliver natural gas
6 into the PGW gas distribution system. PGW relies on the interstate pipeline for all
7 natural gas supply, storage, and transportation services, except for PGW's own on-system
8 peak shaving facilities. PGW owns and operates two LNG facilities that are used
9 primarily both to meet intraday, daily and seasonal supply needs as well as to meet peak
10 day requirement.

11 **Q. PLEASE IDENTIFY PGW'S CURRENT INTERSTATE SUPPLIERS.**

12 A. Enbridge's Texas Eastern Transmission pipeline and Williams' Transco Gas Pipeline
13 comprise the two interstate natural gas pipelines that deliver gas to PGW's city gates. In
14 addition, PGW uses off-system natural gas storage services to meet winter peak
15 requirements.

16 **II. GAS PURCHASING POLICIES AND SUPPLY STRATEGY**

17 **Q. DOES PGW UTILIZE A LEAST-COST PROCUREMENT POLICY IN ITS GAS**
18 **PURCHASING POLICIES AND SUPPLY STRATEGY?**

19 A. Yes. PGW pursues a least cost gas procurement policy in a manner consistent with
20 PGW's obligation to provide safe, adequate and reliable service to its customers.

21 **Q. PLEASE DESCRIBE PGW'S SUPPLY STRATEGY.**

22 A. PGW's supply strategy¹ (which is currently being used during the FY 2021 GCR period
23 and which the Company intends to use for the FY 2022 GCR period) is a portfolio

¹ All natural gas supply strategies are presented to the Company's internal Supply Committee for review and approval. The Supply Committee is comprised of senior corporate management as well as Gas Supply, Gas Planning and Regulatory departmental management. The Supply Committee meets monthly.

1 approach in both contract structure and pricing. The portfolio approach of purchasing gas
2 supply allows PGW to remove some of the volatility in purchasing natural gas supplies
3 for its ratepayers. Without the use of the portfolio approach, firm ratepayer would be
4 totally at the mercy of market volatility.

5 The Company's gas supply portfolio is divided into four distinct categories (1)
6 daily index price swing contracts; (2) physical forward purchased contracts; (3) storage;
7 and (4) LNG.

8 (1) The advantage of daily index priced swing contracts are their operational
9 flexibility which allows PGW to increase and decrease the volume in response to changes
10 in sendout requirements. During certain time periods, these types of contracts also
11 provide security of supply.

12 (2) The Company enters into physical forward purchased contracts for seasonal
13 baseload supplies and long-term baseload supplies, including "Pre-Paid natural gas"
14 arrangements (discussed below). These contracts permit the Company to make
15 discretionary physical forward purchases on a year-round basis.

16 (3) The Company utilizes storage fields which act as additional sources of
17 supply. The gas procured under these contracts also acts as a physical fixed price counter
18 to market conditions.

19 (4) The Company operates its own LNG peak shaving liquefaction, vaporization,
20 and storage facilities.

21 The Enbridge and Williams Gas Pipelines represent the only interstate pipeline
22 facilities with physical connections to the PGW service territory. As a result, all of
23 PGW's supply contracts utilize these pipelines, and the contracts also recognize pipeline

1 receipt and delivery rights. These contracts contain the ability to “lock up” the price for
2 upcoming months or to have the pricing default to an agreed upon market index if there is
3 no market advantage in fixing a price before the month begins. As a result, PGW not
4 only ensures security of supply from the pipelines but also can take advantage of varying
5 basis differentiated pricing in the market. This differentiated pricing results from the fact
6 that all shippers of natural gas receive their gas at varying locations along the pipeline.
7 PGW uses a city-gate delivered price in comparing the various alternatives available.
8 The city gate delivered price is computed considering the “into the pipe price of gas” plus
9 all incremental charges levied by the transporting pipeline to deliver the gas to the city
10 gate. These prices include, but are not limited to, reservation fees, fuel, transportation
11 charges and FERC Annual Charge Adjustment (“ACA”) charges.

12 Additionally, PGW utilizes storages and LNG to meet operational requirements.
13 Bundled storage contracts give PGW the right to both store and deliver gas via bundled
14 pipeline capacity. Unbundled storage contracts provide storage rights for gas which is
15 transported on PGW’s firm pipeline transportation capacity. These storages provide off-
16 system storage, and LNG provides on-system storage. While both types of storages are
17 important to fulfill operational requirements, PGW’s on-system LNG storage is vital
18 during peak days when customer demand exceeds the amount of gas that can be
19 physically provided through PGW’s city gates.

20 Once operational requirements are met, these assets are then used in the overall
21 cost saving strategies. For example, once design winter sendout requirements are
22 ensured, the Company may utilize bundled storage and LNG as a substitute for higher
23 priced gas. PGW’s summer gas procurement policy uses a similar approach to address

1 system supply and storage refill. The Gas Supply department also uses forecasted prices
2 as a benchmark to purchase gas volumes for both system supply and storage refill below
3 the projected cost (when possible) on a proportional basis, while leaving a portion of its
4 needs to default to first of the month pricing.

5 **Q. DOES PGW PURCHASE GAS FROM ANY AFFILIATED INTEREST?**

6 A. No. PGW does not have any affiliated gas suppliers or pipelines.

7 **Q. DOES PGW TAKE STEPS TO ENSURE SYSTEM RELIABILITY WHILE**
8 **SEEKING TO PROCURE GAS AT THE LEAST COST?**

9 A. Yes. PGW physically sources the gas in accordance with its firm pipeline paths. The
10 pipelines give PGW firm entitlements on their systems for the sourcing of gas for which
11 PGW pays a demand charge. By sourcing supply in this way, PGW ensures its sole
12 entitlement to this space on the pipeline and cannot be accused of infringement.
13 Transporting gas from different locations also mitigates the impact of potential regional
14 disruptions because not all of the supply enters the pipe at the same location. As a result,
15 if there is a disruption at one location, not all of PGW's supply will be affected. PGW's
16 Gas Planning Department also runs a supply status model during the winter operating
17 season which recognizes normal and design winter conditions and the latest actual
18 balance of gas in all storage facilities. Gas Management utilizes the output of this model
19 to make recommendations or changes in its supply operating strategy to ensure that peak
20 day needs and design winter conditions can be met from that point forward.

21 **Q. DOES PGW PERIODICALLY REVIEW ITS EXISTING CONTRACTS TO**
22 **DETERMINE IF THEY ARE APPROPRIATE?**

23 A. Yes. PGW reviews each of its existing contracts on a regular basis to ensure that none of
24 the contracts are adverse to its customers' interests. Whenever appropriate, PGW
25 initiates renegotiations (if the contract permits) to change the terms.

1 **Q. IN PGW'S LAST GCR, YOU INDICATED THAT PGW HAD BEGUN TO TAKE**
2 **ADVANTAGE OF A PREPAID GAS PROGRAM MADE POSSIBLE BY**
3 **PROVISIONS IN THE INTERNAL REVENUE CODE THAT PERMITTED**
4 **MUNICIPAL GAS COMPANIES TO OBTAIN GAS COST REDUCTIONS, IS**
5 **THAT CORRECT?**

6 A. Yes. Beginning in FY 2020, PGW has taken advantage of provisions in the Internal
7 Revenue Code that permits municipal gas companies to use tax exempt bond financed
8 prepaid gas purchase arrangements to obtain significant discounts on those purchases, the
9 savings from which are passed on to PGW sales customers.

10 **Q. WHAT IS A PREPAID GAS ARRANGEMENT?**

11 A. A prepaid gas arrangement is an arrangements in which PGW has agreed to purchase gas
12 from a gas supplier for (typically) 25-30 years. (PGW does not pay for the entire 30 years
13 of purchases up front but will receive a monthly invoice for gas received by PGW). The
14 natural gas is purchased from a gas supplier, through an authority. The authority issues a
15 tax-free long-term bond and uses the proceeds to "prepay" for the natural gas it will
16 purchase on behalf of various municipal gas utilities, including PGW. The gas supplier
17 sells the natural gas to the authority (which then, in turn, sells it to PGW) at a discount, in
18 recognition of the fact that the supplier is able to invest the prepayment at taxable rates.
19 In order to share some of this investment income, the supplier provides PGW with natural
20 gas at significant discounts from a market index price. The size of the discount is
21 determined based on the spread between non-taxable and taxable investments. As noted,
22 the gas is purchased on index, but PGW receives a discount from the current index price
23 due to the investment arbitrage.

24 **Q. HOW MANY SUCH ARRANGEMENTS HAS PGW ENTERED INTO?**

25 A. PGW is currently involved in seven (7) prepaid gas arrangements.

1 **Q. WILL THESE ARRANGEMENTS EXIST IN THE 2021-22 GCR PERIOD?**

2 A. Yes. As noted, PGW currently has seven (7) arrangements under signature. Those
3 contracts will reduce the monthly price of gas paid by PGW compared to the price it
4 would otherwise pay. In FY 2021, PGW will save approximately \$3.5 million for gas
5 sales to customers as a result of prepaid gas purchase arrangements. For FY 2022, PGW
6 is predicting that gas sales to customers will save approximately \$3.7 million from the
7 seven prepaid deals.

8 **Q. IN YOUR OPINION, ARE THE GAS COSTS INCURRED BY PGW**
9 **REASONABLE?**

10 A. Yes. The gas costs incurred to date during the 2020-2021 period are the result of the least
11 cost gas procurement strategy outlined in my testimony and are therefore reasonable.
12 The gas costs that PGW is projecting for the 2021-2022 period are also the product of a
13 least cost gas procurement strategy, consistent with PGW's obligation to provide safe,
14 adequate and reliable service to its customers, and are therefore also reasonable.

15 **III. CAPACITY RELEASE, OFF-SYSTEM SALES MARGIN AND ASSET**
16 **MANAGEMENT CREDITS/FEES**

17 **Q. HAS PGW BEEN RETAINING A PORTION OF NET PROCEEDS FROM**
18 **CAPACITY RELEASE CREDITS, OFF-SYSTEM SALES MARGIN AND ASSET**
19 **MANAGEMENT CREDIT/FEES?**

20 A. Yes. During the 2008-2009 GCR proceeding (Docket No. R-2008-2021348), the parties
21 agreed that PGW would be permitted to retain 25% of all off-system sales margins and
22 capacity release credits with the remaining 75% applied as an offset to purchased gas
23 costs for the retention period of September 1, 2008 to August 31, 2011. Likewise, the
24 parties agreed that, for the subsequent GCR period, PGW would retain 25% of all off-
25 system sales margins, capacity release credits and margins or fees arising from asset

1 management arrangements² with the remaining 75% applied as an offset to purchased gas
2 costs. This sharing arrangement was approved by the PUC in all subsequent GCR
3 proceedings.

4 **Q. DOES PGW HAVE A RETENTION PROPOSAL FOR THE PERIODS**
5 **BEGINNING ON SEPTEMBER 1, 2021?**

6 A. Yes. PGW proposes to continue the retention of 25% of capacity release credits, off
7 system sales margin and asset management margin/credit/fees and apply the remaining
8 75% to the Gas Cost Rate.

9 **Q. DO OTHER PENNSYLVANIA NATURAL GAS DISTRIBUTION COMPANIES**
10 **(“NGDCS”) HAVE SHARING MECHANISMS FOR CAPACITY OFF SYSTEM**
11 **SALES CREDITS?**

12 A. Yes. All of the largest NGDCs have sharing mechanisms similar to PGW’s and the
13 sharing percentage for all of the NGDCs is 25%.

14 **Q. HOW ARE SHARING MECHANISMS BENEFICIAL TO BOTH RATEPAYERS**
15 **AND UTILITIES?**

16 A. The ratepayers and the utility benefit from the policy because it creates an incentive to
17 maximize efforts to fully utilize gas supply assets by making off-system sales and
18 capacity release transactions, thereby reducing the overall cost of gas supply and the
19 resulting gas cost rate. For PGW, the lesser portion retained by the Company is used to
20 offset the overall cost of service that must be recovered in base rates.

21 **Q. DID PGW ENGAGE IN ANY CAPACITY RELEASE OR OFF-SYSTEM SALES**
22 **IN FY 2021?**

23 A. Yes. PGW contracted for several off-system sales and several capacity releases. For
24 each of these arrangements, the margin in excess of the incremental costs was split 75-

² Asset management margins/credits/fees are received when PGW enters into a contract with a third party to manage all or part of a storage contract or firm pipeline transportation contract.

1 25%, with 75% being credited to the GCR. PGW retained the remaining 25% in base
2 rates and used it to offset other costs of operation.

3 **Q. DID PGW ENGAGE IN AN ASSET MANAGEMENT ARRANGEMENT IN FY**
4 **2021?**

5 A. Yes. PGW entered into an AMA arrangement with a counterparty for the winter season
6 of FY 2021. The revenue from the AMA arrangement will be split 75-25%, with 75%
7 being credited to the GCR. PGW retained the remaining 25% in base rates and used it to
8 offset other costs of operation.

9 **Q. IN ITS LAST GCR PROCEEDING, DID PGW AGREE TO SHARE THE**
10 **MARGIN FOR NATURAL GAS SALES ASSOCIATED WITH LNG?**

11 A. Yes. In that proceeding, PGW agreed with the parties that, for the FY 2020 GCR period,
12 upstream sales of PGW-owned natural gas, that would not have occurred but for the
13 availability of excess LNG, that use interstate pipeline capacity for delivery/displacement
14 would be removed from the weighted average cost of gas (“WACOG”) per DTH and the
15 Sales Service demand charge. An additional 25% of the margin above that was to be
16 credited to the GCR and 75% was to be retained by PGW and reflected in base rates.

17 **Q. HAS PGW HAD ANY SUCH SALES IN FY 2021?**

18 A. No.

19 **Q. HAS PGW HAD ANY OTHER SALES OF LNG IN FY 2021?**

20 A. Yes. PGW entered into an arrangement with a counterparty for the sale of LNG in FY
21 2021. Under the contract, the counterparty purchased LNG before the 2020-2021 winter
22 heating season. The counterparty had the right to either offload the LNG by truck or use
23 displacement to have the LNG delivered to them or another end user. Under this
24 arrangement, the counterparty purchased the LNG for a predetermined price. When the

1 LNG was resold to an end user, PGW received part of the revenue generated from the
2 resale.

3 **Q. DO YOU BELIEVE THAT THE MARGINS FROM SUCH SALES SHOULD BE**
4 **SHARED UNDER THE PUC'S SHARING POLICY APPLICABLE TO OFF-**
5 **SYSTEM SALES, CAPACITY RELEASE OR ASSET MANAGEMENT?**

6 A. No. This arrangement is the sale of LNG, not an off-system sale, a capacity release or
7 asset management of natural gas. The PUC's sharing policy was designed to give natural
8 gas distribution companies an incentive to maximize the revenues produced by assets
9 paid for through the gas utility's GCR. The costs of PGW's LNG facilities are not
10 recovered through PGW's GCR, but instead are recovered through base rates. Because
11 these sales were the sale of LNG (and not the sale of PGW-owned natural gas) PGW
12 retained the margin from these LNG sales, over and above those costs. These amounts
13 will be used to offset other costs of operation for PGW.

14 **IV. PRICE ANALYSIS AND BUYING ADVISORY SERVICE**

15 **Q. DOES PGW CURRENTLY USE A PRICE ANALYSIS AND BUYING**
16 **ADVISORY SERVICE AS PART OF ITS EFFORTS TO OBTAIN GAS AT**
17 **LEAST COST?**

18 A. Yes, it does. PGW utilizes a firm called Planalytics to provide such services.

19 **Q. WHAT TYPES OF SERVICES DOES PLANALYTICS PROVIDE TO PGW?**

20 A. Planalytics provides the following services:

- 21 ● Price feed from Nymex and Globex for natural gas, crude oil, heating oil and
22 RBOB (reformulated gasoline);
- 23 ● Buying suggestions up to 18 months in the future;
- 24 ● A charting tool for technical analysis;
- 25 ● Short and medium range weather forecasts;
- 26 ● Weather alerts (issued in advance of significant weather events);

- 1 ● Planalytics’ pre-season hurricane forecast and in-season updates; and
- 2 ● Additional energy buyer features include reporting (i.e., market-to-market,
- 3 transaction history, etc.) and portfolio/hedging parameters.

4 **Q. WHAT WAS INCORPORATED INTO PGW’S 2020-2021 GCR PROCEEDING**
5 **SETTLEMENT AGREEMENT WITH REGARD TO THE PLANALYTICS**
6 **ENERGY BUYER SERVICES?**

7 A. PGW agreed to the following:

- 8 a) PGW is permitted to continue to recover the Planalytics fee for
- 9 price analysis and buying advisory services (not to exceed \$125,000) for
- 10 the 2020-2021 GCR period. Continued recovery of the fee beyond the
- 11 2020-2021 GCR period must be addressed in next year’s Purchased Gas
- 12 Cost proceeding.

13

14 **Q. DOES PGW WISH TO CONTINUE THE PLANALYTICS BUYING ADVISORY**
15 **SERVICES?**

16 A. Yes. The Planalytics’ service provides a comprehensive amount of information that the

17 Company finds useful in the procurement of all gas supply. Nonetheless, PGW

18 understands that it must reach a new agreement as to the continuing recovery of the

19 Planalytics fee. It again proposes that these fees be included in the 2021-22 GCR; PGW

20 looks forward to discussing this issue with the parties involved in this year’s proceeding.

21 **V. GAS SUPPLY PURCHASES**

22 **Q. WHERE DID PGW PURCHASE NATURAL GAS SUPPLY ON THE TEXAS**
23 **EASTERN TRANSMISSION CORPORATION (“TETCO”) PIPELINE IN FY**
24 **2020?**

25 A. 100% of all baseload and swing supply purchases on the TETCO pipeline were from

26 Market Zone M-2 in FY 2019. In FY 2020, PGW bought 82% of their winter baseload

27 out of M-2 and 18% of their winter baseload out of the East Texas Production Zone

28 (“ETX”). PGW bought 100% of their swing contracts out of M-2.

1 Due to the growth of PGW's Choice program, PGW has experienced a limitation
2 on the amount of gas that can be purchased at the M-2 30" receipt point. PGW was
3 hoping to purchase baseload gas on M-2 24" receipt point and M-2 Crayne receipt point;
4 however, PGW did not receive any offers during its RFP process for gas at those
5 locations. PGW opted to purchase gas from the ETX Zone to flow on the 24" side of the
6 TETCO pipeline to secure that baseload and to ensure that swing supplies would not be
7 limited.

8 Additionally, as it agreed to do in its last GCR Settlement, since PGW was unable
9 to contract for baseload supply prior to the release of capacity on TETCO pursuant to
10 current capacity release procedures, PGW moved the capacity release on the 24" pipe
11 starting in the South Texas TETCO Supply zone ("STX") for November 2020.

12 **VI. CONCLUSION**

13 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

14 **A. Yes it does.**

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

DIRECT TESTIMONY OF

Gregory Stunder

ON BEHALF OF
PHILADELPHIA GAS WORKS

Docket No. R-2021-3023970

Philadelphia Gas Works
Proposed 2021-22 Annual GCR Adjustment

Proposal to Purchase Renewable Natural Gas

March 1, 2021

1 **Q. PLEASE STATE YOUR NAME AND CURRENT POSITION WITH PGW.**

2 A. My name is Gregory Stunder. My position with PGW is Vice President, Regulatory and
3 Legislative Affairs.

4 **Q. PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.**

5 A. I have been employed with PGW since 2001. I became Vice President, Regulatory and
6 Legislative Affairs in January 2015. My current areas of responsibility include
7 Legislative and Regulatory Affairs, Environmental Sustainability, Environmental
8 Services, Technical Compliance and Business Continuity Planning. Prior to that, I was a
9 Senior Attorney from 2003 to 2015 and a Staff Attorney from 2001 to 2003. I received
10 my Juris Doctor (J.D.) from Temple University - James E. Beasley School of Law in
11 1995, and my Bachelor's Degree, Accounting, from La Salle University in 1985.

12 **Q. HAVE YOU EVER PROVIDED TESTIMONY BEFORE THIS COMMISSION?**

13 A. Yes. I testified before the Pennsylvania Public Utility Commission (“PUC” or
14 “Commission”) in Philadelphia Gas Works’ two most recent base rate proceedings at
15 Docket Nos. R-2017-2586783 and R-2020-3017206.

16 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

17 The purpose of my testimony is to discuss PGW’s Renewable Natural Gas (“RNG”) pilot
18 program. PGW proposes to initiate a pilot program in which it would procure a limited
19 amount of RNG as part of the gas supply used to meet the needs of PGW’s sales
20 customers, and to include the costs of these limited purchases in its GCR.

21 **Q. WHAT IS RNG?**

22 A. RNG is a biogas produced from a biochemical process, such as anaerobic digestion.
23 Conditioned biogas (removing water, carbon dioxide, hydrogen sulfide, and other trace
24 elements) results in RNG, or biomethane, which has a methane content comparable to

1 conventional natural gas and can be a suitable energy source in applications that require
2 pipeline-quality gas.¹

3 **Q. WHAT ARE POTENTIAL RNG SOURCES?**

4 A. RNG can be sourced through a variety of processes, typically involving the breakdown of
5 organic matter. This includes biogas produced by landfills, wastewater treatment
6 facilities, livestock operations and food waste.²

7 **Q. HOW DOES RNG REDUCE GREENHOUSE GAS EMISSIONS?**

8 A. RNG is considered a carbon-neutral fuel because it comes from organic sources that once
9 absorbed carbon dioxide from the atmosphere during photosynthesis.³ RNG has even
10 greater benefits when it's produced from organic waste that would otherwise decay and
11 emit methane into the atmosphere – RNG production captures this methane release.⁴

12 **Q. PLEASE DESCRIBE THE COMPANY'S PROPOSED RNG PILOT PROGRAM?**

13 A. PGW is proposing a pilot program to purchase RNG during FY 2022 and FY 2023.⁵
14 During FY 2022, PGW is proposing to purchase up to \$500,000⁶ of RNG which is
15 approximately 0.4% of its total "C" Factor commodity cost. During FY 2023, PGW may
16 increase its RNG purchases above \$500,000 but not more than 2% of the total "C" Factor
17 commodity cost.⁷ This RNG would be included in PGW's gas supply portfolio and the
18 costs included in the GCR.

19 **Q. HOW MUCH RNG WOULD PGW PURCHASE?**

¹ https://afdc.energy.gov/fuels/natural_gas_renewable.html.

² *Id.*

³ <https://www.socalgas.com/clean-energy/renewable-gas/understanding-renewable-natural-gas>

⁴ *Id.*

⁵ FY 2022 begins on September 1, 2021 and ends August 31, 2022. FY 2023 begins on September 1, 2022 and ends on August 31, 2023.

⁶ PGW added \$500,000 to the cost of gas in Schedule 1 of the March 1, 2021 Annual Filing.

⁷ Based on 2% of the "C" Factor commodity costs set forth in the March 1, 2021 annual filing which is approximately \$2,500,000.

1 A. PGW has not determined a set amount of RNG to purchase; rather, it would purchase
2 RNG volumes that do not exceed the expenditure limits set forth above. Structuring the
3 program in this manner allows PGW to limit costs while beginning the process of
4 incorporating RNG into its system.

5 **Q. WHERE WOULD THE COMPANY ACQUIRE SUPPLIES FOR THE RNG**
6 **PROGRAM?**

7 A. PGW would prioritize sourcing RNG from Pennsylvania suppliers. If PGW is unable to
8 find Pennsylvania suppliers, PGW would then look to suppliers outside of Pennsylvania.
9 This focus on geographic proximity is intended to ensure that the environmental benefits
10 of RNG stay as close to PGW's service territory as possible, and to help further the
11 development of RNG production in PGW's immediate vicinity. Local or regional
12 sourcing could also provide supply adequacy benefits, as explained below.

13 **Q. HOW MUCH DOES RNG COST COMPARED TO CONVENTIONAL NATURAL**
14 **GAS?**

15 A. While RNG is considered an alternative that produces less greenhouse gas than
16 conventional natural gas, it is more expensive; in response to a recent RFP, a supplier
17 responded with an RNG cost adder ranging from \$13.00 to \$17.50 per Dth over and
18 above the indexed cost of natural gas.

19 **Q. WHY IS PGW PROPOSING TO PURCHASE RNG AT A PRICE LIKELY**
20 **HIGHER THAN CONVENTIONAL NATURAL GAS SUPPLIES?**

21 A. PGW is committed to providing safe, adequate, and reliable service to its customers, and
22 PGW believes that incorporating RNG into its gas supply portfolio would help to further
23 these goals. National, state, and local elected officials support the reduction of emissions
24 and RNG does reduce emissions. Additionally, by purchasing limited amounts of RNG
25 on a pilot basis over the course of two years, PGW would gain necessary experience in

1 the RNG supply market which could become an increasing source of gas supply in the
2 years ahead.

3 **Q. SECTIONS 1317 AND 1318 OF THE PUBLIC UTILITY CODE REQUIRE THAT**
4 **A NATURAL GAS DISTRIBUTION COMPANY PURSUE “A LEAST COST**
5 **FUEL PROCUREMENT POLICY, CONSISTENT WITH THE UTILITY’S**
6 **OBLIGATION TO PROVIDE SAFE, ADEQUATE AND RELIABLE SERVICE**
7 **TO ITS CUSTOMERS.” IS PGW’S PROPOSED RNG PILOT PROGRAM**
8 **CONSISTENT WITH THESE REQUIREMENTS?**

9 A. I believe that it is. Separate and apart from its environmental benefits, including RNG in
10 PGW’s gas mix is a prudent step that will diversify its supply portfolio. This could have
11 benefits if there are supply shortages or disruptions that reduce the ability of PGW’s
12 traditional gas supply sources to deliver adequate supply. Sourcing the RNG from local
13 or regional producers provides a diversity of geographic supply and diversity of supply
14 supports reliability. Moreover, if there is a future change in federal or state law that
15 addresses carbon emissions associated with the energy delivered to customers, PGW will
16 be in a better position to respond and continue to provide adequate supply to customers.
17 Becoming familiar with RNG and developing sources of RNG supply is a prudent step to
18 take now so that PGW will be better prepared to respond in the future.

19 Given these considerations, I believe that the RNG pilot is a reasonable part of
20 PGW’s overall least cost procurement strategy because it is consistent with PGW’s
21 concomitant obligation to provide “safe, adequate and reliable service” to its customers.

22 **Q. WILL PGW SEEK TO CONTINUE PURCHASING RNG IN FUTURE FILINGS?**

23 A. PGW proposes that the pilot program span two GCR periods in order to provide
24 meaningful information and data.⁸ PGW would then consider whether to propose the
25 continuation of RNG purchases on a permanent basis. If so, PGW would then submit

⁸ *i.e.* September 1, 2021 to August 31, 2023.

1 testimony and data in its March 1, 2023 annual GCR filing which includes information
2 about PGW's RNG purchasing (to date) and sets forth the Company's proposal for the
3 continuation of an RNG purchasing program.

4 **Q. DOES THAT COMPLETE YOUR DIRECT TESTIMONY?**

5 A. Yes.

CERTIFICATE OF SERVICE

I hereby certify that this day I served a copy of PGW's March 1, 2021 Section 1307(f) Gas Cost Rate Filing upon the persons listed below in the manner indicated in accordance with the requirements of 52 Pa. Code Section 1.54.

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Dated: March 1, 2021

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