NEW ISSUE BOOK-ENTRY ONLY

RATINGS (Unenhanced): Moody's: "A3"
S&P: "A"
Fitch: "BBB+"
See "Ratings" herein

In the opinion of Co-Bond Counsel, under existing statutes, regulations, rulings and court decisions, interest on the Bonds will not be includible in the gross income of the holders thereof for federal income tax purposes, assuming continuing compliance by the City with the requirements of the Internal Revenue Code of 1986, as amended. Under the laws of the Commonwealth of Pennsylvania, as enacted and construed on the date hereof, interest on the Bonds is exempt from Pennsylvania personal income tax and Pennsylvania corporate net income tax. See "Tax Matters" herein.

$253,925,000
CITY OF PHILADELPHIA, PENNSYLVANIA
GAS WORKS REVENUE BONDS
SIXTEENTH SERIES
(1998 GENERAL ORDINANCE)

consisting of

$203,160,000
GAS WORKS REVENUE BONDS
SIXTEENTH SERIES A

$50,765,000
GAS WORKS REVENUE REFUNDING BONDS
SIXTEENTH SERIES B

Dated: Date of Delivery **Due: August 1, as shown on the inside cover page**

Defined Terms All capitalized terms that are not otherwise defined on this cover page have the meanings provided to such terms in this Official Statement.

The Bonds The City of Philadelphia (the "City") is issuing the Gas Works Revenue Bonds, Sixteenth Series (1998 General Ordinance) (the "Bonds") consisting of $203,160,000 Gas Works Revenue Bonds, Sixteenth Series A (the "Series A Bonds") and $50,765,000 Gas Works Revenue Refunding Bonds, Sixteenth Series B (the "Series B Bonds"). The Bonds will be issued in denominations of $5,000 and integral multiples thereof.

Purpose The proceeds of the Series A Bonds will be used to (i) finance a portion of Philadelphia Gas Works' ("PGW") ongoing Capital Improvement Program, (ii) make a deposit to the Sinking Fund Reserve held under the General Gas Works Revenue Bond Ordinance of 1998 (the "1998 General Ordinance"), and (iii) pay the costs of issuing the Series A Bonds. The proceeds of the Series B Bonds will be used to (i) refund certain bonds currently Outstanding under the 1998 General Ordinance, and (ii) pay the costs of issuing the Series B Bonds. See "Plan of Finance and Estimated Sources and Uses of Funds" herein.

Payment and Security The following is qualified in all respects by the information in this Official Statement under the caption "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS" and the documents referenced under such caption.

The Bonds are being issued as Senior 1998 Ordinance Bonds on a parity with all other Senior 1998 Ordinance Bonds issued and Outstanding under the 1998 General Ordinance. The Bonds are secured by and payable by the City solely from the Gas Works Revenues and the Sinking Fund Reserve.

The Bonds are special obligations of the City payable solely from the sources described herein and neither the taxing power nor the general revenues of the City are pledged for the payment of the principal of, premium, if any, or interest on the Bonds, nor are the Bonds a general obligation of the City. The Bonds do not constitute debt of the City within the meaning of the Constitution of the Commonwealth of Pennsylvania.

The scheduled payment of principal of and interest on the Series A Bonds maturing on August 1 of the years 2024 through 2040, inclusive, August 1, 2045 and August 1, 2050, and the Series B Bonds maturing on August 1, 2024 and August 1 of the years 2036 through 2040, inclusive (collectively, the "Insured Bonds") when due will be guaranteed under an insurance policy to be issued concurrently with the delivery of the Insured Bonds by ASSURED GUARANTY MUNICIPAL CORP.

ASSURED GUARANTY® MUNICIPAL

Redemption The Bonds are subject to redemption prior to maturity. See "DESCRIPTION OF THE BONDS" herein.

Additional Bonds The City is authorized to issue additional bonds under the 1998 General Ordinance under the circumstances and upon satisfaction of certain conditions established in the 1998 General Ordinance, as described herein. See "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS – Authorized Additional 1998 Ordinance Bonds" herein.

Interest Payment Dates Interest on the Bonds is payable semiannually on each February 1 and August 1, commencing on February 1, 2021.

Tax Status For information on certain tax matters relating to the Bonds, see the italicized language at the top of this cover page and "TAX MATTERS" herein.

Delivery Date It is expected that the Bonds will be available for delivery to DTC on or about October 29, 2020.

This cover page contains certain information for quick reference only. It is not a summary of the Bonds or this Official Statement. Investors must read the entire Official Statement, including the Appendices, which are an integral part hereof, to obtain information essential to the making of an informed investment decision regarding the Bonds.

The Bonds are offered when, as and if issued and accepted by the Underwriters, subject to the prior sale, withdrawal, or modification of the offer without notice, and subject to the approval as to the legality of the issuance of the Bonds by Eckert Seamans Cherin & Mellott, LLC and Andre C. Dasent, P.C., Co-Bond Counsel, both of Philadelphia, Pennsylvania. Certain legal matters will be passed upon for the Underwriters by Hardwick Law Firm, LLC, of Philadelphia, Pennsylvania, Counsel to the Underwriters. Certain legal matters will be passed upon for the City by the City of Philadelphia Law Department. Certain legal matters will be passed upon for Philadelphia Gas Works by the Office of General Counsel of the Philadelphia Gas Works and by Eckert Seamans Cherin & Mellott, LLC, of Harrisburg, Pennsylvania. Cozen O'Connor and Ahmad Zaffarese LLC, Co-Disclosure Counsel to the City for PGW, both of Philadelphia, Pennsylvania, will each deliver a letter to the City and the Underwriters regarding certain matters related to PGW. Hawkins Delafield & Wood LLP, of Washington, D.C., as Disclosure Counsel to the City, will deliver a letter to the City and the Underwriters regarding certain matters relating to the information contained in APPENDIX C and APPENDIX D.

Siebert Williams Shank & Co., LLC **PNC Capital Markets LLC**
BofA Securities **Blaylock Van, LLC**

Dated: October 21, 2020

MATURITY SCHEDULE

$203,160,000
CITY OF PHILADELPHIA, PENNSYLVANIA
GAS WORKS REVENUE BONDS
SIXTEENTH SERIES A
(1998 GENERAL ORDINANCE)

Due (August 1)	Amount	Rate	Price	Yield	CUSIP No.†
2022	$2,815,000	5.00%	107.983	0.43%	71783MBD6
2023	500,000	5.00	112.416	0.46	71783MBE4
2024*	3,725,000	5.00	116.843	0.47	71783MBF1
2025*	3,910,000	5.00	120.701	0.58	71783MBG9
2026*	4,105,000	5.00	123.704	0.78	71783MBH7
2027*	4,310,000	5.00	126.214	0.98	71783MBJ3
2028*	4,525,000	5.00	128.315	1.17	71783MBK0
2029*	4,755,000	5.00	130.139	1.34	71783MBL8
2030*	4,990,000	5.00	132.076	1.46	71783MBM6
2031*	5,240,000	5.00	130.699C	1.59C	71783MBN4
2032*	5,500,000	5.00	129.651C	1.69C	71783MBP9
2033*	5,775,000	5.00	128.717C	1.78C	71783MBQ7
2034*	6,065,000	5.00	128.201C	1.83C	71783MBR5
2035*	6,370,000	5.00	127.687C	1.88C	71783MBS3
2036*	6,690,000	5.00	127.177C	1.93C	71783MBT1
2037*	7,025,000	5.00	126.769C	1.97C	71783MBU8
2038*	7,375,000	5.00	126.364C	2.01C	71783MBV6
2039*	7,745,000	5.00	125.960C	2.05C	71783MBW4
2040*	8,130,000	5.00	125.558C	2.09C	71783MBX2

$46,225,000 4.00% Term Bonds due August 1, 2045*, Yield: 2.46C%, Price: 113.281C, CUSIP No.† 71783MBY0
$57,385,000 5.00% Term Bonds due August 1, 2050*, Yield: 2.35C%, Price: 122.979C, CUSIP No.† 71783MBZ7

* Insured maturity. See "BOND INSURANCE" within.

† CUSIP is a registered trademark of American Bankers Association (the "ABA"). CUSIP data is provided by CUSIP Global Services, which is managed on behalf of the ABA by S&P Global Market Intelligence, a part of S&P Global Inc. The CUSIP numbers listed above are being provided solely for the convenience of Bondholders of the Bonds only at the time of original issuance of the Bonds and the City, the Philadelphia Gas Works and the Underwriters do not make any representation with respect to such CUSIP numbers or undertake any responsibility for their accuracy now or at any time in the future. The CUSIP number for a specific maturity is subject to being changed after the issuance of such Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part of such maturity or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of such maturity of the Bonds.

C Yield/Price to the August 1, 2030 optional call date.

$50,765,000
CITY OF PHILADELPHIA, PENNSYLVANIA
GAS WORKS REVENUE REFUNDING BONDS
SIXTEENTH SERIES B
(1998 GENERAL ORDINANCE)

Due (August 1)	Amount	Rate	Price	Yield	CUSIP No.†
2021	$ 5,000	5.00%	103.450	0.42%	71783MCA1
2022	500,000	5.00	107.983	0.43	71783MCB9
2023	3,605,000	5.00	112.416	0.46	71783MCC7
2024*	2,435,000	5.00	116.843	0.47	71783MCD5
2036*	8,165,000	4.00	116.486C	2.12C	71783MCE3
2037*	8,490,000	4.00	116.104C	2.16C	71783MCF0
2038*	8,830,000	4.00	115.723C	2.20C	71783MCG8
2039*	9,185,000	4.00	115.343C	2.24C	71783MCH6
2040*	9,550,000	4.00	114.965C	2.28C	71783MCJ2

* Insured maturity. See “BOND INSURANCE” within.

† CUSIP is a registered trademark of American Bankers Association (the “ABA”). CUSIP data is provided by CUSIP Global Services, which is managed on behalf of the ABA by S&P Global Market Intelligence, a part of S&P Global Inc. The CUSIP numbers listed above are being provided solely for the convenience of Bondholders of the Bonds only at the time of original issuance of the Bonds and the City, the Philadelphia Gas Works and the Underwriters do not make any representation with respect to such CUSIP numbers or undertake any responsibility for their accuracy now or at any time in the future. The CUSIP number for a specific maturity is subject to being changed after the issuance of such Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part of such maturity or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of such maturity of the Bonds.

C Yield/Price to the August 1, 2030 optional call date.

CITY OF PHILADELPHIA, PENNSYLVANIA

MAYOR
HONORABLE JAMES F. KENNEY

MAYOR'S CHIEF OF STAFF
James Engler

MAYOR'S CABINET

Tumar Alexander.	Managing Director
Rob Dubow	Director of Finance
Marcel S. Pratt	City Solicitor
Nefertiri Sickout	Acting Chief Diversity, Equity & Inclusion Officer
Stephanie Tipton	Chief Administrative Officer
Sylvie Gallier Howard	Acting Director of Commerce
Anne Fadullon	Director of Planning & Development
Otis Hackney	Chief Education Officer
Sheila Hess	City Representative
Sarah Stevenson	Chief Integrity Officer
Alexander F. DeSantis	Inspector General
Richard Lazer	Deputy Mayor for Labor Relations
Cynthia Figueroa	Deputy Mayor for Children and Families
Deborah Mahler	Deputy Mayor for Intergovernmental Affairs

Acting City Treasurer
Jacqueline Dunn

PHILADELPHIA GAS WORKS
800 W. Montgomery Avenue
Philadelphia, Pennsylvania 19122

Craig E. White	President and Chief Executive Officer
Douglas A. Moser	Executive Vice President and Acting Chief Operating Officer
Joseph F. Golden, Jr.	Executive Vice President and Acting Chief Financial Officer
Charles J. Grant	SVP, HR, Labor Relations, and Corporate Communication
Raquel N. Guzmán, Esq.	Senior Vice President, Legal and General Counsel
Gregory N. Stunder, Esq.	Vice President, Regulatory and Legislative Affairs
Raymond J. Welte	Senior Vice President, Field Operations and Supply Chain
Eloise N. Young	Senior Vice President, Strategic Planning and Information Services
John C. Zuk	Senior Vice President, Gas Management

CITY CONTROLLER
Rebecca Rhynhart

CO-FINANCIAL ADVISORS
PFM Financial Advisors LLC
Phoenix Capital Partners, LLP

FISCAL AGENT
U.S. Bank National Association

No dealer, broker, salesperson or other person has been authorized by the City, the Philadelphia Gas Works ("PGW") or the Underwriters to give any information or to make representations, other than as contained in this Official Statement, and if given or made, such other information or representations must not be relied upon as having been authorized by the City, PGW or the Underwriters. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Bonds by any person, in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale.

The information set forth herein has been furnished by the City and PGW and includes information obtained from other sources, all of which are believed to be reliable. The paragraphs under the heading "UNDERWRITING" have been furnished by the Underwriters for inclusion in that section of this Official Statement. The information and expressions of opinion herein are subject to change without notice and neither the delivery of this Official Statement nor any of the Bonds shall, under any circumstances, create any implication that there has been no change in the affairs of PGW or the City since the date hereof. Such information and expressions of opinion are made for the purpose of providing information to prospective investors and are not to be used for any other purpose or relied on by any other party.

This Official Statement is submitted in connection with the sale of the Bonds described herein and may not be reproduced or used, in whole or in part, for any other purpose. This Official Statement is not to be construed as a contract or agreement among the City, PGW, the Underwriters and the purchasers or owners of any Bonds. This Official Statement is being provided to prospective purchasers either in bound printed form ("Original Bound Format") or in electronic format on the following websites: www.munios.com and www.emma.msrb.org. This Official Statement may be relied upon only if it is in its Original Bound Format or if it is printed in full directly from such websites.

The order and placement of materials in this Official Statement, including the Appendices, are not to be deemed a determination of relevance, materiality or importance, and this Official Statement, including the cover page, the inside cover page and the Appendices, must be considered in its entirety. The captions and headings in this Official Statement are for convenience only and in no way define, limit or describe the scope or intent, or affect the meaning or construction, of any provisions or sections of this Official Statement. The offering of the Bonds is made only by means of this entire Official Statement.

The statements contained in this Official Statement, including in the Appendices, and in any other information provided by PGW and the City and other parties to the transactions described herein that are not purely historical are forward-looking statements. Such forward-looking statements can be identified, in some cases, by terminology such as "may," "will," "should," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "illustrate," "example," and "continue," or the singular, plural, negative or other derivations of these or other comparable terms. Readers should not place undue reliance on forward-looking statements. All forward-looking statements included in this Official Statement are based on information available to such parties on the date thereof, and neither PGW nor the City assumes any obligation to update any such forward-looking statements. The forward-looking statements included herein are necessarily based on various assumptions and estimates and are inherently subject to various risks and uncertainties, including, but not limited to, risks and uncertainties relating to the possible invalidity of the underlying assumptions and estimates and possible changes or developments in various important factors. Accordingly, actual results may vary from the projections, forecasts and estimates contained in this Official Statement and such variations may be material, which could affect the ability of the City to fulfill some or all of the obligations under the Bonds.

The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, their responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

While prospective purchasers of the Bonds should read this Official Statement in its entirety, it should be noted that the 2020 Report as defined herein is not incorporated by reference in this Official Statement. See "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS – Gas Works Revenues – *Supplemental Ordinances and Certain Required Findings; 2020 Report Not Included or Incorporated in this Official Statement and No Reliance Thereon*" herein.

In connection with the offering of the Bonds, the Underwriters may over allot or effect transactions which stabilize or maintain the market price of the Bonds at levels above those which might otherwise prevail in the open market. Such stabilization, if commenced, may be discontinued at any time.

These securities have not been recommended by any federal or state securities commission or regulatory authority. Furthermore, the foregoing authorities have not confirmed the accuracy or determined the adequacy of this document. Any representation to the contrary is a criminal offense. The Bonds have not been registered with the Securities and Exchange Commission under the Securities Act of 1933, as amended, in reliance upon the exemption contained in Section 3(a)(2) of such act.

Assured Guaranty Municipal Corp. ("AGM") makes no representation regarding the Bonds or the advisability of investing in the Bonds. In addition, AGM has not independently verified, makes no representation regarding, and does not accept any responsibility for the accuracy or completeness of this Official Statement or any information or disclosure contained herein, or omitted herefrom, other than with respect to the accuracy of the information regarding AGM supplied by AGM and presented under the heading "BOND INSURANCE" and "APPENDIX B - Specimen Municipal Bond Insurance Policy".

TABLE OF CONTENTS

PAGE

[THIS PAGE INTENTIONALLY LEFT BLANK]

OFFICIAL STATEMENT
$253,925,000
CITY OF PHILADELPHIA, PENNSYLVANIA
GAS WORKS REVENUE BONDS
SIXTEENTH SERIES
(1998 GENERAL ORDINANCE)

consisting of

$203,160,000
GAS WORKS REVENUE BONDS
SIXTEENTH SERIES A
and
$50,765,000
GAS WORKS REVENUE REFUNDING BONDS
SIXTEENTH SERIES B

INTRODUCTION

This introduction is intended to provide an overview of matters that are described in more detail in this Official Statement, and as such is qualified by reference to the entire Official Statement. The Official Statement includes the cover page, the inside cover page, the pages prior to and including the Table of Contents, this introduction, and all appendices to the Official Statement. The definitions of certain capitalized terms appear in APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE." Capitalized terms not otherwise defined shall have the respective meanings set forth in the 1998 General Ordinance (as defined below).

General

The City of Philadelphia, Pennsylvania (the "City") is issuing the City of Philadelphia, Pennsylvania Gas Works Revenue Bonds, Sixteenth Series (1998 General Ordinance) (the "Bonds") consisting of $203,160,000 Gas Works Revenue Bonds, Sixteenth Series A (the "Series A Bonds") and $50,765,000 Gas Works Revenue Refunding Bonds, Sixteenth Series B (the "Series B Bonds") which are special obligations of the City. This Official Statement describes the Bonds, the purposes for which they are being issued, the security and sources of payment of the Bonds, and other related matters.

Purpose; Use of Proceeds

The proceeds of the Series A Bonds will be used to (i) finance a portion of Philadelphia Gas Works' ("PGW" or the "Gas Works") ongoing Capital Improvement Program, (ii) make a deposit to the Sinking Fund Reserve held under the 1998 General Ordinance, and (iii) pay the costs of issuing the Series A Bonds. The proceeds of the Series B Bonds will be used to (i) currently refund the City's Gas Works Revenue Bonds, Ninth Series maturing on August 1 in the years 2021 through 2024, inclusive, and 2040 currently Outstanding under the 1998 General Ordinance (the "Refunded Bonds"), and (ii) pay the costs of issuing the Series B Bonds. The refunding of the Refunded Bonds will result in debt service savings to the City. See "PLAN OF FINANCE AND ESTIMATED SOURCES AND USES OF FUNDS."

The Bonds

The Bonds of the respective Series will be issued in the aggregate principal amounts, the principal amounts per maturity, and at the interest rates, yields and prices shown on the inside cover page. Interest on the Bonds will be payable on each February 1 and August 1, commencing February 1, 2021.

The Bonds are being issued pursuant to: (i) the First Class City Revenue Bond Act of the Commonwealth of Pennsylvania (the "Act"); (ii) the General Gas Works Revenue Bond Ordinance of 1998, as amended and supplemented prior to March 26, 2015 (the "Original Ordinance"); (iii) the Thirteenth

Supplemental Ordinance to the General Gas Works Revenue Bond Ordinance of 1998 (the "Thirteenth Supplemental Ordinance"); (iv) the Fifteenth Supplemental Ordinance to the General Gas Works Revenue Bond Ordinance of 1998 adopted by Philadelphia City Council ("City Council") on June 25, 2020 and signed by the Mayor on June 26, 2020 (the "Fifteenth Supplemental Ordinance" and, together with the Original Ordinance, the Thirteenth Supplemental Ordinance and a Fourteenth Supplemental Ordinance (related to the issuance of certain other Senior 1998 Ordinance Bonds (as defined herein) the "1998 General Ordinance"); and (v) the Bond Authorization for the Bonds adopted by the Bond Committee of the City (consisting of the Mayor, the City Controller and the City Solicitor and acting by a majority thereof) (the "Bond Committee") (the "Sixteenth Series Bond Authorization").

The Bonds will be issued in book-entry form with no physical distribution of the Bonds being made to the public. The Depository Trust Company ("DTC") will act as securities depository for the Bonds. U.S. Bank National Association has been appointed as Fiscal Agent under the 1998 General Ordinance, and as such will also act as paying agent, registrar, and Sinking Fund Depositary of the Sinking Fund (as defined below).

Security and Sources of Payment

The Bonds will be issued as senior bonds under the 1998 General Ordinance ("Senior 1998 Ordinance Bonds"), and will be secured by a pledge of, lien on, and security interest in all Gas Works Revenues (as defined herein) and the Sinking Fund Reserve. Gas Works Revenues are generally defined in the 1998 General Ordinance to include all operating and non-operating revenues of PGW derived from its activities and assets involved in the supply, manufacture, storage and distribution of gas. See "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS" and APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE."

The Bonds will be secured on a parity with all other Senior 1998 Ordinance Bonds, and the obligations of the City to make payments (other than termination payments) due on Qualified Swap and Exchange Agreements, as described below under the caption "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS." The City is authorized to issue additional 1998 Ordinance Bonds (as defined herein), which may be either on a parity with or subordinate to the Senior 1998 Ordinance Bonds, subject to the satisfaction of certain conditions described below under the caption "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS – Authorized Additional 1998 Ordinance Bonds" and APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE."

Rate Covenant

The City has covenanted in the 1998 General Ordinance that, for so long as any 1998 Ordinance Bonds are Outstanding, the City will, at a minimum, impose, charge and collect in each Fiscal Year of PGW such gas rates and charges as shall, together with all other Gas Works Revenues to be received in such Fiscal Year, equal not less than an amount needed to pay, among other costs, the sum of: (i) certain operating expenses of PGW (costs and expenses necessary and appropriate to operate and maintain the Gas Works in good operable condition), and (ii) 150% of debt service on Senior 1998 Ordinance Bonds. See "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS – Rate Covenant and Rate Requirements" and APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE."

Sinking Fund; Sinking Fund Reserve

The Act requires that a bond ordinance authorizing the issuance of bonds must provide for "the establishment and maintenance of a sinking fund." The 1998 General Ordinance establishes a Sinking Fund, which operates as a debt service payment fund. The Sinking Fund is held in the name of the City separate and apart from all other accounts of the City, and the City deposits in the Sinking Fund from Gas Works Revenues the amounts needed to pay when due debt service on Senior 1998 Ordinance Bonds. See the third paragraph under "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS – Gas Works Revenues – *Order of Application of Gas Works Revenues*" and APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE."

The 1998 General Ordinance also establishes a Sinking Fund Reserve as part of the Sinking Fund. The City is required to deposit in the Sinking Fund Reserve an amount sufficient to cause the amount therein to be equal to the Sinking Fund Reserve Requirement. Such deposits can be made from either the proceeds of each Series of bonds secured by the Sinking Fund Reserve, available Gas Works Revenues or some combination of both. The Sinking Fund Reserve Requirement is equal to the greatest amount of debt service requirements on bonds secured by the Sinking Fund Reserve in any Fiscal Year. The Sinking Fund Reserve Requirement may also be met by the use of letters of credit or other credit facilities. The Bonds and the other Senior 1998 Ordinance Bonds currently Outstanding are secured by the Sinking Fund Reserve. See "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS – Sinking Fund Reserve" and APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE."

Special Obligations

The Bonds are special obligations of the City payable solely from the sources described herein and neither the taxing power nor the general revenues of the City are pledged for the payment of the principal of, premium, if any, or interest on the Bonds, nor are the Bonds a general obligation of the City. The Bonds do not constitute debt of the City within the meaning of the Constitution of the Commonwealth of Pennsylvania (the "Commonwealth").

Philadelphia Gas Works

PGW is owned by the City and is accounted for in the City's audited financial statements as a component unit of the City. PGW prepares a separate Comprehensive Annual Financial Report that includes annual financial statements audited by an independent auditor and an unaudited statistical section. See "THE PGW CAFR."

PGW is the largest municipally-owned gas utility in the nation, is responsible for the acquisition and storage of natural gas and is the sole distributer of natural gas within the limits of the City. Such limits also define the service area of PGW which, being the corporate limits of the City, is a mostly dense urban area of 143 square miles located in southeast Pennsylvania along the Delaware River and within the smallest county of the Commonwealth.

PGW is principally a gas distribution utility, with a distribution system of approximately 3,041 miles of gas mains and 476,605 service lines. In addition, PGW operates facilities for the liquefaction, storage, and vaporization of natural gas to supplement gas supply taken directly from interstate pipeline and storage companies. The principal PGW natural gas supply facilities include nine City gate stations, owned in large part by the interstate natural gas pipeline companies serving PGW, Texas Eastern Transmission ("Texas Eastern"), a division of Enbridge (formerly, Spectra Energy) and Transcontinental Gas Pipe Line Corporation ("Transco-Williams"), and two liquefied natural gas ("LNG") plants owned by the City and operated by PGW.

PGW's operations are managed by the Philadelphia Facilities Management Corporation ("PFMC"), a Pennsylvania not-for-profit corporation whose Board is appointed by the Mayor. PFMC's responsibilities are set forth in a Management Agreement between the City and PFMC dated December 29, 1972, as subsequently amended ("Management Agreement"), which delegates responsibility for PGW's operation to an executive management team provided by PFMC. Under the Management Agreement, those responsibilities that are not specifically granted to PFMC are the responsibilities of the Philadelphia Gas Commission ("PGC" or the "Gas Commission"), except to the extent preempted by the Pennsylvania Public Utility Commission (the "PUC") pursuant to the Pennsylvania Natural Gas Choice and Competition Act (the "Gas Choice Act"). The Gas Choice Act made PGW subject to regulation by the PUC effective July 1, 2000, and provides that choice among natural gas suppliers will be provided to PGW's customers.

[Remainder of Page Intentionally Left Blank]

The following summary chart describes the management and governance of PGW:

Organization	Function
City	• Owns PGW property • City administration reviews certain transactions and processes (chiefly through the Director of Finance) • City Council enacts legislation for the functioning of PGW (e.g., the capital budget, real estate transactions, pension modifications and gas supply contracts)
PGC	• Consists of the City Controller, two members appointed by the City Council and two members appointed by the Mayor • Responsibilities include: • approval of certain executive personnel provided by PFMC • review of gas supply contracts for approval by City Council • approval of PGW's operating budget • review of PGW's capital budgets for approval by City Council • review and approval of real estate transactions for approval by City Council
PFMC	• Incorporated by the City in 1972 for the purpose of operating PGW • Governed by a seven-member board of directors appointed by the Mayor • Provides executive management for PGW • Directs operation of PGW facilities and operations
PGW	• Manages construction, operation and maintenance of the gas system on a day-to-day basis • PGW executive management is responsible for hiring PGW staff
PUC	• Regulates rates, customer service and safety

2020 Report Not Included or Incorporated in this Official Statement and No Reliance Thereon

In connection with the enactment of the Fifteenth Supplemental Ordinance on June 26, 2020, pursuant to the requirements of the Act and the 1998 General Ordinance, City Council made certain findings relating to the adequacy of Gas Works Revenues to pay debt service on all then-Outstanding 1998 Ordinance Bonds, Gas Works Notes (hereafter defined) and the Series A Bonds. Such findings, in conformance with the Act and the 1998 General Ordinance, were based on, among other things, the report of the City's Director of Finance. As permitted by the Act, the report of the Director of Finance, as the chief fiscal officer of the City, was based on a report, dated April 24, 2020, prepared by an engineering firm engaged by PFMC on behalf of PGW to evaluate PGW (the "2020 Report"). The 2020 Report was attached to the report of the Director of Finance, as required by the Act, and is part of the proceedings of City Council relating to the enactment of the Fifteenth Supplemental Ordinance.

In connection with the authorization of the Series A Bonds, the 2020 Report is available to the public at: https://phila.legistar.com/LegislationDetail.aspx?ID=4432724&GUID=11255DD2-7736-4157-BE07-5C0DDDC5D3F0&Options=ID%7CText%7C&Search=200296 (i.e., at the City Council's website without charge) and https://fjdefile.phila.gov/efsfjd/zk_fjd_public_qry_03.zp_dktrpt_setup_idx?uid=B3iTMlsIBIolqsSYDxam&o=H5o7GVi8X!rzHdb (i.e., at the website of the Office of Judicial Records of the Court of Common Pleas of

Philadelphia County with case ID: 200601760 for a charge), and at the office of the Chief Clerk of the City Council, Room 402 City Hall, Philadelphia, Pennsylvania.

The 2020 Report is not incorporated by reference herein and prospective purchasers of the Bonds should not rely upon it in making a decision with respect to any purchase of the Bonds, nor should the 2020 Report be construed as a contract with Bondholders or as an invitation or inducement to engage or otherwise participate in the proposed or any other transaction, to provide any financing, or to make any investment.

For a further discussion of the authorization of the Bonds and the 2020 Report, see "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS – Gas Works Revenues – *Supplemental Ordinances and Certain Required Findings; 2020 Report Not Included or Incorporated in this Official Statement and No Reliance Thereon*" below.

COVID-19 Response

General. On January 31, 2020, the United States Department of Health and Human Services declared a public health emergency for the United States to aid the nation's health care community in responding to the novel strain of coronavirus ("COVID-19"). On March 11, 2020, the World Health Organization declared the COVID-19 outbreak a global pandemic, and on March 13, 2020, the President of the United States declared a national state of emergency.

Due to the increase in the number of COVID-19 cases around the country and internationally, federal, state, and local bodies have enacted legislation, and other administrative orders, directives, and guidance to mitigate the impacts of COVID-19 on the general population and the economy. Since March 2020, the Commonwealth has been under a disaster emergency order as issued by the Governor. Such order was followed by stay at home orders for certain counties in the Commonwealth, which was extended to the entire Commonwealth on April 1, 2020. In subsequent executive orders, the restrictions of the Governor's stay at home order have generally been eased throughout the Commonwealth; provided, however, that in an order of July 16, 2020, the Governor directed certain targeted mitigation orders which included a requirement that businesses conduct their operations through teleworking unless not possible. In those circumstances where telework is not possible, the order allows employees to conduct in-person business operations, provided that the businesses fully comply with applicable Commonwealth orders (*i.e.*, the business safety order, the worker safety order, and the masking order). The Mayor and City Council have also taken various emergency measures and other actions to respond to the spread of COVID-19 in the City. Similar emergency measures have been implemented in neighboring counties in New Jersey and Delaware.

On May 1, 2020, the Governor announced a three-phase plan for easing the social and economic restrictions with restrictions gradually easing on a county by county basis as each county achieves certain benchmarks in managing and containing the spread of the virus. The three phases of the plan are identified as the red phase, during which the strict limitations of the stay at home order remain in place; the yellow phase, during which some restrictions are to be eased; and the green phase, during which most limitations of the stay at home and business closure restrictions would be lifted consistent with public health safeguards. All counties in the Commonwealth are currently in the green phase. The City has adopted a "modified, restricted green phase," which slows certain aspects of the reopening process. On September 8, 2020, the City lifted restrictions to permit the reopening of indoor dining, live theatre venues, and movie theatre operations. No assurances can be given that circumstances will not deteriorate in the future as a result of a subsequent COVID-19 outbreak.

The City continues to closely monitor and assess the effects of the COVID-19 pandemic and its impact on the City's financial position and operations. The complete fiscal impact of COVID-19 on the City is likely to change significantly as the situation further develops and cannot be fully quantified at this time. For more information on the City's response on COVID-19 and the related financial impact on the City, see APPENDIX C – "OVERVIEW – Fiscal Health of the City – COVID-19."

PGW's Response. Beginning in the first quarter of 2020 prior to the Commonwealth's declaration of emergency, PGW's senior management convened a multi-disciplinary internal working group in order to ensure overall safety, and to maintain continuity of operations in the face of likely business impacts of COVID-19. PGW customers have not experienced any significant service disruption due to COVID-19 and no such interruptions to service are currently anticipated. PGW has implemented various response measures to address the challenges posed by COVID-19 including, among other things, adopting modified works schedules and remote work arrangements, closing customer service centers to the public, suspending service terminations for reasons other than safety, encouraging customers to use assistance and conservation programs to address financial difficulties posed by the economic consequences of COVID-19, and undertaking health and safety protocols to protect customers, contractors and employees. For a more detailed discussion of these various measures and certain recent financial and operating information for PGW, see "PHILADELPHIA GAS WORKS – COVID-19 Response, Recent Trends and Uncertainties."

See "PHILADELPHIA GAS WORKS – Business Continuity Plans" regarding a general discussion of PGW's emergency response plans, including with respect to pandemics, such as COVID-19. See "PHILADELPHIA GAS WORKS - Insurance, Loss Reserves and Cost Recovery" regarding COVID-19 in relation to certain insurance matters. See "GAS SERVICE TARIFF AND RATES – Collections" for a discussion of a moratorium on utility shut-offs for late payments imposed in response to COVID-19 by the PUC and the PUC's recent modification thereto, and PGW's recent collection results and actions, including the temporary suspension of imposing late charges on customers for non-payment. See "THE CAPITAL IMPROVEMENT PROGRAM –Cast Iron Main Replacement" for a discussion of the impact of COVID-19 on PGW's capital program. See "PGW BUDGETS AND FINANCES – Accounts Receivable" for a discussion of the impact of COVID-19 on PGW's account receivables. See also "MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS AND FINANCIAL CONDITION FOR THE ELEVEN MONTHS ENDED JULY 31, 2020 AND JULY 31, 2019 (UNAUDITED)."

PGW's management considers that it is likely that the impact of COVID-19 on PGW, its operations and financial position will continue to change as circumstances and events evolve. The duration, severity, and degree of the impact of COVID-19 is difficult to forecast due to the dynamic nature of the pandemic, including uncertainty about any potential "spikes" or "second wave" in the disease and the potential public health impacts of the interplay of COVID-19 with annual influenza strains. PGW believes that it may be some time before it is able to determine the full long-term impact of COVID-19 on PGW's business operations.

Replacement of City Treasurer

On September 25, 2020, Christian Dunbar was terminated from his employment as the City Treasurer following the announcement of federal criminal charges against him, which were filed by the United States Attorney's Office for the Eastern District of Pennsylvania. Such charges involve alleged embezzlement and immigration fraud prior to Mr. Dunbar's employment with the City. Jacqueline Dunn was appointed Acting City Treasurer on September 25, 2020. For a further discussion, see "THE GOVERNMENT OF THE CITY OF PHILADELPHIA – Elected and Appointed Officials" in APPENDIX C.

Certain Terminology

As used in this Official Statement, the terms "gas" and "natural gas" are interchangeable.

The Fiscal Year of PGW begins on September 1 and ends on August 31 of the following calendar year. For example, "Fiscal Year 2021" when used in connection with PGW refers to the Fiscal Year ending August 31, 2021. The City's Fiscal Year begins on July 1 and ends on June 30 of the following calendar year. For example, "Fiscal Year 2021" or "FY 2021" when used in connection with the City refers to the fiscal year ending June 30, 2021.

Unless otherwise defined within this Official Statement, when referred to individually, each Series of City of Philadelphia, Pennsylvania Gas Works Revenue Bonds (1998 General Ordinance) is referred to by its numerical designation, followed by the words "Series Bonds."

PLAN OF FINANCE AND ESTIMATED SOURCES AND USES OF FUNDS

Plan of Finance

The proceeds of the Series A Bonds will be used to (i) finance a portion of PGW's ongoing Capital Improvement Program, (ii) make a deposit to the Sinking Fund Reserve held under the 1998 General Bond Ordinance, and (iii) pay the costs of issuing the Series A Bonds.

The proceeds of the Series B Bonds will be used to (i) refund the Refunded Bonds, and (ii) pay the costs of issuing the Series B Bonds.

A portion of the proceeds of the Series B Bonds in an amount equal to the redemption price of the Refunded Bonds plus accrued interest thereon to November 10, 2020, the date set for redemption of the Refunded Bonds, will be (i) deposited in an escrow fund established under an Escrow Deposit Agreement between the City and U.S. Bank National Association, as escrow agent, (ii) invested in United States Treasury Securities State and Local Government Series, Daily Deposit Obligations, and (iii) applied to the payment of the redemption price of the Refunded Bonds and accrued interest on November 10, 2020.

See "Verification" herein.

The refunding of the Refunded Bonds will result in debt service savings to the City.

Estimated Sources and Uses of Funds

The sources and uses of funds are estimated to be as follows:

[Remainder of Page Intentionally Left Blank]

Estimated Sources:	**Series A Bonds**	**Series B Bonds**	**Total**
Principal Amount of the Bonds	$203,160,000.00	$50,765,000.00	$253,925,000.00
Original Issue Premium	45,570,449.75	7,837,875.80	53,408,325.55
Total Sources	$248,730,449.75	$58,602,875.80	$307,333,325.55
Estimated Uses:			
Deposit to Capital Improvement Fund	$240,000,000.00	$ --	$240,000,000.00
Refunding of Refunded Bonds	--	57,870,356.88	57,870,356.88
Deposit to Sinking Fund Reserve	5,619,641.98	--	5,619,641.98
Costs of Issuance[(†)]	3,110,807.77	732,518.92	3,843,326.69
Total Uses	$248,730,449.75	$58,602,875.80	$307,333,325.55

[(†)] Includes the fees and expenses of various counsel and the Fiscal Agent, fees of accountants, fees of financial advisors, verification fees, rating agency fees, printing and publication costs, contingency, bond insurance premium, Underwriters' discount, and other expenses related to the issuance of the Bonds.

Verification

American Municipal Tax-Exempt Compliance (AMTEC) of Avon, Connecticut (the "Verification Agent") will deliver to the City and PGW, on or before the date of the delivery of the Bonds, its report (the "Verification Report") indicating that it has verified the mathematical sufficiency of the information provided by the City, PGW, and their representatives with respect to the amount of proceeds of the Series B Bonds necessary to redeem the Refunded Bonds on November 10, 2020.

The verification performed by the Verification Agent will be based solely upon data, information and documents provided to the Verification Agent. The Verification Report will state that the Verification Agent has no obligation to update the Verification Report for events occurring, or data or information coming to their attention, subsequent to the date of the Verification Report.

DESCRIPTION OF THE BONDS

General

The Bonds of the respective Series will be issued in the denominations of $5,000 and integral multiples thereof and will mature on the dates and in the principal amounts, and will bear interest from their date of delivery at the interest rates, all as set forth on the inside cover page of this Official Statement. Interest on the Bonds is payable on February 1 and August 1, commencing February 1, 2021, and is calculated on the basis of a 360-day year of twelve 30-day months.

The Bonds are available only in book-entry form as fully-registered bonds without coupons. When issued, the Bonds will be registered in the name of Cede & Co., as nominee for DTC, to which payments of principal and interest will be made. Purchasers of the Bonds will not receive physical delivery of bond certificates representing their ownership interests during the period during which a nominee of DTC is owner of the Bonds. So long as DTC or its nominee is the registered owner of the Bonds, principal of and interest on the Bonds are payable directly to such nominee for redistribution to Participants and in turn to Beneficial Owners as described herein. For so long as any purchaser is the Beneficial Owner of Bonds, such purchaser must maintain an account with a broker or dealer who is, or acts through, a Participant to receive payment of the principal of and interest on such Bonds. See APPENDIX G – "BOOK-ENTRY ONLY SYSTEM" herein.

Optional Redemption of Certain of the Bonds at Par

Series A Bonds. The Series A Bonds maturing on or after August 1, 2031 are subject to optional redemption, at the direction of the City, in whole at any time or in part from time to time on or after August 1, 2030, and in any order of maturity as may be designated by the City, at a redemption price equal to 100% of the principal amount of the Series A Bonds so redeemed, plus accrued interest to the redemption date.

Series B Bonds. The Series B Bonds maturing on or after August 1, 2036 are subject to optional redemption, at the direction of the City, in whole at any time or in part from time to time on or after August 1, 2030, and in any order of maturity as may be designated by the City, at a redemption price equal to 100% of the principal amount of the Series B Bonds so redeemed, plus accrued interest to the redemption date.

Mandatory Redemption

The Series A Bonds maturing on August 1, 2045 and August 1, 2050 are subject to mandatory redemption prior to maturity, in part, by lot, at the times and in the amounts set forth below at a price equal to 100% of the principal amount of such Bonds being redeemed, plus accrued interest to the date of redemption:

Series A Bonds

Year (August 1)	Principal Amount	Year (August 1)	Principal Amount
2041	$8,535,000	2046	$10,385,000
2042	8,875,000	2047	10,905,000
2043	9,230,000	2048	11,450,000
2044	9,600,000	2049	12,020,000
2045*	9,985,000	2050*	12,625,000

* Maturity

In the event a portion, but not all, of the Bonds of a Series maturing on a particular date are to be redeemed pursuant to optional redemption or purchased by the City and presented to the Fiscal Agent for cancellation, then the principal amount of any remaining mandatory sinking fund redemptions or the final maturity applicable to such Bonds shall be reduced (subject to the ability to effect future redemptions of the Bonds of such maturity and Series in authorized denominations) in such amounts as specified by the City.

Selection of Bonds to be Called for Redemption

During the period when all of the Bonds are registered in the name of a nominee of DTC, if less than all of the Bonds of a maturity of a Series are being redeemed, DTC's current practice is to determine by lot the amount of the interest of each Participant (as defined in APPENDIX G – "BOOK-ENTRY ONLY SYSTEM") in such maturity to be redeemed. If the Bonds are not in book-entry form, then, if less than all of the Bonds of a maturity and Series are to be redeemed, the particular Bonds to be called for redemption will be selected by lot or by such other method as the Fiscal Agent deems fair and appropriate.

Notice of Redemption of Bonds

Notice of redemption of Bonds shall be made not less than thirty (30) days nor more than (60) days before the date fixed for redemption to the applicable Registered Owners appearing on the Bond Register of the Bonds to be redeemed. During the period when all of the Bonds of a Series are registered in the name of a nominee of DTC, the Fiscal Agent will send all redemption notices to such nominee, and DTC will be responsible for notifying Participants, and Participants and Indirect Participants are responsible for notifying Beneficial Owners. Neither the Fiscal Agent, the City, nor PGW is responsible for sending notices to Beneficial Owners or for the consequences of any action or inaction by the City or PGW as a result of the response or failure to respond by DTC or its nominee as Bondowner. ("Indirect Participants" and "Beneficial Owners" are defined in APPENDIX G – "BOOK-ENTRY ONLY SYSTEM.")

If the Bonds are not in book-entry form, notice of any redemption will be mailed, first class postage prepaid, addressed to the registered owners of the Bonds called for redemption at the addresses appearing in the registration books kept by the bond registrar. Not more than sixty (60) days following the applicable redemption date, a further notice will be mailed as described above to the Bondholders of any Bonds called for redemption and not then presented for payment.

Any notice of redemption provided in accordance with the provisions described above shall be conclusively presumed to have been duly given, whether or not such notice is actually received by the Bondholders. No defect in the notice with respect to any Bond (whether in the form of notice or the providing thereof) shall affect the validity of the redemption proceedings for any other Bonds.

A notice with respect to an optional redemption of the Bonds may state that it is conditioned upon the deposit of moneys with the Fiscal Agent on or before the date fixed for redemption and in such event, such notice shall be of no effect unless such moneys are deposited.

SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS

Pledge of Revenues and Funds

The Bonds and each Series of bonds or notes previously issued or to be issued under the 1998 General Ordinance (collectively, "1998 Ordinance Bonds") are special obligations of the City secured by and payable by the City solely from (i) the Gas Works Revenues, and (ii) unless otherwise set forth in the Supplemental Ordinance authorizing such 1998 Ordinance Bonds, the Sinking Fund Reserve. The Bonds and all Outstanding Senior 1998 Ordinance Bonds are secured by the Sinking Fund Reserve. Bonds and notes issued as subordinate bonds under the 1998 General Ordinance ("Subordinate 1998 Ordinance Bonds") are payable from Gas Works Revenues, subordinate to payment of the Bonds and other Senior 1998 Ordinance Bonds. The Subordinate 1998 Ordinance Bonds are not secured by the Sinking Fund Reserve. See "– Gas Works Revenues" and "– Sinking Fund Reserve" below.

The Bonds are special obligations of the City payable solely from the sources described herein and neither the taxing power nor the general revenues of the City are pledged for the payment of the principal of, premium, if any, or interest on the Bonds, nor are the Bonds a general obligation of the City. The Bonds do not constitute debt of the City within the meaning of the Constitution of the Commonwealth.

Outstanding 1998 Ordinance Bonds

Bonds and notes issued under the 1998 General Ordinance may be issued as Senior 1998 Ordinance Bonds or as Subordinate 1998 Ordinance Bonds. As of September 30, 2020, the City has issued fifteen Series of Senior 1998 Ordinance Bonds in an aggregate principal amount of $2,723,895,000, together with an aggregate principal amount of $221,000,000 of Subordinate 1998 Ordinance Bonds in the form of CP Capital Project Notes (as defined below). As of such date, there was $911,610,000 of Outstanding 1998 Ordinance Bonds, which consisted entirely of Senior 1998 Ordinance Bonds. Subordinate 1998 Ordinance Bonds may be issued in the form of CP Capital Project Notes, which the City is authorized to issue in a principal amount not to exceed $120,000,000 Outstanding at any time. See "– Authorized Additional 1998 Ordinance Bonds" and "Commercial Paper Programs – CP Capital Project Notes" below and "PLAN OF FINANCE AND ESTIMATED SOURCES AND USES OF FUNDS" above. Also see "COMMERCIAL PAPER PROGRAMS – Note Purchase and Credit Agreement."

Senior 1998 Ordinance Bonds

All Senior 1998 Ordinance Bonds (including the Bonds) are secured on a parity with all other Senior 1998 Ordinance Bonds and the obligations of the City to make, from Gas Works Revenues, payments (other than termination payments) due under any Qualified Swaps and Exchange Agreements related to Senior 1998 Ordinance Bonds. In accordance with the 1998 General Ordinance, Net Operating Expenses then payable are paid from Gas Works Revenues before debt service on Senior 1998 Ordinance Bonds and the other City obligations payable on a parity with Senior 1998 Ordinance Bonds. The Bonds and all other Senior 1998 Ordinance Bonds are senior in right of payment and security to any Subordinate 1998 Ordinance Bonds. See "– Gas Works Revenues – *Order of Application of Gas Works Revenues*" below.

Subordinate 1998 Ordinance Bonds

All Subordinate 1998 Ordinance Bonds are subject to the prior right of payment and security of the Senior 1998 Ordinance Bonds (including the Bonds), the other obligations of the City on a parity with Senior 1998 Ordinance Bonds and payments to issuers of Credit Facilities related to Senior 1998 Ordinance Bonds. See "*– Senior 1998 Ordinance Bonds*" above and "– Gas Works Revenues – *Order of Application of Gas Works Revenues*" below. Subordinate 1998 Ordinance Bonds (including CP Capital Project Notes, if any) are secured on a parity with all other Subordinate 1998 Ordinance Bonds and certain other obligations of the City. See APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE – Order of Application of Gas Works Revenues."

Gas Works Revenues

General

The 1998 General Ordinance defines Gas Works Revenues as:

all operating and non-operating revenues of the Gas Works derived from its activities and assets involved in the supply, manufacture, storage and distribution of gas, including all rents, rates and charges imposed or charged by the City upon the owners or occupants of properties connected to, and upon all users of, gas distributed by the Gas Works and all other revenues derived therefrom and all other income derived by the City from the Gas Works.

Revenues derived from activities unrelated to the supply, manufacture, storage and distribution of gas or assets related thereto are not included in Gas Works Revenues. If PGW receives fair payment for the use of gas related assets and personnel of PGW used in such unrelated activities, such payments are included in Gas Works Revenues.

Gas Works Revenues may be divided into separate components in one or more Supplemental Ordinances and any Series of 1998 Ordinance Bonds issued thereafter may be limited as to source of payment to one or more of such components as provided in the Supplemental Ordinance authorizing the particular Series of 1998 Ordinance Bonds. See "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS – Authorized Additional 1998 Ordinance Bonds." As of the date of this Official Statement, no portion of the Gas Works Revenues has been divided as described above and all Gas Works Revenues secure and provide payment for all 1998 Ordinance Bonds. Only new sources of Gas Works Revenues may be so divided while the Bonds and all previously issued Series of 1998 Ordinance Bonds remain Outstanding.

Gas Works Revenues do not include any portions of PGW's rents, rates and charges derived from non-performing assets, if any, which are securitized and sold pursuant to the 1998 General Ordinance. PGW currently has no assets designated as "non-performing." See "PERMITTED SECURITIZATION OF REVENUES RELATED TO NON-PERFORMING ASSETS" below.

Order of Application of Gas Works Revenues

Gas Works Revenues are not exclusively available for payment of debt service on Senior 1998 Ordinance Bonds and deposits to the Sinking Fund Reserve. Gas Works Revenues are also the source of payment for PGW's operating costs, debt service on Subordinate 1998 Ordinance Bonds, payments required under Credit Facilities and Qualified Swaps and Exchange Agreements, and certain other obligations of the City related to PGW. For information concerning the City's existing Qualified Swaps and Exchange Agreements and Credit Facilities, see "– Qualified Swaps and Exchange Agreements" and "– Credit Facilities With Respect to 1998 Ordinance Bonds" below. See APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE – Order of Application of Gas Works Revenues."

The 1998 General Ordinance establishes an order of application of Gas Works Revenues as and when collected in each Fiscal Year as follows: FIRST to Net Operating Expenses then payable; SECOND to debt service on Senior 1998 Ordinance Bonds and payments (other than termination payments) due to the issuers of

Qualified Swaps and Exchange Agreements related to Senior 1998 Ordinance Bonds, and THEREAFTER to the other obligations of the City (including, but not limited to, debt service on Subordinate 1998 Ordinance Bonds and the replenishment of the Sinking Fund Reserve) described and in the order set forth in APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE – Order of Application of Gas Works Revenues."

The City transfers Gas Works Revenues available after the payment of Net Operating Expenses then payable from PGW's operating funds to the Sinking Fund to make payments due on Senior 1998 Ordinance Bonds. The 1998 General Ordinance requires such transfers to be made on or before the day that payments on Senior 1998 Ordinance Bonds are due. The Sinking Fund (including the Sinking Fund Reserve) is held by the Sinking Fund Depositary in the name of the City in an account or accounts separate and apart from all other accounts of the City. U.S. Bank National Association, the Fiscal Agent with respect to the 1998 Ordinance Bonds, also serves as the Sinking Fund Depositary. If the City elects to invest moneys in the Sinking Fund, such investments may be invested and reinvested on a consolidated basis with investments held in the Sinking Fund Reserve. See "– Sinking Fund Reserve" and "– Covenant Against Commingling with Other City Funds" below and APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE – Sinking Fund" and "– Fiscal Agent."

Any deficiency in the Sinking Fund Reserve shall be replenished with the Gas Works Revenues available after the payment of Net Operating Expenses then payable, debt service on 1998 Ordinance Bonds and the other obligations on a parity with 1998 Ordinance Bonds, payments due to Credit Facility Issuers and any Rebate Amount required to be paid to the United States. See APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE – Order of Application of Gas Works Revenues." The 1998 General Ordinance provides that any excess moneys (including investment earnings) in the Sinking Fund Reserve, to the extent not required to be retained in the fund or account to which such moneys related, shall be transferred to the operating accounts of PGW to be applied as Gas Works Revenues in accordance with the 1998 General Ordinance.

Net Operating Expenses

Net Operating Expenses are defined in the 1998 General Ordinance as Operating Expenses exclusive of City Charges.

Operating Expenses are defined in the 1998 General Ordinance as all costs and expenses of the Gas Works necessary and appropriate to operate and maintain the Gas Works in good operable condition during each Fiscal Year, and include, without limitation, the manager's fee, salaries and wages, purchases of service by contract, costs of materials, supplies and expendable equipment, maintenance costs, costs of any property or the replacement thereof or for any work or project, related to the Gas Works, which does not have a probable useful life of at least five years, pension and welfare plan and workmen's compensation requirements, provision for claims, refunds and uncollectible receivables and for City Charges, all in accordance with generally accepted municipal accounting principles consistently applied, but shall exclude depreciation and interest and sinking fund charges. The 1998 General Ordinance, however, excludes expenses which are unrelated to the supply, manufacture, storage and distribution of gas or assets related thereto from the definition of Operating Expenses. Gas Works are defined in the 1998 General Ordinance as all property, real and personal, owned by the City and used in the acquisition or manufacture, storage and distribution of natural, liquefied, synthetic or manufactured gas or in the maintenance, management or administration thereof and all activities ancillary and related thereto, and also means, as the context may require, the business entity managed by PFMC.

City Charges

City Charges are defined in the 1998 General Ordinance as the proportionate charges, if any, for services performed for the Gas Works by all officers, departments, boards or commissions of the City which are contained in the computation of operating expenses of the Gas Works including, without limitation, the expenses of the Gas Commission, and also means the base payments to the City contained in the Management Agreement and all other payments made to the City from Gas Works Revenues.

City Charges are payable from Gas Works Revenues provided, however, that such payments are subordinate to all other City obligations payable from the Gas Works Revenues. See APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE – Order of Application of Gas Works Revenues." The City has covenanted in the 1998 General Ordinance that it will not in any Fiscal Year pay from Gas Works Revenues any City Charges or debt service on any general obligation bonds of the City unless, among other things, there has been deposited in the Sinking Fund an amount sufficient to pay all sinking fund charges then payable with respect to all Outstanding 1998 Ordinance Bonds. See APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE – Covenants – *Additional Covenants*." Assuming the satisfaction of the above referenced covenant, PGW's annual $18.0 million payment to the City under the Management Agreement is paid currently in equal installments on the first business day of February, March, April and May in each Fiscal Year. See "PHILADELPHIA GAS WORKS – Management – *Management Agreement*" and "GAS SERVICE TARIFF AND RATES – Rates – *Ratemaking Methodology to Comply with Bond Covenants*."

Supplemental Ordinances and Certain Required Findings; 2020 Report Not Included or Incorporated in this Official Statement and No Reliance Thereon

Prior to issuing any 1998 Ordinance Bonds, the Act and the 1998 General Ordinance require the City Council to adopt a Supplemental Ordinance that makes certain findings relating to the adequacy of Gas Works Revenues to pay debt service on all then-Outstanding 1998 Ordinance Bonds, the 1998 Ordinance Bonds to be issued thereunder and all other bonds or notes secured by the Gas Works Revenues. See "Authorized Additional 1998 Ordinance Bonds" below. Such findings with respect to the related Bonds have been made in the Thirteenth Supplemental Ordinance and the Fifteenth Supplemental Ordinance and, in conformance with the Act and the 1998 General Ordinance, in connection with the enactment of the Fifteenth Supplemental Ordinance, were based on, among other things, the report of the City's Director of Finance. As permitted by the Act, the report of the Director of Finance, as the chief fiscal officer of the City, was based on the 2020 Report. The 2020 Report was attached to the report of the Director of Finance, as required by the Act, and is part of the proceedings of City Council relating to the enactment of the Fifteenth Supplemental Ordinance. The 2020 Report, relates, in part, to the adequacy of Gas Works Revenues to pay debt service on all bonds and notes for which Gas Works Revenues are pledged. The 2020 Report also addresses, among other things, the condition and operations of the Gas Works facilities and system and contains certain forward looking statements with respect to the anticipated operating and financial performance of PGW through the fiscal year ending August 31, 2025.

In connection with the authorization of the Series A Bonds, the 2020 Report is available to the public at https://phila.legistar.com/LegislationDetail.aspx?ID=4432724&GUID=11255DD2-7736-4157-BE07-5C0DDDC5D3F0&Options=ID%7CText%7C&Search=200296 (*i.e.*, at the City Council's website without charge) and https://fjdefile.phila.gov/efsfjd/zk_fjd_public_qry_03.zp_dktrpt_setup_idx?uid=_4lUMgqTxIolqsSYDxam&o=F6r8GQgjR!rzHdb (*i.e.*, at the website of the Office of Judicial Records of the Court of Common Pleas of Philadelphia County with case ID: 200601760 for a charge), and at the office of the Chief Clerk of the City Council, Room 402 City Hall, Philadelphia, Pennsylvania. The 2020 Report is not incorporated by reference herein and prospective purchasers of the Bonds should not rely upon it in making a decision with respect to any purchase of the Bonds, nor should the 2020 Report be construed as a contract with Bondholders or as an invitation or inducement to engage or otherwise participate in the proposed or any other transaction, to provide any financing, or to make any investment.

While historically the City has included similar independent consulting engineer reports in its offering documents for the City's Gas Works Revenue Bonds, the professional services agreement between PGW and the engineering firm which was engaged to prepare and prepared the 2020 Report sets forth certain terms relating to the City's use of the 2020 Report in offering documents which, in the City's judgment, are not desirable for this transaction because such terms seek to impose contractual obligations on prospective purchasers of the Bonds if the 2020 Report is included in the Official Statement for the Bonds. Accordingly, while the 2020 Report is acceptable to the City, the City has determined not to include the 2020 Report in this Official Statement and such 2020 Report is expressly not included, nor incorporated by reference in this Official Statement, and may not be relied upon in making an investment decision.

Rate Covenant

The 1998 General Ordinance requires the City to comply with a rate covenant (the "Rate Covenant"), which requires the City to impose, charge and collect, in each Fiscal Year, rates and charges which, together with all other Gas Works Revenues to be received in such Fiscal Year, shall be sufficient to meet, among other things, Net Operating Expenses then payable and the debt service coverage requirements (including those with respect to the 1998 Ordinance Bonds) specified in the 1998 General Ordinance. See "– Rate Covenant and Rate Requirements" below, "GAS SERVICE TARIFF AND RATES – Rates – *Ratemaking Methodology to Comply with Bond Covenants*," and APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE" herein.

Sinking Fund Reserve

The 1998 General Ordinance establishes the Sinking Fund Reserve as a separate account in the Sinking Fund. Each Series of 1998 Ordinance Bonds (unless otherwise set forth in the Supplemental Ordinance authorizing such Series) is entitled to the benefit of the Sinking Fund Reserve. The City is required to deposit to the credit of the Sinking Fund Reserve from Gas Works Revenues and/or the proceeds of sale of each Series of 1998 Ordinance Bonds secured by the Sinking Fund Reserve an amount which, together with other amounts in the Sinking Fund Reserve, equals the greatest amount of debt service requirements required in any Fiscal Year to pay principal of and interest on the 1998 Ordinance Bonds secured by the Sinking Fund Reserve coming due and payable in that Fiscal Year. In lieu of a deposit to the credit of the Sinking Fund Reserve or in substitution for amounts in the Sinking Fund Reserve, the City may provide one or more letters of credit or other Credit Facilities in the same aggregate amount, issued by a provider or providers whose Credit Facilities are such that bonds secured by such Credit Facilities are rated in one of the three (3) highest rating categories by Moody's Investors Service, Inc. ("Moody's"), Fitch IBCA, Inc. ("Fitch") or Standard & Poor's Ratings Service, a Division of The McGraw Hill Companies, Inc. ("S&P"), all in the manner described in APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE – Sinking Fund Reserve."

If, at any time and for any reason, the moneys in the Sinking Fund (other than the Sinking Fund Reserve) are insufficient to pay, as and when due, debt service on any 1998 Ordinance Bonds secured by the Sinking Fund Reserve, the Sinking Fund Depositary is required to pay over to the Fiscal Agent, from the Sinking Fund Reserve, the amount of the deficiency. If by reason of such withdrawal (including draws on any Credit Facilities held to satisfy the Sinking Fund Reserve Requirement) or for any other reason there shall be a deficiency in the Sinking Fund Reserve, the City has covenanted to restore such deficiency from Gas Works Revenues (either by a deposit of funds or the reinstatement of the cash limits of the Credit Facilities) within twelve (12) months.

The Sinking Fund Reserve is established solely for the benefit of the Bondholders of those 1998 Ordinance Bonds secured by the Sinking Fund Reserve. The Bonds and all Outstanding Senior 1998 Ordinance Bonds are secured by the Sinking Fund Reserve. Providers of Qualified Swaps or Exchange Agreements, issuers of Credit Facilities (other than those that become Bondholders as a result of a draw under a Credit Facility), the holders of any bonds or notes which are Subordinate 1998 Ordinance Bonds or on a parity with Subordinate 1998 Ordinance Bonds and the providers of any credit facilities related thereto do not have a lien on or security interest in the Sinking Fund Reserve.

Upon issuance of the Bonds, the amount required to be on deposit in the Sinking Fund Reserve will be $107,261,984.70. The City will deposit $5,619,641.98 to the Sinking Fund Reserve in connection with the issuance of the Bonds. The amount on deposit in the Sinking Fund Reserve on the date of issuance of the Bonds will be the amount necessary to satisfy the Sinking Fund Reserve Requirement. See "PLAN OF FINANCE AND ESTIMATED SOURCES AND USES OF FUNDS" above.

The Sinking Fund Reserve is managed by, and invested and reinvested under the direction of, the City. The Sinking Fund Reserve is valued by the Sinking Fund Depositary promptly after any withdrawal from the Sinking Fund Reserve or upon any other event indicating a possible deficiency in the Sinking Fund Reserve and on August 31 of each Fiscal Year of PGW.

The 1998 General Ordinance establishes permitted investments and the terms of such investments for moneys held in the Sinking Fund, including the Sinking Fund Reserve. See APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE – Investment of Funds." For information regarding such investments, which together with cash deposits, totaled approximately $106.5 million as of August 31, 2019 and approximately $102.8 million (unaudited) as of August 31, 2020, see Note 3(b) in APPENDIX A – "COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR FISCAL YEARS ENDED AUGUST 31, 2019 AND 2018 OF THE PHILADELPHIA GAS WORKS – Financial Section."

For additional information concerning the Sinking Fund Reserve, see APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE –Sinking Fund Reserve."

Rate Covenant and Rate Requirements

Pursuant to the Rate Covenant, the City has covenanted in the 1998 General Ordinance that, for so long as the 1998 Ordinance Bonds are Outstanding, the City will, at a minimum, impose, charge and collect in each Fiscal Year of the Gas Works such gas rates and charges as shall, together with all other Gas Works Revenues to be received in such Fiscal Year, equal not less than the greater of (a) and (b) below:

(a) The sum of:

(i) all Net Operating Expenses payable during such Fiscal Year;

(ii) 150% of the amount required to pay Sinking Fund deposits required during such Fiscal Year in respect of all Outstanding Senior 1998 Ordinance Bonds;

(iii) the amount required to pay Sinking Fund deposits required during such Fiscal Year in respect of all Outstanding Subordinate 1998 Ordinance Bonds and other obligations of the Gas Works on a parity with Subordinate 1998 Ordinance Bonds payable during such Fiscal Year;

(iv) the amount, if any, required to be paid into the Sinking Fund Reserve during such Fiscal Year;

(v) the Rebate Amount required to be paid to the United States during such Fiscal Year; and

(vi) the amounts required to be paid to the issuers of Credit Facilities and the providers of Qualified Swaps and Exchange Agreements during such Fiscal Year;

or

(b) The sum of:

(i) all Net Operating Expenses payable during such Fiscal Year;

(ii) all Sinking Fund deposits required during such Fiscal Year in respect of all Outstanding 1998 Ordinance Bonds and all amounts payable in respect of obligations of PGW which are on a parity with any of the 1998 Ordinance Bonds and in respect of general obligation bonds issued for improvements to the Gas Works and all amounts, if any, required during such Fiscal Year to be paid into the Sinking Fund Reserve;

(iii) the Rebate Amount required to be paid to the United States during such Fiscal Year; and

(iv) the amounts required to be paid to the issuers of Credit Facilities and the providers of Qualified Swaps and Exchange Agreements during such Fiscal Year.

In calculating the City's compliance with the Rate Covenant set forth above, required Sinking Fund deposits are calculated without regard to the effect of any Qualified Swap and Exchange Agreements. For a further discussion of the Rate Covenant and other rate requirements applicable to the City, including the PUC obligation to set rates, see "PGW BUDGETS AND FINANCES – Debt Service Coverage Ratio" and "GAS SERVICE TARIFF AND RATES – Rates – *Ratemaking Methodology to Comply with Bond Covenants*."

Qualified Swaps and Exchange Agreements

The 1998 General Ordinance permits the City to enter into a Qualified Swap or Exchange Agreement with respect to a Series of Senior 1998 Ordinance Bonds or Subordinate 1998 Ordinance Bonds or a portion thereof upon the enactment of an ordinance by the City Council authorizing such Qualified Swap or Exchange Agreement. Payments, other than termination payments, due to the provider of a Qualified Swap or Exchange Agreement are payable from Gas Works Revenues on a parity with debt service on, as applicable, Senior 1998 Ordinance Bonds (if such Qualified Swap or Exchange Agreement relates to a Series of Senior 1998 Ordinance Bonds) or Subordinate 1998 Ordinance Bonds (if such Qualified Swap or Exchange Agreement relates to a Series of Subordinate 1998 Ordinance Bonds). See "– Gas Works Revenues – *Order of Application of Gas Works Revenues*" above. The 1998 General Ordinance prohibits the provider of any Qualified Swap or Exchange Agreement from having any right or claim at any time to amounts on deposit in the Sinking Fund Reserve. There are four Qualified Swaps and Exchange Agreements in effect, each of which is related to a Series of Senior 1998 Ordinance Bonds and detailed in the table below.

Table 1
QUALIFIED SWAPS & EXCHANGE AGREEMENTS
RELATED TO SENIOR 1998 ORDINANCE BONDS
as of September 30, 2020

Related Senior 1998 Ordinance Bond Series	8B	8C	8D	8E
Initial Notional Amount	$313,390,000 [7]	$50,000,000	$50,000,000	$50,000,000
Current Notional Amount [1]	$27,370,000	$27,225,000	$40,845,000	$27,370,000
Termination Date	8/1/2028	8/1/2028	8/1/2028	8/1/2028
Product	Fixed Rate Payer Swap	Fixed Rate Payer Swap	Fixed Rate Payer Swap	Fixed Rate Payer Swap
Rate Paid by Provider	70% 1-month LIBOR	70% 1-month LIBOR	70% 1-month LIBOR	70% 1-month LIBOR
Rate Paid by City [2]	3.6745%	3.6745%	3.6745%	3.6745%
Provider	JPMorgan Chase Bank, N.A. [6]	JPMorgan Chase Bank, N.A. [6]	JPMorgan Chase Bank, N.A. [6]	JPMorgan Chase Bank, N.A. [6]
Net Present Value [3]	($5,762,707)	($5,729,149)	($8,595,043)	($5,762,707)
Credit Related Termination Events	For Provider: [4] For City: [5]	For Provider: [4] For City: [5]	For Provider: [4] For City: [5]	For Provider: [4] For City: [5]

(1) As of September 30, 2020. As of such date, the notional amount of each swap is equal to, as applicable, the principal outstanding amount of the related Series.

(2) The City's fixed rate payments under each swap are insured by Assured Guaranty Municipal Corp. ("Assured").

(3) Net present values are as of September 30, 2020, include accrued interest, and are shown at mid-market from the City's perspective.

(4) Each swap may be terminated by the provider if (a) Assured's claims paying ability is rated below "A" by S&P and its financial strength rating is rated below "A2" by Moody's or if either rating is withdrawn or suspended and not reinstated within 30 days (provided that Assured maintains a rating of at least "AA" from S&P or "Aa2" from Moody's during such 30 day period), and (b) the Eighth Series Bonds are rated below "Baa2" by Moody's or below "BBB" by S&P. As of September 30, 2020, Moody's website reflected a rating of "A2" for Assured and S&P's website reflected a rating of "AA" for Assured.

(5) Each swap may be terminated by the City if the senior long-term debt or deposits of the provider are rated below "A3" by Moody's or "A-" by S&P, unless the provider has (i) assigned or transferred the swap to a party acceptable to the City; (ii) provided a credit support provider acceptable to the City whose obligations are pursuant to a credit support document acceptable to the City; or (iii) executed a credit support annex, in form and substance acceptable to the City, providing for the collateralization by the provider of its obligations under the applicable swap.

(6) As of September 30, 2020, Moody's website reflected a senior long-term debt rating of JPMorgan Chase Bank, N.A. ("JPMorgan") of "Aa2" and a counterparty risk assessment rating of "Aa1(cr)." As of September 30, 2020, S&P's website reflected a long-term rating of JPMorgan of "A+".

(7) Reflects the initial notional amount of the swap entered into in connection and concurrently with the issuance of the Sixth Series Bonds, which were the Senior 1998 Ordinance Bonds redeemed in whole with a portion of the proceeds of the Eighth Series Bonds. Upon such redemption, a portion of such swap was terminated and the remainder of the swap was identified to and reallocated among the four Series of Senior 1998 Ordinance Bonds reflected in Table 1. See Note 8 in the "Comprehensive Annual Financial Report for Fiscal Years ended August 31, 2019 and 2018 of the Philadelphia Gas Works – Financial Section".

On July 27, 2017, the Financial Conduct Authority (*i.e.*, the conduct regulator for financial services firms and financial markets and prudential supervisor in the United Kingdom) announced that it will no longer persuade or compel banks to submit rates for the calculation of LIBOR rates after 2021 (the "FCA Announcement"). PGW's swaps use a LIBOR based rate as a reference rate for determining floating-leg payments by the providers thereunder and ultimately the net payment obligations due from, or to, the City thereunder. It is not possible to predict the effect of the FCA Announcement, any changes in the methods pursuant to which LIBOR rates are determined, or any other reforms to LIBOR that may be enacted, any of which may adversely affect the determination of LIBOR rates or result in the phasing out of LIBOR as a reference rate. Any such effects could result in a sudden or prolonged increase or decrease in reported LIBOR rates, or result in the replacement of LIBOR with other reference rates, and could have a negative impact on the market value of PGW's swaps and net payment obligations of the City thereunder.

For additional information regarding such Qualified Swap and Exchange Agreements as of August 31, 2019 see Note 8 in APPENDIX A – "COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR FISCAL YEARS ENDED AUGUST 31, 2019 AND 2018 OF THE PHILADELPHIA GAS WORKS – Financial Section."

Credit Facilities With Respect to 1998 Ordinance Bonds

The 1998 General Ordinance permits the City to enter into a Credit Facility with respect to any Series of Senior 1998 Ordinance Bonds and Subordinate 1998 Ordinance Bonds. As of the date of this Official Statement, there is a Credit Facility in effect in the form of a letter of credit with respect to each of the five subseries of variable rate Senior 1998 Ordinance Bonds (consisting of one subseries of the Fifth Series Bonds and four subseries of the Eighth Series Bonds as further detailed in Table 2 below), which bonds (in the aggregate) have an Outstanding principal balance of $152.8 million as of September 30, 2020. Such amount represents 16.76% of the Senior 1998 Ordinance Bonds Outstanding as of September 30, 2020. The coverage for principal payments under each letter of credit is equal to the Outstanding principal amount of the applicable subseries as of the date of this Official Statement. Each letter of credit expires prior to the final maturity date of the applicable Series of Senior 1998 Ordinance Bonds. In connection with any scheduled expiration, the City may extend the scheduled expiration, provide an alternate liquidity facility to replace the expiring letter of credit, or convert the interest rates on the applicable 1998 Ordinance Bonds to fixed interest rates or to an interest rate mode that does not require a liquidity facility. There can be no assurance that the City will be able to extend any expiration date or to obtain an alternate Credit Facility on terms substantially similar to the terms of any expiring letter of credit.

Following an unreimbursed draw on a letter of credit, the applicable 1998 Ordinance Bonds, so long as they are owned by such issuer, are "bank bonds" and will be subject to a more rapid term loan amortization (as discussed below under Table 2) and bear an interest rate determined in accordance with the applicable Bond Authorization and letter of credit reimbursement agreement (a "bank bond rate"). This interest rate may be higher or lower than the rate that 1998 Ordinance Bonds of the same Series that are not bank bonds would otherwise bear. In addition, each bank bond rate may increase upon the occurrence of certain defaults (such increased bank bond rate is the "default rate") and outstanding term loans to the City under a facility related to liquidity draws and other obligations of the City may become due upon the occurrence of certain defaults.

Issuers of Credit Facilities (other than those that are Bondholders) do not have any lien on or security interest in the Sinking Fund Reserve. See APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE – Order of Application of Gas Works Revenues" for a discussion of the respective payment priorities of amount due under a Credit Facility.

Senior 1998 Ordinance Bonds

The table below describes the existing letters of credit, and the issuers thereof, related to Senior 1998 Ordinance Bonds as of the date of this Official Statement. In accordance with the 1998 General Ordinance, the payment of interest on and principal of bank bonds that are Senior 1998 Ordinance Bonds is on a parity with debt service on all other Senior 1998 Ordinance Bonds.

[Table follows on next page.]

Table 2
VARIABLE RATE SENIOR 1998 ORDINANCE BONDS
LETTERS OF CREDIT

Related Series	Bonds Outstanding ($000 omitted)[4]	Issuer	Expiration Date	Counterparty Risk Assessment Term Ratings (Moody's)[3]	Issuer Long Term and Short Term Ratings (S&P)[3]	Issuer Long Term and Short Term Ratings (Fitch)[3]
5A-2[1]	$30,000	TD Bank[1]	12/21/2024	A1(cr)/P-1(cr)	AA-/A-1+	AA-[7]/F1+
8B[1]	27,370	TD Bank[1]	8/1/2024	A1(cr)/P-1(cr)	AA-/A-1+	AA-[7]/F1+
8C[2][5]	27,225	Barclays[2]	9/1/2022	A1(cr)/P-1(cr)	A/A-1	A+[6]/F1
8D[1][5]	40,845	TD Bank[1]	8/12/2023	A1(cr)/P-1(cr)	AA-/A-1+	AA-[7]/F1+
8E[1][5]	27,370	TD Bank[1]	8/1/2024	A1(cr)/P-1(cr)	AA-/A-1+	AA-[7]/F1+

(1) TD Bank, N.A ("TD Bank"). The City is required to repay the principal component of bank bonds in six semi-annual installments beginning on the letter of credit expiration date. The bank bond rate is a rate per annum equal to (a) during the period from the date of the related unreimbursed draw to and including the 180th day thereafter, the greater of (i) the 'base rate" (as defined below) and (ii) 5.00%, and (b) during the period from the 181st day after the related unreimbursed draw, the greater of (x) the base rate plus 200 basis points (2.00%) and (y) 5.00%; provided, however, that from and after the occurrence and during the continuance of an event of default under the related reimbursement agreement, the bank bond rate shall equal the greater of (x) the base rate plus 300 basis points (3.00%) and (y) 7.00%. The "base rate" is a rate per annum equal to the higher of (a) the Wall Street Journal Prime Rate in effect on such day and (b) the sum of the federal funds open rate in effect on such day plus 100 basis points (1.00%). In no event will the bank rate exceed the lesser of (x) twenty-five percent (25%) per annum and (y) the maximum lawful rate.

(2) Barclays Bank PLC ("Barclays"). The City is required to repay the principal component of the purchase price of bank bonds, assuming the satisfaction of certain conditions, in 10 equal quarterly installments beginning 6 months after the unreimbursed related draw. The bank bond rate is (i) for the first 90 days after Barclays has purchased the 1998 Ordinance Bonds, the "base rate" (as defined below), (ii) for days 91 through and including 180, the base rate plus (except for component (c) of the base rate) one percent (1.0%), and (iii) on and after the 181st day, the base rate plus (except for component (c) of the base rate) two percent (2.0%). The "base rate" is the highest of (a) the prime rate publically announced by Barclays in New York City plus two and one-half of one percent (2.50%), (b) the federal funds rate plus two and one-half of one percent (2.50%), (c) one hundred fifty percent (150%) of the yield on 30-year United States Treasury bonds, and (d) seven and one-half of one percent (7.50%). Notwithstanding the foregoing, immediately and automatically upon the occurrence of an event of default under the letter of credit, and during the continuation thereof, the bank bond rate shall be equal to the base rate plus two percent (2.0 %). In no event will the bank bond rate exceed the lesser of (a) twenty-five percent (25%), and (b) the maximum lawful rate.

(3) All ratings reflect information from the respective rating agency's website as of September 30, 2020.

(4) As of September 30, 2020.

(5) Notwithstanding the establishment of the bank bond rate, bank bonds shall bear interest at the greater of the applicable bank bond rate or the rate of interest borne by 1998 Ordinance Bonds of the applicable Series that are not bank bonds.

(6) Negative rating watch.

(7) Negative rating outlook.

Subordinate 1998 Ordinance Bonds

CP Capital Project Notes, if any, are Subordinate 1998 Ordinance Bonds and any letters of credit, solely as they relate to the CP Capital Project Notes, are Credit Facilities under the 1998 General Ordinance. Pursuant to the 1998 General Ordinance, CP Capital Project Notes, if any, are not secured by the Sinking Fund Reserve. The Gas Works Notes (as defined below) are not issued under the 1998 General Ordinance. However, under the 1998 General Ordinance, such Gas Works Notes are junior in priority of payment to the Senior 1998 Ordinance

Bonds, and payments due in respect of Gas Works Notes are on a parity with Subordinate 1998 Ordinance Bonds. See "COMMERCIAL PAPER PROGRAMS." There are no CP Capital Project Notes or Gas Works Notes currently outstanding and the City does not expect to issue any CP Capital Project Notes prior to the expenditure of all of the proceeds of the Series A Bonds. The City currently does not have any plans to issue Gas Works Notes, but expects to review such potential financing option periodically.

See "COMMERCIAL PAPER PROGRAMS."

Authorized Additional 1998 Ordinance Bonds

The 1998 General Ordinance permits the issuance of additional 1998 Ordinance Bonds which, if and when issued, will be either Senior 1998 Ordinance Bonds or Subordinate 1998 Ordinance Bonds. The issuance of any additional 1998 Ordinance Bonds (other than the Bonds and any other additional 1998 Ordinance Bonds issued pursuant to the Thirteenth Supplemental Ordinance, as described below) requires, among other things, the adoption by the City Council of a Supplemental Ordinance that makes the findings described under "– Gas Works Revenues – *Supplemental Ordinances and Certain Required Findings; 2020 Report Not Included or Incorporated in this Official Statement and No Reliance Thereon*" above.

The 1998 General Ordinance authorizes the City to issue one or more Series of CP Capital Project Notes (as defined below). The CP Capital Project Notes, if any, are issued as Subordinate 1998 Ordinance Bonds. See "– Pledge of Revenues and Funds – *Subordinate 1998 Ordinance Bonds*" above and "COMMERCIAL PAPER PROGRAMS" below.

The Series A Bonds which will finance a portion of PGW's ongoing Capital Improvement Program are being issued pursuant to the Fifteenth Supplemental Ordinance, which authorizes the City to issue one or more Series of Senior 1998 Ordinance Bonds in an aggregate principal amount not to exceed $300 million. The Series B Bonds which will refund the Refunded Bonds are being issued pursuant to the Thirteenth Supplemental Ordinance. See "PLAN OF FINANCE AND ESTIMATED SOURCES AND USES OF FUNDS" above.

The Thirteenth Supplemental Ordinance authorizes the City to issue one or more Series of Senior 1998 Ordinance Bonds in an aggregate principal amount not to exceed $1.026 billion for the purposes, *inter alia*, of refunding or redeeming of all or a portion of any Outstanding Senior 1998 Ordinance Bonds and all or a portion of Outstanding CP Capital Project Notes, and paying any termination payment that may become due and payable under a Qualified Swap Agreement in connection with the redemption or conversion of all or any portion of any refunded Senior 1998 Ordinance Bonds. The first such Series (the Thirteenth Series Bonds) was issued in the aggregate principal amount of $261.77 million on August 18, 2015; the second such Series (the Fourteenth Series Bonds) was issued in the aggregate principal amount of $312.425 million on August 30, 2016; and the third such Series (the "Fifteenth Series Bonds") was issued on August 16, 2017 and the allocable refunding portion thereof was $99.28 million. Subsequent Series of Senior 1998 Ordinance Bonds issued pursuant to the Thirteenth Supplemental Ordinance (including the allocable portion of the Series B Bonds) do not require any additional City Council authorization, provided that the City may only issue bonds under the Thirteenth Supplemental Ordinance to refund Senior 1998 Ordinance Bonds previously issued under the Thirteenth Supplemental Ordinance if such refunding bonds (i) are issued solely to refund any 1998 Ordinance Bonds previously issued pursuant thereto, (ii) do not extend the final maturity of the 1998 Ordinance Bonds to be refunded and have debt service in each year lower than the debt service in each year on the bonds to be refunded, and (iii) are in a principal amount not to exceed the amount which accomplishes the foregoing, together with the amount necessary to pay the costs of issuance related to such refunding bonds. The Thirteenth Supplemental Ordinance provides that the aggregate principal amount of Senior 1998 Ordinance Bonds which may be issued to pay the costs of redeeming the CP Capital Project Notes may not exceed $135.0 million. The Bonds which will refund the Refunded Bonds satisfy the applicable criteria of the Thirteenth Supplemental Ordinance. Prior to the issuance of the Series B Bonds, the City has the authority to issue up to $352.525 million of 1998 Ordinance Bonds to refund Senior 1998 Ordinance Bonds pursuant to the Thirteenth Supplemental Ordinance. After issuing the Series B Bonds, the City will retain the authority to issue up to $301.760 million of 1998 Ordinance Bonds to refund Senior 1998 Ordinance Bonds pursuant to the Thirteenth Supplemental Ordinance.

Any Series of 1998 Ordinance Bonds issued pursuant to the Fifteenth Supplemental Ordinance or the Thirteenth Supplemental Ordinance will be entitled to the benefit of the Sinking Fund Reserve.

As noted above under "– Gas Works Revenues," Gas Works Revenues, pursuant to a Supplemental Ordinance, may be divided into separate components and any Series of 1998 Ordinance Bonds issued thereafter may be limited as to source of payment to one or more such components. Since all current Gas Works Revenues are pledged for the security of and payment on all 1998 Ordinance Bonds, only new revenues that satisfy the definition of Gas Works Revenues could be so divided and pledged as security for and the only source of payment on one or more future Series of 1998 Ordinance Bonds.

The Act and the 1998 General Ordinance authorize the City to issue Senior 1998 Ordinance Bonds and Subordinate 1998 Ordinance Bonds in the form of revenue bond anticipation notes ("Anticipation Notes"). The principal of any Anticipation Notes is payable by exchange for, or out of the proceeds of the sale of, a designated Series of 1998 Ordinance Bonds referred to in the related Anticipation Notes. If such designated Series of 1998 Ordinance Bonds is offered for sale but cannot be sold, the sole remedy of the Holders of Anticipation Notes is to accept the 1998 Ordinance Bonds of the designated Series at their maximum interest rate (which must be set forth in the related Anticipation Notes), or to extend the maturity of the Anticipation Notes for one or more specified additional periods of not less than six months during which additional offers of the designated Series of 1998 Ordinance Bonds may be made. The City has never issued Anticipation Notes.

See "POSSIBLE FUTURE PGW RELATED FINANCINGS" below for information concerning potential future issuances of 1998 Ordinance Bonds.

Covenant Against Commingling with Other City Funds

The City has covenanted that so long as any of the Bonds remain Outstanding, all Gas Works Revenues, as applicable, shall be deposited and held in and disbursed from, one or more unsegregated accounts of PGW which shall be separate from and not commingled with the consolidated cash account of the City or any other account of the City not held exclusively for PGW purposes.

The effectiveness of the separation of proceeds of the Bonds and revenues from other City accounts may be limited under certain circumstances, including a bankruptcy filing by the City. See "REMEDIES OF BONDHOLDERS – Limitation On Remedies of Bondholders" below.

Senior 1998 Ordinance Bonds Debt Service Schedule

The table below reflects the debt service schedule for all Senior 1998 Ordinance Bonds Outstanding, (excluding the Refunded Bonds and including the Bonds).

[Remainder of Page Intentionally Left Blank]

Table 3
SENIOR 1998 ORDINANCE BONDS DEBT SERVICE

Fiscal Year Ending August 31	Outstanding Senior 1998 Ordinance Bonds (1)	Bonds					Total Senior 1998 Ordinance Bonds (including the Bonds)
		Series A Bonds		Series B Bonds			
	Existing Debt Service	Principal	Interest	Principal	Interest	Total Debt Service	Combined Total Debt Service
2021	$88,974,347	$ -	$ 7,325,678	$ 5,000	$1,583,682	$ 8,914,360	$ 97,888,707
2022	87,383,560	2,815,000	9,695,750	500,000	2,095,800	15,106,550	102,490,110
2023	86,467,185	500,000	9,555,000	3,605,000	2,070,800	15,730,800	102,197,985
2024	88,073,435	3,725,000	9,530,000	2,435,000	1,890,550	17,580,550	105,653,985
2025	83,319,301	3,910,000	9,343,750	-	1,768,800	15,022,550	98,341,851
2026	83,092,923	4,105,000	9,148,250	-	1,768,800	15,022,050	98,114,973
2027	79,945,538	4,310,000	8,943,000	-	1,768,800	15,021,800	94,967,338
2028	80,047,068	4,525,000	8,727,500	-	1,768,800	15,021,300	95,068,368
2029	51,100,450	4,755,000	8,501,250	-	1,768,800	15,025,050	66,125,500
2030	49,626,825	4,990,000	8,263,500	-	1,768,800	15,022,300	64,649,125
2031	49,621,325	5,240,000	8,014,000	-	1,768,800	15,022,800	64,644,125
2032	49,619,825	5,500,000	7,752,000	-	1,768,800	15,020,800	64,640,625
2033	41,218,200	5,775,000	7,477,000	-	1,768,800	15,020,800	56,239,000
2034	41,226,950	6,065,000	7,188,250	-	1,768,800	15,022,050	56,249,000
2035	57,953,700	6,370,000	6,885,000	-	1,768,800	15,023,800	72,977,500
2036	27,916,800	6,690,000	6,566,500	8,165,000	1,768,800	23,190,300	51,107,100
2037	27,922,600	7,025,000	6,232,000	8,490,000	1,442,200	23,189,200	51,111,800
2038	27,918,150	7,375,000	5,880,750	8,830,000	1,102,600	23,188,350	51,106,500
2039	17,259,250	7,745,000	5,512,000	9,185,000	749,400	23,191,400	40,450,650
2040	17,263,000	8,130,000	5,124,750	9,550,000	382,000	23,186,750	40,449,750
2041	17,258,750	8,535,000	4,718,250	-	-	13,253,250	30,512,000
2042	17,260,500	8,875,000	4,376,850	-	-	13,251,850	30,512,350
2043	17,261,500	9,230,000	4,021,850	-	-	13,251,850	30,513,350
2044	17,260,250	9,600,000	3,652,650	-	-	13,252,650	30,512,900
2045	17,260,250	9,985,000	3,268,650	-	-	13,253,650	30,513,900
2046	17,259,750	10,385,000	2,869,250	-	-	13,254,250	30,514,000
2047	17,262,000	10,905,000	2,350,000	-	-	13,255,000	30,517,000
2048	-	11,450,000	1,804,750	-	-	13,254,750	13,254,750
2049	-	12,020,000	1,232,250	-	-	13,252,250	13,252,250
2050	-	12,625,000	631,250	-	-	13,256,250	13,256,250
Total	$1,256,773,431	$203,160,000	$184,591,678	$50,765,000	$32,542,632	$471,059,310	$1,727,832,741

(1) Excludes the Refunded Bonds. Interest on the Fifth Series A-2 bonds calculated at 1.64% pursuant to the 1998 General Ordinance (i.e., based on a rate equal to the average interest rate on such Variable Rate 1998 Ordinance Bonds during the period of twenty-four (24) consecutive calendar months immediately preceding the date of calculation). Interest on the Eighth Series B, C, D and E bonds calculated at the swap rate of 3.6745%. This table assumes that there will be no draws on the letters of credit. See "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS – Credit Facilities with Respect to 1998 General Ordinance." See "PLAN OF FINANCE AND ESTIMATED SOURCES AND USES OF FUNDS" above.

BOND INSURANCE

Bond Insurance Policy

Concurrently with the issuance of the Bonds, Assured Guaranty Municipal Corp. ("AGM") will issue its Municipal Bond Insurance Policy for the Series A Bonds maturing on August 1 of the years 2024 through 2040, inclusive, August 1, 2045 and August 1, 2050, and the Series B Bonds maturing on August 1, 2024 and August 1 of the years 2036 through 2040, inclusive (collectively, the "Insured Bonds") (the "Policy"). The Policy guarantees the scheduled payment of principal of and interest on the Insured Bonds when due as set forth in the form of the Policy included as an exhibit to this Official Statement.

The Policy is not covered by any insurance security or guaranty fund established under New York, California, Connecticut or Florida insurance law.

Assured Guaranty Municipal Corp.

AGM is a New York domiciled financial guaranty insurance company and an indirect subsidiary of Assured Guaranty Ltd. ("AGL"), a Bermuda-based holding company whose shares are publicly traded and are listed on the New York Stock Exchange under the symbol "AGO". AGL, through its operating subsidiaries, provides credit enhancement products to the U.S. and international public finance (including infrastructure) and structured finance markets and, as of October 1, 2019, asset management services. Neither AGL nor any of its shareholders or affiliates, other than AGM, is obligated to pay any debts of AGM or any claims under any insurance policy issued by AGM.

AGM's financial strength is rated "AA" (stable outlook) by S&P Global Ratings, a business unit of Standard & Poor's Financial Services LLC ("S&P"), "AA+" (stable outlook) by Kroll Bond Rating Agency, Inc. ("KBRA") and "A2" (stable outlook) by Moody's Investors Service, Inc. ("Moody's"). Each rating of AGM should be evaluated independently. An explanation of the significance of the above ratings may be obtained from the applicable rating agency. The above ratings are not recommendations to buy, sell or hold any security, and such ratings are subject to revision or withdrawal at any time by the rating agencies, including withdrawal initiated at the request of AGM in its sole discretion. In addition, the rating agencies may at any time change AGM's long-term rating outlooks or place such ratings on a watch list for possible downgrade in the near term. Any downward revision or withdrawal of any of the above ratings, the assignment of a negative outlook to such ratings or the placement of such ratings on a negative watch list may have an adverse effect on the market price of any security guaranteed by AGM. AGM only guarantees scheduled principal and scheduled interest payments payable by the issuer of bonds insured by AGM on the date(s) when such amounts were initially scheduled to become due and payable (subject to and in accordance with the terms of the relevant insurance policy), and does not guarantee the market price or liquidity of the securities it insures, nor does it guarantee that the ratings on such securities will not be revised or withdrawn.

Current Financial Strength Ratings

On July 16, 2020, S&P announced it had affirmed AGM's financial strength rating of "AA" (stable outlook). AGM can give no assurance as to any further ratings action that S&P may take.

On December 19, 2019, KBRA announced it had affirmed AGM's insurance financial strength rating of "AA+" (stable outlook). AGM can give no assurance as to any further ratings action that KBRA may take.

On August 13, 2019, Moody's announced it had affirmed AGM's insurance financial strength rating of "A2" (stable outlook). AGM can give no assurance as to any further ratings action that Moody's may take.

For more information regarding AGM's financial strength ratings and the risks relating thereto, see AGL's Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

Capitalization of AGM

At June 30, 2020:

- The policyholders' surplus of AGM was approximately $2,667 million.

- The contingency reserves of AGM and its indirect subsidiary Municipal Assurance Corp. ("MAC") (as described below) were approximately $1,018 million. Such amount includes 100% of AGM's contingency reserve and 60.7% of MAC's contingency reserve.

- The net unearned premium reserves and net deferred ceding commission income of AGM and its subsidiaries (as described below) were approximately $2,048 million. Such amount includes (i) 100% of the net unearned premium reserve and deferred ceding commission income of AGM, (ii) the net unearned premium reserves and net deferred ceding commissions of AGM's wholly owned subsidiaries Assured Guaranty (Europe) plc ("AGE UK") and Assured Guaranty (Europe) SA ("AGE SA"), and (iii) 60.7% of the net unearned premium reserve of MAC.

The policyholders' surplus of AGM and the contingency reserves, net unearned premium reserves and deferred ceding commission income of AGM and MAC were determined in accordance with statutory accounting principles. The net unearned premium reserves and net deferred ceding commissions of AGE UK and AGE SA were determined in accordance with accounting principles generally accepted in the United States of America.

Incorporation of Certain Documents by Reference

Portions of the following documents filed by AGL with the Securities and Exchange Commission (the "SEC") that relate to AGM are incorporated by reference into this Official Statement and shall be deemed to be a part hereof:

(i) the Annual Report on Form 10-K for the fiscal year ended December 31, 2019 (filed by AGL with the SEC on February 28, 2020);

(ii) the Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2020 (filed by AGL with the SEC on May 8, 2020); and

(iii) the Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2020 (filed by AGL with the SEC on August 7, 2020).

All information relating to AGM included in, or as exhibits to, documents filed by AGL with the SEC pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, excluding Current Reports or portions thereof "furnished" under Item 2.02 or Item 7.01 of Form 8-K, after the filing of the last document referred to above and before the termination of the offering of the Bonds shall be deemed incorporated by reference into this Official Statement and to be a part hereof from the respective dates of filing such documents. Copies of materials incorporated by reference are available over the internet at the SEC's website at http://www.sec.gov, at AGL's website at http://www.assuredguaranty.com, or will be provided upon request to Assured Guaranty Municipal Corp.: 1633 Broadway, New York, New York 10019, Attention: Communications Department (telephone (212) 974-0100). Except for the information referred to above, no information available on or through AGL's website shall be deemed to be part of or incorporated in this Official Statement.

Any information regarding AGM included herein under the caption "BOND INSURANCE – Assured Guaranty Municipal Corp." or included in a document incorporated by reference herein (collectively, the "AGM Information") shall be modified or superseded to the extent that any subsequently included AGM Information (either directly or through incorporation by reference) modifies or supersedes such previously included AGM Information. Any AGM Information so modified or superseded shall not constitute a part of this Official Statement, except as so modified or superseded.

Miscellaneous Matters

AGM makes no representation regarding the Bonds or the advisability of investing in the Bonds. In addition, AGM has not independently verified, makes no representation regarding, and does not accept any responsibility for the accuracy or completeness of this Official Statement or any information or disclosure contained herein, or omitted herefrom, other than with respect to the accuracy of the information regarding AGM supplied by AGM and presented under the heading "BOND INSURANCE".

COMMERCIAL PAPER PROGRAMS

The City is authorized to issue commercial paper to finance the costs of certain PGW capital projects, other project costs and working capital requirements. As of December 1, 2017, all commercial paper notes were supported by the Note Purchase Agreement (as defined herein) and a security interest in PGW's revenues as further discussed below. Prior to that, all notes were supported by two irrevocable letters of credit and secured by a security interest in PGW's revenues.

CP Capital Project Notes

Pursuant to the 1998 General Ordinance, the City may currently issue one or more Series of commercial paper notes in installments in a principal amount not to exceed $120.0 million Outstanding at any time (the "CP Capital Project Notes") to finance capital projects included in PGW's approved capital program. CP Capital Project Notes are issued as Subordinate 1998 Ordinance Bonds. As of the date of this Official Statement, no CP Capital Project Notes are outstanding, and the City does not currently anticipate issuing any CP Capital Project Notes.

Pursuant to the Fourteenth Supplemental Ordinance, the City has provided the authority for the issuance of the CP Capital Project Notes in a principal amount not to exceed $120.0 million. PGW may request the City for authorization to issue additional CP Capital Project Notes in future Fiscal Years. The City contemplates issuing any future CP Capital Project Notes pursuant to the Fourteenth Supplemental Ordinance.

The holders of CP Capital Project Notes and the issuers of any credit facilities related thereto do not have a lien on or a security interest in the Sinking Fund Reserve. See "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS – Pledge of Revenues and Funds – *Subordinate 1998 Ordinance Bonds*" and "− Sinking Fund Reserve."

Gas Works Notes

PGW's working capital requirements may be financed by the issuance of notes (the "Gas Works Notes") pursuant to The City of Philadelphia Municipal Utility Inventory and Receivables Financing Act of the Commonwealth (the "Inventory and Receivables Financing Act") and the General Inventory and Receivables Gas Works Revenue Note Ordinance of 2017 (the "Note Ordinance"). Gas Works Notes may be issued in installments in a principal amount (together with interest) not to exceed, in the aggregate, $150.0 million at any one time outstanding. As of the date of this Official Statement, no Gas Works Notes are outstanding, and the City does not currently anticipate issuing any Gas Works Notes. The proceeds of Gas Works Notes may be used to finance or refund the costs of acquiring or funding certain inventory, accounts and other expenses of PGW or to refund Gas Works Notes.

Gas Works Notes are not 1998 Ordinance Bonds. Debt service on Gas Works Notes is payable from Gas Works Revenues on a parity with Subordinate 1998 Ordinance Bonds. The Bonds and all other Senior 1998 Ordinance Bonds are senior in right of payment and security to the Gas Works Notes. See "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS – Pledge of Revenues and Funds" and APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE – Order of Application of Gas Works Revenues." The holders of any Gas Works Notes and the issuers of any credit facilities related thereto do not have a lien on or a security interest in the Sinking Fund Reserve. "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS – Sinking Fund Reserve."

Note Purchase and Credit Agreement

To the extent any CP Capital Project Notes and Gas Works Notes are issued, such notes would be supported by revolving credit pursuant to a Note Purchase and Credit Agreement, dated as of December 1, 2017, between the City and TD Bank, N.A. (the "Bank") (the "Note Purchase Agreement"). CP Capital Project Notes and Gas Works Notes would be secured by a security interest in PGW's Gas Works Revenues on a parity with Subordinate 1998 Ordinance Bonds (which the CP Capital Project Notes themselves constitute). The Note Purchase Agreement supporting PGW's combined commercial paper programs set the maximum level of outstanding CP Capital Project Notes and/or Gas Works Notes plus interest at $120.0 million. The Note Purchase Agreement has a stated term ending December 1, 2021 subject to certain customary suspension and early termination events. CP Capital Project Notes and/or Gas Works Notes purchased by the Bank pursuant to the Note Purchase Agreement will bear interest payable monthly at a per annum rate equal to 69.5% of the sum of an adjusted London Interbank Offered Rate (as more particularly specified in the Note Purchase Agreement) plus 90 basis points for the interest period of generally one month or longer established between the City and the Bank.

OTHER DEBT OBLIGATIONS PAYABLE FROM GAS WORKS REVENUES

Short-Term Borrowings

PGW is authorized to make interfund loans from various consolidated accounts of PGW that do not secure 1998 Ordinance Bonds for payment, as necessary, of PGW obligations, including debt service on bonds issued under the 1998 General Ordinance. PGW must reimburse such accounts as revenues are received by the end of each Fiscal Year during which such withdrawals were made. No such interfund loans are outstanding.

Also, see "COMMERCIAL PAPER PROGRAMS" above.

Additional Bond Ordinances

The Act permits the City to enact new general bond ordinances that pledge, for the security and payment of any bonds and notes issued thereunder, the Gas Works Revenues. Prior to enacting any such bond ordinance, the City Council must adopt a supplemental ordinance that makes certain findings relating to the adequacy of Gas Works Revenues to pay debt service on all then-Outstanding 1998 Ordinance Bonds, Gas Works Notes and the new series of bonds to be issued thereunder. Such findings are to be based on a report of the chief fiscal officer of the City, which in turn can be based on a report of an independent engineer employed by the City to evaluate PGW. The 1998 General Ordinance requires any such bonds and notes to be payable from Gas Works Revenues on a parity with debt service on Subordinate 1998 Ordinance Bonds and the other obligations on a parity therewith. See "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS – Order of Application of Revenues" above and APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE – Order of Application of Gas Works Revenues."

As of the date of this Official Statement, the City does not expect to enact any bond ordinances that pledge all, or a portion of, the Gas Works Revenues for the security and payment of any bonds and notes other than the 1998 Ordinance Bonds and the Gas Works Notes.

POSSIBLE FUTURE PGW RELATED FINANCINGS

Financing of Capital Improvements

Possible Fiscal Year 2024 Issuance

PGW anticipates undertaking a future debt issuance of $235.0 million in Fiscal Year 2024 to fund a portion of PGW's ongoing Capital Improvement Program. PGW currently has a financial target of funding approximately 50% of its ongoing Capital Improvement Program from internally generated funds with the remaining portion funded from debt. Currently budgeted and planned PGW Capital Improvement Program expenditures for the six-year period ending August 31, 2026 total approximately $777.9 million, net of customer contributions and reimbursements, and inclusive of capital expenditures for pipeline replacement discussed below under "- Infrastructure Replacement." Such prospective debt issuance in Fiscal Year 2024 may be in the form of 1998 Ordinance Bonds or obligations as described above under "OTHER DEBT OBLIGATIONS PAYABLE FROM GAS WORKS REVENUES − Additional Bond Ordinances." If either 1998 Ordinance Bonds are issued or CP Capital Project Notes are issued and refinanced with Approved Bonds (as defined herein), then associated debt service would be included in the PUC rates under the 2010 PUC Policy Statement (as defined below). See "GAS SERVICE TARIFF AND RATES – Rates – *Ratemaking Methodology to Comply with Bond Covenants*." See also "CAPITAL IMPROVEMENT PROGRAM –Customer Information System Replacement and Building Consolidation." Additional bonds issued under other ordinances would constitute "Approved Bonds" unless the City Council determined otherwise in the authorizing ordinance.

No Planned PGW-Financed Expansion of LNG Facilities

PGW does not currently anticipate financing the expansion at either of its LNG facilities through the issuance of debt by the City. Also see, "POTENTIAL LNG EXPANSION."

Infrastructure Replacement

In its April 21, 2015 report relating to a PUC-initiated inquiry and analysis of PGW's infrastructure replacement program, the PUC staff identified the issuance of additional debt as one possible means of financing PGW pipeline and other infrastructure replacements. See "PHILADELPHIA GAS WORKS – Governmental Oversight – *PUC April 2015 Report*" below. Such debt, if any, may be issued as 1998 Ordinance Bonds (including any CP Capital Project Notes) or pursuant to one or more new City ordinances as described above under "OTHER DEBT OBLIGATIONS PAYABLE FROM GAS WORKS REVENUES − Additional Bond Ordinances."

The PUC in January 2016 granted PGW's request to increase its Distribution System Improvement Charge (DSIC) surcharge from 5.0% to 7.5% of non-gas revenues.* The increase, from $22 million to approximately $33 million per year, has generated approximately $11 million in additional revenue to fund PGW's accelerated pipeline replacement program, which PGW is allowed to recover on a pay-as-you-go-basis through the DSIC surcharge. This DSIC revenue has been in addition to the approximately $135.3 million (for Fiscal Year 2016 through Fiscal Year 2020) funded through base rates for cast iron replacement. (The base rate funded portion of the program for Fiscal Year 2021 is expected to be approximately $29.8 million.) PGW has not issued any long-term debt to fund the accelerated replacement program.

PGW will consider the effectiveness of the accelerated pipeline replacement program funded by the DSIC surcharge, evaluate the effect of the DSIC on customers, and assess PGW's ability to effectively implement the level of accelerated pipeline replacement associated with the 7.5% DSIC surcharge prior to requesting an increase in the DSIC, but no assurance can be given that such request will be made or if made, approved.

See also "GAS SERVICE TARIFF AND RATES – Rates – *Surcharges* – DSIC Surcharge" and "THE CAPITAL IMPROVEMENT PROGRAM – Cast Iron Main Replacement."

PERMITTED SECURITIZATION OF REVENUES RELATED TO NON-PERFORMING ASSETS

The 1998 General Ordinance permits the City to securitize and sell that portion of the Gas Works rents, rates and charges that relate to assets which are designated as non-performing by the PUC and as to which the PUC has designated specific rents, rates or charges.

Prior to any such securitization and sale, the City must deliver to the Fiscal Agent (1) an engineer's report including a statement that, for the three year period following such securitization and sale, the Gas Works rents, rates and charges (excluding those securitized and sold) are currently and will be sufficient to comply with the Rate Covenant described under the heading "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS − Rate Covenant and Rate Requirements" above applied as if the percentage in subsection (a)(iii) thereof were 175% rather than 150% and (2) an opinion of bond counsel that such

* On July 6, 2016, the PUC issued an Opinion and Order that permitted PGW to recover an additional $11.4 million in DSIC under collections for the year ending December 31, 2015, over the course of two years. This resulted in a temporary increase in the DSIC of an additional $5.7 million a year for two years. Beginning on October 1, 2016, PGW temporarily increased its DSIC surcharge to 8.84% as permitted by the PUC's July 6, 2016 Order. This temporary increase terminated on September 30, 2018.

securitization and sale will not adversely affect the exclusion from gross income for federal income tax purposes of interest on any outstanding 1998 Ordinance Bonds the interest on which is intended to be so excluded. Proceeds received from any such securitization and sale shall be excluded from Gas Works Revenues in all calculations relating to the Rate Covenant and, notwithstanding any provision of the 1998 General Ordinance to the contrary, may be used to redeem or refund obligations issued to finance the related assets designated as non-performing.

Any and all Gas Works rates, rents and charges that are securitized and sold as described under this heading, do not constitute Gas Works Revenues and would not serve as security for or a source of payment of the 1998 Ordinance Bonds (including the Bonds). As of the date of this Official Statement, no PGW assets have been designated as "non-performing."

REMEDIES OF BONDHOLDERS

General

Remedies under the Act and the 1998 General Ordinance available to Holders of 1998 Ordinance Bonds, including Holders of the Bonds, and to any trustee for Bondholders appointed by the Holders of 25% in principal amount of any Series of 1998 Ordinance Bonds in default, are described in the summary contained in APPENDIX E hereto. In addition to the remedies described therein, Bondholders, the Fiscal Agent, as representative of the Bondholders, or a trustee for the Bondholders are entitled under the Pennsylvania Uniform Commercial Code to all remedies of secured parties in respect of (i) the Gas Works Revenues and the funds on deposit in the Sinking Fund and (ii) the Sinking Fund Reserve if such bonds are secured by the Sinking Fund Reserve. So long as DTC or its nominee is the Registered Owner, the remedies of Beneficial Owners are exercisable through the procedures established by DTC.

Limitation on Remedies of Bondholders

The ultimate enforcement of Bondholders' rights upon any default by the City in the performance of its obligations under the 1998 General Ordinance will depend upon the application of remedies provided in the Act, the 1998 General Ordinance and other applicable laws. Litigation may be necessary to obtain relief in accordance with these remedies. Such litigation may be protracted and costly. Remedies such as mandamus, specific performance or injunctive relief are equitable remedies that are subject to the discretion of the courts.

The rights and remedies of Bondholders with respect to the City's obligations under the Bonds could be significantly limited by the provisions of Chapter 9 of the United States Bankruptcy Code ("Chapter 9"). Chapter 9 permits, under prescribed circumstances (and only after an authorization by the applicable state legislature or by a governmental office or organization empowered by state law to give such authorization), a "municipality" of a state to file a petition for relief in a bankruptcy court of the United States if it is insolvent or unable to meet its debts as they mature, and it desires to effect a plan to adjust its debt. Chapter 9 defines "municipality" as a "political subdivision or public agency or instrumentality of a State." Thus, for purposes of Chapter 9, except as may be limited by state law, the City would be considered a "municipality." As a result of the commencement of a federal bankruptcy case by the City, Bondholders could experience delays in receiving Bond payments, as well as partial or total losses of their investments in the Bonds.

The Pennsylvania Intergovernmental Cooperation Authority Act for Cities of the First Class (Pa. P. L. 9, No.6 (1991)) (the "PICA Act"), prohibits the City from filing a petition for relief under Chapter 9 of the United States Bankruptcy Code so long as the Pennsylvania Intergovernmental Cooperation Authority ("PICA") has outstanding any bonds issued pursuant to the PICA Act. As of June 30, 2020, the principal amount of PICA bonds outstanding was approximately $56.1 million, and the final maturity date of such bonds is June 15, 2023. Furthermore, if no PICA bonds are outstanding, the PICA Act requires approval in writing by the Governor of the Commonwealth for a filing under Chapter 9 by the City, and of the City's proposed plan, after the Governor holds a hearing as required by the PICA Act. If the Governor were to grant an approval for the City to file a petition under Chapter 9 and approve the City's plan, and the City were to so file, provisions of the United States Bankruptcy Code could limit the enforcement of Bondholders' rights and remedies. See "THE CITY OF

PHILADELPHIA GOVERNMENT AND FINANCIAL INFORMATION – Local Government Agencies – *Non-Mayoral-Appointed or Nominated Agencies* – PICA" in APPENDIX C hereto.

The filing of a bankruptcy petition under Chapter 9 operates as an automatic stay of the commencement or continuation of any judicial or other proceeding against the debtor or its property. However, a petition filed under Chapter 9 does not operate as a stay of application of pledged "special revenues" (as defined in the United States Bankruptcy Code) to the payment of indebtedness secured by such revenues. Special revenues include receipts derived from the ownership or operation of systems that are used to provide utility services and the proceeds of borrowings to finance such systems. The Bankruptcy Code further provides that special revenues acquired by the debtor after commencement of a Chapter 9 case shall remain subject to any lien resulting from any security agreement entered into by the debtor before the commencement.

The lien on special revenues derived from a system, however, will be subject to the payment of the necessary operating expenses of that system. Therefore if Gas Works Revenues are determined by a bankruptcy court to constitute "special revenues" within the meaning of Chapter 9, then Gas Works Revenues acquired by the City before and after the filing of a Chapter 9 petition will remain subject to the lien and security interest of the 1998 General Ordinance in favor of Holders of the 1998 Ordinance Bonds, but would be subject to the payment of PGW's necessary operating expenses as determined by the City.

If the pledged Gas Works Revenues could not support both the debt service requirements and operating expenses of PGW, it is possible that payments to Holders of the Bonds could be reduced. ***No representation is made that a bankruptcy court will determine that the Gas Works Revenues constitute "special revenues" within the meaning of Chapter 9.***

Unless a debtor consents or the plan proposed under Chapter 9 provides, the bankruptcy court may not interfere with any of the property or revenues of a Chapter 9 debtor or with such debtor's use or enjoyment of any income producing property. Accordingly, if the City were permitted by State law to use the proceeds of the Bonds and the Gas Works Revenues pledged for the benefit of the Bondholders other than to benefit the Gas Works, and decided to do so, it is unclear whether a bankruptcy court would have the power to interfere with that decision. Even if a bankruptcy court had such power, the court, in the exercise of its equitable powers, could refuse to require the City to use the proceeds of the Bonds or the Gas Works Revenues to pay Holders of the Bonds, could permit a subordination of the liens to new bonds if the former were found more than "adequately protected" or could avail itself of a broad range of equitable remedies.

PGW is a component unit of the City and any filing by the City under Chapter 9 could occur under circumstances where the City's general financial condition has deteriorated without regard to the results of operations or the financial position of PGW. No assurances can be provided that any Chapter 9 filing by the City due to circumstances unrelated to PGW would not still adversely affect PGW.

Regardless of any specific adverse determinations in a City bankruptcy proceeding, the existence of such a proceeding could have a materially adverse effect on the liquidity and value of the Bonds.

PHILADELPHIA GAS WORKS

General

PGW, formed in 1836, is principally a gas distribution facility. It is a component unit of the City and is the largest municipally-owned gas utility in the nation. PGW sells natural gas within the City, its service territory, and is the exclusive distributor of natural gas within the limits of the City. PGW maintains a distribution system with approximately 3,041 miles of gas mains and approximately 476,605 service lines serving approximately 510,000 customers as of August 31, 2019.

PGW consists of real and personal property owned by the City and used for the acquisition, manufacture, storage, processing and distribution of natural gas in the City, and all property, books and records employed and maintained in connection with the operation, maintenance and administration of PGW. In addition to an extensive distribution system, PGW operates facilities for the liquefaction, storage and vaporization of natural gas to supplement gas supply taken directly from interstate pipeline and storage companies. Such storage facilities include two LNG plants.

History

The City in March 1835, authorized private ownership and operation of a public gas utility with trustee management. The authorizing ordinance provided for an option clause which allowed the City to become the owner of the utility properties in connection with issuing City bonds to the stockholders. In March of 1841, the City exercised this option to obtain ownership of the utility property and has continuously owned the gas system since that time. The City began manufacturing gas in 1836, and service began that winter with 46 gas lamps provided along Second Street.

The management and operation of PGW has changed over time through a variety of arrangements. After initial private ownership, in 1841, a Board of Trustees assumed management of PGW which structure was maintained until the spring of 1887. At that time, the City took over the operation of PGW and managed it directly. In the midst of significant operating and financial challenges, the City changed this structure in fall of 1897. The City, without a viable option to sell PGW, arranged for the United Gas Improvement Company, (subsequently UGI Corporation), to manage and operate PGW, which arrangement continued through the end of 1972.

The City, in December of 1972, incorporated PFMC as a Pennsylvania non-profit corporation to manage the operations of PGW. PFMC presently provides executive management for PGW and directs operations of its facilities pursuant to the Management Agreement.

Additional Information

In addition to the information under this heading, additional information about PGW is found in other sections of this Official Statement:

For a discussion of PGW's facilities, see "The Gas Works Facilities" and "The Capital Improvement Program."

For a discussion of PGW's revenues and expenses, see "PGW Budgets And Finances," "Gas Service Tariff And Rates," "MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS AND FINANCIAL CONDITION FOR THE ELEVEN MONTHS ENDED JULY 31, 2020 AND JULY 31, 2019 (UNAUDITED)" and APPENDIX A – "COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR FISCAL YEARS ENDED AUGUST 31, 2019 AND 2018 OF THE PHILADELPHIA GAS WORKS – Financial Section."

For information about the City, including the anticipated impact of the COVID-19 pandemic, see APPENDIX C – "THE CITY OF PHILADELPHIA GOVERNMENT AND FINANCIAL INFORMATION." APPENDIX D – "THE CITY OF PHILADELPHIA SOCIOECONOMIC INFORMATION" includes information about the City and its residents such as the City's population, demographics, employment and unemployment conditions, median family and household incomes and cost-of-living index.

Business Continuity Plans

PGW currently uses Assurance Software as the software platform in which its Business Continuity Planning (BCP) plans reside. PGW specifically uses the Continuity Management (CM) module. PGW's BCP plans are based on the Disaster Recovery Institute International (DRII) 10 areas of concentrations. PGW has organized the BCP plans around three broad scenarios. In each of these scenarios, PGW's departments look at impacts and recovery strategies for their respective areas to insure that, they will be able to meet all critical and essential functions to insure not only the safe and reliable delivery of natural gas, but also the safety of PGW's employees and the Gas Works. The first scenario looks at the loss of gas supply (i.e., a circumstance in which

PGW were to lose gas supply coming into the City). The second scenario involves a corporate campus interruption. These plans look at the response and recovery of operations due to a loss of physical facilities and or computer systems. The third scenario, contemplates a pandemic, such as the current Covid-19 outbreak, or the loss of a significant number of employees.

COVID-19 Response, Recent Trends and Uncertainties

Modified Work and Safety Measures. PGW's management considers protecting the health and safety of employees and customers to be among PGW's most essential core values. In responding to the COVID-19 pandemic, PGW proactively introduced precautionary actions to mitigate exposure and reduce the impact of COVID-19 on its employees, contractors, customers and the public.

Beginning in the first quarter of 2020 prior to the Commonwealth's declaration of emergency, PGW's senior management convened a multi-disciplinary internal working group in order to ensure overall safety, and to maintain continuity of operations in the face of likely business impacts. PGW's 24-hour Emergency Hotline has remained available throughout the pandemic with no material impact on response times.

To date, PGW has maintained its commitment to providing safe and reliable service to its customers and protecting the communities it serves. PGW customers have not experienced any significant service disruption due to COVID-19 and no such interruptions to service are currently anticipated.

The following response measures have been implemented to continue PGW's service goals, all in accordance with PGW's Business Continuity Plan and guidance from multiple public health and safety agencies, and after consideration of the current response practices of certain other local utilities:

• Modified Work Schedules and Remote Work: In March 2020, PGW transitioned roughly 600 of its 1,600-member workforce to work from home and limited on-site work to essential service issues only. Essential service issues include all emergency response, all gas odor reports, and all requests to turn on service, requests for financial assistance and calls for Parts & Labor Plan service repairs. PGW also suspended its cast iron main replacement program.

All non-essential work resumed May 17, 2020. PGW employees that transitioned to work from home are anticipated to remain working from a remote environment until further notice.

• Closure of Customer Service Centers to the Public: Following the United States Centers for Disease Control and Prevention's (CDC) guidance on social distancing, and as a precautionary measure for the safety of PGW employees and customers, PGW's five (5) Customer Service Centers have been closed to the public since Monday, March 16, 2020. Alternative options for payment (pay by phone, retail pay, and pay by mail) and customer program enrollment (CRP, LIHEAP, etc., as defined herein) are posted at the centers through on-site signage, as well as on social media, and PGW's website. PGW's alternative payment options give customers the flexibility to make cash payments using Retail Cash which is a free service that allows such payments to be made at certain locations (*i.e.*, CVS, Family Dollar, 7-11, or Speedway).

• Suspension of Service Terminations: The PUC previously ordered all Pennsylvania utilities to cease service terminations (except for safety) during the pendency of the Governor's emergency proclamation. On August 31, 2020, Governor Wolf issued a renewal by amendment to the Proclamation of Disaster for another period of ninety days. On October 13, 2020, the PUC issued an Order modifying the moratorium on service terminations by providing for such moratorium to end effective November 9, 2020, subject to a number of customer protections, including a prohibition on the termination of residential service to residential customers who are at or below 300% of federal poverty income guidelines and who satisfy certain requirements such as applying for all assistance programs for which the customer is eligible. Small business customers, with past due amounts, are also protected from termination of service if they enter into a payment arrangement with their utility and remain current on their payment arrangement and current bill. PGW has suspended non-payment customer service terminations, and new late payment charges on arrearages since Monday, March 16, 2020. Regular billing has continued for all customers. See “GAS SERVICE TARIFF AND RATES – Collections” for a further discussion with respect to such termination moratorium as modified.

PGW has recognized that certain customers may experience financial difficulty as a result of the coronavirus outbreak and has encouraged customers to make arrangements to stay current on their bills during the freeze and conserve their energy use to prevent termination once the moratorium ends.

PGW has a variety of assistance programs in place for customers to assist with their natural gas bills. Options like “Payment Arrangements” (for when customers fall behind, or are worried they might) or “Budget Billing” (which sets up a consistent pay amount each month) are being utilized to counter some of the adverse economic impact which COVID-19 could have over time on revenue trends and cash flows.

- Health & Safety Protection Efforts: In keeping with public health official guidelines, PGW has implemented the following employee-related actions to limit the risk of exposure to employees and customers.

PGW employees have been instructed to follow the precautionary health and hygiene measures promoted by the CDC to mitigate exposure and limit the risk of infection. PGW has also limited all external meeting attendance and external visitors at PGW facilities to operationally critical activities that are required to deliver gas to its customers; restricted travel between PGW office locations, except for operationally critical activities; stopped all non-essential business-related travel and advised against travel to locations with growing case counts; and elevated the level of cleaning and disinfecting at all PGW facilities.

In order to protect the health and safety of its service technicians, PGW customer service representatives ask customers if they or anyone at their property are ill or believe they have been exposed to COVID-19. PGW field technicians and/or crews upon arrival at the property for a field service call and before entering will again question the customer regarding exposure to COVID-19. Before entering the property the employee is required to wear additional protective gear including respirators, face masks, protective suits and nitrile gloves. Customers are also asked to wear a facial covering, if possible, and to enter a separate room or remain at least 6 feet away while technicians perform work inside homes and businesses.

Seasonal Considerations, Recent Trends, and Uncertainties Regarding Financial and Operating Impact. The extent to which the economic and other impacts of COVID-19 will affect PGW’s near term financial and operating results may not be known until the end of the winter season of FY 2021 or thereafter. Historically, PGW has had higher customer sales volumes during the colder weather months of November through April. These typically are the months during PGW’s Fiscal Year when it recognizes generally stronger results in terms of operating income, net income and net earnings (i.e., net income minus PGW’s contributions to the City). These generally stronger results tend to offset, on an annual Fiscal Year basis, relatively less robust results frequently recognized during the warmer months of the Fiscal Year (i.e., the later spring into the early fall months). Consequently, there is a risk that the overall impact on PGW’s operations and financial position due to any deterioration in PGW’s collection results, bad debt experience, and other financial metrics, may be magnified to the extent such deterioration occurs during the cold weather months of PGW’s Fiscal Year.

PGW actively works to minimize the potential for adverse customer payment patterns during winter months. PGW has annual campaigns to educate customers regarding assistance programs such as: LIHEAP grants, CRISIS grants Equal Monthly Payment Plans (Budget Billing), CRP, and other various payment agreement options that are afforded PGW customers. PGW proactively implements these annual campaigns to inform customers of their options if customer payment challenges arise.

PGW has maintained a rolling 24-month collection rate above its 96.0% goal for FY 2020, ending such Fiscal Year with a 24-month collection rate of 96.6%. Fiscal Year 2020 over Fiscal Year 2019 comparisons of the number of customers with an accounts receivable balance in the greater than 90 day category show an increase of approximately 36,000 customers. At August 31, 2019, such residential customer count was approximately 69,000 which has risen to approximately 105,000 residential customers at August 31, 2020. Days

Sales Outstanding ("DSO")†, inclusive of all accounts receivable, no matter what aged category, was 79 DSO as of August 31, 2019 and has risen to 101 DSO as of August 31, 2020. Accounts receivable at August 31, 2020 (unaudited) was approximately $153.0 million, up from the August 31, 2019 balance of $146.0 million, reflecting the results of a greater number of slow paying customers. The DSO at August 31, 2018 was 76.25 with accounts receivable of approximately $148.9 million.

PGW in recent months has observed certain factors which have tended to reduce pressure on operating costs. PGW's management considers these developments to be at least partially attributable to generally lower activity levels due to COVID-19. However, no assurances can be provided that PGW will not experience increased costs in future fiscal periods due to factors such as timing shifts and pent-up demand for certain services of PGW. Operationally, PGW has experienced approximately 48,000 fewer overtime hours due to the stoppage of construction and other work in PGW's third FY 2020 quarter which continued into the fourth quarter of FY 2020. The FY 2019 level was approximately 250,000 overtime hours and the FY 2020 level was approximately 202,000 overtime hours. Odor complaints were flat year over year at approximately 34,000 per year. Customer call volume on a year to year basis is down approximately 156,000 customer calls with the FY 2019 level at 436,000 customer calls and the FY 2020 level at 280,000 customer calls. Customer appointments for FY 2019 were approximately 48,000 while the FY 2020 level was approximately 38,000, resulting in a decrease of 10,000 customer appointments on a year-to-year basis.

PGW's management considers that it is likely that the impact of COVID-19 on PGW, its operations and financial position will continue to change as circumstances and events evolve. The duration, severity, and degree of the impact of COVID-19 is difficult to forecast due to the dynamic nature of the pandemic, including uncertainty about any potential "spikes" or additional "waves" in the disease and the potential public health impacts of the interplay of COVID-19 with annual influenza strains. PGW believes that it may be some time before it is able to determine the full long-term impact of COVID-19 on PGW's business operations. For information on the City's response to COVID-19 and the related financial impact on the City, see "INTRODUCTION – COVID-19 Response – General" and APPENDIX C – "OVERVIEW – Fiscal Health of the City – COVID-19."

Further Discussion. See "PHILADELPHIA GAS WORKS – Business Continuity Plans" regarding a general discussion of PGW's emergency response plans, including with respect to pandemics, such as COVID-19. See "PHILADELPHIA GAS WORKS - Insurance, Loss Reserves and Cost Recovery" regarding COVID-19 in relation to certain insurance matters. See "GAS SERVICE TARIFF AND RATES – Collections" for a discussion of a moratorium on utility shut-offs for late payments imposed in response to COVID-19 by the PUC and the PUC's recent modification thereto, and PGW's recent collection results and actions, including the temporary suspension of imposing late charges on customers for non-payment. See "THE CAPITAL IMPROVEMENT PROGRAM – Cast Iron Main Replacement" for a discussion of the impact of COVID-19 on PGW's capital program. See "PGW BUDGETS AND FINANCES – Accounts Receivable" for a discussion of the impact of COVID-19 on PGW's account receivables. See also "MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS AND FINANCIAL CONDITION FOR THE ELEVEN MONTHS ENDED JULY 31, 2020 AND JULY 31, 2019 (UNAUDITED)."

Management

Governance of the Gas Works

The Philadelphia Home Rule Charter (as defined in APPENDIX E) and the Management Agreement, which was adopted by an ordinance passed on December 29, 1972 (Bill No. 455, as subsequently amended), establishes the governance structure through legislation regarding the (i) ownership of PGW property and functioning of PGW by the City; (ii) approval by the City Council of capital budgets and certain gas supply

† "DSO" is determined by dividing the dollar amount of all receivables by billed revenues and then multiplying the resulting quotient by 365 (i.e., (receivables/billed revenues)*365).

contracts for PGW; (iii) the powers and duties granted to the Gas Commission; and (iv) provisions of executive management functions and directions for operation of PGW facilities by PFMC.

PGW personnel are responsible for the day-to-day management of the construction, operation and maintenance of the gas system. PGW's management organization is set forth in the table under "*Philadelphia Gas Works Organizational Structure*" below. Any changes in governance of PGW must be made pursuant to ordinances adopted by the City Council.

In addition, PGW's rates are regulated by the PUC under the Pennsylvania Natural Gas Choice and Competition Act No. 1999 21, PL. 122, 66 Pa. C.S. Section 2201 et seq. (the "Gas Choice Act"). See "- Governmental Oversight –*The PUC*."

Management Agreement

PFMC has operated PGW pursuant to the Management Agreement since January 1, 1973. The Management Agreement authorizes PFMC to manage and operate all the property, real and personal, collectively known as the Gas Works, for the sole and exclusive benefit of the City and establishes PFMC's primary obligation as applying the highest standards of management practice and diligence to the operation of the Gas Works.

The Management Agreement and any amendments thereto are authorized by ordinances of the City Council. The Management Agreement has a two-year term, which, upon execution, is automatically extended for another two-year term, provided the City has not exercised its right of cancellation. The City can cancel the Management Agreement at any time by providing PFMC a 90-day notice of cancellation. Any such cancellation, however, must be approved by resolution or ordinance of the City Council.

The Management Agreement grants the Gas Commission certain specified powers and duties and all other powers not specifically granted to PFMC. The powers and duties granted to the Gas Commission include: (i) approval of personnel provided by PFMC, (ii) review of gas supply contracts for approval by City Council, (iii) approval of changes in tests and standards of gas quality and pressure, (iv) approval of PGW's operating budget, (v) review of PGW's capital budgets and recommendations thereon to City Council, (vi) approval of certain short-term loans (but not the issuance of bonds), (vii) access to and review of all books, records and accounts of PGW, (viii) prescription of insurance requirements, (ix) promulgation of standards for procurement and disposal of material, and procurement of supplies and services, and (x) approval of all real property acquisitions for further approval of City Council.

Pursuant to the Management Agreement, PFMC provides the executive management of PGW. The Management Agreement specifies in particular that such management includes a Chief Executive Officer (CEO), a Chief Operating Officer (COO), and a Chief Financial Officer (CFO). PFMC is also required to provide other personnel for such management which it considers to be appropriate.

Various aspects of PFMC's management of PGW are subject to review and approval by the Gas Commission, including approval of the PGW chief executive officer, chief operating officer and the chief financial officer, and, where authorization by the City Council is required, recommendation of the City's Director of Finance and/or the Gas Commission. The Management Agreement sets forth various responsibilities for the Gas Commission's oversight of the operations of PGW. The City's Director of Finance oversees certain financial practices of PGW. The Management Agreement designates the City's Law Department as the designated legal advisor to the Gas Commission and PGW. The Law Department has assigned the representation of PGW to the Office of General Counsel of PGW. See "— Governmental Oversight — *Gas Commission*" and "PGW BUDGETS AND FINANCES — Budget Approval" for additional discussions of the Gas Commission.

PFMC Board

The PFMC Board of Directors consists of seven members appointed by the Mayor of the City. Each member is appointed to a two-year term and serves until his successor is duly qualified and seated. The following are the current members of the PFMC Board of Directors:

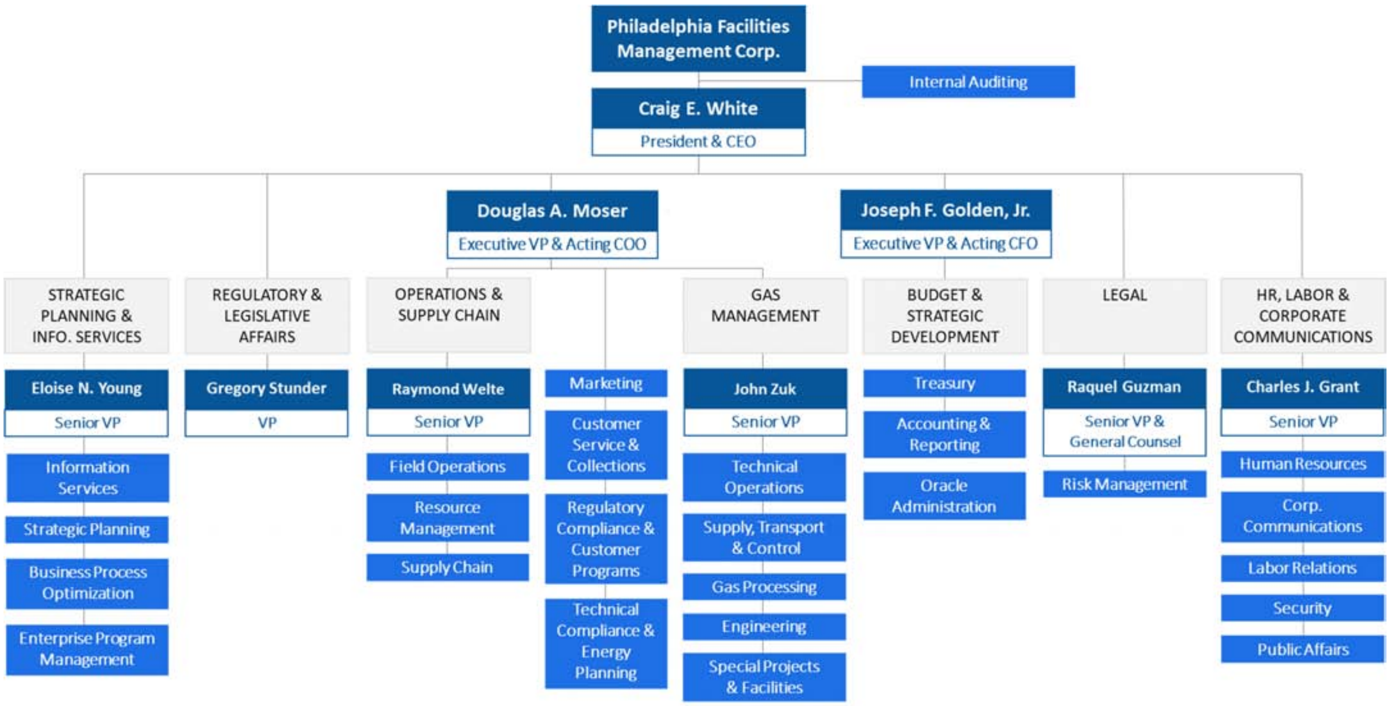
Current Members‡	Title	Term Began
Leigh Whitaker, Director of City Relations, University of Pennsylvania Chair, Workforce Development Committee	Chair	4/05/2016
James Engler, Chief of Staff, Office of the Mayor, City of Philadelphia Member, Workforce Development Committee	Vice-Chair	2/16/2016
Catherine M. Paster, Retired, City of Philadelphia Member, Audit/Finance Committee	Treasurer	1/27/2012
Lauren Gilchrist, Senior Vice President, Senior Director of Research for Philadelphia JLL (Jones Lang LaSalle Incorporated)	Secretary	8/26/2020
Albert Mezzaroba, Of Counsel, Genova Burns, Chairman, Audit/Finance Committee	Member	4/05/2016
Marian B. Tasco Former Majority Leader, Philadelphia City Council Member, Workforce Development Committee	Member	4/05/2016

Philadelphia Gas Works Organizational Structure

PGW's organizational chart is shown below.

[Remainder of page intentionally left blank.]

‡ Currently, one position is vacant.



PGW Senior Officers

The following are brief biographical descriptions of PGW's current senior officers:

Craig E. White, President and Chief Executive Officer. Mr. White is the President and Chief Executive Officer of PGW. Mr. White started with the organization in 1980. During his 40 years of service, he progressed through the ranks and in March of 2011 he was elevated to his present position as President and Chief Executive Officer. Mr. White received a Bachelor of Science Degree from Kutztown University. He is a graduate of Drexel University's MBA Program and has completed executive development programs at Drexel University and Harvard Business School. Mr. White currently sits on the boards of the American Gas Association, the Northeast Gas Association, the National Petroleum Council, the Energy Association of Pennsylvania, the Delaware Valley Citizens Crime Commission, and Jefferson Health and most recently was named Co-Chair of the Greater Philadelphia Energy Action Team.

Douglas A. Moser, Executive Vice President and Acting Chief Operating Officer. Mr. Moser started with the Philadelphia Gas Works in 1979. During his 41 years of service, he progressed through the ranks and in 2012 he was elevated to his present position as Executive Vice President and Acting Chief Operating Officer. Mr. Moser received his Bachelor of Science degree in Chemical Engineering from Pennsylvania State University and his Master in Business Administration degree from Widener University. He serves on the Gas Board of the Energy Association of Pennsylvania, the Board of Directors of the American Public Gas Association, and the Leadership Council of the American Gas Association.

Mr. Moser has announced that he will retire from PGW by the end of PGW's FY 2021 second quarter. See "PHILADELPHIA GAS WORKS – Succession Planning; Personnel Matters; Training" for a discussion of PGW's expectations regarding related succession plans.

Joseph F. Golden, Jr., Executive Vice President and Acting Chief Financial Officer. Mr. Golden was appointed Executive Vice President and Acting Chief Financial Officer in March 2012. In this capacity he is responsible for the treasury, accounting, budgeting, and finance functions. Prior titles held by Mr. Golden at PGW include: Controller, Treasurer, Manager Treasury Department, Senior Staff Accountant, and Staff Accountant. Mr. Golden started his career with PGW in August of 1986. Mr. Golden has prior work experience in public accounting, treasury accounting and cash management, and manufacturing. Mr. Golden holds a Bachelor of Science degree in Accounting from Villanova University, a Master of Business Administration degree from Drexel University, and received his Juris Doctor (*cum laude*) from Temple University School of Law.

Charles J. Grant, Senior Vice President – Human Resources, Labor, and Corporate Communications. Mr. Grant was appointed Senior Vice President in April 2016. Previously, Mr. Grant held the title of Chief of Staff in the Office of the President and Chief Executive Officer. He held the same position in the Office of the Executive Vice President and Chief Operating Officer when he joined PGW in June 2010. In his current position, he is responsible for human resources, organizational development, and staffing. His responsibilities also include oversight and enforcement of PGW's labor contracts and PGW security. He is also responsible for media relations, crisis communications, community partnerships, government affairs, internal communication, digital communication/social media and advertising campaign development. Prior to joining PGW, Mr. Grant was the owner and managing partner in the law firm of Grant & Lebowitz, LLC. Mr. Grant also served as the Chief of the Homicide Unit for the Philadelphia District Attorney's Office, Deputy District Attorney in the Los Angeles County District Attorney's Office, and an adjunct professor at the Beasley School of Law, Temple University. Mr. Grant earned his Bachelor of Arts degree from the Honors College of Ohio University and his Juris Doctor degree from the Georgetown University Law Center.

John C. Zuk, Senior Vice President – Gas Management. Mr. Zuk began his career at PGW over 32 years ago in the Distribution Department. He continued in Field Operations to level of Director of Labor Relations for Field Operations and Customer Affairs. Mr. Zuk also held positions within the Marketing Department from Account Manger up to the title of Vice President. His current position as Senior Vice President of Gas Management includes responsibility for Gas Processing, Engineering, Gas Acquisition, Transportation & Gas Control, as well as PGW-owned and leased properties. Mr. Zuk serves as a member of the American Public Gas Association (APGA) Research Foundation board and Vice-Chair of the APGA Gas Supply Committee. Mr. Zuk received his Bachelor of Science and MBA from LaSalle University.

Raymond J. Welte, Senior Vice President – Field Operations and Supply Chain. Mr. Welte was appointed Senior Vice President, Field Operations and Supply Chain in January 2018. Mr. Welte is responsible for the day to day operations of the Distribution and Field Operations Department. Mr. Welte also oversees Supply Chain, which encompasses Fleet and Procurement. Mr. Welte previously held the positon of Vice President, Field Operations since November 2014. Mr. Welte has held many positions in the Field Operations Department since beginning his career with PGW in October 1978. Some of the positions he has held include: Director, Field Operations; Manager, Field Service Department; Manager Meter Measurement, Pressure Force; Superintendent of Commercial & Industrial; Supervisor Field Service. Mr. Welte has been an active member of the American Gas Association, Society of Gas Operators, and Energy Association of Pennsylvania.

Eloise N. Young, Senior Vice President, Strategic Planning and Information Services. Ms. Young was named Senior Vice President in April 2016 where she has oversight of Strategic Planning and the Information Services Department. Prior to her appointment, she served in a number of positions in PGW's Information Services Department including Chief Information Officer, Director of Technical Strategy and Support, Manager of Systems Services, System Administrator in both the Unix and CICS environments, Database Administrator, and applications developer. She received a Bachelor of Science degree in Information Technology from the University of Phoenix in 2003 and a Generalist Master of Business Administration from Rosemont College in 2014.

Raquel N. Guzmán, Esq., Senior Vice President – Legal and General Counsel. Ms. Guzmán has held various positions within PGW's Legal Department since joining the department in 1998. She was appointed

General Counsel in February 2016. Prior to joining PGW's legal staff, Ms. Guzmán was a Deputy City Solicitor for Regulatory Affairs for the City and also practiced at a major Philadelphia law firm in its real estate department. She holds a Juris Doctor degree from the University of Pennsylvania Law School and an undergraduate degree from Harvard College.

Gregory J. Stunder, Esq., Vice President – Regulatory and Legislative Affairs. Mr. Stunder joined PGW's Legal Department in 2001 and was appointed Vice President – Regulatory & Legislative Affairs in January 2015. While in PGW's Legal Department, Mr. Stunder represented PGW in regulatory and legislative matters relating to base rate and gas cost rate proceedings, main replacement, gas choice and PGW's operations. In his current position, Mr. Stunder's primary responsibility is working with the President and CEO and other members of senior management regarding certain matters relating to state and federal legislatures and regulatory agencies. Prior to attending law school, Mr. Stunder was a Certified Public Accountant and he managed all aspects of the Philadelphia Thermal Energy accounting department (which is now Veolia Energy Philadelphia) including rate matters before the PUC. Mr. Stunder holds a Juris Doctorate from Temple University and a BS in Accounting from LaSalle University.

The following is a brief biography for Seth A. Shapiro. Mr. Shapiro is expected to be appointed Chief Operating Officer of PGW, effective January 4, 2021, subject to execution of an employment agreement that was authorized by the PFMC Board of Directors at its October 22, 2020 meeting. Mr. Shapiro's appointment is subject to the approval of the Gas Commission. Should Mr. Shapiro take office prior to the approval of the Gas Commission, he will do so in an acting capacity.

Seth A. Shapiro. Mr. Shapiro is the immediate past Chairman of the Board of Directors of PFMC, which oversees the operation of PGW. Mr. Shapiro was appointed Chairman by the Honorable James F. Kenney, and also previously served on the PFMC Board of Directors as an appointee of the Honorable Michael Nutter and the Honorable John F. Street. He served on the PFMC Board of Directors for roughly 15 years in the aggregate, serving for 5 years as Chair of the Finance and Audit Committee, and 5 years as Vice Chairman. He was elected Chairman during his most recent appointment (2016 - 2020).

Mr. Shapiro is the Chief Operating Officer of The Goldenberg Group, a Philadelphia-based multi-disciplinary real estate development firm. Mr. Shapiro has over 20 years of experience managing all phases of development and construction. He has served in leadership positions with publically and privately held development companies. During his career, he has managed projects with a combined value of over $1.0 billion, including in excess of 10,000 residential units and over 2 million square feet of retail and commercial space. He has worked on projects in Pennsylvania, New Jersey, Maryland, Virginia, West Virginia and Florida.

He is currently Chairman of the Board of the Chestnut Hill Business District, and has served in leadership positions on a variety of community based non-profits, including Mt. Airy USA and Operation Understanding. Mr. Shapiro has guest lectured at the University of Pennsylvania, Temple University and Drexel University and presents at a variety of industry conferences.

Mr. Shapiro graduated from Cornell University with a B.A. in Government.

Succession Planning; Personnel Matters; Training

Given that the number of PGW employees who are eligible, or approaching eligibility, to retire has been increasing over recent years, PGW is anticipating a significant number of retirements and has taken certain measures in response. PGW over the last decade has put in place a planning process for succession.

PGW conducts biannual meetings with the majority of its departments to address anticipated retirements and training and development programs to further the professional development of identified candidates. PGW both evaluates potential leaders and actively takes steps so that identified employees might be developed as candidates for executive positions including those at a senior level within PGW. PGW recognizes the particular relevance of this for its most senior executive level positions, based on the comparable significant duration of service provided to PGW by each of the CEO, CFO, and COO and the expectation of retirements occurring for some of these positions within the next three years. PFMC Board of Directors Chairman Seth A. Shapiro resigned from the PFMC Board of Directors, effective October 16, 2020. On October 22, 2020, the PFMC Board of Directors elected Leigh Whitaker as Chair. Ms. Whitaker is a Board member who served as Secretary of the PFMC Board of Directors until her election as Chair. At the same meeting, Lauren Gilchrist was elected Secretary of the PFMC Board of Directors. In addition, the PFMC Board of Directors on October 22, 2020 approved the appointment of Seth A. Shapiro as Chief Operating Officer for PGW, effective January 4, 2021. Mr. Shapiro's appointment is subject to execution of an employment agreement that was approved at the October 22, 2020 board meeting, and the approval of the Gas Commission. Should Mr. Shapiro take office prior to the approval of the Gas Commission, he will do so in an acting capacity. Mr. Shapiro is anticipated to be subsequently promoted to the President and CEO position for PGW in December 2021, subject to negotiated terms and the approval of the Gas Commission. Douglas A. Moser has announced that he will retire from PGW by the end of PGW's FY 2021 second quarter.

The probability, risk and impact of turnover and loss, and nine box reviews are examined in PGW meetings, as well as the consideration of possible successors and the time considerations relevant for implementing new placements. In order to increase the number of experienced management level employees who could move into an executive role, PGW has maintained more managerial roles at its Vice President level.

PGW trains employees for leadership through its Management Academy, Leadership Development Program and other coaching. Fourteen individuals who completed the Leadership Development program (38%) were advanced to a Director/Vice President level since approximately 2009. The Management Academy is designed to enhance knowledge of a number of different aspects of PGW's operations and business. Among other things, it focuses on soft skills and decision making enhanced through critical thinking. PGW also is involved with Leadership Philadelphia to cultivate individuals for leadership both within PGW and the broader community.

PGW places emphasis on developing and keeping an inclusive, diverse and equitable work environment. All PGW management employees receive biennial training to prevent discrimination and harassment. The majority of PGW's management team members have received training to identify and preventing unconscious bias. New employees are presented sexual harassment prevention training. Such training is also incorporated into the annual training programs for PGW's Field Operations.

PGW has created job ladders to reward performance in an accelerated manner for engineer and professionals in the information services area. Engineers participate in a rotational program to develop their understanding of different career opportunities provided by PGW. PGW has advanced many of the engineers who started with PGW a decade ago into more senior level positions such as superintendents and directors due to this approach.

PGW utilizes a number of affinity groups in which identified several senior employees with institutional knowledge and respect within PGW offer mentoring to more junior professionals to promote the transfer of such institutional knowledge. Over 350 positions, since approximately Fiscal Year 2017 to third quarter of Fiscal Year 2020, have been filled through promotions within PGW or external hires.

Strategic Planning and Performance Management

Since FY 2018, PGW has used its current annual process for strategic planning. The process starts with a review and affirmation of PGW's goals, vision, fundamental values and mission. The process then involves PGW's senior management group developing a set of "SMART" (specific, measurable, achievable, relevant, and time-bound) objectives. Such objectives are provided to PGW's senior management and Board of Directors for approval. PGW's annually composes a plan to identify strategic initiatives which will be impactful and accomplish the approved set of objectives and goals. PGW undertakes this process in an iterative and collaborative manner. PGW monitors progress through quarterly status updates provided to PGW's senior management and Board of Directors by the initiative leaders.

Monthly reports containing key metrics of PGW's performance are used by PGW's senior management to assess and monitor the overall condition of the utility and the effectiveness of PGW in meeting its mission to provide safe and reliable natural gas service. This ongoing monitoring includes an assessment of the continuing upgrade of PGW's below-ground infrastructure. The Board of Directors of the PFMC also receives such monthly reporting. PGW's management provides a Detail Metrics Annual Report to the PGC on an annual basis, with monthly and yearly actual-to-goal metrics, covering a comprehensive list of specific measures of PGW's performance.

Governmental Oversight

Gas Commission

The Gas Commission was created by the Philadelphia Home Rule Charter. By Ordinance of City Council, the Gas Commission is a five-member body consisting of the City Controller, two members appointed by City Council and two members appointed by the Mayor. The Management Agreement vests in the Gas Commission the responsibility for overseeing the operation by PFMC of PGW. The City Controller serves during his incumbency as City Controller. The members appointed by the City Council and the Mayor each serve for terms of four years and hold office until their successors are appointed and qualified.

The Ordinance authorizing the Management Agreement grants the Gas Commission certain specified powers and duties and other powers not specifically granted to PFMC including: approval of certain personnel provided by PFMC; review of gas supply contracts and contracts for the distribution or transmission of gas for approval by City Council; approval of changes in tests and standards of gas quality; approval of PGW-established gas pressure; initial approval of PGW's operating budget; review of PGW's capital budgets and recommendations thereon to City Council; approval of short-term loans (but not issuance of bonds); access to and review of all books, records and accounts of PGW; prescription of insurance requirements; promulgation of standards for procurement and disposal of material, supplies and services and initial approval of all real property acquisitions, sales and leases for further approval by the City Council.

The PUC

The PUC was created by Pennsylvania statute and consists of five members appointed by the Governor of the Commonwealth, with the consent of the Pennsylvania Senate. Each member serves a five-year term and until his or her successor is appointed and qualified. The PUC conducts reviews of various aspects of PGW and the other utilities for which it establishes rates. The PUC has implemented various substantive and procedural regulations regarding the supervision of those utilities. PGW's rates are established by the PUC under the Commonwealth's Public Utility Code (the "Code" or "Public Utility Code") by virtue of the Gas Choice Act, subject to certain limits on the PUC's authority as described under "GAS SERVICE TARIFF AND RATES – Rates – *Ratemaking Methodology to Comply with Bond Covenants*."

The PUC is Pennsylvania's regulator for services and rates for public utilities within the Commonwealth, including natural gas, among other utility services. PUC holds all regulatory authority for PGW's rates, pursuant to the Gas Choice Act. The Gas Choice Act contains provisions which are designed to accomplish certain goals including prohibiting PUC from requiring action (or refraining from action) by PGW or the City under the Public Utility Code that would adversely affect the tax-exempt status of Approved Bonds, (i.e., defined in the Gas Choice Act as bonds or other obligations issued by the City for PGW, including the Bonds). All bonds issued by the City on behalf of PGW under the Act, including the Bonds, are Approved Bonds. Another such goal is the preservation of the City's ability to comply with its bond covenants to the holders of Approved Bonds (including those covenants concerning the imposition, charging and collection of rates and charges). The Gas Choice Act also requires rates to be set for PGW utilizing the ratemaking methodology and requirements that were applicable to PGW's natural gas distribution operation prior to PUC's assumption of jurisdiction over PGW. This ratemaking methodology is required to be used until all outstanding Approved Bonds are paid in full or are refunded or defeased.

Pursuant to the Gas Choice Act, among other things, PGW became subject to PUC regulation on July 1, 2000 and, except as otherwise provided in the Gas Choice Act, the provisions of the Public Utility Code apply to PGW as if it were a public utility. The Gas Choice Act provides that the PUC, instead of the PGC, sets rates for PGW's customers but that despite customer choice in gas suppliers, PGW remains a monopoly for its gas distribution business.

The Gas Choice Act addresses various matters and provides that the provisions of the Home Rule Charter with respect to the powers and duties of the PGC, to the extent inconsistent with the Gas Choice Act, were abrogated effective July 1, 2020. However, The City cannot be required to take any action under the Public Utility Code if such action would cause a variation in the City's financial plan approved by the Pennsylvania Intergovernmental Cooperation Authority. Moreover, the City's executive or legislative powers to "legislate or otherwise determine the powers, functions, budgets, activities and mission of PGW" are not abrogated or limited.

Following a management audit of PGW provided by PUC and restructuring proceedings, on March 31, 2003, the PUC approved PGW's restructuring plan (Docket No. M-00021612), which implements customer choice and permits licensed natural gas suppliers to deliver gas to customers in Philadelphia using PGW's distribution system. On September 1, 2003, PGW began operating under its Restructuring Compliance Tariff.

PUC South Eighth Street Inquiry

On December 19, 2019 an explosion occurred at 1435 S 8th Street, Philadelphia, Pennsylvania, resulting in reports of two fatalities, property damage, and bodily injury in and near the cited address. Consistent with PUC requirements, the PUC is investigating this incident. Pursuant to this investigation, the PUC directed that certain materials in use at or near the site of the incident be submitted to an independent laboratory, Affiliated Engineering Laboratories, Inc., for metallurgical testing. This testing has been completed and a report of the laboratory's findings has been issued to PGW and the PUC. The report noted that the portion of cast iron main examined was graphitized but the extent of graphitization or graphitic corrosion (the process of leaching of iron from cast iron) and reduced pipe wall thickness were findings typical of cast iron gas mains that have been buried in soil for decades. The testing and examination found no evidence of a pre-existing leaking condition prior to the reported incident and confirmed that the main suffered a circumferential fracture (a crack occurring at once, breaking the entire diameter or width of the pipe into 2 pieces with mating fracture surfaces which are uniform in color). This finding is indicative of a one-time overload condition after exposure to external forces/stresses. The report concluded this incident was the result of a one-time failure. The bending force which caused this incident is beyond the scope of the metallurgical report. There are no PUC findings to date with respect to the investigation. Claims received with respect to injury and damage have not advanced to litigation at this time. PGW can provide no assurances that the consequences of the PUC investigation and related matters would not be material to PGW.

PUC August 2018 Report

In response to the completed Stratified Management and Operations Audit conducted by the PUC via a third-party consultant (Docket No. D-2015-2468141, August 2015), PGW submitted its Implementation Plan on October 2, 2015. Such audit concluded that all areas of PGW were generally functioning adequately and made certain recommendations for minor to moderate improvement of PGW. Since October 2015, PGW has submitted two implementation plan updates as requested by PUC. Based upon these updates, in August 2018, the PUC issued a Management Efficiency Investigation (Docket: D-2017-2627521, the "PUC August 2018 Report"), the objective of which was to review and evaluate the effectiveness of PGW's efforts to implement certain recommendations contained in the PUC-directed Stratified Management and Operations Audit report. The scope of this evaluation was limited to PGW's efforts in implementing 65 prior recommendations (the "2015 Recommendations") in the functional areas of: (i) executive management, (ii) corporate governance, (iii) financial management, (iv) gas operations, (v) emergency preparedness, (vi) supply chain, (vii) fleet and facilities management, (viii) information technology, (ix) customer service, and (x) human resources and diversity. Additionally, the PUC's audit staff deemed it prudent to review PGW's compliance with PUC regulations at 52 Pa. Code Chapter 101 regarding physical security, cyber security, emergency response and business continuity plans.

The PUC auditors found that PGW effectively or substantially implemented 28 of the 65 2015 Recommendations and that PGW had taken some action on the remaining 37 2015 Recommendations. The PUC August 2018 Report can be found on the PUC's website at http://www.puc.pa.gov/pcdocs/1586519.pdf, and is not incorporated by reference herein.

The PUC waived the requirement to submit a third progress report on recommendations from the PUC-directed Stratified Management and Operations Audit report released in October 2015, thereby completing the PUC Management Audit started in 2015. PGW anticipates that the PUC may initiate similar audits in the future as part of its ongoing oversight functions.

PUC April 2015 Report

The PUC assessment of PGW in the Staff Report entitled "Inquiry into Philadelphia Gas Works' Pipeline Replacement Program," released on April 21, 2015 (the "PUC April 2015 Report") stated that a renewed assessment of PGW's pipeline infrastructure and pipeline replacement program is necessary because approximately two-thirds of such infrastructure consists of aging cast iron and unprotected steel pipes, "both of which are high risk pipe that pose a potential risk to life and property…." The PUC April 2015 Report concluded that PGW's pipeline replacement efforts are not aggressive enough given the risk of the cast-iron and unprotected steel pipes. The PUC staff identifies several areas that PGW "should explore to increase its main replacement rate to ensure that its customers receive safe, adequate and reliable service." These areas include: increasing the DSIC above the 5.0% cap, changing PGW's current timing for collecting DSIC payments, issuing additional debt to finance pipeline replacement, reducing PGW's cash liquidity by 25% and applying the released funds to pipeline replacement, increasing the funds available for pipeline replacement by having the City waive all or portion of its annual $18.0 million payment from PGW, streamlining PGW governance structure by eliminating the Gas Commission, and consolidating existing facilities.

PGW previously met with the PUC to discuss suggestions made in the PUC April 2015 Report, including matters summarized under this sub-caption. On September 1, 2015, at Docket No. P-2015-2501500, PGW proposed an increase in the DSIC from 5.0% to 7.5% of distribution revenues and to level and annualize the DSIC. The PUC issued an Opinion and Order granting PGW's request to increase the DSIC to 7.5% on January 28, 2016 ("January 28 Order"). The increase, from $22.0 million to $33.0 million per year, is expected to generate approximately $11.0 million in additional annual revenue to fund PGW's accelerated pipeline replacement program. The January 28 Order also permits PGW to level and annualize DSIC recovery, which will provide PGW with more predictable cash flow and may help mitigate over- and under-collections. PGW's increased DSIC charge of 7.5% became effective on February 1, 2016, for service rendered on or after January 1, 2016.

On July 6, 2016, the PUC issued an Opinion and Order that permitted PGW to recover an additional $11.4 million in DSIC under collections for the year ending December 31, 2015, over the course of two years. This resulted in a temporary increase in the DSIC of an additional $5.7 million a year for two years. Beginning on October 1, 2016, PGW temporarily increased its DSIC surcharge to 8.84% as permitted by the PUC's July 6, 2016 Order. This temporary increase terminated on September 30, 2018. PGW will continue to consider the effectiveness of the accelerated pipeline replacement program funded by the DSIC surcharge, evaluate the effect of the DSIC on customers, and assess PGW's ability to effectively implement the level of accelerated pipeline replacement associated with the 7.5% DSIC surcharge prior to requesting an increase in the DSIC, but no assurance can be given that such request will be made or if made, approved.

See the following sections of this Official Statement for discussion of (i) PGW's infrastructure and pipeline replacement activities: "THE CAPITAL IMPROVEMENT PROGRAM," (ii) the DSIC and annual payment to the City: "GAS SERVICE TARIFF AND RATES – Rates – *Surcharge*" and "– *Ratemaking Methodology to Comply with Bond Covenants*," (iii) PGW governance: "PHILADELPHIA GAS WORKS –

Governmental Oversight" and (iv) operation of existing facilities: "THE GAS WORKS FACILITIES." See also " *– PUC August 2018 Report"* above.

City Council's Special Committee on Energy Opportunities for Philadelphia

By resolution adopted January 29, 2015, the Philadelphia City Council created a Special Committee on Energy Opportunities for Philadelphia, the members of which are City Council members appointed by the Council President. The Committee's charge is to develop "strategies for developing Philadelphia and the region as an energy hub" including by "soliciting conceptual proposals, holding public hearings, and conducting research." The resolution states that the Committee's "scope of work shall include, but not be limited to, identifying strategies for enhancing the Philadelphia Gas Works through such means as reforming its governance or entering into joint ventures and public-private partnerships." The Committee convened an initial hearing, but has not scheduled any future proceedings or other action items.

Also see "PERMITTED SECURITIZATION OF REVENUES RELATED TO NON-PERFORMING ASSETS" above.

Other Federal, Commonwealth and City Oversight

In addition to the Gas Service Tariff (the "Gas Service Tariff") and other rate related regulations promulgated by the PUC (see "– Gas Service Tariff" herein), PGW's operations and facilities are subject to laws and regulations, including permitting and approval requirements, promulgated by federal agencies such as the United States Department of Transportation ("USDOT"), the United States Environmental Protection Agency ("USEPA") and the Federal Emergency Management Agency ("FEMA"), state entities such as the Pennsylvania Department of Labor and Industry ("PADLI") and the Pennsylvania Department of Environmental Protection ("PADEP"), the Pennsylvania Emergency Management Agency and local entities such as the Philadelphia Water Department ("PWD"), the Philadelphia Department of Public Health, the Philadelphia Air Management Services ("AMS") and the Philadelphia Office of Emergency Management ("OEM"). In addition, the prices of gas transportation and storage are subject to regulation by the Federal Energy Regulatory Commission ("FERC"), although PGW, its operations and its facilities, are not.

Labor Relations

As of July 31, 2020, 1,122 of the 1,639 employees of PGW were represented by the Gas Works Employees' Union of Philadelphia, Local 686, Utility Workers' Union of America, AFL-CIO ("Local 686" or the "Union"). The Collective Bargaining Agreement entered into during 2015 ("2015 CBA") between PGW and its Union was due to expire May 15, 2020.

On March 11, 2020, PGW and Local 686 agreed upon a Memorandum of Understanding regarding the outline of a two-year extension of the 2015 CBA. On March 30, 2020, the two-year contract extension of the 2015 CBA was ratified by the PFMC Board of Directors. On March 31, 2020, the two-year extension of the 2015 CBA was ratified by Local 686. The two-year extension of the 2015 CBA will expire May 15, 2022.

The terms of the 2015 CBA extension include general wage increases of 3.0% and 3.0% effective May 15, 2020 and May 15, 2021, respectively. Other changes to the 2015 CBA include an increase in the co-pay for Union employees' emergency room visits from $100 to $175 and a reduction in the Union employees' co-pay for urgent care visits from $75 to $30. PGW anticipates this change will drive utilization away from the emergency room and into urgent care, substantially reducing PGW's costs for emergency room visits. PGW has also received concessions from the Union regarding employee absence, lateness, and productivity issues. PGW has also redesigned the Corporate Discipline Policy to achieve greater operating efficiency.

In addition, the 2015 CBA now permits PGW to freely use outside contractors to perform replacement work on active gas mains and service lines, provided a base mileage of 22 miles of main replacement is budgeted through the course of a Fiscal Year (see "THE CAPITAL IMPROVEMENT PROGRAM"). Under the prior collective bargaining agreement, these tasks could only be performed by members of Local 686. This work includes installing mains of all diameters, connecting mains of all diameters to one another, installing service lines, rebuilding meter sets, and relighting customer appliances after the main has been replaced. Further, outside contractors may be used to abandon mains and service lines (e.g., circumstances involving service lines through which gas is actively flowing when the account is no longer active, or where abandonment is on account of cold weather surveys, revenue protection issues, and non-payments shut-offs) which are regulated by the PUC.

The early resolution of CBA issues also saved PGW approximately $1.0 million in strike preparation expenses.

Insurance, Loss Reserves and Cost Recovery

PGW is exposed to various risks of loss related to: torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees and natural disasters. While self-insured for many risks, PGW purchases insurance coverage when appropriate. PGW's real and personal property is insured against the risk of loss or damage in the amount of $250.0 million, subject to a $0.5 million per accident deductible at the Richmond and Passyunk Plants (hereafter defined) and a $0.1 million per accident deductible at all other locations. There are separate sublimits for flood and earth movement at select locations. PGW's property insurance includes coverage for damages incurred from a terrorist attack. PGW does not carry first party environmental coverage through which it could access direct payment of claims for environmental remediation costs. In addition, PGW maintains Boiler and Machinery, Blanket Crime, Directors and Officers, Fiduciary Liability and other forms of insurance.

PGW maintains $210.0 million in liability (including terrorism) coverage against the risk of damage to property or injury to the public with a per occurrence self-insured retention of $1.0 million. PGW is a qualified self-insured employer in the Commonwealth of Pennsylvania for workers' compensation insurance. In addition, PGW maintains Excess Workers' Compensation Liability coverage with a $0.5 million per occurrence retention.

PGW maintains $10.0 million in Privacy and Security (Cyber) insurance with a $0.25 million retention with sublimits for various coverages along with a $10.0 million Blanket Crime policy with a $0.1 million deductible.

PGW maintains a $30.0 million Public Officials Liability (Directors and Officers Liability) policy with a $0.5 million retention, as well as a $60.0 million Fiduciary Liability policy with a $0.2 million retention.

The above coverage descriptions are subject to the terms, conditions, and exclusions of the individual policies.

Although PGW is principally insured through insurance carriers, it is required to cover any settlements of claims that are excluded from coverage under the applicable insurance policies. In each Fiscal Year, PGW establishes, in accordance with the Gas Commission regulations, an estimated liability for any such excluded settlements to be paid in such Fiscal Year.

PGW has not had to make any claims for losses related to the COVID-19 pandemic.

See Notes 1(q) and 14 to PGW's audited financial statements included in APPENDIX A – "COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR FISCAL YEARS ENDED AUGUST 31, 2019 AND 2018 OF THE PHILADELPHIA GAS WORKS – Financial Section – Notes to Financial Statements."

PGW has been deemed a "local agency" for purposes of the Pennsylvania Political Subdivision Tort Claims Act ("Tort Claims Act"), 42 Pa.C.S. § 8541 et seq. As such, it is entitled to all protections and immunities from liability provided under the Tort Claims Act. See "LITIGATION" in APPENDIX C – THE CITY OF PHILADELPHIA GOVERNMENT AND FINANCIAL INFORMATION" for further information about the Tort Claims Act.

Costs that exceed the applicable insurance coverage and liability reserves set aside for the applicable events and any retainage that is in excess of such reserve are eligible for inclusion in the Base Rate (see "GAS

SERVICE TARIFF AND RATES – Rates – *Base Rate*") although any increase in the Base Rate must be approved by the PUC.

Pension Plans and Other Postemployment Benefits

Pension Plans

PGW maintains pension plans covering all eligible employees of PGW and PFMC, which provide certain retirement, death and disability benefits. Retirement payments for vested employees commence (i) at age 65 and five years of credited service, (ii) age 55 and 15 years of credited service, or (iii) without regard to age, after 30 years of credited service. Union employees hired after May 21, 2011 and non-union employees hired after December 21, 2011 must make an irrevocable choice within 30 days of hire to participate in either the defined benefit pension plan or the defined contribution plan. As of July 31, 2020, there were 1,639 full time employees. Of these 1,639 employees, approximately 870 were hired after the respective dates noted above. There are 659 union employees and 211 non-union employees in this group. The defined contribution plan was chosen by 347 union employees and 128 non-union employees for a total of 475 employees. The defined benefit plan was chosen by 312 union employees and 83 non-union employees for a total of 395 employees. However, this allocation may not be representative of the choices made by future employees.

There are two actuarial valuations prepared for the PGW defined benefit pension plan each year. The first is a funding valuation ("funding valuation") that sets forth the contribution range for the plan year July 1 to June 30. The second is a valuation for financial reporting purposes ("accounting valuation") that is used to determine the net pension liability and related disclosures to be reported in PGW's annual financial statements. The funding valuation and accounting valuation are for different purposes, use different methodologies and assumptions, and have different results. As noted below, the funding valuation reported that the funded ratio at July 1, 2019 was 72.64%. The similar ratio (net position of the pension plan as a percentage of the pension liability) reported in the accounting valuation and PGW's financial statements as of August 31, 2019 was 69.11%.

PGW Pension Plan – Funding Valuation

PGW's pension plan funded ratio (market value of assets basis) ranged from 73.74% as of the September 1, 2011 actuarial funding valuation date to 73.20% as of the July 1, 2019 actuarial funding valuation date. Over that same period, the unfunded actuarial accrued liability as a percentage of covered payroll ranged from a low of 144.83% as of September 1, 2011 to a high of 205.72% as of July 1, 2019. PGW's actuarial funding valuation prepared for its July 1, 2019 through June 30, 2020 plan year projects a funded ratio (actuarial value of assets basis) increasing from 72.64% as of July 1, 2019 to 78.39% as of July 1, 2028 based on: (i) a funding policy of PGW making employer contributions in accordance with the greater of a 20–year open or 30-year closed amortization period, (ii) assumed investment returns of 7.3% per annum, and (iii) covered payroll projected to increase by 4.5% per year. Such schedule of prospective funded status is subject to the foregoing assumptions and other assumptions which may not be realized. No assurances can be provided that PGW's pension plan funded status will not differ materially from such projections which are expected to be revised annually in connection with future actuarial funding valuations of PGW's pension plan.

PGW Pension Plan – Accounting Valuation

Under Governmental Accounting Standards Board Statement No. 27, Accounting for Pensions by State and Local Governmental Employers (GASB 27), a net pension obligation was recorded for a defined benefit plan on a governmental employer's balance sheet, only to the extent the employer did not contribute at least the actuarially determined annual required contribution (ARC) each year. GASB 27 defines the ARC as the amount sufficient to pay (i) the normal cost and (ii) the amortization of the unfunded actuarial liability over a period not to exceed 30 years. Under GASB 27, PGW had no net pension obligation.

GASB Statement No. 68, Accounting and Financial Reporting for Pensions – an amendment of GASB 27 (GASB 68), and its companion standard GASB Statement No. 71, Pension Transition for Contributions Made Subsequent to the Measurement Date (GASB 71), were effective for PGW's Fiscal Year beginning September

1, 2014 with retrospective application, to the extent practical, of all periods presented. Under GASB 68, the balance sheet includes PGW's net pension asset or liability related to its defined benefit plan, which is measured as the total pension liability less the amount of the defined benefit plan's fiduciary net position. The total pension liability is actuarially determined based upon discounting projected benefit payments based on the benefit terms and legal agreements existing at the measurement date. Projected benefit payments are required to be discounted using a single rate that reflects the expected rate of return on investments, to the extent that pension assets are available to pay benefits.

Certain components of the change in the net pension liability are recognized immediately as pension expense in the statement of revenues, expenses and changes in net position each year. For example, changes in the total pension liability resulting from current-period service cost, interest on the total pension liability, and changes of benefit terms are required to be included in pension expense immediately. The portion of the change in the net pension liability attributable to differences between expected and actual experience, changes in assumptions, the net difference between projected and actual earnings on pension plan investments, and contributions made after the measurement date are recognized as deferred inflows or outflows of resources. GASB 68 requires changes in expected versus actual investment returns to be amortized into pension expense over five years, and actuarial assumption changes and experience differences to be amortized over the average remaining years of active employment for Pension Plan participants. The impact of this amortization over time may increase volatility in annual amounts recognized as pension expense compared to amounts recognized under GASB 27 due to shorter permitted amortization periods over which the impact of changes can be smoothed.

The primary initial impact of GASB 68 and 71 was the recognition, as of September 1, 2013, of a net pension liability of $148.7 million and a corresponding decrease in unrestricted net position.

PGW's net pension liability was $247.2 million at August 31, 2019 and $261.3 million at August 31, 2018. Also see APPENDIX A – "COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR FISCAL YEARS ENDED AUGUST 31, 2019 AND 2018 OF THE PHILADELPHIA GAS WORKS – Financial Section – Notes to Financial Statements – (10(e)) – Defined Benefit Pension Plan – Net Pension Liability", for calculations showing the sensitivity of PGW's net pension liability to changes in the current discount rate used to measure PGW's total pension liability. Pension expense recognized for the year ended August 31, 2019 was $30.3 million, and deferred inflows and outflows related to the pension that will be amortized into expense in future years were $18.2 and $14.4 million, respectively, at August 31, 2019.

Financial information presented in the "PGW BUDGETS, RATES AND FINANCES" and "MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS AND FINANCIAL CONDITION FOR THE ELEVEN MONTHS ENDED JULY 31, 2020 AND JULY 31, 2019 (UNAUDITED)" sections below reflects the impact of GASB 68 and 71 for Fiscal Years 2019 and 2018, and for the eleven-month periods ended July 31, 2020 and July 31, 2019.

PGW Employer Pension Contributions for FY 2020 and FY 2021

For the Fiscal Year ended August 31, 2020, the actuarially determined employer contribution for PGW was $26.8 million. On October 18, 2019, the City's Director of Finance directed PGW to contribute $29.3 million, beginning in the plan year 2020, to PGW's pension fund. This contribution amount exceeds the suggested level of funding in the most recent actuarial report for PGW's pension plan. PGW made an employer contribution to the PGW pension fund of $29.3 million in Fiscal Year 2020 and anticipates making an employer contribution to the PGW pension fund in the same amount in Fiscal Year 2021.

Additional Pension Information

See APPENDIX A – "COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR FISCAL YEARS ENDED AUGUST 31, 2019 AND 2018 OF THE PHILADELPHIA GAS WORKS – Financial Section – Notes to Financial Statements – (10) Defined Benefit Pension Plan" and APPENDIX C – "THE CITY OF PHILADELPHIA GOVERNMENT AND FINANCIAL INFORMATION – PGW Pension Plan" for further information including, among other matters, certain historical normal cost, amortization payment, annual required contribution and payment to beneficiaries information, certain historical schedule of pension funding progress information, and schedules of projected funding status (calculated on both 20-year open amortization and 30-year closed amortization bases).

Post-Employment Benefits

PGW pays the full cost of medical, basic dental, and prescription coverage for employees and their beneficiaries who retired prior to December 1, 2001. Employees who retire after December 1, 2001 are provided a choice of three plans at PGW's expense and can elect to pay toward a more expensive plan. PGW pays 100% of the cost of the prescription drug plan after drug co-pays. Union employees hired on or after May 21, 2011 and Non-union employees hired on or after December 21, 2011 who retire are entitled to receive postretirement medical, prescription, and dental benefits for five years only. Retirees hired prior to those dates receive benefits until either their death or the death of their beneficiary, if such election is made.

Post-Employment – Funding Valuation

There are two actuarial valuations prepared for the PGW other post-employment benefit (OPEB) plan ("OPEB Plan") each year. The first is a valuation of PGW's health and life insurance plan for retired employees for the plan year January 1 to December 31. The second is a valuation for financial reporting purposes ("accounting valuation") that is used to determine the net OPEB liability and related disclosures to be reported in PGW's annual financial statements. The actuarial value of PGW's health and life insurance plan for retired employees' assets and accounting valuation are for different purposes, may use different methodologies and assumptions, and may have different results. The funding valuation reported that the funded ratio at January 1, 2019 was 35.44%. The similar ratio (net position of the OPEB Plan as a percentage of the OPEB liability) reported in the accounting valuation and PGW's financial statements as of August 31, 2019 was also 35.44%.

Post-Employment Benefits – Treatment in Financial Statements.

Under Governmental Accounting Standards Board Statement No. 45, Accounting and Financial Reporting for Postemployment Benefits Other than Pensions (GASB 45), a net other postemployment benefit ("OPEB") obligation is recorded for a defined benefit plan on a governmental employer's balance sheet, only to the extent the employer does not contribute at least the actuarially determined annual OPEB cost (AOC) each year. GASB 45 defines the AOC as the amount sufficient to pay (i) the normal cost and (ii) the amortization of the unfunded actuarial liability over a period not to exceed 30 years.

GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions – an amendment of GASB 45 (GASB 75), was effective for PGW's Fiscal Year beginning September 1, 2017 with retrospective application, to the extent practical, of all periods presented. GASB 75 revised standards for measuring and reporting OPEB liabilities for OPEB plans. Under GASB 75, the balance sheet now includes PGW's net liability related to its OPEB Plan, which is measured as the total OPEB liability, less the amount of the OPEB Plan's fiduciary net position. The total OPEB liability is actuarially determined by discounting projected benefit payments based on the benefit terms and legal agreements existing at the measurement date. Projected benefit payments are required to be discounted using a single rate that reflects the expected rate of return on investments, to the extent that OPEB Plan assets are available to pay benefits.

The OPEB Plan's fiscal year-end and measurement date for the net OPEB liability is December 31. PGW's net OPEB liability in its fiscal year-end 2018 audited financial statements reflects the net OPEB liability measured as of December 31, 2017, and PGW's August 31, 2017 audited financial statements have been restated to reflect the net OPEB liability as of the December 31, 2016 measurement date.

Certain components of the change in the net OPEB liability are recognized immediately as OPEB expense in the statement of revenues, expenses and changes in net position each year. For example, changes in the total OPEB liability resulting from current-period service cost, interest on the total OPEB liability, and changes of benefit terms are required to be included in OPEB expense immediately. The portion of the change in the net OPEB liability attributable to differences between expected and actual experience, changes in assumptions, the net difference between projected and actual earnings on OPEB trust investments, and contributions made after the measurement date are recognized as deferred inflows or outflows of resources. GASB 75 requires changes in expected versus actual investment returns to be amortized into OPEB expense over five years, and actuarial assumption changes and experience differences to be amortized over the average remaining years of active employment for Pension Plan participants. The impact of this amortization over time may increase volatility in annual amounts recognized as OPEB expense compared to amounts recognized under GASB 45 due to shorter permitted amortization periods over which the impact of changes can be smoothed.

The primary initial impact of GASB 75 was the recognition, as of September 1, 2016, of an additional net OPEB liability of $302.6 million and a corresponding decrease in unrestricted net position.

PGW's net OPEB liability was $336.1 million at August 31, 2019 and $378.9 million at August 31, 2018. The funded status of PGW's OPEB trust for the period ending December 31, 2019 (i.e., the time period covered in the most recent actuarial report for PGW's OPEB trust), was 49.71% (net positon /total OPEB liabilities)(on a fair value of assets basis).

Also see APPENDIX A – "COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR FISCAL YEARS ENDED AUGUST 31, 2019 AND 2018 OF THE PHILADELPHIA GAS WORKS – Financial Section – Notes to Financial Statements – (11(e)) – Other Postemployment Benefits – Net OPEB Liability", for calculations showing the sensitivity of PGW's net OPEB liability to changes in the current discount rate used to measure PGW's total OPEB liability. OPEB expense recognized for the year ended August 31, 2019 was $28.4 million, and deferred inflows and outflows related to the OPEB that will be amortized into expense in future years were $69.9 million and $91.2 million, respectively, at August 31, 2019.

Financial information presented in the "PGW BUDGETS, RATES AND FINANCES" and "MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS AND FINANCIAL CONDITION FOR THE ELEVEN MONTHS ENDED JULY 31, 2020 AND JULY 31, 2019 (UNAUDITED)" sections below reflects the impact of GASB 75 for Fiscal Years 2019 and 2018, and for the eleven-month periods ended July 31, 2020 and July 31, 2019.

GASB 75 Impact

PGW has taken steps to mitigate the impact of GASB 75. PGW pays the full cost of medical, basic dental, and prescription coverage for employees who retired prior to December 1, 2001. Employees who retire after December 1, 2001 are provided a choice of three plans at PGW's expense and can elect to pay toward a more expensive plan. Retirees may also contribute toward enhanced dental plan and life insurance coverage. PGW pays 100% of the cost for the prescription drug plan after drug co pays. Union employees hired on or after May 21, 2011 and Non-Union employees hired on or after December 21, 2011 are entitled to receive postretirement medical, prescription, and dental benefits for five years only. Currently, PGW provides for the cost of healthcare and life insurance benefits for retirees and their beneficiaries on a pay as you go basis. Also, PGW continues to fund the OPEB Trust with an annual deposit of $18.5 million.

In FY 2018, PGW retrospectively adopted a new required Other Postemployment Benefit (OPEB) standard, Governmental Accounting Standards Board (GASB) Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (GASB 75), as of September 1, 2016. The adoption of this standard resulted in the following:

> Recognition of a net OPEB liability for the single-employer Philadelphia Gas Works OPEB Plan (OPEB Plan) of $350.4 million at August 31, 2017, which increased to $378.9 million at August 31, 2018, and decreased to $336.1 million at August 31, 2019.
>
> Recognition of deferred inflows and outflows related to OPEB resulted in balances of $91.2 million and $81.0 million in deferred outflows and $69.9 million and $36.1 million of deferred inflows at August 31, 2019 and 2018, respectively. These deferred inflows and outflows of resources are related to differences between actual and expected investment returns, assumption changes, demographic factors, differences between expected and actual experience, and contributions made after the measurement

date. GASB 75 requires changes in expected versus actual investment returns to be amortized as OPEB expense over five years and actuarial assumption changes and experience differences to be amortized as OPEB expense over the average working lifetime of all OPEB Plan participants. The impact of this amortization over time will be increased volatility in annual amounts recognized as OPEB expense compared to amounts recognized under prior accounting standards.

A decrease in OPEB expense previously reported for the year ended August 31, 2017 of $8.8 million was reflected in the Statements of Revenues and Expenses and Changes in Net Position as a decrease in administrative and general expense from $88.9 million and an increase in other postemployment benefits expense from $7.4 million to $28.1 million.

OPEB expense was $16.4 million and $27.8 million for the eleven months ended July 31, 2020 and July 31, 2019, respectively.

Expected PGW Employer OPEB Contributions for Plan Years 2020 and 2021

For the OPEB Plan year ending December 31, 2020, PGW anticipates contributing for OPEB costs $31.6 million on a pay-as-you-go basis, $16.0 million resulting from rate surcharges, and $2.5 million from PGW's other resources. For the OPEB Plan year ending December 31, 2021, PGW anticipates contributing for OPEB costs $33.7 million on a pay-as-you-go basis, $16.0 million resulting from rate surcharges, and $2.5 million from PGW's other resources.

Additional OPEB Information

See APPENDIX A – "COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR FISCAL YEARS ENDED AUGUST 31, 2019 AND 2018 OF THE PHILADELPHIA GAS WORKS – Financial Section – Notes to Financial Statements – (11) Other Postemployment Benefits" and APPENDIX C – "THE CITY OF PHILADELPHIA GOVERNMENT AND FINANCIAL INFORMATION – PGW Other Post-Employment Benefits" for further information. See also, "GAS SERVICE TARIFF AND RATES – Rates - *Surcharges* ·OPEB Surcharge."

Litigation

In the ordinary course of its business operations, PGW and PFMC are from time to time sued or threatened with litigation. Most frequently such litigation alleges property damage or personal injury to third parties. However, other forms of litigation also arise from time to time. Such litigation, among other possible subjects, may include environmental-related actions and proceedings in which it may be alleged that the PGW is liable for damages, including but not limited to property damage and bodily injury, or that the City should pay fines or penalties or the costs of response or remediation, because of the alleged generation, transport, or disposal of toxic or otherwise hazardous substances by the City, or the alleged disposal of such substances on or to City-owned property. Other than as described in the next paragraphs, (1) PGW is aware of no litigation pending or threatened in which a final adverse determination, singly or in the aggregate, would have a material adverse effect on PGW's operations or financial condition and (2) PGW believes it has set aside sufficient reserves to meet liabilities arising out of litigation to the extent not covered by insurance.

See also "LITIGATION - PGW" in APPENDIX C – "THE CITY OF PHILADELPHIA GOVERNMENT AND FINANCIAL INFORMATION."

SBG Management Services, Inc. v. PGW (various consolidated cases before the PUC)

The above-referenced consolidated cases involve formal complaints filed by a landlord and related entities (collectively, "SBG") challenging, inter alia, the accuracy of its PGW bills, the lawfulness of PGW's billing methodology regarding the application of payments, and the assessment of late payment charges for amounts of unpaid PGW debt liened under the Municipal Lien Act. Various complaints were consolidated into several discrete groups for adjudication and disposition purposes owing to the numerous transactions involved and common questions of law and fact presented.

On September 17, 2015, the Administrative Law Judge assigned to the complaints issued an Initial Decision with respect to the first group ("First Initial Decision")[§,**] of the consolidated complaints, in response to which PGW filed Exceptions on October 7, 2015. On December 8, 2016, the PUC issued an Order and Opinion, granting in part and denying in part the PGW Exceptions. Accordingly, the PUC adopted the First Initial Decision as modified consistent with the discussion contained in the Opinion and Order as summarized below.

Per the Order and Opinion, the PUC found that PGW improperly assessed late payment charges on arrearages that had been liened under the Municipal Lien Act. Under the PUC's analysis, the primary legal effect of the City's having filed municipal liens on the subject accounts was to remove the late payment charges for the unpaid utility bills from the PUC's jurisdiction. Following that line of reasoning, the PUC opined that it lacks jurisdiction to determine what, if any, is the appropriate rate of interest that PGW may charge for such arrearages. The PUC stated that the appropriate remedy therefore was to remove late payment charges from the customers' bills.[††]

In a separate analysis, the PUC also found that the manner in which PGW applied partial payments to outstanding balances is unreasonable and does not conform to PUC policies. (PGW's practice is to apply all payments to any unpaid late payment charges first, before satisfying any amount owed for gas service.)

The PUC ordered that the several accounts that are the subject of the first group of complaints required a total bill credit in the sum of $566,544.97 to correct for charging late payment charges. The PUC also assessed a civil penalty of $27,000 for violations of the Public Utility Code. The total liability for the first group of these consolidated matters is $593,544.97.

In response to the PUC's determination, PGW filed timely appeals with the Pennsylvania Commonwealth Court from the PUC's decision in each group of complaints. Oral argument took place on November 12, 2019.

On December 9, 2019, the Pennsylvania Commonwealth Court reversed the orders of the PUC related to amounts owed by SBG Management Services, Inc. to PGW that, inter alia, were subject to late payment charges by PGW.[‡‡] The Court found that (i) the PUC committed an error of law in holding that it lacked jurisdiction over gas charges subject to docketed liens, (ii) the PUC committed an error of law in holding that PGW could not continue to impose late fees of 1.5% per month on delinquent accounts once the City dockets a

---

[§] On November 23, 2015, the Administrative Law Judge assigned to the complaints issued an Initial Decision with respect to a second group of the consolidated complaints ("Second Initial Decision"), to which PGW filed Exceptions on December 14, 2015. The Second Initial Decision for the second group is consistent with the Initial Decision and the Opinion and Order of the first group. The Second Initial Decision ordered that the several accounts that are the subject of the proceedings required a total credit in the sum of $313,157.83, to correct for charging of late payment charges. The Second Initial Decision also assessed a civil penalty of $27,000 for violations of the Public Utility Code. The total liability for consolidated matters in the second group is $340,157.83. The PUC has not issued an Order and Opinion for this group, but the facts are similar to the first group described above, and it is expected that the PUC's treatment of these complaints would ultimately parallel its disposition of the first group currently upon reconsideration.

[**] On February 4, 2016, the Administrative Law Judge assigned to the complaints issued an Initial Decision with respect to a third group ("Third Initial Decision") of the consolidated complaints, to which PGW filed Exceptions on February 24, 2016. That Third Initial Decision is consistent with the First Initial Decision and the Opinion and Order of the first group. That Third Initial Decision ordered that the several accounts that are the subject of the third group of complaints required a total credit in the sum of $157,698.85, to correct for charging of late payment charges. The Third Initial Decision also assessed a civil penalty of $27,000 for violations of the Public Utility Code. The total liability for these consolidated matters in the third group is $184,698.85. The PUC has not issued an Order and Opinion for this group, but the facts are similar to the first group described above, and it is expected that the PUC's treatment of these complaints would ultimately parallel its disposition of the first group currently upon reconsideration.

[††] The Order and Opinion mandated removal of the late payment charges from the bill, but did not per se invalidate the late charges.

[‡‡] PGW did not appeal the decision of the PUC regarding partial payment application. This matter was independently resolved per a settlement agreement reached with the Office of Consumer Advocate, and approved by the PUC on June 13, 2019, as part of PGW's last base rate case. Per the settlement, PGW agreed to modify its partial payment allocation practices so that no priority is given to the satisfaction of late payment charges.

lien, and (iii) the PUC erred in imposing penalties, ordering refunds of previously imposed late fees, and directing billing changes relating to charges subject to docketed liens.

On January 8, 2020, SBG petitioned the Pennsylvania Supreme Court ("PA Supreme Court") to reverse the decision of the Commonwealth Court. On June 23, 2020, the PA Supreme Court granted SBG's petition for appeal, which will now be heard by the PA Supreme Court. The parties have filed written briefs with the PA Supreme Court, which has scheduled oral argument for December 1, 2020. PGW opposes any reversal of the Commonwealth Court's decision and will participate in proceedings before the PA Supreme Court.

At this time, PGW cannot predict the impact on PGW's collections and collections practices if the Commonwealth Court decision were reversed and/or if late payment charges could not be assessed on monthly bills with respect to arrearages that are liened. As such, PGW can provide no assurances that the impact would not be material to PGW.

Competition

Under the Gas Choice Act all of PGW's customers may choose among natural gas suppliers. PGW offers a Purchase of Receivables and Consolidated Billing Program to other natural gas suppliers. PGW developed the Purchase of Receivables and Consolidated Billing Program to better enable other natural gas suppliers to offer gas to PGW residential and small business and industrial customers. PGW also offers a dual-billing program to natural gas suppliers wherein suppliers bill for their own charges to customers of various classes. If a customer selects a gas provider other than PGW, such customer will be required to use PGW's distribution (also referred to as "transportation") system and pay the distribution charge for such use. Such distribution charge for transportation service does not vary significantly from what the charge (less gas cost) would be for such customer were it a sales service customer. As a consequence of this charge structure, PGW does not anticipate that customers moving from sales service to transportation service to cause a material reduction in margin (gross revenues less cost of gas) for PGW.

Table 4 shows a breakdown of the components of the average annual bill for residential customers. Customers who select a provider other than PGW will pay the Distribution Rate and Universal Service and Energy Conservation Surcharge components. Note, though, the table does not reflect the costs of natural gas to a customer that selects a different provider.

Table 4
AVERAGE RESIDENTIAL COSTS FOR ALL CUSTOMERS IN A FISCAL YEAR[(1)]

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Distribution Rate[(2)]	$807	$804	$722	$726	$714	$785	$698	$682	$717	$658
Universal Service and Energy Conservation Surcharge	106	123	98	89	106	144	151	141	180	136
Gas Cost Rate	353	345	306	264	471	474	456	381	547	567
Total	$1,266	$1,272	$1,126	$1,079	$1,291	$1,403	$1,305	$1,204	$1,444	$1,361

(1) Source: PGW's records
(2) Includes the Restructuring and Consumer Education, Efficiency Cost Recovery, OPEB and DSIC surcharges.

PGW customers are classified as residential, commercial, or industrial, with residential and commercial customers accounting for approximately 99.5% of PGW's non-heating customer base and approximately 99.9% of PGW's heating customer base for Fiscal Year 2019. PGW holds in excess of 85% of the home heating market in the City, with fuel oil constituting most of the remaining market share. PGW's residential and small to medium-sized commercial market shares are expected to remain stable due to the costs to customers of changing energy sources absent monetary incentives in the form of rebates and related financing mechanisms. Costs of new or replacement residential gas equipment can be affected by many factors such as the U.S. Department of Energy's proposed regulations that could require newly-manufactured gas furnaces have a higher efficiency rating than is currently required. The costs of acquiring such gas furnaces as well as any necessary duct work could affect the willingness of customers to convert to or maintain natural gas. Growth in PGW's market share is expected to be limited absent an expansion in PGW's service territory beyond the City and an investment in marketing or incentive programs.

The average number of firm residential non-heating customers (including CRP customers) is projected to decline from 14,551 in Fiscal Year 2020 to 5,074 in Fiscal Year 2025. The average number of firm residential non-heating customers (including CRP customers) at July 31, 2020 was 16,007. The average number of firm heating customers (including CRP customers) is projected to decrease from 463,893 in Fiscal Year 2021 to 459,433 in Fiscal Year 2025. As of July 31, 2020, the average number of firm heating customers (including CRP customers) is 449,007.

The historical total average number of customers served monthly (for Fiscal Years 2015 through 2019) has been approximately 503,366. PGW's customer base is largest at the end of the peak heating season and decreases afterwards as customers terminate their service until the next heating season begins. The total average number of customers served is projected to decrease from approximately 509,904 in Fiscal Year 2020 to approximately 506,314 in Fiscal Year 2025, a total decrease of about 0.7% over five years. The estimated declines in the total average number of customers post-Fiscal Year 2020 are forward-looking statements. Actual results may vary from such estimates due to a number of circumstances, certain of which are beyond the control of PGW to influence.

PGW experiences greater competition in the larger commercial and industrial markets, with interruptible customers (load balancing service, boiler and power plant service and interruptible transportation sale customers) having the ability to utilize alternate energies (such as oil, electric or steam) if the equivalent price of natural gas is higher than the price of alternative energy. See "GAS SERVICE RATES AND TARIFFS – Gas Service Tariff" herein. Growth in PGW's commercial and industrial customer base may also be affected by regulations of the Clean Air Act as use of natural gas (instead of fuel oil) may help such customers meet air emission operating permits. In addition, the lower cost of natural gas relative to alternative energy sources has resulted in large commercial and industrial customers switching to natural gas.

PGW's ability to increase its customer base is limited principally due to its already high market saturation and its fixed geographic territory in which it is permitted to provide its services. The residential and small to mid-size commercial customer segments are fairly stable for PGW. However, opportunities for PGW to increase market share are generally limited in the absence of subsidies or other incentives (e.g., rebates) for potential customers. Recent years' growth in residential new construction in the City, suggests certain growth opportunity for PGW's customer base. However, no assurances can be provided as to what the impact of COVID-19 may be on City residential patterns and growth.

In contrast, there typically is more competition in the larger commercial and industrial markets. PGW customers utilizing the interruptible transportation rate (known as "IT") can switch from other sources of fuel (i.e., oil, electric or steam). Factors that could impact whether such customers switch to natural gas include the equivalent price of natural gas in relation to the alternative fuel choices and the costs of complying with Clean Air Act regulations (*i.e.*, where use of natural gas can aid commercial and industrial consumers in meeting air emission standards).

PGW promotes the use of combined heat and power ("CHP") by its commercial customers both to enhance reliability and reduce operating costs. On-site CHP can reduce electric demand from the grid and use waste heat from the CHP unit for a customer's cooling and heating requirements. A challenge for CHP projects are high initial capital expenditures for the customer. PGW has also pursued micro-CHP, a small-scale version of CHP which is designed for small commercial customers. Given that this technology is relatively unfamiliar for small commercial customers, funding from PGW, and governmental sources may be required for this product to gain further traction. Smaller commercial projects may be a good market segment for the micro-CHP technology. CHP projects may become increasingly desirable for customers to the extent natural gas prices are relatively lower and stable (and anticipated to remain at such levels) in relation to alternative energy sources.

PGW is pursuing the use of Natural Gas Vehicles (NGVs) both within and outside of PGW. The internal use is by PGW's internal fleet consisting of approximately 24 sedans with expansion to utility trucks. Beyond PGW's own use, the City of Philadelphia has acquired grant funding to purchase a fleet of refuse trucks as NGVs.

Certain factors are expected by PGW's management to continue to put downward pressure on load levels and revenues for PGW. These factors include customer conservation efforts and energy efficiency improvements in buildings and gas equipment.

THE GAS WORKS FACILITIES

PGW maintains and operates a large number of facilities, including a distribution system of gas mains and service lines, and meters, gas supply facilities (including City gate stations where natural gas is received from pipeline transmission companies), centers to monitor and control gas flow and pressure, and liquid natural gas liquefaction, vaporization and gas storage facilities. For additional information see "NATURAL GAS SALES, COSTS AND SUPPLIES – Gas Supply, Storage and Transportation." Also, the PGW facilities are described further below. See also, "THE CAPITAL IMPROVEMENT PROGRAM" for a discussion of historical and planned capital expenditures to maintain and improve PGW facilities.

Gate Stations and Gas Control Center

Natural gas is received through nine City gate stations, eight of which are owned by the two interstate pipeline companies serving PGW, Texas Eastern and Transco-Williams. In addition, there are gas heaters at eight of the City gate stations. These supply facilities are remotely controlled from a gas control center located at PGW's Montgomery Avenue headquarters facility with contingent control capacity at the Richmond Plant. At the gas control center, personnel monitor and control gas flow and pressure from the nine City gate stations to the high-pressure distribution system, as well as provide direction to the LNG production plant operators concerning startup, shutdown and gas flow output from the LNG facilities. A computer system based in the data center that includes back-up equipment, cooling and power supports operations.

LNG Storage and Vaporization Facilities

The Gas Works includes two LNG facilities – one at the Richmond Plant and one at the Passyunk Plant. The Richmond LNG plant is one of the largest peak shaving facilities in the United States. It includes liquefaction, storage and vaporization facilities. The liquefaction facility was placed into service in 2005 and replaced the original modified cascade liquefaction facility. Its liquefaction facility has a daily liquefaction capacity of 16,000 thousand cubic feet ("Mcf") per day and utilizes open expander technology. This technology utilizes energy from the high-pressure interstate pipeline system to run the expander/compressors, significantly reducing fuel requirements. Further, this technology utilizes significantly fewer components than the older modified cascade facility and has resulted in lower operation and maintenance costs. The maximum capacity of the open expander liquefaction facility of 16,000 Mcf per day is not available during the summer months because the demand on the PGW system is not sufficient to create the throughput necessary to run at this capacity.

The two storage tanks at the Richmond Plant have a combined gross capacity of 48,970,000 gallons of LNG (4,045,800 Mcf). Regasification of the liquid natural gas is accomplished with six vaporizers having a total output of 500,000 Mcf per day plus 100,000 Mcf per day in reserve. The Richmond Plant also has facilities to receive LNG from and deliver LNG to cryogenic trailer trucks.

The smaller satellite facility at the Passyunk Plant includes LNG storage and vaporization. It receives liquefied gas supply from the Richmond Plant via cryogenic trailer trucks. The Passyunk LNG facility consists of one LNG storage tank of 3,066,000 gallons gross capacity (*i.e.*, the equivalent of 253,300 Mcf) and two LNG vaporizers, each having a capacity of 45,000 Mcf per day, resulting in 45,000 Mcf per day planned capacity and 45,000 Mcf per day reserve.

The highest daily vaporization rate from the LNG facilities was approximately 360,000 Mcf. This occurred when PGW recorded a maximum sendout from its system in winter of 1994.

Both the Richmond and the Passyunk plant facilities (the "Richmond Plant" and the "Passyunk Plant," respectively) have 24-hour a day staffing with security personnel monitoring the facilities. In addition to on-site personnel, each Facility has fire suppression systems, including emergency shutdown mechanisms and high expansion foam and sprinkler systems, as well as other sensors to monitor the areas surrounding each Facility.

The LNG facilities are primarily used to ensure availability of supply needed to serve peak day demand. The LNG facilities provide capacity that would otherwise be needed from flowing gas and off-system storage (i.e., pipeline and storage capacity) to meet peak day demands. The LNG facilities also allow for a nominal reduction in purchases during the higher cost winter period. Based upon current pipeline and storage charges, which have remained relatively constant over the past five years, PGW estimates that utilizing the existing LNG facilities in lieu of additional pipeline and storage capacity saves approximately $75 million per year.

PGW is actively negotiating with a third party to add liquefaction capability to its Passyunk Plant. It is also offering expanded LNG services at the existing Richmond Plant under new PUC-approved (i.e., in relation to gas service tariffs) rate LNG-N (effective December 2019). See "POTENTIAL LNG EXPANSION."

Gas Holder Storage Facilities

The Richmond Plant has a low-pressure gas holder. The Richmond holder has an operating capacity of 1,000 Mcf. It was installed in the manufactured gas era and is in working order. It is used to enhance operational flexibility of the LNG plant. It is currently slated for demolition in FY 2021.

Distribution Facilities

The principal gas distribution facilities consist of approximately 3,041 miles of main, 476,605 service lines, 198 district regulator stations, 573,500 meters (of which 520,000 are active) and miscellaneous valves, instruments, and other appurtenances. PGW operates nine different operating pressure systems; each system is connected to the other by control regulators. The minimum and maximum operating pressures for these systems are as follows:

	Pressure (Pounds per Square Inch Gauge (PSIG))	
Pressure System	**Minimum**	**Maximum**
Richmond High Pressure Lateral	100	800
Transmission Main TP-1	200	500
Passyunk High Pressure Lateral	200	500
Ivy Hill Gate Station Inlet	100	420
150 PSIG System	60	150
60 PSIG System	30	60
High Pressure Distribution System	10	35
Intermediate Pressure Distribution System	1.5	5
Low Pressure Distribution System (Inches Water Column (W.C.))	4.5"	14"

Approximately 76% (by length) of the gas mains in PGW distribution system operate at low pressure (inches WC). The majority of PGW customers are served from the low pressure system (approximately 90% of customers).

Approximately 42% (by length) of the gas mains are cast iron, 34% are steel, 4% are ductile iron, and 20% are plastic. Of the steel mains, approximately 51% are wrapped, coated, and cathodically protected. Approximately 27% of the service lines are steel (of which 18% are cathodically protected) and 73% are plastic. See "THE CAPITAL IMPROVEMENT PROGRAM" for information regarding PGW's gas main replacement program.

Data Center

PGW has a state-of-the-art energy efficient data center that includes a dedicated backup generator and two independent power feeds supplying separate redundant uninterruptible power supplies. The modular data center design allows for information technology equipment load growth and provides increased redundancy of cooling systems to N+3 or essentially four systems.

The data center uses a hot aisle containment system and equipment which provides a 90+% virtualized compute environment. The center utilizes 600 servers and one Petabyte (i.e., one million gigabytes) of storage.

Combined Heat and Power

A 200 kW natural gas-fired micro-turbine combined heat and power ("CHP") system produces electricity, heat and cooling for the 800 West Montgomery Avenue headquarters building. PGW estimates that approximately half of the building's electricity is produced by the CHP system at half the cost of electricity purchased from the local distribution grid. Waste heat from the micro-turbine's exhaust is converted via an absorber chiller into dedicated cooling for the data center providing substantial annual operating savings. Waste heat from the turbine is also used to heat the building and a project is in development to use the waste heat for domestic hot water The CHP system is also used by PGW marketing to demonstrate the advantages of CHP systems to customers in the growing CHP service segment.

Compressed Natural Gas

PGW installed a compressed natural gas (CNG) fueling station at 1849 N 9th Street with 29 gge (Gasoline Gallon Equivalent) of natural gas storage with one fast fill dispenser and four time fill dispensers. These features provide flexibility in refueling options to make the most of PGW's fleet operation needs. PGW believes that its decision to install the on-site CNG station and purchase 24 CNG vehicles is helping to seed the CNG markets, and improve PGW's own fleet operations. PGW's CNG fleet has driven more than 500,000 miles since the vehicles were purchased in 2014, saving over $54,000 in fuel costs compared to traditional gasoline powered vehicles. PGW's use of the CNG fleet also has benefited the environment by preventing the emission of more than 166,000 pounds of carbon dioxide (when compared to using a traditional gasoline powered vehicle fleet) over the period of time that PGW has employed its CNG fleet.

In addition to providing CNG fuel for PGW's fleet, PGW's station serves as a showcase for companies with fleets that are exploring the use of alternative fuel vehicles. PGW believes it can demonstrate the CNG fueling options, provide design and installation support for the use of CNG, and share with those in its service area the cost savings and environmental benefits of using CNG as an alternative to gasoline and diesel fuel.

Other Facilities

PGW's central building complex is based in the north central section of Philadelphia proximate to Temple University. This includes a 180,000 square foot executive and administrative office building located at 800 West Montgomery Avenue which includes PGW's data center. PGW's former general office building, located at 1800 N. 9th Street, is adjacent and hosts, among other things, certain operations including distribution and field service dispatch centers, gas control dispatching, administrative functions, a radio repair shop, training facilities, parking facilities, information technology and telecommunications offices, warehousing, as well as a metal fabrication shop. The central complex also includes a meter repair shop and PGW's principal facility to maintain and repair its automotive fleet. The automotive maintenance and repair facility also handles maintenance for PGW's portable compressors and trailers.

In addition to administrative offices, PGW has building and parking facilities located throughout the City for Field Operations - distribution and field service, gas control, equipment and automobile repair, training, telecommunications, customer service, and warehousing. PGW maintains certain satellite facilities which include three automobile repair facilities at outlying stations. Other satellite facilities include five customer service district offices, five warehouse facilities, the Tioga station for distribution crews, three operating stations for crews providing field service, and the five customer service district offices (which have become subject to limitations due to the impact of COVID-19).

PGW Technical Compliance

PGW's Technical Compliance and Energy Planning Department helps PGW comply with applicable laws and regulations. Federal regulators include the Department of Transportation, Environmental Protection Agency, Federal Emergency Management Agency, and Pipeline and Hazardous Materials Safety Administration (PHMSA). Commonwealth regulators include the Pennsylvania Department of Labor and Industry, Pennsylvania Department of Environmental Protection, and the PUC. Municipal regulators include the Philadelphia Water Department, Philadelphia Department of Public Health, Philadelphia Air Management Services, and Philadelphia Office of Emergency Management. The Technical Compliance Department has 14 employees divided among four operating units: Chemical Services, Environmental Compliance, Gas Safety Regulatory Services, and Corporate Preparedness.

Chemical Services provides chemical and physical analyses focused on compliance with environmental, health, and safety regulations. Chemical Services provides analytical services, including among other things, analyses relating to natural gas composition and BTU (British Thermal Unit) analysis, odorant analysis, LNG analysis, glycol analysis, wastewater, and stormwater analysis, and other analyses as needed. Chemical Services also provides services pertaining to regulated waste management and spill response. The scope of this unit's services also touch upon permit and regulatory compliance (e.g., with respect to 12 regulated storage tank systems as well as storm water and wastewater permits), industrial hygiene and chemical safety and cleaning services, (i.e., including assessments and remediation related to asbestos, lead, and mold as well as indoor air quality and exposure assessments), and safety data for chemical products and related training. This unit also provides natural gas odorization services, including investigation of atypical conditions.

The Environmental Compliance unit manages environmental regulatory compliance with governmental regulations for all activities conducted at PGW facilities as well as environmental remediation and monitoring efforts among five former manufactured gas plant sites.

The Gas Safety Regulatory Services unit supports PGW operations and provides documentation related to Federal PHMSA advisories, and PUC safety inspections and data requests. This unit also handles official correspondences for PGW's Gas Processing, Field Services, and Distribution departments and Operator Qualification management and support.

The Corporate Preparedness unit focuses on the ongoing process of identifying and planning for risks of disruption to operations and services. The principal objectives for this unit relate to the protection of human life, the minimization of disruptions of service to PGW and its customers, the minimization of financial loss, and the provision of the timely resumption of service after a disrupting event.

Homeland Security

PGW has several Tier 1 facilities as defined by the United States Department of Homeland Security ("Homeland Security"). As a result, PGW was mandated to prepare a plan document which was completed and submitted to Homeland Security with the coordinated efforts of several PGW departments that included Security, Operations and Information Technology. This plan is reviewed on a yearly basis by the associated departments for accuracy, relevance and consistency. This plan is also audited yearly by Homeland Security and a yearly field audit is conducted by Homeland Security to ensure compliance. To date, PGW has met all such compliance requirements.

Management's Opinion of Condition of PGW Facilities and System

The following discussion of PGW management's current views of the condition of PGW facilities and system and related matters are based on PGW's internal records and observations, and the judgment of PGW's management (based on management's experience and knowledge of PGW's facilities and system and the gas industry in general, and not on the analyses or views of any independent consultant).

PGW's management believes that all of its facilities, vehicles, equipment and warehouse stock are reasonably maintained and in good operating condition, subject to only minor items not in good operating condition as would be expected during the normal course of operation of a utility such as PGW. The items which are not in good operating condition are either essentially retired in place or in the process of being repaired.

PGW maintains maps and other records of the distribution system which it believes are in good order and utilizes what it considers to be comprehensive written construction, operating and maintenance standards and procedures. PGW in its routine operations enters its facility records (corrosion, service and leak records) into computer databases, in order to improve the accuracy of, and accessibility of, information. PGW also enters data for the ongoing maintenance of its fleet, plant, and facility operations.

PGW continually monitors its security measures at its major facilities, including the City gate stations, the two LNG facilities, and the headquarters building complex. PGW has established concrete barriers around critical facilities at the Richmond Plant and perimeter fencing around both the Passyunk and Richmond Plants.

Based on PGW's physical observations and other internally generated data, and the level of maintenance expense and capital improvements reflected in PGW's budgets, PGW's management believes that PGW operates and maintains its system in accordance with current Federal, Commonwealth and City regulatory standards and generally accepted industry practices. Based on PGW management's assessment of existing facilities, and under normal operating conditions, PGW's management believes that PGW's currently planned capital expenditures should be sufficient to maintain PGW's facilities and system in good condition through at least the duration of PGW's current Capital Improvement Program.

NATURAL GAS SALES, COSTS AND SUPPLIES

PGW Gas Sales and Natural Gas Costs

PGW serves residential, commercial and industrial customers with residential and commercial customers accounting for approximately 92.8% of PGW's non-heating customer base and approximately 96.3% of PGW's heating customer base for Fiscal Year 2019. Historical average number of customers (for Fiscal Years 2015 through 2019) has been approximately 503,366. References to gas "sales," "revenues" and "receipts" in this Official Statement generally refer to respectively, volume of gas, billings for gas delivered and payments received from billed customers. See "PHILADELPHIA GAS WORKS – Competition."

PGW provides three categories of heating or non-heating services: (1) firm service to residential, commercial or industrial customers who are given an applicable general service rate, municipal service rate or Philadelphia Housing Authority service rate, (2) interruptible service§§ (mostly boiler and power plant service or load balancing service) to customers who must have an alternate energy source because their service may be

§§ Currently interruptible sales consist of LNG sales, which is priced at the LNG weighed average cost of gas plus the Sales Service Charge plus a negotiated margin, and Cogeneration sales service which is priced at the average commodity cost plus $0.75/MCF.

interrupted and (3) transportation service to customers (including residential customers) who do not use PGW as its gas provider.

For Fiscal Year 2019, firm customers constituted approximately 64.4% of PGW's customer base and account for 99.9% of its sales volume (representing gas delivered to customers). For Fiscal Years 2021 through 2025, PGW projects that average firm non-heating customers will decline from 16,628 to 8,782, and total average heating customers will decrease from 463,893 to 459,433 and total average transportation customers will increase from 28,766 to 38,096.

The following table sets forth certain historical information with respect to certain categories of PGW's total average customers for Fiscal Years 2015 through 2019, inclusive.

[Remainder of page intentionally left blank.]

PGW Historical Customer Information

	FISCAL YEAR ENDED AUGUST 31				
	2019	2018	2017	2016	2015
Total Average Non-Heating	20,405	21,754	22,722	24,972	27,382
Total Average Heating	469,638	476,685	474,899	471,594	468,374
Total Average Sales	490,043	498,439	497,621	496,566	495,756
Total Average Transportation	18,414	6,848	4,914	4,513	3,716
Total Average Customers	508,457	505,287	502,535	501,079	499,472

For the twelve-month period ended August 31, 2019, approximately 82.7% of gas revenues were derived from residential customers, approximately 15.7% were derived from commercial and industrial customers and approximately 1.6% were derived from municipal and housing authority customers. Gas revenues represent gas for which PGW has billed customers.

PGW's gas sales and gas costs reflect a variety of factors, including natural gas utilization, natural gas prices, pipeline demand charges and refunds, and exercise by customers (including residential customers) of their rights under the Gas Choice Act to purchase natural gas from providers other than PGW, though such customers will be required to use PGW's distribution (also referred to as "transportation") system and pay a fee for such use. See "PHILADELPHIA GAS WORKS – Competition"). Such choice has been available to commercial, industrial and municipal customers. Residential customers have not had the option to so choose because there has been no third-party gas supplier offering to serve PGW's residential customer base. See "PHILADELPHIA GAS WORKS – Competition". The temperature and other weather conditions greatly affect the gas usage of PGW's heating customers. Colder than normal weather conditions result in a greater demand for natural gas and warmer than normal weather conditions result in a lower demand for natural gas.

Total percent of gas sales by PGW's customer type, net of transportation sales, during each of the past five Fiscal Years ended August 31, are shown in the following Table 5:

Table 5
PERCENT OF GAS SALES[2]
BY CUSTOMER TYPE
THE FISCAL YEARS ENDED AUGUST 31[1]

	2019	2018	2017	2016	2015
Residential	80.1	81.1	81.1	81.1	79.8
Commercial and Industrial	18.4	17.5	17.4	17.2	17.7
Municipal and Housing Authority	1.5	1.4	1.5	1.7	2.5
TOTAL	100.0	100.0	100.0	100.0	100.0

(1) Source: PGW's records.
(2) Sales represent gas delivered to customers.

Total gas sales for PGW are comprised of sales to firm and interruptible customers. Firm customers receive gas service under various schedules which anticipate no interruptions in the delivery of natural gas. Firm sales represented more than 64.4% of total gas sales by volume in Fiscal Year 2019. Interruptible sales service is offered to customers under schedules or contracts which anticipate and permit interruptions on short notice, generally in peak load periods. Interruptible gas service, which is sold to high volume commercial and industrial customers, represented 35.6% of total gas sales in Fiscal Year 2019. For information regarding PGW's gas sales by customer and service type, see "PGW BUDGETS AND FINANCES – Selected Operating Data Regarding Customers and Gas Sales – Table 12 – *Selected Operating Data Regarding Customers and Gas Sales.*" The following table sets forth certain historical information regarding gas revenues received by customer type for Fiscal Years 2015 through 2019, inclusive.

PGW Historical Revenues by Customer Type
(in 000s)

	FISCAL YEAR ENDED AUGUST 31				
	2019	**2018**	**2017**	**2016**	**2015**
Total Adjusted Non-Heating***	$ 23,919	$ 22,162	$ 20,510	$ 21,038	$ 30,232
Total Adjusted Heating†††	573,948	547,288	518,858	491,138	595,163
Total Sales	597,867	569,450	539,368	512,176	625,395
Total Adjusted Transportation‡‡‡	60,239	48,710	41,853	39,420	38,919
Total Revenues	658,106	618,160	581,221	551,596	664,314
DSIC Surcharge	35,640	41,832	35,014	22,581	13,817
Adjusted Total Gas Revenues	693,746	659,992	616,235	574,177	678,131

During the five-year period from Fiscal Year 2015 through Fiscal Year 2019, natural gas sales revenues were affected by the commodity price of natural gas and heating demand caused by weather. The price of natural gas affects sales revenue because a substantial portion of PGW's revenue is the recovery of natural gas costs. The commodity price of natural gas during this period was trending downward. The major cause of the downward pressure on natural gas prices was the volume of natural gas from additional supply coming on line from drilling activity in the Appalachian shale region, over the past several years. Degree days experienced during this period varied from a low of 3,356 (Fiscal Year 2016) to a high of 4,444 (Fiscal Year 2015). The 20-year average degree days for the period ending in Fiscal Year 2019 were 3,962. Fiscal Years with higher degree days would indicate more demand for heat and higher sales volumes. Sales volumes for the period range from a low of 6,580.3 billion cubic feet ("Bcf") in Fiscal Year 2016 to a high of 7,922.7 Bcf in Fiscal Year 2015.

The cost of natural gas is PGW's single largest expense. During the five-year period Fiscal Year 2015 through Fiscal Year 2019, natural gas expenses averaged $194.2 million, with a low of $146.5 million in Fiscal Year 2016 and a high of $252.2 million in Fiscal Year 2015. Information regarding PGW's natural gas costs and operating revenues during each of the past five Fiscal Years ended August 31 is shown in the following Tables. For information regarding PGW's natural gas sales volume, see the table entitled "Sales Volume" in APPENDIX A – "COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR FISCAL YEARS ENDED AUGUST 31, 2019 AND 2018 OF THE PHILADELPHIA GAS WORKS – Statistical Section."

*** Reflects Prior Year's Gas Cost Recovery adjustments of: $412, ($919), ($270), $762 and ($511) (in 000s) for Fiscal Years 2019 through 2015, respectively.
††† Reflects total heating revenues net of WNA adjustment. Reflects Prior Year's Gas Cost Recovery adjustments of $11,040, ($23,933), ($4,768), $17,424, and ($12,124) (in 000s) for Fiscal Years 2019 through 2015, respectively.
‡‡‡ Reflects total transportation revenues net of WNA adjustment.

Table 6
NATURAL GAS COSTS FOR THE FISCAL YEARS ENDED AUGUST 31[1]

	2019	2018	2017	2016	2015
Natural Gas Costs ($ thousands)	$206,801	$186,254	$179,222	$146,515	$252,158
% Natural Gas Costs Increase (Decrease) from Prior Fiscal Year	11.0	3.9	22.3	(41.9)	(17.1)
% Natural Gas Utilization Increase (Decrease) from Prior Fiscal Year Bcf[2]	(2.3)	8.4	8.1	(20.3)	(4.5)
% Natural Gas Price Increase (Decrease)	14.1	(0.2)	24.5	(42.8)	(17.0)
Pipeline Demand Charges ($ thousands)	$62,994	$57,237	$59,992	$57,922	$57,868
Pipeline Refunds ($ thousands)	$7	$14	$5	$23	$0

(1) Source: PGW's records.
(2) Billion cubic feet.

[Remainder of Page Intentionally Left Blank]

Table 7
OPERATING REVENUES
HEAT AND NON-HEAT CUSTOMERS
FISCAL YEARS 2015 THROUGH 2019[(1)(4)]
(THOUSANDS OF U.S. DOLLARS)

	2019	2018	2017	2016	2015
Firm non-heat	$23,328	$23,352	$21,588	$20,765	$27,592
Interruptible gas sales	1,325	1,059	377	346	3,672
Billed non-heating	24,653	24,411	21,965	21,111	31,264
GCR [(2)] non-heating adjustment	412	(919)	(271)	762	(511)
Total non-heating	25,065	23,492	21,694	21,873	30,753
Billed heating	592,730	612,556	527,191	454,852	630,286
GCR heating adjustment	11,040	(23,933)	(4,768)	17,424	(12,124)
Total billed heating	603,770	588,623	522,423	472,276	618,162
Weather normalization adjustment (WNA)	1,347	(3,848)	27,748	39,021	(10,372)
Total heating	605,117	584,775	550,171	511,297	607,790
Total gas sold	630,182	608,267	571,865	533,170	638,543
Firm transportation (FT) non-heat	5,328	5,063	4,559	4,518	4,953
FT heating	42,250	32,592	26,851	22,789	22,468
WNA FT	249	42	1,846	2,458	(374)
Total heating FT	42,499	32,634	28,697	25,247	22,094
Total FT	47,827	37,697	33,256	29,765	27,047
Unbilled adjustment	320	(912)	2,171	(1,830)	(2,105)
GTS: transportation[(3)]	1,161	1,144	1,170	1,231	1,252
GTS (customer/customer choice)	12,664	11,566	8,938	8,784	10,285
GTS (supplier/customer choice)	12	13	14	11	11
GTS (firm supplier)	1,901	1,305	992	1,217	994
Total gas operating revenues	$694,067	659,080	$618,406	$572,348	$676,027

(1) Source: PGW's records.
(2) GCR=Gas Cost Rate.
(3) GTS=Gas Transportation System.
(4) Also see the table "PGW Historical Revenues by Customer Type" above.

Gas Supply, Storage and Transportation

PGW uses models that project customer natural gas requirements for the coldest hour, day and year, using its records since the mid-1970s. These projections form the basis for PGW's decisions regarding capacity commitments for pipeline supply, storage and transportation contracting. In order to deliver gas to its customers, PGW must purchase gas and also arrange capacity on the gas pipelines that deliver gas from the suppliers, many of which can be as far away as the Gulf of Mexico, to the City gate stations.

The cost of gas supply is a function of the price paid and the quantity purchased, both of which are variable. While PGW can set the timing of gas purchases, the prices paid are largely determined in a very competitive and sometimes volatile marketplace. However, PGW uses offsite storage facilities and LNG storage to lower its supply costs.

PGW expects its supplies of natural gas and LNG to be adequate to meet its projected demand on the coldest peak day, hour and year. See also the table below under “Gas Supply and Demand Balance” for certain historical information regarding peak day gas demand and the sources used to meet the demand.

Supply

PGW purchases gas in four different types of transactions: long-term gas transactions, seasonal baseload gas transactions, swing gas transactions and spot gas transactions. To satisfy the projected natural gas requirements, PGW enters into winter-only and summer-only supply arrangements with approximately a dozen gas suppliers. These arrangements are base load supply that PGW must purchase. The price of gas under these supply arrangements can be set in months prior to scheduled delivery if PGW determines there is an advantage to doing so, or the price can be set at an index for the month of delivery. PGW also enters into year-long swing supply arrangements where PGW can adjust the volume from zero to the maximum contract amount on a daily basis. The price of gas under these supply arrangements is based on daily index pricing. PGW has been increasing its purchasing of Marcellus shale supply due to price. For winter 2019-2020, PGW purchases under these winter supply arrangements provided approximately 39% of PGW’s daily firm transportation entitlements. During that same period, approximately 22% of PGW’s natural gas supply portfolio was purchased in the spot market on a 100% gas daily pricing basis that allowed for daily volumetric changes. The source of the remaining 39% of the gas usage was gas in storage facilities, including from three servicers that store and can deliver natural gas through their pipelines and from PGW’s LNG facilities, as an additional source of supply.

Transportation

All PGW’s gas purchases are ultimately transported from the sources of supply to the City gate stations through either Texas Eastern pipelines or Transco-Williams pipelines. Injections and withdrawals of gas from off-system storage also rely on these two pipelines. Texas Eastern and Transco-Williams each account for approximately half of PGW’s total contract pipeline capacity of 302,001 dekatherms (Dth) per day. The major contracts for Texas Eastern and Transco-Williams transportation services are being renewed automatically on a year-to-year basis. See “- *Gas Transportation and Storage Contracts*” below for a summary of PGW’s existing transportation and storage agreements with Texas Eastern and Transco-Williams.

Storage

Due to the highly seasonal nature of PGW’s load (demand), gas purchased and delivered through the pipeline transportation service is supplemented by the use of storage services. The principal PGW natural gas supply facilities include nine City gate stations owned in large part by Texas Eastern and Transco-Williams as well as two LNG plants owned by the City. PGW’s supply facilities also include a gas control center, a deactivated propane/air plant, and one gas holder. During periods when PGW’s load is less than the contracted transportation service, PGW may utilize the available capacity to purchase gas for delivery to off-system storage facilities or to liquefy such gas for storage in its LNG facilities. To the extent that PGW is able to withdraw gas from off-system storage and local LNG facilities, its need to reserve capacity on pipelines to serve higher seasonal loads is diminished. In addition, gas purchased during the lower cost non-winter period, if it can be stored and redelivered from storage during the winter, will be less costly than gas purchased during the generally higher cost winter period. Further, market area storage provides PGW with increased security that gas will be available for customers when needed.

Of PGW’s total contract daily storage withdrawal capacity of 200,885 Dth per day, services provided using the Texas Eastern facilities account for 99,012 Dth per day, or approximately 49.3%, and services provided using the Transco-Williams facilities account for 101,873 Dth per day, or approximately 50.7%. Transco-Williams storage contracts do not include bundled transportation so volumes from this storage must be transported using a transportation contract from a different provider. PGW’s remaining storage volume arrangements consist of storage and transportation bundled. This storage capability primarily reduces contract demand for long haul transportation services and reduces the quantity of gas PGW needs to purchase to meet winter peak demand.

Transportation and Storage Costs

During Fiscal Year 2020, transportation and storage capacity costs are estimated to account for approximately 31% of the total gas supply expenses of $195.1 million. The prices paid for these services are determined by long-term contracts and tariff rates regulated by the FERC. These components of the gas supply cost represent the purchase of capacity, which generally remains relatively fixed, and is not expected to vary directly with the volumes of gas purchased. See "- *Storage*" above, "-*Gas Transportation and Storage Contracts,*" and "- Gas Supply Demand and Balance" below and "THE GAS WORKS FACILITIES - LNG Storage and Vaporization Facilities" above.

Gas Transportation and Storage Contracts

See the following table for a summary of PGW's existing transportation and storage agreements with Texas Eastern and Transco-Williams.

Gas Transportation and Storage Contracts

		Transportation[c]		Storage[d]	
Contract	Contract Expiration[b]	dt/day	Mcf/day[f]	dt/day	Mcf/day[f]
Transco-Williams					
FT - 3691	2023	165,212	159,471		
PSFT - 5001	2021	1,967	1,899		
S-2	2021	5,191	5,011	5,191	5,011
GSS[e]	2023	53,871	51,999	53,871	51,999
WSS[a][e]	2021			35,115	33,895
Subtotal		226,241	218,379	94,177	90,904
Texas Eastern					
CDS - 800232R	2021	75,000	72,394		
FT1 - 800233R	2021	23,822	22,994		
FT1 - 800514R	2022	18,000	17,375		
FT1 - 800515R	2022	18,000	17,375		
FTS2 - 330791	2021	5,394	5,207		
Dominion/GSS/FTS7[e]	2022	6,815	6,578	6,815	6,578
Dominion/GSS/FTS8[e]	2022	22,495	21,714	22,495	21,714
SS1A	2023	44,118	42,585	44,118	42,585
SS1B	2023	20,847	20,123	20,847	20,123
Subtotal		234,491	226,343	94,275	90,999
Total		460,732	444,722	188,452	181,903

(a) Transportation included in FT.

(b) Contracts are assumed renewed based on evergreen clauses beyond their expiration date.

(c) Reference: SDS 6, Page 4 of 4, In the Matter of Proposed Operating Budget FY 2020-2021, Supporting Documentation Gas Costs and Purchasing Plans, Volume I & II, February 2020.

(d) Reference: SDS 6, Pages 1-2 of 4, In the Matter of Proposed Operating Budget FY 2020-2021, Supporting Documentation - Gas Costs and Purchasing Plans, Volume I & II, February 2020.

(e) Volumes reflect 87.5% contract limitation on maximum monthly storage withdrawal.

(f) Mcf conversion at 1.036 BTU.

Gas Supply and Demand Balance

January 19, 1994 was PGW's highest actual historical peak demand day (a day with 2°F average temperature), with a demand (sendout) of 752,707 Mcf. For design purposes, PGW projects total demand based on a 65 heating degree-day ("HDD"). This projection results in a design day average temperature of 0°F. This is the lowest expected temperature that PGW believes could reasonably occur and is supported by PGW historical experience in the 1980's of a design day with an average temperature of 0°F. Pipeline deliveries (flowing gas plus underground storage), for the five Fiscal Years ended August 31, 2019, have met between 67.3% and 85.4% of actual peak day demand. Significantly warmer than normal winters have contributed to these figures during this time period. Since PGW is the supplier of last resort if a customer's supplier cannot deliver natural gas, PGW must maintain these capacity levels. PGW assigns to its firm transportation customers proportionate shares of pipeline capacity and cost. PGW's management believes that PGW currently can meet anticipated demand requirements based upon it capacity.

PGW defines a normal year as one containing 3,962 HDDs for its supply planning purposes. The ten-year average HDDs as recorded at the Richmond Plant provides the basis for the supply planning normal year. A design year consists of 5,280 HDDs according to PGW's definition and is based on the temperatures experienced during the 1977-1978 winter. This winter is utilized due to it being the coldest winter recorded in the previous six decades.

Although 100% of PGW's supply is transported through one of the two interstate pipelines, the supply components are based on the source of gas when ultimately delivered to the customer. Approximately 98.2% of volume, on a normal annual basis, is delivered to end users through the interstate pipeline systems (of which approximately 77.9% is flowing gas (i.e. gas that is purchased at the same time as delivered to customers), and approximately 22.1% is off-system storage), and approximately 1.8% is delivered from PGW's LNG facilities.

The following table summarizes the supply mix that was used to meet historical peak day demand from Fiscal Years 2015 through 2020.

	Fiscal Year Ending August 31,					
	Actual					Estimate
Description	2015	2016	2017	2018	2019	2020
Actual[(a)]						
Peak Heating Degree-Days	54	49	44	52	48	35
Demand – Mcf	645,370	583,377	528,423	639,043	611,853	461,382
Supply – Mcf						
Pipeline/Storage	495,027	483,750	451,101	468,042	411,676	452,560
LNG	150,343	99,627	77,372	171,001	200,177	8,822
Total	645,370	583,377	528,473	639,043	611,853	461,382

(a) Total actual annual demand does not include Interruptible Gas Transportation Service customer Grays-Ferry, which is not included in peak day planning.

Transportation Service to PGW Customers

PGW estimates that in Fiscal Year 2020 it provided transportation service to 25,187 customers. The increase in transportation customers from 3,716 in Fiscal Year 2015 is attributed mainly to customers switching from sales to transportation service. Grays Ferry and Trigen Cogeneration Facility, during calendar year 2019, accounted for approximately 36% of PGW's transportation throughput and 2.2% of PGW's transportation revenue. Essentially dedicated facilities provide service to these customers in accordance with a long-term contractual arrangement. Pursuant to this arrangement, PGW receives approximately 8 cents per Mcf for each unit transported plus a service charge designed to cover PGW's cost to operate and maintain the associated facilities necessary to provide service for these customers. Other customers receive services pursuant to separate individually negotiated contractual arrangements. Transportation customers, in some instances, also receive some service in accordance with the sales rate schedule for a portion of their load.

A substantial number of PGW's customers continue to take fully bundled service from PGW even though PGW since September 1, 2003 has operated under its Restructuring Compliance Tariff with unbundled rates. A fully bundled service entails the given customer dealing with one provider and paying a single charge for all services. In such instances, PGW packages into a single full-service rate all of the separate services which PGW provides (gas supply, transportation, storage, and distribution).

Under PGW's restructured rates, customers may continue taking the gas supply, transportation, and storage services from PGW or select a third-party supplier to receive these services. Whether the customer selects PGW or a third party for these services, the customer remains obligated to take and pay for distribution service from PGW. Under its current tariff arrangement, PGW allocates (with recall rights) components of its pipeline transportation to firm service third party supplier parties such that PGW and its customers who take a fully bundled service will not be adversely affected by paying for capacity that would otherwise be stranded by customers who have selected a third-party supplier. PGW keeps ownership of the transportation capacity due to PGW continuing to be the supplier of last resort. If a firm service third party supplier defaults on, or otherwise no longer can fulfill its obligations, PGW can recall the transportation capacity and provide service to the customers who had chosen service from such third-party supplier. None of PGW's storage capacity is released to firm service third party suppliers. Balancing services (i.e., reconciling customer gas deliveries with consumption) are provided by PGW from its storage as needed. During the winter season, PGW assesses firm service third party suppliers a storage and peaking charge for storage balancing services which PGW provides. During the summer season, firm service third party suppliers return volumes previously provided from PGW storages.

Due to the unbundled rates, PGW's margin from firm customers is not affected in any significant way due to a customer decision to choose a third-party supplier or to keep taking the fully bundled service. The distribution and customer charges are still paid to PGW regardless of which service is taken by the applicable customer. PGW is made whole through the GCR mechanism with regard to gas supply, transportation, and storage costs. Customers choosing to receive fully bundled service are not adversely impacted by PGW's ability to assign capacity to the third-party suppliers.

For Fiscal Year 2020, PGW estimates that approximately 33.0 Bcf of commercial, industrial and municipal throughput, or 43.9% of total throughput for all customers, consisted of gas supply and transportation from a third-party supplier. PGW's management expects that transportation throughput will continue a pattern of annual growth.

ENVIRONMENTAL MATTERS

General

PGW's operations and facilities are subject to numerous laws and regulations, including permitting and approval requirements, promulgated by federal agencies such as the United States Department of Transportation (USDOT), the United States Environmental Protection Agency (USEPA), and the Federal Emergency Management Agency (FEMA), by state entities such as the Pennsylvania Department of Labor and Industry (PADLI) and the Pennsylvania Department of Environmental Protection (PADEP), and by local entities such as the Philadelphia Water Department (PWD), the Philadelphia Department of Public Health (PDPH), Philadelphia Air Management Services (AMS), and the Philadelphia Office of Emergency Management (OEM). These requirements are subject to change and additional or different requirements may be imposed upon PGW in the future. PGW's Technical Compliance Department routinely tracks and notifies relevant personnel of regulatory compliance requirements. See "THE GAS WORKS FACILITIES – *PGW Technical Compliance*." No assurances can be given that PGW will be able to fully comply with changes to existing laws or requirements, or that compliance with such changes in requirements will not materially increase PGW's capital or operating costs, or have a material adverse effect on Gas Works Revenues.

PGW (and its predecessors) has been in operation for more than 180 years, and many of its current facilities (the "Current Sites") and other locations where PGW had previously operated facilities used in gas manufacturing ("Legacy Sites") were built decades ago. As a result of internal environmental evaluations of its Current Sites, PGW believes that several Current Sites that had been used in gas manufacturing contain contaminants from those operations or from other sources. Additionally, certain equipment and fixtures that PGW removed from service years ago may no longer comply with current environmental requirements. The Current Sites are comprised of the Tioga facility, the Belfield station (the "Belfield Facility"), the 9th & Diamond meter shop (the "Diamond Facility"), the Richmond natural gas processing and distribution facility (the "Richmond Plant") and the Passyunk natural gas processing and distribution facility (the "Passyunk Plant"). In order to address these issues, PGW and the City voluntarily approached the PADEP and proposed to resolve these issues at the Current Sites under PADEP's Land Recycling and Environmental Remediation Standards Act ("Act 2").

Currently, there are no remediation efforts occurring at the Legacy Sites, and no remediation activity is presently scheduled for any Legacy Site.

To determine the extent necessary to remediate environmental conditions impacting its Current Sites, PGW commissioned environmental site assessment studies that were conducted by an environmental consulting firm (the "Firm") in 2002, 2003 and most recently in 2004. In 2004, PGW received a set of five remedial investigation reports by the Firm that were based upon the findings of the environmental site assessment studies. These Remedial Investigation Reports (as such term is defined in Act 2) ("RIRs") concerned the characterization of site soil and/or groundwater contaminated with volatile organic compounds ("VOCs") and semi-VOCs at the Current Sites. In each case, the RIRs documented site impacts and recommend remediation at the applicable site to meet the site-specific standards permitted under Act 2.

Based on the RIRs, at the end of 2004, PGW submitted to the PADEP PGW's Notice of Intent to Remediate ("NIR") with copies of the RIRs for review. The remediation actions anticipated by PGW at the time included, but were not limited to, additional site characterizations, risk screenings, groundwater monitoring, soil vapor studies, underground storage tank removals, above ground tank removal, removal of other above ground fixtures, impacted soil removal, and product recovery. PGW has performed monitoring and remedial actions as guided by the reports.

Beginning in 2005, PGW conducted a series of public meetings to inform the public of PGW's upcoming remediation projects at the Current Sites, and also to address any specific concerns raised by local residents regarding PGW's future remediation plans, as required by the Public Involvement Plan Process. As a result of the public meetings, PGW developed a project schedule and budget to address and conduct any necessary remedial work for the impacted Current Sites. PGW expects that this will provide PGW with allocated resources in a manner calculated to avoid any material adverse effect on PGW or on PGW's revenues. Nevertheless, until the project schedule work plans are finalized with the PADEP, it is not possible to determine what the costs of several remediation projects will be. (See "**- Current Activities**" below).

Current Activities

Currently, an air sparge soil vapor extraction system (AS/SVE) is operating on the east side of the Passyunk Plant and similar engineering controls will be evaluated for other facilities. PGW is also operating a remediation system on the west side of the Passyunk Plant that removes light non-aqueous phase liquid (LNAPL) from the groundwater. PGW currently does not plan to remove source material from the Passyunk Plant, the Richmond Plant or the Tioga Facility. The Passyunk Plant, Richmond Plant and Tioga Facility are being monitored on an ongoing basis for development of remedial action work plans for future submittal to PADEP in connection with its Act 2 program. Pursuant to the requirements of the Pennsylvania Storage Tank and Spill Prevention Act of 1989 (the "Spill Prevention Act"), PGW is currently conducting monitored natural attenuation[§§§] as a remedial approach with respect to storage tanks at the Belfield Facility and the Diamond Facility with the goal of attaining site closure for past storage tank issues at both facilities by Fiscal Year 2021.The Spill Prevention Act establishes requirements, standards and procedures for removal and closure of storage tanks, to identify and contain existing contamination and to prevent future releases from storage systems no longer in service. In Fiscal Year 2020, the operating and maintenance expense estimates for environmental remediation were budgeted for $3.4 million. The average costs for these expenses from Fiscal Year 2017 to Fiscal Year 2019 were approximately $0.6 million.

Over the course of Fiscal Years 2020 through 2050, PGW expects to budget such additional amounts as may be necessary to address and conduct remedial work for impacted PGW Current Sites to the extent such costs are not included in other budget line items. PGW expects that this will provide PGW with required resources without causing a material adverse effect on PGW or on PGW's revenues. However, until the work plans are finalized with the PADEP and other agencies with jurisdiction over PGW, and remediation activities are completed, costs of several remediation projects cannot be determined.

Estimates for Financial Statement Purposes

The remediation activities described above at the Current Sites are estimated at a net present value of $26.473 million (as of August 31, 2019) for the 30-year period beginning that date. See APPENDIX A – "COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR FISCAL YEARS ENDED AUGUST 31, 2019 AND 2018 OF THE PHILADELPHIA GAS WORKS – **Financial Section** – Notes to Financial Statements – **Note 1(t) – Pollution Remediation**" attached hereto for a description of PGW's method for estimating remediation obligations.

Other Estimate of Environmental Remediation Costs

For purposes of insurance settlement negotiations (see "– **Insurance Settlements**" below), PGW also commissioned another study with different assumptions regarding the type and scope of necessary work and estimate of remediation costs with respect to the Current Sites and Legacy Sites. The higher estimate reflects what PGW considers could be needed at both Current Sites and Legacy Sites if source removal were necessary. This information does not address PGW's insurance coverage.

Additional Study of Current and Legacy Sites and Associated Remediation Costs

A second estimate for environmental remediation costs dated as of 2003 and updated as of October 2012, is for $333 million for the 30-year period beginning October 2012. It was initially prepared in 2003 by a consultant to PGW for insurance settlement purposes to be a "'reasonable worst case' or 'plausible worst case' scenario," rather than an approach that estimates the environmental remediation costs of scenarios thought most likely to occur or associated with a preferred remedy. It was updated in 2012 primarily to reflect current remediation pricing. It generally includes all of the activities described under the lower cost estimate. However, recognizing that older processing for producing gas and older storage methods make it possible that contaminants exist at the Legacy Sites formerly associated with PGW or its predecessors and located throughout the City and at some of the Current Sites, it expands the properties included in the remediation costs estimate to both the Current Sites and the Legacy Sites. These more comprehensive and costly remediation measures than those assumed in the lower estimate would include, as appropriate, removal or stabilization of contaminated soils, plus pumping and treating groundwater to remove contaminants and prevent migration, excavation as off-site thermal treatment of contaminated soils and attention to ground water contamination. PGW does not currently plan to undertake many of the activities detailed in this estimate.

[§§§]"Natural attenuation" may consist of a variety of physical, chemical, or biological processes that, under favorable conditions, act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil or groundwater.

Actual Costs May Differ Substantially from Estimates

Estimates of remediation costs may change substantially as additional information becomes available regarding the level of contamination at specific sites, available remediation methods, and changes in price, technology, proposed land use, or applicable regulations.

Other Environmental Activities

Clean Air Act

The Clean Air Act (as amended, the "Clean Air Act") requires the County of Philadelphia (which is coterminous with the City) to submit to the USEPA a State Implementation Plan (the "State Implementation Plan") revision demonstrating that the County has implemented all necessary Reasonably Available Control Technology (as defined in the Clean Air Act) controls on all major stationary sources of VOCs and oxides of nitrogen. The Philadelphia Office of Sustainability currently includes the methane released during PGW's main leaks in the City's carbon budget. Such methane has the effect of adding greenhouse gases to the atmosphere, which have been found by scientific consensus to contribute to anthropogenic climate change. As part of PGW's capital improvement program, PGW is replacing portions of its mains with plastic pipes. See "THE CAPITAL IMPROVEMENT PROGRAM" for information regarding PGW's gas main replacement program.

On April 18, 2012, the USEPA finalized regulations under the federal Clean Air Act to reduce air pollution from the oil and natural gas industry. The final rules are expected to, among other outcomes, reduce air toxics and emissions of methane, a potent greenhouse gas. Distribution lines such as PGW's mains have not been affected by the final rules.

Other Remediation Activities

PGW is conducting abatement of asbestos-containing materials, lead-based paint and mold at certain of its facilities. PGW is replacing customer gas regulators with mercury-free regulators. PGW conducts other remediation and abatement projects as needed in conjunction with construction and capital projects among PGW locations and facilities to ensure health and safety during operations and to meet Federal, State, and City regulatory requirements. It is equally sharing the costs of remediation of a former storage facility adjacent to the Passyunk Plant with the present owner for which PGW is only responsible for its own share of the costs.

Voluntary Activities

No contaminants related to the manufacture of natural gas and other gas works operations were found at or above actionable levels in soil vapor tests conducted voluntarily by PGW at properties adjacent to the Passyunk Plant. Although the tests revealed the presence of chloroform, PGW does not believe that the chloroform was generated by PGW activities. Nonetheless, PGW voluntarily has been assisting USEPA's ongoing soil vapor studies of the affected properties. PGW is currently waiting for any further communication from USEPA on this matter.

Regulatory Actions and Suits

Current Sites

With respect to the Current Sites, except with respect to underground storage tanks which are subject to mandatory remediation, and minor fines included in "– **Violations**" below, PGW has not received any orders for mandatory remediation measures or been fined or sanctioned by any environmental regulatory agency, nor has it received any third-party claim for bodily harm or property damage based on environmental issues at the Current Sites. PGW is not aware of any river sediment claim or other natural resource claims.

Legacy Sites

PGW has not made any on-site investigation or data analysis of the Legacy Sites nor has it assessed the Legacy Sites for soil, ground water and soil vapor environmental impact. PGW has not conducted environmental remediation or been asked to conduct environmental remediation at any Legacy Site, other than a third-party claim which the claimant has not pursued. PGW is not aware of any river sediment claim or other natural resource claims. It has not been fined or sanctioned for any Legacy Site, nor has it received any third-party claim for bodily harm or property damage at the Legacy Sites.

Violations

Since 2002, PGW has paid less than $175,000 in fines for notice of violations and penalties associated with permit and regulatory violations from the USEPA, the PWD, and AMS. The majority of such fines were incurred in connection with USEPA requests for settlements under the Comprehensive Environmental Response, Compensation, and Liability Act resulting from issues at off-site disposal facilities.

Insurance Settlements

PGW does not currently carry first party environmental coverage which it could use for environmental remediation costs. However, PGW's pre-1986 excess liability policies included certain coverage for environmental liability to third parties. In 2004, PGW began negotiating a buy-out of those policies with the various carriers, agreeing to forgo any future recovery for third-party claims in exchange for obtaining funds for environmental remediation. Through May 2020, PGW has received $18.4 million in net negotiated settlements from various carriers.

Recovery of Environmental Remediation and Other Costs

The costs of environmental remediation are included in the category of items eligible for inclusion in the Base Rate. However, while there is no express prohibition making the costs of fines or penalties related to environmental matters ineligible for inclusion in the Base Rate, there can be no assurance that the PUC would approve Base Rate increases to cover such costs should they be incurred. PGW's ability to recover expenditures depends on the rates authorized by the PUC. The PUC is obligated by the Gas Choice Act to use the cash flow methodology to determine PGW's "just and reasonable" rates. PGW periodically files rate increase applications, which may or may not be approved, or may be partially approved, and any approval may not occur in a timely manner. See "GAS SERVICE TARIFF AND RATES – Rates – *Base Rate*."

Uncertainty

Any analysis of the costs and requirements of environmental impacts is subject to certain variables, including the possible future discovery of pre-existing unknown pollution conditions, assertions of claims by government agencies or private litigants, changes in laws, administrative policies, or judicial rulings that create new environmental liabilities or exacerbate existing ones. PGW reserves the right to all defenses of liability with respect to environmental impacts, including, without limitation, seeking contribution from previous operators and/or adjacent site owners.

CLIMATE CHANGE

PGW's management considers that the consequences of climate change may most likely impact PGW in terms of its revenues should certain circumstances coincide. Warmer winters within PGW's service area would tend to lead to decreases in the volume of natural gas used by PGW's customers. However, no assurances can be provided that PGW could fully and timely offset the revenue impacts of such lower load (demand) through increases to its Weather Normalization Charge or changes (likely a shortening) in the number of years used to determine the normal weather assumption for PGW's base rates.

PGW does not have any facilities that PGW's management considers likely to be materially affected by climate change and the related rising water table. However, PGW customers do have equipment that is occasionally affected by a rising water table. This occurs at different times with high volumes of rain. The rising water table may infiltrate PGW's customers' equipment, resulting in localized gas outages that must be addressed by PGW Field Operations personnel.

PGW's regulatory and legislative risks, particularly over the long-run, include changes to federal, state and local laws and regulations that drive environmental policy and may impact PGW's ability to recover its costs. Potential regulation and legislation regarding climate change and carbon constrained regulatory regimes (e.g., renewable portfolio standards) could increase the pace of development of alternative energy sources which could create downward pressure on demand for natural gas and PGW's services. In Pennsylvania, legislation to transition to 100% renewable energy sources has been proposed (e.g., House Bill 1425 and Senate Bill 630 which were introduced in the Pennsylvania General Assembly on May 29, 2019) and may be proposed, considered and enacted in the future. Changes in consumer attitudes and preferences in response to climate change concerns may also accelerate movements to greater use of alternative energy sources and lead to further energy efficiency initiatives which may also impact the level of demand for natural gas. Due to the high proportion of PGW's customers who are residential (as opposed to industrial), PGW may experience only limited benefits from any shifts in demand from oil to natural gas (i.e., as a less carbon-intensive fossil fuel) within its service area.

See also "THE GAS WORKS FACILITIES – *Compressed Natural Gas"* and "GAS SERVICE TARIFF AND RATES – Rates – *Weather Normalization Adjustment*." See also "THE GOVERNMENT OF THE CITY OF PHILADELPHIA – Climate Change" in APPENDIX C – "THE CITY OF PHILADELPHIA GOVERNMENT AND FINANCIAL INFORMATION."

GAS SERVICE TARIFF AND RATES

Gas Service Tariff

PGW recovers the costs of providing natural gas, including the cost of owning and operating its various facilities, funding its various programs, satisfying the Rate Covenant, and providing for amounts sufficient to operate on a day-to-day basis, together with appropriate coverage, through the rates set forth in its Gas Service Tariff approved by and on file with the PUC.

The following is a brief description of PGW's rate requests to the PUC since PGW became subject to PUC jurisdiction and the results of those requests:

PGW RATE CHANGE REQUESTS TO PUC[(1)]

Date of Request	Type of Relief (Base Rate or Surcharge)	Amount of Relief Requested	Purpose	Date Relief Granted	Amount of Relief Granted
08/08/2000	Base Rate	$52 million	Interim Rate relief	11/22/2000	$11 million
01/05/2001	Base Rate	$65 million	Rate relief	10/12/2001	$22.6 million
02/25/2002	Base Rate	$60 million	Base rate relief	04/11/2002	$36 million
FY 2002	WNA	Charge/(Credit)	Weather Normalization Adjustment	08/08/2002	Approved
12/22/2006	Base Rate	$100 million	Rate relief	09/28/2007	$25 million
11/14/2008	Base Rate	$60 million	Extraordinary rate relief	12/18/2008	$60 million
12/18/2009	Base Rate	$60 million	Maintain extraordinary rate relief	07/29/2010	$60 million granted in 2008 made permanent
12/18/2009	Surcharge	$42.5 million annually	OPEB funding	07/29/2010	$16 million annually through 2015
12/18/2009	Surcharge	$58.3 million	5yr. Demand Side Management Phase I (DSM)[(2)]	07/29/2010	Cost recovery
01/18/2013	Surcharge	DSIC: 5% of non-gas revenues	Distribution system repair, improvement & replacement	05/09/2013	5% of non-gas revenues from 2010 base year estimated to generate $22 million
December 2014	Surcharge	Automatic adjustment clause extension	DSM Phase II	11/01/2016	Range of $2.5 million to $2.8 million annually through Fiscal Year 2020

					(excluding CRP Comfort); triennial reauthorization plans authorized for subsequent three-year periods(5)
February 2015	Surcharge	$16 million annually	Continued OPEB funding	07/08/2015	$16 million annually
April 2015	Surcharge	$10.7 million	DSM Phase I; extended DSM Phase I until Order was rendered on Phase II	05/07/2015	$10.7 million through Fiscal Year 2016
September 2015	Surcharge	DSIC: 2.5% of non-gas revenues in addition to the existing 5% cap for a total of 7.5%(3)	Distribution system repair, improvement & replacement	01/28/2016	2.5% of non-gas revenues estimated to generate an additional $11 million for a total DSIC of $33 million
February 2016	Surcharge	$11.4 million	Recover under-collection	07/06/2016 Effective 10/01/2016	$11.4 million over two year period
02/27/2017	Base Rate	$70.0 million(4)	Rate relief	11/28/2017	$42 million
02/28/2020	Base Rate	$70 0 million	Rate relief	Pending(6)	To be determined.

____

(1) Does not include GCR changes.
(2) "DSM" or "Demand Side Management" is a PGW program offering services to assist its customers to get the best value for their energy expenses.
(3) Beginning on October 1, 2016, PGW temporarily increased its DSIC surcharge to 8.84% as permitted by the PUC's July 6, 2016 Order which permitted PGW to recover certain DSIC under collections for the year ending December 31, 2015 over the course of two years. This temporary increase terminated on September 30, 2018.
(4) The original amount sought in the February 27, 2017 filing was $70.0 million. A partial settlement in the amount of $42.0 million of base rate increases was submitted to the PUC on July 21, 2017 and was approved on November 28, 2017.
(5) By its approval of the Phase II Plan, the PUC authorized PGW to continue its DSM programs beyond FY 2020, through the filing of triennial implementation plans. PGW's 2021 – 2023 DSM implementation plan was filed in May, 2020.
(6) On August 26, 2020, PGW filed a joint petition for settlement of the rate case. See "Rates -*2020 General Rate Relief Filing*" below for a further discussion, including with respect to the related Settlement Agreement (hereafter defined) and the recommended decision with respect thereto issued by the PUC Administrative Law Judges on October 5, 2020.

[Remainder of Page Intentionally Left Blank]

PGW's current Gas Service Tariff sets forth the rules and regulations and practices for gas service and the rates PGW is allowed to charge for such service, including the Base Rate, the Gas Cost Rate (herein defined) and various adjustments and surcharges.

PGW's rates are unbundled such that any customer may choose a commodity supplier that is different from its distribution provider. As of January 31, 2020, the percentages of residential, commercial, industrial and total customers using alternative suppliers were approximately 4.3%, 17.4%, 27.7% and 5.1%, respectively, and the related respective percentages of load from alternative suppliers were approximately 4.3% (residential), 62.0% (commercial), 96.2% (industrial) and 37.2% (total). See also "PHILADELPHIA GAS WORKS – Competition". PGW's rates generally include a customer charge component, distribution charge component and Gas Cost Rate. Under the unbundled rates, PGW's margin from firm customers is not materially impacted by whether a customer chooses a third-party supplier or elects to continue taking the fully bundled service. A customer will continue to pay the distribution, customer charges and surcharges to PGW even if the customer does not purchase gas service from PGW.

See "Rates" below including the charts under "- *Gas Cost Rate*" and "- *Surcharges*" and under "Summary of Existing Tariff Rates."

Rates

The following types of rates are set forth in the Gas Service Tariff. Each is discussed below in more detail.

- **Base Rate (Customer Charge):** the rate charged by PGW, using the cash flow method (as described under "*Base Rate*" below), to produce a targeted amount of revenue for PGW based on various assumptions, including projected revenues and expenses.

- **Gas Cost Rate ("GCR"):** the current cost of natural gas and all raw materials that are passed through to customers. GCR consists of the purchased gas costs, transportation costs and off-system storage costs, minus the cost directly paid by interruptible sales customers, all subject to various adjustments for actual versus projected values and certain credits.

- **Base Rate (Distribution Charge):** a component of a customer's rate regardless of whether a customer chooses to purchase its gas from PGW or an alternate supplier; the rate charged by PGW, using the cash flow method (as described under "*Base Rate*" below), to produce a targeted amount of revenue for PGW based on various assumptions, including projected revenues and expenses.

- **Surcharges:** Several surcharges are imposed for specific purposes:

    - Universal service and energy conservation (recovery of social program costs)
    - Restructuring and consumer education (recovery of transition costs to customer choice)
    - Efficiency cost recovery (recovery of energy efficiency programs)
    - Other postemployment benefits (recovery of OPEB trust contribution costs)
    - DSIC (recovery of capital costs associated with a portion of PGW's main replacement program)

- **Weather Normalization Adjustment ("WNA")**. Since 2002, the delivery charge (not including GCR or surcharges) has been subject to a WNA which mitigates the risk of a warmer than normal winter season. The WNA adjusts the customer bills upward or downward to reflect differences between actual Heating Degree Days ("HDD") and normal HDDs. A HDD is the difference between the daily temperature mean (high temperature plus low temperature divided by two) and 65° F.

Base Rate

The Base Rate is regulated by the PUC, which is obligated by the Gas Choice Act to use the cash flow methodology to determine PGW's "just and reasonable" rates. Pursuant to the PUC's April 2010 Order and Final Policy Statement[****] (the "2010 PUC Policy Statement") with respect to PGW, the determination of just and reasonable rates includes satisfaction of the subsidiary obligation to provide revenue allowances from rates adequate to cover its reasonable and prudent operating expenses, depreciation allowances and debt service, as well as sufficient margins to meet bond coverage requirements and other internally generated funds over and above its bond coverage requirements, as the PUC deems appropriate and in the public interest, for purposes such as capital improvements, retirement of debt and working capital.

In determining just and reasonable rate levels for PGW, the PUC will consider, among other relevant factors: (1) PGW's test year-end and (as a check) projected future levels of non-borrowed year-end cash, (2) available short term borrowing capacity and internal generation of funds to fund construction, (3) debt to equity ratios and financial performance of similarly situated utility enterprises, (4) level of operating and other expenses in comparison to similarly situated utility enterprises, (5) level of financial performance needed to maintain or improve PGW's bond rating thereby permitting PGW to access the capital markets at the lowest reasonable costs to customers over time, (6) PGW's management quality, efficiency and effectiveness, (7) service quality and reliability and (8) the effect on universal service. See "GAS SERVICE TARIFF AND RATES – Rates – *Ratemaking Methodology to Comply with Bond Covenants.*"

To effect any increase to the Base Rate, PGW files a proposed revision to its existing Gas Service Tariff with the PUC setting forth the proposed new rates and effective date, and detailing the data supporting the necessity of the proposed change. In any proceeding upon the motion of the PUC involving any proposed or existing PGW rate or in any proceedings involving any proposed increase in rates, PGW has the burden of proof to show that the rate involved is just and reasonable. A requested rate increase is initially suspended for 60 days and may be suspended for up to seven additional months while the PUC investigates and determines whether the increase is justified. Part of the investigation includes hearings in which interested parties can participate. After the end of the suspension period required by the Public Utility Code, in its discretion, the PUC may adjust PGW's rate increase request on the basis of the data submitted and consistent with the requirements of the Public Utility Code and, in particular, the Gas Choice Act. If the PUC approves the Base Rate increase, it will determine how to allocate the increase among the different classes of customers.

Since coming under the PUC's jurisdiction in 2000, and prior to Fiscal Year 2020, PGW had filed seven requests seeking increases in the Base Rate totaling $397.5 million (which amount includes multiple requests for the same or similar costs) and the PUC has granted PGW Base Rate increases totaling approximately $212.6 million. Such increases have included requests to cover various financing costs incurred by PGW, including costs to improve its financial position, enhance its ability to access the financial markets, maintain its bond rating and provide liquidity and financial flexibility, and a portion of the costs of certain OPEB liabilities.

PGW has also filed with the PUC certain requests seeking increases to its gas cost rate ("GCR"). The PUC has approved all of the GCR filing requests made by PGW. The following sub-sections describe certain significant cases and orders since 2008 relating to PGW's base rate relief requests including requests related to the annual OPEB surcharge.

[****]In the 2010 PUC Policy Statement, the PUC states that "unlike a regulation, [the 2010 PUC Policy Statement] is not enforceable and has no binding effect on [PUC], or on anyone else." However, it further states that the purpose of the 2010 PUC Policy Statement "is to provide guidance to PGW and all interested parties as to the Commission's [PUC's] view on the statutorily-mandated ratemaking criteria for PGW and the information that should be considered in determining just and reasonable rates" and, further, that the 2010 PUC Policy Statement "is grounded upon Pennsylvania case law."

2008 Extraordinary Rate Relief Filing

PGW, on November 14, 2008, sought extraordinary base rate relief of $60 million, effective January 1, 2009. The PUC granted the request on December 18, 2008. The principal reason for PGW's request was to PGW's access to the financial markets, maintain its bond ratings and provide liquidity and financial flexibility under then-existing credit market conditions. In connection with receiving the extraordinary relief, PGW was required to file a base rate case with the PUC no later than December 31, 2009.

2009 General Rate Relief Filing

PGW on December 18, 2009 submitted a base rate case filing with the PUC. The filing sought to maintain the $60 million base rate increase granted by the PUC in 2008 and provide PGW revenues above those resulting from the base rates for funding PGW's previously booked other post-employment benefits (OPEB) liability in the amount of $105 million over the 2011 through 2015 period. The component related to OPEB was also for the purpose to fully fund, over a 30 year period, PGW's unfunded actuarial accrued OPEB liability. PGW also moved to consolidate PGW's Demand Side Management Plan into the base rate filing. In addition to the need for PGW to comply with the PUC's December 2008 order directing PGW to file a general rate case by the end of 2009, PGW made the filing for purposes of maintain or improving PGW's general financial position, credit rating, liquidity, overall financial flexibility, capital market access and OPEB liability funding.

On May 19, 2010 PGW, along with all active parties to the proceeding, submitted a Petition for Proposed Settlement of the proceeding, which the PUC approved by an order dated July 29, 2010 (the "2010 Order").

Under the 2010 Order, PGW was permitted to maintain virtually all of the extraordinary base rate relief and received an incremental rate increase of $16 million annually. PGW was required to fund $18.5 million of the OPEB liability for a five-year period ending with Fiscal Year 2015 with PGW also agreeing to continue funding the OPEB liability at an annual level of $18.5 million. The increase granted by the Order represented about 38% of the $42.5 million incremental rate increase as originally requested by PGW. The 2010 Order sought established more uniform rates by PGW. The 2010 Order also was designed to create a reasonable transition period from "pay-as-you-go" funding to the full funding of OPEB liability. The 2010 Order required the Net OPEB Obligation to be amortized over a thirty-year period.

The 2010 Order also addressed PGW's implementation of its then proposed five-year Demand Side Management ("DSM") Phase I program. Such DSM program was approved generally as proposed. The 2010 Order also allowed PGW to use an automatic adjustment clause mechanism to recover PGW's implementation costs of the DSM program.

2017 General Rate Relief Filing

PGW made a filing with the PUC on February 27, 2017 which sought an increase in PGW's distribution base rates. The filing sought a general rate increase calculated to produce $70.0 million (11.6%) in additional annual operating revenues. The filing request was based upon a 10-year normal weather assumption. The proposed increase sought to increase certain parts of the base rates (i.e., the fixed customer charge component and the volumetric delivery charge component). PGW's base rate increase request in this filing was based on a fully projected future test year ("FPFTY") coinciding with PGW's Fiscal Year 2018.

The primary focus on the proceedings centered on the level of base rate increase which would be supportable by applying PGW's required ratemaking methodology – the Cash Flow Method – and maintaining compliance with PGW's bond covenants.

On July 21, 2017, the active parties in the proceeding submitted a joint petition to the PUC for settlement agreeing to a $42 million rate increase with a 20-year normal weather assumption. The PUC approved the proposed settlement on November 8, 2017. The joint petitioners included: PGW, the Bureau of Investigation and Enforcement and certain consumer and other advocate groups (i.e., the Office of Consumer Advocate, the

Office of Small Business Advocate, the Retail Energy Supply Association, the Philadelphia Industrial and Commercial Gas Users Group, the Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania, and the tenant Union Representative Network and Action Alliance of Senior Citizens of Greater Philadelphia).

2020 General Rate Relief Filing

On February 28, 2020, PGW filed for an increase in its distribution base rates with the PUC. The filing sought a general rate increase calculated to produce $70 million (10.5%) in additional annual operating revenues based upon a 20-year normal weather assumption. The proposed increase sought to increase the fixed customer charge component, as well as the volumetric delivery charge component of base rates. Consistent with its budget process, the base rate increase requested in this filing was based on a fully projected future test year starting on September 1, 2020 and ending on August 31, 2021 (the "Test Year").

The primary issue in this proceeding is what level of base rate increase is supportable by applying PGW's required ratemaking methodology – the cash flow method (as describe under "Rates – *Base Rate*" above – and complying with Section 2212(e) and (f) of the Public Utility Code (regarding PGW's bond covenants), as well as the 2010 PUC Policy Statement, which explains the way in which the PUC intends to apply the PGW cash flow method (referenced above). In connection with the rate case proceedings, PGW provided expert testimony on July 13, 2020 (Docket No. R-2020-3017206) which addressed among other things, the potential impact of adverse economic conditions on PGW's collection rates. The expert testimony was based, in part, on an assumed unemployment rate of 10% in Philadelphia during the Test Year as its base case, relying partially on Federal Reserve Bank projections applied to the Philadelphia labor market. Although PGW's rolling 24-month collection rates have remained materially stable, the expert's analysis concluded that using such base case, a doubling of PGW's bad debt percent (i.e., 100% minus the collection rate) from 4% to 8% could be expected. The expert stated that such increase would also be expected to result in a doubling of bad debt owed (in nominal dollars) to PGW during the Test Year. The expert further indicated that the incremental bad debt increase due to a drop in PGW's collection rate from 96% to 92% during the Test Year would be anticipated to be $33.1 million dollars for a total bad debt of $66.2 million dollars during the Test Year. No assurances can be given that PGW's actual collection rates will not differ materially from any recent or forecasted level. See "GAS SERVICE TARIFF AND RATES – Collections" below.

Consistent with its practice in prior base rate increase matters, on April 16, 2020, the PUC voted to suspend the proposed rate increase request for up to seven months, and to assign the case to the PUC's Office of Administrative Law Judge for corresponding proceedings and the issuance of a recommended decision. Four telephonic hearings were held on June 2, and 3, 2020 to gather public input on the rate increase proposed by PGW.

On August 26, 2020, PGW filed a Joint Petition for Partial Settlement (the "Settlement Agreement") in which all rate case parties joined or did not oppose, except the environmental stakeholders group that is opposing PGW's rate increase request. The proposed Settlement Agreement would provide PGW with a general rate increase of $35.0 million in annual operating revenues in three increments: $10.0 million for service rendered on or after January 1, 2021, $10.0 million for service rendered on or after July 1, 2021, and $15.0 million for service rendered on or after January 1, 2022. PGW's management believes that settlement agreements with reduced revenue requirements are not atypical in PUC base rate proceedings and are the product of compromise between the parties' diverse interests. The PUC has indicated that settlement results are often preferable to those achieved at the conclusion of a fully litigated proceeding.

A recommended decision by the Administrative Law Judges concerning the proposed Settlement Agreement was issued on October 5, 2020. The Administrative Law Judges recommended modifications to the proposed Settlement Agreement which would delay the effective dates of the base rate increase as follows: $10.0 million on July 1, 2021, $10.0 million on January 1, 2022, and $15.0 million on July 1, 2022. The Administrative Law Judges also recommended delaying the earliest date that PGW could file its next base rate case from January 1, 2022 to January 1, 2023. PGW filed exceptions to the recommended decision on October 15, 2020 in which it requested that the PUC approve the proposed Settlement Agreement without modification. The PUC is expected to issue a final opinion and order in this matter by December 3, 2020. No assurances can be provided that the proposed Settlement Agreement will ultimately be approved as filed or with respect to the final resolution of the issues addressed in the Administrative Law Judges' recommended decision and any exceptions filed by PGW in response thereto.

With respect to the environmental stakeholders, their position is that PGW's rate increase should be denied in its entirety because its infrastructure modernization efforts allegedly do not adequately take account of the effects of climate change. Included in this claim is the contention that PGW should prepare and submit to the PUC a "Climate Business Plan" to "significantly" reduce or eliminate greenhouse gas emissions prior to being granted a rate increase. The recommended decision issued on October 5, 2020 found that the environmental stakeholders did not meet their burden of proof but did recommend that PGW in its next base rate case submit "information regarding its planning related to climate change issues."

See "PGW RATE CHANGE REQUESTS TO PUC" above.

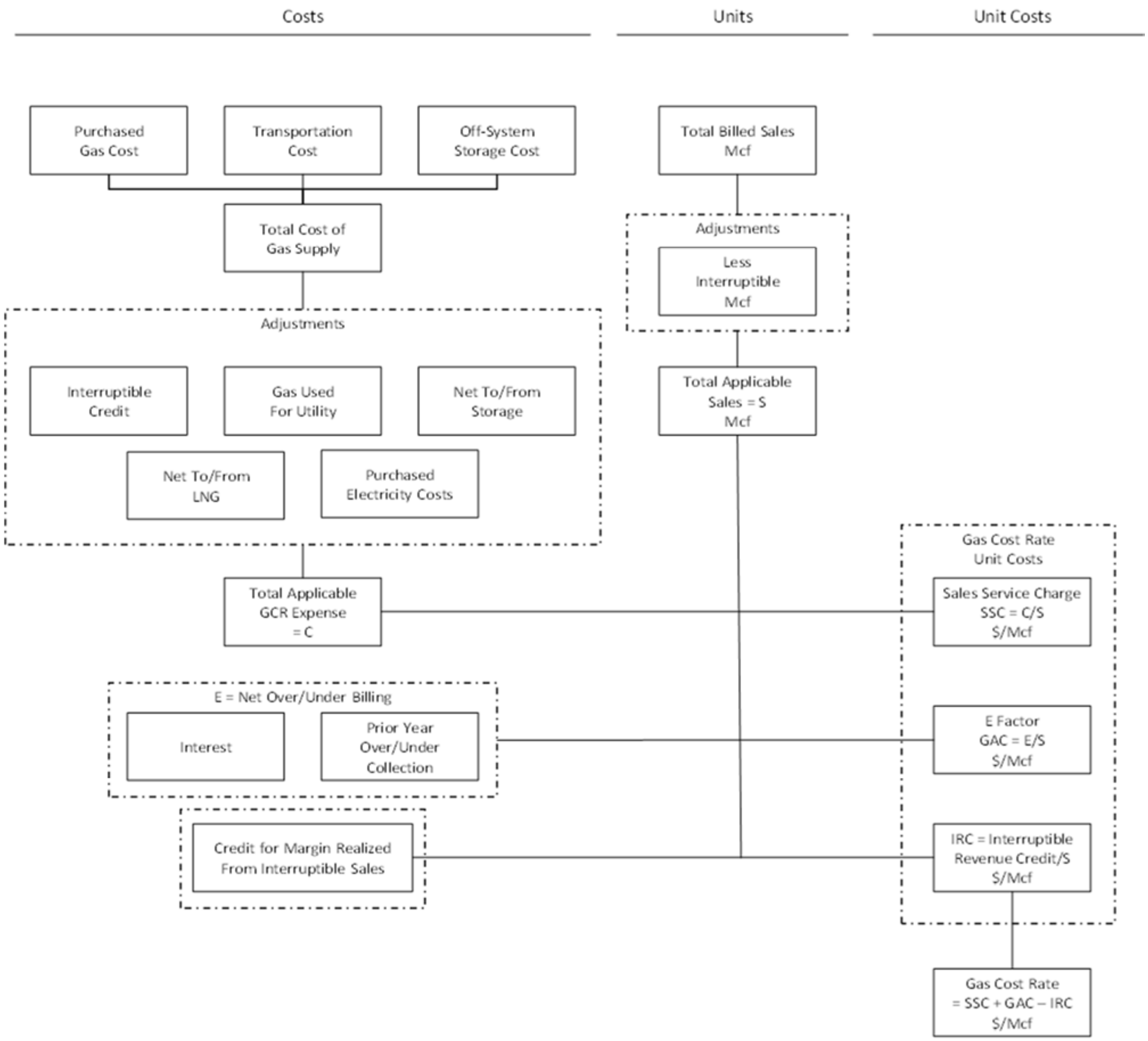
Gas Cost Rate

The current cost of natural gas and all raw materials are passed through to customers through the Gas Cost Rate (GCR), which consists of the purchased gas costs, transportation costs and off-system storage costs, minus the cost directly paid by interruptible sales customers, all subject to various adjustments for actual versus projected values and certain credits as detailed further below.

PGW adjusts total gas supply costs to reflect changes in the inventory cost of storage for gas supply outside PGW's system and storage for LNG and the cost of power purchased for the LNG facilities. The change in inventory cost is attributable largely to two factors -- changes in volume as well as the price paid for the gas put into storage. PGW divides these costs by the total sales volumes less the volumes attributable to direct billed interruptible sales customers to determine the unit cost of fuel, or sales service charge. PGW then makes a number of adjustments to the sales service charge. An additional adjustment is made for the net over or under collection of natural gas during the previous Fiscal Year resulting from differences between values used to project the prior Fiscal Year's GCR and those values actually experienced. PGW also applies the interest expense or credit on the over or under recovery to calculate the total adjustment. In addition, an interruptible revenue credit ("IRC") for margin realized from interruptible sales is made. In the aggregate, these components comprise the GCR.

The GCR represents a substantial portion of a typical heating bill and can change monthly. PGW evaluates the GCR factor quarterly to reflect the cost PGW expects to pay its suppliers. Once actual gas supply costs are booked, any cost adjustments (i.e., whether over or under) are factored into the Gas Cost Rate factor which results in no profit to PGW. By law, the Gas Cost Rate factor is passed on to customers without any profit or markup for PGW added. Although PGW has the ability, upon thirty days' notice to the PUC, to change the CGR monthly, it usually is adjusted on a quarterly basis.

The following chart details components of PGW's Gas Cost Rate.



Weather Normalization Adjustment

PGW's approved commodity charges (exclusive of the cost of gas) is subject to the WNA pursuant to which a customer's bill is adjusted upwards or downwards to reflect differences between the customer's actual heating degree-days and the normal heating degree-days, as calculated from data collected at the Philadelphia International Airport. The WNA reduces the risk to PGW of not recovering its approved margin under circumstances where winter season weather is warmer than normal. The application of the WNA facilitates the stabilization of annual earnings and cash flow during the winter heating season; it is revenue neutral to PGW. The WNA will remain in effect until discontinued by the PUC. In its previous rate case filed with the PUC on February 27, 2017, PGW proposed changing the calculation of normal weather from a method based upon a 30-year calculation of average heating degree days to one based upon a 10-year calculation. PGW and the rate case parties settled on a 20-year calculation which was approved by the PUC on November 8, 2017.

Since 2002, a WNA clause has been an included component of PGW's Tariff. PGW's approved commodity charges (exclusive of cost of gas) are derived using volumes (i.e., sometimes referred to as "throughput") that is based on the assumption that weather (i.e., particularly temperature levels) will be at normal. If temperatures are warmer than normal, sales decline and in conjunction with that, PGW's revenue margin declines. A number of warmer than normal winters, including one of the warmest winters in PGW's history, created the circumstances that led to PGW's need to file for extraordinary rate relief in 2002.

The WNA is designed to change the customers' bills upwards or downwards to account for differences between actual HDDs and normal HDDs. The WNA provides certain benefits which include stability in earnings and cash flows (particularly during the winter season) which tend to reduce the need for rate case filings to be made or for PGW to undertake short-term financing. The WNA can benefit both PGW and its customers through creating predictability in customers' bills.

In Fiscal Year 2019, heating customers were charged approximately $1.6 million as a result of the warmer than normal winter period. PGW's WNA is calculated for each customer bill rendered between October 1 and May 31. The WNA applies to customers served under its General Service, Municipal Service, and Philadelphia Housing Authority (PHA) rate schedules.

In order for PGW's revenue recovery to occur concurrently with a customer's billing cycle, PGW's WNA changes the customer's bill to reflect conditions during the billing cycle covering that bill. The adjustment is calculated by dividing the normal HDDs during the billing cycle by the actual HDDs during the cycle. The WNA only applies if the actual HDDs deviate by an amount greater than 1% from the normal HDDs during the billing cycle.

Surcharges

Several surcharges exist to fund various PGW programs and capital improvements. Depending on the surcharge, not all PGW customer classes are affected by the surcharge. Before PGW's rate restructuring in 2003, PGW recovered certain non-fuel expenses through the GCR mechanism. Among these expenses were discounts given to low income customers through the Customer Responsibility Program and funds provided to weatherize the homes for low-income customers through the Conservation Works Program. Presently, PGW utilizes surcharges (which are not components of the GCR) to recover these costs. Due to the surcharge mechanism, these costs can be recovered by PGW regardless of the extent to which a customer purchases gas from PGW.

- Restructuring and Consumer Education Surcharge. Revenues from this surcharge finance the PUC approved costs incurred or to be incurred by PGW to meet requirements of the Gas Choice Act and applicable PUC regulations, orders, and other regulatory requirements.

- Universal Service and Energy Conservation Surcharge. Revenues generated from the application of this surcharge are used to finance discounts to customers in the CRP and the Senior Citizen Discount Program, the costs of the CRP Home Comfort program (the current iteration of the Low Income Usage Reduction Program (LIURP)) and past due arrearages forgiven to certain CRP customers. The Universal Service and Energy Conservation Surcharge is applicable to all PGW customers (excluding interruptible customers) who are delivered natural gas through PGW's distribution system. PGW automatically adjusts the surcharge quarterly in connection with its Gas Cost Rate filing. PGW's Demand Side Management program ("DSM") is financed principally from this surcharge.

- Efficiency Cost Recovery Surcharge. Revenues generated from the application of this surcharge are used to fund the program costs and the administrative costs of the energy efficiency programs for the firm customers (non-low income DSM), including PGW's voluntary EnergySense program which offers rebates and grants for residential and commercial customers.

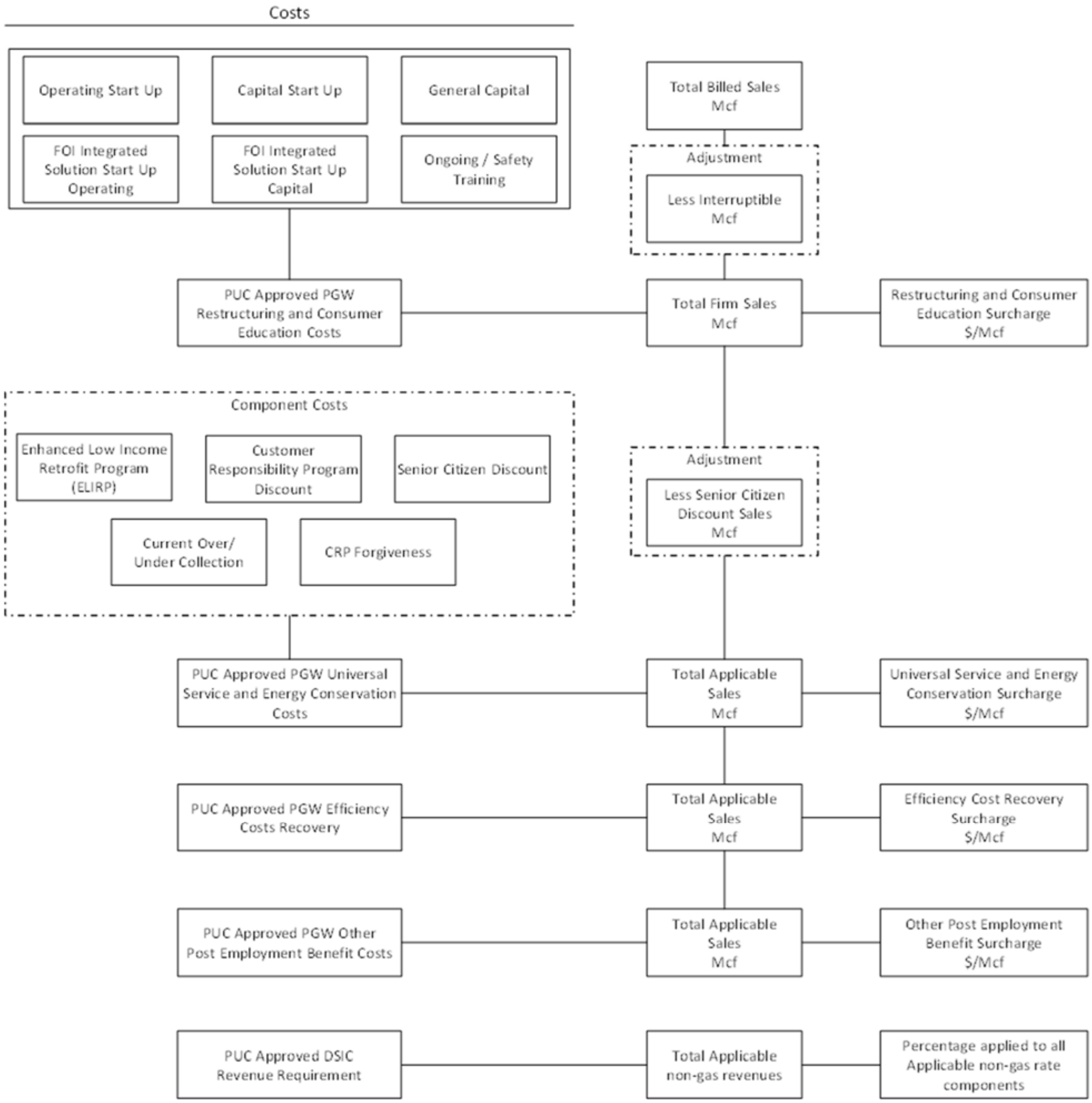
- OPEB Surcharge. Revenues generated from the application of this surcharge are designated for payment of PGW's OPEB obligations (the incremental rate increase of $16.0 million annually is related to an OPEB surcharge which was initially approved in 2010 and then approved to continue beyond 2015 in PGW's 2015-2016 Cost Rate Proceeding; PGW also agreed to continue funding the OPEB liability at $18.5 million annually).

- DSIC Surcharge. In early 2012, Act 11 was enacted by the Pennsylvania Legislature. Act 11 permitted public utilities to file a request with the PUC for the implementation of a DSIC. A DSIC permits natural gas distribution companies to recover the costs related to main and service replacement not already recovered in base rates. This legislation provides utility companies with a supplemental recovery mechanism for costs related to incremental/accelerated distribution system repair, improvement, and replacement. Act 11 permits gas utilities to recover 5.0% of their nongas revenues via the recovery mechanism and permits greater percentage increases if approved by the PUC. PGW started billing customers a DSIC surcharge as of July 1, 2013. The DSIC surcharge is fully reconcilable on a calendar year basis. For additional information, see note 1(h) Revenue Recognition of the basic financial statements within APPENDIX A hereto.

Revenues generated from the application of this charge, which at 7.5% of PGW's non-gas revenues is expected to generate approximately $33.0 million per year, are used to supplement the acceleration of the replacement of at-risk mains which is part of PGW's Long Term Infrastructure Improvement Plan ("LTIIP"). PGW will continue to consider the effectiveness of the accelerated pipeline replacement program funded by the DSIC surcharge, evaluate the effect of the DSIC on customers, and assess PGW's ability to effectively implement the level of accelerated pipeline replacement associated with the 7.5% DSIC surcharge prior to requesting an increase in the DSIC, but no assurance can be given that such request will be made or if made, approved. See "THE CAPITAL IMPROVEMENT PROGRAM" and "PHILADELPHIA GAS WORKS — Governmental Oversight – *PUC April 2015 Report*."

The following chart details components of PGW's Surcharges.

[Remainder of Page Intentionally Left Blank]



Ratemaking Methodology to Comply with Bond Covenants

PGW's rates, as set forth in its Gas Service Tariff, are regulated by the PUC pursuant to Section 2212(b) of the Pennsylvania Public Utility Code. Pursuant to Section 2212(e), in determining PGW's revenue requirement and approving overall rates and charges, the PUC is required to follow the same ratemaking methodology and requirements as set forth the Management Agreement and the City's bond and note ordinances for PGW, and such obligation shall continue until the date on which all bonds, which are Approved Bonds (herein defined), issued thereunder have been paid in full, refunded or defeased. Section 2212(e) also states that (i) the PUC shall permit the City to impose, charge or collect rates or charges as necessary to permit the City to comply with its covenants to the holders of any Approved Bonds and (ii) the PUC shall not require the City to take action, or omit taking any actions, pursuant to the Pennsylvania Public Utility Code if such action or omission would have the effect of causing the interest on tax-exempt bonds issued by the City to be includable in the gross income of the holders of such bonds for federal income tax purposes.

"Approved Bonds" consist of (1) bonds issued by the City under The First Class City Revenue Bond Act or The City of Philadelphia Municipal Utility Inventory and Receivables Financing Act that were issued and outstanding as of July 1, 2000, (2) bonds issued on or after July 1, 2000 by the City, unless the City Council declares otherwise in the authorizing ordinance, (3) bonds issued for the purpose of refunding, redeeming, repaying or otherwise defeasing Approved Bonds and (4) bonds issued by a municipal authority for PGW's benefit for purposes other than refunding, redeeming, repaying or otherwise defeasing Approved Bonds, unless the PUC determines, at the time of the registration of a securities certificate, that the bonds should not be Approved Bonds. The Bonds are Approved Bonds.

Further, Section 2212(f) permits PGW to impose, charge or collect rates and charges as necessary to permit PGW to transfer or pay to the City, on an annual basis, such amount as may be specified from time to time in the applicable ordinances of the City or agreements of the City approved by ordinances; provided that if the amount specified exceeds 110% of the amount that was authorized for transfer or payment to the City at the close of the Fiscal Year of the City ending June 30, 2000, such additional amount shall be subject to review and approval of the PUC, which approval shall be given unless such additional amount would not be just and reasonable. The amount currently specified is $18.0 million, which is the same amount as was authorized for transfer at the close of the City's Fiscal Year 2000. See "GAS SERVICE TARIFF AND RATES – Rates – *Base Rate*" for a description of the 2010 PUC Policy Statement setting forth the factors to be considered in determining PGW rates and revenue allowances. See also "PHILADELPHIA GAS WORKS – Governmental Oversight – *PUC April 2015 Report*."

Summary of Existing Tariff Rates

The current tariff sets forth the rules and regulations for gas service. It also sets out the rates PGW is permitted to charge its customers for various types of service. PUC approval is necessary for changes to be made to this tariff. Currently, PGW primarily provides main types of service: firm service, interruptible service, and transportation service. The following tables summarize PGW's existing rates and applicable surcharges currently approved by the PUC (and thus does not reflect the 2020 base rate filing, the proposed Settlement Agreement or the PUC Administrative Law Judges' recommended modifications to such Settlement Agreement). PGW's rates are presented without bundling. These rates include the following main charge components: a customer charge, a distribution charge, and the GCR. A component of the distribution charge is a delivery charge. Any applicable surcharges are also included with the distribution charge. Certain firm service customers who transport gas through a qualified natural gas supplier do not have the GCR as a component of their rate charges.

Existing Tariff Charges and Effective Dates

Tariff	Effective	Existing Tariff Charges [a]
FIRM SERVICE		
General Service - Rate GS		
Customer Charge - $/meter per month		
Residential and Public Housing Customers	12/1/17	13.75
Commercial and Municipal Customers	12/1/17	23.40
Industrial Customers	12/1/17	70.00
Supply Charge - $/Mcf[b]		
Gas Cost Rate (GCR) + Merchant Function Charge + Gas Procurement Charge		
Residential	9/1/20	3.5789
Public Housing Customers	9/1/20	3.4507
Commercial	9/1/20	3.4718
Industrial Customers	9/1/20	3.4640
Distribution Charge - $/Mcf		
Delivery Charge		
Residential	12/1/17	6.6967
Public Housing Customers	12/1/17	5.7105
Commercial and Municipal Customers	12/1/17	4.8651
Industrial Customers	12/1/17	4.7698
Surcharges		
Universal Service and Energy Conservation	9/1/20	1.6397
Restructuring and Consumer Education	9/1/20	(0.0009)
Efficiency Cost Recovery Surcharge		
Residential and Public Housing Customers	9/1/20	0.0299
Commercial Customers	9/1/20	(0.0248)
Industrial Customers	9/1/20	(0.0337)
Other Post Employment Benefits Surcharge	9/1/20	0.3473
Commodity Charge - $/Mcf		
Residential Customers		12.2916
Public Housing Customers		11.1772
Commercial and Municipal Customers		10.2982
Industrial Customers		10.1862
Distribution System Improvement Charge	10/1/20	6.95%
Customer Charge - $/meter per month		
Residential and Public Housing Customers		0.9556
Commercial and Municipal Customers		1.6263
Industrial Customers		4.8650
Commodity Charge - $/Mcf		
Residential Customers		0.6055
Public Housing Customers		0.5370
Commercial and Municipal Customers		0.4744
Industrial Customers		0.4672
Municipal Service - Rate MS		
Customer Charge - $/meter per month	12/1/17	23.40
Supply Charge - $/Mcf[b]	9/1/20	3.4507
Distribution Charge - $/Mcf		
Delivery Charge	12/1/17	4.2723
Surcharges		
Universal Service and Energy Conservation	9/1/20	1.6397
Restructuring and Consumer Education	9/1/20	(0.0009)
Efficiency Cost Recovery Surcharge		0.0000
Other Post Employment Benefits Surcharge	9/1/20	0.3473
Total Commodity Charge - $/Mcf		9.7091
Distribution System Improvement Charge	10/1/20	6.95%
Customer Charge - $/meter per month		1.6263
Commodity Charge - $/Mcf		0.4350
Philadelphia Housing Authority Service - Rate PHA		
Customer Charge - $/meter per month	12/1/17	23.40
Supply Charge - $/Mcf[b]	9/1/20	3.4507
Distribution Charge - $/Mcf		
Delivery Charge	12/1/17	5.0163
Surcharges		
Universal Service and Energy Conservation	9/1/20	1.6397
Restructuring and Consumer Education	9/1/20	(0.0009)
Efficiency Cost Recovery Surcharge	9/1/20	(0.0248)
Other Post Employment Benefits Surcharge	9/1/20	0.3473
Total Commodity Charge - $/Mcf		10.4283
Distribution System Improvement Charge	1/1/20	6.95%
Customer Charge - $/meter per month		1.6263
Commodity Charge - $/Mcf		0.4849

Tariff	Effective	Existing Tariff Charges [(a)]
INTERRUPTIBLE SERVICE		
Gas Transportation Service - Rate GTS		
Customer Charge - $/meter per month	12/1/17	250.00
Commodity Charge[(d)] - $/Mcf		n/a
Cogeneration Service - Rate CG		
Customer Charge - $/meter per month	12/1/17	362.00
Commodity Charge[(e)] - $/Mcf	9/1/20	2.35
Developmental Natural Gas Vehicle Service, Firm Service - Rate NGVS		
Customer Charge - $/meter per month	12/1/17	35.00
Supply Charge - $/Mcf[(b)]	9/1/20	3.4507
Distribution Charge - $/Mcf		
Delivery Charge	12/1/17	1.3233
Surcharges		
Universal Service and Energy Conservation	9/1/20	1.6397
Restructuring and Consumer Education	9/1/20	(0.0009)
Other Post Employment Benefits Surcharge	9/1/20	0.3473
Total Commodity Charge - $/Mcf		6.7601
Distribution System Improvement Charge	10/1/20	6.95%
Customer Charge - $/meter per month		2.4325
Commodity Charge - $/Mcf		0.2300
Developmental Natural Gas Vehicle Service, Interruptible Service - Rate NGVS		
Customer Charge - $/meter per month	12/1/17	35.00
Commodity Charge - $/Mcf	10/1/20	10.00
TRANSPORTATION SERVICE		
Daily Balancing Service - Rate DB		
Administrative Charge - $/supply pool per month	12/1/17	150.00
Plus charges and/or credits related to balancing and Operational Flow Orders (OFOs)		
Interruptible Transportation - Rate IT		
IT-A - Contracts for not less than 2,500 Dth, maintain standby non-natural gas energy.		
IT-B - Contracts for not less than 5,000 Dth, maintain standby non-natural gas energy.		
IT-C - Contracts for not less than 10,000 Dth, maintain standby non-natural gas energy.		
IT-D - Contracts for not less than 25,000 Dth, maintain standby non-natural gas energy.		
IT-E - Contracts for not less than 80,000 Dth, maintain standby non-natural gas energy.		

Customer Charge - $/meter location per month		Transportation Charge - $/Dth delivered		
IT-A	152.16	IT-A	2.29	maximum
IT-B	273.89	IT-B	1.11	maximum
IT-C	273.89	IT-C	0.86	maximum
IT-D	273.89	IT-D	0.77	maximum
IT-E	426.06	IT-E	0.74	maximum

(a) Reference: Philadelphia Gas Works, Gas Service Tariff, Pa P.U.C No 2.
(b) Sum of Gas Cost Rate (GCR), Merchant Function Charge (MFC), and Gas Procurement Charge (GPC).
(c) Competitively priced based on cost of alternative fuel.
(d) Commodity charge includes Delivery, Transportation, and Standby Service Charges, if applicable.
There are no GTS customers at this time.
(e) Commodity charge based on cost of gas purchased and delivered to PGW gate stations.

Assistance Programs and Grants

PGW participates in, or partially funds, several assistance programs to, among other things, increase cash flow to PGW and decrease accounts receivables and write-offs. Pursuant to its Gas Service Tariff, PGW recovers the costs of the discounts provided to customers pursuant to the Customer Responsibility Program (the "CRP") and the senior citizen discount program (the "Senior Citizen Discount Program"), arrearage forgiveness provided to CRP customers and certain other costs through the Universal Service and Energy Conservation Surcharge, which is applicable to all PGW customers (excluding interruptible customers) who are delivered natural gas through PGW's distribution system.

On October 5, 2017, the PUC approved PGW's 2017-2020 Universal Service and Energy Conservation Plan. On October 3, 2019, the PUC extended PGW's current Conservation Plan by an additional two years – through December 31, 2022 and required a letter indicating how PGW would meet PUC's low income program policy changes. On February 6, 2020, the PUC required PGW to file a Petition indicating its proposed low income program changes. On March 26, 2020, the PUC approved PGW's filing.

Customer Responsibility Program

CRP is a customer assistance program for those low-income residential customers who are at or below 150% of the federal poverty level ("FPL"). In November 1993, the PGC adopted the CRP in November 1993 and it became effective in February 1994. The CRP has a number of purposes which include increasing PGW's collection of revenues, providing an affordable payment plan for low-income customer while emphasizing for customers the importance of payment responsibility, promoting conservation and increasing the assignment of grant funding for PGW. In sort, the goals of the program are to increase PGW's cash flow and decrease PGW's accounts receivable.

PGW will forgive 1/36 of the customer's original pre-CRP debt each month for each CRP bill paid in full. Participants in the CRP are also required to apply for the Low-Income Home Energy Assistance Program (as further described below, "LIHEAP"), if eligible, and designate PGW as the grant recipient. Approximately 55,845 customers were enrolled in CRP as of August 2020. PGW has budgeted that the number of CRP participants will increase to approximately 57,500 by the end of Fiscal Year 2021. The table below sets forth the approximate aggregate discount and approximate amount of debt forgiveness granted by PGW to CRP participants in Fiscal Years 2015-2019.

Table 8
PGW DISCOUNTS AND
DEBT FORGIVENESS GRANTED TO CRP PARTICIPANTS
(THOUSANDS OF U.S. DOLLARS)

Fiscal Year	Discounts to Participants	Debt Forgiveness
2019	\$40,375	\$8,776
2018	\$46,288	\$9,236
2017	\$39,103	\$8,102
2016	\$34,233	\$8,805
2015	\$54,485	\$6,416

Source: PGW's records.

Monthly bills for CRP customers are based on income to promote affordability for low-income households. A customer's CRP agreement providing for fixed monthly bills and forgiveness of owed amounts imposes certain requirements upon such CRP customer. Specifically, the CRP customer must agree to accept conservation measures offered in the Home Comfort program, apply for LIHEAP (and designate PGW as the grant recipient), apply for re-certification at certain specified interval or when certain circumstances change (e.g., when household size or income changes, except if waived due to COVID-19), make payments on time and in full (a CRP customer is in default when the customer is one full payment past due).

CRP applicants must provide proof of income and identification for the people in the household. There are three percentage of income agreement types, as set forth below tied to percentages of FPL. Further, there is an average bill type for customers whose budget bill is lower than the percentage of income bill.

PGW Annual Bill	Household Income
4% of income	0-50% FPL
6% of income	51-100% FPL
6% of income	101-150% FPL

The minimum payment under a CRP agreement is $25 per month.

The main costs for PGW associated with the CRP program are the discounts that customers receive (revenue shortfall) and their arrearage forgiveness.

The CRP revenue shortfall to PGW is currently recovered in the Universal Service Surcharge. The amount of shortfall fluctuation primarily is driven by the cost of natural gas supply and CRP participation levels.

Senior Citizen Discount Program

The Senior Citizen Discount Program has been closed to new participants since September 1, 2003 when it was closed upon being discontinued by the PUC. The Senior Citizen Discount Program provides qualifying residential senior citizens with a discounted General Service Rate approximately equal to a 20% reduction in the participant's total gas bill each month. The number of participants in the Senior Citizen Discount Program decreased from approximately 70,000 in 2004 to approximately 10,330 as of July 2020. Continuing decreases in the average monthly enrollment will continue to result in less supplemental revenue being required to fund the program over time. Discounts to participants in the Senior Citizen Discount Program are recovered through the Universal Service and Energy Conservation Surcharge.

Low-Income Home Energy Assistance Program

LIHEAP is a federally funded program that provides funds to households to ensure continued utility service available. Federal LIHEAP funds are allocated to individual states, which in turn allocate the amount to qualifying residents. PGW's share of LIHEAP funds allocated by the Commonwealth of Pennsylvania has ranged from approximately 11% to 17% since 2015. Funds received from LIHEAP are paid directly to PGW for a credit to the customer's account. Since 2015, LIHEAP funding has ranged from a low of $15.2 million in 2016 to a high of $19.8 million in 2017.

The City's low-income residential gas consumers can apply for LIHEAP through the Pennsylvania Department of Human Services. Several community organizations and PGW district offices throughout Philadelphia offer assistance with the application process. The LIHEAP program consists of two grant components: cash grants and crisis grants. The latter are made available only to eligible customers whose utility service is off or in danger of being terminated. LIHEAP funds are paid directly to PGW and credited against the customer's account.

PGW encourages eligible residential customers to apply for LIHEAP which PGW considers has contributed to its funding levels. Funding levels are also affected based on Federal allocation and how similar programs in other states are designed.

Since 1996, the Commonwealth of Pennsylvania can adjust the customer eligibility criteria for LIHEAP participation within a range from 210% of the federal poverty level to 110% of the federal poverty level. During the 2019-2020 grant season, the program in Pennsylvania capped eligibility at 150% of the federal poverty level.

In 2015-2016, Pennsylvania received approximately $202.5 million in LIHEAP funding by the Federal Government (approximately $ 174.4 million of which was used for grants) and Pennsylvania's level of receipts for the following 2016-2017 period fell to approximately $ 185.5 million (approximately $152.8 million of which was used for grants). In 2017-2018, Pennsylvania's receipts increased to approximately $214.8 million (approximately $174.1 million was to be used for grants). In 2018-2019, Pennsylvania received a lower allocation of approximately $206.5 million (approximately $162.2 million was to be used for grants).

Vendor Payment Program

PGW supports a Vendor Payment Program for a group of customers known as Scattered Site Tenants of the Philadelphia Housing Authority ("PHA") who occupy PHA-owned dwellings for which the Federal Government provides rent subsidies. The Federal Government's Department of Housing and Urban

Development provides funds for a utility allowance to PHA, on behalf of these tenants. PGW receives utility payments for certain of these tenants directly from PHA, while the remaining tenants have responsibility to pay their own utility bills.

Utility Emergency Services Fund

The Utility Emergency Services Fund ("UESF") is a private fuel fund set up with the assistance of various parties including the City, PGW, the City's Water Department, PECO Energy, individual contributions, and private foundations. Under this program, customers at or below 175%of the FPL are permitted to combine a LIHEAP grant with a UESF grant and matching grant from PGW, and their own payment, if necessary, to eliminate all arrearages in order to avoid termination of service or to restore service. If a program participant is a CRP customer, the participant only has to eliminate CRP arrearages, not pre-program arrearages. Except for possible special grant programs, the maximum UESF grant and PGW matching grant for a participating utility customer is $750 each (for a total of $1,500). To be eligible for a UESF grant, the customer must have already received a notice of impending service termination or already have had utility service terminated. The customer must also apply for LIHEAP and must eliminate the customer's account balance (i.e., for non-CRP customers). If the total arrearage cannot be satisfied by the combination of LIHEAP, UESF, and the matching PGW grant, then the customer must pay the balance that would remain prior to being approved for the UESF grant and matching utility grant. In addition, utility customers participating in the UESF program are limited to one UESF grant biennially.

Dollar Plus Program

PGW also continues to support the Dollar Plus Program. Pursuant to this program, PGW's customers generally are request to add $1.00 or more to their gas bill payments to serve as a donation to the Utility Emergency Services Fund.

Also see "– Conservation Programs" below and "GAS SERVICE RATES AND TARIFFS – Collections."

Conservation Programs

Low Income Usage Reduction Program

Pursuant to 52 Pa. Code Chapter 58, PGW offers to qualifying low-income residential customers a PUC regulated energy reduction program ("LIURP") that provides natural gas conservation services to eligible residential customers. For customers living in single-family homes, this program is called Home Comfort. The program is made available to high usage CRP participants who are higher users of gas services as well as to other residential customers who have been identified as low income. Additionally, there is a pilot program called the Low Income Multifamily Efficiency ("LIME") which program PGW has operated since 2017 pursuant to the direction of the PUC which offers gas conservation services with respect to multifamily buildings.

In terms of LIURP historically, the PUC issued a Final Order in the DSM Phase II in fourth quarter of calendar year 2016. The LIURP budget was established at $5.9 million for Fiscal Year 2017 and included the LIME program. Such order addressed the fiscal year 2018 through 2020 LIURP budgets by assigning them to a PUC Universal Service and Energy Conservation Plan review process for further modification. As a consequence of this process, program spending was changed to a calendar year basis, and the program was made available to non-CRP customers. The review process also resulted in the annual budget being established at a level of $8 million for calendar years 2018, 2019 and 2020, (including annual spending of $0.12 million for the LIME program). The PUC extended PGW's then current Plan by an additional two years in October 2019. This extension is for the period through December 31, 2022. PGW's related calendar year budget for 2021 and 2022 was established at an $8 million annual level. The Universal Services and Energy Conservation Surcharge is the mechanism which enables PGW to recoup LIURP costs.

PGW's Home Comfort Program spending was approximately $14.6 million for the time period from September 1, 2017 through August 31, 2019. Based on an analysis of the anticipated time during which the installed conservation measures will be useful, PGW anticipates reaching 2.02 Bcf of natural gas savings on account of reduced usage by customers with an associated net present value spending total of $11.9 million, $14.2 million in present value savings and $2.3 million in net customer savings.

Demand Side Management Programs

PGW's DSM program is marketed as EnergySense. This program is comprised of a group of conservation programs that PGW launched in Fiscal Year 2011. The PUC initially approved the program for a 5-year period. PGW filed with the PUC in late 2014, a Petition for Approval of Demand Side Management Plan 2016-2020 ("DSM Phase II"), and the PUC responded by approving a DSM Bridge Plan. The DSM Bridge Plan addressed an interim period that commenced September 1, 2015, and ran through the earlier of the effective date of the Phase II Plan or August 31, 2016. The first year of Phase II was PGW's Fiscal Year 2017. In terms of the history of the programs, in November of 2016 the PUC approved the continuation of five market rate DSM programs, with a related budget of $10.57 million from Fiscal Year 2017 through Fiscal Year 2020, as well as a Fiscal Year 2017 CRP Home Comfort budget of $5.9 million. Pursuant to the related Final Order of the PUC, PGW discontinued in Fiscal Year 2017 the Home Rebates program. The Final Order also required review of the budget for PGW's CRP Home Comfort program (i.e. for the time period after Fiscal Year 2017) as part of the review process for the Universal Services and Energy Conservation Plan.

PGW's utilized the Efficiency Cost Recovery Surcharge as a means to recoup costs related to the market rate programs (non-low income). In contrast, the Universal Services and Energy Conservation Surcharge is the vehicle by which PGW recovers costs for the Home Comfort program (i.e., PGW's Low Income Usage Reduction Program).

Due to the PUC approving the Phase II Plan, PGW was authorized to extend its DSM programs beyond Fiscal Year 2020. The extension process entails PGW filing three-year plans for implementation. PGW filed the DSM implementation plan for 2021-2023 in May 2020. There are a number of over-arching objectives for the EnergySense programs. The maximizing of customer value and lowering of customer bills are customer-focused. PGW is intended to benefit through a reduction in cash flow requirements for PGW. Certain broader purposes include the reduction of greenhouse gas emissions.

The related conservation programs, as described below, consist of residential equipment rebates, commercial equipment rebates, efficient construction grants and efficient building grants. Residential equipment rebates are oriented for customers who will purchase residential-sized heating equipment and is meant to cover 80%of additional costs for high efficiency equipment. Commercial equipment rebates are intended to be available for industrial and commercial customers who purchase commercial-scale gas equipment. Similarly to the residential equipment rebate program, this program is set up to provide incentives to cover 80% of additional costs for high efficiency equipment. Efficient construction grants are intended to benefit residential and commercial building developers and builders. This program involves customized incentives to incentive the design and construction of new residential and commercial buildings that exceed the minimum requirements of energy codes. The specific incentives range up to $750 for single-family residential customers and to a limit of $60,000 for multifamily and commercial customers, all as a function of the anticipated savings. The efficient building grants program is meant for commercial, multifamily and industrial facility owners and operators. This program entails the making available of technical assistance and tailored incentives for commercial and industrial customers to provide incentives to add comprehensive retrofit projects to the customers' existing properties. Specific incentive amounts range up to $75,000 and 33% of the costs for the particular retrofit project.

During DSM Phase II from September 1, 2017 through August 31, 2020, PGW's EnergySense program spent $3.45 million. Over the anticipated time period of use for such measures, PGW estimated achieving 1.37 Bcf of natural gas savings on account of lower customer usage, with net present value spending of $6.02 million, and $9.18 million in present value savings with a related net saving to PGW's customers of $3.17 million. PGW is able to recoup EnergySense costs by means of the Efficiency Cost Recovery Surcharge.

Collections

PGW utilizes various programs designed to improve collections, including a landlord cooperation program, a commercial lien notification program (the "CLNP"), "soft-oft" monitoring, and a risk-based collections strategy, in accordance with all applicable regulations with respect to collections, including Pennsylvania Act 201, entitled the "Responsible Utility Customer Protection Act" and codified in the Pennsylvania Public Utility Code under Title 66, Chapter 14, as amended ("Chapter 14"). PGW utilizes a lien process which is mostly automated to effect the docketing of liens on eligible properties in instances where there are account arrearages. See "PHILADELPHIA GAS WORKS –Litigation" for a description of certain cases relevant to PGW's collections relating to, inter alia, certain billing matters.

The Landlord Cooperation Program ("LCP") is intended to promote collaboration between residential property landlord and PGW to improve PGW collection capabilities with regard to residential tenants (i.e., a focus on obtaining meter access for PGW). The LCP is intended to reduce the incidence of tenant delinquencies whereby PGW's receipt of amounts for a tenant's unpaid balance results in PGW from refraining from filing a lien on the landlord's property. As a general matter, the particular property would be made to subject to liens in instances where a landlord fails to enroll in the program or otherwise cooperate. LCP had approximately 77,107 registered premises as of September 2020.

The CLNP enables commercial property landlords to cooperate with PGW to enhance PGW's collections from commercial tenants (i.e., a focus on obtaining meter access for PGW). The program is designed for the purpose of lowering tenant delinquencies by providing for additional prior notice of PGW's intended filing of the applicable lien. However, whether or enrollment in the program occurs, a property will remain subject to the related lien. CLNP had approximately 512 registered premises as of September 2020.

Many of the services integral to soft-off monitoring are now automated. Previously, when a customer moved, PGW used a field service representative to shut off gas service. In frequent instances, the representative would not be able to obtain access to the meter and the service would continue with a related ongoing billing of the out-going customer. This situation had the effect of creating additional receivables which would not be collectable. PGW presently provides a final bill to a customer's account, transfers the expense responsibility pertaining to future usage to PGW and monitors the applicable premises diligently for the purpose of avoiding any misappropriation of service or excess usage. In addition to lowering the uncollectible receivables stemming from an unsuccessful attempt to shut off service, the soft-off program enables PGW's Operations department to repurpose field employees to different tasks with concomitant gains in using personnel resources.

PGW undertakes to analyze the patterns of payments made over time by customers as a key component of PGW's risk-based collection strategy. As part of this process, the particular customer is assigned a "score" based largely on three factors: (i) the age of the receivable, (ii) the amount of the receivable, and (iii) the risk that receivable in question will need to be put to the write off process. As a general matter, actual write-off occurs 90 days after the point in time that the shut-off for the particular account occurs and once there are no remaining payments against the last bill. Based on the calculated score for the customer in question, PGW choses a suitable approach to obtain collection. In those instances where a customer's score is high, the approach using physical shut off is employed. In contrast, if the situation entails a customer with a lower score, PGW may pursue the approach involving more frequent customer communications, and this approach may be sufficient to get PGW paid.

PGW collection management methods also entail a write-off reactivation process designed to provide that prior written-off balances are identified promptly and appropriately moved in cases where the particular customer may again apply for service, and cases where an applicant resided at the property during the period of time covering the point when the debt was incurred.

Chapter 14 specifies, among other things, the circumstances pursuant to which natural gas service may be terminated. Pursuant to Section 1406 of Chapter 14, (i) utility service may be terminated subsequent to the giving of a written notice (which notice will be given at least ten days prior to the date of the proposed termination and remain effective for 60 days) for nonpayment of an undisputed delinquent account, failure to comply with the material terms of a payment arrangement, failure to complete payment of a deposit, provide a guarantee of payment or establish credit or failure to permit access to meters, service connections or other property of the public utility for the purpose of replacement, maintenance, repair or meter reading, and (ii) service may be immediately terminated, without notice, for customer actions such as the unauthorized use of the service delivered on or about the affected dwelling, fraud or material misrepresentation of the customer's identity for the purpose of obtaining service or tampering with meters or other public utility's equipment.

In addition, Chapter 14 specifies that during the winter, (a) after November 30 and before April 1, gas service may be terminated to customers with household incomes exceeding 250% of the federal poverty level, and (b) from January 1 and before April 1 service may be terminated to a customer whose household income exceeds 150% of the federal poverty level but does not exceed 250% of the federal poverty level, who has not paid at least 50% of his charges for each of the prior two months; provided however that termination may not occur if the customer has proven in accordance with the PUC rules that there is someone age 65 or over or 12 or younger in the household, if the customer has obtained a medical certificate in accordance with the PUC rules, or if the customer has paid to PGW at least 15% of the customer's monthly household income for each of the last 2 months. Chapter 14 provisions are scheduled to expire on December 31, 2024.

Pursuant to a PUC Order, dated March 13, 2020 (Re: Public Utility Service Termination Moratorium Proclamation of Disaster Emergency- COVID-19, Docket No: M-2020-3019244), there is a current moratorium on terminations for non-safety reasons (the "Termination Moratorium"). The PUC stated that the Termination Moratorium would remain in effect during the pendency of the Proclamation of Disaster, issued by Pennsylvania Governor Tom Wolf on March 6, 2020 related to COVID-19 (the "Proclamation of Disaster"), unless to ameliorate a safety emergency, or unless otherwise determined by the PUC. On June 3, 2020, Governor Wolf issued an amendment to the Proclamation of Disaster which renewed the Proclamation of Disaster for a period of ninety days. On August 10, 2020, the PUC Chairman issued a letter inviting comments from interested persons and organizations regarding the Termination Moratorium "and customer protections for at-risk customers" should the PUC lift the Termination Moratorium. On August 31, 2020, Governor Wolf issued a renewal by amendment to the Proclamation of Disaster for another period of ninety days. On October 13, 2020, the PUC issued an Order (the "October 13th Order") modifying the Termination Moratorium by providing for such moratorium to end effective November 9, 2020, subject to a number of customer protections. Included among the customer protections is a prohibition on the termination of residential service to residential customers who are at or below 300% of federal poverty income guidelines ("Protected Customers") and who satisfy certain requirements such as applying for all assistance programs for which the customer is eligible. Utilities are required to waive late payment charges and connection, reconnection and deposit fees for Protected Customers. Small business customers (as defined by a utility's tariff), with past due amounts, are also protected from termination of service if they enter into a payment arrangement with their utility and remain current on their payment arrangement and current bill. Such payment arrangement is required to be for a period of no less than eighteen months. Utilities are required to continue tracking extraordinary, nonrecurring incremental COVID-19 related expenses, and may create a regulatory asset for any incremental expenses incurred above those embedded in rates resulting from the directives contained in the October 13th Order. Such regulatory asset may enable a utility to recover costs in future approved rates or charges. The restrictions on termination of service to certain residential and small business customers discussed above, and certain other conditions shall remain in effect until the earlier of (1) March 31, 2021; (2) the date on which the Governor's Proclamation of Disaster is rescinded; or (3) a time otherwise established by the PUC. The PUC also called for comments by February 16, 2021 regarding any revisions to the recent protections which the PUC should put in place after March 31, 2021. See also the discussion of Chapter 14 above regarding certain annual winter-season restrictions on service termination which would be anticipated to remain applicable.

No assurances can be provided that PGW may not become subject to other pending or future federal, state or local legislation, regulation or executive action that may limit or otherwise impact PGW's ability to pursue collection actions and undertake other measures to receive payments for its services, and thereby adversely impact PGW's financial position or results of operations (by way of illustration, certain provisions of the type that were set forth in the proposed federal Health and Economic Recovery Omnibus Solutions (HEROES) legislation which passed the United States House of Representatives in spring of 2020 (and passed in updated form by the United States House of Representatives in fall of 2020) and which has been pending before the United States Senate).

As of July 31, 2020, PGW collection rate results (based on PGW's rolling 24-month average) were above PGW's stated annual goal of 96.0% even though the Termination Moratorium in Pennsylvania was still in existence. In response to COVID-19, PGW determined to temporarily stop applying late payment charges on customers' unpaid debt. PGW is not prohibited from resuming applying such late payment charges, and anticipates that it will determine when to resume applying such late payment charges based upon its assessment of the ongoing impact of COVID-19 and other related circumstances. PGW has begun non-regulated collection activity to improve its prospects of maintaining its collection rate at current levels. See also, "PHILADELPHIA GAS WORKS – COVID-19 Response, Recent Trends and Uncertainties" for a discussion of certain collections and account receivables trends through the end of FY 2020 and in comparison to FY 2019.

See "GAS SERVICE TARIFF AND RATES - Rates- *2020 General Rate Relief Filing*" above for a discussion of certain expert testimony submitted in the proceedings relating to PGW's current base rate increase request that considers the potential impact of a decline in PGW's collection rates during Fiscal Year 2021.

For additional information about PGW's collections see "PGW BUDGETS AND FINANCES – Accounts Receivable" and "MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS AND FINANCIAL CONDITION FOR THE ELEVEN MONTHS ENDED JULY 31, 2020 AND JULY 31, 2019 (UNAUDITED)."

Payment Options Used to Reduce Collection Activity

In addition to its collection efforts, PGW continues to offer customers a number of options to pay bills in order to avoid collection activity costs for both PGW and the customer. District Offices and Customer Service Centers (a "CSC") is a satellite location PGW utilized to receive payment for service. PGW has five CSCs located throughout Philadelphia. Prior to closures implemented in response to COVID-19, due to staffing requirements, only three CSCs were operational per day. Customers can also pay PGW at authorized agent locations. These locations are "In Person Payment" centers or utilize commercial payment mechanisms such as BuyPay or Americash Checkfree, and Retail Cash service. Such authorized agents send payments from the customers along to PGW. In addition, PGW offers phone payment options whereby credit card or check payments are accepted through the Interactive Voice Response (IVR) system using a 3rd party vendor and by PGW customer service representatives through software provided by such vendor. Customers also can choose to pay PGW through PGW's website. Furthermore, customers can opt to have monthly payments automatically debited from their bank account. See also "PHILADELPHIA GAS WORKS - COVID-19 Response" for a discussion of the payment options PGW has made available to its customers since the COVID-19 outbreak.

THE CAPITAL IMPROVEMENT PROGRAM

Through its annual capital planning process, PGW identifies potential capital improvements based upon certain operating and economic assumptions, evaluates these requirements, and establishes priorities considering available financial resources. It considers these factors when developing its capital budget for a Fiscal Year. PGW then develops a Capital Improvement Program for a six-year period based upon the approved capital budget for that Fiscal Year and a forecast for the next five Fiscal Years.

The gas design load forecast is a fundamental tool for PGW to identify capital requirements for PGW's operating departments. The needs of these departments comprise the biggest part of PGW's capital needs. The Gas Processing Department's focus is upon providing and maintaining the necessary facilities to take delivery of pipeline supplies and provide supplemental gas to satisfy peak load requirements. The Distribution Department, in its capital budget process, focuses upon the objective of consistently providing and properly maintaining a distribution network as well as the objective of delivering natural gas according to safety standards and at adequate pressure to satisfy the requirements of the appliances and equipment of PGW's customers.

Also of major importance for PGW's Capital Improvement Program process, is to provide sufficient funding for facilities supporting new gas load opportunities which have been identified in the Marketing Department's forecast of customer expansion. This forecast is used to establish budget requirements for the Distribution Department for main and service additions, and for Field Services to identify new meter installations.

The safety of PGW's operations and reliability of service are PGW's major concerns when establishing the priorities of need for capital resources. Also of major importance to PGW is ensuring funding to provide facilities to support new load opportunities. PGW's highest two priorities are capital projects related to expenditures required for maintaining the safety and reliability of PGW's infrastructure. Priority 3 expenditures relate to enforced main relocations that are based on City, Commonwealth and Federal mandated underground infrastructure projects. Priority 4 expenditures relate to projects that will result in additional revenues from load growth opportunities, while Priority 5 are for those expenditures associated with business improvements that increase operational efficiencies and/or productivity.

Under the terms of the Management Agreement, PGW provides each year's annual Capital Improvement Program to the City's Director of Finance and the Gas Commission so that they can undertake their reviews, and offer recommendations to City Council, in advance of budget approval. PGW is restricted to undertaking only such capital improvements which have been included in a PGW capital budget approved by the City Council.

PGW has been financing and expects to continue to finance its Capital Improvement Program through a combination of net proceeds of revenue bond and note sales (other than sales of refunding bonds), investment income, and internally generated funds (includes DSIC surcharges). Internally generated funds consist of Gas Works Revenues available after payment of PGW Net Operating Expenses, principal and interest on bonds and notes issued by the City for PGW purposes, amounts due to Credit Facility issuers and under Qualified Swaps and Exchange Agreements, and City Charges. A decline in net revenues reduces internally generated funds available for capital projects and requires that the shortfall be funded from the issuance of bonds or other indebtedness or the incurrence of capital leases.

Cast Iron Main Replacement

A significant part of the Capital Improvement Program is the replacement of PGW's cast iron mains, some of which date back to the 1890s, with more state-of-the-art plastic pipe at an estimated replacement cost of approximately $1.0 million per mile for smaller diameter pipe, with cost increasing for larger diameter pipe and higher pressure pipe.

PGW's base rates have historically provided approximately $20 million per year for the replacement each year of approximately 18 miles of cast iron mains. This program was started by PGW based on benchmarking and risk assessment analyses which PGW undertook. The program's cost is being funded by customers under the existing base rates. This 18-mile component of PGW's cast iron main replacement program is supplemented by an accelerated main replacement program. The accelerated program is put forth in PGW's LTIIP. See the table at the end of this sub-caption regarding certain historical information about PGW's cast iron main replacement program.

PGW's first LTIIP constitute a five-year plan (covering Fiscal Years 2013 - 2017) for accelerated recovery for distribution facilities. The original LTIIP accelerated the replacement cycle for PGW's large diameter cast iron mains (*i.e.*, 12-inch and larger diameter high pressure main) and other smaller (and more extensive) diameter cast iron mains (i.e. 8-inch and smaller, low/intermediate pressure main). PGW filed with the PUC its second LTIIP petition in the spring of 2017, which also addressed a five-year period (*i.e.*, Fiscal Year 2018 through Fiscal Year 2022). The PUC approved that petition during the summer of 2017. For PGW's forecasting purposes, PGW assumes that this accelerated replacement program will be maintained during the course of the forecasted period extending through Fiscal Year 2022.

The original LTIIP focused on a number of goals and objective including: replacing 18 miles per year of small diameter, low/intermediate pressure cast iron main increased by approximately 3 miles per year. The original LTIIP also focused on replacing large diameter, high pressure, cast iron mains that have been identified as potential risks. (This goal related to 30-inch cast iron mains that have been identified as being in poor condition, and 12-inch cast iron mains, similar to those that have been involved in two separate incidents in PGW's system. Moreover, 12-inch cast iron mains were also involved in an incident within UGI Corporation's service territory.)

On January 16, 2015, the PUC began an examination of PGW's pipeline replacement program, including in terms of critically assessing considerations related to the need for, and any obstacles related to, the expansion of the program. This work resulted in a report to the PUC by Commission Staff. The PUC Commission Staff issued its report "Inquiry into Philadelphia Gas Works' Pipeline Replacement Program" on April 21, 2015. In the Staff's report, it conveyed its view that the then current rate of pipeline replacement needed be more aggressive. The Staff identified "areas of opportunity that PGW should explore to increase its mains replacement rate": (i) increasing the DSIC above the 5% cap (approved at that time); (ii) making level and annualizing DSIC eligible costs; (iii) issuing additional debt; (iv) improving PGW's cash management; (v) seeking the City to waive all or a portion of the $18 million payment; (vi) making the corporate governance structure more streamlined; and (vii) consolidating facilities. See also, "PHILADELPHIA GAS WORKS – Governmental Oversight - *PUC April 2015 Report*" above regarding certain subsequent actions in response to the report.

The DSIC surcharge applies to various customers -- Residential and Public Housing, Commercial and Municipal, and Industrial. The surcharge is calculated as a percentage applied to the delivery charge, surcharges, and customer charge. The percentage is equal to the DSIC revenue requirement divided by the annual non-gas cost revenues of the above customers. This percentage is then applied equally to each of the non-gas rate components of those customers. In contrast, under the original DSIC mechanism, revenues were not fully collected in a given annual period.

The PUC, in the summer of 2016, issued an Opinion and Order that allowed PGW to recover an additional $11.4 million in DSIC under-collections for the calendar year ending December 31, 2015, over the course of two years (i.e., additional annual revenues of $5.7 million per each of the two years). Beginning on October 1, 2016, PGW temporarily increased its DSIC surcharge to 8.84% and on January 1, 2017, PGW changed its DSIC surcharge percentage to 8.80%. The DSIC surcharge was also increased on January 1, 2018 to 8.70% until the temporary increase expired on September 30, 2019. Two factors have helped PGW reduce the under collection of DSIC surcharge revenues. First, was the temporary increase to the DSIC mechanism. Second, is the levelized method of recovery. The under collection of DSIC surcharge revenues moved downward from $16.4 million at the end of Fiscal Year 2016 to $3.0 million at the end of Fiscal Year 2019.

At the end of Fiscal Year 2019, PGW's balance of cast iron mains was 1,313 miles, with a further reduction of 31.7 miles initially forecasted during Fiscal Year 2020. However, due to the Commonwealth's COVID-19-related construction stoppage order, which resulted in a 2-month delay in PGW's main replacement program, PGW estimates that it was short of the mileage goal specified in its LTIIP for FY 2020 by approximately 7 miles. PGW estimates, based on the current replacement rate, that full replacement will be completed by 2063. PGW's Fiscal Year 2020 replacement rate is based in part upon a DSIC rate of 7.5% (*i.e.*, of the amount billed to customers) which was approved in Fiscal Year 2016. PGW's optimal replacement strategy is to enhance the safety and performance of underground distribution structures. Also see "PHILADELPHIA GAS WORKS — Governmental Oversight."

The level of main replacement represents a balance among several factors including prioritizing replacements to areas of highest reported leaks, working within the constraints of a highly populated urban area, providing sufficient supervision and oversight by PGW of internal and external construction crews, and the level of rate or surcharge revenues approved by the PUC to fund the replacements. Approximately 18 miles of the mains replacement program is covered by the current level of approved base rates (which is approximately $29.8 million per year). Additionally, an accelerated mains replacement program is funded by DSIC at $33.0 million per year. This increase in the cap allowed PGW to recover $35.6 million in DSIC for Fiscal Year 2019 (which, when combined with the level in base rates, results in approximately $64.8 million per year). To the extent that PGW and its regulators (i.e., PUC, PGC) agree to further accelerate the level of annual mains (and related service lines) replacement, the preferred method of financing these capital improvements would be through the existing DSIC surcharge mechanism or, as an alternative, through increased base rates.

Currently, when PGW makes improvements and repairs to the System located in the public right of way or thoroughfare, it restores the same in accordance with existing City and Commonwealth specifications. PGW understands that there have been some preliminary discussions within the City Administration about requiring by regulation more extensive restoration (curb to curb) for certain road related construction. Currently, PGW cannot predict if such a change will occur or in what form and therefore cannot predict the impact that such a change would have on PGW's implementation of its capital improvement program and related costs. As such, PGW can provide no assurances that the impact would not be material to PGW.

The following table sets forth certain historical information related to PGW's cast iron main replacement program. As indicated below, the amount of cast iron mains replaced by PGW showed significant increases around the Fiscal Year 2013 and Fiscal Year 2014 time frame, which PGW attributes to the putting in place of the DSIC. The table below also shows that the number of replaced service lines decreased. PGW considers this to be due to the number of service lines that are connected to the mains replaced as well as due to a decline in the total of unprotected steel service lines.

Historical Cast Iron Main and Unprotected Steel Service Replacement

	Cast Iron Main Replacement		Services Removed from Inventory			
Fiscal Year Ending August 31,	Miles of CI Main Replaced	CI Mains Replacement Capital	Number of Unprotected - Bare	Number of Unprotected - Coated	Total	Services Replacement Capital
	(miles)	($000)				($000)
2000	7.81	$8,282	(17,888) [(a)]	9,960 [(a)]	(7,928)	$10,940
2001	18.45	$15,148	(8,211)	(164)	(8,375)	$12,010
2002	21.49	$16,108	(6,688)	(573)	(7,261)	$9,986
2003	22.57	$13,717	(7,011)	(142)	(7,153)	$13,641
2004	19.24	$20,393	(7,846)	(609)	(8,455)	$17,652
2005	19.01	$20,183	(40,477) [(a)]	(56)	(40,533)	$16,127
2006	18.93	$17,582	(8,046)	(76)	(8,122)	$17,232
2007	18.28	$20,180	(4,944)	(1,133)	(6,077)	$21,172
2008	17.98	$21,371	(5,280)	7,027 [(a)]	1,747	$20,743
2009	8.67	$18,385	(5,347)	(466)	(5,813)	$15,443
2010	17.98	$21,718	(2,794)	(509)	(3,303)	$15,793
2011	18.20	$19,278	(3,619)	(455)	(4,074)	$15,872
2012	18.35	$24,387	(3,093)	(437)	(3,530)	$16,247
2013	22.39	$30,680	(2,647)	(304)	(2,951)	$17,514
2014	28.09	$37,414	(3,215)	(255)	(3,470)	$16,576
2015	29.25	$38,751	(3,051)	(244)	(3,295)	$16,540
2016	31.50	$52,712	(3,084)	(173)	(3,257)	$15,854
2017	34.92	$57,711	(5,099)	(631)	(5,730)	$16,433
2018	33.95	$84,186	(4,417)	(485)	(4,902)	$18,320
2019	34.64	$61,094	(4,376)	(524)	(4,900)	$17,220

(a) Change in number of services reflects adjustments to inventory

Customer Information System Replacement and Building Consolidation

The Other Departments category of PGW's Capital Improvement Program includes estimated capital expenditures for Facilities, Information Services, Customer Affairs, and other miscellaneous departments. For Fiscal Year 2021, the combined spending of these departments is estimated at $37.5 million. Two major initiatives are the driving force for this level of spending, replacement of PGW's customer information system ("CIS") and implementation of PGW's Building Consolidation effort. PGW's current CIS was implemented in 1999. It uses a dated and proprietary software architecture, which in the form deployed at PGW has not found broad market acceptance. PGW plans to replace its current CIS with a highly customizable and flexible modern CIS that leverages best practices of the utility industry and will provide a secure and reliable operating platform for the future. In conjunction with the CIS, PGW will update its Customer Experience Portal and platform for service orders. This new portal is designed to provide capacity to allow customers to pay, view and analyze their bills, purchase a parts and labor plan, and schedule service appointments online. This project is a multiyear initiative that will cost in total $32.7 million, of which $11.5 million is expected to be spent in Fiscal Year 2021. In addition, PGW is also pursuing the implementation of developing utility industry technologies by beginning work on a multi-year advance metering infrastructure project (AMI). This project is a real-time communications infrastructure that enables two-way communications between a data center and the customer's meter. The establishment of a fixed communications network will increase efficiency, particularly by elimination of mobile meter reading resources, and customers will benefit through improved service from on demand meter reading.

Building Consolidation is also a multiyear project, with a total budget authorization of $123.3 million. The project is intended to improve space utilization, reduce costs, improve service levels, and shrink PGW's physical and carbon footprint. To attain these benefits, PGW will (i) sublease space for its planned North Operations Center (NOC); (ii) consolidate administrative functions at the existing 800 W. Montgomery facility; and (iii) expand Porter Street Station. After completion of the foregoing, PGW will be able to exit five existing buildings.

There are two components to this project. The first component relates to $53.3 million in expenditures needed to fit out the NOC, restack the 800 West Montgomery Avenue facility and expand the Porter Street Station. Of this total, $20.1 million is expected to be spent in 2021. The breakdown of these capital costs are as follows:

North Operations Center Fit out - $24.254 million

Expanded Porter Street Station - $11.227 million

Restacking of 800 West Montgomery Avenue - $17.769 million.

The second component relates to the $70.0 million sublease for the NOC. The lease transaction requires separate approval by each of the Gas Commission and City Council. The lease structure assumes that Philadelphia Municipal Authority ("PMA") will enter into the lease with the property owner; either PGW or the City will sub-lease the property from PMA.

For further discussion of the Capital Improvement Program, see "PGW BUDGETS AND FINANCES – Budget Approval," and "GAS SERVICE TARIFF AND RATES – Rates – *Surcharges* • DSIC Surcharge". The PUC approved PGW's original LTIIP petition for Fiscal Years 2013-2017 on April 4, 2013. The original LTIIP was modified by a PUC Order entered on June 9, 2016 and continued, by its terms, through August 31, 2017. PGW filed its second LTIIP petition with the PUC on May 3, 2017 for the prospective Fiscal Year 2018-2022 period, and the second LTIIP petition was approved on August 31, 2017.

The following Table 9 represents information regarding actual net capital expenditures for each of the five Fiscal Years 2015-2019 as well as information (on an unaudited basis) for the first eleven months of Fiscal Years 2020 and 2019, respectively:

Table 9
PHILADELPHIA GAS WORKS CAPITAL EXPENDITURES[1]
(Thousands of U.S. Dollars)

	PERIOD SEPTEMBER 1 THROUGH JULY 31 (UNAUDITED)		FISCAL YEARS ENDED AUGUST 31				
	2020	**2019**	**2019**	**2018**	**2017**	**2016**	**2015**
Uses							
Gas Processing	$2,413	$3,358	$5,198	$4,382	$4,678	$1,726	$2,569
Distribution	62,562	65,620	91,126	105,776	80,799	82,592	65,220
Field Services	3,168	5,329	5,795	5,814	6,492	6,384	6,055
Fleet	1,114	6,133	5,587	3,831	6,688	2,592	3,085
Facilities	2,045	1,114	1,367	2,210	966	2,642	4,177
Information Services	5,211	578	771	1,332	1,531	1,481	2,632
Other Departments	153	160	140	82	1,100	2,916	1,761
Total Uses[2]	76,666	82,292	109,984	123,427	102,254	$100,333	$85,499
Sources							
Capital Fund Drawdowns	65,009	40,000	45,000	55,000	25,000	--	--
Restricted Fund			--	--	--	--	10,000
TXCP[3]			--	--	30,000	41,000	30,000
Internal Funds (including DSIC)[4]	11,657	42,292	64,984	68,427	47,254	59,333	45,499
Total Sources	$76,666	$82,292	$109,984	$123,427	$102,254	$100,333	$85,499

(1) Source: PGW's records.
(2) Net of reimbursements, contributions and salvage.
(3) Tax exempt Commercial Paper.
(4) Distribution System Improvement Charge.

[Remainder of Page Intentionally Left Blank]

POTENTIAL LNG EXPANSION

PGW is actively negotiating with a third party to add liquefaction capability to its Passyunk Plant. It is also offering expanded LNG services at the existing Richmond Plant under new rate LNG-N (effective December 2019).

With respect to the Richmond Plant, PGW has finalized several agreements under Rate LNG-N in order to monetize underutilized LNG assets by providing LNG services to a third-party gas marketer. This arrangement does not require PGW to make any significant change to its ongoing operations at the Richmond Plant or to undertake any new significant obligations.

With respect to facilities development at the Passyunk Plant, a term sheet outlining the terms and conditions of a proposed public-private partnership was authorized by the Philadelphia Gas Commission and City Council (City of Philadelphia, Ordinance # 181063-A) and PGW is engaged in dialogue with Passyunk Energy Center, LLC to finalize binding agreements. The key terms of the proposed relationship with Passyunk Energy Center, LLC may be found as part of the authorizing legislation. Essentially, plant expansion costs at the Passyunk Plant would be the responsibility of the proposer. PGW's obligation would be to operate the facilities and provide services for certain fees and reimbursable costs. The additional liquefaction capacity at Passyunk could enable PGW to monetize underutilized assets. The expansion would provide redundancy for PGW's existing facilities and additional capacity to serve PGW customers. There is no assurance that the addition of liquefaction capacity, as described above, will occur. At the present time PGW does not anticipate a project for which it would incur debt or, in the normal course of business, incur expenses in excess of the revenue PGW estimates it will receive from any LNG expansion.

PGW BUDGETS AND FINANCES

PGW revenues used to pay debt service on its indebtedness and to fund its operations are derived primarily from the sale of gas distribution and related services to its customers. Rate and tariff charges for the sale of gas services are proposed by PGW based on, among other factors, anticipated revenues and expenses, required working capital, required debt service coverage and need for funds for capital expenditures. PGW has established several internal financial metric targets which it utilizes for long-term financial planning including: (i) capital expenditures financed approximately one-half from internally generated funds and one-half from proceeds of debt, (ii) a 2.0x or greater debt service coverage ratio under the 1998 General Ordinance, and (iii) a \$100 million cash balance at the end of each Fiscal Year. These targets are subject to change by PGW in its discretion and PGW has no contractual or other obligation to pursue or meet these targets. PGW has had these financial metric targets in place for, at least, the last five Fiscal Years. While PGW has no current expectation of changing these financial metric targets, there can be no assurances that they will not be modified or that they will be achieved. Among several other potential factors, operating conditions, regulatory developments, weather conditions affecting customer natural gas consumption, variables in the United States and local economies in general and the gas industry in particular, and adequate and timely base rate relief as granted by the PUC are anticipated to be major drivers that affect PGW's ability to achieve these financial metric targets.

In contrast to PGW's previously submitted and approved Fiscal Year 2021 operating budget (discussed further below), PGW's current financial and other plans assume that PGW will realize a net increase in base rate revenues of \$35.0 million (based on 20-year normal weather) starting in Fiscal Year 2021 pursuant to the 2020 general rate relief filing, and that PGW will realize a net increase in base rate revenues of \$35.0 million in Fiscal Year 2023. With respect to the 2020 general rate relief filing, the proposed Settlement Agreement, if ultimately approved by the PUC, would provide PGW such general rate increase of \$35.0 million in annual operating revenues in three increments: \$10 million for service rendered on or after January 1, 2021; \$10 million for service rendered on or after July 1, 2021 and \$15 million for service rendered on or after January 1, 2022. For a discussion of the status of the proposed settlement of the proceedings related to the 2020 general rate relief filing, see " GAS SERVICE TARIFF AND RATES - Rates - *2020 General Rate Relief Filing*" above.

PGW reviews its operating and capital budgets and related financial needs on an annual basis and updates its internal forecasts on a more frequent basis. If financial forecasts indicate the need for additional base rate revenues, then PGW anticipates that it would file an additional base rate increase request sooner than otherwise anticipated.

There can be no assurance that any such base rate increases will be approved in whole or in part by the PUC or that the other assumptions utilized by PGW will be realized. PGW's achievement of its financial metric targets, including debt service coverage, liquidity and pay-go capital funding is subject to various uncertainties. No assurances can be provided that PGW will meet any of its financial metric targets or that such targets will not be revised or eliminated. Among other factors, the ability of PGW to achieve any of its financial metric targets may be impacted by economic, demographic, regulatory, climate, public health/safety, market and technological factors which may be wholly or partially beyond the ability of PGW to control or influence.

Budget Approval

General Process for Budgets. The Management Agreement requires PGW to prepare an annual operating budget and an operating forecast for the four years following the budget year. The operating budget and forecast are subject to the approval of the Gas Commission. PGW also prepares annually a proposed capital budget and a forecast for the five years following the budget year. The Gas Commission and the Director of Finance of the City review the capital budget and forecast and forward it, together with their recommendations, to the City Council for its approval by ordinance.

The Gas Commission holds public hearings on the budgets at which PGW and other interested parties are permitted to present evidence to support their positions. Community Legal Services of Philadelphia, Inc. has been appointed by the Gas Commission to serve as Public Advocate and represents residential customers in budget proceedings. The Gas Commission considers the record accumulated in the budget hearings in deciding whether to accept, modify or reject a proposed annual operating budget; and whether to recommend the approval, modification or rejection of a proposed capital budget by City Council. The Gas Commission final order regarding the operating budget and the City Council ordinance regarding the capital budget may direct PGW to reduce expenses in certain areas or increase spending on certain items or to undertake specific projects. This process remains unchanged since passage of the Gas Choice Act which provides that the City continues to determine PGW's budget function.

FY 2021 Operating Budget Process and Approval. In April 2020, PGW submitted its Fiscal Year 2021 Operating Budget to the Gas Commission for its review and approval. PGW's Fiscal Year 2021 Operating Budget was approved by the Gas Commission at its August 11, 2020 meeting. No other approvals are required for PGW's Fiscal Year 2021 Operating Budget which is now in effect.

Subsequent to the Gas Commission's approval, PGW filed (for certain routine compliance purposes) the operating budget in final form with the Gas Commission within approximately 10 days and posted such budget to PGW's website. Such documents are not incorporated by reference herein. As of September 30, 2020, PGW's related Five-Year Forecast for Fiscal Years 2022 through 2026 was still pending review.

FY 2021 Operating Budget – Components and Key Assumption. The approved Fiscal Year 2021 Operating Budget and submitted Five-Year Forecast for Fiscal Years 2022 through 2026, presented budgeted information for Fiscal Year 2021 and forecasted information for Fiscal Years 2022-2026. The budget included a statement of income with itemizations of the different categories of PGW operating revenues, expenses and interest income. It also included a cash flow statement showing both sources and uses of expenditures, a debt service coverage analysis and a balance sheet reflecting assets and equity and liabilities. It also included the principal business assumptions that PGW made when preparing the budget and forecast. These assumptions included certain rate increases, weather–related costs projections, costs of certain commodities and personnel, increased LNG sales and capital improvement expenditures.

A key assumption for the Fiscal Year 2021 Operating Budget as submitted to the Gas Commission was approval by the PUC of the February 28, 2020 filing request by PGW for an increase in its distribution base rates which rate filing requested a general rate increase calculated to produce $70.0 million in annual operating revenues based upon a 20-year heating degree day (HDD) weather normalization. The proposed rate increase was pending before the PUC at the time final action was taken by the Gas Commission approving the Fiscal Year 2021 Operating Budget in August 2020. ***The approved Fiscal Year 2021 Operating Budget is based upon this assumption and the discussion within the following paragraph and the budget table below under the column "Operating Budget FY 2021" reflects that assumption. Consequently, PGW's as filed Fiscal Year 2021 Operating Budget does <u>not</u> reflect the terms of the proposed Settlement Agreement (or any recommended modification thereto by the PUC Administrative Law Judges) and the following discussion of such budget is qualified by reference to the discussion further below of PGW's expected budget variances which are based on the assumption that the proposed Settlement Agreement is approved as filed with the PUC. PGW, consistent with its historical practice, does not anticipate seeking any formal amendment to the approved Fiscal Year 2021 Operating Budget in light of the proposed Settlement Agreement or any other circumstance.***

Discussion of FY 2021 Operating Budget (i.e., unadjusted for Proposed Settlement Agreement). The Fiscal Year 2021 Operating Budget as filed with the Gas Commission projects an ending cash balance of $113.3 million in FY 2021 (a reduction from the estimated operating fund cash balance of $127.1 million in FY 2020). PGW's budgeted total operating revenues in FY 2021 are $723.0 million compared to anticipated total operating revenues of $615.0 million for the same period in Fiscal Year 2020. The Fiscal Year 2021 Operating Budget was approved reflecting a reduction of $0.976 million from the amount PGW requested. These reductions included $0.428 million for reduced legal expenses and a $0.548 million reduction for a decrease in purchased services in the PFMC budget. Net income is budgeted at $136.5 million by year-end FY 2021 compared to $96.5 million budgeted in FY 2020.

Discussion of Anticipated FY 2021 Variances in Light of the Proposed Settlement Agreement. Subsequent to the submission of the FY 2021 Operating Budget to the Gas Commission, PGW filed a Joint Petition for Partial Settlement in the base rate case which all rate case parties joined or did not oppose except the environmental stakeholders group that is opposing PGW's rate increase request. The proposed Settlement Agreement, upon final approval, if granted, would provide PGW with a general rate increase of $35.0 million in annual operating revenues in three increments: $10 million for service rendered on or after January 1, 2021; an additional $10 million for service rendered on or after July 1, 2021 and an additional $15 million for service rendered on or after January 1, 2022. PGW presently anticipates that if the proposed Settlement Agreement is ultimately approved by the PUC as filed, the current expected impact on the Fiscal Year 2021 Operating Budget will consist of a reduction of total operating revenues from approximately $723.0 million to $662.0 million, an ending cash balance of $103.8 million (as compared to $113.3 million), and net income of $75.7 million (as compared to approximately $136.5 million) for Fiscal Year 2021. ***The foregoing discussion of the expected impacts on PGW's FY 2021 Operating Budget does not take into account any potential effects of the PUC Administrative Law Judges' recommended modifications to the proposed Settlement Agreement which would delay the effective dates of the rate increase as follows: $10.0 million on July 1, 2021, $10.0 million on January 1, 2022, and $15.0 million on July 1, 2022. The PUC's final decision with respect to the recommendations of the Administrative Law Judges and the proposed Settlement Agreement and the related 2020 general rate relief filing, and any response by PGW are uncertain and no assurances can be provided regarding the impact of the PUC's and PGW's actions on the FY 2021 Operating Budget or PGW's future Fiscal Year Operating Budgets***. For a discussion of the status of the proposed settlement of the proceedings related to the 2020 general rate relief filing, see " GAS SERVICE TARIFF AND RATES - Rates - 2020 General Rate Relief Filing" above. It should be understood that budgets, by their nature, are subject to changing circumstances and the potential convergence of intervening events which may make it more likely that actual results differ from anticipated budget outcomes and such differences may be material. Consequently, no assurance can be provided that PGW's budgeted results will be fully and timely realized or that any anticipated variance from the approved FY 2021 Operating Budget will occur.

Fiscal Year 2021 Operating Budget Comparative Summary. Set forth below is a summary of PGW's approved Fiscal Year 2021 Operating Budget with comparative information to its Fiscal Year 2020 Operating Budget. ***The summary below is not adjusted to reflect any expected budget variances due to the proposed Settlement Agreement or the PUC Administrative Law Judges' recommended modifications to the proposed Settlement Agreement and the related assumed general base rate increase of $35.0 million. Rather, the Fiscal Year 2021 Operating Budget assumes a $70.0 million general base rate increase.***

PHILADELPHIA GAS WORKS
BUDGETED STATEMENT OF INCOME
(Dollars in Thousands)

	OPERATING BUDGET FY 2020[1]	OPERATING BUDGET FY 2021[2]
OPERATING REVENUES		
Non-Heating	$ 23,203	$ 21,466
Gas Transport Service	61,882	67,767
Heating	598,875	576,418
Revenue Adjustment (TED/BUS Rate)[3]	-	400
Revenue Enhancement / Cost Reduction - FY2021	-	70,000
Weather Normalization Adjustment	436	-
Appropriation for Uncollectible Reserve	(30,588)	(33,101)
Unbilled Adjustment	(191)	(36)
Total Gas Revenues	653,617	702,914
Appliance Repair & Other Revenues	6,835	7,964
LNG Project Revenues	-	-
Other Operating Revenues	11,397	12,161
Total Other Operating Revenues	18,232	20,125
Total Operating Revenues	671,849	723,039
OPERATING EXPENSES		
Natural Gas	195,123	191,548
Other Raw Material	10	10
Sub-Total Fuel	195,133	191,558
CONTRIBUTION MARGINS	476,716	531,481
Gas Processing	22,512	21,740
Field Services	-	-
Distribution	-	-
Field Operations	85,188	86,412
Collection	4,383	4,430
Customer Service	15,248	15,751
Account Management	9,206	9,245
Marketing	4,999	4,916
Administrative & General	84,074	85,191
Health Insurance	25,340	27,151
Environmental	792	1,059
Capitalized Fringe Benefits	(9,664)	(8,969)
Capitalized Administrative Charges	(17,050)	(22,707)
Amortization of Restructuring Costs		
Pensions	29,531	23,577
Taxes	9,280	9,435
Other Post-Employment Benefits	17,892	25,422
Proposed Bond Refunding Savings	-	(589)
Cost / Labor Savings	114	(164)
Sub-Total Other Operating & Maintenance	281,845	281,900
Depreciation	60,602	67,934
Cost of Removal	4,500	4,500
To Clearing Accounts	-	-
Net Depreciation	65,102	72,434
Sub-Total Other Operating Expenses	346,947	354,334

TOTAL OPERATING EXPENSES	542,080	545,892
OPERATING INCOME	129,769	177,147
Interest Gain / (Loss) and Other Income	3,885	7,400
INCOME BEFORE INTEREST	133,654	184,547
INTEREST		
Long-Term Debt	44,020	54,442
Other	(9,716)	(9,612)
AFUDC	(1,959)	(2,212)
Loss From Extinguishment of Debt	4,845	(4,460
Total Interest	37,190	47,078
NET INCOME	**96,464**	**137,469**
City Payment	18,000	18,000
NET EARNINGS	**$ 78,464**	**$ 119,469**

(1) The Operating Budget FY 2020 column reflects PGW's approved operating budget for FY 2020 and does not reflect any estimate of actual FY 2020 operating and financial results for PGW.
(2) Reflects the FY 2021 Operating Budget as approved and filed with the Gas Commission. The Operating Budget FY 2021 column does not reflect any expected financial impact to PGW of the proposed Settlement Agreement and the related assumed general base rate increase of $35.0 million (*i.e.*, instead of the $70.0 million level assumed in the approved FY 2021 Operating Budget). See "*Discussion of Anticipated FY 2021 Variances in Light of the Proposed Settlement Agreement*" above.
(3) TED/BUS Rate - Refers to the Technology and Economic Development Rider and the rate Backup Service in PGW's Gas Service Tariff.

Capital Budget

PGW's Fiscal Year 2020 Capital Budget of $127.708 million was approved by the City on June 20, 2019. It sets out budgeted and forecasted amounts for the capital expenditures that PGW expected to make in its classes of operations, a detailed breakdown of uses within each class of operations and identification of the expected sources of payment for the described capital expenditures. The FY 2020 Capital Budget, as well as approved carryover spending from prior approved Capital Budgets, reflects net total capital expenditures in Fiscal Year 2020 of approximately $121.566 million. The capital funding sources in 2020 include proceeds from 1998 Ordinance Bonds of approximately $60.805 million, DSIC receipts of approximately $33.0 million and internally generated funds of approximately $27.761 million.

On May 8, 2019, PGW submitted a request to the Philadelphia Gas Commission to amend the Fiscal Year 2020 Capital Budget for reauthorizing remaining spending for two Fiscal Year 2018 Capital Program projects whose two-year spending lifespan were to be exceeded. The Fiscal Year 2020 Capital Budget was amended to increase the budget authorization by $1.299 million, for a total authorization of $129.007 million.

PGW's Fiscal Year 2021 Capital Budget was submitted to the Philadelphia Gas Commission on January 2, 2020. On March 15, 2020, the Gas Commission staff filed a recommended decision authorizing budget authorization of $213.368 million. The Gas Commission rendered its decision recommending that City Council approve the FY 2021 Capital Budget on April 21, 2020. City Council final approval was received on June 18, 2020. PGW has proposed an amendment to the FY 2021 Capital Budget to address the timing of certain projects which will be completed beyond a two-year lifespan (i.e., to obtain a budget reauthorization). Such reauthorization would not require additional spending to complete applicable projects. The Gas Commission staff recommended the approval of the budget reauthorization on September 25, 2020. The Gas Commission approved the budget reauthorization recommendation to City Council at its October 13, 2020 meeting.

The following is excerpted from PGW's Compliance FY 2021 Capital Budget and Five-Year Forecast for FY 2022 through FY 2026, inclusive.

Table 10
CAPITAL BUDGET
FY 2021 AND FORECAST FOR FY 2022 THROUGH FY 2026

	FY 2021 CAPITAL BUDGET	FY 2022 - FY 2026					TOTAL 6 YEARS
		2022	2023	2024	2025	2026	
Gas Processing							
Additions	$ 103,000	$ 265,000	$ 200,000	$ 112,000	$ 115,000	$ 118,000	$ 913,000
Replacements	5,908,000	4,894,000	7,552,000	8,014,000	12,625,000	97,596,000	136,589,000
TOTAL	6,011,000	5,159,000	7,752,000	8,126,000	12,740,000	97,714,000	137,502,000
Acquired Assets	6,011,000	5,159,000	7,752,000	8,126,000	12,740,000	97,714,000	137,502,000
Lease	-	-	-	-	-	-	-
Distribution							
Additions	15,075,000	15,436,000	15,806,000	16,184,000	16,574,000	16,972,000	96,047,000
Replacements	89,306,000	92,644,000	93,953,000	95,292,000	96,666,000	98,071,000	565,932,000
GROSS TOTAL	104,381,000	108,080,000	109,759,000	111,476,000	113,240,000	115,043,000	661,979,000
Less: Reimbursements	(4,366,319)	(4,457,000)	(4,550,000)	(4,645,000)	(4,742,000)	(4,841,000)	(27,601,319)
NET TOTAL:	100,014,681	103,623,000	105,209,000	106,831,000	108,498,000	110,202,000	634,377,681
Acquired Assets	100,014,681	103,623,000	105,209,000	106,831,000	108,498,000	110,202,000	634,377,681
Lease	-	-	-	-	-	-	-
Field Services							
Additions	3,176,000	3,371,000	3,538,000	3,713,000	3,878,000	4,037,000	21,713,000
Replacements	8,544,000	10,170,000	9,329,000	8,270,000	7,746,000	7,253,000	51,312,000
GROSS TOTAL	11,720,000	13,541,000	12,867,000	11,983,000	11,624,000	11,290,000	73,025,000
Less: Salvage	-	-	-	-	-	-	-
Less: Contributions*	-	-	-	-	-	-	-
NET TOTAL	11,720,000	13,541,000	12,867,000	11,983,000	11,624,000	11,290,000	73,025,000
Acquired Assets	11,720,000	13,541,000	12,867,000	11,983,000	11,624,000	11,290,000	73,025,000
Lease	-	-	-	-	-	-	-
Fleet Operations							
Additions	-	-	-	-	-	-	-
Replacements	3,966,000	9,049,000	4,330,000	8,061,000	4,353,000	2,196,000	31,955,000
GROSS TOTAL	3,966,000	9,049,000	4,330,000	8,061,000	4,353,000	2,196,000	31,955,000
Less: Salvage	-	-	-	-	-	-	-
NET TOTAL	3,966,000	9,049,000	4,330,000	8,061,000	4,353,000	2,196,000	31,955,000
Acquired Assets	3,966,000	9,049,000	4,330,000	8,061,000	4,353,000	2,196,000	31,955,000
Lease	-	-	-	-	-	-	-
Other Departments							
Additions	788,000	250,000	257,075	264,252	271,534	278,922	2,109,783
Replacements	86,502,000	9,538,000	4,436,100	1,456,553	1,473,307	4,525,533	107,931,493
TOTAL	87,290,000	9,788,000	4,693,175	1,720,805	1,744,841	4,804,455	110,041,276
Acquired Assets	87,290,000	9,788,000	4,693,175	1,720,805	1,744,841	4,804,455	110,041,276
Lease	-	-	-	-	-	-	-
Total							
Additions	19,142,000	19,322,000	19,801,075	20,273,252	20,838,534	21,405,922	120,782,783
Replacements	194,226,000	126,295,000	119,600,100	121,093,553	122,863,307	209,641,533	893,719,493
GROSS TOTAL	**213,368,000**	**145,617,000**	**139,401,175**	**141,366,805**	**143,701,841**	**231,047,455**	**1,014,502,276**
Less: Salvage	-	-	-	-	-	-	-
Less: Reimbursements**	(4,366,319)	(4,457,000)	(4,550,000)	(4,645,000)	(4,742,000)	(4,841,000)	(27,601,319)
Less: Contributions*	-	-	-	-	-	-	-
NET TOTAL:	209,001,681	141,160,000	134,851,175	136,721,805	138,959,841	226,206,455	986,900,957
Acquired Assets	209,001,681	141,160,000	134,851,175	136,721,805	138,959,841	226,206,455	986,900,957
Lease	-	-	-	-	-	-	-

*Contributions are potential contributors
**Reimbursement to PGW; relocating structures and equipment and/or load growth

Gas Processing Capital Expenditures

Budgeted capital spending for the Gas Processing Department is focused on the safety and reliability of natural gas measurement and control facilities, plant buildings and grounds, and PGW's LNG capacity. The more significant initiatives in Fiscal Year 2021 include: $1.1 million to replace the meter and regulator heater and generator, and $1.4 million to replace the hazard detection system at the Passyunk Plant. Out-year planned expenditures are anticipated for a number of purposes including during Fiscal Years 2023 and 2025 in a total amount of $3.6 million to replace heaters and generators at two meter and regulator stations, $6.4 million to be spent over Fiscal Years 2022 through 2024 to replace the Richmond Plant's LNG switchgear, $3.8 million in Fiscal Years 2024 through 2025 to replace the fiber optics at the Richmond and Passyunk Plants, and $5.0 million in Fiscal Year 2025 to the Richmond Plant's river water switchgear. Actual levels of expenditures, including carryover spending to a future Fiscal Year, will be impacted by the particular work patterns and any contingencies relating to a particular project.

Distribution Capital Expenditures

The ongoing cast iron main replacement capital program is central to this category of capital expenditures which is funded through base rates and the DSIC. The base rate funded portion of the program for Fiscal Year 2021 is expected to be approximately $29.8 million to provide for the removal of approximately 18 miles of cast iron mains. Historically, cast iron pipe was generally used by natural gas utilities. This was particularly true in the case of low-pressure gas mains such as those used by PGW. Leaks tend to result due to aging of this pipe due to joint deterioration and increases in the brittleness of such pipe. Replacement options for such cast iron mains include plastic for low-pressure systems as well as wrapped and cathodically protected steel (the latter being used for higher pressure systems).

Estimated capital spending for Fiscal Year 2021 is $94.5 million for PGW's Distribution Department. This spending level maintains a trend of increased expenditures which began in Fiscal Year 2013. The increase is associated closely with addressing at-risk mains in furtherance of PGW's LTIIP. The DSIC enables PGW to recover these capital costs on a pay-as-you-go basis, which reduces or avoids dependence on additional indebtedness to maintain this part of PGW's capital program.

Field Services Capital Expenditures

PGW estimates capital spending for Fiscal Year 2021 for the Field Services Department in the amount of $9.0 million. These capital expenditures are intended, in part, for PGW to benefit from implementing the automated meter reading system. Specific benefits include a need for fewer estimated readings, enhanced accuracy, less time required from PGW's employees and fewer customer complaints. The 2021 Capital Budget continues to implement PGW's AMI program.

Fleet Operations Capital Expenditures

For Fiscal Year 2021, the Fleet Operations Department estimated capital expenditures are in the amount of $4.0 million. These expenditures generally serve the purpose of replacing vehicles and mobile equipment, particularly in support of critical field operations. In any particular year, spending in this area is based upon the inventory of vehicles to be replaced. The respective useful lives of vehicles are annually analyzed and this analysis, together with PGW's normal replacement criteria, substantially determines the number of vehicles which are replaced. Fiscal Year 2021 spending is based on such analysis and criteria.

See "THE CAPITAL IMPROVEMENT PROGRAM - Customer Information System Replacement and Building Consolidation" above for a detailed discussion of the Other Departments portion of PGW's capital budget.

Accounts Receivable

Net accounts receivable were $86.0 million at the end of Fiscal Year 2019, an increase of approximately $3.4 million or 4.1% from Fiscal Year 2018 due to higher gas revenues during FY 2019, which resulted from increased sales and a higher GCR driven by increased commodity prices. The 24-month collection rate in Fiscal Year 2019 was 96.3% as compared to 95.4% in Fiscal Year 2018. The accumulated provision for uncollectible accounts, totaling $66.8 million, increased by $0.5 million at the end of Fiscal Year 2019, compared to the end of Fiscal Year 2018. The reserve for bad debt is for accounts that have not yet been written off. When a receivable is written-off, the bad debt reserve will be reduced by the same amount.

For a further discussion of PGW's accounts receivable experience, see "MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS AND FINANCIAL CONDITION FOR THE ELEVEN MONTHS ENDED JULY 31, 2020 AND JULY 31, 2019 (UNAUDITED) – Assets – *Accounts Receivable"*.

[Remainder of page intentionally left blank.]

Table 11
ACCOUNTS RECEIVABLE, PROVISION FOR UNCOLLECTIBLE ACCOUNTS, NET WRITE-OFFS, COLLECTION FACTORS AND REVENUE STATISTICS[(1)]
(Thousands of U.S. Dollars)

	FISCAL YEAR ENDED AUGUST 31				
	2019	**2018**	**2017**	**2016**	**2015**
Billed Gas Revenues[(2)]	$682,294	$684,844	$621,273	$555,991	$690,766
Accounts Receivable	152,740	148,938	147,152	147,849	188,882
Less: Reserve for Bad Debt	(66,751)	(66,327)	(65,124)	(74,286)	(102,029)
Net Accounts Receivable	$85,989	$82,611	$82,028	$73,563	$86,853
Bad Debt Reserve/Accounts Receivable	43.7%	44.5%	44.3%	50.2%	54.0%
Net Write-Offs	$29,559	$29,623	$39,154	$54,876	$ 40,153
Receivable/Billed Gas Revenues	22.4%	21.7%	23.7%	26.6%	27.3%
Bad Debt	$29,983	$30,826	$29,992	$27,133	$ 34,833
Bad Debt/Billed Gas Revenues	4.4%	4.5%	4.8%	4.9%	5.0%
Bad Debt/Accounts Receivable	19.6%	20.7%	20.4%	18.4%	18.4%
Total Customer Receipts	$685,608	$685,057	$613,239	$571,544	$700,933
Total Customer Billings	$709,940	$712,964	$647,414	$581,053	$721,833
Collection Factor	96.6%	96.1%	94.7%	98.4%	97.1%
Five-Year Average Collection Factor (2015-2019)	96.5%				

(1) Source: PGW's records.

(2) This is calculated based on Adjusted Total Gas Revenues less Prior Year's Gas Cost Recovery. Accounts receivable is partly driven by sales revenue. Higher sales revenue pushes higher accounts receivable balances. During the five- year period between Fiscal Year 2015 and Fiscal Year 2019, the year-end net accounts receivable balance averaged 12.7% of billed revenue, with a low of 12.1% in Fiscal Year 2018 and the high of 13.2% in Fiscal Year 2016. Along with billed revenue, accounts receivable is influenced by the collection rate. PGW calculates the collection rate by dividing the total gas receipts collected in a Fiscal Year by the total gas billings that were applied to PGW customers' accounts during the same time period. During the five-year period between Fiscal Year 2015 and Fiscal Year 2019 PGW averaged a 96.5% collection rate, with a high of 98.4% in Fiscal Year 2016 and the low of 94.7% in Fiscal Year 2017.

PGW calculates the provision for uncollectible accounts based on a financial analysis and a collectability study performed as of each Fiscal Year-end. The same methodology was used for all Fiscal Years between Fiscal Year 2015 and Fiscal Year 2019. This analysis is used to determine the adequacy of the accumulated provision for uncollected accounts. For each Fiscal Year during the stated period, management has provided an accumulated provision for uncollectible accounts in excess of the collectability study results based on its analysis of historical aging data. The actual results of the PGW's collection efforts could differ significantly from PGW's estimate. Net write-offs historically have been less than the reserve for bad debt each year due to the effects of the assistance programs and grants described under "GAS SERVICE TARIFF AND RATES – Assistance Programs and Grants."

See "PHILADELPHIA GAS WORKS – COVID-19 Response, Recent Trends and Uncertainties" for a discussion of certain collections and account receivables trends through the end of FY 2020 and in comparison to FY 2019. Also see "Gas Service Rates and Tariffs – Collections."

Selected Operating Data Regarding Customers and Gas Sales

The following table sets forth certain information regarding PGW customers, gas sales by classification and demand for gas.

Table 12
SELECTED OPERATING DATA
REGARDING CUSTOMERS AND GAS SALES[1]

	PERIOD SEPTEMBER 1 THROUGH JULY 31		FISCAL YEARS ENDED AUGUST 31				
	2020	2019	2019	2018	2017	2016	2015
Summary of Customers At End Of Period							
Residential	465,015	468,311	467,732	476,012	475,342	474,115	475,561
Industrial and Commercial:							
Firm	21,473	21,616	21,608	21,676	21,613	22,443	25,193
Interruptible	3	3	3	3	3	4	2
Municipal and PHA	2	2	2	2	2	2	2
Total Customers	486,457	489,932	489,345	497,693	496,960	496,564	500,758
Gas Sales by Classification (Mmcf) [2]							
Residential:							
Heating	30,586	33,809	34,373	35,732	32,045	30,180	38,523
Non-Heating	406	414	428	435	398	426	503
Industrial and Commercial:							
Firm	7,200	8,171	8,421	8,351	7,530	7,078	9,390
Interruptible	587	204	205	166	18	38	514
Other (FT)	5,840	5,802	5,971	4,907	4,457	4,123	4,294
Total Gas Sales & Transport	44,619	48,400	49,398	49,591	44,448	41,845	53,224
Average Monthly Usage of Residential Customers (Mcf)[3]:							
Heating	6.2	6.8	6.4	6.5	5.9	5.6	7.1
Non-Heating	2.3	2.2	2.1	1.9	1.7	1.7	1.8
Average Monthly Bill of Residential Customers:							
Heating $	$98.76	$106.97	$100.77	$102.93	$93.70	$86.50	$107.48
Non-Heating $	$45.39	$44.76	$43.24	$41.41	$35.65	$31.26	$37.87
Degree Days	3,353	3,995	3,995	3,986	3,552	3,356	4,444
Normal Degree Days	3,962	3,956	3,956	3,957	4,237	4,237	4,256
	85%	101%	101%	101%	84%	79%	104%
Maximum 24-Hour Sendout (Mcf)	461,382	611,853	611,853	639,043	528,428	583,377	645,370
Peak-day Avg. Temperature (Degrees)	30	17	17	13	21	16	11

[1] Source: PGW's records.
[2] Million cubic feet.
[3] Thousand cubic feet.

Summary of Statements of Revenue and Expenses

Information for each of the past five Fiscal Years should be read in conjunction with and was derived from the audited financial statements and notes thereto. As discussed in "PHILADELPHIA GAS WORKS – Pension Plans and Other Postemployment Benefits," GASB Statement No. 68, Accounting and Financial Reporting for Pensions, was effective for PGW's Fiscal Year beginning September 1, 2014, and its provisions were retrospectively applied as of September 1, 2013.

Table 13
SUMMARY OF STATEMENTS OF REVENUES AND EXPENSES
(Thousands of U.S. Dollars)

	PERIOD SEPTEMBER 1 THROUGH JULY 31 (UNAUDITED)		FISCAL YEARS ENDED AUGUST 31				
	2020	**2019**	**2019**	**2018[2]**	**2017**	**2016**	**2015[1]**
Operating revenues:							
Gas revenues:							
Nonheating	$21,127	$23,631	$25,065	$23,492	$21,694	$21,873	$30,753
Gas transport service	60,479	60,979	63,565	51,724	44,370	41,008	39,588
Heating	533,306	583,906	605,437	583,864	552,342	509,467	605,686
Provision for uncollectible accounts[3]	(38,640)	(29,865)	(29,983)	(30,826)	(29,992)	(27,133)	-
Total gas revenues	576,272	638,651	664,084	628,254	588,414	545,215	676,027
Appliance and other revenues	5,743	7,216	7,908	8,121	8,199	7,961	8,727
Other operating revenues	6,841	12,030	12,736	11,124	9,598	10,928	12,493
Total operating revenues	588,856	657,897	684,728	647,499	606,211	564,104	697,247
Operating expenses:							
Natural gas	149,241	201,334	206,825	186,265	179,230	146,524	252,169
Field operations[4]	71,674	71,057	79,341	88,105	--	--	--
Gas processing	21,503	17,746	22,028	21,644	16,789	17,948	18,180
Field services[4]	--	--	--	--	37,715	36,277	36,874
Distribution[4]	--	--	--	--	41,318	37,173	38,629
Collection and account management	10,831	11,094	12,490	11,975	11,200	10,913	11,192
Provision for uncollectible accounts[3]	--	--	--	--	--	--	34,833
Customer services	12,856	12,544	13,983	13,904	13,230	12,432	12,262
Marketing	3,717	3,492	4,232	3,751	3,644	3,671	6,956
Administrative and general[4]	64,053	67,241	67,649	63,206	59,372*	99,652	93,347
Pensions	28,011	30,818	30,268	43,159	54,826	62,336	43,748
Other postemployment benefits	16,401	27,798	28,351	32,889	28,062*	9,929	6,726
Taxes	8,305	7,874	8,705	8,758	7,890	7,521	7,823
Total operating expenses before depreciation	386,592	451,016	473,872	473,656	453,276	444,376	562,739
Depreciation	58,213	56,870	68,186	63,970	54,347	51,679	49,371
Less depreciation expense included in operating expenses above	--	--	--	7,516	6,770	6,231	5,584
Net depreciation	58,213	56,870	68,186	56,454	47,577	45,448	43,787
Total operating expenses	444,805	507,886	542,058	530,110	500,853	489,824	606,526
Operating income	144,051	150,011	142,670	117,389	105,358	74,280	90,721
Interest and other income	5,580	10,519	10,788	4,634	1,989	1,393	3,784
Income before interest expense	149,631	160,530	153,458	122,023	107,347	75,673	94,505
Interest expense:							
Long-term debt	40,043	42,688	46,136	48,351	39,104	40,296	45,756
Other	(5,520)	(4,820)	(5,245)	(5,058)	3,312	8,443	11,548

Allowance for funds used during construction	(1,695)	(1,107)	(1,295)	(1,353)	(1,408)	(1,120)	(781)
Total interest expense	32,828	36,761	39,596	41,940	41,008	47,619	56,523
Excess of revenues over (under) expenses prior to City Payment	116,803	123,769	113,862	80,083	66,339	28,054	37,982
Distribution to the City of Philadelphia	(16,500)	(16,500)	(18,000)	(18,000)	(18,000)	(18,000)	(18,000)
Excess of revenues over expenses	100,303	107,269	95,862	62,083	48,339	10,054	19,982
Net position, beginning of the period	207,562	111,700	111,700	49,617	1,278*	277,984	258,002
Net position, end of the period	$307,865	$218,969	$207,562	$111,700	$49,617	$288,038	$277,984

---

(1) During FY 2015, PGW implemented GASB Statement No. 68, Accounting and Financial Reporting for Pensions - an Amendment of GASB Statement No. 27, that improves accounting and financial reporting by state and local governments for pensions, and GASB Statement No. 71, Pension Transition for Contributions Made Subsequent to the Measurement Date - an amendment of GASB Statement No. 68, to address an issue regarding application of the transition provisions of Statement No. 68, Accounting and Financial Reporting for Pensions. This change was retroactive to FY 2014. See also "PHILADELPHIA GAS WORKS – Pension Plans and Other Postemployment Benefits."

* FY 2017 has been restated as a result of the implementation of GASB 75.

(2) During FY 2018, PGW implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, for purposes of measuring the net OPEB liabilities, deferred outflows of resources and deferred inflows of resources related to the OPEB Plans and the OPEB Plans expense, information about the fiduciary net position of the OPEB Plan, and additions to/deductions from the OPEB Plans' fiduciary net position are determined on the same basis as they are reported by the OPEB Plans. This change was retroactive to FY 2017.

(3) For Fiscal Years 2019, 2018, 2017 and 2016, PGW reported provision for uncollectible accounts as a reduction of revenue as required by the GASB. Prior to the FY 2016, PGW reported provision for uncollectible accounts as an expense.

(4) Presentment of the FY 2018 Statement of Revenue and Expenses was restated in FY 2019 to reflect Distribution, Field Services, and Operations Support Services (OSS) as a single line item – Field operations. Prior to FY 2019 and the FY 2018 restatement, Distribution and Field Services were reported on separate lines and OSS was reported as a part of the Administrative and general line of the Statement of Revenue and Expenses.

DEBT SERVICE COVERAGE RATIO

The annual operating budgets approved by the Gas Commission have estimated the level of revenues required to reach at least the minimum rates and charges mandated by the General Gas Works Revenue Bond Ordinance of 1975, as amended and supplemented, and under which no debt remains outstanding as of August 18, 2015 (the "Retired 1975 General Ordinance") and the 1998 General Ordinance. The following table presents the historical revenues and regularly scheduled debt service coverage calculated under the Retired 1975 General Ordinance and the 1998 General Ordinance for Fiscal Year 2015 through 2019, inclusive. Payment of City Charges is subordinate to the payment of debt service on bonds issued under the 1998 General Ordinance (and was similarly subordinated to the payment of debt service on bonds issued under the Retired 1975 General Ordinance).

[Table follows on next page.]

Table 14
DEBT SERVICE COVERAGE[(1)]
(Thousands of U.S. Dollars)

	2019	2018	2017	2016	2015
FUNDS PROVIDED					
Total Gas Revenues	$664,084	$628,254	$618,406	$572,348	$676,027
Other Operating Revenues	20,644	19,245	17,797	18,889	21,220
Total Operating Revenues	684,728	647,499	636,203	591,237	697,247
Other Income Incr. / (Decr.)	10,787				
Restricted Funds		4,634	1,087	1,416	10,836
AFUDC†††† (Interest)	1,295	1,353	1,408	1,120	781
TOTAL FUNDS PROVIDED	696,810	653,486	638,698	593,773	708,864
FUNDS APPLIED					
Fuel Costs	206,825	186,265	179,230	146,524	252,169
Other Operating Costs	335,232	343,845	360,467	370,433	354,357
Total Operating Expenses	542,057	530,110	539,697	516,957	606,526
Less: Non-Cash Expenses	74,481	82,843	84,027	89,059	74,535
TOTAL FUNDS APPLIED	467,576	447,267	455,670	427,898	531,991
Funds Available to Cover Debt Service	$229,234	$206,219	$183,028	$165,875	$176,873
1975 Ordinance Bonds Debt Service[(2)]	-	-	-	-	$26,904
Debt General Service Coverage 1975 General Ordinance Bonds	**-**	**-**	**-**	**-**	**6.57**
Net Available after Prior Debt Service	$229,234	$206,219	$183,028	$165,875	$149,969
Equipment Leasing Debt Service	-	-	-	-	-
Net Available after Prior Capital Leases	$229,234	$206,219	$183,028	$165,875	$149,969
Senior 1998 Ordinance Bonds Debt Service	$98,417	$87,690	$67,582	$77,867	$70,139
Debt Service Coverage Senior 1998 Ordinance Bonds	**2.33**	**2.35**	**2.71**	**2.13**	**2.14**
Net Available after Senior 1998 Ordinance Debt Service	$130,817	$118,529	$115,446	$88,008	$79,830
Subordinate 1998 Ordinance Bond Debt Service	-	-	-	-	-
Debt Service Coverage Subordinate 1998 Ordinance Bonds	-	-	-	-	-
Aggregate Debt Service[(3)]	$98,417	$87,690	$67,582	$77,867	$97,043
Debt Service Coverage (Combined liens)[(4)]	2.33	2.35	2.71	2.13	1.82
Debt Service Coverage (Combined liens with $18.0M City Fee)[(5)]	2.15	2.15	2.44	1.90	1.64

†††† Allowance for Funds Used During Construction

(1) Source: Comprehensive Annual Financial Report for Fiscal Years Ended August 31, 2019 and 2018 of the Philadelphia Gas Works (attached as APPENDIX A) and PGW's records.

(2) No debt remains outstanding as of August 18, 2015 for the General Gas Works Revenue Bond Ordinance of 1975, as amended and supplemented.

(3) Aggregate Debt Service = (Debt Service Coverage 1975 Ordinance Bonds + Debt Service Coverage 1998 Ordinance Bonds + Debt Service Coverage 1998 Subordinate Bonds).

(4) Debt Service Coverage (Combine liens) = Funds Available to Cover Debt Service / Aggregate Debt Service.

(5) Debt Service Coverage (Combine liens with $18.0M City Fee) = Funds Available to Cover Debt Service - $18.0M / Aggregate Debt Service.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS AND FINANCIAL CONDITION FOR THE ELEVEN MONTHS ENDED JULY 31, 2020 AND JULY 31, 2019 (UNAUDITED)

The narrative overview and analysis of the financial statements of PGW for the eleven months ended July 31, 2020 and July 31, 2019 have been prepared by PGW's management. The information presented below is unaudited and should be read in conjunction with additional information contained in PGW's audited financial statements as of and for the years ended August 31, 2019 and 2018 included in the attached APPENDIX A. See also "PHILADELPHIA GAS WORKS – COVID-19 Response, Recent Trends and Uncertainties" for a discussion of PGW's actions in response to COVID-19 related developments, certain recent trends in collection, account receivables and operating metrics, and certain associated risks and uncertainties to PGW's operating and financial results due to the pandemic's economic and other impacts.

Financial Highlights

Eleven Month Period Ended July 31, 2020

The eleven-month period ended July 31, 2020 was 15.6% warmer than normal. The FY 2020 period was 16.1% warmer than the prior year and firm gas sales decreased by 4.2 Billion Cubic Feet (Bcf). The Weather Normalization Adjustment (WNA) Clause, which was in effect from October 2019 through May 2020, resulted in heating customers receiving charges totaling $10.8 million. The eleven-month period ended July 31, 2019 was 1.0% colder than normal. The eleven-month period ended July 31, 2019 was 0.2% colder than the same period the prior year and firm gas sales decreased by 1.3 Bcf from the prior year. The WNA Clause, which was in effect from October 2018 through May 2019, resulted in heating customers receiving charges totaling $1.6 million.

PGW achieved rolling 24-month collection rates of 97.2% at July 31, 2020, 96.4% at July 31, 2019, and 95.0% at July 31, 2018. For July 31, 2020, the collection rate is calculated by dividing the total gas receipts collected from August 1, 2018 through July 31, 2020 by the total gas billings that were applied to PGW customers' accounts from August 1, 2018 through July 31, 2020. The same methodology was utilized in the prior periods.

Table 15
UNAUDITED
CONDENSED STATEMENTS OF REVENUES AND EXPENSES
(THOUSANDS OF U.S. DOLLARS)

	ELEVEN MONTHS ENDED JULY		
	2020	**2019**	**2018**
Total gas revenues	$576,272	$638,651	$617,404
Other revenues	12,584	19,246	17,457
Total operating revenues	588,856	657,897	634,861
Fuel expense	149,241	201,334	181,059
All other operating expenses	295,564	306,552	311,403
Total operating expenses	444,805	507,886	492,462
Operating income	144,051	150,011	142,399
Interest and other income	5,580	10,519	4,858
Total interest expense	(32,828)	(36,761)	(38,528)
Distribution to the City of Philadelphia	(16,500)	(16,500)	(16,500)
Excess of revenues over expenses	$100,303	$107,269	$92,229

Operating Revenues

Operating revenues in the eleven-month period ended July 31, 2020 were $588.9 million, a decrease of $69.0 million, or 10.5%, from the eleven-month period ended July 31, 2019. The decrease resulted from lower natural gas sendout, which was approximately 8.5% lower in the eleven-month period ended July 31, 2020 when compared to the same period in FY 2019. There were approximately 16.1% less degree days during the period September 1, 2019 through July 31, 2020 when compared to the corresponding period in the prior year. Operating revenues in the eleven-month period ended July 31, 2019 were $657.9 million, an increase of $23.0 million, or 3.6%, from the eleven-month period ended July 31, 2018. The increase resulted from higher natural gas sendout, which was approximately 1.1% higher in the eleven-month period ended July 31, 2019 when compared to the corresponding period in FY 2018.

Total sales volumes, including gas transportation deliveries, in the eleven-month period ended July 31, 2020 decreased by 6.0 Bcf, or 8.2%, to 67.7 Bcf from the eleven-month period ended July 31, 2019 sales volumes of 73.7 Bcf. In the eleven-month period ended July 31, 2020, firm gas sales of 38.2 Bcf were 4.2 Bcf or 9.9% lower than the corresponding period in FY 2019. Interruptible gas sales of 1.9 Bcf were 0.2 Bcf or 10.4% higher than the FY 2019 level. The volume of natural gas transported for gas transportation customers decreased by 2.2 Bcf to 28.8 Bcf from the 31.0 Bcf level experienced in the corresponding period in FY 2019. Total sales volumes, including gas transportation deliveries, in the eleven-month period ended July 31, 2019 increased by 0.5 Bcf, or 0.7%, to 73.7 Bcf from the eleven-month period ended July 31, 2018 sales volumes of 73.2 Bcf. In the eleven-month period ended July 31, 2019, firm gas sales of 42.4 Bcf were 1.3 Bcf or 2.9% lower than the corresponding period in FY 2018 and interruptible gas sales approximated the FY 2018 level. The volume of natural gas transported for gas transportation customers increased by 2.2 Bcf to 31.0 Bcf from the 28.9 Bcf level experienced in FY 2018.

As of July 31, 2020, the number of customers served by PGW increased from the previous year and was approximately 523,300 customers. The number of customers served by PGW at July 31, 2019 and 2018 was approximately 510,500 and 509,200, respectively. There were approximately 25,200 Commercial accounts, an increase of 300 Commercial accounts from the corresponding period of the previous fiscal year. There were approximately 24,900 and 24,800 Commercial accounts in fiscal years 2019 and 2018, respectively. There were approximately 700 Industrial accounts as of July 31, 2020, an increase of 100 Industrial accounts from the corresponding period of the previous fiscal year. There were approximately 600 Industrial accounts as of July 31, 2019, a decrease of 100 Industrial accounts from the corresponding period of the previous fiscal year. The number of residential accounts at July 31, 2020 increased to approximately 497,400 customers, an increase of 12,400 customers from the July 31, 2019 level, and 13,700 customers from the July 31, 2018 level.

Operating Expenses

Total operating expenses, including fuel costs, in the eleven-month period ended July 31, 2020 were $444.8 million, a decrease of $63.1 million or 12.4% from the eleven-month period ended July 31, 2019. The decrease for the eleven-month period ended July 31, 2020 was mainly caused by decreased natural gas utilization and costs associated with Other Post-Employment Benefits, Pension, and Administrative and General expenses. These decreases were partially offset by increased Gas Processing and Depreciation expenses. Total operating expenses, including fuel costs, in the eleven-month period ended July 31, 2019 were $507.9 million, an increase of $15.4 million or 3.1% from the same period in FY 2018. The increase for the eleven-month period ended July 31, 2019 was mainly caused by increased natural gas utilization, Other Post-Employment Benefits, and Depreciation expenses offset by lower Field Operations, Administrative and General, and Pension expenses.

Fuel Expense

The cost of natural gas utilized decreased by $52.1 million or 25.9% to $149.2 million in the eleven-month period ended July 31, 2020 compared with $201.3 million in the eleven-month period ended July 31, 2019. The average commodity price per Thousand Cubic Feet (Mcf) decreased by $1.03 or $42.0 million, while the volume of gas utilized decreased by 4.3 Bcf, 9.6% or $13.6 million. The pipeline supplier refunds in the eleven-month period ended July 31, 2020 were $9.7 million. The pipeline supplier refunds in the eleven-month period ended July 31, 2019 were less than $0.1 million. The demand charges increased by $13.2 million for the eleven months ended July 31, 2020 when compared to the eleven months ended July 31, 2019. The cost of natural gas utilized increased by $20.3 million or 11.2% to $201.3 million in the eleven-month period ended July 31, 2019 compared with $181.1 million in the eleven-month period ended July 31, 2018. The average commodity price per Mcf increased by $0.43 or $19.5 million, while the volume of gas utilized decreased by 1.2 Bcf, 2.5% or $3.1 million. The demand charges increased by $3.9 million for the eleven months ended July 31, 2019 when compared to the eleven months ended July 31, 2018.

All Other Operating Expenses

Expenditures for street operations, infrastructure improvements, and plant operations in the eleven-month period ended July 31, 2020 were $93.2 million, a $4.4 million, or 5.0%, increase from the same period in FY 2019 total of $88.8 million. The increase in the eleven-month period ended July 31, 2020 was caused primarily by higher contract maintenance costs for gas processing. The eleven-month period ended July 31, 2019 total of $88.8 million was $5.1 million lower than the eleven-month period ended July 31, 2018 total of $94.0 million as a result of lower field operation expense.

Additionally, expenses of $92.2 million related to collection and account management, customer services, marketing, and the administrative area decreased by $1.4 million or 1.5% in the eleven-month period ended July 31, 2020 primarily due to lower administrative expenses. This category increased by $7.5 million in the eleven-month period ended July 31, 2019 compared to the eleven-month period ended July 31, 2018 primarily due to higher administrative expenses.

Pension expense decreased by $2.8 million or 9.1% to $28.0 million as of July 31, 2020 as compared to July 31, 2019 due primarily to higher than anticipated earnings. Pension expense decreased by $18.2 million or 37.2% to $30.8 million as of July 31, 2019 as compared to July 31, 2018 due to higher than anticipated earnings.

OPEB expense decreased by $11.4 million or 41.0% in the eleven-month period ended July 31, 2020 as compared to the eleven-month period ended July 31, 2019 primarily to higher than anticipated earnings. OPEB expense for the eleven-month period ended July 31, 2019 increased $21.2 million when compared to the eleven-month period ended July 31, 2018, primarily due to changes in the total OPEB liability related to assumption changes, actuarial experience recognized over the average working lifetime of the OPEB Plan's participants, and the difference between projected and actual investment earnings.

Provision for Uncollectible Accounts

Based on the most recent accounts receivable collectability evaluation, the provision for uncollectible accounts for the eleven-month period ended July 31, 2020 totaled $38.6 million, an increase of $8.8 million or 29.4% compared to the same period ended July 31, 2019, which totaled $29.9 million. The accumulated provision for uncollectible accounts at July 31, 2020 reflects a balance of $77.2 million, compared to the $69.0 million balance as of July 31, 2019. This increase of $8.2 million or 11.9% in the accumulated provision for uncollectible accounts is partly due to the impact from the COVID-19 pandemic. Since March 2020, PGW has followed the PUC moratorium on shutting off gas services to customers who otherwise would be eligible for shutoff. Thus, the accounts receivable balance has increased as of July 31, 2020. As a part of PGW's normal monthly process, a collectability study was performed and a corresponding increase to the accumulated provision for uncollectible accounts was indicated by the study. The provision for uncollectible accounts for the eleven-month period ended July 31, 2019 totaled $29.9 million, an increase of $1.9 million or 6.9% compared to the same period ended July 31, 2018, which totaled $27.9 million. The accumulated provision for uncollectible accounts at July 31, 2019 reflects a balance of $69.0 million compared to the $65.7 million balance as of July 31, 2018.

Net Depreciation Expense

Net depreciation expense was $58.2 million for the eleven-month period ended July 31, 2020; an increase of $1.3 million.as compared to the same period ended July 31, 2019. Net depreciation expense was $56.9 million for the eleven-month period ended July 31, 2019; an increase of $11.2 million compared to the same period ended July 31, 2018. The increase between the periods is caused by increased utility plant balances and accounting assumption changes.

Interest and Other Income

Interest and other income for the eleven-month period ended July 31, 2020 was $5.6 million and $4.9 million lower than the $10.5 million as of July 31, 2019, as a result of decreased earnings on restricted and unrestricted fund balances. Interest and other income as of July 31, 2019 was $5.7 million higher than July 31, 2018, as a result of increased earnings on higher restricted fund balances.

Total Interest Expense

Total interest expense was $32.8 million for the eleven-month period ended July 31, 2020; a decrease of $3.9 million when compared to the same period ended July 31, 2019. Interest expense was lower for the eleven-month period ended July 31, 2020, primarily due to lower long-term debt balances. Total interest expense was $36.8 million for the eleven-month period ended July 31, 2019; a decrease of $1.8 million when compared to the same period ended July 31, 2018.

[Remainder of Page Intentionally Left Blank]

Table 16
UNAUDITED
CONDENSED BALANCE SHEETS
(Thousands Of U.S. Dollars)

	ELEVEN MONTHS ENDED JULY 31		
Assets	**2020**	**2019**	**2018**
Current assets:			
Cash and cash equivalents	$223,116	$171,893	$136,534
Account receivables (net of provisions for 2020= $77,204, 2019= $69,008, and 2018= $65,668)	99,566	96,748	96,377
Gas inventories, materials, and supplies	44,700	49,024	47,902
Current portion of capital improvement fund	-	61,000	55,000
Workers' compensation escrow fund	2,736	2,701	2,647
Other current assets	5,886	13,107	12,022
Total current assets	376,004	394,473	350,482
Non-current assets:			
Utility plant, at original cost:			
In service	2,554,567	2,412,333	2,329,025
Under construction	94,235	134,995	115,572
Total	2,648,802	2,547,328	2,444,597
Less accumulated depreciation	(1,174,672)	(1,113,361)	(1,056,352)
Utility plant, net	1,474,130	1,433,967	1,388,245
Sinking fund, revenue bonds	102,809	105,740	103,521
Capital improvement funds	-	12,548	96,579
Unamortized bond insurance costs	235	261	292
Regulatory asset-environmental	37,102	31,592	30,011
Other non-current assets	6,503	9,111	11,008
Total non-current assets	1,620,779	1,593,219	1,629,656
Total assets	1,996,783	1,987,692	1,980,138
Deferred outflows of resources			
Accumulated fair value of hedging derivatives	11,634	1,896	9,212
Unamortized losses on reacquired debt	32,239	37,215	42,509
Deferred outflows related to pension	14,421	24,943	39,400
Deferred outflows related to OPEB	91,175	81,048	33,076
Total assets and deferred outflows of resources	2,146,352	2,132,794	2,104,335
Liabilities			
Current liabilities:			
Current portion of long-term revenue bonds	58,884	67,612	54,818
Other current liabilities	101,757	87,185	76,740
Total current liabilities	160,641	154,797	131,558
Non-current liabilities:			
Long-term revenue bonds	965,673	1,024,247	1,097,071
Other non-current liabilities	65,486	55,895	65,695
Net pension liabilities	247,246	261,261	261,945
Net OPEB liabilities	335,521	389,728	340,004
Total non-current liabilities	1,613,926	1,731,131	1,764,715
Total liabilities	1,774,567	1,885,928	1,896,273
Deferred inflows of resources			
Deferred inflows related to pension	19,400	17,768	35,296
Deferred inflows related to OPEB	44,520	10,129	30,920
Total liabilities and deferred inflows of resources	63,920	27,897	66,216
Net position			
Restricted (debt service)			
Total net position	307,865	218,969	141,846
Total liabilities, deferred inflows of resources and net position	$2,146,352	$2,132,794	$2,104,335

Assets

Accounts Receivable

At July 31, 2020, accounts receivable (net) of $99.6 million increased by $2.8 million or 2.9%, from July 31, 2019 partly due to the impact from the COVID-19 pandemic. Since March 2020, PGW has followed the PUC moratorium on shutting off gas services to customers who cannot pay their bills during the pandemic. Thus, these account receivables are not written off to bad debt causing the increase to accounts receivable. However, no assurance can be given that these accounts will not be written off to bad debt once the moratorium ends. As of July 31, 2019, accounts receivable (net) of $96.7 million increased by $0.4 million or 0.4%, from July 31, 2018 due to higher other accounts receivable and accrued gas revenues. The accumulated provision for uncollectible accounts at July 31, 2020 reflects a balance of $77.2 million, an increase of $8.2 million, compared to the $69.0 million balance at July 31, 2019. The balance was $65.7 million at July 31, 2018.

Cash and Cash Equivalents; Gas Inventories, Materials, and Supplies; Other Current Assets,

At July 31, 2020, cash and cash equivalents totaled $223.1 million, an increase of $51.2 million from the July 31, 2019 total of $171.9 million. The balance was $136.5 million at July 31, 2018. At July 31, 2020, gas inventories, materials, and supplies totaled $44.7 million, a decrease of $4.3 million from the July 31, 2019 total of $49.0 million. At July 31, 2020, gas storage totaled $33.7 million, a decrease of $4.5 million or 11.8% when compared to July 31, 2019. The decrease in gas inventory reflects a decrease in the price per Mcf. Actual volumes in storage as of July, 2020 were 13.5 Bcf, an increase of 0.5 Bcf from the prior year. At July 31, 2019, gas inventories, materials, and supplies totaled $49.0 million, an increase of $1.1 million from the July 31, 2018 total of $47.9 million. At July 31, 2019, gas storage totaled $38.2 million, an increase of $1.3 million or 3.5% when compared to July 31, 2018. The increase in gas inventory reflects an increase in the volume of gas stored in inventory. Actual volumes in storage as of July 31, 2019 were 13.0 Bcf, an increase of 0.2 Bcf or 1.5% compared to the prior year. Other current assets totaled $5.9 million as of July 31, 2020, a decrease of $7.2 million from July 31, 2019. The decrease is associated with lower accrued reimbursable costs. Other current assets totaled $13.1 million at July 31, 2019, an increase of $1.1 million from July 31, 2018.

Restricted Investment Funds

Restricted Investment Funds include the current portion of the Capital Improvement Fund and the Workers' Compensation Escrow Fund. Restricted Investment Funds decreased by $61.0 million at July 31, 2020 compared to July 31, 2019 due to the drawdown from the current portion of the Capital Improvement Fund in FY 2020. The balance of the current portion of the Capital Improvement Fund at July 31, 2020, July 31, 2019, and July 31, 2018 was $0.0 million, $61.0 million, and $55.0 million, respectively. Pursuant to the Pennsylvania Department of Labor and Industry Bureau of Workers' Compensation Self Insurance policy, PGW has established and maintains a restricted trust account. As of July 31, 2020, July 31, 2019, and July 31, 2018, the trust account balances were $2.7 million, $2.7 million and $2.6 million, respectively.

Utility Plant and Other Noncurrent Assets

As of July 31, 2020 noncurrent assets including utility plant, net, the long-term portion of the Capital Improvement Fund, the revenue bonds' Sinking Fund, and unamortized bond insurance costs totaled $1,620.8 million, an increase of $27.6 million from July 31, 2019. At July 31, 2019, noncurrent assets including utility plant, net, the long-term portion of the Capital Improvement Fund, the revenue bonds' Sinking Fund, and unamortized bond insurance costs totaled $1,593.2 million, a decrease of $36.4 million from July 31, 2018. Utility plant, net, totaled $1,474.1 million at July 31, 2020, an increase of $40.2 million or 2.8% compared with the July 31, 2019 balance. Utility plant, net, totaled $1,434.0 million at July 31, FY 2019, an increase of $45.7 million or 3.3% compared with the July 31, 2018 balance. A portion of the proceeds from the sale of the Fifteenth Series Bonds was utilized to finance a portion of PGW's ongoing Capital Improvement Fund. The major capital expenditures are associated with PGW's gas supply infrastructure, namely, gas mains, and customer service lines, including capital expenditures for the Long Term Infrastructure Improvement Plan. For additional information on PGW's capital assets, see note 1(g) Utility Plant of the basic financial statements within APPENDIX A hereto.

As of July 31, 2020, PGW billed customers $30.8 million for the DSIC surcharge. As of July 31, 2019, PGW billed customers $34.6 million for the DSIC surcharge. The DSIC surcharge is fully reconcilable on a calendar year basis. For additional information regarding the DSIC surcharge, see note 1(h) Revenue Recognition of the basic financial statements within APPENDIX A hereto. See also “GAS SERVICE TARIFF AND RATES – Rates – *Surcharges*.”

Deferred Outflows of Resources

Deferred outflows of resources represent amounts that will result in a reduction of net position in a subsequent period.

Deferred outflows of resources related to hedging derivatives and bond refunding

Deferred outflows of resources include the accumulated fair value of hedging derivatives that will be recognized in the statement of revenues and expenses, changes in net position upon termination of the hedging relationship, and unamortized losses on bond refunding. Deferred outflows of resources related to hedging derivatives and bond refunding increased $4.9 million at July 31, 2020 from the July 31, 2019 total of $39.1 million. Deferred outflows decreased $12.6 million at July 31, 2019 from the July 31, 2018 total of $51.7 million.

Deferred outflows of resources related to pension

Deferred outflows of resources include increases in the pension liability that will be amortized into pension expense in future periods. Deferred outflows of resources relating to pension decreased $10.5 million or 42.2% as of July 31, 2020 from the July 31, 2019 total of $24.9 million. Deferred outflows of resources decreased $14.5 million or 36.7% from the July 31, 2019 balance when compared to the July 31, 2018 total of $39.4 million.

Deferred outflows of resources related to OPEB

Deferred outflows of resources include increases in the OPEB liability that will be amortized into OPEB expense in future periods. Deferred outflows of resources relating to OPEB increased $10.1 million or 12.50% at July 31, 2020 from the July 31, 2019 total of $81.0 million. Deferred outflows increased $48.0 million at July 31, 2019 from the July 31, 2018 total of $33.1 million primarily due to the ordinary amortization of investment gains and losses related to OPEB due to the implementation of GASB 75.

Liabilities

Long-Term Revenue Bonds

Long term revenue bonds, including the current portion and unamortized discount and premium, totaled $1,024.6 million at July 31, 2020. This was $67.3 million less than the previous year primarily as a result of scheduled principal payments. This represents 76.9% of total capitalization at July 31, 2020. Long term revenue bonds, including the current portion and unamortized discount and premium, totaled $1,091.9 million at July 31, 2019. This was $60.0 million less than the previous year primarily as a result of scheduled principal payments. Long-term revenue bonds, including the current portion and unamortized discount and premium, totaled $1,151.9 million at July 31, 2018. Long term debt represented 83.3% of total capitalization at July 31, 2019. For additional information, see note 8, Long Term Debt and Other Liabilities of the basic financial statements included in APPENDIX A hereto.

Current Portion of Revenue Bonds and Notes Payable

The Note Purchase Agreement supporting PGW’s combined commercial paper programs for capital and working capital purposes set the maximum level of outstanding notes plus interest at $120.0 million in FY 2020. There were no Capital Project Notes or Gas Works Revenue Notes outstanding at July 31, 2020, July 31, 2019 or July 31, 2018. Under no circumstances will the City issue notes, together with interest thereon, in excess of $120.0 million, unless the stated amount of the related credit facility is increased by the applicable bank. See also “COMMERCIAL PAPER PROGRAM” above.

Other Current Liabilities

At July 31, 2020, other current liabilities totaled $22.2 million, an increase of $10.6 million from July 31, 2019, due to the increase in Deferred Refunds for natural gas. At July 31, 2019, the total was $11.6 million and $5.3 million at July 31, 2018. At July 31, 2020, accounts payable totaled $44.0 million, an increase of $5.2 million or 13.4% compared with July 31, 2019.At July 31, 2019, accounts payable totaled $38.8 million, an increase of $3.3 million or 9.2% compared with July 31, 2018.

Other Non-Current Liabilities

At July 31, 2020, other noncurrent liabilities totaled $65.5 million, an increase of $9.6 million compared to July 31, 2019. The increase in FY 2020 is primarily due to the change in the value of the interest rate swaps and pollution remediation liabilities. At July 31, 2019, other noncurrent liabilities totaled $55.9 million, a decrease of $9.8 million compared to July 31, 2018. The decrease in FY 2018 is primarily due to the change in the value of the interest rate swaps.

Net OPEB Liability

The net OPEB obligation was $335.5 million at July 31, 2020, a $54.2 million decrease from the $389.7 million obligation at July 31, 2019. The net OPEB obligation was $389.7 at July 31, 2019, a $49.7 million increase from the $340.0 million obligation at July 31, 2018. The increase in FY 2020 and FY 2019 was caused by changes in assumptions.

Net Pension Liability

The decrease in the net pension liability of $14.0 million or 5.4% at July 31, 2020 as compared to the July 31, 2019 balance of $261.3 million was primarily driven by ordinary amortization in accordance with pension actuary reports. There was a decrease in the net pension liability of $0.7 million or 0.3% at July 31, 2019 as compared to July 31, 2018.

Deferred Inflows of Resources

Deferred inflows of resources represent amounts that will result in an increase of net position in a subsequent period.

Deferred inflows of resources related to pension

Deferred inflows of resources represent the difference between actual and expected earnings on pension plan investments. The increase in deferred inflows of resources related to pension of $1.6 million at July 31, 2020 as compared to the July 31, 2019 balance of $17.8 million is primarily related to changes in investment performance. The decrease in deferred inflows of resources related to pension of $17.5 million at July 31, 2019 as compared to July 31, 2018 is primarily related to changes in investment performance. There were $35.3 million in deferred inflows of resources related to pension at July 31, 2018.

Deferred inflows of resources related to OPEB

Deferred inflows of resources were recognized as a result of the implementation of GASB 75 and represent the difference between actual and expected earnings on OPEB plan investments. Deferred inflows of resources related to OPEB as of July 31, 2020 were $44.5 million as compared to $10.1 million as of July 31, 2019. The increase in deferred inflows of resources related to OPEB is primarily driven by changes in investment performance. There were $30.9 million in deferred inflows of resources related to OPEB at July 31, 2018.

PGW Payment to City

PGW made a payment of $18.0 million to the City in each of the City's Fiscal Years 2020, 2019 and 2018. The City has the right to obtain such payment from PGW in any lawful manner, including set off against payments the City would otherwise make to PGW.

At the direction of the City's Director of Finance and approval of City Council, PGW can increase its annual payment by an amount equal to or less than 10% (i.e., up to a $19.8 million annual payment). To the extent that PGW is directed by the City's Finance Director to increase its annual payment to an amount greater than $19.8 million, PGW must first gain approval from the PUC.

The obligation of PGW to make the payment to the City is subject and subordinate to the pledge and application of "Gas Works Revenues" and "Project Revenues," as such terms are defined in the 1998 General Ordinance and the Act, respectively. See "SECURITY AND SOURCES OF PAYMENT FOR THE 1998 ORDINANCE BONDS – Order of Application of Revenues" herein.

THE PGW CAFR

The "COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR FISCAL YEARS ENDED AUGUST 31, 2019 AND 2018 OF THE PHILADELPHIA GAS WORKS" (the "PGW CAFR") is attached as APPENDIX A. The PGW CAFR includes audited Financial Statements (as defined below), required supplemental information and unaudited Introductory and Statistical Sections as reflected in the Table of Contents in APPENDIX A.

PGW is owned by the City, and is accounted for in the City's audited financial statements as a component unit of the City. See APPENDIX C – "THE CITY OF PHILADELPHIA GOVERNMENT AND FINANCIAL INFORMATION." The City Controller has examined and expressed opinions on the basic financial statements of the City contained in the City's Comprehensive Annual Financial Reports for Fiscal Year 2019 (the "City FY 2019 CAFR") but not those contained in the PGW CAFR. The City Controller has not participated in the preparation of this Official Statement nor in the preparation of the budget estimates and projections and cash flow statements and forecasts set forth in various tables contained in this Official Statement. Consequently, the City Controller expresses no opinion with respect to any of the data contained in this Official Statement other than what is contained in the City FY 2019 CAFR. Some of the information set forth in APPENDIX C – "THE CITY OF PHILADELPHIA GOVERNMENT AND FINANCIAL INFORMATION" was derived from the City FY 2019 CAFR.

Independent Auditors

The basic financial statements of the Philadelphia Gas Works as of and for the Fiscal Years ended August 31, 2019 and August 31, 2018, included in APPENDIX A to this Official Statement (the "Financial Statements"), have been audited by KPMG LLP, as stated in their report appearing therein, dated December 20, 2019. Any financial information regarding the Philadelphia Gas Works other than in the Financial Statements has not been audited by any firm of independent auditors and no opinion on such information is expressed in this Official Statement.

Unaudited Statistical Section

PGW prepared the Statistical Section of the PGW CAFR to present comparative information to assist readers to better understand the Financial Statements, note disclosure and required supplementary information that appear elsewhere in the PGW CAFR and to more fully comprehend PGW's overall financial health. The information in the Statistical Section is presented for the past ten Fiscal Years.

The Statistical Section contains information regarding PGW's financial trends, revenue capacity, and debt capacity, certain demographic and economic information and operating information.

TAX MATTERS

Federal

Exclusion of Interest from Gross Income

In the opinion of Co-Bond Counsel, under existing statutes, regulations, rulings and court decisions, interest on the Bonds will not be includible in the gross income of the holders thereof for federal income tax purposes, assuming continuing compliance by the City with the requirements of the Internal Revenue Code of 1986, as amended (the "Code").

In rendering its opinion, Co-Bond Counsel have assumed compliance by the City with the covenants contained in the 1998 General Ordinance and the Tax Compliance Agreement that are intended to comply with the provisions of the Code relating to actions to be taken by the City in respect of the Bonds after issuance thereof to the extent necessary to effect or maintain the exclusion from federal gross income of the interest on the Bonds. These covenants relate to, inter alia, the use of and investment of proceeds of the Bonds and the rebate to the United States Treasury of specified arbitrage earnings, if any. Failure to comply with such covenants could result in interest on the Bonds becoming includible in gross income for federal income tax purposes from the date of issuance of the Bonds.

Other Federal Tax Matters

Ownership or disposition of the Bonds may result in other federal tax consequences to certain taxpayers, including, without limitation, certain S corporations, foreign corporations with branches in the United States, property and casualty insurance companies, taxpayers who have an initial basis in the Bonds greater or less than the principal amount thereof, individual recipients of Social Security or Railroad Retirement benefits, and taxpayers, including banks, thrift institutions and other financial institutions subject to Section 265 of the Code, who may be deemed to have incurred or continued indebtedness to purchase or to carry the Bonds.

Co-Bond Counsel are not rendering any opinion as to any federal tax matters other than those described under the caption "Exclusion of Interest from Gross Income" and expressly stated in the form of the opinions of Co-Bond Counsel included as APPENDIX H hereto. Prospective purchasers of the Bonds should consult their independent tax advisors with regard to all federal tax matters.

Pennsylvania

In the opinion of Co-Bond Counsel, under the laws of the Commonwealth of Pennsylvania as presently enacted and construed, interest on the Bonds is exempt from Pennsylvania personal income tax and Pennsylvania corporate net income tax; however, under the laws of the Commonwealth, as enacted and construed on the date hereof, any profits, gains or income derived from the sale, exchange or other disposition of the Bonds will be subject to Pennsylvania taxes and local taxes within the Commonwealth.

Co-Bond Counsel are not rendering any opinion as to any Commonwealth of Pennsylvania tax matters other than those described under the caption "TAX MATTERS – Pennsylvania" and expressly stated in the form of the opinions of Co-Bond Counsel included as APPENDIX H hereto. Prospective purchasers of the Bonds should consult their independent tax advisors with regard to all Commonwealth of Pennsylvania tax matters.

Other

The Bonds and interest thereon may be subject to state and local taxes in jurisdictions other than the Commonwealth of Pennsylvania under applicable state or local tax laws.

Purchasers of the Bonds should consult their independent tax advisors with regard to all state and local tax matters.

Changes in Federal and Pennsylvania Tax Law

From time to time, there are legislative proposals in the Congress and in state legislatures that, if enacted, could alter or amend the treatment of the Bonds for federal and state tax purposes or adversely affect the market value or marketability of the Bonds. It cannot be predicted whether or in what form any such proposal might be enacted or whether, if enacted, it would apply to bonds issued prior to enactment. In addition, from time to time regulatory actions are announced or proposed, and litigation is threatened or commenced, which, if implemented or concluded in a particular manner, could adversely affect the market value or marketability of the Bonds. It cannot be predicted whether any such regulatory action will be implemented, whether any particular litigation or judicial action will be commenced or, if commenced, how it will be resolved, or whether the Bonds or the market value or marketability thereof would be affected thereby.

General

The foregoing is only a general summary of certain provisions of the Code and Pennsylvania law as enacted and in effect on the date of this Official Statement and does not purport to be complete. Holders and prospective purchasers of the Bonds, especially those subject to special rules, should consult their own tax advisors as to the effects, if any, of the Code and state and local tax matters, including any pending or proposed legislation, regulatory initiatives or litigation.

The opinions expressed by Co-Bond Counsel are based upon existing legislation and regulations as interpreted by relevant judicial and regulatory authorities as of the date of delivery of the Bonds, and Co-Bond Counsel will express no opinion as of any date subsequent thereto or with respect to any pending legislation, regulatory initiatives or litigation.

RATINGS

Moody's, S&P and Fitch have assigned the Bonds underlying ratings of "A3" (stable outlook), "A" (stable outlook), and "BBB+" (positive outlook), respectively.

Moody's and S&P have assigned the Insured Bonds ratings of "A2" (stable outlook) and "AA" (stable outlook), respectively, based upon the delivery of the Policy in connection with the issuance and delivery of the Insured Bonds.

A rating, including any related outlook with respect to potential changes in such rating, reflects only the view of the rating agency giving such rating and is not a recommendation to buy, sell or hold the Bonds. An explanation of the procedure and methodology used by each rating agency and the significance of the rating it assigns to the Bonds may be obtained only from the rating agency furnishing the rating.

Ratings may be changed at any time, and no assurance can be given that they will not be revised downward or withdrawn entirely by any rating agency. Any such downward revision or withdrawal of a rating may have an adverse effect on the market price of the Bonds.

None of the City, PGW and the Underwriters has undertaken any responsibility to assure the maintenance of any particular rating on the Bonds and shall have no liability if a rating is lowered, withdrawn or suspended.

The City has agreed, in the Continuing Disclosure Agreement, to report actual rating changes on the Bonds. See "CONTINUING DISCLOSURE" herein.

NO LITIGATION

To the knowledge of the City of Philadelphia Law Department and, solely with respect to (E) below, based upon certain representations from PGW's General Counsel, after customary inquiry, no litigation is pending against the City before any court, public board or agency, or threatened in writing against the City (A) to restrain or enjoin the issuance, sale, execution or delivery of the Bonds, (B) which contests the validity or enforceability of the Bonds or any proceedings of the City taken with respect to the issuance, sale, execution or delivery thereof, (C) which contests the pledge or application of any moneys or security provided for the payment of the Bonds, (D) challenges the existence or powers of the City or (E) other than the named cases described in detail under "PHILADELPHIA GAS WORKS –Litigation" in which a final adverse determination, singly or in the aggregate, would have a material and adverse effect on PGW's operations or financial condition.

CERTAIN LEGAL MATTERS

All legal matters incident to the authorization, issuance and sale of the Bonds are subject to approval of the legality of the issuance of the Bonds by Eckert Seamans Cherin & Mellott, LLC and Andre C. Dasent, P.C., both of Philadelphia, Pennsylvania, Co-Bond Counsel. The proposed form of such opinions are included herein as APPENDIX H. Certain legal matters will be passed upon for the Underwriters by Hardwick Law Firm, LLC, of Philadelphia, Pennsylvania, Counsel to the Underwriters. Certain legal matters will be passed upon for the City by the City Solicitor. Certain legal matters will be passed upon for PGW by the Office of General Counsel of Philadelphia Gas Works and Eckert Seamans Cherin & Mellott, LLC of Harrisburg, Pennsylvania. Cozen O'Connor and Ahmad Zaffarese LLC, both of Philadelphia, Pennsylvania, as Co-Disclosure Counsel to the City for PGW, will each deliver a letter to the City and the Underwriters regarding certain matters related to PGW. Hawkins Delafield & Wood LLP, of Washington, D.C., as Disclosure Counsel to the City, will deliver a letter to the City and the Underwriters regarding certain matters relating to the information contained in APPENDIX C and APPENDIX D.

The various legal opinions to be delivered concurrently with the delivery of the Bonds express the professional judgment of the law firms rendering the opinions as to the legal issues explicitly addressed therein. In rendering a legal opinion, the law firm does not become an insurer or guarantor of that expression of professional judgment, of the transaction opined upon, or of the future performance of parties to the transaction. Nor does the rendering of an opinion guarantee the outcome of any legal dispute that may arise out of the transaction. These legal opinions, generally, are based on existing law and fact and each law firm expressly disclaims any obligation to update its opinions if there are changes in law or facts subsequent to the date of such opinions.

CO-FINANCIAL ADVISORS

PFM Financial Advisors LLC and Phoenix Capital Partners, LLP both of Philadelphia, Pennsylvania, have served as financial advisors (the "Financial Advisors") to the City in respect of the issuance of the Bonds. The Financial Advisors assisted in the preparation of this Official Statement and in other matters relating to the planning, structuring and issuance of the Bonds.

The Financial Advisors have received and reviewed but have not independently verified information in this Official Statement for accuracy or completeness (except, as to each Financial Advisor, the information in this section). Investors should not draw any conclusions as to the suitability of the Bonds from, or base any investment decisions upon, the fact that the Financial Advisors have advised the City with respect to the Bonds. The Financial Advisors' fees for this issue are contingent upon the sale and issuance of the Bonds.

The Financial Advisors are financial advisory and consulting organizations and are registered municipal advisors and are not engaged in the business of underwriting, marketing or trading of municipal securities or any other negotiable instruments.

CERTAIN RELATIONSHIPS

PFM Financial Advisors LLC, financial advisor to the City, acts as a consultant to PGW on certain management and labor relations issues and has provided testimony before the PUC on several PGW rate cases. Eckert Seamans Cherin & Mellott, LLC and Andre C. Dasent, P.C. each provides certain legal services to the City and to PGW. Cozen O'Connor and Ahmad Zaffarese LLC each provides certain legal services to the City on unrelated matters.

UNDERWRITING

The underwriters listed on the cover page to this Official Statement (the "Underwriters"), subject to the terms and conditions of the Bond Purchase Contract between the City and Underwriters have agreed to purchase the: (i) Series A Bonds at a purchase price of $247,737,514.47 (which is equal to the par amount of the Series A Bonds of $203,160,000.00 plus original issue premium of $45,570,449.75 less an Underwriters' discount of $992,935.28), and (ii) Series B Bonds at a purchase price of $58,371,272.24 (which is equal to the par amount of the Series B Bonds of $50,765,000.00 plus original issue premium of $7,837,875.80 less an Underwriters' discount of $231,603.56).

The Underwriters may offer and sell the Bonds to certain dealers and others (including sales for deposit into investment trusts, certain of which may be sponsored or managed by one or more of the underwriters) at prices lower than the public offering prices stated on the inside cover page hereof. The Bonds may be offered and sold to certain dealers (including the Underwriters and other dealers depositing Bonds into investment trusts) at prices lower than such offering prices, and such public offering prices may be changed from time to time by the Underwriters without prior notice.

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Under certain circumstances, the Underwriters and their affiliates may have certain creditor and/or other rights against the City in connection with such activities.

In the course of their various business activities, the Underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own accounts and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of the City (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the City or PGW. The Underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

A Siebert Williams Shank & Co., LLC affiliate (“Affiliate”), which is a registered investment advisor, has three sub-advisory agreements with PFM Asset Management LLC, which is an investment advisor affiliate of PFM Financial Advisors LLC. The sub-advisory agreements do not relate to the City. Affiliate’s business is separate from Siebert Williams Shank & Co., LLC’s business and the employees of Siebert Williams Shank & Co., LLC who conduct business with the City are not involved in the activities of Affiliate.

PNC Capital Markets LLC, an Underwriter for the Bonds, may offer to sell to its affiliate, PNC Investments LLC, securities in PNC Capital Markets LLC’s inventory for resale to PNC Investments LLC’s customers, including securities such as the Bonds. PNC Capital Markets LLC may share with PNC Investments LLC a portion of the fee or commission paid to PNC Capital Markets LLC if any Bonds are sold to customers of PNC Investments LLC.

BofA Securities, Inc., an underwriter for the Bonds, has entered into a distribution agreement with its affiliate Merrill Lynch, Pierce, Fenner & Smith Incorporated (“MLPF&S”). As part of this arrangement, BofA Securities, Inc. may distribute securities to MLPF&S, which may in turn distribute such securities to investors through the financial advisor network of MLPF&S. As part of this arrangement, BofA Securities, Inc. may compensate MLPF&S as a dealer for their selling efforts with respect to the Bonds.

The City will use a portion of the proceeds from the Bonds to redeem and refund the Refunded Bonds. To the extent an Underwriter or an affiliate thereof is an owner of the Refunded Bonds, such Underwriter or its affiliate, as applicable, would receive a portion of the proceeds from the issuance of the Bonds contemplated herein in connection with such Refunded Bonds being redeemed and refunded by the City.

CONTINUING DISCLOSURE

In order to assist the Underwriters in complying with the requirements of Rule l5c2-12 promulgated by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended, the City will enter into a Continuing Disclosure Agreement with Digital Assurance Certification, L.L.C., as dissemination agent for the benefit of the Registered Owners (as defined in such agreement) of the Bonds, to be dated the date of delivery of the Bonds, the form of which is attached hereto as APPENDIX F.

During the last five years, the City has not fully satisfied its obligations to file annual updates to certain tables of the types contained in APPENDIX C by the deadlines provided in its continuing disclosure agreements. Such annual updates were made through incorporation by reference to the City's offering documents, but, in some instances, were done so after the applicable filing deadline. The City engaged a third-party vendor to monitor its continuing disclosure obligations and was not aware that the annual updates made through incorporation by reference to the City's offering documents were not compliant in all respects. The City is undertaking a comprehensive review of its process for providing annual updates to the tables of the types contained in APPENDIX C to ensure future compliance. On December 23, 2019, the City filed a failure to file notice describing the foregoing circumstances. Such notice was subsequently amended to provide further clarification.

In connection with the continuing disclosure annual filing for Gas Works Revenue Bonds that was made in February 2016, certain annual financial information that should have been included was not filed until August 2016. The late-filed information was required by a continuing disclosure agreement that had been entered into in connection with Gas Works Revenue Bonds that were issued in August 2015. The information that the City filed in February 2016 satisfied all prior continuing disclosure agreements relating to Gas Works Revenue Bonds. In connection with the continuing disclosure annual filing for certain Gas Works Revenue Bonds that was made in February 2019, the audited financial statements for the Philadelphia Gas Works' Fiscal Year ended August 31, 2018, were inadvertently not filed until March 2019.

The Philadelphia Parking Authority (the "PPA"), as the issuer, and the City, as an obligated person, entered into separate continuing disclosure agreements relating to the PPA's Parking System Revenue Bonds, Series 1999A (the "1999A PPA Bonds"). For the City's continuing disclosure agreement relating to such bonds, it is required to file (i) its CAFR and (ii) annual updates to certain financial information and operating data of the type included in APPENDIX C. During the previous five years, the City's CAFRs were properly filed for the 1999A PPA Bonds when due. However, the annual updates to certain financial information and operating data of the type included in APPENDIX C, which are made through incorporation by reference to the City's offering documents, were not properly linked to the 1999A PPA Bonds. Such error has been corrected.

The City has reviewed, updated, and is implementing with respect to PGW disclosure policies and procedures to assist the City in complying with its continuing disclosure undertakings in the future.

CERTAIN REFERENCES

All summaries of the provisions of the Bonds and the security therefor, the Act, the Inventory and Receivables Financing Act, the Gas Choice Act, the Constitution and other laws of the Commonwealth, the 1998 General Ordinance, the Thirteenth Supplemental Ordinance, the Fifteenth Supplemental Ordinance and the Bond Committee Authorization, set forth herein, including APPENDIX E hereto, and all summaries and references to other materials not purported to be quoted in full, are only brief outlines of certain provisions thereof and do not constitute complete statements of such documents or provisions. Copies of the Act, the 1998 General Ordinance, the Thirteenth Supplemental Ordinance and the Fifteenth Supplemental Ordinance are available from the Office of the Director of Finance, Municipal Services Building, 1401 John F. Kennedy Boulevard, Suite 1330, Philadelphia, Pennsylvania 19102. Reference is made hereby to the complete documents relating to such matters for the complete terms and provisions thereof. So far as statements are made in this Official Statement involving matters of opinion, whether or not expressly so stated, they are made merely as such and not as representations of fact.

MISCELLANEOUS

This Official Statement is made available only in connection with the sale of the Bonds and may not be used in whole or in part for any other purpose. **This Official Statement is not to be construed as a contract or agreement between the City, PGW or the Underwriters and the purchasers or owners of any of the Bonds.** Any statements made in this Official Statement involving matters of opinion, whether or not expressly so stated, are intended merely as opinions and not as representations of fact. No representation is made that any opinions or estimates herein will be realized. The information and expressions of opinion herein are subject to change without notice, and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of PGW or the City since the date hereof. The City will provide financial and other information regarding PGW from time to time to S&P, Moody's and Fitch in connection with securities ratings assigned by those rating agencies to obligations payable from Gas Works Revenues.

The attached Appendices are an integral part of this Official Statement and should be read in their entirety together with the foregoing statements.

[Remainder of Page Intentionally Left Blank]

This Official Statement has been duly executed and delivered by the following officer on behalf of the City of Philadelphia.

CITY OF PHILADELPHIA, PENNSYLVANIA

By: /s/ Rob Dubow
Name: Rob Dubow
Title: Director of Finance

APPENDIX A

COMPREHENSIVE ANNUAL FINANCIAL REPORT
FOR FISCAL YEARS ENDED AUGUST 31, 2019 AND 2018
OF THE PHILADELPHIA GAS WORKS

[THIS PAGE INTENTIONALLY LEFT BLANK]

ENERGY FOR ALL OF US

PGW

Philadelphia Gas Works

(A Component Unit of the City of Philadelphia)

Comprehensive Annual Financial Report

For Fiscal Years Ended August 31, 2019 and 2018

www.pgworks.com

800 West Montgomery Avenue

Philadelphia, PA 19122

Philadelphia Gas Works
(A Component Unit of the City of Philadelphia)
Comprehensive Annual Financial Report
For Fiscal Years Ended August 31, 2019 and 2018

James F. Kenney
Mayor, City of Philadelphia, PA

Seth A. Shapiro
Chairman, Board of Directors,
Philadelphia Facilities
Management Corporation

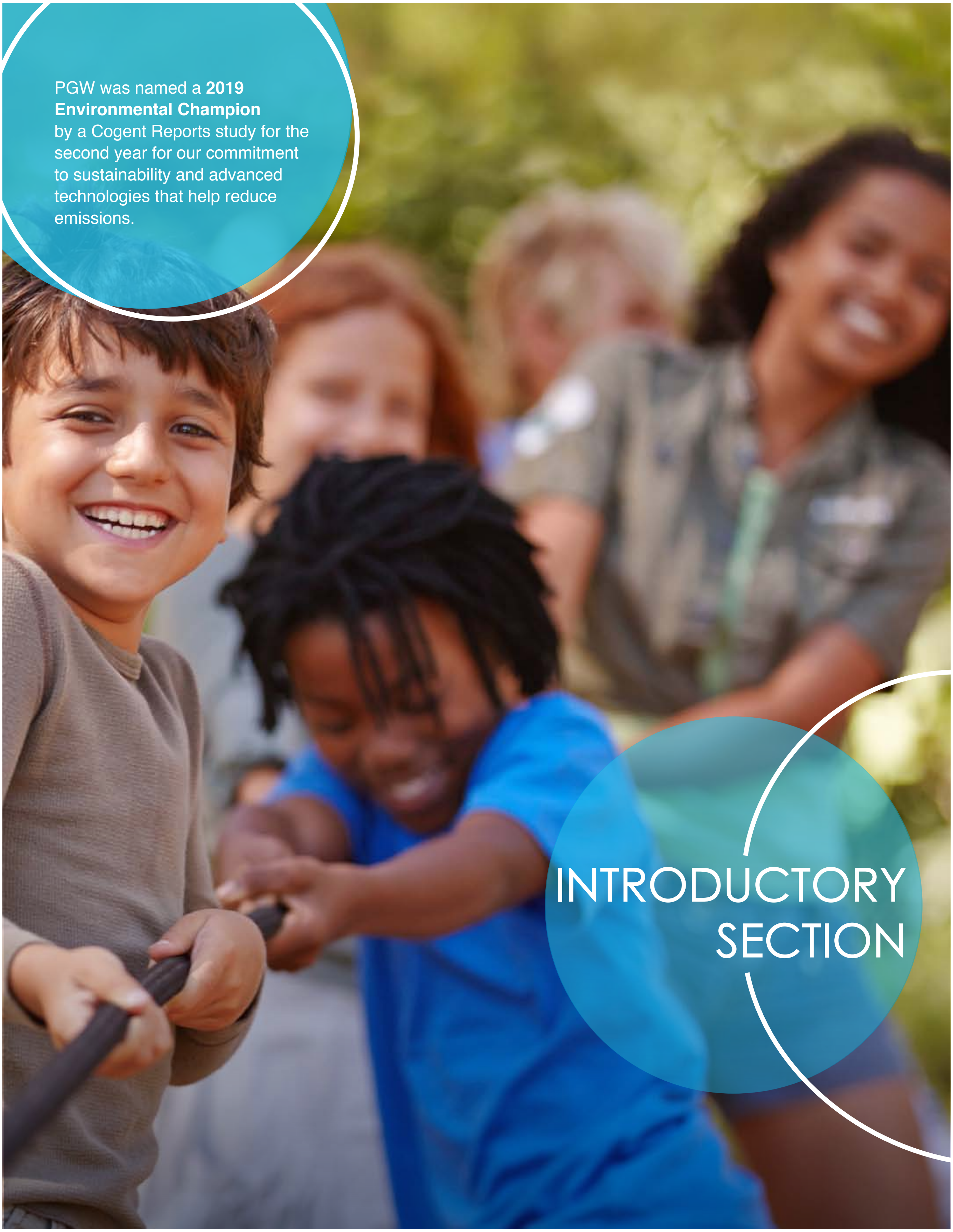
Craig E. White
President & Chief Executive Officer,
Philadelphia Gas Works

Joseph F. Golden, Jr.
Executive Vice President &
Acting Chief Financial Officer,
Philadelphia Gas Works

Prepared by:
The Finance Organization
Philadelphia Gas Works
Philadelphia, PA

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Table of Contents

(This page has been intentionally left blank)


PGW was named a **2019 Environmental Champion** by a Cogent Reports study for the second year for our commitment to sustainability and advanced technologies that help reduce emissions.
INTRODUCTORY SECTION

(This page has been intentionally left blank)

PHILADELPHIA GAS WORKS
Joseph F. Golden, Jr. • Executive Vice President and Acting Chief Financial Officer
800 West Montgomery Avenue • Philadelphia, PA 19122
Phone: 215-684-6464
Email: JGolden@pgworks.com

Dear Customers & Stakeholders,

The Comprehensive Annual Financial Report (CAFR) of the Philadelphia Gas Works (PGW) for the years ended August 31, 2019 and 2018 is attached hereto. The financial statements included were prepared in accordance with Generally Accepted Accounting Principles in the United States of America (U.S. GAAP). Responsibility for both the accuracy and completeness of the data rests with PGW management.

PGW management is responsible for the preparation and fair presentation of the financial statements in accordance with U.S. GAAP. This includes the design, implementation and maintenance of internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to error or fraud. The internal controls are subject to periodic evaluation by management in order to determine their adequacy. This evaluation recognizes that: (1) the cost of a control should not exceed the benefits to be derived; and (2) the valuation of costs and benefits requires estimates and judgments by PGW management.

The financial statements were audited by KPMG LLP (KPMG), a firm of licensed certified public accountants. The annual audit was conducted in accordance with auditing standards generally accepted in the United States of America. Those standards require that KPMG plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of PGW's internal controls over financial reporting. Accordingly, no such opinion was expressed as to PGW's internal controls over financial reporting. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

KPMG's opinion was unmodified and states, in part, that the financial statements "present fairly, in all material respects, the financial position of Philadelphia Gas Works as of August 31, 2019 and 2018, and the changes in its financial position and its cash flows for the years then ended, in accordance with U.S. generally accepted accounting principles." The independent auditor's report is presented as the first component of the financial section of this report and should be read in its entirety.

Management has provided a narrative to accompany the basic financial statements. This narrative is known as Management's Discussion and Analysis (MD&A). This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. This letter and the MD&A should be read in their entireties.

PROFILE OF PHILADELPHIA GAS WORKS

PGW, founded in 1836, began with just 46 lights along Second Street. Today, PGW brings vital energy to homes and businesses in every corner of the City. In fact, 510,000 customers rely on PGW 24 hours a day, 365 days a year to provide safe, reliable natural gas to affordably meet Philadelphia's energy demands. The approximately 78 billion cubic feet delivered by PGW annually helps ensure Philadelphians have the energy they need to care for their families and customers.

PGW's Mission is led by the men and women of PGW who maintain and improve PGW's 6,000+ mile distribution system, which consists of approximately 3,000 miles of gas mains and 3,000 miles of gas service lines. As the largest municipally-owned utility in the U.S., PGW is focused on enhancing the quality of life for all Philadelphians – in every Philadelphia neighborhood.

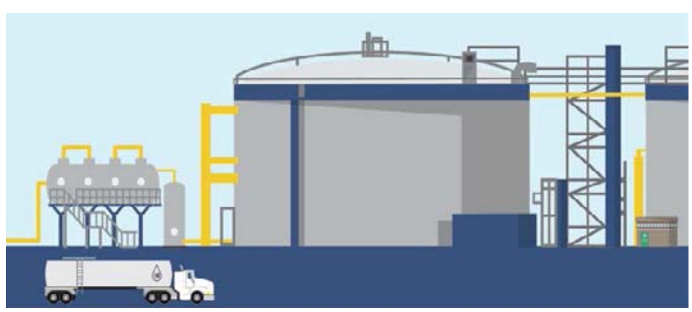
ENERGY FOR ALL OF US

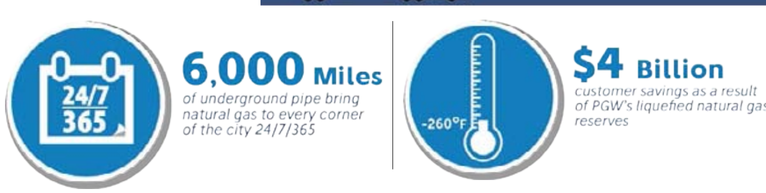
PGW recognizes the financial constraints and challenges our communities face, and we endeavor in all that we do to deliver affordable energy.

In FY 2019, Philadelphia City Council granted approval of the framework of a public-private-partnership (P3) at our Passyunk Liquefied Natural Gas (LNG) plant. Our project "partner", Passyunk Energy Center LLC, will market and sell LNG, opening the door to a potential new revenue stream to PGW. This revenue will be reinvested right back into the PGW.

LNG is not a new endeavor for PGW. We've been producing LNG for approximately 50 years. In that time, the use of LNG reserves at our Passyunk and Port Richmond facilities has saved our customers nearly $4 billion. That's real savings for PGW's customers.

More and more people are turning to natural gas as their energy source. For the fifth consecutive year, PGW has seen an increase in its residential customer base. We're serving 10,000 more customers in FY 2019 than in FY 2014.





Every customer – whether they're new to the City or have been here many years – deserves the same opportunity and access to safe, reliable and affordable energy. PGW's infrastructure improvement program aims to remove all vintage pipe from the system and replace it with new state-of-the-art materials. This improvement program, in FY 2019 alone, accounted for the upgrading of over 34 miles of pipeline. PGW invests millions of dollars annually to maintain and modernize our system, and expects to continue to do so for years to come.

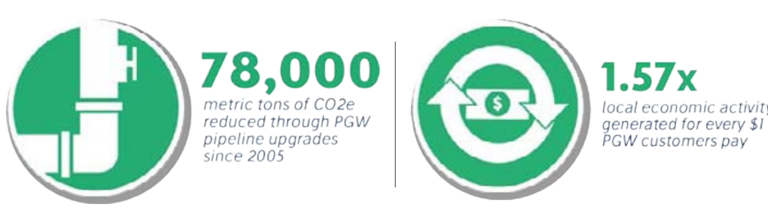
Upgrading our infrastructure has environmental benefits as well. PGW's infrastructure upgrades have reduced 78,000 metric tons of CO2e since 2005. That is equal to eliminating the emissions of approximately 9,000 homes, annually.

Right now, our communities are calling for businesses, including PGW, to have more sustainable practices. Building a more sustainable Philadelphia takes team work. As a result of PGW's partnerships with the Philadelphia Phillies and the Philadelphia Eagles, every home run hit by a Phillies' player, PGW plants a tree in a local neighborhood or watershed area. For every field goal made by the Eagles, PGW plants 10 trees in Neshaminy Park. After the 2019 playing seasons wrapped up, over 500 new trees in our area are or will be planted.

For customers looking for opportunities to save energy and reduce their carbon footprint at home, PGW partners with local agencies, public officials and community groups to offer weatherization workshops, energy efficiency tips and more. In FY 2019, we attended hundreds of events throughout the City, assisting and educating more than 25,000 customers on how to achieve greater energy efficiencies.

For large-scale customers who rely on fuel oil, coal or international fuel imports, use of natural gas leads to a cleaner future. Businesses are turning to PGW for technologies like Combined Heat & Power, natural gas conversions, and energy efficient incentives through our EnergySense Program. In April 2019, PGW EnergySense awarded $120,000 to National Real Estate at East Market in Center City for its retrofit work. EnergySense is the longest-running, voluntary demand-side management program for natural gas customers in Pennsylvania.

PGW recognizes that sustainability is fundamental to our daily operations, which is why we are committed to encouraging our customers and stakeholders in their own energy efficiency efforts.



ACKNOWLEDGEMENTS

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to PGW for its CAFR for the fiscal year ended August 31, 2018. This was the seventh straight year that PGW received this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish a CAFR that satisfies both U.S. GAAP and legal requirements. The Certificate of Achievement is valid for a period of one year only. PGW believes that our current report continues to conform to the Certificate of Achievement program requirements and is submitting it to the GFOA for consideration for another certificate. This report for FY 2019 is PGW's eighth submission to the program. The preparation of the CAFR on a timely basis was made possible by the dedicated service of the entire staff of the Finance organization as well as various other departments within PGW. Each has my sincere appreciation for their valuable contributions.

On behalf of Philadelphia Gas Works, which has proudly served the needs of Philadelphia, its residents and its businesses since 1836, I am pleased to present PGW's CAFR, for the fiscal year ended August 31, 2019.

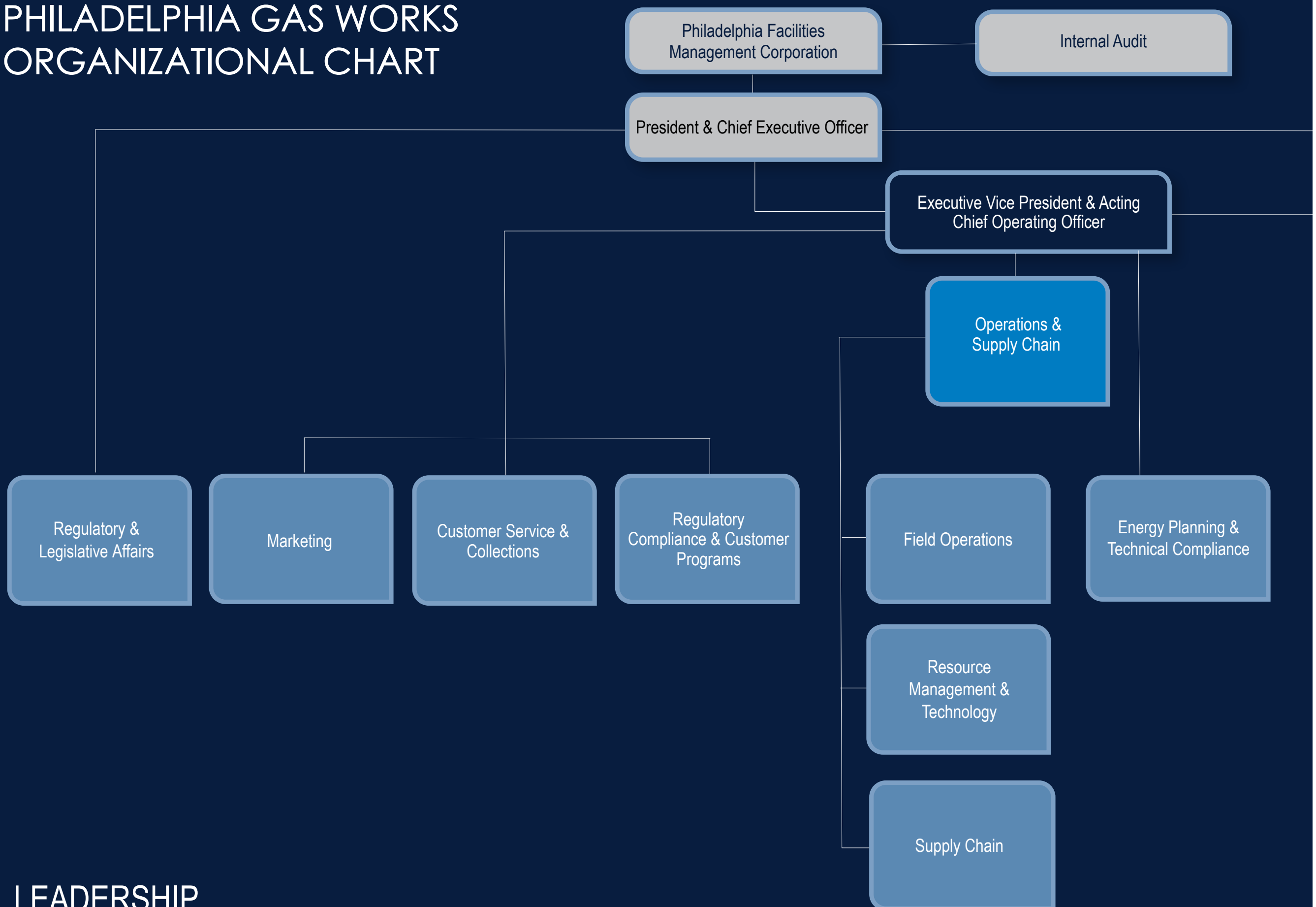
Respectfully submitted,

Joseph F. Golden, Jr.
Executive Vice President and Acting Chief Financial Officer

February 27, 2020

(This page has been intentionally left blank)

PHILADELPHIA GAS WORKS ORGANIZATIONAL CHART



LEADERSHIP

Craig E. White
President & Chief Executive Officer

Douglas A. Moser
Executive Vice President &
Acting Chief Operating Officer

Joseph F. Golden, Jr.
Executive Vice President &
Acting Chief Financial Officer

Charles J. Grant
Senior Vice President,
Human Resources, Labor &
Corporate Communications

Raquel N. Guzmán, Esquire
Senior Vice President,
Legal & General Counsel

Raymond M. Snyder
Senior Vice President,
Gas Management

Raymond J. Welte
Senior Vice President,
Operations &
Supply Chain

Eloise N. Young
Senior Vice President,
Strategic Planning &
Information Services

Denise Adamucci
Vice President,
Regulatory Compliance &
Customer Programs

Bernard L. Cummings
Vice President,
Customer Service & Collections

Kenneth S. Dybalski
Vice President,
Energy Planning &
Technical Compliance

Daniel M. Furtek
Vice President,
Resource Management &
Technology

William J. Gallagher
Vice President,
Budget & Strategic Development

Joseph R. Hawkinson
Vice President,
Field Operations

Daniel E. Leonard, Jr.
Controller

Anthony P. Mauro
Vice President,
Supply Chain

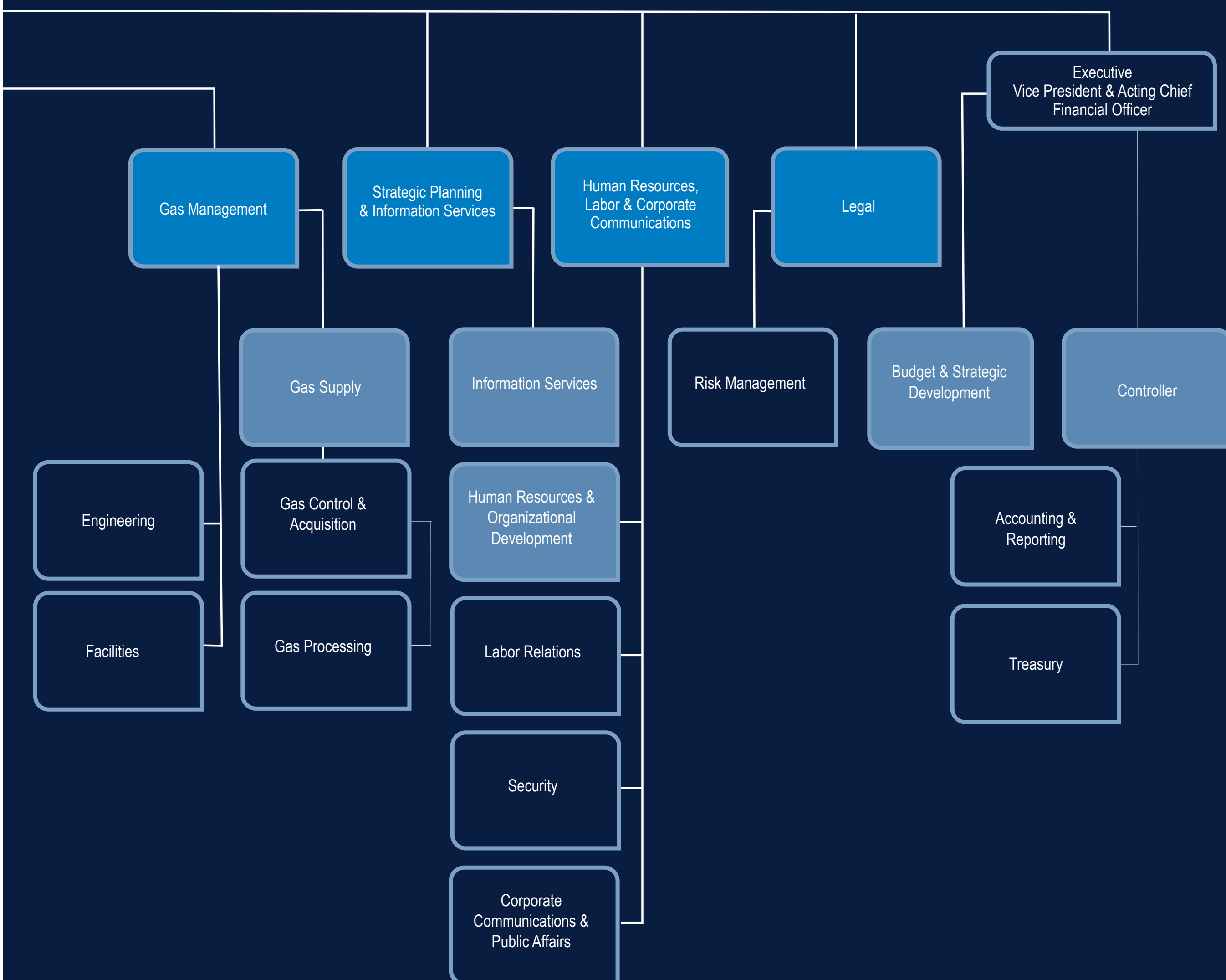
Gregory Stunder
Vice President,
Regulatory & Legislative
Affairs

Florian Teme
Vice President,
Marketing

Lorraine S. Webb
Vice President,
Human Resources &
Organizational
Development

Frank Weigert
Chief Information Officer
& Vice President,
Information Services

John C. Zuk
Vice President,
Gas Supply



BOARD OF DIRECTORS

Seth A. Shapiro

Chief Operating Officer,
The Goldenberg Group
Board Chairman
Audit/Finance Committee

Marian B. Tasco

Former Majority Leader,
Philadelphia City Council
Workforce Development
Committee

Catherine M. Paster

Former First Deputy
Director of Finance,
City of Philadelphia
Board Treasurer,
Audit/Finance Committee

James Engler, Esq.

Chief of Staff,
City of Philadelphia
Board Vice-Chair,
Workforce Development
Committee

Leigh Whitaker, Esq.

Director for City Relations,
University of Pennsylvania
Board Secretary
Chair, Workforce
Development Committee

Albert Mezzaroba, Esq.

Of Counsel, Genova Burns
Chair, Audit/Finance
Committee

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Philadelphia Gas Works

Pennsylvania

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

August 31, 2018

Christopher P. Morrill

Executive Director/CEO

Safety is a habit and at the foundation of everything we do. In 2019, PGW was awarded the **System Operational Achievement Recognition Award** from the American Public Gas Association.

FINANCIAL SECTION

KPMG LLP
1601 Market Street
Philadelphia, PA 19103-2499

Independent Auditors' Report

The Controller of the City of Philadelphia and Chairman and Members of the Philadelphia Facilities Management Corporation Philadelphia, Pennsylvania:

We have audited the accompanying financial statements of Philadelphia Gas Works (the Company), a component unit of the City of Philadelphia, as of and for the years ended August 31, 2019 and 2018, and the related notes to the financial statements, which collectively comprise the Company's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Philadelphia Gas Works, as of August 31, 2019 and 2018, and the changes in its financial position, and its cash flows for the years then ended, in accordance with U.S. generally accepted accounting principles.

Required Supplementary Information

U.S. generally accepted accounting principles require that management's discussion and analysis on pages 3-16 and the required supplementary information related to net pension and OPEB obligations as listed in the table of contents on pages 86-89 to be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

The introductory and statistical sections have not been subjected to the auditing procedures applied in the audits of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

KPMG LLP

Philadelphia, Pennsylvania
December 20, 2019

The narrative overview and analysis of the financial statements of Philadelphia Gas Works (the Company or PGW) for the years ended August 31, 2019 and 2018 have been prepared by PGW's management. The information presented here is unaudited and should be read in conjunction with additional information contained in PGW's financial statements.

Financial Highlights

- The Fiscal Year (FY) 2019 weather reflected a 1.0% colder than normal winter. The FY 2019 period was 0.2% colder than the prior year but firm gas sales decreased by 1.3 Billion Cubic Feet (Bcf). The Weather Normalization Adjustment (WNA) Clause, which was in effect from October 2018 through May 2019, resulted in heating customers receiving charges totaling $1.6 million. The FY 2018 reflected a 0.6% warmer than normal winter. However, the FY 2018 period was 12.2% colder than the prior year and firm gas sales increased by 4.5 Bcf from the prior year. The WNA Clause, which was in effect from October 2017 through May 2018, resulted in heating customers receiving credits totaling $3.8 million.
- PGW achieved 24-month collection rates of 96.3% in FY 2019, 95.4% in FY 2018, and 96.5% in FY 2017. For FY 2019, the collection rate is calculated by dividing the total gas receipts collected from September 1, 2017 through August 31, 2019 by the total gas billings that were applied to PGW customers' accounts from September 1, 2017 through August 31, 2019. The same methodology was utilized in FY 2018 and FY 2017.
- PGW continues to have various business initiatives that pertain to improving collections, productivity, and operational efficiencies throughout the Company. PGW, at the end of FY 2019, FY 2018, and FY 2017, had no Gas Works Revenue Capital Project Commercial Paper Notes (Capital Project Notes) or Gas Works Revenue Notes outstanding. The cash balances at the end of FY 2019 and FY 2018 were $124.1 million and $131.1 million, respectively. PGW had a cash balance of $88.5 million at the end of FY 2017.
- At December 05, 2019 and December 12, 2018, $120.0 million was available from the commercial paper program. The cash balance on December 05, 2019 and on December 12, 2018 was $80.3 million and $83.6 million, respectively.
- The Company's FY 2020 Capital Budget was approved by the City Council of the City of Philadelphia in an amount not to exceed $127.7 million and funding was provided to continue the implementation of an 18-mile Cast Iron Main Replacement (CIMR) Program. The CIMR Program cost for FY 2020 is expected to be $29.0 million. The total six-year cost of the CIMR Program is forecasted to be $185.1 million.
- In FY 2018, the Company retrospectively adopted a new required Other Postemployment Benefit (OPEB) standard, Governmental Accounting Standards Board (GASB) Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (GASB 75), as of September 1, 2016. The adoption of this standard resulted in the following:
  - Recognition of a net OPEB liability for the single-employer Philadelphia Gas Works OPEB Plan (OPEB Plan) of $350.4 million at August 31, 2017, which increased to $378.9 million at August 31, 2018, and increased to $336.1 million at August 31, 2019.
  - Recognition of deferred inflows and outflows related to OPEB resulted in balances of $91.2 million and $81.0 million in deferred outflows and $69.9 million and $36.1 million of deferred inflows at August 31,

2019 and 2018, respectively. These deferred inflows and outflows of resources are related to differences between actual and expected investment returns, assumption changes, demographic factors, differences between expected and actual experience, and contributions made after the measurement date. GASB 75 requires changes in expected versus actual investment returns to be amortized as OPEB expense over five years and actuarial assumption changes and experience differences to be amortized as OPEB expense over the average working lifetime of all OPEB Plan participants. The impact of this amortization over time will be increased volatility in annual amounts recognized as OPEB expense compared to amounts recognized under prior accounting standards.

– A decrease in OPEB expense previously reported for the year ended August 31, 2017 of $8.8 million was reflected in the Statements of Revenues and Expenses and Changes in Net Position as a decrease in administrative and general from $88.9 million and an increase in other postemployment benefits expense from $7.4 million to $28.1 million.

– OPEB expense was $28.4 million and $32.9 million for the year ended August 31, 2019 and August 31, 2018, respectively.

Overview of the Financial Statements

The discussion and analysis are intended to serve as an introduction and overview of PGW's basic financial statements. PGW's financial statements comprise the following:

Financial statements provide both long-term and short-term information about PGW's overall financial condition, results of operations, and cash flows.

The notes to basic financial statements provide additional information that is essential to a full understanding of the data presented in PGW's financial statements. The notes can be found immediately following the basic financial statements.

The financial statements report information about PGW as a whole using accounting methods similar to those used by private sector business. The three statements presented are as follows:

The statements of revenues and expenses and changes in net position present revenues and expenses and their effects on the change in net position during the fiscal year. These changes in net position are recorded as soon as the underlying event giving rise to the change occurs, regardless of when cash is received or paid.

The balance sheets include all of PGW's assets, liabilities, and deferred inflows and outflows of resources, with the difference between the assets and deferred outflows of resources and liabilities and deferred inflows of resources reported as net position. Over time, increases or decreases in net position are indicators of whether PGW's financial position is improving or deteriorating.

The statements of cash flows provide relevant information about the cash receipts and cash payments of an enterprise during a period and the impact on PGW's financial position.

Condensed Statements of Revenues and Expenses and Changes in Net Position

(Thousands of U.S. dollars)

	Years ended August 31		
	2019	**2018**	**2017 (a)**
Total gas revenues	$ 664,084	628,254	588,414
Other revenues	20,644	19,245	17,797
Total operating revenues	684,728	647,499	606,211
Fuel expense	206,825	186,265	179,230
All other operating expenses	335,233	343,845	321,623
Total operating expenses	542,058	530,110	500,853
Operating income	142,670	117,389	105,358
Interest and other income	10,788	4,634	1,989
Total interest expense	(39,596)	(41,940)	(41,008)
Distribution to the City of Philadelphia	(18,000)	(18,000)	(18,000)
Excess of revenues over expenses	95,862	62,083	48,339
Net position, beginning of year	111,700	49,617	1,278
Net position, end of year	$ 207,562	111,700	49,617

(a) As restated as a result of the implementation of GASB 75

Operating Revenues

Operating revenues in FY 2019 were $684.7 million, an increase of $37.2 million, or 5.7%, from FY 2018. The increase resulted from higher natural gas sendout, which was approximately 1.1% higher in FY 2019 when compared to FY 2018 and from a higher Gas Cost Rate (GCR) driven by increased commodity prices. Operating revenues in FY 2018 were $647.5 million, an increase of $41.3 million, or 6.8%, from FY 2017. The increase resulted from higher natural gas sendout, which was approximately 9.7% higher in FY 2018 when compared to FY 2017, and a base rate increase approved by the Pennsylvania Public Utility Commission (PUC) in the Settlement Agreement which became effective December 1, 2017.

Total sales volumes, including gas transportation deliveries, in FY 2019 increased by 0.5 Bcf, or 0.7%, to 76.4 Bcf from the FY 2018 sales volumes of 75.9 Bcf. In FY 2019, firm gas sales of 43.2 Bcf were 1.3 Bcf or 2.9% lower than FY 2018 and interruptible gas sales approximated the FY 2018 level. The volume of natural gas transported for gas transportation customers increased by 2.3 Bcf to 33.0 Bcf from the 30.7 Bcf level experienced in FY 2018. Total sales volumes, including gas transportation deliveries, in FY 2018 increased by 7.2 Bcf, or 10.5%, to 75.9 Bcf from the FY 2017 sales volumes of 68.7 Bcf. In FY 2018, firm gas sales of

44.5 Bcf were 4.5 Bcf or 11.4% higher than FY 2017 and interruptible gas sales approximated the FY 2017 level. The volume of natural gas transported for gas transportation customers increased by 2.0 Bcf to 30.7 Bcf from the 28.7 Bcf level experienced in FY 2017.

Total sales volumes, including gas transportation deliveries, in FY 2018 increased by 7.2 Bcf, or 10.5%, to 75.9 Bcf from the FY 2017 sales volumes of 68.7 Bcf. In FY 2018, firm gas sales of 44.5 Bcf were 4.5 Bcf or 11.4% higher than FY 2017 and interruptible gas sales approximated the FY 2017 level. The volume of natural gas transported for gas transportation customers increased by 2.0 Bcf to 30.7 Bcf from the 28.7 Bcf level experienced in FY 2017.

Provision for Uncollectible Accounts – The provision for uncollectible accounts in FY 2019 totaled $30.0 million, a decrease of $0.8 million or 2.6% from FY 2018. The provision for uncollectible accounts in FY 2018 totaled $30.8 million, an increase of $0.8 million or 2.7% from FY 2017. The decrease in the provision for uncollectible accounts in FY 2019 is mainly due to higher collection rates achieved in FY 2019. PGW is committed to continuing its collection efforts in an attempt to reduce outstanding delinquent account balances and to provide assistance to those customers who qualify for low-income grants and payment programs to help those customers maintain their gas service.

In FY 2019, the number of customers served by PGW increased from the previous year and was approximately 510,000 customers. The number of customers served by PGW at the end of FY 2018 and FY 2017 was approximately 508,000 and 505,000, respectively. There were approximately 25,000 Commercial accounts, reflecting no change from the previous two fiscal years. Industrial accounts were unchanged from the previous two fiscal years at approximately 700 customers. The number of residential accounts in FY 2019 increased to approximately 484,500 customers, an increase of 2,200 customers from the FY 2018 level, and 5,200 customers from the FY 2017 level.

Operating Expenses

Total operating expenses, including fuel costs, in FY 2019 were $542.1 million, an increase of $12.0 million or 2.3% from FY 2018. The increase for FY 2019 was mainly caused by increased natural gas utilization and increased depreciation expense. These increases were partially offset by decreased field operation expense, administrative and general, and amortization of the unfunded actuarially determined pension expense. Total operating expenses, including fuel costs, in FY 2018 were $530.1 million, an increase of $29.2 million or 5.8% from FY 2017. The increase for FY 2018 was mainly caused by increased natural gas utilization. These increases were partially offset by a decrease in the amortization of the unfunded actuarially determined pension expense.

Cost of Fuel – The cost of natural gas utilized increased by $20.5 million or 11.0% to $206.8 million in FY 2019 compared with $186.3 million in FY 2018. The average commodity price per Thousand Cubic Feet (Mcf) increased by $0.39 or $17.8 million, while the volume of gas utilized decreased by 1.1 Bcf, 2.3% or $3.0 million. The pipeline supplier refunds in FY 2019 and FY 2018 were less than $0.1 million but demand charges increased by $5.7 million compared to FY 2018.

(Continued)

The cost of natural gas utilized increased by $7.1 million or 4.0% to $186.3 million in FY 2018 compared with $179.2 million in FY 2017. The average commodity price per Mcf approximated the FY 2017 average commodity price; however, the volume of natural gas utilized increased by 3.7 Bcf, 8.4% or $10.0 million. The pipeline supplier refunds in FY 2018 and FY 2017 were less than $0.1 million but demand charges increased by $2.9 million compared to FY 2017. The cost of fuel includes all commodity charges and demand charges net of pipeline refunds.

Variations in the cost of purchased gas are passed through to customers under the GCR provision of PGW's rate schedules. Over recoveries or under recoveries of purchased gas costs are subtracted from or added to gas revenues and are included in other current assets or other current liabilities, thereby eliminating the effect that recovery of gas costs would otherwise have on net income.

The average natural gas commodity prices for utilized natural gas for FY 2019, FY 2018, and FY 2017 were $3.12, $2.73, and $2.73 per Mcf, respectively.

Other Operating Expenses – Expenditures for street operations, infrastructure improvements, and plant operations in FY 2019 were $99.9 million, an $8.8 million, or 8.1%, decrease from the FY 2018 total of $108.7 million. The decrease in FY 2019 was caused primarily by lower contract maintenance and material costs for distribution and field services. The FY 2018 total of $108.7 million was $12.9 million higher than the FY 2017 total of $95.8 million as a result of higher labor costs associated with the field operation departments.

Additionally, expenses of $99.9 million related to collection and account management, customer services, marketing, and the administrative area increased by $5.9 million or 6.3% in FY 2019 primarily due to higher administrative expenses. This category increased by $6.6 million in FY 2018 compared to FY 2017 primarily due to higher administrative expenses.

Pension expense decreased by $12.9 million or 29.9% to $30.3 million in FY 2019 as compared to FY 2018 due primarily to higher than anticipated earnings. Pension expense decreased by $11.6 million or 21.2% to $43.2 million in FY 2018 as compared to FY 2017 due to higher than anticipated earnings.

OPEB expense decreased by $4.5 million or 13.7% in FY 2019 as compared to FY 2018 primarily to higher than anticipated earnings. OPEB expense as determined in accordance with GASB 75 increased by $4.8 million, or 17.1%, in FY 2018 as compared to FY 2017. OPEB expense increased in FY 2018 primarily due to changes in the total OPEB liability related to assumption changes, actuarial experience recognized over the average working lifetime of the OPEB Plan's participants, and the difference between projected and actual investment earnings recognized over a closed five-year period.

Net Depreciation Expense – Net depreciation expense increased by $11.7 million in FY 2019 compared with FY 2018. Net depreciation expense increased by $8.9 million in FY 2018 compared with FY 2017. The effective composite depreciation rates were 2.1% for FY 2019 and FY 2018 and 2.2% for FY 2017. Cost of removal is charged to expense as incurred.

(Continued)

Interest and Other Income – Interest and other income in FY 2019 was $6.2 million higher than FY 2018, as a result of increased earnings on restricted and unrestricted fund balances. Interest and other income in FY 2018 was $2.6 million higher than FY 2017, as a result of increased earnings on higher restricted fund balances.

Interest Expense – Total interest expense was $39.6 million in FY 2019, a decrease of $2.3 million or 5.5% when compared with FY 2018. Interest on long-term debt was $2.3 million or 4.8% lower in FY 2019 when compared to 2018. Interest expense was lower in FY 2019 due to the normal amortization of long-term debt. Total interest expense was $41.9 million in FY 2018, an increase of $0.9 million or 2.2% when compared with FY 2017. Interest on long-term debt was $9.3 million or 23.8% higher in FY 2018 when compared to FY 2017 reflecting the full year effect of the issuance of the Fifteenth Series Bonds in August 2017. Offsetting this increase, other interest expense decreased by $4.7 million, primarily reflecting the amortization of the bond premium related to the Fifteenth Series Bonds. Also, a decrease in interest expense associated with PGW's commercial paper program resulting from lower borrowing costs coupled with decreasing outstanding balances offset the increase. Other interest costs further decreased by $3.8 million due primarily to the reduction of expenses for losses on reacquired debt and other variable bond fees.

Excess of Revenues over Expenses – In FY 2019, the Company's excess of revenues over expenses was $95.9 million, an increase of $33.8 million from FY 2018. This increase is primarily due to greater contribution margins of gas and lower pension and OPEB expenses. In FY 2018, the Company's excess of revenues over expenses was $62.1 million, an increase of $13.8 million from FY 2017. This increase is primarily due to greater contribution margins resulting from a base rate increase approved by the PUC in the Settlement Agreement which became effective December 1, 2017.

Condensed Balance Sheets

(Thousands of U.S. dollars)

		Years ended August 31	
Assets	**2019**	**2018**	**2017 (a)**
Current assets:			
Accounts receivable (net of accumulated provision for uncollectible accounts of $66,751, $66,327, and $65,124 for 2019, 2018, and 2017, respectively)	$ 85,989	82,611	82,028
Restricted investment funds	71,345	63,646	57,616
Cash and cash equivalents, cash designated for capital expenditures, gas inventories, materials, and supplies and other current assets	193,979	201,417	172,663
Total current assets	351,313	347,674	312,307
Noncurrent assets:			
Utility plant, net	1,451,470	1,403,956	1,338,115
Unamortized bond insurance costs	258	290	322
Capital improvement fund	—	50,815	110,000
Sinking fund, revenue bonds	106,509	103,255	102,202
Other assets	43,156	40,650	41,311
Total noncurrent assets	1,601,393	1,598,966	1,591,950
Total assets	1,952,706	1,946,640	1,904,257
Deferred Outflows of Resources			
Accumulated fair value of hedging derivatives	10,332	594	7,911
Unamortized losses on bond refunding	36,776	42,054	47,614
Deferred outflows related to pension	14,421	24,943	39,400
Deferred outflows related to OPEB	91,175	81,048	33,076
Total deferred outflows	152,704	148,639	128,001
Total assets and deferred outflows of resources	$ 2,105,410	2,095,279	2,032,258

(a) As restated as a result of the implementation of GASB 75.

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Management's Discussion and Analysis
August 31, 2019 and 2018
(Unaudited)

Condensed Balance Sheets

(Thousands of U.S. dollars)

Net Position, Liabilities, and Deferred Inflows		Years ended August 31 2019	2018	2017 (a)
Net position:				
Net investment in capital assets	$	494,460	432,354	375,366
Restricted		109,220	105,901	104,818
Unrestricted		(396,118)	(426,555)	(430,567)
Total net position		207,562	111,700	49,617
Noncurrent liabilities:				
Long-term revenue bonds		999,474	1,062,763	1,125,473
Other noncurrent liabilities		65,482	55,889	65,686
Net pension liability		247,246	261,261	261,945
Net OPEB liability		336,079	378,888	350,356
Total noncurrent liabilities		1,648,281	1,758,801	1,803,460
Current liabilities:				
Current portion of revenue bonds		62,946	62,709	49,890
Other current liabilities		98,517	112,669	86,096
Total current liabilities		161,463	175,378	135,986
Deferred inflows:				
Deferred inflows related to pension		18,230	13,266	12,275
Deferred inflows related to OPEB		69,874	36,134	30,920
Total deferred inflows		88,104	49,400	43,195
Total net position, liabilities, and deferred inflows	$	2,105,410	2,095,279	2,032,258

(a) As restated as a result of the implementation of GASB 75.

Assets

Accounts Receivable – In FY 2019, accounts receivable (net) of $86.0 million increased by $3.4 million or 4.1%, from FY 2018 due to higher gas revenue during FY 2019, which resulted from increased sales and a higher GCR driven by increased commodity prices. In FY 2018, accounts receivable (net) of $82.6 million increased by $0.6 million or 0.7%, from FY 2017 due to higher gas billings during FY 2018, which resulted from increased sales and higher commodity prices for natural gas. The accumulated provision for uncollectible accounts at August 31, 2019 reflects a balance of $66.8 million, an increase of $0.5 million, compared to the $66.3 million balance in FY 2018. The balance was $65.1 million in FY 2017. Net write-offs for FY 2019 were $28.6 million as compared to $29.6 million and $39.2 million in FY 2018 and FY 2017, respectively.

Cash and Cash Equivalents, Gas Inventories, Materials, and Supplies, and Other Current Assets – In FY 2019, cash and cash equivalents totaled $124.1 million, a decrease of $7.0 million from the FY 2018 total of $131.1 million. The balance was $88.5 million in FY 2017. In FY 2019, gas inventories, materials, and supplies totaled $51.7 million, a decrease of $0.7 million from the FY 2018 total of $52.4 million. In FY 2019, gas storage totaled $41.3 million, a decrease of $0.4 million or 0.9% when compared to FY 2018. The decrease in gas inventory reflects a decrease in the price per Mcf of gas stored in inventory. Actual volumes in storage as of August 31, 2019 were 14.5 Bcf, identical to the prior year. In FY 2018, gas inventories, materials, and supplies totaled $52.4 million, a decrease of $3.0 million from the FY 2017 total of $55.4 million. In FY 2018, gas storage totaled $41.7 million, a decrease of $4.3 million or 9.3% when compared to FY 2017. The decrease in gas inventory reflects a decrease in volume stored, offset by an increase in the price per Mcf. Actual volumes in storage as of August 31, 2018 were 14.5 Bcf, a decrease of 2.2 Bcf or 12.8% compared to the prior year. Other current assets totaled $18.1 million in FY 2019, an increase of $0.1 million from FY 2018. Other current assets totaled $18.0 million FY 2018, an increase of $10.7 million from FY 2017. The decrease in other current assets in FY 2018 is a result of a decrease in the deferred GCR.

Restricted Investment Funds – Restricted Investment Funds include the current portion of the Capital Improvement Fund and the Workers' Compensation Escrow Fund. Restricted Investment Funds increased by $7.7 million in FY 2019 primarily due to the anticipated increase in the drawdown from the current portion of the Capital Improvement Fund in FY 2020. The balance of the current portion of the Capital Improvement Fund at August 31, 2019, 2018, and 2017 was $68.6 million, 61.0 million, and 55.0 million, respectively. On August 16, 2017, PGW deposited $190 million into the Capital Improvement Fund as proceeds from the sale of the City of Philadelphia Gas Works Revenue Bonds, Fifteenth Series. Subsequent to the deposit, PGW withdrew $45.0 million, $55.0 million, and $25.0 million to finance various capital initiatives in FY 2019, FY 2018, and FY 2017, respectively, and anticipates withdrawing $68.6 million in FY 2020. Pursuant to the Pennsylvania Department of Labor and Industry Bureau of Workers' Compensation Self-Insurance policy, the Company has established and maintains a restricted trust account. As of August 31, 2019, 2018, and 2017, the trust account balances were $2.7 million, $2.6 million and $2.6 million, respectively.

Utility Plant and Other Noncurrent Assets – In FY 2019, noncurrent assets including utility plant, net, the long-term portion of the Capital Improvement Fund, the revenue bonds' Sinking Fund, and unamortized bond insurance costs totaled $1,601.4 million, an increase of $2.4 million from FY 2018. In FY 2018, noncurrent assets including utility plant, net, the long-term portion of the Capital Improvement Fund, the revenue bonds' Sinking Fund, and unamortized bond insurance costs totaled $1,599.0 million, an increase of $7.0 million from

FY 2017. Utility plant, net, totaled $1,451.5 million in FY 2019, an increase of $47.5 million or 3.4% compared with the FY 2018 balance. Utility plant, net, totaled $1,404.0 million in FY 2018, an increase of $65.9 million or 4.9% compared with the FY 2017 balance. Capital expenditures for construction of distribution facilities, purchase of equipment, information technology enhancements, and other general improvements were $110.5 million in FY 2019 compared to $123.4 million in FY 2018 and $102.3 million in FY 2017. A portion of the proceeds from the sale of the Fifteenth Series Bonds was utilized to finance a portion of PGW's ongoing Capital Improvement Fund. The major capital expenditures are associated with PGW's gas supply infrastructure, namely, gas mains, and customer service lines, including capital expenditures for the Long-Term Infrastructure Improvement Plan. For additional information on the Company's capital assets, see note 1(g) *Utility Plant* of the basic financial statements.

In early 2012, Act 11 was enacted by the Pennsylvania Legislature. Act 11 permitted public utilities to file a request with the PUC for the implementation of a Distribution System Improvement Charge (DSIC). A DSIC permits natural gas distribution companies to recover the costs related to main and service replacement not already recovered in base rates. This legislation provides utility companies with a supplemental recovery mechanism for costs related to incremental/accelerated distribution system repair, improvement, and replacement. Act 11 permits gas utilities to recover 5.0% of their nongas revenues via the recovery mechanism and permits greater percentage increases if approved by the PUC. The Company started billing customers a DSIC surcharge as of July 1, 2013. In FY 2019, the Company billed customers $35.6 million for the DSIC surcharge. In FY 2018, the Company billed customers $41.8 million for the DSIC surcharge. The DSIC surcharge is fully reconcilable on a calendar-year basis. For additional information, see note 1(h) *Revenue Recognition* of the basic financial statements.

Deferred Outflows of Resources Related to Hedging Derivatives and Bond Refunding – Deferred outflows of resources represent amounts that will result in a reduction of net position in a subsequent period. Deferred outflows of resources include the accumulated fair value of hedging derivatives that will be recognized in the statement of revenues and expenses, changes in net position upon termination of the hedging relationship, and unamortized losses on bond refunding. Deferred outflows of resources related to hedging derivatives and bond refunding increased $4.4 million in FY 2019 from the FY 2018 total of $42.7 million. Deferred outflows decreased $12.8 million in FY 2018 from the FY 2017 total of $55.5 million.

Deferred Outflows of Resources Related to Pension – Deferred outflows of resources represent amounts that will result in a reduction of net position in a subsequent period. Deferred outflows of resources include increases in the pension liability that will be amortized into pension expense in future periods. Deferred outflows of resources relating to pension decreased $10.5 million or 42.2% in FY 2019 from the FY 2018 total of $24.9 million. Deferred outflows of resources decreased $14.5 million or 36.8% in FY 2018 from the FY 2017 total of $39.4 million.

Deferred Outflows of Resources Related to OPEB – Deferred outflows of resources represent amounts that will result in a reduction of net position in a subsequent period. Deferred outflows of resources include increases in the OPEB liability that will be amortized into OPEB expense in future periods. Deferred outflows of resources relating to OPEB increased $10.2 million or 12.6% in FY 2019 from the FY 2018 total of $81.0 million. Deferred outflows increased $47.9 million in FY 2018 from the FY 2017 restated total of $33.1 million primarily due to the recognition of deferred outflows of resources related to OPEB due to the implementation of GASB 75.

Liabilities

Long-Term Revenue Bonds – Long-term revenue bonds, including the current portion and unamortized discount and premium, totaled $1,062.4 million in FY 2019. This was $63.1 million less than the previous year primarily as a result of scheduled principal payments. This represents 83.7% of total capitalization in FY 2019. Long-term revenue bonds, including the current portion and unamortized discount and premium, totaled $1,125.5 million in FY 2018. This was $49.9 million less than the previous year primarily as a result of scheduled principal payments. Long-term revenue bonds, including the current portion and unamortized discount and premium, totaled $1,175.4 million in FY 2017. This was $249.0 million greater than the previous year primarily as a result of issuing the Fifteenth Series Bonds. Long-term debt represented 95.9% of total capitalization in FY 2017. For additional information, see note 8, *Long-Term Debt and Other Liabilities* of the basic financial statements.

Debt Service Coverage Ratio and Ratings – PGW has a mandatory debt service coverage ratio of 1.50 times debt service on both the 1975 and 1998 Ordinance Bonds. At August 31, 2019, only Senior 1998 Ordinance Bonds were outstanding. At August 31, 2019, debt service coverage on Senior 1998 Ordinance Bonds was 2.33 times, compared to 2.35 and 2.71 times at August 31, 2018 and 2017, respectively. PGW's current bond ratings are "A3" from Moody's Investors Service (Moody's), "A" from Standard & Poor's Rating Service (S&P), and "BBB+" from Fitch Ratings.

Current Portion of Revenue Bonds and Notes Payable – Pursuant to the provisions of the City of Philadelphia Note Ordinances, PGW may sell short-term notes to either support working capital requirements or pay the costs of certain capital projects and other project costs. PGW may issue short-term notes in a principal amount, which, together with interest, may not exceed $150.0 million outstanding to support working capital requirements. PGW may also sell additional short-term notes in an aggregate principal amount, which may not exceed $120.0 million outstanding at any time to pay the costs of certain capital projects and other project costs. As of December 1, 2017, all notes are supported by a Note Purchase and Credit Agreement and a security interest in PGW's revenues. Prior to that, all notes were supported by two irrevocable letters of credit and a security interest in PGW's revenues. The note purchase agreement supporting PGW's combined commercial paper programs set the maximum level of outstanding notes plus interest at $120.0 million in FY 2019. The letters of credit supporting PGW's combined commercial paper programs set the maximum level of outstanding notes plus interest at $120.0 million in FY 2018 and FY 2017. There were no Capital Project Notes or Gas Works Revenue Notes outstanding at August 31, 2019, FY 2018, or FY 2017.

Other Current Liabilities – In FY 2019, other current liabilities totaled $6.2 million, a decrease of $9.0 million from FY 2018, due to a change in the deferred GCR. In FY 2018, the total was $15.2 million and $6.0 million in FY 2017. In FY 2019, accounts payable totaled $67.5 million, a decrease of $5.1 million or 7.0% compared with FY 2018 primarily due to a decrease in unbilled natural gas costs. In FY 2018, accounts payable totaled $72.6 million, an increase of $17.7 million or 32.2% compared with FY 2017 primarily due to an increase in unbilled natural gas costs.

Other Noncurrent Liabilities – In FY 2019, other noncurrent liabilities totaled $65.5 million, an increase of $9.6 million compared to FY 2018. The increase in FY 2019 is primarily due to the change in the value of the interest rate swaps and pollution remediation liabilities. In FY 2018, other noncurrent liabilities totaled

$55.9 million, a decrease of $9.8 million compared to FY 2017. The decrease in FY 2018 is primarily due to the change in the value of the interest rate swaps.

Net OPEB Liability – The net OPEB obligation was $336.1 million for the fiscal year ended August 31, 2019, a $42.8 million decrease from the $378.9 million obligation at August 31, 2018. The net OPEB obligation was $378.9 million for the fiscal year ended August 31, 2018, a $28.5 million increase from the $350.4 million obligation at August 31, 2017. The increase in FY 2018 and FY 2017 was caused by changes in assumptions.

Net Pension Liability – There was a decrease in the net pension liability of $14.1 million or 5.4% in FY 2019 as compared to FY 2018. The decrease in the net pension liability of $0.6 million or 0.2% in FY 2018 as compared to FY 2017 was primarily driven by higher than anticipated earnings in FY 2017.

Deferred Inflows of Resources Related to Pension – Deferred inflows of resources represent amounts that will result in an increase of net position in a subsequent period. Deferred inflows of resources represent the difference between actual and expected earnings on pension plan investments. The increase in deferred inflows of resources related to pension of $4.9 million in FY 2019 as compared to FY 2018 is primarily related to changes in investment performance in FY 2019. The increase in deferred inflows of resources related to pension of $1.0 million in FY 2018 as compared to FY 2017 is primarily related to changes in investment performance in FY 2018. There were $12.3 million in deferred inflows of resources related to pension at August 31, 2017.

Deferred Inflows of Resources Related to OPEB – Deferred inflows of resources represent amounts that will result in an increase of net position in a subsequent period. Deferred inflows of resources were recognized as a result of the implementation of GASB 75 and represent the difference between actual and expected earnings on OPEB plan investments. Deferred inflows of resources related to OPEB as of August 31, 2019 were $69.9 million as compared to $36.1 million as of August 31, 2018. The increase in deferred inflows of resources related to OPEB of $33.8 million or 93.6% between FY 2019 and FY 2018 is primarily driven by changes in investment performance. There were $30.9 million in deferred inflows of resources related to OPEB at August 31, 2017.

Net Position – In FY 2019, total net position totaled $207.6 million, an increase of $95.9 million compared to FY 2018. The increase in FY 2019 is due to an excess of revenues over expenses generated by PGW operations during FY 2019. In FY 2019, unrestricted net position totaled negative $396.1 million, an increase of $30.5 million compared to FY 2018. In FY 2018, total net position totaled $111.7 million, an increase of $62.1 million as compared to FY 2017. In FY 2018, unrestricted net position totaled negative $426.6 million, an increase of $4.0 million compared to FY 2017. This increase is primarily due to favorable changes in the Company's net pension liability. Due to the long-term nature of the Company's net pension and OPEB liability, the Company's negative unrestricted net position is not indicative of its near-term liquidity.

Other Financial Factors

Recent Rate Filings

On May 9, 2013, the PUC entered an order approving PGW's DSIC. The DSIC permitted PGW to recover reasonable and prudent costs incurred to repair, improve, or replace certain eligible distribution property that is part of the utility's distribution system, in an amount up to 5.0% of distribution revenues. On September 1, 2015, PGW proposed an increase in the DSIC from 5.0% to 7.5% of distribution revenues and to levelize and annualize the DSIC. The PUC issued an Order and Opinion granting PGW's request to increase its DSIC to 7.5% on January 28, 2016 (January 28 Order). The increase, from $22.0 million to $33.0 million per year, will generate approximately $11.0 million in additional revenue to fund PGW's accelerated pipeline replacement program. The January 28 Order also permits PGW to levelize and annualize DSIC recovery, which will provide PGW with more predictable cash flow and may help mitigate overcollections and undercollections. PGW's increased DSIC charge of 7.5% became effective on February 1, 2016.

On July 6, 2016, the PUC issued an Order and Opinion that permitted PGW to recover an additional $11.4 million in DSIC undercollections for the year ended December 31, 2015, over the course of two years. This results in a temporary increase in the DSIC of an additional $5.7 million a year for two years, for a total DSIC rate of 8.84%. PGW implemented the temporary increase on October 1, 2016. This temporary increase terminated on September 30, 2018. PGW will consider the effectiveness of the accelerated CIMR Program funded by the DSIC surcharge, evaluate the effect of the DSIC on customers, and assess PGW's ability to effectively implement the level of accelerated pipeline replacement associated with the 7.5% DSIC (or higher levels) prior to requesting an increase in the DSIC.

On February 27, 2017, PGW filed for an increase in its distribution base rates with the PUC. The filing sought a general rate increase calculated to produce $70.0 million, or 11.6%, in additional annual operating revenues based upon a ten-year normal weather assumption. The filing also requested to increase the fixed customer charge component, as well as the volumetric delivery charge component of base rates.

On July 21, 2017, PGW filed a Joint Petition for Partial Settlement (Settlement Agreement) of the matter for settlement of all but two issues in the case (neither of which directly concerned PGW's revenue request). The Settlement Agreement provided PGW with a general rate increase of $42.0 million in annual operating revenues calculated using a twenty-year normal weather assumption. PGW has determined the estimated pro forma revenue impact from the change from ten-year normal weather (less Heating Degree Days (HDDs)) to twenty-year normal weather (more HDDs) is approximately an additional $17.0 million per year over the forecast period. Settlement agreements with reduced revenue requirements are typical in PUC base rate proceedings and are the product of compromise between the parties' diverse interests. The PUC has indicated that settlement results are often preferable to those achieved at the conclusion of a fully litigated proceeding.

On November 8, 2017, the PUC entered its Order and Opinion in the case, which approved the Settlement Agreement without modification (and found in favor of PGW on the two nonsettled issues). Thereafter, PGW made its Compliance Tariff filing on November 14, 2017. The new rates approved by the PUC in the Settlement Agreement became effective on December 1, 2017.

Refunding, Defeasance, and Redeeming of Debt

On August 16, 2017, the City issued Gas Works Revenue Bonds, Fifteenth Series (1998 General Ordinance) in the par amount of $273.1 million. A portion of the proceeds from the sale of the Fifteenth Series Bonds were utilized to refund a portion of the Seventh Series Bonds and redeem the City's outstanding Capital Project Notes. The Fifteenth Series Bonds also contained new money debt issued to finance a portion of PGW's ongoing Capital Improvement Program, pay the costs of issuing the bonds, and provide a deposit to the Sinking Fund Reserve. The Fifteenth Series Bonds, with fixed interest rates that range from 2.0% to 5.0%, have maturity dates through 2047.

Upcoming Accounting Standards

GASB Statement No. 84, *Fiduciary Activities* (GASB 84) establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities. An activity meeting the criteria should be reported in a fiduciary fund in the basic financial statements. Governments with activities meeting the criteria should present a statement of fiduciary net position and a statement of changes in fiduciary net position. This Statement describes four fiduciary funds that should be reported, if applicable: (1) pension (and other employee benefit) trust funds, (2) investment trust funds, (3) private-purpose trust funds, and (4) custodial funds. The requirements of this Statement will take effect for periods beginning after December 15, 2018 (the Company's fiscal year ending August 31, 2020). The Company is currently evaluating the impact of GASB 84 on its financial statements, and anticipates that certain pension and other postemployment benefit arrangements will be reported under the standard as fiduciary funds.

GASB Statement No. 90, *Majority Equity Interest* – an amendment of GASB Statements No. 14 and No. 61, will take effect for periods beginning after December 15, 2018 (the Company's fiscal year ended August 31, 2020). The primary objectives of GASB 90 are to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures. GASB 90 defines a majority equity interest and specifies that a majority equity interest in a legally separate organization should be reported as an investment if a government's holding of the equity interest meets the definition of an investment. The Company is currently evaluating the impact of GASB 90 on its financial statements, and anticipates that the adoption of this statement will not have a material impact on the financial statements.

Contacting the Company's Financial Management

This financial report is designed to provide the citizens of Philadelphia, customers, investors, and creditors with a general overview of PGW's finances and to demonstrate PGW's accountability for the money it receives. If you have questions pertaining to this report or need additional financial information, please contact Philadelphia Gas Works, 800 W. Montgomery Avenue, Philadelphia, PA 19122 or on the Web at www.pgworks.com.

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)

Balance Sheets

August 31, 2019 and 2018

(Thousands of U.S. dollars)

Assets		**2019**	**2018**
Current assets:			
Cash, cash equivalents, and short term investments	$	124,145	131,051
Accounts receivable (net of provision for uncollectible accounts of $66,751 and $66,327 for 2019 and 2018, respectively)		85,989	82,611
Gas inventories, materials, and supplies		51,691	52,364
Current portion of capital improvement fund		68,634	61,000
Workers' compensation escrow fund		2,711	2,646
Other current assets		18,143	18,002
Total current assets		351,313	347,674
Noncurrent assets:			
Utility plant, at original cost:			
In service		2,486,973	2,394,302
Under construction		87,826	75,953
Total		2,574,799	2,470,255
Less accumulated depreciation		1,123,329	1,066,299
Utility plant, net		1,451,470	1,403,956
Capital improvement fund		—	50,815
Sinking fund, revenue bonds		106,509	103,255
Unamortized bond insurance costs		258	290
Regulatory asset – environmental		37,102	31,593
Other noncurrent assets		6,054	9,057
Total noncurrent assets		1,601,393	1,598,966
Total assets		1,952,706	1,946,640
Deferred Outflows of Resources			
Accumulated fair value of hedging derivatives		10,332	594
Unamortized losses on bond refunding		36,776	42,054
Deferred outflows related to pension		14,421	24,943
Deferred outflows related to OPEB		91,175	81,048
Total deferred outflows of resources		152,704	148,639
Total assets and deferred outflows of resources	$	2,105,410	2,095,279

See accompanying notes to basic financial statements.

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)

Balance Sheets

August 31, 2019 and 2018

(Thousands of U.S. dollars)

Liabilities		**2019**	**2018**
Current liabilities:			
Current portion of revenue bonds	$	62,946	62,709
Accounts payable		67,530	72,620
Current portion of long-term liabilities		6,313	7,216
Customer deposits		3,090	2,644
Other current liabilities		6,178	15,220
Accrued accounts:			
Interest, taxes, and wages		12,406	11,969
Distribution to the City		3,000	3,000
Total current liabilities		161,463	175,378
Noncurrent liabilities:			
Long-term revenue bonds		999,474	1,062,763
Other noncurrent liabilities		65,482	55,889
Net pension liability		247,246	261,261
Net OPEB liability		336,079	378,888
Total noncurrent liabilities		1,648,281	1,758,801
Total liabilities		1,809,744	1,934,179
Deferred Inflows of Resources			
Deferred inflows related to pension		18,230	13,266
Deferred inflows related to OPEB		69,874	36,134
Total deferred inflows of resources		88,104	49,400
Total liabilities and deferred inflows of resources		1,897,848	1,983,579
Net Position			
Net investment in capital assets		494,460	432,354
Restricted (debt service)		106,509	103,255
Restricted (workers' compensation)		2,711	2,646
Unrestricted		(396,118)	(426,555)
Total net position		207,562	111,700
Total liabilities, deferred inflows of resources, and net position	$	2,105,410	2,095,279

See accompanying notes to basic financial statements.

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)

Statements of Revenues and Expenses and Changes in Net Position

Years ended August 31, 2019 and 2018

(Thousands of U.S. dollars)

		2019	2018
Operating revenues:			
Gas revenues:			
Nonheating	$	25,065	23,492
Gas transport service		63,565	51,724
Heating		605,437	583,864
Provision for uncollectible accounts		(29,983)	(30,826)
Total gas revenues		664,084	628,254
Appliance and other revenues		7,908	8,121
Other operating revenues		12,736	11,124
Total operating revenues		684,728	647,499
Operating expenses:			
Natural gas		206,825	186,265
Gas processing		22,028	21,644
Field operations		79,341	88,105
Collection and account management		12,490	11,975
Customer services		13,983	13,904
Marketing		4,232	3,751
Administrative and general		67,649	63,206
Pensions		30,268	43,159
Other postemployment benefits		28,351	32,889
Taxes		8,705	8,758
Total operating expenses before depreciation		473,872	473,656
Depreciation		68,186	63,970
Less depreciation expense included in operating expenses above		—	7,516
Net depreciation		68,186	56,454
Total operating expenses		542,058	530,110
Operating income		142,670	117,389
Interest and other income		10,788	4,634
Income before interest expense		153,458	122,023
Interest expense:			
Long-term debt		46,136	48,351
Other		(5,245)	(5,058)
Allowance for funds used during construction		(1,295)	(1,353)
Total interest expense		39,596	41,940
Distribution to the City of Philadelphia		(18,000)	(18,000)
Excess of revenues over expenses		95,862	62,083
Net position, beginning of year		111,700	49,617
Net position, end of year	$	207,562	111,700

See accompanying notes to basic financial statements.

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)

Statements of Cash Flows

Years ended August 31, 2019 and 2018

(Thousands of U.S. dollars)

		2019	2018
Cash flows from operating activities:			
Receipts from customers	$	686,300	686,200
Payments to suppliers		(397,440)	(364,326)
Payments to employees		(127,621)	(129,266)
Claims paid		(2,922)	(3,223)
Other receipts		15,100	22,900
Net cash provided by operating activities		173,417	212,285
Cash flows from noncapital financing activities:			
Income (loss) from nonutility operations		6,150	(602)
Interest and fees		(216)	98
Distribution to the City of Philadelphia		(18,000)	(18,000)
Net cash used in noncapital financing activities		(12,066)	(18,504)
Cash flows from investment activities			
Sinking fund reserve deposits		(3,254)	(1,053)
Capital improvement fund deposits		(1,819)	(1,815)
Capital improvement fund withdrawals		45,000	55,000
Interest income / capital gain from short-term investments		1,964	1,410
Interest income / capital gain on capital improvement fund		1,094	2,351
Interest income / capital gain on sinking fund		1,579	1,476
Net cash provided by investment activities		44,564	57,369
Cash flows from capital and related financing activities:			
Purchases of capital assets		(115,699)	(122,297)
Principal paid on long-term debt		(51,820)	(38,425)
Interest paid on long-term debt		(46,597)	(49,265)
Other		1,295	1,353
Net cash (used in) capital and related financing activities		(212,821)	(208,634)
Net (decrease) in cash and cash equivalents		(6,906)	42,516
Cash and cash equivalents at beginning of year		131,051	88,535
Cash and cash equivalents at end of year	$	124,145	131,051
Reconciliation of operating income to net cash provided by operating activities:			
Operating income	$	142,670	117,389
Adjustments to reconcile operating income to net cash provided by operating activities:			
Depreciation and amortization expense		68,186	56,454
Provision for uncollectible accounts		29,983	30,826
Change in assets and liabilities:			
Receivables, net		(33,425)	(31,439)
Gas inventories, materials, and supplies		673	3,050
Other current assets		(141)	10,795
Other assets and deferred outflows of resources		(11,850)	(25,618)
Accounts payable		(5,090)	17,699
Customer deposits		446	(742)
Other current liabilities		(9,945)	10,603
Accrued accounts		437	(987)
Other liabilities, deferred inflows of resources, net OPEB and pension liabilities		(8,527)	24,255
Net cash provided by operating activities	$	173,417	212,285

See accompanying notes to basic financial statements.

(1) Summary of Significant Accounting Policies

The accounting methods employed by the Philadelphia Gas Works (the Company or PGW) are in accordance with U.S. generally accepted accounting principles (U.S. GAAP) and are in conformity with City of Philadelphia (the City) reporting requirements.

As described in note 2, the Company is accounted for as a component unit of the City, and consequently follows accounting principles promulgated by the Governmental Accounting Standards Board (GASB) as they apply to business type activities. Under the Regulated Operations guidance within GASB Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre November 30, 1989 FASB and AICPA Pronouncements* (GASB 62), assets or liabilities may be created by certain actions of regulatory bodies.

The principal accounting policies within this framework are described as follows:

(a) Regulation

Prior to July 1, 2000, the Company was under the regulatory jurisdiction of the Philadelphia Gas Commission (PGC). The PGC had the authority to set the Company's rates and tariffs. The PGC also approved the Company's annual Operating Budget and reviewed the Company's Capital Budget prior to approval by the City Council of the City (City Council).

Effective July 1, 2000, and pursuant to the passage of the Pennsylvania Natural Gas Choice and Competition Act (the Act), the Company came under the regulatory jurisdiction of the Pennsylvania Public Utility Commission (PUC). Under the PUC's jurisdiction, the Company filed a restructuring plan on July 1, 2002, which among other things, provided for an unbundled tariff permitting customer choice of the commodity supplier by September 1, 2003. Under the Act, the PUC is required to follow the "same ratemaking methodology and requirements" that were previously applicable to the PGC when determining the Company's revenue requirements and approving overall rates and charges. The PGC continues to approve the Company's Operating Budget and review its Capital Budget. The Company's Capital Budget must be approved by City Council.

The Company, as of September 1, 2003, is operating under its Restructuring Compliance Tariff. The Restructuring Compliance Tariff Rates are designed to maintain revenue neutrality and the Tariff Rules and Regulations are designed to comport with the Pennsylvania Public Utility Code. For additional information related to PGW's tariff and base rates, see note 1(d) *Base Rates*.

(b) Operating Budget

On February 15, 2019, PGW filed a proposed Fiscal Year (FY) 2020 Operating Budget with the PGC. The PGC Hearing Examiners conducted Informal Discovery (ID) sessions on May 9, 2019 and on May 15, 2019 and a public hearing was convened by the Hearing Examiners to address PGW's Operating Budget on June 13, 2019. On July 11, 2019, a recommended decision was rendered by the Hearing Examiners, which proposed adjustments to the Operating Budget as filed. On August 13, 2019, the PGC approved, with adjustments, PGW's FY 2020 Operating Budget. PGW filed a Compliance Budget with the PGC on August 26, 2019.

On June 29, 2018, PGW filed a proposed FY 2019 Operating Budget with the PGC. The PGC Hearing Examiners conducted ID sessions in July and August 2018. On August 28, 2018, a public hearing was convened by the Hearing Examiners to address PGW's Operating Budget. On September 28, 2018, a recommended decision was rendered by the Hearing Examiners, which proposed adjustments to the Operating Budget as filed. On November 14, 2018, the PGC approved, with adjustments, PGW's FY 2019 Operating Budget. PGW filed a Compliance Budget with the PGC on October 26, 2018.

On July 14, 2017, PGW filed a modified FY 2018 Operating Budget with supporting documentation, reflecting updated estimated actual data for FY 2018. The original FY 2018 Operating Budget information was basically unchanged.

On May 26, 2017, PGW filed a proposed FY 2018 Operating Budget. After appropriate discovery and hearings, the PGC approved the FY 2018 Operating Budget on November 14, 2017.

(c) Capital Budget

On January 2, 2019, PGW filed with the PGC its proposed FY 2020 Capital Budget in the amount of $149.7 million. After a due diligence review and related ID process in January 2019, a public hearing was held on February 20, 2019. The PGC's review culminated in deliberations taken at a public meeting held on April 9, 2019 whereby the PGC endorsed an FY 2020 Capital Budget in an amount not to exceed $127.7 million. The endorsed budget was approved by City Council on June 20, 2019 and signed by the Mayor on June 24, 2019.

On May 8, 2019 and August 6, 2019, PGW submitted proposed reauthorization requests related to the Gas Processing Department to the PGC. The requests, upon approval, will increase the FY 2020 Capital Budget by $1.3 million or an amount not to exceed $129.0 million.

On November 1, 2018, PGW submitted proposed amendments that would increase the FY 2018 and FY 2019 Capital Budgets by $4.7 million and $4.7 million, respectively. The PGC's review culminated in deliberations taken at a public meeting held on December 18, 2018 whereby the PGC endorsed an FY 2018 Capital Budget in an amount not to exceed $119.1 million and an FY 2019 Capital Budget in an amount not to exceed $139.2 million. The endorsed budgets were approved by City Council on June 20, 2019 and signed by the Mayor on July 24, 2019.

On January 2, 2018, PGW filed with the PGC its proposed FY 2019 Capital Budget in the amount of $155.9 million. After a due diligence review and related ID process in January and February 2018, a public hearing was held on February 27, 2018. The PGC's review culminated in deliberations taken at a public meeting held on April 24, 2018 whereby the PGC endorsed an FY 2019 Capital Budget in an amount not to exceed $134.5 million. The endorsed budget was approved by City Council on June 14, 2018 and signed by the Mayor on June 21, 2018.

On January 3, 2017, PGW filed with the PGC its proposed FY 2018 Capital Budget in the amount of $115.1 million. After a due diligence review and related ID process in January and February 2017, a public hearing was held on February 21, 2017. The PGC's review culminated in deliberations taken at a public meeting held on April 25, 2017 whereby the PGC endorsed an FY 2018 Capital Budget in an amount not to exceed $114.4 million. The endorsed budget was approved by City Council on June 15, 2017 and signed by the Mayor on June 21, 2017.

(d) Base Rates

On February 27, 2017, PGW filed for an increase in its distribution base rates with the PUC. The filing sought a general rate increase calculated to produce $70.0 million, or 11.6%, in additional annual operating revenues based upon a ten year normal weather assumption. The filing also requested to increase the fixed monthly customer charge component, as well as the volumetric delivery charge component of base rates.

On July 21, 2017, PGW filed a Joint Petition for Partial Settlement (Settlement Agreement) of the matter for settlement of all but two issues in the case (neither of which directly concerned PGW's revenue request). The Settlement Agreement provided PGW with a general rate increase of $42.0 million in annual operating revenues calculated using a twenty year normal weather assumption. PGW has determined the estimated pro forma revenue impact from the change from ten year normal weather (less Heating Degree Days (HDDs)) to twenty year normal weather (more HDDs) is approximately an additional $17.0 million per year over the forecast period. Settlement agreements with reduced revenue requirements are typical in PUC base rate proceedings and are the product of compromise between the parties' diverse interests. The PUC has indicated that settlement results are often preferable to those achieved at the conclusion of a fully litigated proceeding.

On November 8, 2017, the PUC entered its Order and Opinion in the case, which approved the Settlement Agreement without modification and found in favor of PGW on the two nonsettled issues. Thereafter, PGW made its Compliance Tariff filing on November 14, 2017. The new rates approved by the Settlement Agreement became effective on December 1, 2017.

In FY 2015, the PUC approved the Company's Gas Cost Rate (GCR) settlement petition, which included a provision allowing for the continued recovery of PGW's Other Postemployment Benefits (OPEB) Rider. The OPEB recovery remains at $16.0 million annually. PGW continues to deposit this $16.0 million plus an additional $2.5 million annual contribution into the OPEB Trust for an annual total of $18.5 million. Additionally, PGW's petition to continue the Demand Side Management Program was decided by the PUC in November 2016 and was revised and approved.

On December 18, 2009, PGW submitted a base rate filing with the PUC (1) to maintain the $60.0 million base rate increase that the PUC granted in 2008 and (2) to fund PGW's OPEB liability in the amount of $42.5 million. PGW also moved to consolidate the Company's Demand Side Management Program, an energy efficiency and conservation plan, into the base rate filing. On May 19, 2010, PGW, along with all active parties to the proceeding, submitted a Petition for Proposed Settlement of the proceeding (the Settlement) and the PUC approved the Settlement on July 29, 2010. Under the Settlement, PGW was permitted to maintain virtually all of the extraordinary base rate relief, received an incremental rate increase of $16.0 million annually related to OPEB, and was required to fund $18.5 million of the OPEB liability in each of the fiscal years 2011 through 2015. The new rates were effective September 1, 2010. The Settlement also permitted the implementation of the Demand Side Management Program.

(e) Weather Normalization Adjustment Clause

The Weather Normalization Adjustment (WNA) Clause was approved by PUC Order dated August 8, 2002. The purpose of the WNA Clause is to neutralize the impact of weather on the Company's revenues. This allows the Company to achieve the recovery of appropriate costs as authorized by the PUC. The WNA Clause results in neither a rate increase nor a rate decrease, but acts as a billing adjustment. The main benefits of the WNA Clause are the stabilization of cash flow and the reduction of the need for short-term borrowing from year to year. The WNA Clause is applied to customer invoices rendered during the period of October 1 through May 31 of each year for each billing cycle. The adjustment for the year ended August 31, 2019 was an increase in billings of $1.6 million. The WNA Clause resulted in a decrease in billings of $3.8 million for the year ended August 31, 2018.

(f) Gas Cost Rate

The Company's single greatest operating expense is the cost of natural gas. The rate charged to the Company's customers to recover these costs is called the GCR. The GCR reflects the increases or decreases in natural gas costs and other applicable GCR costs. This GCR mechanism provides the flexibility to rapidly reflect current conditions without the time delay inherent in full base rate alteration. The intent is to achieve an annual balance between the costs incurred for fuel and their pass through to customers.

At the end of the fiscal year, costs recovered through the GCR and surcharges are compared to the actual cost of fuel and other applicable costs. Customers are then credited or charged for the over recovery or under recovery of costs. The GCR and surcharges charge/credit may be updated quarterly or in the subsequent fiscal year to reflect the under recovery or over recovery. Changes in the GCR impact the reported amounts of gas revenues but do not affect operating income or net income because they are passed through to the customer without markup. At August 31, 2019, approximately $2.3 million was recorded in other current assets for the under recovery of the GCR and surcharges. At August 31, 2018, approximately $9.2 million was recorded in other current liabilities for the over recovery of the GCR and surcharges. The GCR comprises the purchased gas costs plus the gas adjustment charge minus the interruptible revenue credit.

GCR Effective Dates and Rates

(Amounts in U.S. dollars)

Effective date	GCR rate per Mcf*	Change
December 1, 2019	$ 4.7175	0.1145
September 1, 2019	4.6030	0.3306
June 1, 2019	4.2724	(0.6055)
March 1, 2019	4.8779	0.4056
December 1, 2018	4.4723	0.6090
September 1, 2018	3.8633	0.2423
June 1, 2018	3.6210	(0.2647)
March 1, 2018	3.8857	(0.8056)
December 1, 2017	4.6913	0.5390
September 1, 2017	4.1523	(0.4463)

* Mcf – thousand cubic feet

(g) Utility Plant

Utility plant is stated at original cost. The cost of additions, replacements, and betterments of units of property is capitalized and included in the utility plant accounts. The cost of property sold or retired is removed from the utility plant accounts and charged to accumulated depreciation. Normal repairs, maintenance, the cost of minor property items, and expenses associated with retirements are charged to operating expenses as incurred.

In a previous rate order, the PGC disallowed the accrual of the net negative salvage component in depreciation. Cost of removal in the amounts of $5.7 million and $6.4 million was charged to expense as incurred in FY 2019 and FY 2018, respectively, and is included in depreciation expense in the statements of revenues and expenses and changes in net position. Depreciation is calculated on an asset-by-asset basis on the estimated useful lives of plant and equipment on a straight-line method. The composite rate for both FY 2019 and FY 2018 was 2.1%. The composite rates are supported by a depreciation study of utility plant as of August 2014. The effective composite depreciation rates, as a percentage of cost, for FY 2019 were as follows:

Production plant	1.65 %
Transmission, distribution, and storage	2.00
General plant	3.26

The most recent depreciation study was completed in FY 2015 for the plant activity subsequent to the last depreciation study and through FY 2014. It is anticipated that PGW will complete the next depreciation study in FY 2020 for the plant activity subsequent to the last depreciation study and through FY 2019.

(Continued)

Allowance for Funds Used During Construction (AFUDC) is an estimate of the cost of funds used for construction purposes. The AFUDC, as calculated on borrowed funds, reduces interest expense. The AFUDC rate applied to construction work in progress was 4.80% and 4.59% in FY 2019 and FY 2018, respectively.

The following is a summary of utility plant activity for the fiscal years ended August 31, 2019 and 2018 (thousands of U.S. dollars):

	August 31, 2019			
	Beginning balance	Additions and transfers	Retirements and transfers	Ending balance
Capital assets not being depreciated:				
Land	$ 5,595	—	—	5,595
Under construction	75,953	110,543	(98,670)	87,826
Total capital assets not being depreciated	81,548	110,543	(98,670)	93,421
Other capital assets:				
Distribution and collection systems	1,846,188	84,660	(5,630)	1,925,218
Buildings and equipment	542,519	14,012	(371)	556,160
Total other capital assets	2,388,707	98,672	(6,001)	2,481,378
Less accumulate depreciation for:				
Distribution and collection systems	(863,262)	(38,438)	(3,690)	(905,390)
Buildings and equipment	(203,037)	(14,034)	(868)	(217,939)
Total accumulated depreciation	(1,066,299)	(52,472)	(4,558)	(1,123,329)
Utility plant, net	$ 1,403,956	156,743	(109,229)	1,451,470

* Cost of removal of approximately $5.7 million was charged to expense as incurred in FY 2019 and is not included in accumulated depreciation.

(Continued)

	August 31, 2018			
	Beginning balance	Additions and transfers	Retirements and transfers	Ending balance
Capital assets not being depreciated:				
Land	$ 5,595	—	—	5,595
Under construction	105,393	124,329	(153,769)	75,953
Total capital assets not being depreciated	110,988	124,329	(153,769)	81,548
Other capital assets:				
Distribution and collection systems	1,724,227	126,158	(4,197)	1,846,188
Buildings and equipment	514,909	27,610	—	542,519
Total other capital assets	2,239,136	153,768	(4,197)	2,388,707
Less accumulate depreciation for:				
Distribution and collection systems	(822,462)	(36,913)	(3,887)	(863,262)
Buildings and equipment	(189,547)	(13,188)	(302)	(203,037)
Total accumulated depreciation	(1,012,009)	(50,101)	(4,189)	(1,066,299)
Utility plant, net	$ 1,338,115	227,996	(162,155)	1,403,956

* Cost of removal of approximately $6.4 million was charged to expense as incurred in FY 2018 and is not included in accumulated depreciation.

(h) Revenue Recognition

The Company is primarily a natural gas distribution company. Operating revenues include revenues from the sale of natural gas to residential, commercial, and industrial heating and nonheating customers. The Company also provides natural gas transportation service. Appliance and other revenues primarily consist of revenue from the Company's parts and labor repair program. Revenue from this program is recognized on a monthly basis for the life of the individual parts and labor plans. Additional revenue is generated from collection fees, reconnection charges, and bulk liquefied natural gas sales contracts. Other operating revenues primarily consist of finance charges assessed on delinquent accounts.

In early 2012, Act 11 was enacted by the Pennsylvania Legislature, which permitted public utilities to file a request with the PUC for the implementation of a Distribution System Improvement Charge (DSIC). A DSIC permits natural gas distribution companies to recover the costs related to main and service replacement not already recovered in base rates. This legislation provides utility companies with a supplemental recovery mechanism for costs related to incremental/accelerated distribution system repair, improvement, and replacement. Act 11 permits gas utilities to recover 5.0% of their nongas revenues via the recovery mechanism and permits greater percentage increases if the PUC approves. The Company started billing customers a DSIC surcharge as of July 1, 2013. In FY 2019, the Company billed customers $35.6 million for the DSIC surcharge. In FY 2018, the Company billed customers $41.8 million for the DSIC surcharge. The DSIC surcharge is fully reconcilable on a calendar year basis and at the fiscal year end; the over billed or under billed amount is recorded as an adjustment to revenue.

The Company bills customers for the cost of natural gas and the related costs incurred through the processing, distribution, and delivery of natural gas to residential, commercial, and industrial heating and nonheating customers.

Revenues include amounts related to gas that has been used by customers but has not yet been billed. Revenues are recognized as gas is distributed. Estimated revenues from gas distributed and unbilled, less estimated uncollectible amounts are accrued and included in operating revenues and were $4.9 million and $4.6 million for the years ended August 31, 2019 and 2018, respectively.

(i) Operating Expenses

The Company recognizes costs incurred as part of the Company's regular business activities on the statements of revenues and expenses and changes in net position as operating expenses. These costs include distribution, marketing, gas processing, and other similar costs.

Costs incurred that do not involve normal business operations are recognized as nonoperating expenses.

(j) Provision for Uncollectible Accounts

The Company estimates its accumulated provision for uncollectible accounts based on a financial analysis and a collectibility study performed as of the fiscal year end. The methodology used in performing the collectibility study has been reviewed by the PGC. For FY 2019 and FY 2018, management has provided an accumulated provision for uncollectible accounts in excess of the collectibility study results based on its analysis of historical aging data. The actual results of the Company's collection efforts could differ significantly from the Company's estimate.

Due to the seasonal nature of the business, the Company carries credit balances in accounts receivable primarily as a result of prepayment by budget customers. Credit balances of $15.9 million and $16.8 million in FY 2019 and FY 2018, respectively, have been reclassified to accounts payable.

(k) Gas Inventories, Materials, and Supplies

Gas inventories, materials, and supplies, consisting primarily of fuel stock, gas stored to meet peak demand requirements, and spare parts, are stated at average cost at August 31, 2019 and 2018, as follows (thousands of U.S. dollars):

		2019	2018
Gas inventory	$	41,263	41,652
Material and supplies		10,428	10,712
Total	$	51,691	52,364

(l) Unamortized Bond Insurance Costs, Debt Discount, and Premium

Discounts or premiums and bond insurance costs arising from the sale of revenue bonds are amortized using the interest method over the term of the related bond issue. Other costs of bond issuance are expensed as incurred.

(m) Unamortized Losses on Bond Refunding

Losses on bond refunding are recorded as deferred outflows of resources and amortized, using the interest method, to interest expense over the shorter of the life of the refunding bond issue or the remaining original amortization period.

(n) Pensions and Postemployment Benefits

As described in note 10, the City sponsors a single employer defined benefit pension plan, the Philadelphia Gas Works Pension Plan (the Pension Plan), to provide pension benefits for certain current and former PGW employees. As described in note 11, PGW sponsors a single employer defined benefit healthcare plan, the Philadelphia Gas Works OPEB Plan (the OPEB Plan), to provide postemployment healthcare and life insurance benefits to substantially all current and former PGW employees.

In accordance with GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – an amendment of GASB 27* (GASB 68), and GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (GASB 75), for purposes of measuring the net pension and OPEB liabilities, deferred outflows of resources and deferred inflows of resources related to the Pension and OPEB Plans, and the Pension and OPEB Plans expense, information about the fiduciary net position of the Pension Plan and OPEB Plan, and additions to/deductions from the Pension and OPEB Plans' fiduciary net position are determined on the same basis as they are reported by the Pension and OPEB Plans. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with benefit terms. Investments are reported at fair value. With the exception of deferred outflows of resources related to employer contributions made after the measurement date, deferred inflows and outflows of resources related to the Pension and OPEB Plans are amortized over a closed five-year period or the average remaining service life of employees in the plan. Deferred outflows of resources related to employer contributions made after the measurement date will be recognized as a reduction of the net liability in the next fiscal year.

(o) Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the financial statement measurement date. The fair value hierarchy categorizes the inputs to valuation techniques used to measure fair value into three levels as follows:

- Level 1 – quoted prices for identical assets or liabilities in active markets that a government can access at the measurement date.
- Level 2 – quoted prices other than those included within Level 1 and other inputs that are observable for an asset or liability, either directly or indirectly.
- Level 3 – pricing inputs are unobservable for the asset or liability and include situations where there is little, if any, market activity or involvement.

The fair value hierarchy gives the highest priority to Level 1 inputs and the lowest priority to Level 3. When the fair value of an asset or a liability is measured using inputs from more than one level of the fair value hierarchy, the measurement is considered to be based on the lowest priority level that is significant to the entire measurement.

The categorization of a financial instrument within the hierarchy is based upon pricing transparency and is not necessarily an indication of the Company’s perceived risk of that instrument.

The following is a description of the valuation methodologies used for investments measured at fair value:

- U.S. government obligations – The fair value of government obligations are based on institutional bond quotes and evaluations based on various market and industry inputs and are primarily considered Level 1 inputs.
- U.S. government agencies and instrumentalities – The fair value of debt instruments of U.S. government agencies and instrumentalities is based on prices or yields of similar bonds, which is a Level 2 input.
- Corporate obligations – The fair value of corporate bonds are based on institutional bond quotes and evaluations based on various market and industry inputs and are primarily considered Level 2 inputs.
- Foreign issues – The fair value of foreign bonds are based on institutional bond quotes and evaluations based on various market and industry inputs and are primarily considered Level 2 inputs.

(p) Cash and Cash Equivalents

For the purpose of reporting cash and cash equivalents, all highly liquid investments with original maturities of three months or less are considered cash equivalents, except those held for long-term purposes in the Sinking Fund Reserve, Workers' Compensation Escrow Fund, and Capital Improvement Fund as described in note 3.

(q) Reserve for Injuries and Damages

The Company is principally insured through insurance carriers. However, the Company is required to cover settlement of claims, which are excluded under the provisions of such insurance policies. An estimated liability has been established, in accordance with PGC regulations, for settlements to be paid by the Company in the next fiscal year as described in note 14.

Estimated losses from claims for occurrences not covered by insurance, which will not be paid in the next fiscal year, have been accrued. Such liabilities have been established based upon Company history and consultation with counsel. Such expenses are expected to be recovered through future rates. Reductions to the reserve are made as claims are settled.

(r) Segment Information

All of the Company's assets and operations are employed in only one segment, local transportation, and distribution of natural gas in the City.

(s) Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Significant estimates in the Company's financial statements include the accumulated provision for uncollectible accounts, the fair value of interest rate swap agreements, the self-insurance liability, and the valuation of net pension and OPEB liabilities.

(t) Pollution Remediation

The Company estimates its pollution remediation obligations using the effective cash flow method, in which measurement is based on the outlays expected to be incurred as a sum of probability weighted amounts in a range of possible estimated amounts. The Company's liability is based on a combination of internal and external cost estimates for the specific remediation activities agreed to as part of Pennsylvania Act 2, Land Recycling and Environmental Remediation Standards Act of 1995 and Pennsylvania Act 32, Storage Tank and Spill Prevention Act of 1989.

Estimated site liabilities are determined based upon existing remediation laws and technologies, specific site consultants' engineering studies, or by extrapolating experience with environmental issues at comparable sites. Estimates may change substantially as additional information becomes available regarding the level of contamination at specific sites, available remediation methods, and changes in price, technology, proposed land use, or applicable regulations.

(u) Pronouncements Effective in the Current Year

GASB Statement No. 83, *Certain Asset Retirement Obligations* (GASB 83) addresses accounting and financial reporting for certain asset retirement obligations (ARO). An ARO is a legally enforceable liability associated with the retirement of a tangible capital asset. A government that has legal obligations to perform future asset retirement activities related to its tangible capital assets should recognize a liability based on the guidance in this statement. The requirements of this Statement were effective for periods beginning after June 15, 2018 (the Company's fiscal year ended August 31, 2019). The adoption of GASB 83 did not have a material impact on the financial statements.

GASB Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements* (GASB 88) improves consistency in accounting and financial reporting related to debt, including direct borrowings and direct placements, and to provide financial statement users with additional essential information about debt. This Statement defines debt for purposes of disclosure in notes to financial statements and establishes additional financial statement note disclosure requirements related to debt obligations of governments, including direct borrowings and direct placements. The requirements of this Statement were effective for periods beginning after June 15, 2018 (the Company's fiscal year ended August 31, 2019). The adoption of GASB 88 did not have a material impact on the financial statements.

(v) Pronouncements Effective in Future Years

(i) Effective for the Year Ending August 31, 2020

GASB Statement No. 84, *Fiduciary Activities* (GASB 84) establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities. An activity meeting the criteria should be reported in a fiduciary fund in the basic financial statements. Governments with activities meeting the criteria should present a statement of fiduciary net position and a statement of changes in fiduciary net position. This Statement describes four fiduciary funds that should be reported, if applicable: (1) pension (and other employee benefit) trust funds, (2) investment trust funds, (3) private-purpose trust funds, and (4) custodial funds. The requirements of this Statement will take effect for periods beginning after December 15, 2018 (the Company's fiscal year ending August 31, 2020). The Company is currently evaluating the impact of GASB 84 on its financial statements, and anticipates that certain pension and other postemployment benefit arrangements will be reported under the standard as fiduciary funds.

GASB Statement No. 90, *Majority Equity Interest* – an amendment of GASB Statements No. 14 and No. 61, will take effect for periods beginning after December 15, 2018 (the Company's fiscal year ended August 31, 2020). The primary objectives of GASB 90 are to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures. GASB 90 defines a majority equity interest and specifies that a majority equity interest in a legally separate organization should be reported as an investment if a government's holding of the equity interest meets the definition of an investment. The Company is currently evaluating the impact of GASB 90 on its financial statements, and anticipates that the adoption of this statement will not have a material impact on the financial statements.

(ii) Effective for the Year Ending August 31, 2021

GASB Statement No. 87, *Leases* (GASB 87) requires recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. The requirements of this Statement will take effect for periods beginning after December 15, 2019 (the Company's fiscal year ending August 31, 2021). The Company is currently evaluating the impact of GASB 87 on its financial statements.

GASB Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period* (GASB 89) establishes accounting requirements for interest cost incurred before the end of a construction period. This Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. The requirements of this Statement will take effect for periods beginning after December 15, 2019 (the Company's fiscal year ending August 31, 2021). The Company is currently evaluating the impact of GASB 89 on its financial statements.

(iii) Effective for the Year Ending August 31, 2022

GASB Statement No. 91, *Conduit Debt Obligations* (GASB 91) will take effect for financial statements starting with periods beginning after December 15, 2020 (the Company's fiscal year ending August 31, 2022). The primary objectives of GASB 91 are to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with commitments extended by issuers, arrangements associated with conduit debt obligations, and related note disclosures. Under this statement, a conduit obligation is defined as a debt instrument where (1) at least three parties involved, (2) the issuer and the third party obligor are not within the same financial reporting entity, (3) the debt obligation is a not parity bond of the issuer, nor is it cross-collateralized with other debt of the issuer, (4) the third party obligor or its agent, not the issuer, ultimately receives the proceeds from the debt issuance, (5) the third party obligor, not the issuer, is primary obligated for the payment of all amounts associated with the debt obligation (debt service payments). GASB 91 requires issuers to disclose general information about their conduit debt obligations, organized by type of commitment, including the aggregate outstanding principal amount of the issuers' conduit debt obligations and a description of each type of commitment. The Company is currently evaluating the impact of GASB 91 on its financial statements.

(2) Ownership and Management and Related-Party Transactions and Balances

The Company is accounted for as a component unit of the City. As of January 1, 1973, under the terms of a two year agreement automatically extended for successive two year periods unless canceled upon 90 days' notice by the City, the Company is being managed by the Philadelphia Facilities Management Corporation (PFMC). The agreement, as amended, provides for reimbursement to PFMC of actual costs incurred in managing the Company, not to exceed a total of the prior fiscal year's maximum amount adjusted to reflect the percentage change in the Consumer Price Index for All Urban Consumers (CPI-U) All Items Index, Philadelphia, Pennsylvania, United States Department of Labor, Bureau of Labor Statistics, as most recently published and available to the Director of Finance of the City on March 1 of each such fiscal year. In FY 2019 and FY 2018, the applicable maximum amount was calculated to be $1.3 million and $1.2 million, respectively. The agreement requires the Company to make annual payments of $18.0 million to the City. In FY 2019 and FY 2018, the Company made the annual payment of $18.0 million to the City.

The Company engages in various other transactions with the City. The Company provides gas service to the City. Operating revenues include $7.4 million and $7.6 million in FY 2019 and FY 2018, respectively, relating to sales to the City. Net amounts receivable from the City were $0.6 million and $0.5 million at August 31, 2019 and 2018, respectively. Water and sewer services and licenses are purchased from the City. Such purchases totaled $1.7 million and $1.6 million in FY 2019 and FY 2018, respectively. Water and sewer services and licenses are purchased from the City. Such purchases totaled $1.7 million and $1.6 million in FY 2019 and FY 2018, respectively.

Certain activities of the PGC are paid for by the Company. Such payments totaled $0.8 million and $0.7 million in FY 2019 and FY 2018, respectively.

(3) Cash and Cash Equivalents, and Investments

(a) Cash and Cash Equivalents, and Short-Term Investments

Cash and cash equivalents consist primarily of bank deposits, money market accounts, and investments purchased through various brokerage relationships. Bank balances of such deposits, accounts, and investments at August 31, 2019 and August 31, 2018 were $123.8 million and $131.0 million, respectively. Book balances of such deposits and accounts at August 31, 2019 and August 31, 2018 were $124.1 million and $131.1 million, respectively. Short-term investments with a carrying amount (at fair value) of $107.3 million and $121.5 million at August 30, 2019 and August 31, 2018, respectively, are included in the balances presented above. Federal depository insurance on these balances at August 31, 2019 and August 31, 2018 was $0.5 million and $0.8 million, respectively. The remaining balances are not insured. Investments are primarily in money market accounts, U.S. Treasury bills, U.S. government agencies and instrumentalities, and corporate obligations (short-term investments).

The highest balance of short-term investments during FY 2019 and FY 2018 was $194.2 million and $154.1 million, respectively.

The following is a schedule that details the Company's short-term investments (thousands of U.S. dollars):

		August 31, 2019		
Investment type	**Fair value**	**Weighted average maturity (years)**	**Credit rating**	**Rating agency**
U.S. government obligations:				
U.S. Treasury bills	$ 30,983	0.0377	*	*
U.S. Treasury notes	11,007	0.1857	*	*
Total U.S. government obligations	41,990			
U.S. government agencies and instrumentalities:				
Federal Home Loan Mortgage Corporation medium term notes	14,958	0.1842	*	*
Federal Home Loan Bank bonds	19,970	0.0825	Aaa/AA+	Moody's/S&P
Total U.S. government agencies and instrumentalities	34,928			
Total fair value of U.S. government securities	76,918			
Cash and cash equivalents:				
Agricultural Bank CP	2,999	—	*	*
Agricultural Bank CP	2,676	—	*	*
China Construction CP	4,992	—	*	*
First Adu Dhabi Bank CP	4,999	—	*	*
Korea Development Bank CP	4,492	—	*	*
Industrial Com Bank CP	4,993	—	*	*
Total cash and cash equivalents	25,151			
Other:				
Federal Fund 30 – Mutual Fund	5,256	—	*	*
Total fair value of investments, including cash deposits	$ 107,325			
Portfolio weighted modified duration				

* The credit of this investment is unrated.

	August 31, 2018			
Investment type	**Fair value**	**Weighted average maturity (years)**	**Credit rating**	**Rating agency**
U.S. government obligations:				
U.S. Treasury bills	$ 4,945	0.4944	*	*
U.S. Treasury notes	38,013	0.3901	*	*
U.S. government agencies and instrumentalities:				
Federal Home Loan Mortgage Corporation medium term notes	3,245	0.0889	*	*
Federal Home Loan Bank bonds	38,953	0.1024	Aaa/AA+	Moody's/S&P
Total U.S. government agencies and instrumentalities	42,198			
Total fair value of U.S. government securities	85,156			
Corporate obligations:				
Apple Incorporated	1,496	1.0333	Aa1/AA+	Moody's/S&P
Total corporate obligations	1,496			
Foreign issues:				
Rabobank Nederland NY	601	0.3722	Aa3/A+	Moody's/S&P
Total foreign issues	601			
Cash and cash equivalents:				
Agricultural Bank CP	2,488	—	*	*
Cdp Financial INC CP	3,795	—	*	*
Commercial Bank Qatar C P	2,982	—	*	*
Dnb Bank Asa C P	499	—	*	*
Koch Industries Inc C P	3,795	—	*	*
Korea Development Bk C P	2,483	—	*	*
Liberty ST Funding L C P	1,350	—	*	*
Mountcliff C P	1,799	—	*	*
Mufg Bank Ltd Ny Bran C P	4,736	—	*	*
National Secs Clearing C P	949	—	*	*
Sumitomo Mtsu Bkg Corp C P	749	—	*	*
Victory Receivables Cp C P	1,600	—	*	*

(Continued)

Investment type	Fair value	August 31, 2018 Weighted average maturity (years)	Credit rating	Rating agency
Money market:				
First American Government Obligations				
Fund Class Z	$ 1,723	—	*	*
Total cash and cash equivalents	28,948			
Other:				
Federal Fund 30 Mutual Fund	5,256	—	*	*
Total fair value of investments, including cash deposits	$ 121,457			
Portfolio weighted modified duration				

* The credit of this investment is unrated.

The following table is a schedule that details the fair value hierarchy of the Company's short-term investments (thousands of U.S. dollars):

Investment type	August 31, 2019 Total fair value	Level 1	Level 2	Level 3
U.S. government obligations:				
U.S. Treasury bills	$ 30,983	30,983	—	—
U.S. Treasury notes	11,007	11,007	—	—
Total U.S. government obligations	41,990	41,990	—	—
U.S. government agencies and instrumentalities:				
Federal Home Loan Mortgage Corporation medium term notes	14,958	—	14,958	—
Federal Home Loan Bank Bonds	19,970	—	19,970	—
Total U.S. government agencies and instrumentalities	34,928	—	34,928	—
Total fair value of U.S. government securities	76,918	41,990	34,928	—

Investment type		Total fair value	Level 1	Level 2	Level 3
		August 31, 2019			
Cash and cash equivalents:					
Agricultural Bank CP	$	2,999	2,999	—	—
Agricultural Bank CP		2,676	2,676	—	—
China Construction CP		4,992	4,992	—	—
First Adu Dhabi Bank CP		4,999	4,999	—	—
Korea Development Bank CP		4,492	4,492	—	—
Industrial Com Bank CP		4,993	4,993	—	—
Total cash and cash equivalents		25,151	25,151	—	—
Other:					
Federal Fund 30 Mutual Fund		5,256	5,256	—	—
Total fair value of investments, including cash deposits	$	107,325	72,397	34,928	—

Investment type		Total fair value	Level 1	Level 2	Level 3
		August 31, 2018			
U.S. government obligations:					
U.S. Treasury bills	$	4,945	4,945	—	—
U.S. Treasury notes		38,013	38,013	—	—
Total U.S. government obligations		42,958	42,958	—	—
U.S. government agencies and instrumentalities:					
Federal Home Loan Mortgage Corporation medium term notes		3,245	—	3,245	—
Federal Home Loan Bank Bonds		38,953	—	38,953	—
Total U.S. government agencies and instrumentalities		42,198	—	42,198	—
Total fair value of U.S. government securities		85,156	42,958	42,198	—
Corporate obligations:					
Apple Incorporated		1,496	—	1,496	—
Foreign issues:					
Radobank Nederland NY		601	—	601	—

	August 31, 2018			
Investment type	**Total fair value**	**Level 1**	**Level 2**	**Level 3**
Cash and cash equivalents:				
Agricultural Bank CP	$ 2,488	2,488	—	—
Cdp Financial INC CP	3,795	3,795	—	—
Commercial Bank Qatar C P	2,982	2,982	—	—
Dnb Bank Asa C P	499	499	—	—
Koch Industries Inc C P	3,795	3,795	—	—
Korea Development Bk C P	2,483	2,483	—	—
Liberty ST Funding L C P	1,350	1,350	—	—
Mountcliff C P	1,799	1,799	—	—
Mufg Bank Ltd Ny Bran C P	4,736	4,736	—	—
National Secs Clearing C P	949	949	—	—
Sumitomo Mtsu Bkg Corp C P	749	749	—	—
Victory Receivables Cp C P	1,600	1,600	—	—
Money market:				
First American Government Obligations Fund Class Z	1,723	1,723	—	—
Total cash and cash equivalents	28,948	28,948	—	—
Other:				
Federal Fund 30 Mutual Fund	5,256	5,256	—	—
Total fair value of investments, including cash deposits	$ 121,457	77,162	44,295	—

(b) Sinking Fund Reserve, Workers' Compensation Escrow Fund, and Capital Improvement Fund

The investments in the Company's Sinking Fund Reserve, Capital Improvement Fund and Workers' Compensation Escrow Fund consist primarily of U.S. Treasury and government agency obligations, corporate obligations, and money market accounts. These investments are maintained by the City or in the Company's name by its agent.

The Sinking Fund Reserve is required by bond ordinance to hold an amount equal to the greatest amount of debt service required by bonds secured by the Sinking Fund Reserve in any fiscal year. The balance of the Company's Sinking Fund Reserve at August 31, 2019 and 2018 was $106.5 million and $103.3 million, respectively. Interest income on these funds, to the extent not drawn, is reflected as an increase and approximated $2.0 million in FY 2019 and $1.0 million in FY 2018.

The balance in the Capital Improvement Fund at August 31, 2019 and 2018 was $68.6 million and $111.8 million, respectively. PGW withdrew $45.0 million during FY 2019 and $55.0 million FY 2018 to finance various capital projects. Interest income on these funds, to the extent not drawn, is reflected as an increase and approximated $1.6 million in FY 2019 and $1.8 million in FY 2018.

Investments are recorded at fair value except for certain money market funds recorded at amortized cost. The adjustment to the market value for the Sinking Fund Reserve and the Capital Improvement Fund resulted in a gain of $1.2 million and $0.2 million in FY 2019 and FY 2018, respectively.

Pursuant to the Pennsylvania Department of Labor and Industry Bureau of Workers' Compensation Self-Insurance policy, the Company has established and maintained a restricted trust account. As of August 31, 2019 and 2018, the trust account balances were $2.7 million and $2.6 million, respectively.

The following tables are schedules that detail the Company's investments in the Sinking Fund Reserve (thousands of U.S. dollars):

	August 31, 2019				
Investment type		**Fair value**	**Weighted average maturity (years)**	**Credit rating**	**Rating agency**
U.S. government obligations:					
U.S. Treasury notes	$	39,940	1.0367	Aaa/N/A	Moody's/S&P
U.S. government agencies and instrumentalities:					
Federal Home Loan Mortgage Corporation medium term notes		4,032	0.6222	Aaa/AA+	Moody's/S&P
Federal National Mortgage Association		5,097	0.3960	Aaa/AA+	Moody's/S&P
Federal Home Loan Bank bonds		13,920	1.5922	Aaa/AA+	Moody's/S&P
Federal Farm Credit Banks		5,234	1.0932	Aaa/AA+	Moody's/S&P
Total U.S. government agencies and instrumentalities		28,283			
Total fair value of U.S. government securities		68,223			
Corporate obligations:					
Apple Incorporated		1,992	0.5371	Aa1/AA+	Moody's/S&P
Chevron Corporation		2,022	0.4836	Aa2/AA	Moody's/S&P
Exxon Mobil Corporation		2,018	0.1458	Aaa/AA+	Moody's/S&P
Exxon Mobil Corporation		1,119	0.2351	Aaa/AA+	Moody's/S&P
Total corporate obligations		7,151			
Foreign issues:					
Bank of Montreal MTN		1,288	0.1811	Aa2/A+	Moody's/S&P
Bank of Nova Scotia		1,011	0.1191	Aa2/A+	Moody's/S&P
Canadian Imperial Bank		1,417	0.1751	Aa2/A+	Moody's/S&P
Royal Bank of Canada MTN		2,022	0.0888	Aa2/AA-	Moody's/S&P
Shell International		2,838	0.1403	Aa2/AA-	Moody's/S&P
Toronto Dominion MTN		1,927	0.2157	Aa1/AA-	Moody's/S&P
Toronto Dominion MTN		1,012	0.0686	Aa1/AA-	Moody's/S&P
Total foreign issues		11,515			

(Continued)

	August 31, 2019				
Investment type		**Fair value**	**Weighted average maturity (years)**	**Credit rating**	**Rating agency**
Cash and cash equivalents:					
BNP Paribas Finance Inc. CP	$	2,467	0.0850	*	*
Cooperatieve Central CP		1,993	0.0183	*	*
Credit Agricole Crpin CP		2,975	0.0640	*	*
JP Morgan Securities CP		1,996	0.0117	*	*
MUFG Bank LTD NY Bran CP		2,984	0.0411	*	*
Natixis NY CP		2,491	0.0229	*	*
Swedbank AB CP		1,978	0.0557		
Toyota Motor Credit Company CP		2,467	0.0853	*	*
Money market:					
First American Government Obligations Fund Class Z		269	—	*	*
Total cash and cash equivalents		19,620			
Other		—	—	*	*
Total fair value of investments, including cash deposits	$	106,509			
Portfolio weighted modified duration					

* The credit of this investment is unrated.

	August 31, 2018				
Investment type		**Fair value**	**Weighted average maturity (years)**	**Credit rating**	**Rating agency**
U.S. government obligations:					
U.S. Treasury notes	$	44,999	1.0652		
U.S. government agencies and instrumentalities:					
Federal Home Loan Mortgage Corporation medium term notes		8,739	0.9583	Aaa/AA+	Moody’s/S&P
Federal National Mortgage Association		2,210	1.2083	Aaa/AA+	Moody’s/S&P
Federal Home Loan Bank bonds		17,132	0.8738	Aaa/AA+	Moody’s/S&P
Total U.S. government agencies and instrumentalities		28,081			
Total fair value of U.S. government securities		73,080			

	August 31, 2018			
Investment type	**Fair value**	**Weighted average maturity (years)**	**Credit rating**	**Rating agency**
Corporate obligations:				
Chevron Corporation	$ 1,999	0.1243	Aa2/AA-	Moody's/S&P
Apple Incorporated	1,998	0.2596	Aa1/AA+	Moody's/S&P
Microsoft Corporation	1,983	0.2340	Aaa/AAA	Moody's/S&P
Exxon Mobil Corporation	1,975	0.3765	Aaa/AA+	Moody's/S&P
Total corporate obligations	7,955			
Cash and cash equivalents:				
American Honda Finance Corporation CP	1,985	—	*	*
Bank of Montreal CP	1,985	—	*	*
Bank of Tokyo Mitsubishi CP	1,970	—	*	*
BNP Paribas Finance Inc. CP	1,970	—	*	*
Cooperative Centrale CP	1,984	—	*	*
Credit Agricole Crpin CP	1,988	—	*	*
Dexia Credit Local CP	1,978			
ING US Funding LLC CP	1,984	—	*	*
JP Morgan Securities CP	1,965	—	*	*
Natixis NY CP	1,979	—	*	*
Toyota Motor Credit Company CP	1,985	—	*	*
Money market:				
First American Government Obligations Fund Class Z	447	—	*	*
Total cash and cash equivalents	22,220			
Other	—	—	*	*
Total fair value of investments, including cash deposits	$ 103,255			
Portfolio weighted modified duration				

* The credit of this investment is unrated.

The following is a schedule that details the Company's investments in the Workers' Compensation Escrow Fund (thousands of U.S. dollars):

	August 31, 2019			
Investment type	**Fair value**	**Weighted average maturity (years)**	**Credit rating**	**Rating agency**
Money market:				
Fidelity Government Portfolio – Class I	$ 2,711	—	Aaa/AAA	Moody's/S&P
Total fair value of investments including cash deposits	$ 2,711			
Portfolio weighted modified duration				

* The credit of this investment is unrated.

	August 31, 2018			
Investment type	**Fair value**	**Weighted average maturity (years)**	**Credit rating**	**Rating agency**
U.S. government obligations:				
U.S. Treasury notes	$ 2,589	0.3750		
Money market:				
Fidelity Government Portfolio – Class I	57	—	Aaa/AAA	Moody's/S&P
Total fair value of investments including cash deposits	$ 2,646			
Portfolio weighted modified duration				

* The credit of this investment is unrated.

The following tables are schedules that detail the Company's investments in the Capital Improvement Fund (thousands of U.S. dollars):

	August 31, 2019				
Investment type		**Fair value**	**Weighted average maturity (years)**	**Credit rating**	**Rating agency**
U.S. government obligations:					
U.S. Treasury bills	$	11,923	0.3501		
U.S. Treasury notes		47,497	0.2627	Aaa/N/A	Moody's/S&P
Total U.S. government obligations		59,420			
U.S. government agencies and instrumentalities:					
Federal Home Loan Mortgage Corporation medium term notes		100	0.0889	Aaa/AA+	Moody's/S&P
Total fair value of U.S. government securities		59,520			
Corporate obligations:					
Apple Incorporated		1,599	0.0801	Aa1/AA+	Moody's/S&P
Chevron Corporation		150	0.0188	Aa2/AA	Moody's/S&P
Institute for Advanced Study		300	0.0125	Aaa/AAA	Moody's/S&P
Walmart Stores, Inc.		1,999	0.0535	Aa2/AA	Moody's/S&P
Total corporate obligations		4,048			
Foreign issues:					
Toronto MTN		500	0.0780	Aa1/AA-	Moody's/S&P
Toronto Dominion MTN		461	0.5025	Aa1/AA-	Moody's/S&P
Total foreign issues		961			
Municipal issues:					
Pennsylvania ST Hsg Fin Agy Sf Mtge		145	0.0095	Aa2/AA+	Moody's/S&P
Pennsylvania ST Hsg Fin Agy Sf Mtge		125	0.0557	Aa2/AA+	Moody's/S&P
Pennsylvania ST Turnpike Commission		750	0.1436	Aaa/N/A	Moody's/S&P
University of Pittsburg PA Commonwealth		300	0.0095	Aa1/AA+	Moody's/S&P
Total municipal issues		1,320			
Cash and cash equivalents:					
Export Development Corporation CP		998	—	*	*
Salt River Project CP		200	—	*	*
Sentara VA CP		1,500	—	*	*
Money market:					
First American Government Obligations Fund Class Z		87	—	*	*
Total cash and cash equivalents		2,785			
Total fair value of investments including cash deposits	$	68,634			
Portfolio weighted modified duration					

* The credit of this investment is unrated.

	August 31, 2018			
Investment type	**Fair value**	**Weighted average maturity (years)**	**Credit rating**	**Rating agency**
U.S. government obligations:				
U.S. Treasury notes	$ 46,308	0.8537		
U.S. government agencies and instrumentalities:				
Federal Home Loan Mortgage Corporation medium term notes	6,060	0.8512	Aaa/AA+	Moody's/S&P
Federal National Mortgage Association	5,489	0.5713	Aaa/AA+	Moody's/S&P
Federal Home Loan Bank bonds	2,987	0.4352	Aaa/AA+	Moody's/S&P
Total U.S. government agencies and instrumentalities	14,536			
Total fair value of U.S. government securities	60,844			
Corporate obligations:				
Apple Incorporated	2,893	0.0203	Aa1/AA+	Moody's/S&P
Berkshire Hathaway Financial	2,783	0.0311	Aa2/AA	Moody's/S&P
Chevron Corporation	2,800	0.0532	Aa2/AA-	Moody's/S&P
Emory University	1,500	0.0307	Aa2/AA	Moody's/S&P
Exxon Mobil Corporation	1,995	0.0408	Aaa/AA+	Moody's/S&P
Institute for Advanced Study	805	0.0170	Aaa/AAA	Moody's/S&P
Johns Hopkins University	591	0.0150	Aa2/AA	Moody's/S&P
Johnson & Johnson	1,275	0.0347	Aaa/AAA	Moody's/S&P
Microsoft Corporation	2,974	0.0960	Aaa/AAA	Moody's/S&P
New York University	292	0.0099	Aa2/AA-	Moody's/S&P
Northwestern University	50	0.0019	Aaa/AAA	Moody's/S&P
Princeton University	1,597	0.0622	Aaa/AAA	Moody's/S&P
Stanford University	840	0.0342	Aaa/AAA	Moody's/S&P
Walmart Stores, Inc.	2,749	0.1289	Aa2/AA	Moody's/S&P
Yale University	1,449	0.0709	Aaa/AAA	Moody's/S&P
Total corporate obligations	24,593			
Municipal issues:				
Chester County PA Ref	1,916	0.3718	Aaa/AAA	Moody's/S&P
Montgomery County PA Ser B	116	0.0303	Aaa/N/A	Moody's/S&P
Pennsylvania ST Turnpike Commission	744	0.2553	Aaa/N/A	Moody's/S&P
University of Pittsburgh PA Of The Cmwlth	297	0.0847	Aa1/AA+	Moody's/S&P
Westmoreland County PA Txbl Ser B	578	0.0400	Aa2/N/A	Moody's/S&P
Total municipal issues	3,651			

	August 31, 2018			
Investment type	**Fair value**	**Weighted average maturity (years)**	**Credit rating**	**Rating agency**
Cash and cash equivalents:				
American Honda Financial CP	$ 2,287	—	*	*
Credit Agricole Corporation CP	1,995	—	*	*
Export Development Corporation CP	2,997	—	*	*
Nestle Finance Intl LTD CP	1,258	—	*	*
Paccar Financial Corporation CP	995	—	*	*
Prudential Funding LLC CP	995	—	*	*
Salt River Project CP	995	—	*	*
State of Ohio Hospital CP	1,991	—	*	*
Swedbank AB CP	2,979	—	*	*
Toyota Motor Credit Company CP	1,983	—	*	*
Money market:				
First American Government Obligations Fund Class Z	2,252	—	*	*
Total cash and cash equivalents	20,727			
Other:				
University of Pittsburgh PA CP	2,000	0.0076	*	*
Total fair value of investments including cash deposits	$ 111,815			
Portfolio weighted modified duration				

* The credit of this investment is unrated.

The following tables are schedules that detail the fair value hierarchy of the Company's investments in the Sinking Fund Reserve (thousands of U.S. dollars):

	August 31, 2019			
Investment type	**Total fair value**	**Level 1**	**Level 2**	**Level 3**
U.S. government obligations:				
U.S. Treasury notes	$ 39,940	39,940	—	—
U.S. government agencies and instrumentalities:				
Federal Home Loan Mortgage Corporation medium term notes	4,032	—	4,032	—
Federal National Mortgage Association	5,097	—	5,097	—
Federal Home Loan Bank bonds	13,920	—	13,920	—
Federal Farm Credit banks	5,234	—	5,234	—
Total U.S. government agencies and instrumentalities	28,283	—	28,283	—
Total fair value of U.S. government securities	68,223	39,940	28,283	—
Corporate obligations:				
Apple Incorporated	1,992	—	1,992	—
Chevron Corporation	2,022	—	2,022	—
Exxon Mobil Corporation	2,018	—	2,018	—
Exxon Mobil Corporation	1,119	—	1,119	—
Total corporate obligations	7,151	—	7,151	—
Foreign issues:				
Bank of Montreal MTN	1,288	—	1,288	—
Bank of Nova Scotia	1,011	—	1,011	—
Canadian Imperial Bank	1,417	—	1,417	—
Royal Bank of Canada MTN	2,022	—	2,022	—
Shell International	2,838	—	2,838	—
Toronto Domion MTN	1,927	—	1,927	—
Toronto Domion MTN	1,012	—	1,012	—
Total foreign issues	11,515	—	11,515	—

	August 31, 2019			
Investment type	**Total fair value**	**Level 1**	**Level 2**	**Level 3**
Cash and cash equivalents:				
BNP Paribas Finance Inc. CP	$ 2,467	2,467	—	—
Cooperative Centrale CP	1,993	1,993	—	—
Credit Agricole Crpin CP	2,975	2,975	—	—
JP Morgan Securities CP	1,996	1,996	—	—
MUFG Bank LTD NY Bran CP	2,984	2,984	—	—
Natixis NY CP	2,491	2,491	—	—
Swedbank AB CP	1,978	1,978	—	—
Toyota Motor Credit Company CP	2,467	2,467	—	—
Money market:				
First American Government Obligations Fund Class Z	269	269	—	—
Total cash and cash equivalents	19,620	19,620	—	—
Total fair value of investments, including cash deposits	$ 106,509	59,560	46,949	—

	August 31, 2018			
Investment type	**Total fair value**	**Level 1**	**Level 2**	**Level 3**
U.S. government obligations:				
U.S. Treasury notes	$ 44,999	44,999	—	—
U.S. government agencies and instrumentalities:				
Federal Home Loan Mortgage Corporation medium term notes	8,739	—	8,739	—
Federal National Mortgage Association	2,210	—	2,210	—
Federal Home Loan Bank bonds	17,132	—	17,132	—
Total U.S. government agencies and instrumentalities	28,081	—	28,081	—
Total fair value of U.S. government securities	73,080	44,999	28,081	—

(Continued)

	August 31, 2018			
Investment type	**Total fair value**	**Level 1**	**Level 2**	**Level 3**
Corporate obligations:				
Chevron Corporation	$ 1,999	—	1,999	—
Apple Incorporated	1,998	—	1,998	—
Microsoft Corporation	1,983	—	1,983	—
Exxon Mobil Corporation	1,975	—	1,975	—
Total corporate obligations	7,955	—	7,955	—
Cash and cash equivalents:				
American Honda Finance Corporation CP	1,985	1,985	—	—
Bank of Montreal CP	1,985	1,985	—	—
Bank of Tokyo Mitsubishi CP	1,970	1,970	—	—
BNP Paribas Finance Inc. CP	1,970	1,970	—	—
Cooperative Centrale CP	1,984	1,984	—	—
Credit Agricole Crpin CP	1,988	1,988	—	—
Dexia Credit Local CP	1,978	1,978	—	—
ING US Funding LLC CP	1,984	1,984	—	—
JP Morgan Securities CP	1,965	1,965	—	—
Natixis NY CP	1,979	1,979	—	—
Toyota Motor Credit Company CP	1,985	1,985	—	—
Money market:				
First American Government Obligations Fund Class Z	447	447	—	—
Total cash and cash equivalents	22,220	22,220	—	—
Total fair value of investments, including cash deposits	$ 103,255	67,219	36,036	—

The following tables are schedules that detail the fair value hierarchy of the Company's investments in the Workers' Compensation Escrow Fund (thousands of U.S. dollars):

	August 31, 2019			
Investment type	**Total fair value**	**Level 1**	**Level 2**	**Level 3**
Money market:				
Fidelity Government Portfolio – Class I	2,711	2,711	—	—
Total fair value of investments, including cash deposits	$ 2,711	2,711	—	—

	August 31, 2018			
Investment type	**Total fair value**	**Level 1**	**Level 2**	**Level 3**
U.S. government obligations:				
U.S. Treasury notes	$ 2,589	2,589	—	—
Money market:				
Fidelity Government Portfolio – Class I	57	57	—	—
Total fair value of investments, including cash deposits	$ 2,646	2,646	—	—

The following table is a schedule that details the fair value hierarchy of the Company's investments in the Capital Improvement Fund (thousands of U.S. dollars):

	August 31, 2019			
Investment type	**Total fair value**	**Level 1**	**Level 2**	**Level 3**
U.S. government obligations:				
U.S. Treasury bills	$ 11,923	11,923	—	—
U.S. Treasury notes	47,497	47,497	—	—
Total U.S. government obligations	59,420	59,420	—	—
U.S. government agencies and instrumentalities:				
Federal Home Loan Mortgage Corporation medium term notes	100	—	100	—
Total fair value of U.S. government securities	59,520	59,420	100	—
Corporate obligations:				
Apple Incorporated	1,599	—	1,599	—
Chevron Corporation	150	—	150	—
Institute Advance Study	300	—	300	—
Walmart Stores Incorporated	1,999	—	1,999	—
Total corporate obligations	4,048	—	4,048	—
Foreign issues:				
Toronto MTN	500	—	500	—
Toronto Dominion MTN	461	—	461	—
Total foreign issues	961	—	961	—
Municipal Issues:				
Pennsylvania ST Hsg Fin Agy Sf Mtge	145	—	145	—
Pennsylvania ST Hsg Fin Agy Sf Mtge	125	—	125	—
Pennsylvania ST Turnpike Commission	750	—	750	—
University of Pittsburg PA	300	—	300	—
Total foreign obligations	1,320	—	1,320	—

Investment type		Total fair value (August 31, 2019)	Level 1	Level 2	Level 3
Cash and cash equivalents:					
Export Development Corporation CP	$	998	998	—	—
Salt River Project CP		200	200	—	—
Sentara VA CP		1,500	1,500	—	—
Money market:					
First American Government Obligations Fund Class Z		87	87	—	—
Total cash and cash equivalents		2,785	2,785	—	—
Total fair value of investments, including cash deposits	$	68,634	62,205	6,429	—

Investment type		Total fair value (August 31, 2018)	Level 1	Level 2	Level 3
U.S. government obligations:					
U.S. Treasury notes	$	46,308	46,308	—	—
U.S. government agencies and instrumentalities:					
Federal Home Loan Mortgage Corporation medium term notes		6,060	—	6,060	—
Federal National Mortgage Association		5,489	—	5,489	—
Federal Home Loan Bank bonds		2,987	—	2,987	—
Total U.S. government agencies and instrumentalities		14,536	—	14,536	—
Total fair value of U.S. government securities		60,844	46,308	14,536	—
Corporate obligations:					
Apple Incorporated		2,893	—	2,893	—
Berkshire Hathaway Financial		2,783	—	2,783	—
Chevron Corporation		2,800	—	2,800	—
Emory University		1,500	—	1,500	—
Exxon Mobil Corporation		1,995	—	1,995	—
Institute for Advanced Study		805	—	805	—
Johns Hopkins University		591	—	591	—
Johnson & Johnson		1,275	—	1,275	—

	August 31, 2018			
Investment type	**Total fair value**	**Level 1**	**Level 2**	**Level 3**
Microsoft Corporation	$ 2,974	—	2,974	—
New York University	292	—	292	—
Northwestern University	50	—	50	—
Princeton University	1,597	—	1,597	—
Stanford University	840	—	840	—
Walmart Stores, Inc.	2,749	—	2,749	—
Yale University	1,449	—	1,449	—
Total corporate obligations	24,593	—	24,593	—
Municipal issues:				
Chester County PA Ref	1,916	—	1,916	—
Montgomery County PA Ser B	116	—	116	—
Pennsylvania ST Turnpike Commission	744	—	744	—
University of Pittsburgh PA Of The Cmwlth	297	—	297	—
Westmoreland County PA Txbl Ser B	578	—	578	—
Total municipal issues	3,651	—	3,651	—
Cash and cash equivalents:				
American Honda Financial CP	2,287	2,287	—	—
Credit Agricole Corporation CP	1,995	1,995	—	—
Export Development Corporation CP	2,997	2,997	—	—
Nestle Finance Intl LTD CP	1,258	1,258	—	—
Paccar Financial Corporation CP	995	995	—	—
Prudential Funding LLC CP	995	995	—	—
Salt River Project CP	995	995	—	—
State of Ohio Hospital CP	1,991	1,991	—	—
Swedbank AB CP	2,979	2,979	—	—
Toyota Motor Credit Company CP	1,983	1,983	—	—
Money market:				
First American Government Obligations Fund Class Z	2,252	2,252	—	—
Total cash and cash equivalents	20,727	20,727	—	—
Miscellaneous:				
University of Pittsburgh PA CP	2,000	—	2,000	—
Total fair value of investments, including cash deposits	$ 111,815	67,035	44,780	—

(c) Interest Rate Risk

It is the policy of the City to diversify its investment portfolios. Portfolio diversification is employed as a way to control risk. Investments shall be diversified as to maturities, and as to kind of investments to minimize the risk of loss, which might result from over concentration of assets in a specific maturity, in a specific kind of a security, or from a specific issuer or industry.

(d) Credit Risk

The City has adopted an investment policy relating to the investments of the Company. Per the investment policy, the Company's allowable investments are as follows:

(1) Bonds or notes of the U.S. government.

(2) U.S. Treasury obligations, including separate trading of registered interest and principal securities; receipts indicating an undivided interest in such U.S. Treasury obligations; and stripped coupons held under book entry with the New York Federal Reserve Bank.

(3) Obligations of the following U.S. government sponsored agencies: Government National Mortgage Association, Federal National Mortgage Association, Federal Home Loan Mortgage Corporation, Federal Farm Credit System, Federal Home Loan Bank, Resolution Funding Corporation, and Tennessee Valley Authority.

(4) Collateralized banker's acceptances and certificate of deposit denominated in U.S. dollars and issued by a city code authorized depository certificate of deposit that must be secured by acceptable collateral with a total market value equal to 102.0% of the deposit.

(5) Commercial paper with a stated maturity of 270 days or less, which is rated P1 by Moody's or A1+ by Standard & Poor's (S&P). The senior long-term debt of the commercial paper issuer, or the entity providing an explicit guarantee, must be rated not lower than A2 by Moody's or A by S&P.

(6) Asset backed commercial paper (ABCP), which does not have a long-term rating, is an allowable investment if it meets the short-term rating requirements but is only allowed up to the ABCP sublimit.

(7) General obligation bonds of corporations rated Aa2 or better by Moody's or AA or better by S&P with a final maturity of two years or less.

(8) Collateralized mortgage obligations and pass through securities directly issued by a federal agency or instrumentality of the United States, the underlying security for which is guaranteed by an agency or instrumentality of the United States and with a final maturity of two years or less, the rating must be no lower than Aa2 by Moody's or AA by S&P.

(9) Money market mutual funds, as defined by the Securities and Exchange Commission, such money market funds must have assets over $15.0 billion, have the highest rating from Moody's, S&P, and Fitch, and contain only government securities.

(10) Repurchase agreements that are fully collateralized in bonds or notes of the U.S. government pledged to the City and held in the City's name and deposited at the time the investment is made with an entity or a third party selected and approved by the City the market value of the collateral shall be at least 102.0% of the funds being disbursed.

(11) Obligations of the Commonwealth of Pennsylvania (the Commonwealth) or any municipality or other political subdivision of the Commonwealth with a final maturity of two years or less and a rating of at least AA by Moody's or S&P.

Authorized investments for Sinking Fund Portfolios are dictated by the First Class City Revenue Bond Act of the General Assembly of the Commonwealth of Pennsylvania, approved October 18, 1972. This also includes any investment vehicle permitted for any Commonwealth state agency.

The Company's investment policy provides for the following percentage limitations of authorized investments, valued at market:

	Percent of portfolio allowed	Percent of portfolio per issuer	Percent of outstanding securities per issuer
U.S. government	100	100	N/A
U.S. Treasury	100	100	N/A
U.S. agencies and instrumentalities	100	33	N/A
Banker's acceptances and certificates of deposit	15	3	3
Commercial paper	25	3	3
Corporate bonds	25	3	3
Collateralized mortgage obligations and pass-through securities	5	3	3
Commonwealth of PA and subdivisions of Commonwealth of PA	15	3	3
Money market mutual funds	25	10	3
Repurchase agreements	25	10	N/A

More than 84.8% of the Company's short-term investments as of August 31, 2019 are in the following: U.S. Treasury bills (28.9%), Commercial Paper (23.4%), Federal Home Loan Bank Bonds (18.6%), and Federal Home Loan Mortgage Corporation medium term notes (13.9%). These investments are in accordance with the investment policy.

(e) Custodial Credit Risk

The Company has selected, as custodial bank, a member of the Federal Reserve System, to hold its investments. Delivery of the applicable investment documents to the Company's custodian is required for all investments. For secured transactions, such as repurchase agreements, either the title to or a perfected security interest in the securities, along with any necessary transfer documents, must be transferred to the custodian. Such transactions will always use delivery versus payment procedures.

(4) Recoverable Costs

In compliance with orders issued by the PGC, the cost of projects that produce benefits over an extended period is recorded on the balance sheets as a recoverable cost in other assets. There is no return on the asset being charged to the customers. The unamortized costs included in other noncurrent assets were $0.4 million and $0.8 million as of August 31, 2019 and 2018, respectively. The unamortized costs included in other current assets were $0.4 million and $0.4 million as of August 31, 2019 and 2018, respectively.

In accordance with U.S. GAAP for regulated entities, the Company has recognized the long-term portion of its environmental remediation liability as a regulatory asset because based on available evidence it is probable that the previously incurred costs will be recovered through rates. In FY 2019, settlements by the Company's insurance carriers provided less than $0.1 million associated with environmental remediation costs. Environmental remediation costs of approximately $0.6 million in FY 2019 were offset by insurance settlements received in prior fiscal years, and the remainder was recorded on the Balance Sheets as a recoverable cost in other noncurrent assets. The Company estimates additional expenditures to be approximately $39.1 million.

(5) Deferred Compensation Plan

The Company offers its employees a deferred compensation plan created in accordance with Internal Revenue Code Section 457. The plan, available to all Company employees with at least 30 days of service, permits them to defer a portion of their salary until future years. The Company provides an annual 10.0% matching contribution of applicable wages that immediately vests to the employee. The Company contributed $0.4 million in FY 2019 and $0.4 million in FY 2018. PGW's contributions are accounted for as part of administrative and general expenses.

(6) Notes Payable

Pursuant to the provisions of the City of Philadelphia Note Ordinances, PGW may issue short-term notes to either support working capital requirements or pay the costs of certain capital projects and other project costs. PGW may issue short-term notes in a principal amount, which, together with interest, may not exceed $150.0 million outstanding to support working capital requirements. PGW may also issue additional short-term notes in an aggregate principal amount, which may not exceed $120.0 million outstanding at any time to pay the costs of certain capital projects and other project costs. As of December 1, 2017, all notes are supported by a Note Purchase and Credit Agreement and a security interest in PGW's revenues. Prior to that, all notes were supported by two irrevocable letters of credit and a security interest in PGW's revenues. The Note Purchase and Credit Agreement supporting PGW's combined commercial paper programs set the maximum level of outstanding notes plus interest at $120.0 million in FY 2019 and FY 2018, respectively. The commitment amount is $120.0 million under the current credit agreement. The expiration date of the credit agreement is December 31, 2021.

There were no Gas Works Revenue Capital Project Commercial Paper Notes (Capital Project Notes) or Gas Works Revenue Notes outstanding at August 31, 2019 and 2018, respectively.

(7) GCR Tariff Reconciliation

During the fiscal year ended August 31, 2019, the Company's actual gas costs were higher than its billed gas costs by approximately $1.2 million. This amount was netted with other applicable costs and recorded in other current assets for FY 2019. Actual gas costs were $10.9 million lower than billed gas costs in FY 2018. This amount was netted with other applicable costs and recorded in other current assets for FY 2018.

Natural Gas Pipeline Supplier Refund

The Company received less than $0.1 million in refunds in FY 2019 and FY 2018, related to Federal Energy Regulatory Commission/Pipeline Rate Cases. This amount was utilized as a reduction in the cost of gas for reconciliation purposes in the calculation of the applicable GCR.

(8) Long-Term Debt and Other Liabilities

The following summary of long-term debt consists primarily of bonds issued by the City under agreements whereby the Company must reimburse the City for the principal and interest payments required by the bond ordinances for the fiscal years ended August 31, 2019 and 2018 (thousands of U.S. dollars):

		August 31, 2019			August 31, 2018		
		Current portion	Long-term	Total	Current portion	Long-term	Total
Revenue bonds	$	52,870	911,610	964,480	51,820	964,480	1,016,300
Unamortized discount		(4)	(56)	(60)	(4)	(60)	(64)
Unamortized premium		10,080	87,920	98,000	10,893	98,343	109,236
Total revenue bonds	$	62,946	999,474	1,062,420	62,709	1,062,763	1,125,472

The following is a summary of activity related to revenue bonds and other liabilities and the respective balances for the fiscal years ended August 31, 2019 and 2018 (thousands of U.S. dollars):

		Year ended August 31, 2019				
		Beginning balance	Additions	Reductions	Ending balance	Due within one year
Revenue bonds	$	1,016,300	—	(51,820)	964,480	52,870
Other liabilities:						
Claims and judgments	$	14,064	—	(4,504)	9,560	3,925
Environmental cleanup		34,244	4,877	—	39,121	2,388
Interest rate swap liability		14,796	8,318	—	23,114	—
Total other liabilities	$	63,104	13,195	(4,504)	71,795	6,313

	Year ended August 31, 2018				
	Beginning balance	**Additions**	**Reductions**	**Ending balance**	**Due within one year**
Revenue bonds	$ 1,054,725	—	(38,425)	1,016,300	51,820
Other liabilities:					
Claims and judgments	$ 14,377	—	(313)	14,064	6,100
Environmental cleanup	33,605	639	—	34,244	1,116
Interest rate swap liability	23,533	—	(8,737)	14,796	—
Total other liabilities	$ 71,515	639	(9,050)	63,104	7,216

(a) Principal Maturities and Scheduled Interest and Swap Payments

Principal maturities and scheduled interest payments for revenue bonds and estimated payments on the interest rate swaps are as follows (thousands of U.S. dollars):

	Revenue bonds			
	Principal	**Interest**	**Net swap amount**	**Total**
Fiscal year ending August 31:				
2020	$ 52,870	41,921	2,717	97,508
2021	53,765	39,393	2,717	95,875
2022	54,820	36,750	2,717	94,287
2023	56,690	33,963	2,717	93,370
2024	58,195	31,571	2,717	92,483
2025–2029	255,435	127,540	5,824	388,799
2030–2034	158,495	83,867	—	242,362
2035–2039	153,210	47,934	—	201,144
2040–2044	73,995	22,244	—	96,239
2045–2048	47,005	4,777	—	51,782
Total	$ 964,480	469,960	19,409	1,453,849

This table assumes that there are no draws on letters of credit supporting variable rate debt issuances resulting in bank bonds. Bank bonds are subject to accelerated payment terms and increased interest rates. Variable rate debt issuances represent $152.8 million of the outstanding principal at August 31, 2019.

Future debt service is calculated using rates in effect at August 31, 2019 for variable rate bonds, which ranged from 1.30% to 1.40%. The variable rate received under the swaps is 70.0% of one-month London Interbank Offered Rate (LIBOR) until maturity, which was 1.59% at August 31, 2019.

(b) Bond Issuances – Refunding of Bonds and Defeasance of Bonds

1998 Ordinance Fifteenth Series Bonds

On August 16, 2017, the City issued Gas Works Revenue Bonds, Fifteenth Series (1998 General Ordinance) in the par amount of $273.1 million. A portion of the proceeds from the sale of the Fifteenth Series Bonds were utilized to refund a portion of the Seventh Series Bonds and redeem the City's outstanding Capital Project Notes. The Fifteenth Series Bonds also contained new money debt issued to finance a portion of PGW's ongoing Capital Improvement Program, pay the costs of issuing the bonds, and provide a deposit to the Sinking Fund Reserve. The Fifteenth Series Bonds, with fixed interest rates that range from 2.0% to 5.0%, have maturity dates through 2047. The loss on the refunding component was $0.3 million, which will be amortized over the life of the Fifteenth Series Bonds. This refunding transaction provided net present value debt service savings of $0.7 million utilizing an arbitrage yield of 2.98%. The savings as a percentage of refunded bonds was 10.11%.

As of August 31, 2019, the Company's Eighth Series variable rate debt was backed by letter of credit agreements, which expire on September 1, 2020 (Eighth Series C and D) or August 1, 2024 (Eighth Series B and E), respectively.

The Company's Fifth Series A-2 variable rate bonds are backed by an irrevocable letter of credit, which had an original stated expiration date of December 21, 2019. On April 22, 2019, this letter of credit was extended for a five-year term from the original stated expiration date resulting in a new stated expiration date of December 21, 2024.

In the event that the letter of credit agreements supporting the Eighth and Fifth Series bonds are not extended or replaced prior to their expiration dates, a mandatory tender of the then outstanding bonds will occur. If such mandatory tender results in draws on the letters of credit, the bonds will become bank bonds subject to accelerated payment terms and increased interest rates.

Interest rates and maturities of the outstanding revenue bonds are detailed as follows (thousands of U.S. dollars):

				Balance outstanding August 31	
	Interest rates	**Maturity date (fiscal year)**		**2019**	**2018**
5th Series A-2	Variable *	2035	$	30,000	30,000
8th Series B	Variable **	2028		27,370	27,370
8th Series C	Variable **	2028		27,225	27,225
8th Series D	Variable **	2028		40,845	40,845
8th Series E	Variable **	2028		27,370	27,370
9th Series	2.00%–5.25%	2040		60,835	64,415
10th Series	3.00%–5.00%	2026		19,160	24,075
13th Series	3.00%–5.00%	2034		193,690	210,125
14th Series	2.00%–5.00%	2038		278,105	296,500
15th Series	2.00%–5.00%	2047		259,880	268,375
			$	964,480	1,016,300

* As of August 31, 2019, the LIBOR based rate was 1.34%.

** As of August 31, 2019, the LIBOR based rate ranged from 1.34% to 1.35%.

(c) Debt Coverage and Sinking Fund Requirements

Under the terms of both general ordinances, the City is required to maintain rates to allow the Company to satisfy 1975 and 1998 revenue bond debt coverage ratio requirements. Upon issuance of the Thirteenth Series Bonds, no debt under the 1975 General Ordinance remains outstanding.

Also provided by both general ordinances is the establishment of a Sinking Fund Reserve into which deposits are made in an amount equal to the maximum annual debt service requirement on the bonds of each respective general ordinance in any fiscal year.

Funds in the Sinking Fund Reserve are to be applied to the payment of debt service if, for any reason, other funds in the Sinking Fund, which operates as a debt service payment fund into which debt service payments are deposited as they come due, should be insufficient.

The revenue bonds are, and will be, equally and ratably collateralized by a security interest in all of the Company’s project revenues, as defined in the general ordinances, and moneys in the Sinking Fund, including the Sinking Fund Reserve.

Portions of certain revenue bonds were issued as zero-coupon securities. Interest on these securities is accrued and compounded on the payment dates of the current interest bonds within the issue. The accrued interest in the amount of $8.1 million and $7.9 million in FY 2019 and FY 2018, respectively, is reported as a component of accrued accounts.

(d) Interest Rate Swap Agreements

Objective – In January 2006, the City entered into a fixed rate payor, floating rate receiver interest rate swap to create a synthetic fixed rate for the Sixth Series Bonds. The interest rate swap was used to hedge interest rate risk.

Terms – The swaps had an original termination date of August 1, 2031, which was subsequently amended to August 1, 2028. The swaps require the City to pay a fixed rate of 3.6745% and receive a variable rate equal to 70.0% of one-month LIBOR until maturity.

In August 2016, the underlying variable rate bonds maturing in FY 2017 through FY 2023 were refunded with fixed rate bonds and the related portions of the swaps, totaling $102.7 million in notional amount, were terminated. PGW made a termination payment of $13.9 million to fund this partial termination of the swaps which is included in unamortized loss on bond refunding on the Company's balance sheet.

As of August 31, 2019, the swaps had a notional amount of $122.8 million and the associated variable rate debt had a $122.8 million principal amount, broken down by series as follows:

- The Series B swap had a notional amount of $27.4 million and the associated variable rate bonds had a $27.4 million principal amount.
- The Series C swap had a notional amount of $27.2 million and the associated variable rate bonds had a $27.2 million principal amount.
- The Series D swap had a notional amount of $40.8 million and the associated variable rate bonds had a $40.8 million principal amount.
- The Series E swap had a notional amount of $27.4 million and the associated variable rate bonds had a $27.4 million principal amount.

The final maturity date for all swaps is on August 1, 2028.

Fair Value – As of August 31, 2019, the swaps had a combined negative fair value of approximately $23.1 million. The fair values of the interest rate swaps were estimated using the zero-coupon method and are classified as Level 2 within the fair value hierarchy as described in note 1. That method calculates the future net settlement payments required by the swap, assuming current forward rates are implied by the current yield curve for hypothetical zero-coupon bonds due on the date of each future net settlement on the swaps.

Risks – As of August 31, 2019, the City is not exposed to credit risk because the swaps had a negative fair value. Should interest rates change and the fair value of the swaps become positive, the City would be exposed to credit risk in the amount of the swaps' fair value. The swaps include a termination event additional to those in the standard ISDA master agreement based on credit ratings. The swaps may be terminated by the City if the rating of the counterparty falls below A3 or A – (Moody's/S&P), unless the counterparty has (i) assigned or transferred the swap to a party acceptable to the City; (ii) provided a credit support provider acceptable to the City whose obligations are pursuant to a credit support document acceptable to the City; or (iii) executed a credit support annex, in form and substance acceptable to the City, providing for the collateralization by the counterparty of its obligations under the swaps.

The swaps may be terminated by the counterparty if the rating on the City of Philadelphia Gas Works Revenue Bonds falls below Baa2 or BBB (Moody's/S&P). However, because the City's swap payments are insured by Assured Guaranty Municipal Corporation, as long as Assured Guaranty Municipal Corporation is rated at or above A2 or A (Moody's/S&P), the termination event based on the City's ratings is stayed. At the present time, the rating for Assured Guaranty Municipal Corporation is at A2/AA (Moody's/S&P).

The City is exposed to (i) basis risk, as reflected by the relationship between the rate payable on the bonds and 70.0% of one-month LIBOR received on the swap, and (ii) tax risk, a form of basis risk, where the City is exposed to a potential additional interest cost in the event that changes in the federal tax system or if marginal tax rates cause the rate paid on the outstanding bonds to be greater than the 70.0% of one-month LIBOR received on the swap.

The impact of the interest rate swaps on the financial statements for the years ended August 31, 2019 and 2018 is as follows (thousands of U.S. dollars):

	Interest rate swap liability	Deferred outflows of resources
Balance, August 31, 2018	$ 14,796	594
Change in fair value through August 31, 2019	8,318	8,318
Amortization of terminated hedge	—	1,420
Balance, August 31, 2019	$ 23,114	10,332

	Interest rate swap liability	Deferred outflows of resources
Balance, August 31, 2017	$ 23,533	7,911
Change in fair value through August 31, 2018	(8,737)	(8,737)
Amortization of terminated hedge	—	1,420
Balance, August 31, 2018	$ 14,796	594

Because the original hedging relationship was terminated when the Sixth Series Bonds were refunded by the Eighth Series Bonds in 2009, there is a difference between the interest rate swap liability and the related deferred outflows of resources. The difference is being amortized on a straight-line basis to expense over the life of the hedge.

The interest rate swap liability is included in other noncurrent liabilities on the balance sheets.

There are no collateral posting requirements associated with the swap agreements.

(9) Defeased Debt

Defeased debt of the Company (bonds issued by the Company payable from the proceeds of irrevocably pledged assets) at August 31, 2019 was as follows (thousands of U.S. dollars):

	Latest date maturing to	Interest rate	Bonds outstanding
9th Series	08/01/40	5.25 %	$ 61,455
12th Series B	05/15/20	7.00	5,595
Total			$ 67,050

The assets pledged, primarily noncallable U.S. government securities, had a market value of $69.2 million at August 31, 2019, bearing interest on face value from 1.25% to 5.88%. In FY 2019, the Fiscal Agent with respect to the Gas Works Revenue Bonds (Escrow Agent with respect to the Escrow Deposit Agreement), paid the maturing principal of the Defeased Bonds in the amount of $5.4 million in a manner consistent with the Notices of Defeasance for the 12th Series B Gas Works Revenue Bonds.

Defeased debt of the Company (bonds issued by the Company payable from the proceeds of irrevocably pledged assets) at August 31, 2018 was as follows (thousands of U.S. dollars):

	Latest date maturing to	Interest rate	Bonds outstanding
9th Series	08/01/40	5.25 %	$ 61,455
12th Series B	05/15/20	7.00	10,910
Total			$ 72,365

The assets pledged, primarily noncallable U.S. government securities, had a market value of $75.7 million at August 31, 2018, bearing interest on face value from 1.27% to 5.89%. In FY 2018, the Fiscal Agent with respect to the Gas Works Revenue Bonds (Escrow Agent with respect to the Escrow Deposit Agreement), paid the maturing principal of the Defeased Bonds in the amount of $224.1 million in a manner consistent with the Notices of Defeasance for the 7th Series, 10th Series, 12th Series B, 17th Series, and 19th Series Gas Works Revenue Bonds, respectively.

The investments held by the trustee and the defeased bonds are not recognized on the Company's balance sheets in accordance with the terms of the Indentures of Defeasance. The investments pledged for the redemption of the defeased debt have maturities and interest payments scheduled to coincide with the trustee cash requirements for debt service.

(10) Defined Benefit Pension Plan

(a) Plan Description

The Pension Plan provides pension benefits for all eligible employees of PGW and other eligible class employees of PFMC and PGC.

The Pension Plan provides for retirement payments for vested employees at age 65 or earlier under various options, which includes a disability pension provision, a preretirement spouse or domestic partner's death benefit, a reduced pension for early retirement, various reduced pension payments for the election of a survivor option, and a provision for retirement after 30 years of service without penalty for reduced age. In accordance with Resolutions of the PGC, Ordinances of City Council, and as prescribed by the City's Director of Finance, the Pension Plan is being funded with contributions by PGW to the Sinking Fund Commission of the City, which serves as the Trustee. Management believes that the Pension Plan is in compliance with all applicable laws.

(b) Benefits Provided

Normal Retirement Benefits: The Pension Plan provides retirement benefits as well as death and disability benefits. Retirement benefits vest after five years of credited service. Employees who retire at or after age 65 are entitled to receive an annual retirement benefit, payable monthly, in an amount equal to the greater of:

- 1.25% of the first $6,600 of Final Average Earnings plus 1.75% of the excess of Final Average Earnings over $6,600, times years of credited service, with a maximum of 60.0% of the highest annual earnings during the last 10 years of credited service or
- 2.0% of total earnings received during the period of credited service plus 22.5% of the first $1,200 annual amount, applicable only to participants who were employees on or prior to March 24, 1967.

Death Benefits: Before retirement, the death beneficiary of deceased active participants or of deferred vested participants are entitled to vested benefits provided such participants died after having attained age 45 and completed at least 15 years of Credited Service and whose age plus years of credited service equals at least 65 or whom have completed at least 15 years (effective May 15, 2015 – formerly 20 years) of Credited Service regardless of age. The benefit is payable for the death beneficiary's remaining lifetime equal to the amount the participant would have received had the participant retired due to a disability on the day preceding his/her death and elected the 100% contingent annuitant option.

Disability Benefits: Disability benefits are the same as the Normal Retirement Benefits and are based on Final Average Compensation and Credited Service as of the date of disability.

Final Average Earnings are the employee's average pay, over the highest five years of the last 10 years of credited service. Employees with 15 years of credited service may retire at or after age 55 and receive a reduced retirement benefit. Employees with 30 years of service may retire without penalty for reduced age.

Except as noted in the following paragraph, covered employees are not required to contribute to the Pension Plan.

In December 2011, the Pension Plan was amended by Ordinance and a new deferred compensation plan was authorized by Ordinance as well. Newly hired employees have an irrevocable option to join either a new deferred compensation plan created in accordance with Internal Revenue Code Section 401 or the existing defined-benefit plan. The defined-contribution plan provides for an employer contribution equal to 5.5% of applicable wages. The defined-benefit plan provides for a newly hired employee contribution equal to 6.0% of applicable wages. The Ordinance did not affect the retirement benefits of active employees, current retirees and beneficiaries, or terminated employees entitled to benefits but not yet receiving them.

(c) Employees Covered by Benefit Terms

At June 30, 2019, the date of the most recent actuarial valuation, the Pension Plan membership consisted of the following:

Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits, but not yet receiving them	2,495
Participants:	
Vested	909
Nonvested	286
Total participants	1,195
Total membership	3,690

(d) Contributions

The Pension Plan funding policy provides for periodic employer contributions at actuarially determined amounts that are sufficient to accumulate assets to pay benefits when due considering employee contributions required for new hires after December 2011 who elect to participate in the Pension Plan. The employer contribution is determined using the Projected Unit Credit actuarial funding method. For the fiscal years ended August 31, 2019 and 2018, the actuarially determined employer contribution was $28.8 million and $28.4 million, respectively. PGW contributed the actuarially determined contribution in both fiscal years. Employee contributions were approximately $1.2 million in the plan year ended June 30, 2019 and approximately $1.1 million in the plan year ended June 30, 2018.

(Continued)

(e) Net Pension Liability

The Company's net pension liability as of August 31, 2019 and 2018 was measured as of June 30, 2019 and 2018, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of June 30, 2019 and June 30, 2018, respectively.

The total pension liability was determined using the entry age normal actuarial method and the following actuarial assumptions:

	2019	2018
Inflation	2.00 %	2.00 %
Salary increases	4.50	4.50
Investment rate of return	7.30	7.30

Mortality rates: Mortality rates for FY 2018 were based on the RP-2014 mortality tables for males and females generationally projected with scale MP-2017. Mortality rates for FY 2019 were based on the RP-2014 mortality tables for males and females generationally projected with scale MP-2018.

Long-term rate of return: The long-term expected rate of return on Pension Plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class for FY 2019 are summarized in the following table:

Asset class	Minimum	Maximum	Target	Expected annual return
Domestic equity	35.0 %	55.0 %	45.0 %	8.8 %
International equity	10.0	30.0	20.0	8.8
Fixed income	25.0	45.0	35.0	5.2
Cash equivalents	—	10.0	—	—
			100.0 %	

Discount rate: The discount rate used to measure the total pension liability at June 30, 2019 and 2018 was 7.3%. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate and that Company contributions will be made at rates equal to the difference between actuarially determined contribution rates and the employee contributions. Based on those assumptions, the Pension Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on Pension Plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Changes in Net Pension Liability

(Thousands of U.S. dollars)

		Increase (decrease)		
		Total pension liability (a)	Plan fiduciary net position (b)	Net pension liability (a)-(b)
Balances at September 1, 2017	$	783,471	521,526	261,945
Changes for the year:				
Service cost		6,103	—	6,103
Interest		55,718	—	55,718
Differences between expected and actual experience		15,706	—	15,706
Contributions – employer		—	29,143	(29,143)
Contributions – employee		—	1,078	(1,078)
Net investment income		—	44,310	(44,310)
Benefit payments, including refunds of employee contributions		(52,627)	(52,627)	—
Administrative expenses		—	(184)	184
Change in assumptions		(3,864)	—	(3,864)
Net changes		21,036	21,720	(684)
Balances at August 31, 2018	$	804,507	543,246	261,261

Changes in Net Pension Liability

(Thousands of U.S. dollars)

		Increase (decrease)		
		Total pension liability (a)	**Plan fiduciary net position (b)**	**Net pension liability (a)-(b)**
Balances at September 1, 2018	$	804,507	543,246	261,261
Changes for the year:				
Service cost		6,554	—	6,554
Interest		57,241	—	57,241
Differences between expected and actual experience		(12,089)	—	(12,089)
Contributions – employer		—	28,570	(28,570)
Contributions – employee		—	1,249	(1,249)
Net investment income		—	34,260	(34,260)
Benefit payments, including refunds of employee contributions		(53,893)	(53,893)	—
Administrative expenses		—	(192)	192
Change in assumptions		(1,834)	—	(1,834)
Net changes		(4,021)	9,994	(14,015)
Balances at August 31, 2019	$	800,486	553,240	247,246

Sensitivity of the net pension liability to changes in the discount rate: The following table presents the net pension liability of the Company at June 30, 2019, calculated using the discount rate of 7.30%, as well as what the Company's net pension liability would be if it were calculated using a discount rate that is one-percentage-point lower (6.30%) or one-percentage-point higher (8.30%) than the current rate:

		1% Decrease 6.30%	**Current discount rate 7.30%**	**1% Increase 8.30%**
			(Thousands of U.S. dollars)	
Net pension liability	$	338,357	247,246	171,192

The following table presents the net pension liability of the Company at June 30, 2018, calculated using the discount rate of 7.30%, as well as what the Company's net pension liability would be if it were calculated using a discount rate that is one-percentage-point lower (6.30%) or one-percentage-point higher (8.30%) than the current rate:

		1% Decrease 6.30%	Current discount rate 7.30%	1% Increase 8.30%
			(Thousands of U.S. dollars)	
Net pension liability	$	354,026	261,261	183,912

Pension Plan's fiduciary net position: Detailed information about the Pension Plan's fiduciary net position is available in the separately issued Pension Plan financial report. Requests for additional information should be addressed to Chief Investment Officer, Philadelphia Board of Pensions and Retirements, 1500 John F. Kennedy Boulevard, Two Penn Center Plaza, 17th Floor, Philadelphia, PA 19102.

(f) Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the years ended August 31, 2019 and 2018, the Company recognized pension expense of $30.3 million and $43.2 million, respectively. At August 31, 2019 and 2018, the Company reported deferred outflows of resources and deferred inflows of resources related to the pension from the following sources (thousands of U.S. dollars):

		August 31, 2019		August 31, 2018	
		Deferred outflows of resources	Deferred inflows of resources	Deferred outflows of resources	Deferred inflows of resources
Differences between expected and actual experience	$	8,067	8,949	12,697	2,023
Changes of assumptions		—	5,039	6,119	6,726
Net difference between projected and actual earnings on pension plan investments		—	4,242	—	4,517
Contributions made after measurement date		6,354	—	6,127	—
Total	$	14,421	18,230	24,943	13,266

The $6.4 million reported as deferred outflows of resources related to employer contributions made after the measurement date as of June 30, 2019 will be recognized as a reduction of the net pension liability in the Company's FY 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows (thousands of U.S. dollars):

Fiscal year:	
2020	$ (682)
2021	(6,799)
2022	(4,127)
2023	1,445

(g) Fair Value Measurements

The following table sets forth by level, within the fair value hierarchy described in note 1, the plan's assets at fair value as of June 30, 2019 (thousands of U.S. dollars):

	Level 1	Level 2	Level 3	Total
Corporate bonds	$ —	80,787	—	80,787
Common and preferred stock	346,141	25,897	2	372,040
U.S. government securities	44,028	29,290	—	73,318
Financial agreements	—	—	39	39
Asset backed securities	—	9,095	—	9,095
Municipal obligations	—	2,469	—	2,469
	$ 390,169	147,538	41	537,748

The following table sets forth by level, within the fair value hierarchy described in note 1, the plan's assets at fair value as of June 30, 2018 (thousands of U.S. dollars):

	Level 1	Level 2	Level 3	Total
Corporate bonds	$ —	73,853	220	74,073
Common and preferred stock	353,535	11,411	2	364,948
U.S. government securities	38,897	33,392	—	72,289
Financial agreements	—	—	68	68
Asset backed securities	—	8,729	—	8,729
Bond mutual funds	2,954	—	—	2,954
Municipal obligations	—	3,391	—	3,391
	$ 395,386	130,776	290	526,452

(11) Other Postemployment Benefits

(a) Plan Description

The Company sponsors a single-employer defined-benefit healthcare plan and provided postemployment healthcare and life insurance benefits to retirees and their beneficiaries and dependents in FY 2019 and FY 2018, respectively, in accordance with their retiree medical program.

The OPEB Plan comprises (1) the PGW OPEB Trust (the Trust), which is used to receive, hold, and disburse assets accumulated to pay for some of the postemployment benefits other than pensions provided by PGW to its eligible retired employees and other eligible beneficiaries and (2) OPEB expenses paid for directly by PGW out of its general resources rather than through the Trust. The Trust was established for the exclusive benefit of PGW's retired employees and other eligible beneficiaries designated under the plan. Management believes that the OPEB Plan is in compliance with all applicable laws.

(b) Benefits Provided

Medical Benefits: For pre-65 retirees, a choice of medical plans is offered through Independence Blue Cross including Personal Choice, Blue Cross Blue Shield with Major Medical, or Keystone HMO's. Employees who retire after December 1, 2001 are provided the Keystone 5 Plan at PGW's expense and they can buy up to a more expensive plan. Employees who retire on or after September 1, 2007 are provided the Keystone 10 Plan at PGW's expense, and they can buy up to a more expensive plan. Union employees who retire after August 31, 2011 are provided the Keystone 15 Plan at PGW's expense and can buy up to a more expensive plan. Management employees who retire after August 31, 2011 continue to receive the Keystone 10 as the base plan and can buy up to a more expensive plan.

Reinsurance provides specific stop-loss coverage of $0.3 million on pre-65 Medical and Prescription Drug claims.

Eligible pre-65 retirees who relocate outside of the Keystone coverage area may elect to participate in the PGW Retiree Health Reimbursement Arrangement (HRA). Under the HRA, the Keystone base plan premium-equivalent will be credited to a participant's HRA account and will be available to reimburse the participant for eligible medical insurance premiums.

Medicare eligible retirees are provided a fully insured Medicare Supplement Plan through Independence Blue Cross.

Opt-out benefits of $1,500 per year for single coverage and $3,000 per year for married coverage are available to eligible retirees. This benefit is not available to a married couple who both retired from PGW and who are eligible for Medicare benefits. Retirees can maintain prescription drug and dental coverage even if they opt out of medical coverage.

Prescription Drug Benefits: Employees who retired on or after April 15, 1976 and prior to December 1, 2001, are offered a Prescription Drug Plan that has been established specifically for retirees and is separate from the plan that is offered to active employees. The retiree Prescription plan consists of a

$2 copay for generic drugs, a $2 copay for brand name drugs when no generic drugs are available, and a $15 copay for brand name drugs when generic drugs are available. There are no deductibles and no lifetime maximums. Employees who retired prior to April 15, 1976 or on or after December 1, 2001 but before September 1, 2007 have a $5 copay for generics and a $10 copay for brand drugs. Employees who retire on or after September 1, 2007 have a $5 copay for generics and a $15 copay for brand drugs.

Effective, January 1, 2012, PGW moved Medicare eligible retirees into an Employee Group Waiver Plan arrangement. Covered drugs and copays remain the same. Prescription drug benefits are self-funded for all retirees.

Dental Benefits: For employees who retired after April 15, 1978, a basic dental plan is offered at no cost to the retiree. For employees who retired after June 1, 1984, an enhanced dental plan is offered. For eligible retirees who enroll in the enhanced dental plan, the retiree must pay the difference between the basic and enhanced plans. The dental plans were fully insured through August 31, 2016. Effective September 1, 2016, the dental benefits are self-funded.

Death Benefits: Nonunion employees are offered voluntary life insurance equal to two times their salary at retirement. At age 65, the life insurance benefit decreases by 5.0% per year for 15 years until the benefit equals 25.0% of the original life insurance benefit at age 65. PGW pays the cost of the first $75,000 of coverage. Retirees in this category pay $0.35 per $1,000 per month for coverage in excess of $75,000.

Union employees are offered voluntary life insurance equal to one times their salary at retirement. At retirement, the life insurance benefit decreases by 10.0% per year for 5 years until the benefit equals 50.0% of the original life insurance benefit at retirement. Retirees in this category pay $0.35 per $1,000 of coverage per month, PGW pays the balance.

Upon the death of an active employee prior to satisfying the requirements for Preretirement Spouse's Death Benefits, surviving spouses and dependents are entitled to receive 2 years of health coverage paid by PGW. Upon the death of an active employee on or after satisfying the requirements for Preretirement Spouse's Death Benefits, surviving spouses and dependents are entitled to receive health coverage for life (or for 5 years if hired on or after May 21, 2011 if Union or hired on or after December 21, 2011 if Nonunion) paid by PGW.

Contributions: The OPEB Plan pays the full cost of medical, basic dental, and prescription coverage for employees who retired prior to December 1, 2001. Employees who retire after December 1, 2001 are provided the Keystone 5/Keystone 10/Keystone 15 plan at PGW's expense and can buy up to a more expensive plan. Retirees also contribute toward enhanced dental plan and life insurance coverage as described above. PGW pays 100.0% of the cost for the prescription drug plan after drug copays.

(c) Participants Covered

At December 31, 2018, the date of the latest actuarial valuation, the OPEB Plan's combined membership consisted of the following:

	Number
Retirees	1,494
Beneficiaries	415
Active employees – Union	1,131
Active employees – Management	524
Total number of participants	3,564

(d) Contributions

Contributions to the OPEB Plan are the amounts received (additions) from PGW as sponsor of the Plan. These contributions include both amounts paid by PGW out of general resources to fund benefits on a pay-as-you-go basis, and contributions related to rate surcharges approved by the PUC in May 2010 and continued in July 2015. For the OPEB Plan year ended December 31, 2018, PGW contributed $28.7 million on a pay-as-you-go basis, $16.0 million resulting from rate surcharges, and $2.5 million of its resources. For the OPEB Plan year ended December 31, 2017, PGW contributed $29.7 million on a pay-as-you-go basis, $16.0 million resulting from rate surcharges, and $2.5 million of its resources.

(e) Net OPEB Liability

The Company's net OPEB liability as of August 31, 2019 and 2018 was measured as of December 31, 2018 and 2017, and the net OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of September 1, 2018 and 2017, respectively. The September 1, 2018 actuarial valuation was rolled forward to December 31, 2018 measurement date and the September 1, 2017 actuarial valuation was rolled forward to the December 31, 2017 measurement date.

Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future, and are subject to continual revision as actual amounts are compared to past expectations and new estimates are made about the future. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

The total OPEB liability was determined using the entry age normal actuarial method and the following actuarial assumptions used to value the postemployment medical liabilities can be categorized into the following three groups:

- *Benefit assumptions:* the initial per capita cost rates for medical coverage, and the face amount of employer-paid life insurance.

- *Demographic assumptions:* including the probabilities of retiring, dying, terminating (without a benefit), becoming disabled, recovery from disability, election (participation rates) and coverage levels.
- *Economic assumptions:* the discount rate and health care cost trend rates.

Benefit assumptions:

- *Per capita claims:* Using actuarial standards, specifically ASOP6, the annual age specific per capital claims cost rate were projected at the following assumed trend rates for future years (whole U.S. dollars):

	Medical		
Age	**Existing retirees and dependents**	**Future retirees and dependents**	**Prescription drug**
<50	$ 6,622	6,602	2,804
50–54	8,050	8,025	3,099
55–59	10,070	10,040	3,877
60–64	12,130	12,094	4,670
65–69	2,219	2,108	3,446
70–74	2,535	2,408	3,936
75–79	2,826	2,684	4,387
80–84	3,058	2,905	4,748
85–90	3,182	3,022	4,941
90+	3,230	3,068	5,015

- *Life insurance:* The claims cost for life insurance is based on the actuarial present value of projected life insurance claims increased by 15.0% to reflect the cost of the insurance funding vehicle.
- *Morbidity:* The below healthcare cost for prescription drug coverage and pre-65 medical coverage reflects the following changes due to increased usage as a result of aging:

Age	Annual increase
55–59	4.00 %
60–64	3.50 %
65–69	3.00 %
70–74	2.50 %
75–79	2.00 %
80–84	1.00 %
85+	0.50 %

Demographic assumptions:

- *Mortality rates:* Mortality is assumed to follow the sex-distinct RP-2014 Employee, Healthy Annuitant and Disabled Retiree Mortality Tables (head-count weighted) projected with scale MP-2018.
- *Retirement rates:* Retirement rates applicable once an employee is eligible for retirement benefits vary by age and service with rates as follows:

Age	Service less than 30–years	Service at least 30–years
55–60	10.0 %	15.0 %
61	10.0 %	30.0 %
62–64	25.0 %	50.0 %
65–69	50.0 %	50.0 %
70+	100.0 %	100.0 %

- *Withdrawal rates:* Turnover rates applicable before an employee is eligible for retirement benefits vary by age and service with illustrative rates as follows:

	Years of service					
Age	0	1	2	3	4	5
20	23.2 %	17.4 %	14.4 %	11.6 %	8.8 %	5.8 %
25	18.8 %	14.0 %	11.8 %	9.4 %	7.0 %	4.6 %
30	14.8 %	11.0 %	9.2 %	7.4 %	5.6 %	3.6 %
35	11.2 %	8.4 %	7.0 %	5.6 %	4.2 %	2.8 %
40	8.8 %	6.6 %	5.6 %	4.4 %	3.4 %	2.2 %
45	7.2 %	5.4 %	4.6 %	3.6 %	2.8 %	1.8 %
50	5.2 %	3.8 %	3.2 %	2.6 %	2.0 %	1.2 %
55	— %	— %	— %	— %	— %	— %

- *Disability rates:* Disability rates vary by age with illustrative rates as follows:

Age	Percent expected to become disabled in the next year
30	0.16 %
35	0.07 %
40	0.11 %
45	0.22 %
50	0.46 %
55	1.02 %
60	1.62 %

Economic assumptions:

- *Long-term rate of return:* The long-term expected rate of return on OPEB Plan investments was determined using a building block method in which best estimate ranges of expected future real rates of return (expected returns, net of OPEB Plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by expected inflation. The target allocation for each major asset class as of December 31, 2018 is summarized in the following table:

Asset class	Minimum	Maximum	Target	Expected annual return
Domestic equity large cap	27.5 %	37.5 %	32.5 %	7.0 %
Domestic equity small cap	10.0	15.0	12.5	6.8
Emerging market equity	5.0	10.0	7.5	10.4
International equity	15.0	20.0	17.5	7.9
Fixed income	20.0	40.0	30.0	4.1
Commodities/Real Assets	—	10.0	—	—
Cash equivalents	—	5.0	—	—
			100.0 %	

- *Healthcare cost trend:*

Fiscal year beginning (September 1)	Healthcare cost trend rates			
	Medical (pre-65)	Medical (post-65)	Prescription	Dental
2018	6.0 %	4.5 %	8.5 %	4.0 %
2019	5.5	4.5	8.0	4.0
2020	5.0	4.5	7.5	4.0
2021	4.5	4.5	7.0	4.0
2022	4.5	4.5	6.5	4.0
2023	4.5	4.5	6.0	4.0
2024	4.5	4.5	5.5	4.0
2025	4.5	4.5	5.0	4.0
2026	4.5	4.5	4.5	4.0

- *Discount rate:* The discount rate used for determining the total OPEB liability is the long-term expected rate of return on plan investments of 7.30% as of December 31, 2018 and December 31, 2017 and 7.95% as of December 31, 2016 and 2015, which represents the long-term expected rate of return on Plan investments at the applicable measurement date.

Changes in Net OPEB Liability

(Thousands of U.S. dollars)

		Increase (decrease)		
		Total OPEB liability (a)	**Plan fiduciary net position (b)**	**Net OPEB liability (a)-(b)**
Balances at September 1, 2017	$	489,979	139,623	350,356
Changes for the year:				
Service cost		5,180	—	5,180
Interest		38,182	—	38,182
Differences between expected and actual experience		(5,345)	—	(5,345)
Assumption changes		61,382	—	61,382
Benefit payments		(29,747)	—	(29,747)
Contributions-employer		—	48,247	(48,247)
Project investment return on year		—	11,834	(11,834)
Plan asset gain/(loss)		—	10,835	(10,835)
Benefit payments		—	(29,747)	29,747
Administrative expenses and bank fees		—	(49)	49
Net changes		69,652	41,120	28,532
Balances at August 31, 2018	$	559,631	180,743	378,888

Changes in Net OPEB Liability

(Thousands of U.S. dollars)

		Increase (decrease)		
		Total OPEB liability (a)	Plan fiduciary net position (b)	Net OPEB liability (a)-(b)
Balances at September 1, 2018	$	559,631	180,743	378,888
Changes for the year:				
Service cost		6,268	—	6,268
Interest		40,262	—	40,262
Differences between expected			—	—
and actual experience		(64,606)	—	(64,606)
Assumption changes		7,707	—	7,707
Benefit Payments		(28,729)	—	(28,729)
Contributions-employer		—	47,229	(47,229)
Project investment return on year		—	13,868	(13,868)
Plan asset gain/(loss)		—	(28,622)	28,622
Benefit payments		—	(28,729)	28,729
Administrative expenses and bank fees		—	(35)	35
Net changes		(39,098)	3,711	(42,809)
Balances at August 31, 2019	$	520,533	184,454	336,079

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate: The following presents the Net OPEB liability of the Company, as well as what the Net OPEB liability would be if it were calculated using a discount rate that is one-percentage-point lower or one-percentage-point higher than the current discount rate:

		1% Decrease 6.30%	Current discount rate 7.30%	1% Increase 8.30%
			(Thousands of U.S. dollars)	
Net OPEB liability	$	281,338	336,078	402,473

Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates: The following presents the Net OPEB liability of the Company, as well as what the Net OPEB liability would be if it were calculated using healthcare cost trend rates are one-percentage-point lower or one-percentage-point higher than the current healthcare cost trend rates:

		1% Decrease 6.30%	Current healthcare cost trend rates 7.30%	1% Increase 8.30%
			(Thousands of U.S. dollars)	
Net OPEB liability	$	280,394	336,078	404,279

OPEB Plan's fiduciary net position: Detailed information about the OPEB Plan's fiduciary net position is available in the separately issued OPEB Plan financial report. Requests for additional information should be addressed to Administrator – PGW OPEB Trust, 800 W. Montgomery Avenue, Philadelphia, Pennsylvania 19122.

(f) OPEB Expense and Deferred Outflow of Resources and Deferred Inflows of Resources Related to Other Postemployment Benefits

For the years ended August 31, 2019 and 2018, the Company recognized OPEB expense of $28.4 million and $32.9 million, respectively. At August 31, 2019 and 2018, the Company reported deferred outflows of resources and deferred inflow of resources related to other postemployment benefits from the following sources (thousands of U.S. dollars):

		August 31, 2019		August 31, 2018	
		Deferred outflows of resources	Deferred inflows of resources	Deferred outflows of resources	Deferred inflows of resources
Differences between expected and actual experience	$	—	67,281	—	22,860
Changes of assumptions		42,995	2,593	49,106	3,889
Net difference between projected and actual earnings on OPEB plan investments		15,919	—	—	9,385
Contributions made after measurement date		32,262	—	31,942	—
Total	$	91,176	69,874	81,048	36,134

The $32.3 million and $31.9 reported as deferred outflows of resources related to employer contributions made after the measurement date as of December 31, 2018 and 2017, respectively, will be recognized as a reduction of the net OPEB liability in FY 2019 and FY 2018, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows (thousands of U.S. dollars):

Fiscal year:		
2020	$	(4,345)
2021		(4,345)
2022		3,385
2023		(5,655)

(g) Fair Value Measurements

All investments of the OPEB Plan at both December 31, 2019 and 2018 are publicly traded mutual funds categorized in Level 1 of the fair value hierarchy.

(12) Defined Contribution Pension Plan

PGW contributes to a defined-contribution pension plan, for all employees hired after May 21, 2011 (Union) or December 8, 2011 (Nonunion) who elect not to contribute to the defined-benefit plan. The Defined Contribution Plan is administered by the PGW Investment Committee. Benefit terms, including contribution requirements, for the Defined Contribution Plan are established and may be amended by Ordinance of the City. For each employee in the Defined Contribution Plan, the Company is required to contribute annually 5.5% of applicable wages to an individual employee account. Employees are not required to make contributions to the plan. For the years ended August 31, 2019 and 2018, the Company recognized pension expense of $1.6 million and $1.5 million, respectively, for the Defined Contribution Plan.

Participants are immediately vested in Company contributions and earnings on Company contributions.

The Company had no accrued liabilities for contributions payable to the Defined Contribution Plan at August 31, 2019 and 2018.

The Defined Contribution Plan (DC) is a "tax-qualified" 401 (a) plan that is designed to comply with appropriate federal tax laws under the Internal Revenue Code (Tax Code). The DC Plan is a "defined contribution" plan as defined by the Tax Code. It is considered a "defined contribution" plan because the benefit consists of a defined contribution made by PGW for the benefit of the employee. The defined contribution is calculated as an amount equal to five and one half percent (5.5%) of the employee's applicable wages. These amounts are deposited into an account for the benefit of the employee under the guidelines of the plan. The funds contributed by PGW to the plan immediately vest to the benefit of the employee. The Company contributed $1.6 million in FY 2019 and $1.5 million in FY 2018. PGW's contributions are accounted for as part of administrative and general expenses.

(13) Pollution Remediation Obligation

The Company recorded an additional liability for pollution remediation obligations of $3.6 million and $0.7 million for FY 2019 and FY 2018, respectively. The pollution remediation liability is reflected in other noncurrent and current liabilities. In accordance with U.S. GAAP for regulated entities, the Company has also recognized the long-term portion of its environmental remediation liability as a regulatory asset because based on available evidence it is probable that the previously incurred costs will be recovered through rates.

The pollution remediation obligations at August 31, 2019 and 2018 were $39.1 million and $34.2 million, respectively, which reflect the provisions of GASB Statement No. 49*, Accounting and Financial Reporting for Pollution Remediation Obligations*.

(14) Risk Management

The Company is exposed to various risks of loss related to torts, theft of, damage to, and destruction of assets, errors and omissions, injuries to employees, and natural disasters. While self-insured for many risks, the Company purchases insurance coverage where appropriate. The Company's real and personal property is insured against the risk of loss or damage in the amount of $250.0 million, subject to a $0.3 million per accident deductible at the Richmond and Passyunk Plants and a $0.1 million per accident deductible at all other locations. There are separate sublimits for flood and earth movement at select locations. The Company's Property Insurance includes coverage for damage incurred from a terrorist attack. In addition, the Company maintains Blanket Crime, which is a form of Property Insurance.

The Company maintains $210.0 million in liability (including terrorism) coverage, insuring against the risk of damage to property, or injury to the public with a $1.0 million per occurrence self-insured retention.

The Company maintains statutory limits for Workers' Compensation (including terrorism) with a $0.5 million per occurrence self-insured retention.

The Company maintains a $30.0 million Public Officials Liability (Directors and Officers Liability) policy with a $0.5 million retention as well as a $60.0 million Fiduciary Liability policy with a $0.2 million self-insured retention.

The Company maintains $5.0 million in Environmental Liability coverage for liability arising from nonowned Disposal Sites subject to an each incident deductible of $0.1 million, as well as a $5.0 million Cyber (Privacy) Liability policy with a $0.3 million retention covering costs arising from a data or security breach. The Cyber policy limits were increased to $10.0 million with the policy renewal effective September 1, 2019.

The Company maintains a medical stop-loss insurance program for its self-insured healthcare plans. The coverage provides for a $0.3 million deductible per covered participant.

The Company has evaluated all open claims as of August 31, 2019 and has appropriately accrued for these claims on the balance sheets.

(Continued)

Claims and settlement activity for occurrences excluded under the provisions of insurance policies for injuries and damages are as follows (thousands of U.S. dollars):

		Beginning of year reserve	Current year claims and adjustments	Claims settled	End of year reserve	Current liability amount
Fiscal year ended August 31:						
2019	$	14,064	(1,582)	(2,922)	9,560	3,925
2018		14,377	2,910	(3,223)	14,064	6,100
2017		10,493	6,681	(2,797)	14,377	4,627

(15) Commitments and Contingencies

Commitments

Commitments for major construction and maintenance contracts were approximately $36.9 million and $41.2 million, as of August 31, 2019 and 2018, respectively.

The Company is committed under various noncancelable operating lease agreements to pay minimum annual rentals as follows (thousands of U.S. dollars):

2020	$	817
2021		460
2022		418

Rent expense for the fiscal years ended August 31, 2019 and 2018 amounted to $2.0 million and $1.9 million, respectively.

The Company, in the normal course of conducting business, has entered into long-term contracts for the supply of natural gas, firm transportation, and long-term firm gas storage service. The Company's cumulative obligations for demand charges for all of these services are approximately $7.0 million per month.

The Company has entered into seasonal contracts with suppliers providing the Company the ability to fix the price of the purchase of natural gas during the operating season of November through March. The Company also has seasonal contracts with suppliers providing the Company with the ability to fix the price of natural gas during the refill season of April through October.

The Company's amended FY 2020 Capital Budget was approved by City Council in the amount of $127.7 million. Within this approval, funding was provided to continue the implementation of an 18-mile CIMR Program. The cost for this program in FY 2020 is expected to be $29.0 million. The total six-year cost of the CIMR Program is forecasted to be $185.1 million. In addition to the 18-mile CIMR Program, the FY 2020 Capital Budget includes funding for an accelerated CIMR Program which PGW will include in its DSIC surcharge. This incremental program in FY 2020 is expected to cost $33.0 million. The total six-year cost of this incremental program is forecasted to be $198.0 million. The FY 2020 Capital Budget also includes $3.8 million for the purchase of smartpoint devices for the Automatic Meter Infrastructure (AMI) units, which will replace the Automatic Meter Reading (AMR) devices. The total six-year cost of this program to replace AMR units is approximately $23.2 million.

Contingencies

The Company's material legal proceedings are as described below. The Company believes that it has valid defenses to these legal proceedings and intends to defend them vigorously. PGW records reserves for estimated losses from contingencies when information available indicates that a loss is probable and the amount of the loss, or range of loss, can be reasonably estimated. Management has assessed the following matters based on current information and made a judgment concerning their potential outcomes, considering the nature of the claim, the amount and nature of damages sought, and the probability of success. The Company is unable to predict the outcome of these legal proceedings or reasonably estimate the scope or amount of any associated costs and potential liabilities.

Philadelphia Gas Works, Petitioner v. Pennsylvania Public Utility Commission and SBG Management Services, et. al., Respondents, Pennsylvania Commonwealth Court Docket Nos. 1291 CD 2018, 1405 CD 2018 and 1404 CD 2018. These are an appeal by PGW dated October 19, 2018 from the Orders of the Pennsylvania Public Utility Commission issued (a) December 8, 2016, and the related Opinions and Orders denying reconsideration that were issued on May 18, 2018 and on August 23, 2018; (b) September 20, 2018; and (c) October 4, 2018.

Eight complaints were filed by landlords and by SBG Management Services, Inc. (collectively, SBG), the property management company that manages the day-to-day operations of certain residential properties owned by the landlords. The complaints which challenged amounts owned by SBG to PGW that, inter alia, were subject to late payment charges by PGW were divided into three groups by the Commission. The Commission's Regulations and PGW's Commission approved tariff authorizes PGW to charge interest (in the form of a late payment charge) at the rate of 1.5% per month on the overdue balance of a utility bill. In addition, if a customer does not pay for natural gas services provided by PGW, a municipal lien (which is created by operation of the Pennsylvania Municipal Claim and Tax Lien Law, 53 P.S. §§ 7101, et. seq. (MCTLL)) may be docketed with the appropriate local court. The Commission held that it lacks jurisdiction over unpaid amounts for natural gas service provided by PGW when a municipal lien is docketed under the MCTLL. Based upon that conclusion, the Commission determined that once a lien is docketed, PGW may not apply rules set forth in its Commission-approved tariff to the arrearage amount giving rise to the lien and may not show that arrearage amount on its monthly bills to nonpaying customers. The PUC assessed civil penalties in the total amount of approximately $0.1 million against PGW, ordered PGW to refund sums totaling approximately $1.0 million to the complainants, correct its practices in the assessment of late payment charges on unpaid balances, and modify the payment application sequence associated with partial payments. This would require PGW to make changes to PGW's billing system.

In response, PGW filed the present appeals with the Pennsylvania Commonwealth Court (at Docket Nos. 1291 CD 2018, 1404 CD 2018 and 1405 CD 2018) from the Commission’s decision in each group of complaints. Oral argument before the Court took place on November 12, 2019. On December 9, 2019, the Court reversed the orders of the PUC, finding that: (i) the PUC committed an error of law in holding that it lacked jurisdiction over gas charges subject to docketed liens, (ii) the PUC committed an error of law in holding that PGW could not continue to impose late fees of 1.5% per month on delinquent accounts once the City dockets a lien, and (iii) the PUC erred in imposing penalties, ordering refunds of previously imposed late fees, and directing billing changes relating to charges subject to docketed liens. At this time, no appeal of the Court’s decision has been taken by the other participants in the cases. PGW cannot predict, with any degree of certainty, the outcome of any potential appeal or the potential range of loss, however, the Company believes that there is a sound basis for the positions advanced by PGW and adopted by the Commonwealth Court.

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)

Required Supplementary Information (Unaudited)

Schedule of Changes in Net Pension Liability and Related Ratios

(Thousands of U.S. dollars)

	Fiscal year ending					
	2019	2018	2017	2016	2015	2014
Total pension liability:						
Service cost	$ 6,554	6,103	5,823	5,399	4,890	8,924
Interest cost	57,241	55,718	55,443	55,903	52,377	47,098
Changes in benefit terms	—	—	—	—	—	—
Differences between expected and actual experience	(12,089)	15,706	2,182	(8,840)	17,961	59,326
Changes in assumptions	(1,834)	(3,864)	(7,952)	26,748	44,876	—
Benefit payments	(53,893)	(52,627)	(51,376)	(50,447)	(46,917)	(42,913)
Net change in total pension liability	(4,021)	21,036	4,120	28,763	73,187	72,435
Total pension liability (beginning)	804,507	783,471	779,351	750,588	677,401	604,966
Total pension liability (ending)	800,486	804,507	783,471	779,351	750,588	677,401
Plan fiduciary net position:						
Contributions – employer	28,570	29,143	27,918	21,123	21,106	24,934
Contributions – employee	1,249	1,078	852	602	393	239
Net investment income	34,260	44,310	61,003	2,872	24,472	75,303
Benefit payments	(53,893)	(52,627)	(51,376)	(50,447)	(46,917)	(42,913)
Administrative expense	(192)	(184)	(129)	(1,611)	(1,480)	(732)
Net change in fiduciary net position	9,994	21,720	38,268	(27,461)	(2,426)	56,831
Plan fiduciary net position (beginning)	543,246	521,526	483,258	510,719	513,145	456,314
Plan fiduciary net position (ending)	553,240	543,246	521,526	483,258	510,719	513,145
Net pension liability (ending)	$ 247,246	261,261	261,945	296,093	239,869	164,256
Net position as a percentage of pension liability	69.11 %	67.53 %	66.57 %	62.01 %	68.04 %	75.75 %
Covered payroll for the year ended June 30,	$ 98,454	101,271	94,767	90,860	95,187	103,530
Net pension liability as a percentage of covered payroll	251.13 %	257.98 %	276.41 %	325.88 %	252.00 %	158.66 %

Notes to schedule:

The amounts presented in each fiscal year were determined as of the June 30 that occurred within the fiscal year
Historical information:
The Company has presented the information noted above for those years for which information is available.
Ten-year trend information will be presented prospectively
Changes in assumptions:
Investment Rate of Return: 7.30% in 2016-2019, 7.65% in 2015, 7.95% in 2014
Mortality Rates: Adopted RP-2014 static mortality table in FY 2016 generationally projected with scale MP-2015 in FY 2016, MP-2016 in FY 2017, MP-2017 in FY 2018, and MP-2018 in FY 2019; RP-2000 static mortality projected to the year of valuation prior to FY 2016

Unaudited – see accompanying independent auditors' report.

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)

Required Supplementary Information (Unaudited)

Schedule of Pension Contributions

(Thousands of U.S. dollars)

Fiscal year ending		2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Actuarially determined contribution	$	28,797	28,395	29,260	26,476	21,526	24,385	23,673	23,802	22,936	23,099
Contributions made		28,797	28,395	29,260	26,476	21,526	24,385	23,673	23,802	22,936	23,099
Contribution deficiency/(excess)	$	—	—	—	—	—	—	—	—	—	—
Covered payroll for the year ended August 31,	$	99,494	97,431	91,176	87,416	91,579	99,606	101,968	102,279	102,279	102,103
Contributions as a percent of covered payroll		28.94 %	29.14 %	32.09 %	30.29 %	23.51 %	24.48 %	23.22 %	23.27 %	22.42 %	22.62 %

Notes to schedule:

Actuarial Valuation Date: July 1 for FY 2015-2018 and September 1 for prior periods
Methods and assumptions used to determine contributions:
Actuarial Cost Method: Projected Unit Credit
Asset Valuation Method: Assets smoothed over a five-year period beginning in FY 2016 and Market Value in FY 2015 and prior periods
Amortization Method: Contributions based on greater of 20-year level dollar open amortization method or 30-year level dollar closed amortization method
Salary Increases: 4.50%
General Inflation: 2.00%
Investment Rate of Return: 7.30% in FY 2019, 7.30% in FY 2016-2018, 7.65% in FY 2015
Mortality Rates: RP-2014 static mortality generationally projected with scale MP-2014 in FY 2015, MP-2015 in FY 2016, MP-2016 in FY 2017, MP-2017 in FY 2018 and MP-2018 in FY 2019
RP-2000 static mortality projected to the year of valuation for all periods prior to 2015

Unaudited – see accompanying independent auditors' report.

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)

Required Supplementary Information (Unaudited)

Schedule of Changes in the Net OPEB Liability and Related Ratios

(Thousands of U.S. dollars)

		Fiscal year ending	
	2019	**2018**	**2017**
Total OPEB liability:			
Service cost	$ 6,267	5,180	5,315
Interest cost	40,262	38,182	39,961
Differences between expected and actual experience	(64,606)	(5,345)	(30,973)
Changes in assumptions	7,708	61,382	(6,481)
Benefit payments	(28,729)	(29,747)	(30,370)
Net change in total OPEB liability	(39,098)	69,652	(22,548)
Total OPEB liability (beginning)	559,631	489,979	512,527
Total OPEB liability (ending)	520,533	559,631	489,979
Plan fiduciary net position:			
Contributions – employer	47,229	48,247	48,870
Investment income	(14,755)	22,669	10,710
Benefit payments	(28,729)	(29,747)	(30,370)
Administrative, investment management expenses and bank fees	(34)	(49)	(30)
Net change in plan fiduciary net position	3,711	41,120	29,180
Plan fiduciary net position (beginning)	180,743	139,623	110,443
Plan fiduciary net position (ending)	184,454	180,743	139,623
Net OPEB liability (ending)	$ 336,079	378,888	350,356
Plan fiduciary net position as a percentage of the total OPEB liability	35.4 %	32.3 %	28.5 %
Covered employee payroll for the year ended December 31,	120,132	118,636	109,440
Net OPEB liability as a percentage of covered employee payroll	279.76 %	319.37 %	320.14 %

Notes to Schedule:

The amounts presented for each fiscal year were determined as of the calendar-year end that occurred within the fiscal year

Historical information:

The Company has presented the information noted above for those years for which information is available

Ten-year trend information will be presented prospectively.

Changes in assumptions:

Discount rate: 7.30% in 2018 and in 2017, 7.95% in 2016

Mortality Rates: Adopted the sex-distinct RP-2014 Employee, Healthy Annuitant and Disabled Retiree Mortality Tables (head-count weighted) projection with scale MP-2018, MP-2017, MP-2015 in 2016

Unaudited – see accompanying independent auditors' report.

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)

Required Supplementary Information (Unaudited)

Schedule of OPEB Contributions

(Thousands of U.S. dollars)

Fiscal year ending		2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Actuarially determined contribution	$	33,405	37,638	37,639	41,782	37,980	38,062	41,216	47,071	46,622	50,152
Contributions made		47,548	47,114	48,065	49,551	48,847	44,362	42,242	44,486	41,719	21,706
Contribution deficiency/(excess)	$	(14,143)	(9,476)	(10,426)	(7,769)	(10,867)	(6,300)	(1,026)	2,585	4,903	28,446
Covered employee payroll for the year ended August 31,		128,642	130,171	119,667	112,956	114,074	115,174	110,120	106,308	106,943	106,637
Contributions as a percent of covered employee payroll		36.96 %	36.19 %	40.17 %	43.87 %	42.82 %	38.52 %	38.36 %	41.85 %	39.01 %	20.36 %

Notes to schedule:
- Actuarial Valuation Date: September 1 (beginning of each fiscal year)
- Methods ad assumptions used to determine contributions:
  - Actuarial Cost Method: Entry Age Cost Method
  - Asset Valuation Method: Market Value
  - Per Capita Claims: ASOP Actuarial Standards
  - Salary Increases: 4.5% in FY 2015 through 2019, and 3.0% in prior periods
  - General Inflation: 3.0%
  - Participation Rates: Assumed 100.0% of future retirees who meet the eligibility requirements will participate in the OPEB plan. Current retirees who have opted out of coverage are assumed to continue to receive opt out payments in the future
  - Life Insurance: The claims cost for life insurance is based on the actuarial present value of projected life insurance claims increased by 15.0% to reflect the cost of the insurance funding vehicle.
  - Discount rate: 7.30% in FY 2019 through 2017, 7.95% in FY 2013 through FY 2016, 8.00% in FY 2011 and 2012, and 5.00% in prior periods
  - Mortality Rates: Adopted the sex-distinct RP-2014 Employee, Healthy Annuitant and Disabled Retiree Mortality tables (head-count weighted) projection with scale MP-2018 in FY 2019, MP-2017 in FY 2018, MP-2016 in FY 2017, MP-2015 in 2016, MP-2014 in FY 2015, and the 2014 Static Annuitant and Non-Annuitant Mortality table as set forth in Treasury Regulation Section 1.430(h)(3)-1(e) in FY 2014, the 2013 Static Annuitant and Non-Annuitant Mortality table as set forth in Treasury Regulation Section 1.430(h)(3)-1(e) in FY 2013, the 2012 Static Annuitant and Non-Annuitant Mortality table as set forth in Treasury Regulation Section 1.430(h)(3)-1(e) in FY 2012, and the RP2000 Combined Health Mortality Table in FY 2011 and prior years

Unaudited – see accompanying independent auditors' report.

PGW values the importance of giving back. In 2019, our employees **donated more than $95,000 to United Way of Greater Philadelphia and Southern New Jersey** to help break the cycle of poverty for families in our community.

STATISTICAL SECTION

(This page has been intentionally left blank)

PHILADELPHIA GAS WORKS

Statistical Section

Description of Schedules

August 31, 2019

This section of the Company's comprehensive annual financial report presents comparative information in order to better understand the financial statements, note disclosures, and required supplementary information and to more fully comprehend the Company's overall financial health.

Financial Trends

These schedules contain trend information to help the reader understand how the Company's financial performance and well being have changed over time.

Revenue Capacity

These schedules contain information to help the reader assess the Company's revenue.

Debt Capacity

These schedules present information to help the reader assess the affordability of the Company's current levels of outstanding debt and its ability to issue additional debt in the future.

Demographic and Economic Information

These schedules offer demographic and economic indicators to help the reader understand the environment within which the Company's financial activities take place.

Operating Information

These schedules contain service and infrastructure data to help the reader understand how the information in the Company's financial report relates to the services the Company provides and the activities it performs.

Sources

Unless otherwise noted, the information in these schedules is derived from the audited financial statements for the relevant year.

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Balance Sheets
Fiscal Years 2010 through 2019
(Thousands of U.S. dollars)

Assets	**2019**	**2018**	**2017**
Current assets:			
Cash and cash equivalents	124,145	131,051	88,535
Cash designated for capital expenditures	-	-	-
Accounts receivable (net of provision for uncollectible accounts)	85,989	82,611	82,028
Gas inventories, materials, and supplies	51,691	52,364	55,414
Current portion of capital improvement fund	68,634	61,000	55,000
Workers' compensation escrow fund	2,711	2,646	2,616
Health insurance escrow fund	-	-	-
Other current assets	18,143	18,002	28,714
Total current assets	351,313	347,674	312,307
Non current assets			
Utility plant, at original cost:			
In service	2,486,973	2,394,302	2,244,731
Under construction	87,826	75,953	105,393
Total	2,574,799	2,470,255	2,350,124
Less accumulated depreciation	1,123,329	1,066,299	1,012,009
Utility plant, net	1,451,470	1,403,956	1,338,115
Unamortized bond issuance costs * (1)	258	290	322
Unamortized losses on reacquired debt	-	-	-
Capital improvement fund	-	50,815	110,000
Sinking fund, revenue bonds	106,509	103,255	102,202
City of Philadelphia	-	-	-
Regulatory asset - environmental	37,102	31,593	30,010
Other non current assets	6,054	9,057	11,301
Total non current assets	1,601,393	1,598,966	1,591,950
Total assets	1,952,706	1,946,640	1,904,257
Deferred outflows of resources (3)			
Accumulated fair value of hedging derivatives	10,332	594	7,911
Unamortized losses on bond refunding (1)	36,776	42,054	47,614
Deferred outflows related to pension (2)	14,421	24,943	39,400
Deferred outflows related to OPEB (4)	91,175	81,048	33,076
Total deferred outflows of resources	152,704	148,639	128,001
Total assets and deferred outflows of resources	2,105,410	2,095,279	2,032,258

* For Fiscal Years 2019, 2018, 2017, 2016, 2015, 2014, 2013 and 2012 this category includes only bond insurance costs.

(1) During FY 2013, the Company implemented GASB Statement No. 65, *Items Previously Reported as Assets and Liabilities*, that amends or supersedes the accounting and financial reporting guidance for certain items previously required to be reported as assets or liabilities. The objective is to either properly classify certain items that were previously reported as assets and liabilities as deferred outflows of resources or deferred inflows of resources or recognize certain items that were previously reported as assets and liabilities as outflows of resources (expenses) or inflows of resources (revenues). This change was retroactive to FY 2012.

(2) During FY 2015, the Company implemented GASB Statement No. 68, *Accounting and Financial Reporting for Pensions - an Amendment of GASB Statement No. 27,* that improves accounting and financial reporting by state and local governments for pensions, and GASB Statement No. 71*, Pension Transition for Contributions Made Subsequent to the Measurement Date—an amendment of GASB Statement No. 68,* to address an issue regarding application of the transition provisions of Statement No. 68, *Accounting and Financial Reporting for Pensions.* This change was retroactive to FY 2014.

(3) During FY 2012, the Company implemented GASB Statement No. 63, *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position*. Prior to implementation of this standard, net position was referred to as fund equity, and net investment in capital assets was referred to as excess (deficiency) of capital assets, net of related debt. This standard also established the financial reporting categories of deferred outflows of resources and deferred inflows of resources.

(4) During FY 2018, the Company implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, for purposes of measuring the net OPEB liabilities, deferred outflows of resources and deferred inflows of resources related to the OPEB Plans, and the OPEB Plans expense, information about the fiduciary net position of the OPEB Plan, and additions to/deductions from the OPEB Plans' fiduciary net position are determined on the same basis as they are reported by the OPEB Plans. This change was retroactive to FY 2017.

Source - PGW's Audited Financial Statements

2016	2015	2014	2013	2012	2011	2010
91,743	114,327	105,734	100,933	75,826	105,386	79,052
-	-	10,000	-	-	-	-
73,563	86,853	101,457	97,749	81,997	98,925	92,173
47,891	50,908	69,989	80,234	81,086	85,993	103,133
-	-	-	44,055	88,838	122,332	170,809
2,603	2,597	2,597	2,597	2,597	2,596	2,595
-	3,223	3,223	3,223	3,222	-	-
31,017	13,596	19,221	16,196	26,939	35,523	27,212
246,817	271,504	312,221	344,987	360,505	450,755	474,974
2,178,632	2,093,112	2,018,234	1,951,546	1,894,129	1,856,303	1,794,277
73,531	64,254	57,206	44,409	53,851	40,555	46,339
2,252,163	2,157,366	2,075,440	1,995,955	1,947,980	1,896,858	1,840,616
967,353	924,996	881,888	840,968	822,330	785,780	746,607
1,284,810	1,232,370	1,193,552	1,154,987	1,125,650	1,111,078	1,094,009
512	3,473	14,136	15,736	17,417	24,585	27,066
-	-	-	-	-	62,039	70,873
-	-	-	-	-	-	-
86,652	90,141	105,909	105,280	105,312	112,038	111,409
-	-	-	-	-	-	-
28,425	-	-	-	-	-	-
6,364	37,646	37,528	33,097	30,996	30,640	22,925
1,406,763	1,363,630	1,351,125	1,309,100	1,279,375	1,340,380	1,326,282
1,653,580	1,635,134	1,663,346	1,654,087	1,639,880	1,791,135 -	1,801,256
14,763	20,948	18,879	12,059	34,712	25,360	25,906
57,175	37,471	37,051	44,868	53,241	-	-
88,043	78,128	46,131	-	-	-	-
-	-	-	-	-	-	-
159,981	136,547	102,061	56,927	87,953	25,360	25,906
1,813,561	1,771,681	1,765,407	1,711,014	1,727,833	1,816,495	1,827,162

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Balance Sheets
Fiscal Years 2010 through 2019
(Thousands of U.S. dollars)

Fund Equity and Liabilities	**2019**	**2018**	**2017**
Current liabilities:			
Notes payable	-	-	-
Current portion of revenue bonds	62,946	62,709	49,890
Accounts payable	67,530	72,620	54,922
Current portion of long-term liabilities	6,313	7,216	5,828
Customer deposits	3,090	2,644	3,385
Other current liabilities	6,178	15,220	6,005
Accrued accounts:			
Interest, taxes, and wages	12,406	11,969	12,956
Distribution to the City	3,000	3,000	3,000
Total current liabilities	161,463	175,378	135,986
Non current liabilities:			
Long-term revenue bonds	999,474	1,062,763	1,125,473
Other non current liabilities (4)	65,482	55,889	65,686
Net pension liability (2)	247,246	261,261	261,945
Net OPEB liability (4)	336,079	378,888	350,356
Total non current liabilities	1,648,281	1,758,801	1,803,460
Total liabilities	1,809,744	1,934,179	1,939,446
Deferred Inflows of Resources (3)			
Deferred inflows related to pension (2)	18,230	13,266	12,275
Deferred inflows related to OPEB (4)	69,874	36,134	30,920
Total deferred inflows of resources	88,104	49,400	43,195
Total liabilities and deferred inflows of resources	1,897,848	1,983,579	1,982,641
Net position			
Excess (deficiency) of net investment in capital assets	494,460	432,354	375,366
Restricted (debt service and workers' compensation)	109,220	105,901	104,818
Unrestricted (1) (2) (4)	(396,118)	(426,555)	(430,567)
Total net position	207,562	111,700	49,617
Total liabilities, deferred inflows of resources, and net position	2,105,410	2,095,279	2,032,258

(1) During FY 2013, the Company implemented GASB Statement No. 65, *Items Previously Reported as Assets and Liabilities* , that amends or supersedes the accounting and financial reporting guidance for certain items previously required to be reported as assets or liabilities. The objective is to either properly classify certain items that were previously reported as assets and liabilities as deferred outflows of resources or deferred inflows of resources or recognize certain items that were previously reported as assets and liabilities as outflows of resources (expenses) or inflows of resources (revenues). This change was retroactive to FY 2012.

(2) During FY 2015, the Company implemented GASB Statement No. 68, *Accounting and Financial Reporting for Pensions - an Amendment of GASB Statement No. 27,* that improves accounting and financial reporting by state and local governments for pensions, and GASB Statement No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date—an amendment of GASB Statement No. 68,* to address an issue regarding application of the transition provisions of Statement No. 68, *Accounting and Financial Reporting for Pensions* . This change was retroactive to FY 2014.

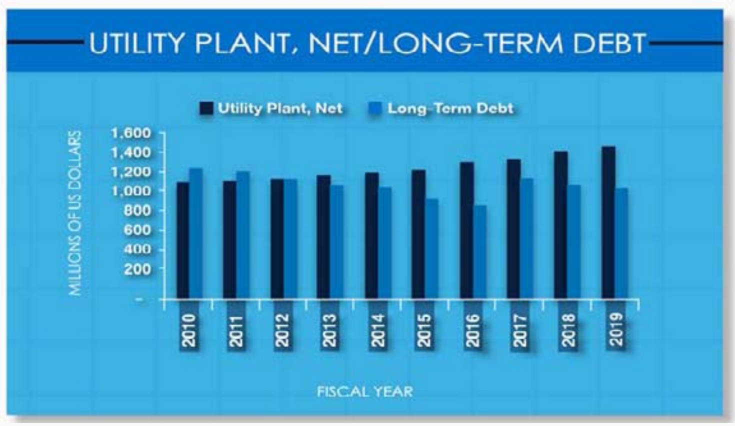
(3) During FY 2012, the Company implemented GASB Statement No. 63, *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position* . Prior to implementation of this standard, net position was referred to as fund equity, and net investment in capital assets was referred to as excess (deficiency) of capital assets, net of related debt. This standard also established the financial reporting categories of deferred outflows of resources and deferred inflows of resources.

(4) During FY 2018, the Company implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* , for purposes of measuring the net OPEB liabilities, deferred outflows of resources and deferred inflows of resources related to the OPEB Plans, and the OPEB Plans expense, information about the fiduciary net position of the OPEB Plan, and additions to/deductions from the OPEB Plans' fiduciary net position are determined on the same basis as they are reported by the OPEB Plans. This change was retroactive to FY 2017.

Source - PGW's Audited Financial Statements

2016	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**
71,000	30,000	-	-	-	-	-
44,803	43,030	53,227	52,406	30,545	50,549	42,537
55,870	56,027	58,888	59,379	57,127	55,893	59,303
6,808	-	-	-	-	-	-
3,308	2,858	2,245	2,305	2,449	2,869	3,998
6,983	14,091	19,321	9,107	10,265	12,098	12,185
6,417	10,051	14,646	14,823	15,555	17,476	16,743
3,000	3,000	3,000	3,000	3,000	3,000	3,000
198,189	159,057	151,327	141,020	118,941	141,885	137,766
881,620	914,719	980,749	1,033,976	1,086,502	1,166,992	1,224,987
149,621	168,399	179,265	177,431	206,445	197,878	189,974
296,093	239,869	164,256	-	-	-	-
-	-	-	-	-	-	-
1,327,334	1,322,987	1,324,270	1,211,407	1,292,947	1,364,870	1,414,961
1,525,523	1,482,044	1,475,597	1,352,427	1,411,888	1,506,755	1,552,727
-	11,653	31,808	-	-	-	-
-	-	-	-	-	-	-
-	11,653	31,808	-	-	-	-
1,525,523	1,493,697	1,507,405	1,352,427	1,411,888	1,506,755	1,552,727
415,561	274,621	159,576	112,660	97,442	15,869	(2,706)
89,255	95,962	111,729	111,100	111,131	114,634	114,004
(216,778)	(92,599)	(13,303)	134,827	107,372	179,237	163,137
288,038	277,984	258,002	358,587	315,945	309,740	274,435
1,813,561	1,771,681	1,765,407	1,711,014	1,727,833	1,816,495	1,827,162

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Debt to Capital Ratio, Utility Plant, Net/Long-Term Debt and Net Position
Fiscal Years 2010 through 2019



PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Statements of Revenues and Expenses
Fiscal Years 2010 through 2019
(Thousands of U.S. dollars)

	2019	2018	2017
Operating revenues:			
Gas revenues:			
Nonheating	25,065	23,492	21,694
Gas transport service	63,565	51,724	44,370
Heating	605,437	583,864	552,342
Provision for uncollectible accounts (4)	(29,983)	(30,826)	(29,992)
Total gas revenues	664,084	628,254	588,414
Appliance and other revenues	7,908	8,121	8,199
Other operating revenues	12,736	11,124	9,598
Total operating revenues	684,728	647,499	606,211
Operating expenses:			
Natural gas	206,825	186,265	179,230
Gas processing	22,028	21,644	16,789
Field services	35,158	39,291	37,715
Distribution	42,665	47,762	41,318
Collection and account management	12,490	11,975	11,200
Provision for uncollectible accounts (4)	-	-	-
Customer services	13,983	13,904	13,230
Marketing	4,232	3,751	3,644
Administrative and general (3)	69,167	64,258	59,372
Pensions (2)	30,268	43,159	54,826
Other postemployment benefits (3)	28,351	32,889	28,062
Taxes	8,705	8,758	7,890
Total operating expenses before depreciation	473,872	473,656	453,276
Depreciation	68,186	63,970	54,347
Less depreciation expense included in operating expenses above	-	7,516	6,770
Net depreciation	68,186	56,454	47,577
Total operating expenses	542,058	530,110	500,853
Operating income	142,670	117,389	105,358
Interest and other income	10,788	4,634	1,989
Income before interest expense	153,458	122,023	107,347
Interest expense:			
Long-term debt	46,136	48,351	39,104
Other	(5,245)	(5,058)	3,312
Allowance for funds used during construction	(1,295)	(1,353)	(1,408)
Total interest expense	39,596	41,940	41,008
Excess of revenues over expenses prior to City Payment	113,862	80,083	66,339
Distribution to the City of Philadelphia	(18,000)	(18,000)	(18,000)
Grant back of distribution from the City of Philadelphia	-	-	-
Excess of revenues over expenses (2)	95,862	62,083	48,339
Net position, beginning of the year (1) (2) (3)	111,700	49,617	1,278
Net position, end of the year (2) (3)	207,562	111,700	49,617

(1) During FY 2013, the Company implemented GASB Statement No. 65, *Items Previously Reported as Assets and Liabilities* , that amends or supersedes the accounting and financial reporting guidance for certain items previously required to be reported as assets or liabilities. The objective is to either properly classify certain items that were previously reported as assets and liabilities as deferred outflows of resources or deferred inflows of resources or recognize certain items that were previously reported as assets and liabilities as outflows of resources (expenses) or inflows of resources (revenues). This change was retroactive to FY 2012.

(2) During FY 2015, the Company implemented GASB Statement No. 68, *Accounting and Financial Reporting for Pensions - an Amendment of GASB Statement No. 27,* that improves accounting and financial reporting by state and local governments for pensions, and GASB Statement No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date—an amendment of GASB Statement No. 68,* to address an issue regarding application of the transition provisions of Statement No. 68, *Accounting and Financial Reporting for Pensions* . This change was retroactive to FY 2014.

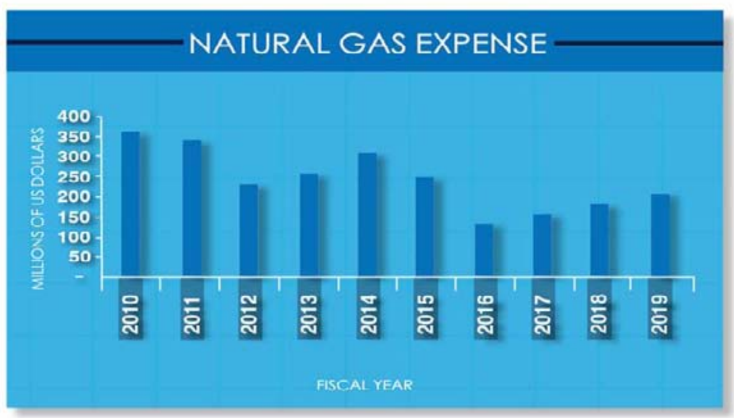
(3) During FY 2018, the Company implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* , for purposes of measuring the net OPEB liabilities, deferred outflows of resources and deferred inflows of resources related to the OPEB Plans, and the OPEB Plans expense, information about the fiduciary net position of the OPEB Plan, and additions to/deductions from the OPEB Plans' fiduciary net position are determined on the same basis as they are reported by the OPEB Plans. This change was retroactive to FY 2017.

(4) For Fiscal Years 2018, 2017, and 2016 the Company reported provision for uncollectible accounts as a reduction of revenue as required by the GASB. Prior to FY 2016, the Company reported provision for uncollectible accounts as an expense.

Source - PGW's Audited Financial Statements

2016	2015	2014	2013	2012	2011	2010
21,873	30,753	39,610	35,262	37,054	51,437	51,343
41,008	39,588	41,217	37,078	29,324	28,700	26,860
509,467	605,686	655,311	602,814	562,009	669,131	664,139
(27,133)	-	-	-	-	-	-
545,215	676,027	736,138	675,154	628,387	749,268	742,342
7,961	8,727	8,317	8,333	8,240	8,400	8,959
10,928	12,493	14,681	9,984	8,356	8,611	7,931
564,104	697,247	759,136	693,471	644,983	766,279	759,232
146,524	252,169	304,051	255,501	233,713	330,932	354,004
17,948	18,180	19,637	17,592	15,640	16,097	14,952
36,277	36,874	37,577	34,926	33,883	33,950	34,026
37,173	38,629	36,929	30,259	27,750	27,990	23,426
10,913	11,192	11,273	11,297	11,491	11,765	15,266
-	34,833	38,848	39,971	36,702	36,027	35,000
12,432	12,262	11,187	11,102	11,946	12,532	13,030
3,671	6,956	7,783	6,789	6,664	4,378	3,900
99,652	93,347	85,872	78,206	81,161	76,850	71,620
62,336	43,748	27,214	23,614	23,972	22,597	24,633
9,929	6,726	11,228	16,492	20,119	22,472	27,269
7,521	7,823	7,687	7,220	7,122	7,135	6,990
444,376	562,739	599,286	532,969	510,163	602,725	624,116
51,679	49,371	47,428	45,912	45,045	43,629	43,168
6,231	5,584	5,771	4,870	4,870	4,714	4,690
45,448	43,787	41,657	41,042	40,175	38,915	38,478
489,824	606,526	640,943	574,011	550,338	641,640	662,594
74,280	90,721	118,193	119,460	94,645	124,639	96,638
1,393	3,784	3,597	1,147	4,659	4,348	5,301
75,673	94,505	121,790	120,607	99,304	128,987	101,939
40,296	45,756	48,261	49,655	53,012	57,225	52,527
8,443	11,548	9,380	10,740	16,824	18,884	18,986
(1,120)	(781)	(506)	(430)	(292)	(427)	(390)
47,619	56,523	57,135	59,965	69,544	75,682	71,123
28,054	37,982	64,655	60,642	29,760	53,305	30,816
(18,000)	(18,000)	(18,000)	(18,000)	(18,000)	(18,000)	(18,000)
-	-	-	-	-	-	18,000
10,054	19,982	46,655	42,642	11,760	35,305	30,816
277,984	258,002	211,347	315,945	304,185	274,435	243,619
288,038	277,984	258,002	358,587	315,945	309,740	274,435

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Operating Revenues, Natural Gas Expense, and
Excess of Revenues Over Expenses Prior to City Payment
Fiscal Years 2010 through 2019



(This page has been intentionally left blank)

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Average Number of Customers Billed by System
Fiscal Years 2010 through 2019

	2019	2018	2017	2016
Residential	484,300	482,300	479,300	476,300
Commercial	25,000	25,000	25,000	25,000
Industrial	700	700	700	700
Total	510,000	508,000	505,000	502,000

Source - PGW Records

2015	2014	2013	2012	2011	2010
475,300	474,300	475,300	477,300	477,300	476,200
25,000	25,000	25,000	25,000	25,000	25,000
700	700	700	700	700	800
501,000	500,000	501,000	503,000	503,000	502,000

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Operating Revenues
Fiscal Years 2010 through 2019
(Thousands of U.S. dollars)

	2019	**2018**	**2017**	**2016**
Firm non-heat	23,328	23,352	21,588	20,765
Interruptible gas sales	1,325	1,059	377	346
Billed non-heating	24,653	24,411	21,965	21,111
GCR non-heating adjustment	412	(919)	(271)	762
Total non-heating	25,065	23,492	21,694	21,873
Billed heating	592,730	612,556	527,191	454,852
GCR heating adjustment	11,040	(23,933)	(4,768)	17,424
Total billed heating	603,770	588,623	522,423	472,276
Weather normalization adjustment (WNA)	1,347	(3,848)	27,748	39,021
Total heating	605,117	584,775	550,171	511,297
Total gas sold	630,182	608,267	571,865	533,170
Firm transportation (FT) non-heat	5,328	5,063	4,559	4,518
FT heating	42,250	32,591	26,850	22,789
WNA - FT	249	42	1,846	2,458
Total heating FT	42,499	32,633	28,696	25,247
Total FT	47,827	37,696	33,255	29,765
Unbilled adjustment	320	(911)	2,171	(1,830)
GTS: transportation	1,161	1,144	1,171	1,231
GTS - customer/customer choice	12,664	11,566	8,938	8,784
GTS - supplier/customer choice	12	13	14	11
GTS - firm supplier	1,901	1,305	992	1,217
Total gas revenues	694,067	659,080	618,406	572,348

Source - PGW Records

2015	2014	2013	2012	2011	2010
27,592	30,324	31,401	33,282	36,779	37,932
3,672	9,068	4,703	3,338	14,431	12,503
31,264	39,392	36,104	36,620	51,210	50,435
(511)	218	(841)	434	228	908
30,753	39,610	35,263	37,054	51,438	51,343
630,286	660,942	605,761	519,950	659,681	630,970
(12,124)	6,174	(12,407)	4,244	5,360	16,742
618,162	667,116	593,354	524,194	665,041	647,712
(10,372)	(11,810)	8,060	44,016	1,696	12,970
607,790	655,306	601,414	568,210	666,737	660,682
638,543	694,916	636,677	605,264	718,175	712,025
4,953	5,671	5,194	3,861	4,582	3,306
22,468	23,330	19,665	14,037	14,541	13,254
(374)	(488)	331	1,412	128	455
22,094	22,842	19,996	15,449	14,669	13,709
27,047	28,513	25,190	19,310	19,251	17,015
(2,105)	5	1,398	(6,201)	2,393	3,457
1,252	1,173	1,050	1,086	1,147	1,928
10,285	10,278	9,372	7,955	8,333	7,421
11	11	478	170	(790)	(105)
994	1,242	989	803	759	601
676,027	736,138	675,154	628,387	749,268	742,342

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Sales Volumes
Fiscal Years 2010 through 2019
(Sales in Mcf)*

	2019	**2018**	**2017**	**2016**
Firm non-heat	1,618,792	1,592,458	1,508,362	1,568,529
Interruptible gas sales	204,951	165,808	18,420	37,909
Billed non-heating	1,823,743	1,758,266	1,526,782	1,606,438
Total non-heating	1,823,743	1,758,266	1,526,782	1,606,438
Billed heating	41,603,356	42,925,738	38,464,325	36,115,312
Total billed heating	41,603,356	42,925,738	38,464,325	36,115,312
Total heating	41,603,356	42,925,738	38,464,325	36,115,312
Total gas sold	43,427,099	44,684,004	39,991,107	37,721,750
Firm transportation (FT) non-heat	708,321	664,696	640,312	667,248
FT heating	5,262,884	4,242,257	3,816,219	3,456,099
Total heating FT	5,262,884	4,242,257	3,816,219	3,456,099
Total FT	5,971,205	4,906,953	4,456,531	4,123,347
Unbilled adjustment	27,810	521,488	(7,071)	33,433
GTS: transportation	13,150,399	12,926,197	12,630,935	12,796,900
GTS - customer/customer choice	13,843,821	12,833,659	11,612,597	11,303,602
Utility Use	261,766	263,681	264,016	233,115
Unaccounted for gas	1,667,421	1,351,894	1,684,675	1,738,806
Total sendout	78,349,521	77,487,876	70,632,790	67,950,953
Unaccounted for gas as a % of total sendout	2.1%	1.7%	2.4%	2.6%

* Mcf = Thousand cubic feet

Source - PGW Records

2015	2014	2013	2012	2011	2010
1,912,025	1,955,220	2,003,583	2,148,736	2,218,768	2,186,030
514,110	1,096,381	890,383	192,058	1,004,185	1,049,318
2,426,135	3,051,601	2,893,966	2,340,794	3,222,953	3,235,348
2,426,135	3,051,601	2,893,966	2,340,794	3,222,953	3,235,348
46,504,401	46,577,983	42,741,706	36,196,469	45,795,915	42,604,640
46,504,401	46,577,983	42,741,706	36,196,469	45,795,915	42,604,640
46,504,401	46,577,983	42,741,706	36,196,469	45,795,915	42,604,640
48,930,536	49,629,584	45,635,672	38,537,263	49,018,868	45,839,988
764,344	795,971	701,712	542,271	629,683	456,675
3,529,555	3,291,193	2,725,563	1,941,019	2,038,726	1,848,085
3,529,555	3,291,193	2,725,563	1,941,019	2,038,726	1,848,085
4,293,899	4,087,164	3,427,275	2,483,290	2,668,409	2,304,760
19,916	95,656	62,646	(633,531)	204,694	276,161
13,166,995	12,069,664	10,708,926	11,429,993	12,024,712	12,390,748
12,837,207	13,201,076	12,346,548	10,459,723	10,581,753	8,440,368
343,324	350,974	410,193	394,574	465,505	632,040
2,445,717	1,051,828	1,492,946	2,067,268	2,563,662	2,097,817
82,037,594	80,485,946	74,084,206	64,738,580	77,527,603	71,981,882
3.0%	1.3%	2.0%	3.2%	3.3%	2.9%

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Gas Cost Rate
Fiscal Years 2010 through 2019
(U.S. dollars)

	2019	2018	2017	2016	2015
June 1	4.2724	3.6210	4.5986	3.2179	4.1721
March 1	4.8779	3.8857	4.9430	3.4946	4.7059
January 1	-	-	-	-	-
December 1	4.4723	4.6913	4.1577	3.6934	5.9976
September 1	3.8633	4.1523	4.2026	4.0724	5.8670

Shown in dollars per thousand cubic feet

Source - PGW Records

2014	2013	2012	2011	2010
6.5642	6.0709	4.7129	6.0930	6.5139
6.0016	6.3991	4.9783	6.5400	7.3455
-	-	-	-	-
5.4473	5.7323	6.1270	6.2753	7.2497
5.4259	5.2247	6.0594	6.9050	7.0900

(This page has been intentionally left blank)

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Ratios of Outstanding Debt by Type
Fiscal Years 2010 through 2019
(Thousands of U.S. dollars)

	Revenue Bonds	Ratio to Operating Revenue	Operating Revenue	Number of Customers	Debt per Customer (1)
2019	964,480	141%	684,728	510,000	1,891
2018	1,016,300	157%	647,499	508,000	2,001
2017	1,054,725	174%	606,211	505,000	2,089
2016	837,830	149%	564,104	502,000	1,669
2015	915,175	131%	697,247	501,000	1,827
2014	1,015,920	134%	759,136	500,000	2,032
2013	1,065,720	154%	693,471	501,000	2,127
2012	1,093,440	170%	644,983	503,000	2,174
2011	1,195,773	156%	766,279	503,000	2,377
2010	1,243,733	164%	759,232	502,000	2,478

(1) Per customer data in whole dollars

Source - PGW's Audited Financial Statements and PGW Records

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Debt Service
Through Fiscal Year 2047
(U.S. dollars)

Year	5th Series Variable	8th Series B	8th Series C	8th Series D	8th Series E
2020	459,000	1,035,188	1,018,814	1,540,755	1,032,451
2021	459,000	1,035,188	1,018,814	1,540,755	1,032,451
2022	459,000	1,035,188	1,018,814	1,540,755	1,032,451
2023	459,000	1,035,188	1,018,814	1,540,755	1,032,451
2024	459,000	5,755,188	5,713,814	8,585,755	5,752,451
2025	459,000	5,941,668	5,903,118	8,865,004	5,939,403
2026	459,000	6,004,343	5,963,762	8,958,694	6,002,587
2027	459,000	6,447,374	6,410,052	9,623,049	6,446,151
2028	459,000	6,476,009	6,437,204	9,656,003	6,475,385
2029	459,000	—	—	—	—
2030	459,000	—	—	—	—
2031	459,000	—	—	—	—
2032	459,000	—	—	—	—
2033	459,000	—	—	—	—
2034	459,000	—	—	—	—
2035	30,229,500	—	—	—	—
2036	—	—	—	—	—
2037	—	—	—	—	—
2038	—	—	—	—	—
2039	—	—	—	—	—
2040	—	—	—	—	—
2041	—	—	—	—	—
2042	—	—	—	—	—
2043	—	—	—	—	—
2044	—	—	—	—	—
2045	—	—	—	—	—
2046	—	—	—	—	—
2047	—	—	—	—	—
TOTAL	37,114,500	34,765,336	34,503,205	51,851,525	34,745,783

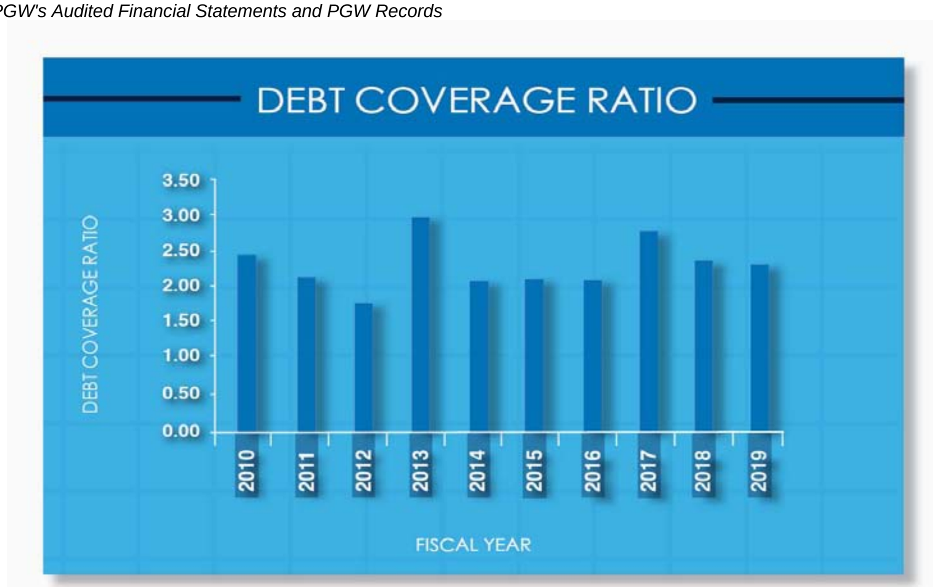
Source - PGW Records

9th Series	10th Series	13th Series	14th Series	15th Series	Total 1998 Ordinance
6,816,775	5,274,994	25,404,500	37,530,450	17,394,550	97,507,477
6,819,025	4,529,494	28,528,500	33,514,950	17,396,750	95,874,927
6,821,225	3,784,706	27,042,000	34,156,700	17,395,500	94,286,340
6,820,975	3,050,456	26,250,750	34,763,575	17,397,750	93,369,715
4,327,800	2,299,706	24,696,250	17,500,075	17,392,750	92,482,790
2,242,800	1,560,706	17,681,250	19,635,700	17,395,250	85,623,899
2,242,800	1,376,100	17,295,250	19,674,450	17,399,250	85,376,236
2,242,800	—	13,517,000	19,667,075	17,394,000	82,206,501
2,242,800	—	13,525,500	18,346,825	18,664,250	82,282,976
2,242,800	—	13,524,250	18,343,700	18,740,500	53,310,250
2,242,800	—	13,522,500	18,348,825	17,263,500	51,836,625
2,242,800	—	13,524,000	18,345,575	17,259,750	51,831,125
2,242,800	—	13,517,250	18,347,325	17,263,250	51,829,625
2,242,800	—	5,121,250	18,347,200	17,257,750	43,428,000
2,242,800	—	5,124,000	18,353,200	17,257,750	43,436,750
2,242,800	—	—	10,655,700	17,257,000	60,385,000
9,937,800	—	—	10,657,300	17,259,500	37,854,600
9,933,813	—	—	10,658,600	17,264,000	37,856,413
9,933,825	—	—	10,653,900	17,264,250	37,851,975
9,936,526	—	—	—	17,259,250	27,195,776
9,935,600	—	—	—	17,263,000	27,198,600
—	—	—	—	17,258,750	17,258,750
—	—	—	—	17,260,500	17,260,500
—	—	—	—	17,261,500	17,261,500
—	—	—	—	17,260,250	17,260,250
—	—	—	—	17,260,250	17,260,250
—	—	—	—	17,259,750	17,259,750
—	—	—	—	17,262,000	17,262,000
105,954,164	21,876,163	258,274,250	387,501,125	487,262,550	1,453,848,600

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Debt Service Coverage
Fiscal Years 2010 through 2019
(Thousands of U.S. dollars)

	2019	2018	2017
Funds Provided			
Total gas revenues	664,084	628,254	618,406
Other operating revenues	20,644	19,245	17,797
Total operating revenues	684,728	647,499	636,203
Other income increase restricted funds	10,788	4,634	1,087
City grant	-	-	-
AFUDC (Interest)	1,295	1,353	1,408
Total funds provided	696,811	653,486	638,698
Funds Applied			
Fuel costs	206,825	186,265	179,230
Other operating costs	335,233	343,845	360,467
Total operating expenses	542,058	530,110	539,697
Less: non-cash expenses	74,481	82,843	84,027
Total funds applied	467,577	447,267	455,670
Funds available to cover debt service	229,234	206,219	183,028
Funds available excluding lease costs	229,234	206,219	183,028
1975 ordinance bonds debt service	-	-	-
Debt service coverage 1975 bonds	-	-	-
Net available after prior debt service	229,234	206,219	183,028
Net available after prior capital leases	229,234	206,219	183,028
1998 ordinance bonds debt service	98,417	87,690	67,582
Debt service coverage 1998 bonds	2.33	2.35	2.71
Net available after 1998 debt service	130,817	118,529	115,446
1998 ordinance subordinate bond debt service	-	-	-
Debt service coverage subordinate bonds	-	-	-

Source - PGW's Audited Financial Statements and PGW Records



2016	2015	2014	2013	2012	2011	2010
572,348	676,027	736,138	675,154	628,387	749,268	742,342
18,889	21,220	22,998	18,317	16,596	17,011	16,890
591,237	697,247	759,136	693,471	644,983	766,279	759,232
1,416	10,836	4,079	196	8,311	12,550	3,035
-	-	-	-	-	-	18,000
1,120	781	506	430	292	427	390
593,773	708,864	763,721	694,097	653,586	779,256	780,657
146,524	252,169	304,051	255,501	233,713	330,932	354,004
370,433	354,357	336,892	318,510	316,625	310,708	308,590
516,957	606,526	640,943	574,011	550,338	641,640	662,594
89,059	74,535	53,039	48,103	47,619	48,479	71,029
427,898	531,991	587,904	525,908	502,719	593,161	591,565
165,875	176,873	175,817	168,189	150,867	186,095	189,092
165,875	176,873	175,817	168,189	150,867	186,095	189,092
-	26,904	28,592	30,163	31,754	30,691	30,101
-	6.57	6.15	5.58	4.75	6.06	6.28
165,875	149,969	147,225	138,026	119,113	155,404	158,991
165,875	149,969	147,225	138,026	119,113	155,404	158,991
77,867	70,139	69,749	47,668	67,874	72,274	65,095
2.13	2.14	2.11	2.90	1.75	2.15	2.44
88,008	79,830	77,476	90,358	51,239	83,130	93,896
-	-	-	-	-	1,988	1,986
-	-	-	-	-	41.82	47.28

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Demographic and Economic Statistics
Principal Employers
Current Calendar Year and Nine Years Ago

2018	2009
Albert Einstein Medical	Albert Einstein Medical
Children's Hospital of Philadelphia	Children's Hospital of Philadelphia
City of Philadelphia	City of Philadelphia
Comcast Cablevision of Willow Grove Inc	Hospital of the University of Pennsylvania
School District of Philadelphia	School District of Philadelphia
SEPTA	SEPTA
Temple University	Temple University
Thomas Jefferson University Hospitals	Thomas Jefferson University Hospitals
University Of Pennsylvania (College)	United States Postal Service
University Of Pennsylvania (Hospital)	University Of Pennsylvania

Listed Alphabetically
Source - City of Philadelphia

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Demographic and Economic Statistics
Calendar Years 2009 through 2018

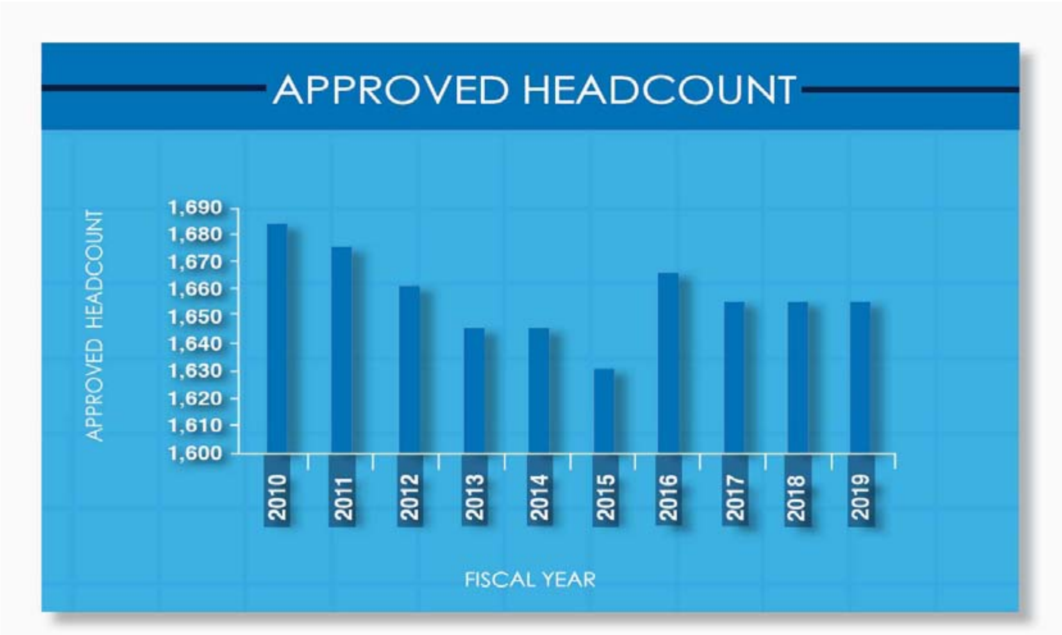
Calendar Year	Population (1)	Personal Income (Thousands of U.S. Dollars) (2)	Per Capita Personal Income (U.S. Dollars)	Unemployment Rate (3)
2018	1,584,138	88,311,658	55,747	5.5%
2017	1,580,863	88,081,991	55,718	6.2%
2016	1,567,872	80,973,410	51,645	6.8%
2015	1,567,442	77,903,831	49,701	6.9%
2014	1,560,297	66,495,223	42,617	8.0%
2013	1,553,165	65,473,002	42,155	10.0%
2012	1,547,607	64,151,742	41,452	10.5%
2011	1,538,567	62,632,520	40,708	10.8%
2010	1,526,006	56,970,074	37,333	10.8%
2009	1,547,297	54,061,223	34,939	9.6%

Sources:
(1) US Census Bureau
(2) US Department of Commerce, Bureau of Economic Analysis
(3) US Department of Labor, Bureau of Labor Statistics

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Budgeted Full-Time Personnel by Department
Fiscal Years 2010 through 2019

Departments	**2019**	**2018**	**2017**
President & Chief Executive Officer	2	2	2
Chief Operating Officer	2	2	2
Chief Financial Officer	2	2	2
Gas processing	115	116	116
Field services	364	372	372
Distribution	483	486	486
Collection	28	29	29
Customer service	169	170	170
Marketing	32	32	32
Administrative and general	497	480	480
PGW Total	1,694	1,691	1,691
Personnel savings	(44)	(41)	(41)
Philadelphia Gas Commission	5	5	5
Grand Total	1,655	1,655	1,655

Source - PGW's Annual Operating Budget



2016	2015	2014	2013	2012	2011	2010
2	3	3	3	3	2	2
2	2	2	2	2	3	2
2	2	2	2	2	-	-
116	119	123	125	119	119	119
374	372	372	366	371	371	341
480	472	472	468	467	467	467
29	31	31	31	35	36	91
170	176	189	190	198	207	207
32	44	44	46	41	34	34
484	449	442	445	454	463	459
1,691	1,670	1,680	1,678	1,692	1,702	1,722
(31)	(42)	(40)	(38)	(37)	(32)	(42)
5	5	5	5	5	5	5
1,665	1,633	1,645	1,645	1,660	1,675	1,685

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Actual Full-Time Personnel by Department
Fiscal Years 2010 through 2019

Departments	2019	2018	2017
President & Chief Executive Officer	2	2	2
Chief Operating Officer	2	2	2
Chief Financial Officer	2	2	2
Gas processing	116	117	117
Field services	353	361	370
Distribution	474	474	486
Collection	27	27	26
Customer service	167	167	169
Marketing	25	27	27
Administrative and general	464	454	445
PGW Total	1,632	1,633	1,646
Philadelphia Gas Commission	6	5	5
Grand Total	1,638	1,638	1,651

Source - PGW Records

2016	2015	2014	2013	2012	2011	2010
2	3	3	3	3	3	2
2	3	2	2	3	2	2
2	2	2	2	1	1	-
116	115	121	121	122	118	120
362	365	364	370	360	362	357
473	477	475	474	468	475	466
25	27	30	31	34	36	57
157	171	143	154	158	167	170
27	33	38	41	38	32	31
440	426	441	456	464	475	480
1,606	1,622	1,619	1,654	1,651	1,671	1,685
5	5	5	5	3	4	4
1,611	1,627	1,624	1,659	1,654	1,675	1,689

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Operating Indicators
Fiscal Years 2010 through 2019

	2019	2018	2017	2016
Financial				
Debt service ratio (1975 Ordinance)	N/A	N/A	N/A	N/A
Debt service ratio (1998 Ordinance)	2.33	2.35	2.71	2.13
Debt to total capital ratio	83.7%	91.0%	95.9%	76.3%
Bad debt as a % of revenue	4.2%	4.5%	4.7%	4.6%
Bad debt reserve as a % of accounts receivable	43.7%	44.5%	44.3%	50.2%
Collection factor (receipts/billings)	96.3%	95.4%	96.5%	97.7%
Cash balance (Thousands of U.S. dollars)	124,145	131,051	88,535	91,743
Natural Gas (NG) storage (Thousands of U.S. dollars)	41,263	41,652	46,031	38,556
Payroll				
Total payroll (Thousands of U.S. dollars) (Includes Overtime)	128,107	129,688	119,182	112,556
Overtime (Thousands of U.S. dollars)	11,776	13,863	11,118	11,125
Overtime as a % of Total Payroll	9.2%	10.7%	9.3%	9.9%
Liquefied Natural Gas (LNG)				
LNG to storage (Mcf)*	2,180,597	1,868,481	2,331,475	2,233,463
LNG from storage (Mcf)	1,914,218	2,516,678	1,396,559	1,258,905
Net to (from) storage (Mcf)	266,379	(648,197)	934,916	974,558
Off-system sales contributed to GCR (Thousands of U.S. dollars)	-	-	175	125
Natural Gas Cost				
Gas utilized (Mcf)	46,127,914	47,226,345	43,557,457	40,301,447
Gas utilized (Thousands of U.S. dollars)	206,801	186,254	179,222	146,515
Cost per Mcf ($)	4.48	3.94	4.11	3.64
Natural Gas Sales Information				
Firm gas sold (Mcf)	43,222,148	44,518,196	39,972,687	37,683,841
Interruptible gas sold (Mcf)	204,951	165,808	18,420	37,909
Total gas sold (Mcf)	43,427,099	44,684,004	39,991,107	37,721,750
Transportation gas - GTS (Mcf)	32,965,425	30,666,809	28,700,063	28,223,849
Other (Mcf)	1,956,997	2,137,063	1,941,620	2,005,354
Total gas sendout (Mcf)	78,349,521	77,487,876	70,632,790	67,950,953
Unaccounted for gas as a % of total gas sendout	2.1%	1.7%	2.4%	2.6%
Transportation gas - GTS as a % of total gas sendout	42.1%	39.6%	40.6%	41.5%
Firm gas sold as a % of total gas sold	99.5%	99.6%	100.0%	99.9%
Degree Days				
Fiscal Year	3,995	3,986	3,552	3,356

* Mcf = Thousand cubic feet

Source - PGW Records

	2015	2014	2013	2012	2011	2010
	6.57	6.15	5.58	4.75	6.06	6.28
	2.14	2.11	2.90	1.75	2.15	2.44
	77.5%	80.0%	75.2%	78.0%	79.7%	82.2%
	5.0%	5.1%	5.8%	5.7%	4.7%	4.6%
	54.0%	51.4%	51.9%	54.4%	50.3%	52.9%
	97.1%	95.0%	91.9%	96.6%	95.1%	98.7%
	114,327	105,734	100,933	75,826	105,386	79,052
	40,791	60,089	70,638	73,086	78,579	96,097
	113,675	115,174	110,120	106,308	106,125	106,003
	11,824	13,629	9,495	7,948	9,700	8,494
	10.4%	11.8%	8.6%	7.5%	9.1%	8.0%
	2,043,392	1,821,935	1,677,268	1,422,440	1,286,742	1,354,605
	2,237,729	3,210,133	1,537,601	974,238	1,428,896	1,117,628
	(194,337)	(1,388,198)	139,667	448,202	(142,154)	236,977
	-	321	743	748	867	274
	50,562,653	52,961,786	50,178,147	43,017,936	55,023,503	51,820,468
	252,158	304,040	255,496	233,709	330,926	353,998
	4.99	5.74	5.09	5.43	6.01	6.83
	48,416,426	48,533,203	44,745,289	38,345,205	48,014,683	44,790,670
	514,110	1,096,381	890,383	192,058	1,004,185	1,049,318
	48,930,536	49,629,584	45,635,672	38,537,263	49,018,868	45,839,988
	30,298,101	29,357,904	26,482,749	24,373,006	25,274,874	23,135,876
	2,808,957	1,498,458	1,965,785	1,828,311	3,233,861	3,006,018
	82,037,594	80,485,946	74,084,206	64,738,580	77,527,603	71,981,882
	3.0%	2.0%	2.0%	3.2%	3.3%	2.9%
	36.9%	36.5%	35.7%	37.6%	32.6%	32.1%
	98.9%	97.8%	98.0%	99.5%	98.0%	97.7%
	4,444	4,405	3,889	3,037	4,005	3,730

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Capital Asset Information
Calendar Years 2010 through 2019

	2019	2018	2017	2016
Gas main (Miles)	3,042	3,041	3,039	3,020
Services (Miles)	2,889	2,891	2,868	2,865
Number of meters				
Residential/Small commercial	506,946	501,529	502,305	499,110
Large diaphragm	3,543	3,385	3,179	3,030
Rotary	10,210	10,653	10,076	10,034
Turbine	280	286	284	283
Total	520,979	515,853	515,844	512,457

Source - Gas Annual Report of PGW to the Pennsylvania Public Utility Commission

2015	2014	2013	2012	2011	2010
3,022	3,023	3,025	3,026	3,027	3,029
2,862	2,860	2,779	2,736	2,772	2,815
497,556	499,375	498,765	501,250	497,151	502,145
2,842	2,695	2,579	2,401	2,298	2,245
9,945	9,883	9,778	9,690	9,551	9,513
285	291	288	289	287	297
510,628	512,244	511,410	513,630	509,287	514,200

PHILADELPHIA GAS WORKS
(A Component Unit of the City of Philadelphia)
Ten Largest Customers
Current Fiscal Year and Nine Years Ago
(Thousands of U.S. dollars)

2019		2010	
Customer 1 (A)	3,604	Customer 1 (C)	6,584
Customer 2 (B)	2,942	Customer 2 (A)	4,648
Customer 3 (C)	2,659	Customer 3 (B)	4,017
Customer 4	2,515	Customer 4 (F)	2,623
Customer 5	2,214	Customer 5	2,176
Customer 6 (D)	1,694	Customer 6	2,048
Customer 7 (E)	1,162	Customer 7 (D)	1,811
Customer 8	1,050	Customer 8 (E)	1,522
Customer 9 (F)	1,030	Customer 9	992
Customer 10	922	Customer 10	796
Total	19,792	Total	27,217

Note - A letter designation indicates a repeat customer from the Fiscal Year 2010 list identified on the fiscal year 2019 list.

Source - PGW Records

APPENDIX B

SPECIMEN MUNICIPAL BOND INSURANCE POLICY

[THIS PAGE INTENTIONALLY LEFT BLANK]

ASSURED GUARANTY MUNICIPAL

MUNICIPAL BOND INSURANCE POLICY

ISSUER: Policy No: -N

BONDS: $ in aggregate principal amount of Effective Date:

Premium: $

ASSURED GUARANTY MUNICIPAL CORP. ("AGM"), for consideration received, hereby UNCONDITIONALLY AND IRREVOCABLY agrees to pay to the trustee (the "Trustee") or paying agent (the "Paying Agent") (as set forth in the documentation providing for the issuance of and securing the Bonds) for the Bonds, for the benefit of the Owners or, at the election of AGM, directly to each Owner, subject only to the terms of this Policy (which includes each endorsement hereto), that portion of the principal of and interest on the Bonds that shall become Due for Payment but shall be unpaid by reason of Nonpayment by the Issuer.

On the later of the day on which such principal and interest becomes Due for Payment or the Business Day next following the Business Day on which AGM shall have received Notice of Nonpayment, AGM will disburse to or for the benefit of each Owner of a Bond the face amount of principal of and interest on the Bond that is then Due for Payment but is then unpaid by reason of Nonpayment by the Issuer, but only upon receipt by AGM, in a form reasonably satisfactory to it, of (a) evidence of the Owner's right to receive payment of the principal or interest then Due for Payment and (b) evidence, including any appropriate instruments of assignment, that all of the Owner's rights with respect to payment of such principal or interest that is Due for Payment shall thereupon vest in AGM. A Notice of Nonpayment will be deemed received on a given Business Day if it is received prior to 1:00 p.m. (New York time) on such Business Day; otherwise, it will be deemed received on the next Business Day. If any Notice of Nonpayment received by AGM is incomplete, it shall be deemed not to have been received by AGM for purposes of the preceding sentence and AGM shall promptly so advise the Trustee, Paying Agent or Owner, as appropriate, who may submit an amended Notice of Nonpayment. Upon disbursement in respect of a Bond, AGM shall become the owner of the Bond, any appurtenant coupon to the Bond or right to receipt of payment of principal of or interest on the Bond and shall be fully subrogated to the rights of the Owner, including the Owner's right to receive payments under the Bond, to the extent of any payment by AGM hereunder. Payment by AGM to the Trustee or Paying Agent for the benefit of the Owners shall, to the extent thereof, discharge the obligation of AGM under this Policy.

Except to the extent expressly modified by an endorsement hereto, the following terms shall have the meanings specified for all purposes of this Policy. "Business Day" means any day other than (a) a Saturday or Sunday or (b) a day on which banking institutions in the State of New York or the Insurer's Fiscal Agent are authorized or required by law or executive order to remain closed. "Due for Payment" means (a) when referring to the principal of a Bond, payable on the stated maturity date thereof or the date on which the same shall have been duly called for mandatory sinking fund redemption and does not refer to any earlier date on which payment is due by reason of call for redemption (other than by mandatory sinking fund redemption), acceleration or other advancement of maturity unless AGM shall elect, in its sole discretion, to pay such principal due upon such acceleration together with any accrued interest to the date of acceleration and (b) when referring to interest on a Bond, payable on the stated date for payment of interest. "Nonpayment" means, in respect of a Bond, the failure of the Issuer to have provided sufficient funds to the Trustee or, if there is no Trustee, to the Paying Agent for payment in full of all principal and interest that is Due for Payment on such Bond. "Nonpayment" shall also include, in respect of a Bond, any payment of principal or interest that is Due for Payment made to an Owner by or on behalf of the Issuer which has been recovered from such Owner pursuant to the

United States Bankruptcy Code by a trustee in bankruptcy in accordance with a final, nonappealable order of a court having competent jurisdiction. "Notice" means telephonic or telecopied notice, subsequently confirmed in a signed writing, or written notice by registered or certified mail, from an Owner, the Trustee or the Paying Agent to AGM which notice shall specify (a) the person or entity making the claim, (b) the Policy Number, (c) the claimed amount and (d) the date such claimed amount became Due for Payment. "Owner" means, in respect of a Bond, the person or entity who, at the time of Nonpayment, is entitled under the terms of such Bond to payment thereof, except that "Owner" shall not include the Issuer or any person or entity whose direct or indirect obligation constitutes the underlying security for the Bonds.

AGM may appoint a fiscal agent (the "Insurer's Fiscal Agent") for purposes of this Policy by giving written notice to the Trustee and the Paying Agent specifying the name and notice address of the Insurer's Fiscal Agent. From and after the date of receipt of such notice by the Trustee and the Paying Agent, (a) copies of all notices required to be delivered to AGM pursuant to this Policy shall be simultaneously delivered to the Insurer's Fiscal Agent and to AGM and shall not be deemed received until received by both and (b) all payments required to be made by AGM under this Policy may be made directly by AGM or by the Insurer's Fiscal Agent on behalf of AGM. The Insurer's Fiscal Agent is the agent of AGM only and the Insurer's Fiscal Agent shall in no event be liable to any Owner for any act of the Insurer's Fiscal Agent or any failure of AGM to deposit or cause to be deposited sufficient funds to make payments due under this Policy.

To the fullest extent permitted by applicable law, AGM agrees not to assert, and hereby waives, only for the benefit of each Owner, all rights (whether by counterclaim, setoff or otherwise) and defenses (including, without limitation, the defense of fraud), whether acquired by subrogation, assignment or otherwise, to the extent that such rights and defenses may be available to AGM to avoid payment of its obligations under this Policy in accordance with the express provisions of this Policy.

This Policy sets forth in full the undertaking of AGM, and shall not be modified, altered or affected by any other agreement or instrument, including any modification or amendment thereto. Except to the extent expressly modified by an endorsement hereto, (a) any premium paid in respect of this Policy is nonrefundable for any reason whatsoever, including payment, or provision being made for payment, of the Bonds prior to maturity and (b) this Policy may not be canceled or revoked. THIS POLICY IS NOT COVERED BY THE PROPERTY/CASUALTY INSURANCE SECURITY FUND SPECIFIED IN ARTICLE 76 OF THE NEW YORK INSURANCE LAW.

In witness whereof, ASSURED GUARANTY MUNICIPAL CORP. has caused this Policy to be executed on its behalf by its Authorized Officer.

ASSURED GUARANTY MUNICIPAL CORP.

By ______________________________
Authorized Officer

A subsidiary of Assured Guaranty Municipal Holdings Inc.
1633 Broadway, New York, N.Y. 10019
(212) 974-0100

Form 500NY (5/90)

APPENDIX C

THE CITY OF PHILADELPHIA GOVERNMENT AND FINANCIAL INFORMATION

TABLE OF CONTENTS

Page

TABLE OF CONTENTS
(continued)

Page

TABLE OF CONTENTS
(continued)

Page

OVERVIEW

The City of Philadelphia (the "City" or "Philadelphia"), located along the southeastern border of the Commonwealth of Pennsylvania (the "Commonwealth" or "Pennsylvania"), is the largest city in the Commonwealth and the sixth largest city in the United States with approximately 1.584 million residents (based on 2018 estimates). According to the 2010 U.S. Census, the City increased its population in the ten years from 2000 to 2010, reflecting the City's first population gain in 60 years. From 2010 to 2018, the City increased its population by 3.6%. The City is also the center of the United States' eighth largest metropolitan statistical area, which is an 11-county area encompassing the City, Camden, NJ, and Wilmington, DE and represents approximately 6.1 million residents (based on 2018 estimates).

The City benefits from its strategic geographical location, relative affordability, cultural and recreational amenities, and its growing strength in key industries. The City's economy is composed of diverse industries, with virtually all classes of industrial and commercial businesses represented. The City is a major regional business and personal services center with strengths in insurance, law, finance, healthcare, higher education, utilities, and the arts. In addition, the City is a center for health, education, research and science facilities with the nation's largest concentration of healthcare resources within a 100-mile radius.

The cost of living in the City is relatively moderate and affordable compared to other major metropolitan areas in the northeast United States. The City, as one of the country's education centers, offers its business community a large and diverse labor pool that draws from major universities including, within the geographical boundaries of the City, the University of Pennsylvania ("Penn"), Temple University, Drexel University, St. Joseph's University, and LaSalle University, among others.

Fiscal Health of the City

The City has implemented several strategies to address significant fiscal challenges, including the novel coronavirus ("COVID-19") pandemic, for Fiscal Year 2020 and over the course of Fiscal Years 2021-2025, which are described in the Fiscal Year 2021 Adopted Budget (as defined herein) and the Twenty-Ninth Five-Year Plan (as defined herein), respectively.

COVID-19: Due to the increase in the number of cases of COVID-19 around the country and internationally, federal, state, and local governmental bodies have enacted legislation, regulations, and administrative orders, directives, and guidance to mitigate the impacts of COVID-19 on the general population and the economy. In March 2020, the Governor of Pennsylvania (the "Governor") declared a disaster emergency in the Commonwealth, which was followed by stay at home orders for an increasing number of counties in Commonwealth (extended to the entire Commonwealth on April 1, 2020). In subsequent executive orders, the restrictions of the Governor's stay at home order have been eased throughout the Commonwealth. The Mayor and City Council have also taken various emergency measures and other actions to respond to the spread of COVID-19 in the City. Similar emergency measures have been implemented in neighboring counties in New Jersey and Delaware.

Plans for Reopening Pennsylvania. The Governor announced plans for a measured reopening of the Commonwealth and the gradual easing of public health and safety restrictions, to strategically reopen the economy, while minimizing public health risks. Such plans include a three-phase matrix to determine when counties and/or regions would be ready to begin easing some restrictions on work, congregate settings, and social interactions. Each phase is applied on a region-by-region basis and the shift from one phase to another is based upon the incidence rate of COVID-19 cases per capita, regional health care testing capabilities, contact tracing, and an evaluation of the region's high-risk settings.

- **Red Phase**. The red phase is designed to minimize the spread of COVID-19 through strict social distancing, closures of non-life sustaining businesses and schools, and building safety protocols. No counties in the Commonwealth are currently in the red phase.

- **Yellow Phase**. The yellow phase is expected to ease some restrictions on returning to work and social interaction while others, such as closures of schools, gyms, entertainment venues, and other indoor recreation centers, as well as limitations around large gatherings, would remain in place. Retail locations are able to open with safety precautions in place relating to worker and building safety. This phase is designed to reopen the economy while continuing to closely monitor public health data to ensure the spread of COVID-19 remains contained to the greatest extent possible.

- **Green Phase**. The green phase eases most restrictions by lifting the stay at home and business closure orders to allow the economy to strategically reopen while continuing to prioritize public health. In this phase, public health indicators continue to be monitored and orders and restrictions are adjusted as necessary to ensure the spread of COVID-19 remains at a minimum. All counties in the Commonwealth are currently in the green phase.

As of the date hereof, the City is in the green phase with its related restrictions, as described above. However, the City has adopted a "modified, restricted green phase," which slows certain aspects of the reopening process. On September 8, 2020, the City lifted restrictions to permit the reopening of indoor dining (with limited capacity), live theatre venues, and movie theatre operations. No assurances can be given that circumstances will not deteriorate in the future as a result of a subsequent COVID-19 outbreak.

Legal Challenges. There have been legal challenges to certain aspects of the Governor's executive orders and other emergency measures issued in connection with the COVID-19 outbreak. One such challenge was filed in the Eastern District of Pennsylvania and involves equal protection and due process claims related to the closures of non-essential businesses. While the due process claim was dismissed on August 31, 2020, the judge ruled that the equal protection claim, related to the alleged arbitrary nature of a waiver program allowing certain businesses to remain open during the height of the COVID-19 outbreak, can proceed.

In another matter, a federal judge in the Western District of Pennsylvania issued a ruling on September 14, 2020, in favor of several counties, businesses, and state officials challenging the Governor's order that shut down non-essential businesses and placed restrictions on gatherings. The judge held that aspects of such orders are unconstitutional, violating the freedom of assembly, due process, and equal protection clauses under the United States Constitution. The Commonwealth has announced that it intends to appeal the ruling.

Although such rulings do not impact any of the emergency measures or other actions taken by the Mayor and City Council in response to the COVID-19 outbreak, no assurances can be given that the City will not face similar legal challenges. For more information on the City's response to COVID-19, see the forepart of this Official Statement and "INTRODUCTION – COVID-19 Response."

Fiscal Impact. The City continues to closely monitor and assess the effects of the COVID-19 pandemic and its economic, operating, financial, and budgetary impact on the City. Such impact is expected to be significant, but cannot be fully quantified at this time. As a result of revenue losses and increases in expenses relating to COVID-19 and the ensuing economic downturn, the City identified a

$749 million budgetary gap for Fiscal Year 2021 to be addressed in the Fiscal Year 2021 Adopted Budget and the Twenty-Ninth Five-Year Plan through reductions to planned spending, reduced reserve levels, and increased tax rates. For more information on the City's historical financial operations and the City's projected General Fund balances for Fiscal Years 2020-2025, see "– Fiscal Health of the City – General Fund Reserves" and "DISCUSSION OF FINANCIAL OPERATIONS" and Tables 1 and 2 (and the text following Table 2) herein.

The Fiscal Year 2021 Adopted Budget, the Twenty-Ninth Five-Year Plan, and the FY 2020 Fourth Quarter QCMR (as defined herein), as applicable, reflect the sudden, dramatic changes in service demands, unanticipated costs, and economic conditions as a result of the COVID-19 global pandemic and the City's associated response.

Revenues. With all but essential City services and businesses ceasing operations and with schools closed and City workers focused on preventing the spread of COVID-19 and treating those affected, the City has seen an immediate impact on certain revenue sources, resulting in projected revenues of $4.58 billion in Fiscal Year 2021, a $278.6 million (5.7%) decrease compared to the current estimate for Fiscal Year 2020. For Fiscal Year 2021, the City is currently projecting a decline in various components of its tax base, including decreases in Wage and Earnings Taxes, Real Estate Taxes, Real Property Transfer Taxes, Sales and Use Taxes, and Business Income and Receipts Taxes ("BIRT"), resulting in projected tax collections of $3.33 billion in Fiscal Year 2021, a $192.7 million (5.5%) decrease compared to the current estimate for Fiscal Year 2020.

The impact on Wage and Earnings Taxes is compounded because commuters account for about 40% for all Wage and Earnings Taxes and such tax is not due when those commuters are required to work from home outside the City. If there are more long-term or permanent shifts to work from home, changes in consumer preferences, and population shifts, then there may be a greater and lasting negative impact on City finances.

The City is also projecting reductions in amusement and hotel taxes, among other tax base impacts. The City is currently estimating that total tax collections in Fiscal Year 2021 will be less than in Fiscal Year 2020. As of the date hereof, no federal funds have been approved to offset revenue losses. The City is evaluating measures to maximize reimbursements from the Federal Emergency Management Agency ("FEMA") and other federal and Commonwealth sources and working to identify and leverage all federal stimulus funding entitlements available to the City. For information on the current estimates for tax revenues for Fiscal Year 2020 and budgeted amounts for Fiscal Year 2021, see "– Fiscal Health of the City – Tax Revenues" and "REVENUES OF THE CITY" and Table 3 herein.

Expenses. The City is projecting higher costs for essential services and increased fixed costs, including overtime and other added labor costs and higher pension payments. With tax filing and payment deadlines delayed, the City also expects lower near-term collections and plans to issue tax and revenue anticipation notes in Fiscal Year 2021 to maintain cash flow (see "OTHER FINANCING RELATED MATTERS – Recent and Upcoming Financings").

The City has incurred in Fiscal Year 2020 and projects for Fiscal Year 2021 significant new expenses for healthcare to reduce the spread of COVID-19 and treat those affected, including labor costs and expenses for testing sites and supplies, quarantine locations and services, surge hospital capacity, medical vehicles, personal protective equipment, disinfectant/cleaning supplies, morgue capacity, and business supports.

On March 27, 2020, Congress passed the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"), which provided the City with certain federal stimulus funding for COVID-19-related expenses. The City received $276 million in such federal funds in April 2020. The Fiscal Year 2021 Adopted Budget and the Twenty-Ninth Five-Year Plan include CARES Act funding for Fiscal Years 2020 and 2021 in the amounts of $100 million in the General Fund and $176 million in the Grants Revenue Fund, respectively. The Fiscal Year 2021 Adopted Budget and the Twenty-Ninth Five-Year Plan do not include potential federal stimulus funding entitlements, reimbursements from FEMA, or funds from other federal or Commonwealth sources that may be received.

Budget Measures. The projected revenue losses and increases in expenses described above are expected to be addressed with reductions to planned spending, reduced reserve levels, and new revenue sources.

Even with budgetary spending pressures, the City expects to increase its annual contribution to the School District of Philadelphia (the "School District") by $30.1 million from $222.5 million in Fiscal Year 2020 to $252.6 million in Fiscal Year 2021. For more information on the School District, see "– Fiscal Health of the City – Increased Funding for the School District," "THE GOVERNMENT OF THE CITY OF PHILADELPHIA – Local Government Agencies – Mayoral-Appointed or Nominated Agencies – The School District," Table 6 – Real Estate Tax Rates and Allocations, and "EXPENDITURES OF THE CITY – City Payments to School District" and Table 21 herein.

With respect to cuts to expenses, the City expects to reduce spending with a hiring freeze, layoffs for temporary, seasonal, and part-time workforce, pay cuts, and containing labor costs with the City's unions. The City also expects to implement targeted cost saving initiatives to reduce certain overtime expenses and eliminate vacant positions, among others.

The City is projecting that Fiscal Year 2021 will end with a cumulative adjusted year end General Fund balance of $51.4 million. For more information on the City's historical financial operations and the City's projected General Fund balances for Fiscal Years 2020-2025, see "– Fiscal Health of the City – General Fund Reserves" and "DISCUSSION OF FINANCIAL OPERATIONS" and Tables 1 and 2 (and the text following Table 2) herein.

The Fiscal Year 2021 Adopted Budget and the Twenty-Ninth Five-Year Plan include budgeted reserves for specific costs or scenarios in the future. Over the course of the Twenty-Ninth Five-Year Plan, the City has reduced the projected overall reserve allocations to make a portion of those funds available for the delivery of services, while maintaining a minimal level of reserve balances to guard against greater than expected revenue losses or new spending pressures. For information on budgeted reserves, see "– Fiscal Health of the City – Budgeted Reserves" and "DISCUSSION OF FINANCIAL OPERATIONS," Table 1, footnotes 12, 13, 14, 15, and 16, and Table 2, footnotes 7, 8, 9, 10, and 11 herein.

The City also expects to draw down on the funds set aside in the Budget Stabilization Reserve. For information on the Budget Stabilization Reserve, see "– Fiscal Health of the City – Budget Stabilization Reserve" and "DISCUSSION OF FINANCIAL OPERATIONS – Budget Stabilization Reserve" herein.

The Fiscal Year 2021 Adopted Budget and the Twenty-Ninth Five-Year Plan include certain revenue enhancements, totaling $40.6 million in Fiscal Year 2021. Such revenue enhancements include (i) freezing the BIRT rate at the Fiscal Year 2020 level for the next three Fiscal Years; (ii) freezing the resident rate for Wage and Earnings Taxes and Net Profits Taxes at the Fiscal Year 2020 level for the next three Fiscal Years; (iii) raising the non-resident rate for Wage and Earnings Taxes and Net Profits Taxes for one year; (iv) raising the parking tax rate for one year; (v) eliminating the discount for early payment of Real Estate Taxes; (vi) adjusting license and permit fees; and (vii) raising the commercial refuse fee.

The City continues to closely monitor and assess the effects of the COVID-19 pandemic and its impact on the City's financial position and operations. The full fiscal impact of COVID-19 on the City is likely to change significantly as the situation further develops and is expected to impact various economic sectors throughout the City, including higher education, healthcare, travel, leisure and hospitality, and professional services, among others. It is not possible at present to project with any reasonable degree of certainty the impact on City revenues, expenditures, reserves, budgets, or financial position. Such overall impact will depend heavily on future events and actions by the federal and Commonwealth governments, as well as other nations around the world. No assurance can be given regarding future events or impacts because many actions and events are unpredictable, unknowable at this time, and outside the control of the City.

The information provided by the City in this Official Statement and previous filings by the City on EMMA was provided as of the respective dates and for the periods specified therein and is subject to change without notice. In particular, the dates as of and periods for which information was provided in this Official Statement and previous filings by the City on EMMA may have occurred before the COVID-19 pandemic and before realizing the economic impact of measures instituted to slow the spread of COVID-19. Accordingly, such information may not be indicative of future results or performance due to these and other factors.

General Fund Reserves: In the Fiscal Year 2020 Adopted Budget (as defined herein), the City projected that Fiscal Year 2019 would end with a cumulative adjusted year end General Fund balance of $209.9 million. Based on the actual results included in the City's CAFR for Fiscal Year 2019 (the "Fiscal Year 2019 CAFR"), the City reported that Fiscal Year 2019 ended with a cumulative adjusted year end General Fund balance of $438.7 million. Such number has been included as part of the current estimate for Fiscal Year 2020 in the FY 2020 Fourth Quarter QCMR. As such, the City's current estimate is that Fiscal Year 2020 will end with a cumulative adjusted year end General Fund balance of $254.9 million, below the Mayor's target for the General Fund balance of 6-8% of expenditures.

Over the course of the Twenty-Ninth Five-Year Plan, the City's projected General Fund balance averages approximately $117.8 million per Fiscal Year (as defined herein), with a low of $50.8 million in Fiscal Year 2022. After including the current estimate of the General Fund balance for Fiscal Year 2020, as included in the FY 2020 Fourth Quarter QCMR, the average fund balance over this same period would be $140.8 million (assuming no other changes). These projected General Fund balances incorporate budgeted amounts for certain budgeted reserves and expected contributions to the Budget Stabilization Reserve in Fiscal Year 2025 (each as described below).

The City's General Fund balance still remains below recommended levels. The Government Finance Officers Association ("GFOA") recommends fund balances of approximately 17% of revenues or expenditures and the City's General Fund balances over the course of the Twenty-Ninth Five-Year Plan are projected to be below the City's internal 6-8% goal. The projected Fiscal Year 2021 General Fund balance of $51.4 million, as noted above, is approximately 1.1% of planned expenditures for such Fiscal Year.

For more information on the City's historical financial operations and the City's projected General Fund balances for Fiscal Years 2020-2025, see "DISCUSSION OF FINANCIAL OPERATIONS" and Tables 1 and 2 (and the text following Table 2) herein.

Budget Stabilization Reserve: To provide the City with a financial cushion should unexpected costs arise, the City made a deposit of $34.3 million to the Budget Stabilization Reserve (as defined herein), pursuant to the Fiscal Year 2020 Adopted Budget. The Fiscal Year 2021 Adopted Budget includes a draw down on such funds and redirects them to spending. The Twenty-Ninth Five-Year Plan does not include any additional payments to the Budget Stabilization Reserve in Fiscal Years 2021-2024, but such payments are projected to resume in Fiscal Year 2025, in the amount of $39.9 million. For more information on the Budget Stabilization Reserve, see "DISCUSSION OF FINANCIAL OPERATIONS – Budget Stabilization Reserve" herein.

Budgeted Reserves: The Fiscal Year 2021 Adopted Budget and the Twenty-Ninth Five-Year Plan include budgeted reserves, certain of which are described below.

Labor Reserve. The City's unions are covered by bargaining agreements through June 30, 2021. The Twenty-Ninth Five-Year Plan includes a labor reserve for potential future labor cost increases once such agreements expire (the "Labor Reserve").

Reopening and Recession Reserve. To mitigate against the fiscal impact of the national and local economic recession and the costs of reopening efforts related to COVID-19, the Twenty-Ninth Five-Year Plan includes a reopening and recession reserve to address related expenses (the "Reopening and Recession Reserve").

For Fiscal Year 2020, information related to the foregoing reserves can be found in Tables 1 and 2 in the rows entitled "Advances & Miscellaneous Payments" or "Payments to Other Funds," as applicable. See "DISCUSSION OF FINANCIAL OPERATIONS," Table 1, footnotes 12, 14, 15, and 16, and Table 2, footnotes 7, 9, 10, and 11.

In the Fiscal Year 2021 Adopted Budget and the Twenty-Ninth Five-Year Plan, as applicable, the City projects that the Labor Reserve and the Reopening and Recession Reserve will total approximately (i) $25.0 million in Fiscal Year 2021 (as budgeted), (ii) $80.0 million in Fiscal Year 2022, (iii) $75.0 million in Fiscal Year 2023, (iv) $90.0 million in Fiscal Year 2024, and (v) $90.0 million in Fiscal Year 2025.

For the budgeted reserves, any portion of such reserves that is not used to offset the applicable stated costs will increase the General Fund balance at the end of the given Fiscal Year, if not used by the City for other purposes.

Tax Revenues: Approximately three-quarters of the City's revenues come from local taxes and more than 85% of tax revenues come from just four taxes: Wage and Earnings Taxes, Real Estate Taxes, BIRT, and Real Property Transfer Taxes. The largest portion of these tax revenues, more than 40%, comes from the Wage and Earnings Tax (see Table 3 and "REVENUES OF THE CITY – Wage, Earnings, and Net Profits Taxes" herein). Approximately 40% of the Wage and Earnings Tax is paid by non-resident workers. Additionally, the City remains unique among the nation's largest cities in that it imposes a tax on both corporate profits and revenue through the BIRT, which is projected to generate 13.9% of the City's local tax revenue in Fiscal Year 2021 (based on the Fiscal Year 2021 Adopted Budget). See "REVENUES OF THE CITY" and Table 3 herein.

High Fixed Costs: The City's high fixed costs consume a significant portion of the City's budget. The largest of such costs is the City's payment to the Municipal Pension Fund. Based on the current estimate in the Twenty-Ninth Five-Year Plan, pension costs are expected to consume approximately 13.5% of expenditures in Fiscal Year 2021, with a City pension cost of approximately $650.2 million (from the General Fund). Even with such payments, the Municipal Pension Fund is under 50% funded. See "PENSION SYSTEM" herein.

Increased Funding for the School District: In the Fiscal Year 2021 Adopted Budget, the City's direct contribution to the School District from the General Fund is $252.6 million in Fiscal Year 2021, an amount $30.1 million higher than the current estimate for Fiscal Year 2020 ($222.5 million). The School District is an independent governmental entity.

For more information on the School District, see "THE GOVERNMENT OF THE CITY OF PHILADELPHIA – Local Government Agencies – Mayoral-Appointed or Nominated Agencies – The School District." For more information on the City's historical contributions to the School District, see "EXPENDITURES OF THE CITY – City Payments to School District" and Table 21 herein.

In addition to the fiscal challenges and related strategic planning described above, the City faces several near-term fiscal uncertainties, such as (i) continued expenditures related to COVID-19, (ii) the severity of the economic downturn and length of the recession, (iii) continued increases in pension costs, (iv) uncertainties related to how amendments to the federal tax code may impact the City's economy (such as the limits placed on the state and local tax deduction, among others), (v) possible decreases in federal and state spending, (vi) potential increases in labor costs under future labor agreements, and (vii) continued increases in City contributions to the School District.

This "OVERVIEW" is intended to highlight the strategies implemented by the City to address its principal anticipated fiscal challenges. The reader is cautioned to review with care the more detailed information presented in this APPENDIX C.

THE GOVERNMENT OF THE CITY OF PHILADELPHIA

Introduction

As noted above, the City is the largest city in the Commonwealth, the sixth largest city in the United States, and the center of the United States' eighth largest metropolitan statistical area. The City benefits from its strategic geographical location, relative affordability, cultural and recreational amenities, and its growing strength in key industries.

As one of the country's education centers, the City offers the business community a large and diverse labor pool. Penn, Temple University, Drexel University, St. Joseph's University, La Salle University, and Community College of Philadelphia are certain of the well-known institutions of higher education located in the City. There are also a number of other well-known colleges and universities located near the City, notably including Villanova University, Bryn Mawr College, Haverford College, Swarthmore College, Lincoln University, and the Camden Campus of Rutgers University, among others.

The City is a center for health, education, research and science facilities. In the City, there are more than 30 hospitals, including the Children's Hospital of Philadelphia, Hospital of the University of Pennsylvania, Einstein Medical Center-Philadelphia, Temple University Hospital, and Thomas Jefferson University Hospitals and Jefferson Health, among others, and schools of medicine, dentistry, pharmacy, optometry, podiatry, and veterinary medicine.

Tourism is important to the City and is driven by the City's extraordinary historic and cultural assets. The City's Historic District includes Independence Hall, the Liberty Bell, Carpenters' Hall, the Betsy Ross House, and Elfreth's Alley, the Nation's oldest residential street. The Benjamin Franklin Parkway District (referred to as the "Parkway" in APPENDIX D) includes the Philadelphia Museum of

Art, the Barnes Foundation, and the Rodin Museum. The Avenue of the Arts, located along a mile-long section of South Broad Street between City Hall and Washington Avenue, includes the Kimmel Center, the Academy of Music, and other performing arts venues. All of the foregoing are key tourist attractions in the City.

For more information on the City's demographic and economic resources and economic development initiatives, see APPENDIX D hereto.

History and Organization

The City was incorporated in 1789 by an Act of the General Assembly of the Commonwealth (the "General Assembly") (predecessors of the City under charters granted by William Penn in his capacity as proprietor of the colony of Pennsylvania may date to as early as 1682). In 1854, the General Assembly, by an act commonly referred to as the Consolidation Act: (i) made the City's boundaries coterminous with the boundaries of Philadelphia County (the same boundaries that exist today) (the "County"); (ii) abolished all governments within these boundaries other than the City and the County; and (iii) consolidated the legislative functions of the City and the County. Article 9, Section 13 of the Pennsylvania Constitution abolished all county offices in the City, provides that the City performs all functions of county government, and states that laws applicable to counties apply to the City.

Since 1952, the City has been governed under a Home Rule Charter authorized by the General Assembly pursuant to the First Class City Home Rule Act, Act of April 21, 1949, P.L. 665, Section 17, and adopted by the voters of the City (as amended and supplemented, the "City Charter"). The City Charter provides, among other things, for the election, organization, powers and duties of the legislative branch (the "City Council") and the executive and administrative branch, as well as the basic rules governing the City's fiscal and budgetary matters, contracts, procurement, property, and records. Under Article XII of the City Charter, the School District operates as a separate and independent home rule school district. Certain other constitutional provisions and Commonwealth statutes continue to govern various aspects of the City's affairs, notwithstanding the broad grant of powers of local self-government in relation to municipal functions set forth in the First Class City Home Rule Act.

Under the City Charter, there are two distinct principal governmental entities in the City: (i) the City, which performs municipal and county functions; and (ii) the School District, which has boundaries coterminous with the City and responsibility for all public primary and secondary education.

The court system in the City, consisting of Common Pleas and Municipal Courts, is part of the Commonwealth judicial system. Although judges are paid by the Commonwealth, most other court costs are paid by the City, with partial reimbursement from the Commonwealth.

Elected and Appointed Officials

The Mayor is elected for a term of four years and is eligible to be elected for no more than two successive terms. Each of the seventeen members of City Council is also elected for a four-year term, which runs concurrently with that of the Mayor. There is no limitation on the number of terms that may be served by members of City Council. Of the members of City Council, ten are elected from districts and seven are elected at-large. No more than five of the seven at-large candidates for City Council may be nominated by any one party or political body. The District Attorney and the City Controller are elected at the mid-point of the terms of the Mayor and City Council.

The City Controller's responsibilities derive from the City Charter, various City ordinances and state and federal statutes, and contractual arrangements with auditees. The City Controller must follow

Generally Accepted Government Auditing Standards, established by the federal Government Accountability Office (formerly known as the General Accounting Office), and Generally Accepted Auditing Standards, promulgated by the American Institute of Certified Public Accountants (collectively, "Generally Accepted Auditing Standards").

The City Controller audits and reports on the City's and the School District's respective Comprehensive Annual Financial Reports ("CAFRs"), federal assistance received by the City, and the performance of City departments. The City Controller also conducts a pre-audit program of City expenditure documents required to be submitted for approval, such as invoices, payment vouchers, purchase orders and contracts. Documents are selected for audit by category and statistical basis. The Pre-Audit Division verifies that expenditures are authorized and accurate in accordance with the City Charter and other pertinent legal and contractual requirements before any moneys are paid by the City Treasurer. The Pre-Audit Technical Unit, consisting of auditing and engineering staff, inspects and audits capital project design, construction and related expenditures. Other responsibilities of the City Controller include investigation of allegations of fraud, preparation of economic reports, certification of the City's debt capacity and the capital nature and useful life of the capital projects, and opining to the Pennsylvania Intergovernmental Cooperation Authority ("PICA") on the reasonableness of the assumptions and estimates in the City's five-year financial plans.

Under the City Charter, the principal officers of the City's government are the Managing Director of the City (the "Managing Director"), the Director of Finance of the City (the "Director of Finance"), the City Solicitor (the "City Solicitor"), the Director of Commerce (the "Director of Commerce"), the City Representative (the "City Representative"), and the Director of Planning and Development (the "Director of Planning and Development"). Under the City Charter, the Mayor appoints the Managing Director, the Director of Finance, the Director of Commerce, the City Representative, and the Director of Planning and Development. The Mayor, with the advice and consent of a majority of City Council, also appoints the City Solicitor.

The Managing Director, in coordination with the senior officials of City departments and agencies, is responsible for supervising the operating departments and agencies of the City that render the City's various municipal services. The Director of Commerce is charged with the responsibility of promoting and developing commerce and industry. The City Representative is the Ceremonial Representative of the City and especially of the Mayor. The City Representative is charged with the responsibility of giving wide publicity to any items of interest reflecting the activities of the City and its inhabitants, and for the marketing and promotion of the image of the City. Under the City Charter, the Director of Planning and Development oversees the Department of Planning and Development, which includes three divisions: (i) the Division of Development Services; (ii) the Division of Planning and Zoning; and (iii) the Division of Housing and Community Development. Such divisions represent five budgetary programs/fiscal divisions, including Executive Administration, Planning & Zoning, Development Services, Community Development, and Housing Development.

The City Solicitor is head of the Law Department and acts as legal advisor to the Mayor, City Council, and all of the agencies of the City government. The City Solicitor is also responsible for: (i) advising on legal matters pertaining to all of the City's contracts and bonds; (ii) assisting City Council, the Mayor, and City agencies in the preparation of ordinances for introduction in City Council; and (iii) conducting litigation involving the City.

The Director of Finance is the chief financial and budget officer of the City and is selected from three names submitted to the Mayor by a Finance Panel, which is established pursuant to the City Charter and is comprised of the President of the Philadelphia Clearing House Association, the Chairman of the Philadelphia Chapter of the Pennsylvania Institute of Certified Public Accountants, and the Dean of the

Wharton School of Finance and Commerce of the University of Pennsylvania. Under Mayor Kenney's administration, the Director of Finance is responsible for the financial functions of the City, including: (i) development of the annual operating budget, the capital budget, and capital program; (ii) the City's program for temporary and long-term borrowing; (iii) supervision of the operating budget's execution; (iv) the collection of revenues through the Department of Revenue; (v) the oversight of pension administration as Chairperson of the Board of Pensions and Retirement; and (vi) the supervision of the Office of Property Assessment. The Director of Finance is also responsible for the appointment and supervision of the City Treasurer, whose office manages the City's debt program and serves as the disbursing agent for the distribution of checks and electronic payments from the City Treasury and the management of cash resources.

The following are brief biographies of Mayor Kenney, his Chief of Staff, the Director of Finance, and the Acting City Treasurer.

James F. Kenney, Mayor. On November 3, 2015, James F. Kenney was elected as the City's 99th Mayor and was sworn into office on January 4, 2016. Mayor Kenney was reelected to a second term on November 5, 2019 and was sworn into office on January 6, 2020. Mayor Kenney is a lifelong resident of the City and a graduate of La Salle University. In 1991, Mayor Kenney was elected to serve as a Democratic City Councilman At-Large and was a member of City Council for 23 years.

James Engler, Chief of Staff. Mr. Engler was appointed Chief of Staff effective August 10, 2018. Prior to that, Mr. Engler served as Deputy Mayor for Policy and Legislation since January 2016. In that role, Mr. Engler served as a senior liaison between the Mayor's Office and City Council and was responsible for developing administration policy priorities and working with stakeholders inside and outside of government to advance those goals.

Rob Dubow, Director of Finance. Mr. Dubow has served as Director of Finance since being appointed on January 7, 2008. Prior to that appointment, Mr. Dubow was the Executive Director of PICA. He has also served as Executive Deputy Budget Secretary of the Commonwealth, from 2004 to 2005, and as Budget Director for the City, from 2000 to 2004.

Jacqueline Dunn, Acting City Treasurer. Ms. Dunn was appointed Acting City Treasurer on September 25, 2020. Prior to her appointment, Ms. Dunn served as Deputy City Treasurer since July 2019. As Acting City Treasurer, Ms. Dunn (i) oversees the issuance of all notes and bonds on behalf of the City's General Fund and Enterprise Funds used to finance capital projects, (ii) manages cash collections and cash resources in the City Treasury, and (iii) serves as the disbursing agent for the distribution of checks and electronic payments from the City Treasury. Ms. Dunn also serves as the Director of Finance's designee on the Philadelphia Board of Pensions and Retirement. In 2014, Ms. Dunn joined the City as an Assistant Finance Director in the Finance Department. In 2016, she was appointed Chief of Staff to the Director of Finance. Prior to joining the City, Ms. Dunn worked for Public Financial Management and the Annenberg Public Policy Center. She has a master's degree in Governmental Administration and a bachelor's degree in Political Science, both from the University of Pennsylvania.

Prior City Treasurer. On September 25, 2020, Christian Dunbar was terminated from his employment as the City Treasurer following the announcement of federal criminal charges against him, which were filed by the United States Attorney's Office for the Eastern District of Pennsylvania. Such charges involve alleged embezzlement and immigration fraud prior to Mr. Dunbar's employment with the City.

Although the federal criminal charges do not relate to activities occurring during Mr. Dunbar's employment with the City, the Mayor has asked the City's Inspector General to begin a review of the City Treasurer's Office from the time Mr. Dunbar served as Deputy City Treasurer commencing in January 2016 through his termination as City Treasurer.

Separately, the City Controller's Office opened an investigation of the City Treasurer's Office regarding accounts for COVID-19-related emergency expenses and sent notice of the investigation to the City Treasurer's Office on September 22, 2020. The City Controller's Office received information that, at a minimum, suggested the accounts had not been processed through the City's financial accounting system ("FAMIS"), against the City's standard accounting procedures. The City Controller has ordered that payments outside of FAMIS stop immediately and opened an investigation into any such accounts.

The City Treasurer's Office has controls and separation of duties that are intended to safeguard City funds and prevent misappropriation of such funds and has agreed to cooperate fully with the Inspector General's review, the investigation of the City Controller's Office, and any other related inquiries.

Government Services

Municipal services provided by the City include: (i) police and fire protection; (ii) health care; (iii) certain welfare programs; (iv) construction and maintenance of local streets, highways, and bridges; (v) trash collection, disposal and recycling; (vi) provision for recreational programs and facilities; (vii) maintenance and operation of the water and wastewater systems (the "Water and Wastewater Systems"); (viii) acquisition and maintenance of City real and personal property, including vehicles; (ix) maintenance of building codes and regulation of licenses and permits; (x) maintenance of records; (xi) collection of taxes and revenues; (xii) purchase of supplies and equipment; (xiii) construction and maintenance of airport facilities (the "Airport System"); and (xiv) maintenance of a prison system. For information on the Water and Wastewater Systems, see APPENDIX D – "KEY CITY-RELATED SERVICES AND BUSINESSES – Water and Wastewater." For information on the Airport System, see APPENDIX D – "TRANSPORTATION – Airport System."

The City owns the assets that comprise the Philadelphia Gas Works ("PGW" or the "Gas Works"). PGW serves residential, commercial, and industrial customers in the City. PGW is operated by Philadelphia Facilities Management Corporation ("PFMC"), a non-profit corporation specifically organized to manage and operate PGW for the benefit of the City. For more information on PGW, see "PGW PENSION PLAN," "PGW OTHER POST-EMPLOYMENT BENEFITS," "EXPENDITURES OF THE CITY – PGW Annual Payments," and "LITIGATION – PGW."

Local Government Agencies

There are a number of governmental authorities and quasi-governmental non-profit corporations that also provide services within the City. Certain of these entities are comprised of governing boards, the members of which are either appointed or nominated, in whole or part, by the Mayor, while others are independent of the Mayor's appointment or recommendation.

Mayoral-Appointed or Nominated Agencies

Philadelphia Industrial Development Corporation and Philadelphia Authority for Industrial Development. The Philadelphia Industrial Development Corporation ("PIDC") and the Philadelphia Authority for Industrial Development ("PAID"), along with the City's Commerce Department, coordinate the City's efforts to maintain an attractive business environment, attract new businesses to the City, and retain existing businesses. PIDC manages PAID's activities through a management agreement. Of the 30 members of the board of PIDC, eight are City officers or officials (the Mayor, the Managing Director, the Finance Director, the Commerce Director, the Director of Planning and Development, the City Solicitor, and two members of City Council), nine members are designated by the President of the Chamber of Commerce of Greater Philadelphia (the "Chamber of Commerce"), and the remaining 13 members are jointly designated by the Chamber of Commerce and the Commerce Director. The five-member board of PAID is appointed by the Mayor.

Philadelphia Municipal Authority. The Philadelphia Municipal Authority (formerly the Equipment Leasing Authority of Philadelphia) ("PMA") was originally established for the purpose of buying equipment and vehicles to be leased to the City. PMA's powers have been expanded to include any project authorized under applicable law that is specifically authorized by ordinance of City Council. PMA is governed by a five-member board appointed by City Council from nominations made by the Mayor.

Philadelphia Energy Authority. The Philadelphia Energy Authority ("PEA") was established by the City and incorporated in 2011 for the purpose of facilitating and developing energy generation projects, facilitating and developing energy efficiency projects, the purchase or facilitation of energy supply and consumer energy education. PEA is authorized to participate in projects on behalf of the City, other government agencies, institutions and businesses. PEA is governed by a five-member board appointed by City Council from four nominations made by the Mayor and one nomination from City Council.

Philadelphia Redevelopment Authority. The Philadelphia Redevelopment Authority (formerly known as the Redevelopment Authority of the City of Philadelphia) (the "PRA"), supported by federal funds through the City's Community Development Block Grant Fund and by Commonwealth and local funds, is responsible for the redevelopment of the City's blighted areas. PRA is governed by a five-member board appointed by the Mayor.

Philadelphia Land Bank. The Philadelphia Land Bank (the "PLB") is an independent agency formed under the authority of City ordinance and Pennsylvania law to return vacant and tax delinquent properties to productive reuse. The PLB has an 11-member board of directors, of which five are appointed by the Mayor and five are appointed by City Council. The final board member is appointed by a majority vote of the other board members. The City provides funds for its operations. For more information on the PLB, see APPENDIX D – "ECONOMIC DEVELOPMENT STRATEGIES AND IMPLEMENTATION – City and Quasi-City Economic Development Agencies and Related Programs – Philadelphia Land Bank."

Philadelphia Housing Authority. The Philadelphia Housing Authority (the "PHA") is a public body organized pursuant to the Housing Authorities Law of the Commonwealth and is neither a department nor an agency of the City. PHA is responsible for developing and managing low and moderate income rental units and limited amounts of for-sale housing in the City. PHA is also responsible for administering rental subsidies to landlords who rent their units to housing tenants qualified by PHA for such housing assistance payments. PHA is governed by a nine-member Board of Commissioners, all of whom are appointed by the Mayor with the approval of a majority of the members of City Council. The terms of the Commissioners are concurrent with the term of the appointing Mayor. Two of the members of the Board are required to be PHA residents. For more information on PHA, see APPENDIX D – "ECONOMIC DEVELOPMENT STRATEGIES AND IMPLEMENTATION – City and Quasi-City Economic Development Agencies and Related Programs – The Philadelphia Housing Authority."

Hospitals and Higher Education Facilities Authority of Philadelphia. The Hospitals and Higher Education Facilities Authority of Philadelphia (the "Hospitals Authority") assists non-profit hospitals by financing hospital construction projects. The City does not own or operate any hospitals. The powers of the Hospitals Authority also permit the financing of construction of buildings and facilities for certain colleges and universities and other health care facilities and nursing homes. The Hospitals Authority is governed by a five-member board appointed by City Council from nominations made by the Mayor.

Southeastern Pennsylvania Transportation Authority. The Southeastern Pennsylvania Transportation Authority ("SEPTA"), which is supported by transit revenues and federal, Commonwealth, and local funds, is responsible for developing and operating a comprehensive and coordinated public transportation system in the southeastern Pennsylvania region. Two of the 15 members of SEPTA's board are appointed by the Mayor and confirmed by City Council. SEPTA is not a department or agency of the City. For more information on SEPTA, see "EXPENDITURES OF THE CITY – City Payments to SEPTA" and APPENDIX D – "TRANSPORTATION – Southeastern Pennsylvania Transportation Authority (SEPTA)."

Pennsylvania Convention Center Authority. The Pennsylvania Convention Center Authority (the "Convention Center Authority") constructed and maintains, manages, and operates the Pennsylvania Convention Center, which opened on June 25, 1993. The Pennsylvania Convention Center is owned by the Commonwealth and leased to the Convention Center Authority. An expansion of the Pennsylvania Convention Center was completed in March 2011. This expansion enlarged the Pennsylvania Convention Center to approximately 2,300,000 square feet with the largest contiguous exhibit space in the Northeast, the largest convention center ballroom on the East Coast, and the ability to host large tradeshows or two major conventions simultaneously.

Of the 15 members of the board of the Convention Center Authority, two are appointed by the Mayor and one by each of the President and Minority Leader of City Council. The Director of Finance is an ex-officio member of the Board with no voting rights. The Commonwealth, the City and the Convention Center Authority have entered into an operating agreement with respect to the operation and financing of the Pennsylvania Convention Center. In January 2014, SMG began managing and operating the Pennsylvania Convention Center, instituting a number of measures intended to reduce and control show costs and improve customer service. For more information on the Convention Center Authority, see "EXPENDITURES OF THE CITY – City Payments to Convention Center Authority."

The School District. The School District was established, pursuant to the First Class City Home Rule Education Act, by the Educational Supplement to the City Charter as a separate and independent home rule school district to provide free public education to the City's residents. Under the City Charter, the School District is governed by the Board of Education of the School District of Philadelphia (the "Board of Education"), which is appointed by the Mayor.

Effective December 2001, the School District was declared distressed by the Secretary of Education of the Commonwealth (the "Secretary of Education") pursuant to the Public School Code of 1949, as amended (the "School Code"). During such a period of distress, the powers and duties of the Board of Education are vested in a School Reform Commission (the "School Reform Commission") created pursuant to the School Code. In December 2017, the Secretary of Education approved a resolution adopted by the School Reform Commission recommending the dissolution of the School Reform Commission and rescission of the declaration of distressed school district status effective June 30, 2018. In April 2018, the Mayor appointed nine members to serve on the Board of Education and such individuals assumed their duties on July 1, 2018. As of such date, the Board of Education governs the School District.

Under the City Charter, the Board of Education is required to levy taxes annually, within the limits and upon the subjects authorized by the General Assembly or City Council, in amounts sufficient to provide for operating expenses, debt service charges, and for the costs of any other services incidental to the operation of public schools. The School District has no independent power to authorize school taxes. Certain financial information regarding the School District is included in the City's CAFR.

The School District is part of the Commonwealth system of public education. In a number of matters, including the incurrence of short-term and long-term debt, the School District is governed by the separate statutes of the Commonwealth. The School District is a separate political subdivision of the Commonwealth, and the City has no property interest in or claim on any revenues or property of the School District.

In the Fiscal Year 2019 CAFR, the City reported that its direct contribution to the School District from the General Fund was $180.9 million in Fiscal Year 2019. In the Fiscal Year 2020 Adopted Budget, the City's direct contribution to the School District from the General Fund is $222.5 million in Fiscal Year 2020, which amount is unchanged as the current estimate in the FY 2020 Fourth Quarter QCMR. In the Fiscal Year 2021 Adopted Budget, the City's direct contribution to the School District from the General Fund is $252.6 million in Fiscal Year 2021. Such amounts do not include funding from taxes levied by the School District and authorized by City Council. For more information on the City's historical contributions to the School District, see "EXPENDITURES OF THE CITY – City Payments to School District" and Table 21.

Non-Mayoral-Appointed or Nominated Agencies

PICA. PICA was created by the Pennsylvania Intergovernmental Cooperation Authority Act for Cities of the First Class (the "PICA Act") in 1991 to provide financial assistance to cities of the first class, and it continues in existence for a period not exceeding one year after all of its liabilities, including the PICA Bonds (as defined herein), have been fully paid and discharged. The City is the only city of the first class in the Commonwealth. The Governor, the President pro tempore of the Pennsylvania Senate, the Minority Leader of the Pennsylvania Senate, the Speaker of the Pennsylvania House of Representatives, and the Minority Leader of the Pennsylvania House of Representatives each appoints one voting member of PICA's board. The Secretary of the Budget of the Commonwealth and the Director of Finance of the City serve as ex officio members of PICA's board with no voting rights.

In January 1992, the City and PICA entered into an Intergovernmental Cooperation Agreement (the "PICA Agreement"), pursuant to which PICA agreed to issue bonds from time to time, at the request of the City, for the purpose of funding, among other things, deficits in the General Fund and a debt service reserve. See "DEBT OF THE CITY – PICA Bonds."

Under the PICA Act and for so long as any PICA Bonds are outstanding, the City is required to submit to PICA: (i) a five-year financial plan on an annual basis; and (ii) quarterly financial reports, each as further described below under "DISCUSSION OF FINANCIAL OPERATIONS – Five-Year Plans of the City" and "– Quarterly Reporting to PICA." Under the PICA Act, at such time when no PICA Bonds are outstanding, the City will no longer be required to prepare such annual financial plans or quarterly reports. As of June 30, 2020, the principal amount of PICA Bonds outstanding was $56,075,000. For more information on PICA Bonds, see "DEBT OF THE CITY – PICA Bonds."

The PICA Act and the PICA Agreement provide PICA with certain financial and oversight functions. PICA has the power to exercise certain advisory and review procedures with respect to the City's financial affairs, including the power to review and approve the five-year financial plans prepared by the City, and to certify non-compliance by the City with the then-existing five-year plan. PICA is also required to certify non-compliance if, among other things, no approved five-year plan is in place or if the City has failed to file mandatory revisions to an approved five-year plan. Under the PICA Act, any such certification of non-compliance would, upon certification by PICA, require the Secretary of the Budget of the Commonwealth to withhold funds due to the City from the Commonwealth or any of its agencies (including, with certain exceptions, all grants, loans, entitlements, and payments payable to the City by the Commonwealth, including payment of the portion of the PICA Tax, as further described under "DEBT OF THE CITY – PICA Bonds" below, otherwise payable to the City). Such withheld funds are held in escrow by the Commonwealth or in the applicable City account until such non-compliance is cured. A majority vote of PICA will determine when the conditions that caused the City to be certified as non-compliant have ceased to exist. Following such vote, PICA notifies the Secretary of the Budget and the withheld funds are released (together with all interest and income earned thereon during the period held in escrow).

Philadelphia Parking Authority. The Philadelphia Parking Authority (the "PPA") is responsible for: (i) the construction and operation of parking facilities in the City and at Philadelphia International Airport ("PHL"); and (ii) enforcement of on-street parking regulations. The members of the PPA's board are appointed by the Governor, with certain nominations from the General Assembly. PPA is not a department or agency of the City. For more information on the PPA, see "REVENUES OF THE CITY – Philadelphia Parking Authority Revenues."

Cybersecurity

The City relies on a complex technology environment to conduct its operations. As a recipient and provider of personal, private, and sensitive information, the City and its departments and offices face multiple cyber threats including, but not limited to, hacking, viruses, malware, and other attacks on computers and other sensitive digital networks and systems.

The City's Office of Innovation and Technology works to protect the City from cyber threats by adopting new technology and ensuring City systems and citizen data are protected. The Office of Innovation and Technology follows industry best practices, develops City-wide security policies, provides regular security training to all City employee users, and uses security tools to mitigate, prevent, deter, and respond to incidents if and when they occur. Additionally, to identify potential vulnerabilities and proactively mitigate them, the City organizes periodic (i) vulnerability scanning of critical systems, (ii) penetration tests of the information security environment, and (iii) regular internal testing of systems and users. These tests are performed by both the Office of Innovation and Technology and third parties.

The Office of Innovation and Technology is working to establish relationships with federal and state government, and commercial, academic, and law enforcement security experts. It is the City's expectation that such relationships will enable the City to stay informed of threats and continuing improvements to security systems.

No assurances can be given that the City's security and operational control measures will be successful in guarding against future cyber threats and attacks. The results of any attack on the City's computer and information technology systems could impact its operations and damage the City's digital networks and systems, and the costs of remedying any such damage could be substantial.

Climate Change

The City's Office of Sustainability ("OOS") works with partners around the City, both public and private, to educate and prepare the City for climate change, among other things. OOS is responsible for implementing Greenworks Philadelphia, the City's comprehensive sustainability plan, which consists of a variety of initiatives to prepare the City for future climate–related challenges.

Planning for the potential impact of climate change in the City is challenging. The City's climate is variable and projections of future conditions range significantly. Potential climate change impacts include rising temperatures (heat waves); air quality issues; increased heavy precipitation events (rain or snow); rising sea levels (two feet by 2050 and four feet by 2100); and storm surges from more intense hurricanes and tropical storms.

Under the mid-century (2050) and end-of-century (2100) analyses, the City projects that it will experience a greater frequency of heavy and extremely heavy precipitation events, with the largest increase occurring in precipitation that falls during winter months. Heavy precipitation and flooding can be caused by a variety of weather systems, including tropical storms and hurricanes, thunderstorms, and frontal activity. When these heavy precipitation events fall as rain, they often exceed the capacity of the City's storm sewer infrastructure; when they fall as snow, they require many City resources to manage. Some of these projections are already becoming a reality, as the City has experienced an increase in the intensity and frequency of storm events over the last decade, which has on occasion resulted in significant flooding.

The sea level rising is a particularly important risk for the City, as rising seas affect water levels in the Delaware and Schuylkill Rivers bordering the City. Higher sea levels will increase the depth and extent of flooding in and around the City from storm surges. Low-lying areas already experience localized flooding during heavy storm events, and both municipal infrastructure and private development exist along the two rivers. Because of the City's topography and its location next to tidal rivers, many City facilities and other properties are vulnerable to sea level rise, even under conservative sea level rise scenarios. For example, PHL and at least a dozen other City facilities would be exposed to flooding with two feet of sea level rise, a scenario that is likely to occur by mid-century. Under the mid-century sea level rise scenario (indicating two feet of sea level rise), only one City facility is highly vulnerable to flooding, but under the end-of-century sea level rise scenario (four feet of sea level rise), 19 facilities are highly vulnerable and another 12 City facilities are moderately vulnerable. Hundreds of additional facilities (both City and private) are highly vulnerable to both riverine flooding and the combination of sea level rise and storm surge.

Financial Impact. While the financial effects of climate change are difficult to quantify, the City has developed some cost estimates related to its future fiscal impact. Climate change will increase both the risk of expensive extreme events and the regular, recurring costs of doing business, along with equally important but less quantifiable costs to quality of life in the City. Proactive planning for climate change can help to reduce many of these costs, both public and private.

Climate change is increasing the intensity of extreme storms, and just one severe hurricane could cause more than $2 billion in damages across the City. The City expects to see more frequent extreme storms with higher winds and more flooding, due in part to sea level rise combined with heavy rains. Depending on severity, each of these storms could cause between $20 million and $900 million in damages in the City.

In addition to increasing disaster costs, higher heat and more precipitation will increase the everyday cost of doing business for the City's government, businesses, and residents. Increased operating costs from climate change across all sectors would result in a significant economic impact in the City. Much of these costs will be borne by City departments in combination with Commonwealth and federal government; others will fall directly on the private sector.

As the effects of climate change take shape in the City, annual costs related thereto are expected to include a variety of increases ranging from energy and maintenance costs to the increasing costs of continuing to provide services. For example, the City expects climate change to (i) increase annual electricity costs by up to $1 million due to increased demand for air conditioning; (ii) create an additional $2 to $4 million in roadway maintenance costs from precipitation, freeze-thaw cycles, and high temperatures; and (iii) increase the annual cost of running heat emergency helplines to advise callers about how to avoid heat stress and refer those in need of help to emergency services.

The City also expects to face a variety of other increased costs due to climate change, such as (i) costs associated with a variety of respiratory diseases caused by higher levels of ozone (with costs for medical treatment and lost productivity associated with these diseases approaching $20 million by 2050), and (ii) increased regional transportation expenses (increased operational costs and damages from climate change could rise by almost $2 million per year).

In 2016, OOS, along with a cross-departmental Climate Adaptation Working Group, issued *Growing Stronger: Toward a Climate-Ready Philadelphia* to (i) assess vulnerabilities and preparation opportunities for municipal government; (ii) identify low-barrier and high-impact internal actions that can be taken to reduce risks and decrease stressors on City infrastructure services; and (iii) guide proactive projects with benefits beyond municipal operations. City-wide climate adaptation planning efforts are now also underway.

In addition to participating in planning efforts, City departments are taking action and implementing projects that aim to increase resilience on a broad array of climate issues. The Department of Public Property ensures that emergency generators in City-maintained facilities are well maintained and fueled, which is intended to allow other City departments to continue providing services during emergency situations. During heat emergencies, the Department of Public Health ensures communication among City agencies and deploys environmental health teams into the community. Philadelphia Parks and Recreation works with citizen scientists to identify forest restoration practices suitable for the City's changing climate. Regarding broader development across the City, the Philadelphia City Planning Commission (the "Planning Commission") requires new facilities located in flood zones to be raised 18 inches above FEMA base flood elevation, and the Philadelphia Water Department (the "Water Department") promotes green storm water infrastructure as a source control measure to minimize flooding impacts.

CITY FINANCES AND FINANCIAL PROCEDURES

Except as otherwise noted, the financial statements, tables, statistics, and other information shown below have been prepared by the Office of the Director of Finance and can be reconciled to the financial statements in the Fiscal Year 2019 CAFR and notes therein. The Fiscal Year 2019 CAFR was prepared by the Office of the Director of Finance in conformance with guidelines adopted by the Governmental Accounting Standards Board and the American Institute of Certified Public Accountants' audit guide, Audits of State and Local Government Units and audited by the City Controller under Generally Accepted Auditing Standards.

General

Governmental funds account for their activities using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recognized as soon as they are both measurable and available. Revenues are considered to be available when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period. For this purpose, the City considers revenues to be available if they are collected within 60 days of the end of the current fiscal period. Expenditures are generally recorded when a liability is incurred, as in the case of full accrual accounting. Debt service expenditures, as well as expenditures related to compensated absences and claims and judgments, are recorded only when payment is due; however, those expenditures may be accrued if they are to be liquidated with available resources.

Imposed non-exchange revenues, such as real estate taxes, are recognized when the enforceable legal claim arises and the resources are available. Derived tax revenues, such as wage, BIRT, net profits and earnings taxes, are recognized when the underlying exchange transaction has occurred and the resources are available. Grant revenues are recognized when all the applicable eligibility requirements have been met and the resources are available. All other revenue items are considered to be measurable and available only when cash is received by the City.

Revenue that is considered to be program revenue includes: (i) charges to customers or applicants for goods received, services rendered or privileges provided; (ii) operating grants and contributions; and (iii) capital grants and contributions. Internally dedicated resources are reported as general revenues rather than as program specific revenues; therefore, all taxes are considered general revenues.

The City's financial statements reflect the following three funds as major Governmental Funds:

- The General Fund is the City's primary operating fund. It accounts for all financial resources of the general government, except those required to be accounted for in other funds.

- The Health Choices Behavioral Health Fund accounts for resources received from the Commonwealth. These resources are restricted to providing managed behavioral health care to residents of the City.

- The Grants Revenue Fund accounts for the resources received from various federal, Commonwealth, and private grantor agencies, including those received by the City's Department of Human Services ("DHS"). The resources are restricted to accomplishing the various objectives of the grantor agencies.

The City also reports on permanent funds, which are used to account for resources legally held in trust for use by the park and library systems of the City. There are legal restrictions on the resources of the permanent funds that require the principal to remain intact, while only the earnings may be used for the programs.

The City reports on the following fiduciary funds:

- The Municipal Pension Fund accumulates resources to provide pension benefit payments to qualified employees of the City and certain other quasi-governmental organizations.

- The PGW Retirement Reserve Fund accounts for contributions made by PGW to provide pension benefit payments to its qualified employees under its pension plan. For more information on the PGW Pension Plan (as defined herein), see "PGW PENSION PLAN."

- The Escrow Fund accounts for funds held in escrow for various purposes.

- The Employees Health & Welfare Fund accounts for funds deducted from employees' salaries for payment to various organizations.

- The Departmental Custodial Accounts account for funds held in custody by various departments of the City.

The City reports on the following major proprietary funds:

- The Water Fund accounts for the activities related to the operation of the Water and Wastewater Systems.

- The Aviation Fund accounts for the activities of the Airport System.

Proprietary funds distinguish operating revenues and expenses from non-operating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's ongoing operations. The principal operating revenues of the Water Fund are charges for water and sewer service. The principal operating revenues of the Aviation Fund are charges for the use of the City's airports, PHL and Northeast Philadelphia Airport. Operating expenses for enterprise funds include the cost of sales and services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as non-operating revenues and expenses.

Current City Disclosure Practices

It is the City's practice to file its CAFR, which contains the audited combined financial statements of the City, in addition to certain other information, such as the City's bond ratings and information about upcoming debt issuances, with the Municipal Securities Rulemaking Board ("MSRB") as soon as practicable after delivery of such information. For bonds issued in calendar year 2015 and thereafter, the annual filing deadline is February 28; for bonds issued prior to calendar year 2015, the annual filing deadline is 240 days after the end of the respective Fiscal Year, being February 25. The Fiscal Year 2019 CAFR was filed with the MSRB on February 25, 2020, through the MSRB's Electronic Municipal Market Access ("EMMA") system.

A wide variety of information concerning the City is available from publications and websites of the City and others, including the City's investor information website at http://www.phila.gov/investor (the "City's Investor Website"). Any such information that is inconsistent with the information set forth in this Official Statement should be disregarded. No such information is a part of or incorporated into this Official Statement.

Independent Audit and Opinion of the City Controller

The City Controller has examined and expressed opinions on the basic financial statements of the City contained in the Fiscal Year 2019 CAFR. The City Controller has not participated in the preparation of this Official Statement nor in the preparation of the budget estimates and projections and cash flow statements and forecasts set forth in various tables contained in this Official Statement. Consequently, the City Controller expresses no opinion with respect to any of the data contained in this Official Statement other than what is contained in the basic financial statements of the City in the Fiscal Year 2019 CAFR.

Budgetary Accounting Practices

The City's budgetary process accounts for certain transactions on a basis other than generally accepted accounting principles ("GAAP"). In accordance with the City Charter, the City has formally established budgetary accounting control for its operating and capital improvement funds.

The operating funds of the City, consisting of the General Fund, eleven (11) Special Revenue Funds (County Liquid Fuels Tax, Special Gasoline Tax, Health Choices Behavioral Health, Hotel Room Rental Tax, Grants Revenue, Community Development, Car Rental Tax, Housing Trust, Acute Care Hospital Assessment, Budget Stabilization, and Water Residual Funds) and two Enterprise Funds (Water and Aviation Funds), are subject to annual operating budgets adopted by City Council. These budgets appropriate funds for all City departments, boards and commissions by major class of expenditure within each department. Major classes are defined as: (i) personal services; (ii) purchase of services; (iii) materials and supplies; (iv) equipment; (v) contributions, indemnities, and taxes; (vi) debt service; (vii) payments to other funds; and (viii) advances and other miscellaneous payments. The appropriation amounts for each fund are supported by revenue estimates and take into account the elimination of accumulated deficits and the re-appropriation of accumulated surpluses to the extent necessary. All transfers between major classes (except for materials and supplies and equipment, which are appropriated together) must have City Council approval. Appropriations that are not expended or encumbered at year-end are lapsed.

The City's capital budget is adopted annually by City Council. The capital budget is appropriated by project for each department. Requests to transfer appropriations between projects must be approved by City Council. Any appropriations that are not obligated at year-end are either lapsed or carried forward to the next Fiscal Year.

Schedules prepared on the legally enacted basis differ from the GAAP basis in that both expenditures and encumbrances are applied against the current budget, adjustments affecting activity budgeted in prior years are accounted for through fund balance or as reduction of expenditures and certain interfund transfers and reimbursements are budgeted as revenues and expenditures. The primary difference between the GAAP and legal (budgetary) fund balance is due to the timing of recognizing the BIRT. The legal basis recognizes BIRT revenues in the Fiscal Year they are collected. The GAAP basis requires the City to recognize the BIRT revenues (which are primarily paid in April) for the calendar year in which the BIRT taxes are due, requiring the City to defer a portion of the April payment into the next Fiscal Year. For more information on BIRT, see "REVENUES OF THE CITY – Business Income and Receipts Tax."

DISCUSSION OF FINANCIAL OPERATIONS

Principal Operations

The major financial operations of the City are conducted through the General Fund. In addition to the General Fund, operations of the City are conducted through two other major governmental funds and 19 non-major governmental funds. The City operates on a July 1 to June 30 fiscal year ("Fiscal Year") and reports on all the funds of the City, as well as its component units, in the City's CAFR. PMA's and PICA's financial statements are blended with the City's statements. The financial statements for PGW, PRA, the PPA, the School District, the Community College of Philadelphia, the Community Behavioral Health, Inc., the Delaware River Waterfront Corporation, and PAID are presented discretely.

Fund Accounting

Funds are groupings of activities that enable the City to maintain control over resources that have been segregated for particular purposes or objectives. All of the funds of the City can be divided into three categories: governmental funds, proprietary funds, and fiduciary funds.

Governmental Funds. The governmental funds are used to account for the financial activity of the City's basic services, such as: general government; economic and neighborhood development; public health, welfare and safety; cultural and recreational; and streets, highways and sanitation. The funds' financial activities focus on a short-term view of the inflows and outflows of spendable resources, as well as on the balances of spendable resources available at the end of the Fiscal Year. The financial information presented for the governmental funds is useful in evaluating the City's short-term financing requirements.

The City maintains 22 individual governmental funds. The City's CAFRs, including the Fiscal Year 2019 CAFR, present data separately for the General Fund, Grants Revenue Fund, and Health Choices Behavioral Health Fund, which are considered to be major funds. Data for the remaining 19 funds are combined into a single aggregated presentation.

Proprietary Funds. The proprietary funds are used to account for the financial activity of the City's operations for which customers are charged a user fee; they provide both a long- and short-term view of financial information. The City maintains three enterprise funds that are a type of proprietary fund – airport, water and wastewater operations, and industrial land bank.

Fiduciary Funds. The City is the trustee, or fiduciary, for its employees' pension plans. It is also responsible for PGW's employees' retirement reserve assets. Both of these fiduciary activities are reported in the City's CAFRs, including the Fiscal Year 2019 CAFR, as separate financial statements of fiduciary net assets and changes in fiduciary net assets.

See "CITY FINANCES AND FINANCIAL PROCEDURES" for a further description of these governmental, proprietary, and fiduciary funds.

Budget Procedure

At least 90 days before the end of the Fiscal Year, the operating budget for the next Fiscal Year is prepared by the Mayor and submitted to City Council for adoption. The budget, as adopted, must be balanced and provide for discharging any estimated deficit from the current Fiscal Year and make appropriations for all items to be funded with City revenues. The Mayor's budgetary estimates of revenues for the ensuing Fiscal Year and projection of surplus or deficit for the current Fiscal Year may not be altered by City Council. Not later than the passage of the operating budget ordinance, City Council must enact such revenue measures as will, in the opinion of the Mayor, yield sufficient revenues to balance the budget.

At least 30 days before the end of the Fiscal Year, City Council must adopt by ordinance an operating budget and a capital budget for the ensuing Fiscal Year and a capital program for the six ensuing Fiscal Years. If the Mayor disapproves the bills, he must return them to City Council with the reasons for his disapproval at the first meeting thereof held not less than ten days after he receives such bills. If the Mayor does not return the bills within the time required, they become law without his approval. If City Council passes the bills by a vote of two-thirds of all of its members within seven days after the bills have been returned with the Mayor's disapproval, they become law without his approval. While the City Charter requires that City Council adopt the ordinances for the operating and capital budgets at least 30 days before the end of the Fiscal Year, in practice, such ordinances are often adopted after such deadline, but before the end of such Fiscal Year. For example, the City's Fiscal Year 2021 operating budget ordinance was presented to City Council on March 5, 2020, revised and resubmitted to City Council on May 1, 2020, approved by City Council on June 25, 2020, and signed by the Mayor on June 26, 2020. There is no practical consequence to adopting the budget ordinances after the deadline in the City Charter, but before the end of the Fiscal Year.

The capital program is prepared annually by the Planning Commission to present the capital expenditures planned for each of the six ensuing Fiscal Years, including the estimated total cost of each project and the sources of funding (local, state, federal, and private) estimated to be required to finance each project. The capital program is reviewed by the Mayor and transmitted to City Council for adoption with his recommendation thereon. The Capital Program ordinance for Fiscal Years 2021-2026 (the "Fiscal Year 2021-2026 Adopted Capital Program") was approved by City Council on June 25, 2020, and signed by the Mayor on June 26, 2020 (see Table 48).

The capital budget ordinance, authorizing in detail the capital expenditures to be made or incurred in the ensuing Fiscal Year from City Council appropriated funds, is adopted by City Council concurrently with the capital program. The capital budget must be in full conformity with that part of the capital program applicable to the Fiscal Year that it covers.

For information on the City's Fiscal Year 2020 Adopted Budget, see "– Current Financial Information – Fiscal Year 2020 Adopted Budget and Twenty-Eighth Five-Year Plan" herein. For information on the Fiscal Year 2021 Adopted Budget and Twenty-Ninth Five-Year Plan, see "– Current Financial Information – Fiscal Year 2021 Adopted Budget and Twenty-Ninth Five-Year Plan" herein. For information on the City's capital program, see "CITY CAPITAL PROGRAM" herein.

Budget Stabilization Reserve

In April 2011, the City adopted an amendment to the City Charter that established the "Budget Stabilization Reserve." The City Charter provides that the annual operating budget ordinance is required to provide for appropriations to a Budget Stabilization Reserve, to be created and maintained by the Director of Finance as a separate fund, which may not be commingled with any other funds of the City. Appropriations to the Budget Stabilization Reserve are required to be made each Fiscal Year if the projected General Fund balance for the upcoming Fiscal Year equals or exceeds three percent of General Fund appropriations for such Fiscal Year. City Council can appropriate additional amounts to the Budget Stabilization Reserve by ordinance, no later than at the time of passage of the annual operating budget ordinance and only upon recommendation of the Mayor. Total appropriations to the Budget Stabilization Reserve are subject to a limit of five percent of General Fund appropriations. Amounts in the Budget Stabilization Reserve from the prior Fiscal Years, including any investment earnings certified by the Director of Finance, are to remain on deposit therein. The City has made a deposit of $34.3 million to the Budget Stabilization Reserve, pursuant to the Fiscal Year 2020 Adopted Budget.

Withdrawals from the Budget Stabilization Reserve are permitted only upon (i) approval by ordinance of a transfer of appropriations from the Budget Stabilization Reserve and only for the purposes set forth in such transfer ordinance and (ii) either (1) a certification by the Director of Finance that General Fund revenues actually received by the City during the prior Fiscal Year were at least one percent less than the General Fund revenues set forth in the Mayor's estimate of receipts, or (2) a certification by the Director of Finance that such withdrawal is necessary to avoid either a material disruption in City services or to fund emergency programs necessary to protect the health, safety or welfare of City residents, and that it would be fiscally imprudent to seek emergency appropriations pursuant to the City Charter. Any such certification must be approved either by a resolution adopted by two-thirds of all of the members of City Council or an agency of the Commonwealth with responsibility for ensuring the fiscal stability of the City.

For information on the planned withdrawal from the Budget Stabilization Reserve for Fiscal Year 2021, see "OVERVIEW – Fiscal Health of the City – Budget Stabilization Reserve."

Annual Financial Reports

The City is required by the City Charter to issue, within 120 days after the close of each Fiscal Year, a statement as of the end of the Fiscal Year showing the balances in all funds of the City, the amounts of the City's known liabilities, and such other information as is necessary to furnish a true picture of the City's financial condition (the "Annual Financial Reports"). The Annual Financial Reports, which are released on or about October 28 of each year, are intended to meet these requirements and are unaudited. As described above, the audited financial statements of the City are contained in its CAFR, which is published at a later date. The Annual Financial Reports contain financial statements for all City governmental funds and blended component units presented on the modified accrual basis. The proprietary and fiduciary funds are presented on the full accrual basis. They also contain budgetary comparison schedules for those funds that are subject to an annual budget. The financial statements of the City's discretely presented component units that are available as of the date of the Annual Financial Reports are also presented. Historically, the results for General Fund balance have not materially changed between the Annual Financial Reports and the CAFRs.

The Annual Financial Report for Fiscal Year 2019 was released on October 28, 2019. As noted herein, the Fiscal Year 2019 CAFR was filed with the MSRB on February 25, 2020, through the EMMA system. See "CITY FINANCES AND FINANCIAL PROCEDURES – Current City Disclosure Practices."

Five-Year Plans of the City

The PICA Act requires the City to annually prepare a financial plan that includes projected revenues and expenditures of the principal operating funds of the City for five Fiscal Years consisting of the current Fiscal Year and the subsequent four Fiscal Years. Each five-year plan, which must be approved by PICA, is required to, among other things, eliminate any projected deficits, balance the Fiscal Year budgets and provide procedures to avoid fiscal emergencies. For information on the Twenty-Eighth Five-Year Plan, see "– Current Financial Information – Fiscal Year 2020 Adopted Budget and Twenty-Eighth Five-Year Plan" herein. For information on the Twenty-Ninth Five-Year Plan, see "– Current Financial Information – Fiscal Year 2021 Adopted Budget and Twenty-Ninth Five-Year Plan" herein.

Quarterly Reporting to PICA

The PICA Act requires the City to prepare and submit quarterly reports to PICA so that PICA may determine whether the City is in compliance with the then-current five-year plan. Each quarterly report is required to describe actual or current estimates of revenues, expenditures, and cash flows compared to budgeted revenues, expenditures, and cash flows by covered funds for each month in the previous quarter and for the year-to-date period from the beginning of the then-current Fiscal Year of the City to the last day of the fiscal quarter or month, as the case may be, just ended. Each such report is required to explain any variance existing as of such last day.

Under the PICA Agreement, a "variance" is deemed to have occurred as of the end of a reporting period if (i) a net adverse change in the fund balance of a covered fund (i.e., a principal operating fund) of more than 1% of the revenues budgeted for such fund for that Fiscal Year is reasonably projected to occur, such projection to be calculated from the beginning of the Fiscal Year for the entire Fiscal Year, or (ii) the actual net cash flows of the City for a covered fund are reasonably projected to be less than 95% of the net cash flows of the City for such covered fund for that Fiscal Year originally forecast at the time of adoption of the budget, such projection to be calculated from the beginning of the Fiscal Year for the entire Fiscal Year.

PICA may not take any action with respect to the City for variances if the City: (i) provides a written explanation of the variance that PICA deems reasonable; (ii) proposes remedial action that PICA believes will restore overall compliance with the then-current five-year plan; (iii) provides information in the immediately succeeding quarterly financial report demonstrating to the reasonable satisfaction of PICA that the City is taking remedial action and otherwise complying with the then-current five-year plan; and (iv) submits monthly supplemental reports until it regains compliance with the then-current five-year plan.

PICA last declared a variance in February 2009. Such variance was cured by the City pursuant to a revised five-year plan for Fiscal Years 2010-2014 and the Commonwealth's authorization of an increase in the City Sales Tax (as defined herein). See "REVENUES OF THE CITY – Sales and Use Tax" herein. A failure by the City to explain or remedy a variance would, upon certification by PICA, require the Secretary of the Budget of the Commonwealth to withhold funds due to the City from the Commonwealth or any of its agencies (including, with certain exceptions, all grants, loans, entitlements and payments payable to the City by the Commonwealth, including payment of the portion of the PICA Tax, as further described under "DEBT OF THE CITY – PICA Bonds" below, otherwise payable to the City). The City uses its Quarterly City Manager's Reports to satisfy the quarterly reporting requirement to PICA. Such reports are released within 45 days following the end of the applicable quarter and the most recent versions of such reports are available on the City's Investor Website. The most recent Quarterly City Manager's Report is the report for the period ending June 30, 2020, which was released on August 17, 2020 (the "FY 2020 Fourth Quarter QCMR"). The next Quarterly City Manager's Report is the report for the period ending September 30, 2020, and it is expected to be released on or about November 16, 2020.

Summary of Operations

The following table presents the summary of operations for the General Fund for Fiscal Years 2017-2019, budgeted amounts and current estimates for Fiscal Year 2020, and budgeted amounts for Fiscal Year 2021. For a description of the legally enacted basis on which the City's budgetary process accounts for certain transactions, see "CITY FINANCES AND FINANCIAL PROCEDURES – Budgetary Accounting Practices." "Current Estimate," as used in the tables and text below, refers (except as otherwise indicated) to the most recently revised estimates for Fiscal Year 2020, which were released by the City on August 17, 2020, as part of the FY 2020 Fourth Quarter QCMR.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Table 1
General Fund
Summary of Operations (Legal Basis)
Fiscal Years 2017-2019 (Actual), 2020 (Adopted Budget and Current Estimate), and 2021 (Adopted Budget)
(Amounts in Millions of USD)[1], [2]

	Actual 2017	Actual 2018	Actual 2019	Adopted Budget 2020 (June 18, 2019)	Current Estimate 2020 (August 17, 2020)	Adopted Budget 2021 (June 26, 2020)
Revenues						
Real Property Taxes	$587.1	$650.4	$696.6	$690.9	$691.5	$684.5
Wage and Earnings Tax	1,448.9	1,542.3	1,581.9	1,633.7	1,603.3	1,519.1
Net Profits Tax	22.3	32.3	35.8	38.2	36.6	29.9
Business Income and Receipts Tax	417.5	446.1	540.9	497.3	514.0	464.3
Sales Tax[3]	188.4	198.4	224.2	227.9	194.2	174.5
Other Taxes[4]	367.7	454.9	458.6	472.6	417.4	390.4
Philadelphia Beverage Tax[5]	39.5	77.4	76.9	75.9	65.8	67.4
Total Taxes	3,071.4	3,401.8	3,614.8	3,636.5	3,522.8	3,330.1
Locally Generated Non-Tax Revenue	309.5	320.6	349.1	353.3	362.2	357.9
Revenue from Other Governments						
Net PICA Taxes Remitted to the City[6]	409.5	454.2	493.6	499.3	497.7	470.6
Other Revenue from Other Governments[7]	307.7	323.9	311.1	347.9	389.3	297.6
Total Revenue from Other Governments	717.2	778.2	804.7	847.2	887.0	768.2
Receipts from Other City Funds	60.1	55.4	51.7	81.0	88.5	125.6
Total Revenue	4,158.2	4,556.1	4,820.3	4,918.0	4,860.4	4,581.8
Obligations/Appropriations						
Personal Services	1,589.0	1,690.1	1,749.8	1,820.1	1,884.4	1,795.2
Purchase of Services[8]	851.4	891.1	915.5	1,001.3	1,032.1	948.6
Materials, Supplies and Equipment	94.4	102.2	113.3	123.7	166.6	117.3
Employee Benefits	1,241.0[11]	1,314.0[11]	1,371.1[11]	1,412.0[11]	1,348.4[11]	1,287.2[11]
Indemnities, Contributions, and Refunds[9]	186.6	195.2	279.8	322.4	341.7	378.7
City Debt Service[10]	140.9	148.8	159.8	187.5	187.5	185.7
Payments to Other City Funds	36.5	61.5	183.2[12]	68.9	73.9	67.2
Advances & Miscellaneous Payments[13]	0.0	0.0	0.0	55.1[14]	18.4[15]	25.0[16]
Payment to Budget Stabilization Reserve	0.0	0.0	0.0	34.3	34.3	0.0
Total Obligations/Appropriations	4,139.8	4,402.9	4,772.4	5,025.3	5,087.2	4,804.9
Operating Surplus (Deficit) for the Year	18.4	153.2	47.9	(107.3)	(226.8)	(223.1)
Net Adjustments – Prior Year	22.5	26.3	22.0	19.5	43.0	19.5
Cumulative Fund Balance Prior Year	148.3	189.2	368.8	297.7[17]	438.7[17]	254.9
Cumulative Adjusted Year End Fund Balance (Deficit)	$189.2	$368.8	$438.7[17]	$209.9	$254.9	$51.4

(1) Sources: For Fiscal Years 2017-2019, the City's CAFRs for such Fiscal Years. For Fiscal Year 2020 (Adopted Budget), the Fiscal Year 2020 Adopted Budget. For Fiscal Year 2020 (Current Estimate), the FY 2020 Fourth Quarter QCMR. For Fiscal Year 2021 (Adopted Budget), the Fiscal Year 2021 Adopted Budget and Twenty-Ninth Five-Year Plan, as applicable.
(2) Figures may not sum due to rounding.
(3) For more information on the City Sales Tax, see "REVENUES OF THE CITY – Sales and Use Tax."
(4) Includes Amusement Tax, Real Property Transfer Tax, Parking Lot Tax, Smokeless Tobacco Tax and miscellaneous taxes.
(5) The Philadelphia Beverage Tax (as defined herein) taxes the distribution of certain beverages at 1.5 cents per ounce and became effective January 1, 2017.
(6) For a detailed breakdown of "Net PICA Taxes Remitted to the City," see Table 43. Such figures reflect revenues received by the City from the PICA Tax of 1.50%, the proceeds of which are remitted to PICA for payment of debt service on PICA Bonds and PICA expenses. After paying debt service and expenses, net proceeds from the tax are remitted to the City as Revenue from Other Governments. See "DEBT OF THE CITY – PICA Bonds."
(7) For a detailed breakdown of "Other Revenue from Other Governments," see Table 12. "Other Revenue from Other Governments" includes state gaming revenues.
(8) Includes debt service on lease and service agreement financings.
(9) Includes contributions to the School District. See also Table 21 and the accompanying text herein.
(10) Includes debt service on General Obligation Debt (as defined herein) and tax and revenue anticipation notes; excludes debt service on PICA Bonds and lease and service agreement financings.
(11) For Fiscal Year 2017, includes $19.2 million from City Sales Tax revenues for the Municipal Pension Fund. For Fiscal Year 2018, includes $24.2 million from such tax revenues for the Municipal Pension Fund. For Fiscal Year 2019, includes $52.1 million from such tax revenues for the Municipal Pension Fund. For Fiscal Year 2020 (Adopted Budget), assumes $53.9 million from such tax revenues for the Municipal Pension Fund. For Fiscal Year 2020 (Current Estimate), assumes $37.1 million from such tax revenues for the Municipal Pension Fund. For Fiscal Year 2021 (Adopted Budget)), assumes $27.3 million from such tax revenues for the Municipal Pension Fund. See "REVENUES OF THE CITY – Sales and Use Tax."
(12) Includes $20.0 million for recession-related expenses.
(13) Advances & Miscellaneous Payments includes certain budgeted reserves for a given Fiscal Year. Any portion of such reserves that is not used to offset the applicable stated costs will increase the General Fund balance at the end of the given Fiscal Year, if not used by the City for other purposes.
(14) Includes $55.1 million in the Federal and State Funding and Recession Reserves.
(15) Includes $18.4 million in the Reopening and Recession Reserve.
(16) Includes $25.0 million in the Reopening and Recession Reserve.
(17) In its Fiscal Year 2020 Adopted Budget, the City projected that Fiscal Year 2019 would end with a General Fund balance of $297.9 million. In the Fiscal Year 2019 CAFR, the City reported that Fiscal Year 2019 ended with a General Fund balance of $438.7 million. Such number has been included as the "Cumulative Fund Balance Prior Year" in the FY 2020 Fourth Quarter QCMR.

Current Financial Information

Table 2 below shows General Fund balances for Fiscal Year 2019, budgeted amounts and current estimates for Fiscal Year 2020, and budgeted amounts for Fiscal Year 2021.

Table 2
General Fund – Fund Balance Summary
(Amounts in Thousands of USD)[1]

	Fiscal Year 2019 Actual[2] (June 30, 2019)	Fiscal Year 2020 Adopted Budget[2] (June 18, 2019)	Fiscal Year 2020 Current Estimate[2] (August 17, 2020)	Fiscal Year 2021 Adopted Budget[2] (June 26, 2020)
REVENUES				
Taxes	$3,614,840[3]	$3,636,492[3]	$3,522,792[3]	$3,330,098[3]
Locally Generated Non – Tax Revenues	349,062	353,328	362,177	357,890
Revenue from Other Governments	804,698	847,172	886,989	768,197
Revenues from Other Funds of City	51,677	81,011	88,476	125,608
Total Revenue	**$4,820,277**	**$4,918,003**	**$4,860,434**	**$4,581,793**
OBLIGATIONS / APPROPRIATIONS				
Personal Services	$1,749,789	$1,820,084	$1,884,357	$1,795,159
Personal Services – Employee Benefits	1,371,066[4]	1,411,963[4]	1,348,375[4]	1,287,159[4]
Purchase of Services[5]	915,529	1,001,325	1,032,110	948,562
Materials, Supplies, and Equipment	113,267	123,682	166,576	117,304
Contributions, Indemnities, and Taxes	279,769	322,432	341,732	378,737
Debt Service[6]	159,787	187,483	187,483	185,714
Payments to Other Funds	183,182[7]	68,913	73,913	67,216
Advances & Miscellaneous Payments[8]	0	55,108[9]	18,403[10]	25,000[11]
Payment to Budget Stabilization Reserve	0	34,276	34,276	0
Total Obligations / Appropriations	**$4,772,389**	**$5,025,266**	**$5,087,225**	**$4,804,851**
Operating Surplus (Deficit)	**47,888**	**(107,263)**	**(226,791)**	**(223,058)**
OPERATIONS IN RESPECT TO PRIOR FISCAL YEARS				
Net Adjustments – Prior Years	22,009	19,500	43,019	19,500
Operating Surplus/(Deficit) & Prior Year Adj.	69,897	(87,763)	(183,772)	(203,558)
Prior Year Fund Balance	368,783	297,666[12]	438,680[12]	254,908
Year End Fund Balance	**$438,680**[12]	**$209,903**	**$254,908**	**$51,350**

(1) Figures may not sum due to rounding.
(2) Sources: For Fiscal Year 2019, the Fiscal Year 2019 CAFR. For Fiscal Year 2020 Adopted Budget, the Fiscal Year 2020 Adopted Budget. For Fiscal Year 2020 Current Estimate, the FY 2020 Fourth Quarter QCMR. For Fiscal Year 2021 Adopted Budget, Fiscal Year 2021 Adopted Budget and Twenty-Ninth Five-Year Plan, as applicable.
(3) For Fiscal Year 2019, includes $76.9 million in revenue from the Philadelphia Beverage Tax. For Fiscal Year 2020 Adopted Budget, assumes $75.9 million in revenue from such tax. For Fiscal Year 2020 Current Estimate, assumes $65.8 million in revenue from such tax. For Fiscal Year 2021 Adopted Budget, assumes $ 67.4 million in revenue from such tax. The Philadelphia Beverage Tax taxes the distribution of certain beverages at 1.5 cents per ounce and became effective January 1, 2017.
(4) For Fiscal Year 2019, includes $52.1 million from City Sales Tax revenues for the Municipal Pension Fund. For Fiscal Year 2020 (Adopted Budget), assumes $53.9 million from such tax revenues for the Municipal Pension Fund. For Fiscal Year 2020 (Current Estimate), assumes $37.1 million from such tax revenues for the Municipal Pension Fund. For Fiscal Year 2021 (Adopted Budget), assumes $27.3 million from such tax revenues for the Municipal Pension Fund. See "REVENUES OF THE CITY – Sales and Use Tax."
(5) Includes debt service on lease and service agreement financings.
(6) Includes debt service on General Obligation Debt (as defined herein) and tax and revenue anticipation notes; excludes debt service on PICA Bonds and lease and service agreement financings.
(7) Includes $20.0 million for recession-related expenses.
(8) Advances & Miscellaneous Payments includes certain budgeted reserves for a given Fiscal Year. Any portion of such reserves that is not used to offset the applicable stated costs will increase the General Fund balance at the end of the given Fiscal Year, if not used by the City for other purposes.
(9) Includes $55.1 million in the Federal and State Funding and Recession Reserves.
(10) Includes $18.4 million in the Reopening and Recession Reserve.
(11) Includes $25.0 million in the Reopening and Recession Reserve.
(12) In its Fiscal Year 2020 Adopted Budget, the City projected that Fiscal Year 2019 would end with a General Fund balance of $297.666 million. In the Fiscal Year 2019 CAFR, the City reported that Fiscal Year 2019 ended with a General Fund balance of $438.680 million. Such number has been included as the "Prior Year Fund Balance" in the FY 2020 Fourth Quarter QCMR.

The following discussion of the Fiscal Year 2020 Adopted Budget, the Twenty-Eighth Five-Year Plan, the FY 2020 Fourth Quarter QCMR, the Fiscal Year 2021 Adopted Budget, and the Twenty-Ninth Five-Year Plan, as applicable, is based, in part, on projections and forward-looking statements related to Fiscal Years 2020 and 2021. No assurance can be given that the applicable budget estimates and forward-looking statements will be realized. The accuracy of such budget estimates and forward-looking statements cannot be verified until after the close of the applicable Fiscal Year and the completion of the related audit.

Fiscal Year 2020 Adopted Budget and Twenty-Eighth Five-Year Plan. The City's proposed Fiscal Year 2020 operating budget was submitted by the Mayor to City Council on March 7, 2019, along with the City's proposed five-year plan for Fiscal Years 2020-2024. On June 13, 2019, City Council approved the Fiscal Year 2020 operating budget ordinance, which was signed by the Mayor on June 18, 2019 (the "Fiscal Year 2020 Adopted Budget"). On June 18, 2019, the City submitted to PICA its FY 2020-2024 Five Year Financial Plan Per Council Approved Budget and PICA approved such plan on July 16, 2019 (the "Twenty-Eighth Five-Year Plan").

Fiscal Year 2020 Current Estimate. The current estimate for Fiscal Year 2020 is derived from information included in the FY 2020 Fourth Quarter QCMR. In the FY 2020 Fourth Quarter QCMR, the City estimates that it will end Fiscal Year 2020 with a General Fund balance (on the legally enacted basis) of approximately $254.9 million.

Fiscal Year 2021 Adopted Budget and Twenty-Ninth Five-Year Plan. The City's proposed Fiscal Year 2021 operating budget was submitted by the Mayor to City Council on March 5, 2020, along with the City's proposed five-year plan for Fiscal Years 2021-2025. Each of those documents was revised and resubmitted on May 1, 2020 to include the City's current assessment of the impact of the COVID-19 pandemic on the City's financial position and operations. On June 25, 2020, City Council approved the Fiscal Year 2021 operating budget ordinance, which was signed by the Mayor on June 26, 2020 (the "Fiscal Year 2021 Adopted Budget").

On June 26, 2020, the City submitted to PICA its FY 2021-2025 Five Year Financial Plan Per Council Approved Budget (the "Twenty-Ninth Five-Year Plan"). PICA recommended approval of such plan on July 21, 2020, on the condition that the City provides monthly updates on obligations and revenues to protect against any significant deviation from projected revenues, obligations or fund balance, which could appropriately be deemed a variance by PICA and require a revision to the Twenty-Ninth Five-Year Plan in accordance with the PICA Act and the PICA Agreement. PICA staff, in recommending that PICA approve the Twenty-Ninth Five-Year Plan, noted that the revenue and expenditure projections presented in the Twenty-Ninth Five-Year Plan were [quoting from the PICA Act] "based on reasonable and appropriate assumptions and methods of estimation . . . consistently applied." The PICA staff report concluded that "[a]lthough PICA is confident that the [Twenty-Ninth Five-Year Plan] is based on reasonable and appropriate assumptions, and year end fund balances are positive throughout the life of the [Twenty-Ninth Five-Year Plan], certain factors were identified that might present risks to the [Twenty-Ninth Five-Year Plan]." The PICA report identified such factors as: (i) the length and uncertainty of the COVID-19 global pandemic; (ii) the possibility of slower than projected economic growth over the period covered by the plan; (iii) the projected growth of BIRT collections; (iv) low General Fund balance levels; and (v) increasing overtime and pension costs. The PICA staff report also highlighted certain other financial concerns that could impact the City's financial condition, including, among others (a) future labor, overtime, and employee health benefit costs; (b) funding of the now locally controlled School District; (c) speculative revenues from sources such as locally generated non-tax revenue, revenue from other governments, and revenue from other funds; and (d) the use of the Budget Stabilization Reserve in Fiscal Year 2021 and the lack of near-term plans to fund such reserve (not projected to occur until Fiscal Year 2025).

As part of the Twenty-Ninth Five-Year Plan, the City has also included certain contingency measures that may be implemented if actual revenue collections are lower than expected. Such contingency measures include (i) recognizing known underspending of funds in Fiscal Year 2020, (ii) utilizing the Reopening and Recession Reserve and the Labor Reserve, and (iii) delaying or reducing new initiatives that have not commenced, among others. If implemented, such contingency measures are expected to allow the City to achieve a balanced plan and positive annual General Fund balances in each year of the plan even if revenues are weaker than projected.

For Fiscal Years 2021-2025, the Twenty-Ninth Five-Year Plan projects that the City will end such Fiscal Years with General Fund balances (on the legally enacted basis) of approximately (i) $51.4 million (Fiscal Year 2021), (ii) $50.8 million (Fiscal Year 2022), (iii) $141.3 million (Fiscal Year 2023), (iv) $117.1 million (Fiscal Year 2024), and (v) $229.2 million (Fiscal Year 2025).

For information on the current assessment of the fiscal impact of COVID-19 on the City, see "OVERVIEW – Fiscal Health of the City – COVID-19."

For more information on the City's annual budget process under the City Charter and the five-year financial plans and quarterly reporting required under the PICA Act, see "– Budget Procedure," "– Five-Year Plans of the City," and "– Quarterly Reporting to PICA," above.

REVENUES OF THE CITY

General

Prior to 1939, the City relied heavily on the real estate tax as the mainstay of its revenue system. In 1932, the General Assembly adopted an act (commonly referred to as the Sterling Act) under which the City is permitted to levy any tax that was not specifically pre-empted by the Commonwealth. Acting under the Sterling Act and other Pennsylvania legislation, the City has taken various steps over the years to broaden its sources of income, including: (i) enacting the wage, earnings, and net profits tax in 1939; (ii) introducing a sewer service charge to make the sewage treatment system self-sustaining after 1945; (iii) requiring under the City Charter that the water, sewer, and other utility systems be fully self-sustaining; (iv) enacting the Mercantile License Tax (a gross receipts tax on business done within the City) in 1952, which was replaced as of the commencement of Fiscal Year 1985 by the Business Privilege Tax (renamed the Business Income and Receipts Tax in May 2012), and (v) enacting the City Sales Tax (as defined herein) for City general revenue purposes effective beginning in Fiscal Year 1992.

Major Revenue Sources

The City currently derives its revenues primarily from various taxes, non-tax revenues, and receipts from other governments. See Table 3 for General Fund tax revenues for Fiscal Years 2017-2019, budgeted amounts and current estimates for Fiscal Year 2020, and budgeted amounts for Fiscal Year 2021. The following discussion of the City's revenues does not take into account revenues in the non-debt related funds. The tax rates for Fiscal Years 2017 through 2019 are contained in the Fiscal Year 2019 CAFR.

Table 3 provides a detailed breakdown of the "Total Taxes" line from Table 1 above. Table 3 does not include "Revenues from Other Governments," which consists of "Net PICA Taxes Remitted to the City" and "Other Revenue from Other Governments." "Net PICA Taxes Remitted to the City" is set forth in Table 1 and a detailed breakdown of such revenues is shown in Table 43. "Other Revenue from Other Governments" is set forth in Table 1 and a detailed breakdown of such revenues is shown in Table 12.

Table 3
General Fund Tax Revenues
Fiscal Years 2017-2019 (Actual), 2020 (Adopted Budget and Current Estimate), and 2021 (Adopted Budget)
(Amounts in Millions of USD) [(1), (2), (3)]

	Actual 2017	Actual 2018	Actual 2019	Adopted Budget 2020 (June 18, 2019)	Current Estimate 2020 (August 17, 2020)	Adopted Budget 2021 (June 26, 2020)
Real Property Taxes						
Current	$542.9	$611.3	$658.2	$653.4	$653.9	$647.5
Prior	44.2	39.1	38.4	37.6	37.6	36.8
Total	$587.1	$650.4	$696.6	$690.9	$691.5	$684.3
Wage and Earnings Tax[(4)]						
Current	$1,440.6	$1,536.9	$1,577.5	$1,628.3	$1,597.9	$1,513.7
Prior	8.3	5.4	4.4	5.4	5.4	5.4
Total	$1,448.9	$1,542.3	$1,581.9	$1,633.7	$1,603.3	$1,519.1
Business Taxes						
Business Income and Receipts Tax Current & Prior	$417.5	$446.1	$540.9	$497.3	$514.0	$464.3
Net Profits Tax						
Current	$25.3	$27.6	$29.5	$33.5	$31.9	$25.2
Prior	(3.0)	4.7	6.4	4.7	4.7	4.7
Subtotal Net Profits Tax	$22.3	$32.3	$35.8	$38.2	$36.6	$29.9
Total Business and Net Profits Taxes	$439.8	$478.4	$576.7	$535.6	$550.6	$494.2
Other Taxes						
Sales and Use Tax[(5)]	$188.4	$198.4	$224.2	$227.9	$194.2	$174.5
Amusement Tax	20.6	23.0	26.4	28.9	18.5	16.6
Real Property Transfer Tax	247.3	331.5	328.4	339.3	313.5	292.9
Parking Taxes	96.1	96.5	99.3	100.2	80.7	76.7
Other Taxes	3.8	4.0	4.4	4.2	4.7	4.4
Subtotal Other Taxes	$556.1	$653.3	$682.7	$700.5	$611.6	$565.1
Philadelphia Beverage Tax[(6)]	39.5	77.4	76.9	75.9	65.8	67.4
TOTAL TAXES	**$3,071.4**	**$3,401.8**	**$3,614.8**	**$3,636.5**	**$3,522.8**	**$3,330.1**

(1) Sources: For Fiscal Years 2017-2019, the City's CAFRs for such Fiscal Years. For Fiscal Year 2020 (Adopted Budget), the Fiscal Year 2020 Adopted Budget. For Fiscal Year 2020 (Current Estimate), the FY 2020 Fourth Quarter QCMR. For Fiscal Year 2021 (Adopted Budget), the Fiscal Year 2021 Adopted Budget and the Twenty-Ninth Five-Year Plan, as applicable.
(2) See Table 7 in the Fiscal Year 2019 CAFR for tax rates.
(3) Figures may not sum due to rounding.
(4) Does not include the PICA Tax of 1.50%, the proceeds of which are remitted to PICA for payment of debt service on PICA Bonds and PICA expenses. After paying debt service and expenses, net proceeds from the tax are remitted to the City as Revenue from Other Governments. See "DEBT OF THE CITY – PICA Bonds" for a description of the PICA Tax.
(5) For more information on the City Sales Tax, see "– Sales and Use Tax" and Table 11.
(6) The Philadelphia Beverage Tax taxes the distribution of certain beverages at 1.5 cents per ounce and became effective January 1, 2017.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Wage, Earnings, and Net Profits Taxes

The largest tax revenue source (comprising more than 43% of all tax revenues in Fiscal Year 2019) is the wage, earnings and net profits tax. The Wage and Earnings Tax is collected from all employees working within City limits, and all City residents regardless of work location. The Net Profits Tax is collected on the net profits from the operation of a trade, business, profession, enterprise or other activity conducted by individuals, partnerships, associations or estates and trusts within the City limits. The following table sets forth the resident and non-resident wage, earnings and net profits tax rates for Fiscal Years 2017-2021, the annual wage, earnings and net profits tax receipts in Fiscal Years 2017-2019, the budgeted amount and current estimate of such receipts for Fiscal Year 2020, and the budgeted amount of such receipts for Fiscal Year 2021.

Table 4
Summary of Wage, Earnings and Net Profits Tax Rates and Receipts
Fiscal Years 2017-2019 (Actual), 2020 (Adopted Budget and Current Estimate), and 2021 (Adopted Budget)[(1)]

Fiscal Year	Resident Wage, Earnings and Net Profits Tax Rates[(2)]	Non-Resident Wage, Earnings and Net Profits Tax Rates	Annual Wage, Earnings and Net Profits Tax Receipts (including PICA Tax) (Amounts in Millions of USD)[(3)]
2017	3.9004%	3.4741%	$1,940.4 (Actual)
2018	3.8907%	3.4654%	$2,071.5 (Actual)
2019	3.8809%	3.4567%	$2,146.4 (Actual)
2020	3.8712%	3.4481%	$2,218.0 (Adopted Budget) $2,184.5 (Current Estimate)
2021	3.8712%	3.5019%	$2,056.8 (Adopted Budget)

(1) See Table 7 in the Fiscal Year 2019 CAFR for tax rates for Fiscal Years 2017-2019. See the Twenty-Ninth Five-Year Plan for tax rates for Fiscal Years 2020 and 2021.
(2) Includes PICA Tax. See "DEBT OF THE CITY – PICA Bonds" for a description of the PICA Tax.
(3) Sources: For Fiscal Years 2017-2019, the City's CAFRs for the City's annual wage, earnings, and net profits tax receipts and the City's Quarterly City Manager's Reports for gross PICA Tax (see first column in Table 43). For Fiscal Year 2020, the Fiscal Year 2020 Adopted Budget and the FY 2020 Fourth Quarter QCMR. For Fiscal Year 2021, the Fiscal Year 2021 Adopted Budget.

Commonwealth funding from gaming revenues is mandated by statute to be used to reduce the resident and nonresident wage tax rate. Gaming revenues have averaged approximately $86.3 million in Fiscal Years 2017-2019. For Fiscal Year 2020, the budgeted amount and current estimate of gaming revenues is $86.3 million. For Fiscal Year 2021, the budgeted amount of gaming revenues is $86.3 million.

See "– Other Tax Rate Changes" herein, for information regarding wage and earnings tax rate reductions under the Twenty-Ninth Five-Year Plan.

In a 2015 decision by the Supreme Court of the United States (*Comptroller of the Treasury of Maryland v. Wynne*, 135 S. Ct. 1787 (2015)), a state's failure to provide certain credits against its personal income tax was held to have violated the dormant Commerce Clause of the United States Constitution. Such personal income tax was applied to income earned outside of the state of residency, and residents were not given a credit for income taxes paid to the state where such income was earned, resulting, in the circumstances presented, in taxing income earned interstate at a rate higher than income earned intrastate. The City provides a credit to resident taxpayers against their respective wage, earnings, and net profits tax liabilities for similar taxes paid to another locality, but does not provide a credit for similar taxes paid to another state. Taxpayers have challenged the City's refusal to grant a credit for taxes paid to other states and have appealed to the Commonwealth Court on such matters. To date, the City's position has been upheld by both the Tax Review Board and the Court of Common Pleas. The City estimates the cost of current appeals to be approximately $10 million.

Business Income and Receipts Tax

Pursuant to The First Class City Business Tax Reform Act of 1984, City Council imposed a business tax measured by gross receipts, net income or the combination of the two. The same year, City Council by ordinance repealed the Mercantile License Tax and the General Business Tax and imposed the Business Privilege Tax. As of May 1, 2012, the Business Privilege Tax was renamed the Business Income and Receipts Tax (or BIRT). The BIRT allows for particular allocations and tax computations for regulated industries, public utilities, manufacturers, wholesalers, and retailers. Rental activities are usually considered to be business activities. Every estate or trust (whether the fiduciary is an individual or a corporation) must file a BIRT return if the estate or trust is engaged in any business or activity for profit within the City. There are also credit programs where meeting the requirement of the program allows for a credit against the BIRT. All persons subject to both the BIRT and the Net Profits Tax are entitled to apply a credit of 60% of the net income portion of their BIRT liability against what is due on the Net Profits Tax to the maximum of the Net Profits Tax liability for that tax year.

In November 2011, legislation was enacted to halt a previously enacted program of reducing the gross receipts portion of the BIRT and to commence reductions in the net income portion of the BIRT. The following table provides a summary of BIRT rates for tax years 2012-2024. Future BIRT rates remain subject to amendment by action of City Council and the Mayor.

Table 5
Summary of Business Income and Receipts Tax Rates

Tax Year	Gross Receipts	Net Income
2012	1.415 mills	6.45%
2013	1.415 mills	6.45%
2014	1.415 mills	6.43%
2015	1.415 mills	6.41%
2016	1.415 mills	6.39%
2017	1.415 mills	6.35%
2018	1.415 mills	6.30%
2019	1.415 mills	6.25%
2020	1.415 mills	6.20%
2021	1.415 mills	6.20%
2022	1.415 mills	6.20%
2023	1.415 mills	6.20%
2024	1.415 mills	6.15%

The 2011 legislation incorporated several changes intended to help small and medium sized businesses and lower costs associated with starting a new business in order to stimulate new business formation and increase employment in the City, including the following: (i) the Commercial Activity License fee for all businesses was eliminated in 2014; (ii) business taxes for the first two years of operations for all new businesses with at least three employees in their first year and six employees in their second year were eliminated beginning in 2012; and (iii) across the board exclusions on the gross receipts portion of the BIRT were provided for all businesses phased in over a three-year period beginning in 2014 and eventually excluding the first $100,000 of gross receipts, along with proportional reductions in the net income portion of the BIRT. The legislation also provided for implementation of single sales factor apportionment in 2015, which enables businesses to pay BIRT based solely on sales in the City, rather than on property or payroll.

By Fiscal Year 2024, the net income (profits) portion of the business tax is projected to reach 6.15%. In addition, legislation was enacted, effective for tax year 2019, to (i) eliminate the requirement for new businesses to make an estimated business tax payment when filing a return for their first tax year of business operations and (ii) allow such estimated payments in the second year to be made in quarterly installments.

Real Property Taxes

Assessment and Collection. Taxes are levied on the assessed value of all taxable residential and commercial real property located within the City's boundaries for the City and for the School District (each, a "Real Estate Tax") as assessed by the Office of Property Assessment ("OPA") and collected by the Department of Revenue for both the City and the School District. Real Estate Taxes are authorized by Commonwealth law with the millage split between the City Real Estate Tax and the School District Real Estate Tax changing over the years. Currently, the City Real Estate Tax is equal to 45% of the total authorized millage and the School District Real Estate Tax is equal to 55% of the total authorized millage. Real Estate Taxes are levied on a calendar year basis. By separate ordinances, City Council authorizes and levies the rate of the City Real Estate Tax and authorizes the rate of the School District Real Estate Tax. The Board of Education levies all School District taxes, including the School District Real Estate Tax. Bills are sent in December for the following year and payments are due March 31.

For tax year 2014, all properties in Philadelphia were reassessed at their actual market value by OPA under the Actual Value Initiative ("AVI") in order to replace outdated values and inequities within the system. Under AVI, the total assessed value of all properties more accurately reflected the market in the City and the total assessment grew substantially. As a result, the Mayor and City Council significantly reduced the Real Estate Tax rate to ensure that, in its first year, the reassessment resulted in the collection of approximately the same amount of Real Estate Taxes as the prior year (tax year 2013).

In order to mitigate any hardship that could be created by the substantial increases in assessed value, the ordinance imposing the new Real Estate Tax rates included a homestead exemption of $30,000 for all primary residential owner-occupants, which was subsequently increased to $40,000 of assessed value in Fiscal Year 2019. In the Fiscal Year 2020 Adopted Budget, the homestead exemption was increased from $40,000 to $45,000 of assessed value. In addition to the homestead exemption, the City has also instituted several other property tax relief programs for taxpayers.

In December 2019, City Council also passed legislation to modify the existing 10-year property tax abatement for new construction of residential properties. Effective for exemption applications beginning January 1, 2021, the program will be adjusted to exempt 100% of the improvement value in the first year with graduated 10% annual reductions in the exemption percentage each subsequent year. No changes were made to the existing property tax abatement programs for commercial buildings or substantial rehabilitation of residential structures.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

The Real Estate Tax rates for tax years 2016-2020 are set forth in Table 6 below:

Table 6
Real Estate Tax Rates and Allocations

Tax Year	City	School District	Total
2016	0.6317%	0.7681%	1.3998%
2017	0.6317%	0.7681%	1.3998%
2018	0.6317%	0.7681%	1.3998%
2019	0.6317%	0.7681%	1.3998%
2020	0.6317%	0.7681%	1.3998%

For Fiscal Year 2019, the actual amount of Real Estate Tax revenue for the City was $658.2 million (excluding delinquent collections). For Fiscal Year 2020, the budgeted amount of Real Estate Tax revenue for the City is $653.4 million (excluding delinquent collections). For Fiscal Year 2020, the current estimate of Real Estate Tax revenue for the City is $653.9 million (excluding delinquent collections). For Fiscal Year 2021, the budgeted amount of Real Estate Tax revenue for the City is $647.5 million (excluding delinquent collections). See Table 3 above. For information on the process for appealing a property tax assessment, see the text before and after Table 7 below.

Table 7 shows the assessed values of properties used for tax years 2020 and 2021 Real Estate Taxes.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Table 7
Certified Property Values for Tax Years 2020 and 2021

Tax Year 2020

Category	Market Value[1]	Taxable Assessed Value	Exempt Assessed Value	Homestead	# of Properties
Single Family Residential	$79,112,006,350	$63,891,731,827	$6,964,128,995	$8,256,145,52	457,631
Multi-Family Residential (Apartments)[2]	29,341,610,800	21,276,976,823	7,771,704,222	292,929,755	42,064
Non-Residential[3]	55,275,284,866	28,285,867,793	26,948,588,073	40,829,000	36,908
Vacant Land	4,534,177,300	2,121,913,727	2,409,942,273	2,321,300	44,722
Total	**$168,263,079,316**	**$115,576,490,170**	**$44,094,363,563**	**$8,592,225,583**	**581,325**

1 Assessment data current as of March 31, 2019.
2 Apartments were split from the previous hotels and apartments category and are now reflected as multi-family residential.
3 Includes commercial, industrial, store with dwelling, hotels, and motels.

Tax Year 2021

Category	Market Value[1]	Taxable Assessed Value	Exempt Assessed Value	Homestead	# of Properties
Single Family Residential	$79,889,823,850	$63,697,212,563	$6,844,885,434	$9,347,725,853	457,751
Multi-Family Residential (Apartments)[2]	30,080,351,000	21,561,546,044	8,201,312,244	317,492,712	42,331
Non-Residential[3]	55,443,377,866	28,471,130,722	26,926,216,544	46,030,600	36,763
Vacant Land	4,541,666,800	2,154,649,414	2,384,398,986	2,618,400	44,611
Total	**$169,955,219,516**	**$115,884,538,743**	**$44,356,813,208**	**$9,713,867,565**	**581,456**

1 Assessment data current as of December 31, 2019.
2 Apartments were split from the previous hotels and apartments category and are now reflected as multi-family residential.
3 Includes commercial, industrial, store with dwelling, hotels, and motels.

Assessment and Appeals. OPA is responsible for property assessments, while the Board of Revision of Taxes ("BRT"), an independent, seven-member board appointed by the Board of Judges of the Philadelphia Common Pleas Court, is the property assessment appeals board.

OPA certifies the market values by March 31 of the prior year (i.e., for tax year 2021, OPA certified the market values on March 31, 2020). Taxpayers base their appeals on the certified market values, and therefore, the assessed values are adjusted as the appeals are finalized. In some circumstances and for certain tax years, taxpayers are permitted, during the appeals process, to pay their property tax bills based on the certified market value of their properties from the prior assessment. For budgetary purposes, OPA provides updated assessment data to the Office of the Director of Finance by February of each year, from which Real Estate Tax projections are made. Certified values can vary substantially from the amounts included in such data and, as such, Real Estate Tax collections can also vary from the amounts included in the City's proposed annual operating budget.

Under AVI, OPA set up a new process called a first level review ("FLR"), where a taxpayer could request an administrative review of its assessment notice prior to launching a formal appeal with the BRT. The BRT has the authority, following a formal appeal, to either increase, decrease, or leave unchanged the property assessment. Some appeals are not resolved before bills are sent to taxpayers. As such, some property assessments are modified after taxpayers receive bills.

For tax year 2018 (as certified on March 31, 2017), OPA revised the assessed values of over 60,000 parcels (which included properties of all categories, including commercial and residential parcels) throughout the City as part of its reassessment. In September 2017, the owners of multiple commercial properties in the City filed a lawsuit against the City in the Court of Common Pleas. The plaintiffs in such matter alleged, based on a July 2017 Pennsylvania Supreme Court decision, that OPA violated the uniformity clause of the Pennsylvania Constitution in reassessing commercial properties and not residential properties for tax year 2018. The plaintiffs sought declaratory relief, a permanent injunction, and an order directing OPA to recertify their properties at tax year 2017 values. Subsequently, ten additional cases were filed, asserting virtually the same claims. All of the cases, which encompass approximately 600 plaintiffs and approximately 700 properties, were consolidated for management purposes. In a ruling handed down on July 18, 2019, the Common Pleas Court found that plaintiffs were owed refunds for overpayments equal to the difference between the plaintiffs' Real Estate Taxes for tax year 2017 and tax year 2018. The Common Pleas Court calculated the total amount of these refunds against the City and the School District at more than $50 million. The City and School District appealed the ruling on October 22, 2019. As noted below, City-wide reassessments were conducted for tax years 2019 and 2020. As such, the City does not expect the Real Estate Taxes for such tax years to be impacted by the final judgment on this matter. For more general information on judgments and settlements on claims against the City, see "LITIGATION."

For tax year 2019 (as certified on March 31, 2018), OPA revised the assessed values of over 515,000 parcels throughout the City as part of its reassessment. As of December 11, 2019, OPA has received 20,757 FLRs, with approximately 200 that have yet to be decided. As of July 7, 2020, BRT has received approximately 10,200 formal appeals, with approximately 200 that have yet to be decided.

For tax year 2020 (as certified on March 31, 2019), OPA revised the assessed values of over 503,000 parcels throughout the City as part of its reassessment. As of December 11, 2019, OPA has received 11,706 FLRs, with approximately 4,650 that have yet to be decided. As of July 7, 2020, BRT has received approximately 7,400 appeals, with approximately 5,000 that have yet to be decided.

For tax year 2021 (as certified on March 31, 2020), OPA had planned to conduct a second year of trending for assessments, but initial results showed certain anomalies that would result in assessed values that were not acceptable to the City's standards. As such, the City carried forward the assessed values from tax year 2020, with the exception of properties that had new construction, expiring abatements, renovations, subdivisions, consolidations, or errors in prior year assessments. As described below in "Review of Assessment Methodology," OPA will continue implementing procedures to ensure greater accuracy in future assessments.

For tax year 2022 (to be certified on March 31, 2021), the City will not conduct a citywide reassessment due to operational delays regarding COVID-19.

Review of Assessment Methodology. OPA continues to review its assessment methodology in order to improve the transparency and accuracy of its assessment activities and the quality of assessments. Such efforts include (i) implementing the new computer-assisted mass appraisal system program, (ii) contracting with an outside vendor to improve the quality of OPA's data, (iii) strengthening OPA's modeling team, and (iv) providing more training to the sales validation team, which was created in 2019, to help ensure improved data.

Collection Initiatives. Since 2010, the City has pursued a number of initiatives to improve the collection of Real Estate Taxes, including (i) prompt correspondence with taxpayers with overdue Real Estate Taxes, (ii) using outside collection firms to collect overdue Real Estate Taxes, (iii) sequestration of delinquent properties occupied by commercial tenants, and (iv) tax lien sales.

As a result of economic disruptions from the COVID-19 pandemic, the City's regular collection strategies have been modified. At this time, the Department of Revenue continues to send bills and notifications and pursue its outreach efforts, but some legal action, enforcement projects, and placements with collection agencies have been temporarily suspended. The Department of Revenue has started to gradually resume enforcement actions as economic conditions permit. The City continues to evaluate and pursue long-time delinquent accounts and place liens on properties for property-based taxes and fees. Along with existing flexible payment agreements for property tax and water fees, the City has also launched new payment agreements for all business taxes in an effort to bring businesses affected by COVID-19 closures into compliance.

Real Estate Tax Tables. See Table 8 below for data with respect to Real Estate Taxes levied from 2015 to 2019 and collected by the City from January 1, 2015 to June 30, 2019. See Table 9 for the assessed property values of the City's principal taxable assessed parcels in 2020. See Table 10 for the 2020 market and assessed values of the ten highest valued taxable real properties in the City, as well as the amounts and duration of Real Estate Tax abatements with respect to such properties.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Table 8
City of Philadelphia
Real Property Taxes Levied and Collected
For the Calendar Years 2015-2019
(Amounts in Millions of USD)[(1), (2)]

Calendar Year	Taxes Levied Based on Original Assessment[(3)]	Taxes Levied Based on Adjusted Assessment[(4)]	Collections in the Calendar Year of Levy[(6)]	Percentage Collected in the Calendar Year of Levy	Collections in Subsequent Years[(5), (6)]	Total Collections to Date: All Years[(6)]	Percentage Collected to Date: All Years[(6)]
2015	$547.4	$516.7	$489.1	94.7%	$25.9	$515.0	99.7%
2016	$569.9	$548.8	$525.2	95.7%	$19.5	$544.7	99.3%
2017	$580.5	$564.7	$542.9	96.1%	$16.5	$559.4	99.1%
2018	$658.1	$629.2	$604.4	96.1%	$8.7	$613.2	97.5%
2019	$709.4	$690.8	$636.5	N/A	N/A	$636.5	N/A

(1) Source: Fiscal Year 2019 CAFR.
(2) Real Estate Taxes are levied by the City and the School District. While this table reflects City General Fund Real Estate Tax revenues exclusively, the School District Real Estate Tax collection rates are the same.
(3) Taxes are levied on a calendar year basis. They are due on March 31.
(4) Adjustments include assessment appeals, a 1% discount for payment in full by February 28, the senior citizen tax discount, and the tax increment financing return of tax paid. For more information on the reassessment appeal process, see "– Real Property Taxes – Assessment and Appeals."
(5) Includes payments from capitalization charges. This capitalization occurs one time, after the end of the first year of the levy, on any unpaid balances.
(6) For calendar year 2019, the data shown reflects collections through June 30, 2019. For earlier calendar years, the data shown reflects collections through December 31 of the respective year.

Table 9
Principal Taxable Assessed Parcels – 2021
(Amounts in Millions of USD)[(1)]

Taxpayer	2021 Assessment[(2)]	2021 Percentage of Total Assessments
Kim Sub Cira Square LP	$370.6	0.29%
Liberty Property Phila[(3)]	359.0	0.29
EQC Nine Penn Center Prop	352.1	0.28
NG 1500 Market St LLC	349.9	0.28
Phila Liberty Place LP	315.0	0.25
Park Towne Place Assoc	276.9	0.22
Commerce Square Partners	266.4	0.21
Phila Plaza Phaze II	252.7	0.20
Philadelphia Market Street	250.3	0.20
Brandywine Operating	236.4	0.19
Total	$3,029.3	2.41%
Total Taxable Assessments[(4)]	$125,867.6	

Source: City of Philadelphia, Office of Property Assessment.

(1) Figures may not sum due to rounding.
(2) Assessment Values rounded to the nearest $100,000 and only include the largest assessed property for each taxpayer, additional properties owned by the same taxpayer are not included.
(3) Acquired by Prologis, Inc. in the first quarter of calendar year 2020.
(4) Total 2021 Taxable Assessment as of December 31, 2019.

Table 10
Ten Largest Certified Market and Assessment Values of Tax-Abated Properties
Certified Values for 2021
(Amounts in Millions of USD)[(1), (2)]

Location	2020 Certified Market Value	Total Assessment	Total Taxable Assessment	Total Exempt Assessment	Exempt Through Tax Year
1001-99 N Delaware Ave	$307.4	$307.4	$49.7	$257.7	2026
1800 Arch St	$278.8	$278.8	$27.9	$250.9	2027
401 N Broad St	$245.8	$245.8	$223.1	$22.7	2026
1801 John F Kennedy	$200.3	$200.3	$134.0	$66.3	2024
170 S Independence W Mall	$162.1	$162.1	$141.3	20.9	2028
1601 Vine St	$154.1	$154.1	$13.8	$140.3	2028
2402-14 Market St	$148.0	$148.0	$32.3	115.7	2028
450 N 18th St	$146.3	$146.3	$14.6	$131.7	2027
2116 Chestnut St	$144.0	$144.0	$14.4	$129.6	2023
500 N 21st St	$133.4	$133.4	$13.3	$120.1	2026

Source: City of Philadelphia, Office of Property Assessment.

(1) Figures may not sum due to rounding.
(2) Certified Values as of 12/31/2019.

Sales and Use Tax

Pursuant to the authorization granted by the Commonwealth under the PICA Act, the City adopted a 1% sales and use tax (the "City Sales Tax") for City general revenue purposes effective beginning in Fiscal Year 1992. It is imposed in addition to, and on the same basis as, the Commonwealth's sales and use tax. Vendors are required to pay City Sales Taxes to the Commonwealth Department of Revenue together with the Commonwealth sales and use tax. The State Treasurer deposits the collections of City Sales Taxes in a special fund and disburses the collections, including any investment income earned thereon, less administrative fees of the Commonwealth Department of Revenue, to the City on a monthly basis.

The City's budgets for Fiscal Years 2010-2014 provided for an increase in the City Sales Tax rate to 2%, as authorized by the Commonwealth effective October 8, 2009, through June 30, 2014. In July 2013, the Commonwealth authorized the implementation of a new, permanent 1% increase in the City Sales Tax rate effective July 1, 2014, which was adopted by the City on June 12, 2014 and became effective on July 1, 2014. Under the reauthorized City Sales Tax, the first $120 million collected from such additional 1% is distributed to the School District. For Fiscal Years 2015-2018, the General Assembly authorized the City to use the next $15 million of City Sales Tax revenues from such additional 1% collected in such Fiscal Years for the payment of debt service on obligations issued by the City for the benefit of the School District. Following such debt service payments, that remaining portion of the City Sales Tax revenues from such additional 1% distributed to the City is required to be used exclusively in accordance with Act 205 (as defined herein) and deposited to the Municipal Pension Fund.

The following table sets forth the City Sales Taxes collected in Fiscal Years 2017-2019, the budgeted amount and current estimate for Fiscal Year 2020, and the budgeted amount for Fiscal Year 2021.

Table 11
Summary of City Sales Tax Collections
Fiscal Years 2017-2019 (Actual), 2020 (Adopted Budget and Current Estimate), and 2021 (Adopted Budget)
(Amounts in Millions of USD)[(1)]

Fiscal Year	City Sales Tax Collections
2017 (Actual)	\$188.4[(2)]
2018 (Actual)	\$198.4[(2)]
2019 (Actual)	\$224.2[(3)]
2020 (Adopted Budget)	\$227.9[(3)]
2020 (Current Estimate)	\$194.2[(3)]
2021 (Adopted Budget)	\$174.5[(3)]

(1) Sources: For Fiscal Years 2017-2019, the City's CAFRs for such Fiscal Years. For Fiscal Year 2020, the Fiscal Year 2020 Adopted Budget and the FY 2020 Fourth Quarter QCMR, as applicable. For Fiscal Year 2021, the Fiscal Year 2021 Adopted Budget.

(2) Net collections estimated to be distributed to the City (i) from the first 1% City Sales Tax, (ii) following the distribution of \$120 million of revenues from the second 1% City Sales Tax to the School District, and (iii) following the payment of debt service on obligations issued by the City for the benefit of the School District, as described above.

(3) Net collections estimated to be distributed to the City from the first 1% City Sales Tax and following the distribution of \$120 million of revenues from the second 1% City Sales Tax to the School District, as described above.

Real Property Transfer Tax

Real Property Transfer Taxes are collected in connection with the sale of real property in the City. The Real Property Transfer Tax rate in the City is 4.278%, 3.278% of which is imposed by the City and 1% of which is charged by the Commonwealth. Revenues from this tax fell during the 2008 recession but have grown since such recession ended. In the Fiscal Year 2019 CAFR, the City reported that it collected approximately \$328.4 million in revenues from the Real Property Transfer Tax in Fiscal Year 2019.

In the Twenty-Ninth Five-Year Plan (and for Fiscal Year 2020, the FY 2020 Fourth Quarter QCMR), the City currently estimates for Fiscal Years 2020-2025 that it will collect approximately (i) \$313.5 million (Fiscal Year 2020), (ii) \$292.8 million (Fiscal Year 2021, as budgeted), (iii) \$301.3 million (Fiscal Year 2022), (iv) \$313.8 million (Fiscal Year 2023), (v) \$325.5 million (Fiscal Year 2024), and (vi) \$337.7 million (Fiscal Year 2025) in revenues from the Real Property Transfer Tax in such Fiscal Years.

After significant growth through Fiscal Year 2018, changes in the real estate market in the City were projected to return to a more moderate level, with a reduction in Real Property Transfer Tax revenue in Fiscal Year 2019, with relatively slow growth projected annually thereafter, mostly due to a "normalized" level for the commercial property market.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Other Taxes

The City also collects parking taxes, an amusement tax, a valet parking tax, an outdoor advertising tax, a smokeless tobacco tax, the Philadelphia Beverage Tax (see below), and other miscellaneous taxes.

In June 2016, City Council passed the Philadelphia Beverage Tax (Chapter 19-4100 of the Philadelphia Code) (the "Philadelphia Beverage Tax"). On October 31, 2016, the Department of Revenue adopted regulations for the Philadelphia Beverage Tax. The Philadelphia Beverage Tax taxes the distribution of certain beverages at 1.5 cents per ounce and became effective January 1, 2017.

The Philadelphia Beverage Tax is deposited into the General Fund, and with the additional revenue, the City has budgeted for pre-Kindergarten, community schools, and debt service for improvements to parks, playgrounds, recreation centers, and libraries, as contemplated by the City's Rebuild program. In the Fiscal Year 2019 CAFR, the City reported that it collected approximately $76.9 million in revenues from the Philadelphia Beverage Tax for Fiscal Year 2019.

In the Twenty-Ninth Five-Year Plan (and for Fiscal Year 2020, the FY 2020 Fourth Quarter QCMR), the City currently estimates that for Fiscal Years 2020-2025 that it will collect approximately (i) $65.8 million (Fiscal Year 2020), (ii) $67.4 million (Fiscal Year 2021, as budgeted), (iii) $68.0 million (Fiscal Year 2022), (iv) $67.4 million (Fiscal Year 2023), (v) $66.9 million (Fiscal Year 2024), and (vi) $66.4 million (Fiscal Year 2025) in revenues from the Philadelphia Beverage Tax in such Fiscal Years.

Improved Collection Initiative

The City is pursuing a multifaceted strategy designed to improve collections of various taxes while decreasing delinquencies. Key compliance strategies continue to include revocation of commercial licenses and sequestration, among others.

In addition to compliance efforts, the City has completed two projects – one to implement technology solutions for its cashiering and payments processing systems and another to develop an integrated data warehouse and case management system. These initiatives improve operational efficiencies and drive compliance efforts by providing tools previously unavailable to the City.

Other Locally Generated Non-Tax Revenues

These revenues include license fees and permit sales, traffic fines and parking meter receipts, court related fees, stadium revenues, interest earnings and other miscellaneous charges and revenues of the City.

Revenue from Other Governments

The following table presents revenues received from other governmental jurisdictions for Fiscal Years 2017-2019, the budgeted amount and current estimate for Fiscal Year 2020, the budgeted amount for Fiscal Year 2021, and the percentage such revenues represent in the General Fund. The table does not reflect substantial amounts of revenues from other governments received by the Grants Revenue Fund, Community Development Fund, and other operating and capital funds of the City.

Table 12
Revenue from Other Governmental Jurisdictions
Fiscal Years 2017-2019 (Actual), 2020 (Adopted Budget and Current Estimate), and 2021 (Adopted Budget)
(Dollar Amounts in Millions of USD)[(1), (2), (3)]

Fiscal Year	Commonwealth[(4)]	Federal Government	Other Governments[(5)]	Total	Percentage of General Fund Revenues
2017 (Actual)	$214.7	$37.6	$55.4	$307.7	7.4%
2018 (Actual)	$224.5	$31.3	$68.2	$323.9	7.1%
2019 (Actual)	$214.2	$21.9	$75.1	$311.1	6.5%
2020 (Adopted Budget)	$235.7	$45.8	$66.4	$347.9	7.1%
2020 (Current Estimate)	$217.5	$119.2	$52.6	$389.3	8.0%
2021 (Adopted Budget)	$222.8	$23.0	$51.8	$297.6	6.5%

(1) Sources: For Fiscal Years 2017-2019, the City's CAFRs for such Fiscal Years. For Fiscal Year 2020, the Fiscal Year 2020 Adopted Budget and the Twenty-Ninth Five-Year Plan, as applicable. For Fiscal Year 2021, the Fiscal Year 2021 Adopted Budget.
(2) Figures may not sum due to rounding.
(3) Does not include the PICA Tax.
(4) Such revenues are for health, welfare, court, and various other specified purposes.
(5) Such revenues primarily consist of payments from PGW, parking fines and fees from PPA, and other authorized adjustments.

Revenues from City-Owned Systems

In addition to taxes, the City realizes revenues through the operation of various City-owned systems, such as the Water and Wastewater Systems and PGW. The City has issued revenue bonds with respect to the Water and Wastewater Systems and PGW to be paid solely from and secured by a pledge of the respective revenues of these systems. The revenues of the Water and Wastewater Systems and PGW are not legally available for payment of other obligations of the City until, on an annual basis, all revenue bond debt service requirements and covenants relating to those bonds have been satisfied, and then only in a limited amount and upon satisfaction of certain other conditions.

Water Fund. The revenues of the Water Department are required to be segregated from other funds of the City. Under the City's Restated General Water and Wastewater Revenue Bond Ordinance of 1989 (the "Water Ordinance"), an annual transfer may be made from the Water Fund to the City's General Fund in an amount not to exceed the lesser of (i) all Net Reserve Earnings and (ii) $4,994,000. "Net Reserve Earnings" means the amount of interest earnings during the Fiscal Year on amounts in the Debt Reserve Account and Subordinated Bond Fund, each as defined in the Water Ordinance.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

The following table shows the amounts transferred from the Water Fund to the General Fund for Fiscal Years 2017-2019, the budgeted amount and current estimate for Fiscal Year 2020, and the budgeted amount for Fiscal Year 2021.

Table 13
Transfers from Water Fund to General Fund (Excess Interest on Sinking Fund Reserve)
Fiscal Years 2017-2019 (Actual), 2020 (Adopted Budget and Current Estimate), and 2021 (Adopted Budget)[(1), (2)]

Fiscal Year	Amount Transferred
2017 (Actual)	$1,866,455
2018 (Actual)	$1,627,838
2019 (Actual)	$4,094,824
2020 (Adopted Budget and Current Estimate)	$1,500,000
2021 (Adopted Budget)	$1,500,000

(1) Sources: For Fiscal Years 2017-2019, the City's Supplemental Report of Revenues & Obligations for such Fiscal Years. For Fiscal Year 2020, the Fiscal Year 2020 Adopted Budget and the Twenty-Ninth Five-Year Plan, as applicable. For Fiscal Year 2021, the Fiscal Year 2021 Adopted Budget.
(2) The Water Department's budgeted amount for such transfers is typically greater than the figure included in the City's operating budget.

The City also budgets for certain transfers from the Water Fund to the General Fund related to services performed and costs borne by the General Fund. For Fiscal Year 2019, the amount of such transfers was approximately $7.1 million. For Fiscal Year 2020, the budgeted amount for such transfers is approximately $12.7 million, while the current estimate for such transfers is approximately $8.6 million. For Fiscal Year 2021, the budgeted amount for such transfers is approximately $9.0 million.

PGW. The revenues of PGW are required to be segregated from other funds of the City. Payments for debt service on PGW bonds are made directly by PGW. PGW is required to make an annual payment of $18 million to the General Fund. The Fiscal Year 2021 Adopted Budget includes such $18 million annual payment to the General Fund from PGW for such Fiscal Year. For more information on PGW, see "THE GOVERNMENT OF THE CITY OF PHILADELPHIA – Government Services."

Philadelphia Parking Authority Revenues

The PPA was established by City ordinance pursuant to the Pennsylvania Parking Authority Law (P.L. 458, No. 208 (June 5, 1947)). Various statutes, ordinances, and contracts authorize the PPA to plan, design, acquire, hold, construct, improve, maintain and operate, own or lease land and facilities for parking in the City, including such facilities at PHL, and to administer the City's on-street parking program.

The PPA owns and operates five parking garages and a number of surface parking lots at PHL. The land on which these garages and surface lots are located is leased from the City, acting through the Division of Aviation, pursuant to a lease expiring in 2030 (the "Lease Agreement"). The Lease Agreement provides for payment of rent to the City, which is equal to gross receipts less operating expenses, debt service on the PPA's bonds issued to finance improvements at PHL, and reimbursement to the PPA for capital expenditures and prior year operating deficits relating to its operations at PHL, if any.

The PPA's administrative costs are a component of its operating expenses. In 1999, at the request of the FAA, the PPA and the City entered into a letter agreement (the "FAA Letter Agreement"), which contained a formula for calculating the PPA's administrative costs and capped such costs at 28% of the PPA's total administrative costs for all of its cost centers. The PPA owns and/or operates parking facilities at a number of locations in the City in addition to those at PHL. The PPA parking facilities at PHL are cost centers for purposes of the FAA Letter Agreement.

On-street parking revenues are administered and collected, on behalf of the City, by the PPA. Pursuant to Pennsylvania law, the PPA transmits these revenues to the City, net of any actual expenses incurred in the administration of the on-street parking system in accordance with the PPA's approved budget. If such net revenues exceed a designated threshold, then any excess above that threshold is to be transmitted to the School District. The current threshold is $35 million and includes a mandatory escalator to take into account increases in revenues.

The following table presents payments received by the City from PPA for on-street parking for Fiscal Years 2017-2019, the budgeted amount and current estimate for Fiscal Year 2020, and the budgeted amount for Fiscal Year 2021.

Table 14
PPA On-Street Parking Payments to the City
Fiscal Years 2017-2019 (Actual), 2020 (Adopted Budget and Current Estimate), and 2021 (Adopted Budget)[(1), (2)]
(Amounts in Millions of USD)

Fiscal Year	Payments to the City
2017 (Actual)	$39.9
2018 (Actual)	$41.3
2019 (Actual)	$39.1
2020 (Adopted Budget)	$45.8
2020 (Current Estimate)	$32.0
2021 (Adopted Budget)	$31.2

(1) Sources: For Fiscal Years 2017-2019, the City's Supplemental Report of Revenues & Obligations for such Fiscal Years. For Fiscal Year 2020, the Fiscal Year 2020 Adopted Budget and the FY 2020 Fourth Quarter QCMR, as applicable. For Fiscal Year 2021, the Fiscal Year 2021 Adopted Budget.
(2) Table 14 shows City revenues; none of such payments is transferred to the School District.

Other Tax Rate Changes

The Twenty-Ninth Five-Year Plan includes changes to both the resident and non-resident wage and earnings tax. The following table details rates under the Twenty-Ninth Five-Year Plan.

Table 15
Changes in Wage and Earnings Tax Rates[(1)]

	Twenty-Ninth Five-Year Plan	
Fiscal Year	Resident Wage and Earnings Tax Rates[(2)]	Non-Resident Wage and Earnings Tax Rates
2020	3.8712%	3.4481%
2021	3.8712%	3.5019%
2022	3.8712%	3.4481%
2023	3.8712%	3.4481%
2024	3.8616%	3.4395%
2025	3.8519%	3.4309%

(1) Source: The Twenty-Ninth Five-Year Plan.
(2) Includes PICA Tax. See "DEBT OF THE CITY – PICA Bonds" for a description of the PICA Tax.

Under the Twenty-Ninth Five-Year Plan, receipts from the Wage and Earnings Tax are estimated to grow at a rate of (i) 2.26% in Fiscal Year 2020, (ii) 8.97% in Fiscal Year 2022, (iii) 7.02% in Fiscal Year 2023, (iv) 4.17% in Fiscal Year 2024, and (v) 3.63% in Fiscal Year 2025. Such receipts are expected to contract at a rate of 4.57% in Fiscal Year 2021.

EXPENDITURES OF THE CITY

Three of the principal City expenditures are for personal services (personnel) (including pensions and other employee benefits), purchase of services (including payments to SEPTA), and debt service. The expenditures for personal services (personnel) and purchase of services are addressed below under this caption; debt service is addressed below under "DEBT OF THE CITY."

Personal Services (Personnel)

As of June 30, 2020, the City employed 28,339 full-time employees, representing approximately 4.7% of employees in Philadelphia (approximately 608,945 employees, according to preliminary, non-seasonally adjusted data from the Bureau of Labor Statistics). Of the 28,339 full-time employees, the salaries of 22,422 were paid from the General Fund. Additional sources of funding for full-time City employees include the Grants Revenue Fund, the Water Fund, and the Aviation Fund, as well as grants and contributions from other governments. Activities funded through such grants and contributions are not undertaken if funding is not received. The following table sets forth the number of filled, full-time positions of the City as of the dates indicated.

Table 16
Filled, Full-Time Positions[(1), (2)]

	June 30, 2016	June 30, 2017	June 30, 2018	June 30, 2019	June 30, 2020
General Fund					
Police	6,942	6,986	7,172	7,241	7,175
Fire	2,316	2,281	2,511	2,530	2,628
Courts	1,839	1,856	1,867	1,842	1,825
Prisons	2,289	2,277	2,177	2,130	1,975
Streets	1,676	1,702	1,738	1,736	1,925
Public Health	653	687	711	752	739
Human Services[(3)]	449	385	517	396	437
All Other	5,263	5,436	5,533	5,583	5,718
Total – General Fund	21,427	21,610	22,226	22,210	22,422
Other Funds	5,615	5,849	5,641	5,873	5,917
Total – All Funds	27,042	27,459	27,867	28,083	28,339

(1) Source: Table P-1 in the City's Quarterly City Manager's Reports.
(2) Table 16 does not include seasonal or temporary employees.
(3) Positions have been transferred to the Grants Revenue Fund. Non-reimbursed expenditures will be transferred to the General Fund during the fiscal year.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Overview of City Employees

The wages and benefits of City employees vary not only by position, but also by whether the employees are represented by a union and, if so, which union. Employee wages and benefits may also be impacted by whether the employee is subject to the civil service system or exempt from those rules. Thus, City employees may be broken down into three major categories for purposes of understanding how their wages and benefits are determined: (i) employees who are not subject to the civil service system ("exempt employees"); (ii) employees who fall under the civil service system but are not represented by a union ("non-represented employees"); and (iii) employees who are subject to the civil service system and are represented by a union ("union employees").

As of March 31, 2020, the City had over 23,000 unionized employees, representing approximately 80% of the City's employees. Such employees were represented by the City's four municipal unions: (i) Fraternal Order of Police ("FOP") Lodge No. 5; (ii) International Association of Fire Fighters ("IAFF") Local 22; (iii) American Federation of State, County and Municipal Employees District Council 33 ("AFSCME DC 33"); and (iv) American Federation of State, County and Municipal Employees District Council 47 ("AFSCME DC 47"). The foregoing unions were previously covered by bargaining agreements through June 30, 2020. In light of the COVID-19 global pandemic, the City and all of its unions reached one-year agreements to extend contract terms through June 30, 2021, as described in more detail in Table 18 below.

On March 29, 2020, the City and FOP Lodge No. 5 (Police Department) reached a one-year extension agreement, which resulted in a 2.5% wage increase, a one-time lump sum bonus for members, and a lump sum payment to the retiree health fund. The cost of the bonus was funded by a one-month City contribution holiday to the health fund. This contract resulted in a projected aggregate cost to the City of approximately $19.11 million during Fiscal Years 2020 and 2021.

On March 29, 2020, the City reached a one-year agreement with the FOP Lodge No. 5 (Philadelphia Sheriff's Office and Register of Wills), reflecting annual wage increases of 2.0% for Register of Wills employees and 2.25% for Sheriff's Office employees. The contract resulted in a projected aggregate cost to the City of approximately $729,198 during Fiscal Years 2020 and 2021.

On April 7, 2020, the City and the American Federation of State, County, and Municipal Employees (AFSCME) District Council 47 Locals 2186, 2187, and 810 reached one-year agreements, reflecting a 2.0% wage increase for employees and a one-time lump sum bonus for members. The cost of the bonus will be funded by a City contribution holiday to the health and welfare fund. The agreement results in a projected aggregate cost to the City of approximately $3.83 million during Fiscal Years 2020 and 2021.

On April 16, 2020, the City and the International Association of Fire Fighters (IAFF) Local 22 reached a one-year extension agreement, which resulted in a 2.5% wage increase and a lump sum payment to the retiree health fund. The contract resulted in a projected aggregate cost to the City of approximately $8.30 million during Fiscal Years 2020 and 2021.

On May 4, 2020, the City and AFSCME District Council 33 reached a one-year extension agreement, which resulted in a 2.0% wage increase and a one-time lump sum bonus for members. The cost of the bonus will be funded by a one-month City contribution holiday to the health fund. The contract resulted in a projected aggregate cost to the City of approximately $4.83 million during Fiscal Years 2020 and 2021.

On May 6, 2020, the City and AFSCME District Council 33 Local 159 reached a one-year extension agreement, which resulted in a 2.25% wage increase and a one-time lump sum bonus for members. The cost of the bonus will be funded by a one-month City contribution holiday to the health fund. The contract resulted in a projected aggregate cost to the City of approximately $2.76 million during Fiscal Years 2020 and 2021.

The costs of the agreements discussed above have been included in the City's five-year plans, as applicable. See "DISCUSSION OF FINANCIAL OPERATIONS – Current Financial Information" herein).

For more information on the current status of the interest arbitration awards that have been issued for, and contract settlements reached with, the City's major labor organizations, as well as changes that have been made for non-represented employees, see Table 18.

Collective bargaining with respect to the wages, hours and other terms and conditions of employment of union employees, other than uniformed employees of the Police Department and the Fire Department, is governed by the Public Employee Relations Act (Pa. P.L. 563, No. 195 (1970)) ("PERA"). PERA requires the City and the unions to negotiate in good faith to attempt to reach agreement on new contract terms and, if an impasse exists after such negotiations, to mediate through the Commonwealth Bureau of Mediation. Once the mediation procedures have been satisfied, and if no collective bargaining agreement has been reached, most employees covered by PERA are permitted to strike. Certain employees, however, including employees of the Sheriff's Office and the Register of Wills represented by the FOP, corrections officers represented by AFSCME DC 33, and employees of the First Judicial District represented by AFSCME DC 47, are not permitted to strike under PERA. These employees must submit any impasse to binding interest arbitration once the mediation procedures have been satisfied. PERA permits parties at an impasse, which are not required to submit to binding interest arbitration, to do so voluntarily. Provisions of an interest arbitration award issued under PERA that require legislative action are considered advisory only and the legislative body is permitted to meet, consider, and reject those provisions.

Uniformed employees of the Police Department and the Fire Department bargain under the Policemen and Firemen Collective Bargaining Act (Pa. P.L. 237, No. 111 (1968)) ("Act 111"), which provides for final and binding interest arbitration to resolve collective bargaining impasses and prohibits these employees from striking. Interest arbitration under Act 111 operates similarly to interest arbitration under PERA, but City Council is not permitted to reject the portions of an interest arbitration award that require legislative action. To the contrary, City Council is required to pass any legislation necessary to implement the award unless doing so would violate state or federal law. Thus, the arbitration panel has significant, although not limitless, power to issue an award on mandatory subjects of bargaining. As with interest arbitration under PERA, the arbitration panel cannot issue an award on a matter that is one of inherent managerial policy. In addition to the grounds available to challenge a PERA interest arbitration award on appeal, the PICA Act requires an Act 111 interest arbitration panel to, among other things, give substantial weight to the City's five-year plan and ability to pay for the cost of the award without negatively impacting services, and gives the City the right to appeal the award to the Court of Common Pleas if it believes the panel has failed to meet these responsibilities. If the arbitration panel fails to do so or, among other things, if it awards wages or benefits that exceed what is assumed in the most-recent five-year plan without substantial evidence in the record demonstrating that the City can afford these increases without adversely impacting service levels, the Court of Common Pleas is required to vacate the arbitration award and remand it to the arbitration panel.

Overview of Employee Benefits

The City provides various pension, life insurance, and health benefits for its employees. The benefits offered depend on the employee's union status and bargaining unit, if applicable. General Fund employee benefit expenditures for Fiscal Years 2017 through 2021 are shown in the following table.

Table 17
General Fund Employee Benefit Expenditures
Fiscal Years 2017-2019 (Actual), 2020 (Adopted Budget and Current Estimate), and 2021 (Adopted Budget)
(Amounts in Millions of USD)[(1)]

	Actual 2017	Actual 2018	Actual 2019	Adopted Budget 2020	Current Estimate 2020	Adopted Budget 2021
Pension Costs[(2)]	$665.2[(5)]	$742.2[(6)]	$752.5[(7)]	$749.1[(8)]	$728.1[(9)]	650.2[(10)]
Health						
Payments under City-administered plan	83.8	81.6	77.7	90.0	94.2	92.0
Payments under union-administered plans	345.3	336.6	379.3	400.0	365.8	367.3
Total Health	429.1	418.2	457.0	490.0	460.0	459.3
Federal Insurance Contributions Act (FICA) Taxes[(3)]	75.1	80.4	81.8	84.5	80.7	84.3
Other[(4)]	71.5	72.9	79.8	88.4	79.6	93.4
Total	$1,241.0	$1,314.0	$1,371.1	$1,412.0	$1,348.4	$1,287.2

(1) Sources: The City's five-year financial plans, the City's Quarterly City Manager's Reports, and other City records. "Payments under City-administered plan" and "Payments under union-administered plans" were provided by the City, Department of Human Resources and the Office of Budget and Program Evaluation. Figures may not sum due to rounding.
(2) Includes debt service on Pension Bonds (as defined herein) and the Commonwealth contributions to the Municipal Pension Fund. See Tables 29 and 30.
(3) Includes payments of social security and Medicare taxes.
(4) Includes payments for unemployment compensation, employee disability, group life, group legal, tool allowance, and flex cash payments.
(5) Includes $19.2 million from City Sales Tax revenues for the Municipal Pension Fund. See "REVENUES OF THE CITY – Sales and Use Tax."
(6) Includes $24.2 million from City Sales Tax revenues for the Municipal Pension Fund. See "REVENUES OF THE CITY – Sales and Use Tax."
(7) Includes $52.1 million from City Sales Tax revenues for the Municipal Pension Fund. See "REVENUES OF THE CITY – Sales and Use Tax."
(8) Assumes $53.9 million from City Sales Tax revenues for the Municipal Pension Fund. See "REVENUES OF THE CITY – Sales and Use Tax."
(9) Assumes $37.1 million from City Sales Tax revenues for the Municipal Pension Fund. See "REVENUES OF THE CITY – Sales and Use Tax."
(10) Assumes $27.3 million from City Sales Tax revenues for the Municipal Pension Fund. See "REVENUES OF THE CITY – Sales and Use Tax."

Each of the City's four municipal unions sponsors its own health plan that provides medical, prescription, dental and optical benefits to participating employees and eligible retirees through trusts on which the City has varying degrees of minority representation. Exempt and non-represented employees, along with represented employees of the Register of Wills and employees represented by AFSCME DC 33 who have chosen not to become members of the union's healthcare plan, receive health benefits through a plan sponsored and administered by the City. Each of the plans provides different benefits determined by the plan sponsor or through collective bargaining. To provide health care coverage, the City pays a negotiated monthly premium for employees covered by the union contract for AFSCME DC 33 and is self-insured for all other eligible employees. Aside from AFSCME DC 33, the City is responsible for the actual health care cost that is invoiced to the City's unions by their respective vendors. The actual cost can be a combination of self-insured claim expenses, premiums, ancillary services, and administrative expenses. In addition, employees who satisfy certain eligibility criteria receive five years of health benefits after their retirement. See "OTHER POST-EMPLOYMENT BENEFITS" below. Such benefits are determined and administered by the plan in which the employee participated at the time of his or her retirement. Other employee benefits, including life insurance and paid leave, are similarly determined by the respective collective bargaining agreements, as well as City policies and Civil Service Regulations. Employees also participate in the Municipal Pension Plan. See "PENSION SYSTEM" below.

Overview of Current Labor Situation

Table 18 summarizes the current status of the contract settlements reached with the City's major labor organizations, as well as changes that have been made for non-represented employees. It also provides a brief summary of pension reforms that have occurred since 2016, as part of previous labor contract settlements.

Table 18
Status of Arbitration Awards and Labor Contract Settlements

Organization	Authorized Number of Full-Time Citywide Employees Represented[1]	Status of Arbitration Award or Contract Settlement	Wage Increases	Pension Reforms[2]
FOP Lodge No. 5 (Police Department)	6,552	One-year contract extension effective July 1, 2020 through June 30, 2021	• 2.5% pay increase effective May 4, 2020	• Current employees in Plan 87 or Plan 10 will pay an additional .92% of salary effective 7/1/17, increasing by an additional .92% of salary effective 7/1/18 (total increase of 1.84%). These contributions are on top of the current 5% or 6% contribution rates in effect, varies by plan membership • Employees hired on or after 7/1/17 will be required to pay an additional 2.5% of salary
FOP Lodge No. 5 (Sheriff's Office and Register of Wills)	391	One-year contract extension effective July 1, 2020 through June 30, 2021	Sheriff's Office employees: • 2.25% increase effective May 4, 2020 Register of Wills employees: • 2.0% increase effective May 4, 2020	• Tiered contribution system for current employees under which employees who have higher salaries pay a higher percent of their salaries as contributions to the pension fund • Mandatory stacked-hybrid plan for new hires under which employees receive a defined benefit pension for their first $65,000 of earnings and a defined contribution pension for earnings above $65,000 • Plan 10 closed to new enrollment for members of Lodge 5 but remains unchanged for other employee groups • Once fully implemented, such employees in Plan 10 are expected to receive a letter indicating that they have 90 days to make an irrevocable election to opt into the stacked-hybrid plan • DROP (as defined below) interest rate decreases from 4.5% to the rate on the one-year treasury effective January 1 of each year for participants not currently enrolled or eligible to enroll
IAFF Local 22	2,525	One-year contract extension effective July 1, 2020 through June 30, 2021	• 2.5% pay increase effective May 4, 2020	• Current employees in Plan 87 or Plan 10 will pay an additional .92% of salary effective 7/1/17, increasing by an additional .92% of salary effective 7/1/18 (total increase of 1.84%). These contributions are on top of the current 5% or 6% contribution rates in effect; varies by plan membership • Employees hired on or after 7/1/17 will be required to pay an additional 2.5% of salary
AFSCME DC 33	8,196	One-year contract term effective July 1, 2020 through June 30, 2021	• 2.0% pay increase effective May 4, 2020	• Tiered contribution system for current employees under which employees who have higher salaries pay a higher percent of their salaries as contributions to the pension fund • Mandatory stacked-hybrid plan for new hires under which employees receive a defined benefit pension for their first $65,000 of earnings and a defined contribution pension for earnings above $65,000 • Plan 10 closed to new enrollment for members of DC33 but remains unchanged for other employee groups • Once fully implemented, such employees in Plan 10 are expected to receive a letter indicating that they have 90 days to make an irrevocable election to opt into the stacked-hybrid plan • DROP interest rate decreases from 4.5% to the rate on the one year treasury effective January 1 of each year for participants not currently enrolled or eligible to enroll

(1) From data provided by the Mayor's Office of Labor Relations on March 31, 2020.
(2) "Plan 87," "Plan 10," and "Plan 16" referenced in this column are described in Table 19.

Organization	Authorized Number of Full-Time Citywide Employees Represented[1]	Status of Arbitration Award or Contract Settlement	Wage Increases	Pension Reforms[2]
AFSCME DC 33, Local 159 Correctional Officers	1,978	One-year contract effective July 1, 2020 through June 30, 2021	• 2.25% pay increase effective May 4, 2020	• Tiered contribution system for current employees under which employees who have higher salaries pay a higher percent of their salaries as contributions to the pension fund • Mandatory stacked-hybrid plan for new hires under which employees receive a defined benefit pension for their first $65,000 of earnings and a defined contribution pension for earnings above $65,000 • Plan 10 closed to new enrollment for members of DC33 but remains unchanged for other employee groups • Once fully implemented, such employees in Plan 10 are expected to receive a letter indicating that they have 90 days to make an irrevocable election to opt into the stacked-hybrid plan • DROP interest rate decreases from 4.5% to the rate on the one year treasury effective January 1 of each year for participants not currently enrolled or eligible to enroll
AFSCME DC 47	3,760	One-year contract extension effective July 1, 2020 through June 30, 2021	• 2.0% pay increase effective May 1, 2020	• Tiered contribution system for current employees under which employees who have higher salaries pay a higher percent of their salaries as contributions to the pension fund (effective January 1, 2019) • Mandatory stacked-hybrid plan for new hires under which employees receive a defined benefit pension for their first $65,000 of earnings and a defined contribution pension for earnings above $65,000 (effective January 1, 2019) • Plan 10 closed to new enrollment for members of DC47 (effective January 1, 2019) • Once fully implemented, such employees in Plan 10 are expected to receive a letter indicating that they have 90 days to make an irrevocable election to opt into the stacked-hybrid plan
AFSCME DC 47 Local 810 Court Employees	488	One-year contract extension effective July 1, 2020 through June 30, 2021	• 2.0% pay increase effective May 1, 2020	• Tiered contribution system for current employees under which employees who have higher salaries pay a higher percent of their salaries as contribution to the pension fund (effective January 1, 2019) • Mandatory stacked-hybrid plan for new hires under which employees receive a defined benefit pension for their first $65,000 of earnings and a defined contribution pension for earnings above $65,000 (effective January 1, 2019) • Plan 10 closed to new enrollment for members of DC47 (effective January 1, 2019) • Once fully implemented, such employees in Plan 10 are expected to receive a letter indicating that they have 90 days to make an irrevocable election to opt into the stacked-hybrid plan
Non-Represented Employees	1,157	Changes for non-represented employees	• 3.0% pay increase for Fiscal Year 2018 • 2.5% pay increase for Fiscal Year 2019	• Tiered contribution system for current employees under which employees who have higher salaries pay a higher percent of their salaries as contribution to the pension fund (effective January 1, 2019) • Mandatory stacked-hybrid plan for new hires under which employees receive a defined benefit pension for their first $65,000 of earnings and a defined contribution pension for earnings above $65,000 (effective January 1, 2019) • Previous 2011 reforms to DROP program remain in place; interest rate was decreased from 4.5% to the rate on the one year treasury effective January 1 of each year for participants not currently enrolled or eligible to enroll and eligibility age remains increased by two years

(1) From data provided by the Mayor's Office of Labor Relations on March 31, 2020.
(2) "Plan 87," "Plan 10," and "Plan 16" referenced in this column are described in Table 19.

Certain features of the 1987 Plan ("Plan 87"), the 2010 Plan ("Plan 10"), and the 2016 Plan ("Plan 16") are summarized below. Plan 87 is solely a defined benefit plan. Plan 10 and Plan 16 are "hybrid" plans that include both defined benefit and defined contribution components. A more comprehensive summary of each plan is included as Appendix D of the July 1, 2019 Valuation (as defined herein). See "PENSION SYSTEM" below.

Table 19
Summary of Key Aspects of Plan 87, Plan 10, and Plan 16

Plan 87	Normal Retirement Eligibility	Average Final Compensation ("AFC")	Defined Benefit – Retirement Benefits Multiplier
Municipal (Plan Y)	Age 60 and 10 years of credited service[(1)]	Average of three highest calendar or anniversary years	• (2.2% x AFC x years of service up to 10 years) plus (2.0% x AFC x numbers of years in excess of 10 years), subject to a maximum of 100% of AFC
Police and Fire	Age 50 and 10 years of credited service[(1)]	Average of two highest calendar or anniversary years	• (2.2% x AFC x years of service up to 20 years) plus (2.0% x AFC x numbers of years in excess of 20 years), subject to a maximum of 100% of AFC
Elected Official (Plan L)	Age 55 and 10 years of credited service[(2)]	Average of three highest calendar or anniversary years	• 3.5% x AFC x years of service, subject to a maximum of 100% of AFC

Plan 10	Normal Retirement Eligibility	Average Final Compensation ("AFC")	Defined Benefit – Retirement Benefits Multiplier
Municipal[(3)]	Age 60 and 10 years of credited service	Average of five highest calendar or anniversary years	• 1.25% x AFC x years of service up to 20 years
Police and Fire	Age 50 and 10 years of credited service	Average of five highest calendar or anniversary years	• 1.75% x AFC x years of service up to 20 years - **Defined Contribution** • The City matches employee contributions at a 50% rate, with the total City match not to exceed 1.5% of compensation for each year. • After five years of credited service, the full amount in the account is distributed to the employee when he or she separates from City service. • The right to the portion of the account attributable to City contributions does not vest until the completion of five years of credited service.

Plan 16	Normal Retirement Eligibility	Average Final Compensation ("AFC")	Defined Benefit – Retirement Benefits Multiplier
Municipal	Age 60 and 10 years of credited service	Lesser of (i) AFC under Plan Y (of Plan 87) (which is the average of three highest calendar or anniversary years) or (ii) $65,000	• (2.2% x AFC x years of service up to 10 years) plus (2.0% x AFC x numbers of years in excess of 10 years), subject to a maximum of 100% of AFC - **Defined Contribution** • Employees may voluntarily participate in the defined contribution portion; employee contributions vest immediately. • For employees with annual salaries above the cap, the City matches employee contributions at a 50% rate, with the total City match not to exceed 1.5% of compensation for each year (only if employee is contributing); the City's matching contributions vest after five years of credited service. • The maximum annual employee contribution is $19,500, excluding the City's matching contributions.

(1) Five years of credited service for those who make additional contributions. See "PENSION SYSTEM – Pension System; Pension Board – Membership."
(2) The lesser of two full terms or eight years of credited service for those elected officials who make additional contributions. See "PENSION SYSTEM – Pension System; Pension Board – Membership."
(3) Under Plan 10 (Municipal), pension contributions freeze after 20 years. At such time and for each subsequent year, the employee's pension payments remain fixed and the employee may no longer make pension contributions.

Purchase of Services

The following table shows the City's major purchase of services, which represents one of the major classes of expenditures from the General Fund. Table 20 shows contracted costs of the City for Fiscal Years 2017-2019, the budgeted amounts and current estimates for Fiscal Year 2020, and the budgeted amounts for Fiscal Year 2021.

Table 20
Purchase of Services in the General Fund
Fiscal Years 2017-2019 (Actual), 2020 (Adopted Budget and Current Estimate), and 2021 (Adopted Budget)
(Amounts in Millions of USD)(1), (7)

	Actual 2016	Actual 2017	Actual 2018	Actual 2019	Adopted Budget 2020	Current Estimate 2020	Adopted Budget 2021
Human Services(2)	$75.3	$75.7	$76.3	$82.8	$89.2	$89.2	$129.3
Public Health	64.9	70.7	72.7	72.9	90.2	83.5	90.5
Public Property(3)	155.0	158.5	157.4	163.9	172.5	176.9	166.2
Streets(4)	51.9	46.2	49.2	53.5	58.8	54.8	59.5
First Judicial District	17.7	12.1	13.5	10.3	8.5	8.5	8.5
Licenses & Inspections	10.4	12.0	11.6	13.5	14.4	12.4	13.5
Homeless Services(5)	37.1	38.0	39.2	47.3	50.0	50.9	36.0
Prisons	104.9	105.3	102.2	92.5	92.8	106.5	88.4
All Other(6)	305.0	332.9	369.0	378.8	424.7	449.4	357.2
Total	**$822.2**	**$851.4**	**$891.1**	**$915.5**	**$1,001.3**	**$1,032.1**	**$948.6**

(1) For Fiscal Years 2017-2019, the City's Supplemental Report of Revenues & Obligations for such Fiscal Years. For Fiscal Year 2020, the Fiscal Year 2020 Adopted Budget, the Twenty-Ninth Five-Year Plan, and the FY 2020 Fourth Quarter QCMR, as applicable. For Fiscal Year 2021, the Fiscal Year 2021 Adopted Budget.
(2) Includes payments for care of dependent and delinquent children.
(3) Includes payments for SEPTA, space rentals, and utilities.
(4) Includes solid waste disposal costs.
(5) Includes homeless shelter and boarding home payments.
(6) Includes the Convention Center subsidy, payments for vehicle leasing, and debt service on lease and service agreement financings, among other things.
(7) Figures may not sum due to rounding.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

City Payments to School District

The following table presents the City's payments to the School District from the General Fund for Fiscal Years 2017-2019, the budgeted amount and current estimate for Fiscal Year 2020, and the budgeted amount for Fiscal Year 2021.

Table 21
City Payments to School District
Fiscal Years 2017-2019 (Actual), 2020 (Adopted Budget and Current Estimate), and 2021 (Adopted Budget)
(Amounts in Millions of USD)[1]

	Actual 2017	Actual 2018	Actual 2019	Adopted Budget and Current Estimate 2020	Adopted Budget 2021
City Payments to School District	$104.3	$104.3	$180.9	$222.5	$252.6

[1] Sources: For Fiscal Years 2017-2019, the City's CAFRs for such Fiscal Years. For Fiscal Year 2020, the Fiscal Year 2020 Adopted Budget and the FY 2020 Fourth Quarter QCMR, as applicable. For Fiscal Year 2021, the Fiscal Year 2021 Adopted Budget.

Beginning with the City's adopted budget for Fiscal Year 2016, the City implemented a $25 million property tax increase and a $10 million parking tax increase to benefit the School District. The figures in Table 21 reflect such increases.

For more discussion of the School District, see "THE GOVERNMENT OF THE CITY OF PHILADELPHIA – Local Government Agencies – *Mayoral-Appointed or Nominated Agencies* – The School District," above. For a discussion of changes in the funding provided by the City to the School District, see "REVENUES OF THE CITY – Sales and Use Tax." For a discussion of the transition to AVI and how such transition affects funding for the School District, see "REVENUES OF THE CITY – Real Property Taxes."

City Payments to SEPTA

SEPTA operates a public transportation system within the City and Bucks, Chester, Delaware, and Montgomery counties. SEPTA's operating budget is supported by federal, Commonwealth, and local subsidies, including payments from the City. The following table presents the City's payments to SEPTA from the General Fund for Fiscal Years 2017-2019, the budgeted amount and current estimate for Fiscal Year 2020, and the budgeted amount for Fiscal Year 2021.

Table 22
City Payments to SEPTA
Fiscal Years 2017-2019 (Actual), 2020 (Adopted Budget and Current Estimate), and 2021 (Adopted Budget)
(Amounts in Millions of USD)[1]

	Actual 2017	Actual 2018	Actual 2019	Adopted Budget 2020	Current Estimate 2020	Adopted Budget 2021
City Payment to SEPTA	$79.7	$81.9	$84.6	$87.6	$86.4	$84.6

[1] Sources: For Fiscal Years 2017-2019, the City's CAFRs for such Fiscal Years. For Fiscal Year 2020, the Fiscal Year 2020 Adopted Budget and the FY 2020 Fourth Quarter QCMR, as applicable. For Fiscal Year 2021, the Fiscal Year 2021 Adopted Budget.

The City budgets operating subsidies each Fiscal Year to match the estimated operating subsidies of the Commonwealth under Act 89. The state operating subsidy is funded through the Pennsylvania Public Transportation Trust Fund as created by Act 44 of 2007, amended by Act 89 of 2013. The local match requirement is calculated to match state operating subsidies. In addition, local matching funds must be appropriated each Fiscal Year in which state funds are received in order for SEPTA to receive the full allocation of state funds. The Twenty-Ninth Five-Year Plan projects annual operating subsidy payments to SEPTA from the City will increase to $101.5 million by Fiscal Year 2025. For more information on SEPTA, see APPENDIX D – "TRANSPORTATION – Southeastern Pennsylvania Transportation Authority (SEPTA)."

City Payments to Convention Center Authority

In connection with the financing of the expansion to the Pennsylvania Convention Center and the refinancing of debt for the original Pennsylvania Convention Center construction, the Commonwealth, the City, and the Convention Center Authority entered into an operating agreement in 2010 (the "Convention Center Operating Agreement"). The Convention Center Operating Agreement provides for the operation of the Convention Center by the Convention Center Authority and includes an annual subsidy of $15,000,000 from the City to the Convention Center Authority in each Fiscal Year through Fiscal Year 2040.

As authorized by ordinance, the City has agreed to pay to the Convention Center Authority on a monthly basis a certain percentage of hotel room taxes and hospitality promotion taxes collected during the term of the Convention Center Operating Agreement. The remaining percentages of such taxes are paid to the City's tourism and marketing agencies. The General Fund does not retain any portion of the proceeds of the hotel room rental tax or the hospitality promotion tax.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

PENSION SYSTEM

The amounts and percentages set forth under this heading relating to the City's pension system, including, for example, actuarial liabilities and funded ratios, are based upon numerous demographic and economic assumptions, including the investment return rates, inflation rates, salary increase rates, post-retirement mortality, active member mortality, rates of retirement, etc. The reader is cautioned to review and carefully consider the assumptions set forth in the documents that are cited as the sources for the information in this section. In addition, the reader is cautioned that such sources and the underlying assumptions are relevant as of their respective dates, and are subject to changes, any of which could cause a significant change in the unfunded actuarial liability.

Each year, an actuarial valuation report of the City's pension system is published in late March or early April. Such report includes, as of July 1 of a given Fiscal Year, an examination of the current financial condition of the pension system, key historical trends, and the projected financial outlook of the pension system, among other information. In addition, an annual report on the audited financial statements of the City's pension system is published in late December or early January. The information included under the caption "PENSION SYSTEM" is derived from the actuarial valuation reports or the annual reports on the audited financial statements of the City's pension system, unless otherwise noted herein.

Overview

The City faces significant ongoing financial challenges in meeting its pension obligations, including an unfunded actuarial liability ("UAL") of approximately $5.9 billion as of July 1, 2019. In Fiscal Year 2019, the City's contribution to the Municipal Pension Fund was approximately $797.8 million, of which the General Fund's share (including the Commonwealth contribution) was $642.5 million. See Table 29. The City's aggregate pension costs (consisting of payments to the Municipal Pension Fund and debt service on the Pension Bonds (as defined herein)) have increased from approximately 7.87% of the City's General Fund budget to approximately 14.20% of the General Fund budget from Fiscal Years 2010 to 2019. See Table 31. The funded ratio of the Municipal Pension Plan was 76.7% on July 1, 1999 (at which time the UAL was approximately $1.4 billion), and was 49.7% on July 1, 2019.

The decline in the Municipal Pension System's funded status and the net growth of the unfunded liability is the product of a number of factors, including the following:

- The declines in the equity markets in 2000-2001 and in 2008-2009. See Table 24 below.

- A reduction in the assumed rate of return, from 8.75% in 2009 to 7.55% effective July 1, 2019 (i.e., Fiscal Year 2020). Although the gradual reductions in the assumed rates of return reflected in Table 24 are considered a prudent response to experience studies, by reducing the assumed return in the measurement of the actuarial liabilities, it serves to increase the UAL from what it otherwise would have been.

- Adopting more conservative mortality rates in response to experience studies performed by the Municipal Pension Plan actuary.

- The Municipal Pension Plan is a mature system, which means the number of members making contributions to the Municipal Pension Plan is less than the number of retirees and other beneficiaries receiving payments from the Municipal Pension Plan, by approximately 9,100. As a result, the aggregate of member contributions and the City's contributions are less than the amount of benefits and refunds payable in most years, with the result that in such years investment income must be relied upon to meet such difference before such income can contribute to an increase in the Municipal Pension System's assets growth. See Table 26 (which reflects that in Fiscal Years 2018-2019, however, the aggregate of member contributions and the City's contribution exceeded the amount of benefits and refunds payable in such Fiscal Years).

- The determination by the City, commencing in Fiscal Year 2005, to fund in accordance with the "minimum municipal obligation" ("MMO"), as permitted and as defined by Pennsylvania law, in lieu of the City Funding Policy (as defined herein), resulted in the City contributing less than otherwise would have been contributed. See below, "– Funding Requirements; Funding Standards."

- Revising, in Fiscal Year 2009, in accordance with Pennsylvania law, the period over which the UAL was being amortized, such that the UAL as of July 1, 2009 was "fresh started" to be amortized over a 30-year period ending June 30, 2039. In addition, changes were made to the periods over which actuarial gains and losses and assumption changes were amortized under Pennsylvania law. See "UAL and its Calculation – Actuarial Valuations."

The City has taken a number of steps to address the funding of the Municipal Pension Plan, including the following:

- Reducing the assumed rate of return on a gradual and consistent basis, which results in the City making larger annual contributions. See Table 24 below.

- Adopting more conservative mortality rates in response to experience studies performed by the Municipal Pension Plan actuary.

- In conjunction with the revisions to the amortization periods that occurred in Fiscal Year 2009, changing from a level percent of pay amortization schedule to a level dollar amortization schedule. This results in producing payments that ensure that a portion of principal on the UAL is paid each year.

- Funding consistently an amount greater than the MMO (subject to the authorized deferrals for Fiscal Years 2010 and 2011 described below). See Table 29.

- Negotiating collective bargaining agreements by which additional contributions are being made (and will be made) by certain current (and future) members and by which benefits will be capped for certain future members of the Municipal Pension Plan. See Table 18.

- Securing additional funding, including funds required to be deposited by the City to the Municipal Pension Fund from its share of sales tax revenue.

- Adopting a Revenue Recognition Policy (defined and described below), by which sources of anticipated additional revenue that will be received by the System are specifically dedicated toward paying down the unfunded pension liability and not to reducing future costs of the City. The additional revenue is tracked and accumulated in a notional account, which is then deducted from the Actuarial Asset Value to determine the contribution under the Revenue Recognition Policy. As a result, such contribution is higher than the MMO.

- Changing the investment strategy to increase the use of passive investment vehicles, which has resulted in increased returns and decreased fees.

This "Overview" is intended to highlight certain of the principal factors that led to the pension system's current funded status, and significant steps the City and the Pension Board (as defined herein) have taken to address the underfunding. The reader is cautioned to review with care the more detailed information presented below under this caption, "Pension System."

Pension System; Pension Board

The City maintains two defined-benefit pension programs: (i) the Municipal Pension Plan, a single employer plan, which provides benefits to police officers, firefighters, non-uniformed employees, and non-represented appointed and elected officials, and (ii) the PGW Pension Plan, a single employer plan, which provides benefits to PGW employees. The Municipal Pension Plan is administered through 20 separate benefit structures, the funding for which is accounted for on a consolidated basis by the Municipal Pension Fund. Such benefit structures establish for their respective members different contribution levels, retirement ages, etc., but all assets are available to pay benefits to all members of the Municipal Pension Plan. The Municipal Pension Plan is a mature plan, initially established in 1915, with net investment assets that totaled approximately $5.7 billion as of June 30, 2019. The Municipal Pension Plan has approximately 28,600 members who make contributions to the plan, and provides benefits to approximately 37,700 retirees and other beneficiaries.

PGW is principally a gas distribution facility owned by the City. For accounting presentation purposes, PGW is a component unit of the City and follows accounting rules as they apply to proprietary fund-type activities. The PGW Pension Plan is funded with contributions by PGW to such plan, which are treated as an operating expense of PGW, and such plan is not otherwise addressed under the caption "PENSION SYSTEM." See "PGW PENSION PLAN" below.

Contributions are made by the City to the Municipal Pension Fund from: (i) the City's General Fund; (ii) funds that are received by the City from the Commonwealth for deposit into the Municipal Pension Fund; and (iii) various City inter-fund transfers, representing amounts contributed, or reimbursed, to the City's General Fund for pensions from the City's Water Fund, Aviation Fund, and certain other City funds or agencies. See Table 29. In addition to such City (employer) contribution, the other principal additions to the Municipal Pension Fund are: (i) member (employee) contributions; (ii) interest and dividend income; (iii) net appreciation in asset values; and (iv) net realized gains on the sale of investments. See Table 26 below. An additional source of funding is that portion of the 1% Sales Tax rate increase that is required under Pennsylvania law to be deposited to the Municipal Pension Fund. See "REVENUES OF THE CITY – Sales and Use Tax."

The City of Philadelphia Board of Pensions and Retirement (the "Pension Board") was established by the City Charter to administer "a comprehensive, fair and actuarially sound pension and retirement system covering all officers and employees of the City." The City Charter provides that the Pension Board "shall consist of the Director of Finance, who shall be its chairman, the Managing Director, the City Controller, the City Solicitor, the Personnel Director and four other persons who shall be elected to serve on the Board by the employees in the civil service in such manner as shall be determined by the Board." In addition, there is one non-voting member on the Pension Board, who is appointed by the President of City Council. An Executive Director, together with a budgeted staff of 73 personnel, administers the day-to-day activities of the retirement system, providing services to approximately 66,300 members.

The Municipal Pension Plan, the Municipal Pension Fund, and the Pension Board are for convenience sometimes collectively referred to under this caption as the "Municipal Retirement System."

Membership. The following table shows the membership totals for the Municipal Pension Plan, as of July 1, 2019 and as compared to July 1, 2018.

Table 23
Municipal Pension Plan – Membership Totals

	July 1, 2019	**July 1, 2018**	**% Change**
Actives	28,596	28,845	-0.9%
Terminated Vesteds	965	1,074	-10.1%
Disabled	3,883	3,890	-0.2%
Retirees	22,241	22,275	-0.2%
Beneficiaries	8,574	8,547	0.3%
Deferred Retirement Option Plan ("DROP")	2,069	1,944	6.4%
Total City Members	66,328	66,575	-0.4%
Annual Salaries	$1,842,554,883	$1,805,400,096	2.1%
Average Salary per Active Member	$64,434	$62,590	2.9%
Annual Retirement Allowances	$774,067,324	$761,946,574	1.6%
Average Retirement Allowance	$22,309	$21,951	1.6%

Source: July 1, 2019 Valuation.

As shown in Table 23, total membership in the Municipal Pension Plan decreased by 0.4%, or from 66,575 to 66,328 members, from July 1, 2018 to July 1, 2019, including a decrease of 0.9% in active members from 28,845 to 28,596 (who were contributing to the Municipal Pension Fund). Of the 66,328 members, 37,732 were retirees, beneficiaries, disabled, and other members (who were withdrawing from, or not contributing to, the Municipal Pension Fund).

Subject to the exceptions otherwise described in this paragraph, employees and officials become vested in the Municipal Pension Plan upon the completion of ten years of service. Employees and appointed officials who hold positions that are exempt from civil service and who are not entitled to be represented by a union, and who were hired before January 13, 1999, may elect accelerated vesting after five years of service in return for payment of a higher employee contribution than if the vesting period were ten years. Such employees and officials become vested after five years of service if hired after January 13, 1999 or seven years of service if hired after January 1, 2019, and pay a higher employee contribution than if the vesting period were ten years. Elected officials become vested in the Municipal Pension Plan once they complete service equal to the lesser of two full terms in their elected office or eight years and pay a higher contribution than if the vesting period were ten years. Elected officials pay an additional employee contribution for the full cost of the additional benefits they may receive over those of general municipal employees. Upon retirement, employees and officials may receive up to 100% of their average final compensation depending upon their years of credited service and the plan in which they participate.

All City employees participate in the U.S. Social Security retirement system except for uniformed Police and uniformed Fire employees.

Certain membership information relating to the City's municipal retirement system provided by the Pension Board is set forth in Appendix A to the July 1, 2019 Actuarial Valuation Report (the "July 1, 2019 Valuation") and includes as of July 1, 2019, among other information, active and non-active member data by plan, age/service distribution for active participants and average salary for all plans, and age and benefit distributions for non-active member data.

Funding Requirements; Funding Standards

City Charter. The City Charter establishes the "actuarially sound" standard quoted above. Case law has interpreted "actuarially sound" as used in the City Charter to require the funding of two components: (i) "normal cost" (as defined below) and (ii) interest on the UAL. (*Dombrowski v. City of Philadelphia*, 431 Pa. 199, 245 A.2d 238 (1968)).

Pennsylvania Law. The Municipal Pension Plan Funding Standard and Recovery Act (Pa. P.L. 1005, No. 205 (1984)) ("Act 205"), applies to all municipal pension plans in Pennsylvania, "[n]otwithstanding any provision of law, municipal ordinance, municipal resolution, municipal charter, pension plan agreement or pension plan contract to the contrary . . . ." Act 205 provides that the annual financial requirements of the Municipal Pension Plan are: (i) the normal cost; (ii) administrative expense requirements; and (iii) an amortization contribution requirement. In addition, Act 205 requires that the MMO be payable to the Municipal Pension Fund from City revenues, and that the City shall provide for the full amount of the MMO in its annual budget. The MMO is defined as "the financial requirements of the pension plan reduced by . . . the amount of any member contributions anticipated as receivable for the following year." Act 205 further provides that the City has a "duty to fund its municipal pension plan," and the failure to provide for the MMO in its budget, or to pay the full amount of the MMO, may be remedied by the institution of legal proceedings for mandamus.

In accordance with Pennsylvania law and Act 205, the City uses the entry age normal actuarial funding method, whereby "normal cost" (associated with active employees only) is the present value of the benefits that the City expects to become payable in the future distributed evenly as a percent of expected payroll from the age of first entry into the plan to the expected age at retirement. The City's share of such normal cost (to which the City adds the Plan's administrative expenses) is reduced by member contributions. The term "level" means that the contribution rate for the normal cost, expressed as a percentage of active member payroll, is expected to remain relatively level over time.

The City has budgeted and paid at least the full MMO amount since such requirement was established, and more specifically, prior to Fiscal Year 2005 the City had been contributing to the Municipal Pension Plan the greater amount as calculated pursuant to the City Funding Policy which was implemented before Act 205 was effective, as described below. Beginning in Fiscal Year 2018, the City is contributing under the Revenue Recognition Policy (defined below), which requires higher contribution amounts than under the MMO. Payment of the MMO is a condition for receipt of the Commonwealth contribution to the Municipal Pension Fund. See Table 29.

Act 205 was amended in 2009 by Pa. P.L. 396, No. 44 ("Act 44") to authorize the City to: (i) "fresh start" the amortization of the UAL as of July 1, 2009 by a level annual dollar amount over 30 years ending June 30, 2039; and (ii) revise the amortization periods for actuarial gains and losses and assumption changes in accordance with Act 44, as described below under "UAL and its Calculation – Actuarial Valuations." In addition, Act 44 authorized the City to defer, and the City did defer, $150 million of the MMO otherwise payable in Fiscal Year 2010, and $80 million of the MMO otherwise payable in Fiscal Year 2011, subject to repayment of the deferred amounts by June 30, 2014. The City repaid the aggregate deferred amount of $230 million, together with interest at the then-assumed interest rate of 8.25%, in Fiscal Year 2013. See Table 29. Because the final amortization date is fixed, if all actuarial assumptions are achieved, the unfunded liability would decline to zero as of the final amortization date. To the extent future experience differs from the assumptions used to establish the 30-year fixed amortization payment schedule, new amortization bases attributable to a particular year's difference would be established and amortized over their own 20-year schedule.

GASB; City Funding Policy. Governmental Accounting Standards Board ("GASB") Statement No. 27, "Accounting for Pensions by State and Local Governmental Employers" ("GASB 27"), applied to the City for Fiscal Years beginning prior to July 1, 2014. For the Fiscal Year beginning July 1, 2014, GASB Statement No. 68 ("GASB 68"), which amends GASB 27 in several significant respects, applies. GASB 27 defined an "annual required contribution" ("ARC") as that amount sufficient to pay (i) the normal cost and (ii) the amortization of UAL, and provides that the maximum acceptable amortization period is 30 years (for the initial 10 years of implementation, 1996-2006, a 40-year amortization period was permitted). GASB 27 did not establish funding requirements for the City but rather was an accounting and financial reporting standard. GASB 68 does not require the calculation of an ARC but does require the City to include as a liability on its balance sheet the City's "net pension liability," as defined by GASB 68. The City has been funding the Municipal Pension Fund since Fiscal Year 2003 based on the MMO (at a minimum), including the deferral permitted by Act 44. See Table 29 below.

The City, prior to Fiscal Year 2005, had been funding the Municipal Pension Fund in accordance with what the City referred to as the "City Funding Policy." That reference was used and continues to be used in the Actuarial Reports. Under the City Funding Policy, the UAL as of July 1, 1985 was to be amortized over 34 years ending June 30, 2019, with payments increasing at 3.3% per year, the assumed payroll growth. This initial UAL base under the City's Funding Policy has now been fully amortized. Other changes in the unfunded actuarial liability were amortized in level-dollar payments over various periods as prescribed in Act 205. In 1999, the City issued pension funding bonds, the proceeds of which were deposited directly into the Municipal Pension Fund to pay down its UAL. See "– Annual Contributions – *Annual Debt Service Payments on the Pension Bonds*" below.

Revenue Recognition Policy. The City follows a policy (the "Revenue Recognition Policy") to contribute each year to the Municipal Pension Fund an amount in excess of the MMO. Aspects of such policy are mandated by City ordinance or labor agreements, as applicable. The determination for such additional funding is based on not including (i) the portion of the amounts generated by the increase in the Sales Tax rate that became effective on July 1, 2014 and are required by Act 205 to be deposited to the Municipal Pension Fund (see "REVENUES OF THE CITY – Sales and Use Tax"), (ii) contributions to be made by City employees that are under Plan 16 (described above in the text that immediately follows Table 19), and (iii) additional member contributions for current and future members in Plan 87 Police, Plan 87 Fire, and all Municipal Plans in the actuarial asset value when determining the annual contribution obligation.

The amounts projected by the City in the Twenty-Ninth Five-Year Plan (and for Fiscal Year 2020, the FY 2020 Fourth Quarter QCMR) to be deposited from Sales Tax revenue into the Municipal Pension Fund, for the six Fiscal Years 2020-2025, respectively, are as follows: $37.1 million; $27.3 million; $39.3 million; $47.2 million; $52.9 million; and $58.6 million.

UAL and its Calculation

According to the July 1, 2019 Valuation, the funded ratio (the valuation of assets available for benefits to total actuarial liability) of the Municipal Pension Fund as of July 1, 2019 was 49.7% and the Municipal Pension Fund had an unfunded actuarial liability ("UAL") of $5.931 billion. The UAL is the difference between total actuarial liability ($11.783 billion as of July 1, 2019) and the actuarial value of assets ($5.852 billion as of July 1, 2019).

Key Actuarial Assumptions. In accordance with Act 205, the actuarial assumptions must be, in the judgment of both Cheiron (the independent consulting actuary for the Municipal Pension Fund) and the City, "the best available estimate of future occurrences in the case of each assumption." The assumed investment return rate used in the July 1, 2019 Valuation was 7.55% a year (which includes an inflation assumption of 2.75%), net of administrative expenses, compounded annually. For the prior actuarial valuation, the assumed investment return rate was 7.60%. See Table 24 for the assumed rates of return for Fiscal Years 2010 to 2019. The 7.60% was used to establish the MMO payment for Fiscal Year 2019; 7.55% will be used to establish the MMO payment for Fiscal Year 2020; 7.55% will be used to establish the MMO payment for Fiscal Year 2021.

Other key actuarial assumptions in the July 1, 2019 Valuation include the following: (i) total annual payroll growth of 3.30%, (ii) annual administrative expenses assumed to increase 3.30% per year, (iii) to recognize the expense of the benefits payable under the Pension Adjustment Fund (as described below), actuarial liabilities were increased by 0.54%, based on the statistical average expected value of the benefits, (iv) a vested employee who terminates will elect a pension deferred to service retirement age so long as their age plus years of service at termination are greater than or equal to 55 (45 for police and fire employees in the 1967 Plan), (v) for municipal and elected members, 65% of all disabilities are ordinary and 35% are service-connected, and (vi) for police and fire members, 25% of all disabilities are ordinary and 75% are service-connected.

"Smoothing Methodology". The Municipal Retirement System uses an actuarial value of assets to calculate its annual pension contribution, using an asset "smoothing method" to dampen the volatility in asset values that could occur because of fluctuations in market conditions. The Municipal Retirement System used a five-year smoothing prior to Fiscal Year 2009, and beginning with Fiscal Year 2009 began employing a ten-year smoothing. Using the ten-year smoothing methodology, investment returns in excess of or below the assumed rate are prospectively distributed in equal amounts over a ten-year period, subject to the requirement that the actuarial value of assets will be adjusted, if necessary, to ensure that the actuarial value of assets will never be less than 80% of the market value of the assets, nor greater than 120% of the market value of the assets. The actuarial value of assets as of July 1, 2019, was approximately 102.9% of the market value of the assets, as compared to 101.1% as of July 1, 2018.

Actuarial Valuations. The Pension Board engages an independent consulting actuary (currently Cheiron) to prepare annually an actuarial valuation report. Act 205, as amended by Act 44, establishes certain parameters for the actuarial valuation report, including: (i) use of the entry age normal actuarial cost method; (ii) that the report shall contain: (a) actuarial exhibits, financial exhibits, and demographic exhibits; (b) an exhibit of normal costs expressed as a percentage of the future covered payroll of the active membership in the Municipal Pension Plan; and (c) an exhibit of the actuarial liability of the Municipal Pension Plan; and (iii) that changes in the actuarial liability be amortized in level-dollar payments as follows: (a) actuarial gains and losses be amortized over 20 years beginning July 1, 2009 (prior to July 1, 2009, gains and losses were amortized over 15 years); (b) assumption changes be amortized over 15 years beginning July 1, 2010 (prior to July 1, 2010, assumption changes were amortized over 20 years); (c) plan changes for active members be amortized over 10 years; (d) plan changes for inactive members be amortized over one year; and (e) plan changes mandated by the Commonwealth be amortized over 20 years.

Act 205 further requires that an experience study be conducted at least every four years, and cover the five-year period ending as of the end of the plan year preceding the plan year for which the actuarial valuation report is filed. The most recent Experience Study was prepared by Cheiron in March 2018 for the period July 1, 2012 – June 30, 2017. The actuarial and demographic assumptions that were adopted by the Pension Board in response to such Experience Study continue to be employed for the July 1, 2019 Valuation (which is used to determine the June 30, 2021 fiscal year end MMO, City Funding

Policy, and Revenue Recognition Policy contributions). Details of these assumption changes and the experience of the Municipal Pension Plan can be found in the *City of Philadelphia Municipal Retirement System Experience Study Results for the period covering July 1, 2012 – June 30, 2017,* available at the Investor Information section of the City's Investor Website.

Pension Adjustment Fund

Pursuant to § 22-311 of the Philadelphia Code, the City directed the Pension Board to establish a Pension Adjustment Fund ("PAF") on July 1, 1999, and further directed the Pension Board to determine, effective June 30, 2000 and each Fiscal Year thereafter, whether there are "excess earnings" as defined available to be credited to the PAF. The Pension Board's determination is to be based upon the actuary's certification using the "adjusted market value of assets valuation method" as defined in § 22-311. Although the portion of the assets attributed to the PAF is not segregated from the assets of the Municipal Pension Fund, the Philadelphia Code provides that the "purpose of the Pension Adjustment Fund is for the distribution of benefits as determined by the Board for retirees, beneficiaries or survivors [and] [t]he Board shall make timely, regular and sufficient distributions from the Pension Adjustment Fund in order to maximize the benefits of retirees, beneficiaries or survivors." Distributions are to be made "without delay" no later than six months after the end of each Fiscal Year. The PAF was established, in part, because the Municipal Retirement System does not provide annual cost-of-living increases to retirees or beneficiaries. At the time the PAF was established, distributions from the PAF were subject to the restriction that the actuarial funded ratio using the "adjusted market value of assets" be not less than such ratio as of July 1, 1999 (76.7%). That restriction was deleted in 2007.

The amount to be credited to the PAF is 50% of the "excess earnings" that are between one percent (1%) and six percent (6%) above the actuarial assumed investment rate. Earnings in excess of six percent (6%) of the actuarial assumed investment rate remain in the Municipal Pension Fund. Although the Pension Board utilizes a ten-year smoothing methodology, as explained above, for the actuarial valuation of assets for funding and determination of the MMO, § 22-311 provides for a five-year smoothing to determine the amount to be credited to the PAF. The actuary determined that for the Fiscal Year ended June 30, 2019, there were no "excess earnings" as defined to be credited to the PAF. The Pension Board transfers to the PAF the full amount calculated by the actuary as being available in any year for transfer within six months of the Pension Board designating the amount to be transferred.

Transfers to the PAF and the resultant additional distributions to retirees result in removing assets from the Municipal Pension Plan. To account for the possibility of such transfers, and as an alternative to adjusting the assumed investment return rate to reflect such possibility, the actuary applies a load of 0.54% to the calculated actuarial liability as part of the funding requirement and MMO. Such calculation was utilized for the first time in the July 1, 2013 actuarial valuation.

The market value of assets as used under this caption, "PENSION SYSTEM," represents the value of the assets if they were liquidated on the valuation date and this value includes the PAF (except as otherwise indicated in certain tables), although the PAF is not available for funding purposes. The actuarial value of assets does not include the PAF.

Rates of Return; Asset Values; Changes in Plan Net Position

Rates of Return. The following table sets forth for the Fiscal Years 2010-2019 the market value of assets internal rate of return and actuarial value of assets internal rate of return experienced by the Municipal Pension Fund, and the assumed rate of return. The 5-year and 10-year annual average returns as of June 30, 2019, were 4.81% and 8.25%, respectively, on a market value basis.

Table 24
Municipal Pension Fund
Annual Rates of Return

Year Ending June 30,	Market Value	Actuarial Value[1]	Assumed Rate of Return
2010	13.8%	12.9%	8.25%
2011	19.4%	9.9%	8.15%
2012	0.2%	2.4%	8.10%
2013	10.9%	5.1%	7.95%
2014	15.7%	4.8%	7.85%
2015	0.3%	5.8%	7.80%
2016	-3.2%	4.5%	7.75%
2017	13.1%	4.4%	7.70%
2018	9.0%	5.1%	7.65%
2019	5.7%	7.6%	7.60%

Source: July 1, 2019 Valuation.

(1) Net of PAF. See "Pension Adjustment Fund" above. The actuarial values reflect a ten-year smoothing.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Asset Values. The following table sets forth, as of the July 1 actuarial valuation date for the years 2010-2019, the actuarial and market values of assets in the Municipal Pension Fund and the actuarial value as a percentage of market value.

Table 25
Actuarial Value of Assets vs. Market Value of Net Assets
(Dollar Amounts in Millions of USD)

Actuarial Valuation Date (July 1)	Actuarial Value of Assets[1]	Market Value of Net Assets[1]	Actuarial Value as a Percentage of Market Value
2010[2]	$4,380.9	$3,650.7	120.0%
2011[2]	$4,719.1	$4,259.2	110.8%
2012[2]	$4,716.8	$4,151.8	113.6%
2013	$4,799.3	$4,444.1	108.0%
2014	$4,814.9	$4,854.3	99.2%
2015	$4,863.4	$4,636.1	104.9%
2016	$4,936.0	$4,350.8	113.5%
2017	$5,108.6	$4,873.0	104.8%
2018	$5,397.4	$5,340.1	101.1%
2019	$5,852.5	$5,687.2	102.9%

Source: July 1, 2019 Valuation for Actuarial Value of Assets; 2010-2019 Actuarial Reports for Market Value of Net Assets.

(1) For purposes of this table, the Market Value of Net Assets excludes the PAF, which as of June 30, 2019 equaled $1.225 million. The Actuarial Value of Assets excludes that portion of the Municipal Pension Fund that is allocated to the PAF. The actuarial values reflect a ten-year smoothing.

(2) The July 1, 2010 actuarial and market values of assets include the $150 million deferred contribution from Fiscal Year 2010, and the July 1, 2011 and July 1, 2012 actuarial and market values of assets include the total deferred contribution of $230 million. See Table 29 below.

Changes in Plan Net Position. The following table sets forth, for the Fiscal Years 2015-2019, the additions, including employee (member) contributions, City contributions (including contributions from the Commonwealth), investment income and miscellaneous income, and deductions, including benefit payments and administration expenses, for the Municipal Pension Fund. Debt service payments on pension funding bonds (as described below at "Annual Contributions – *Annual Debt Service Payments on the Pension Bonds*") are made from the City's General Fund, Water Operating Fund, and Aviation Operating Fund, but are not made from the Municipal Pension Fund, and therefore are not included in Table 26. In those years in which the investment income is less than anticipated, the Municipal Pension Fund may experience negative changes (total deductions greater than total additions), which, as the table reflects, did occur in Fiscal Years 2015 and 2016. Furthermore, if unrealized gains are excluded from Table 26, resulting in a comparison of cash actually received against actual cash outlays, it results in a negative cash flow in Fiscal Years 2015-2017, which is typical of a mature retirement system. In Fiscal Years 2018-2019, there was a positive cash flow.

Contributions from the Commonwealth are provided pursuant to the provisions of Act 205. Any such contributions are required to be used to defray the cost of the City's pension system. The amounts contributed by the Commonwealth for each of the last ten Fiscal Years are set forth in Table 29 below. The contributions from the Commonwealth are capped pursuant to Act 205, which provides that "[n]o municipality shall be entitled to receive an allocation of general municipal pension system State aid in an amount greater that 25% of the total amount of the general municipal pension system State aid available."

Employee (member) contribution amounts reflect contribution rates as a percent of pay, which for the plan year beginning July 1, 2019, vary from 6.00% to 8.50% for police and fire employees, and from 2.37% to 7.00% for municipal employees excluding elected officials. These rates include the increases for police employees effective July 1, 2017 resulting from the FOP Lodge No. 5 and IAFF Local No. 22 Labor Contracts. Such contracts increased member contributions for current police officers in Plan 87 and Plan 10 by 0.92% effective July 1, 2017 and an additional 0.92% effective July 1, 2018. For new police officers and fire fighters hired or rehired on or after July 1, 2017, the member contribution rate is increased by 2.5% over the rate which would otherwise be in effect as of July 1, 2017. The rates also include the increases in contributions for certain municipal employees and elected officials currently in Plans 67, 87 and 87 Prime and elected officials as required by legislation. This legislation called for employees in these groups to pay an additional 0.5% of compensation from January 1, 2015 to December 31, 2015 and an additional 1.0% from January 1, 2016 onwards. New employees in these groups entering Plan 87 Municipal Prime will pay an additional 1.0% of compensation which is included in the table below. Finally, these rates do not include the additional tiered contributions paid by current and future municipal employees based on their level of compensation.

Table 26
Changes in Net Position of the Municipal Pension Fund
Fiscal Years 2015-2019
(Amounts in Thousands of USD)

	2015	2016	2017	2018	2019
Beginning Net Assets					
(Market Value)[1]	$4,916,705	$4,674,252	$4,357,975	$4,874,075	$5,341,286
Additions					
- Member Contributions	58,658	67,055	73,607	83,289	99,180
- City Contributions[2]	577,195	660,247	706,237	781,984	797,806
- Investment Income[3]	11,790	(147,424)	563,372	438,515	301,749
- Miscellaneous Income[4]	2,049	1,742	3,253	1,812	1,987
Total	$649,692	$581,620	$1,346,469	$1,305,600	$1,200,721
Deductions					
- Benefits and Refunds	(881,666)	(889,343)	(821,495)	(828,266)	(842,469)
- Administration	(10,479)	(8,554)	(8,874)	(10,123)	(11,155)
Total	$(892,145)	$(897,897)	$(830,369)	$(838,389)	$(853,624)
Ending Net Assets					
(Market Value)	$4,674,252	$4,357,975	$4,874,075	$5,341,286	$5,688,383

Source: Municipal Pension Fund's audited financial statements.

(1) Includes the PAF, which is not available for funding purposes.

(2) City Contributions include pension contributions from the Commonwealth. See Table 29.

(3) Investment income is shown net of fees and expenses, and includes interest and dividend income, net appreciation (depreciation) in fair value of investments, and net gains realized upon the sale of investments.

(4) Miscellaneous income includes securities lending and other miscellaneous revenues.

Funded Status of the Municipal Pension Fund

The following two tables set forth, as of the July 1 actuarial valuation date for the years 2010-2019, the asset value, the actuarial liability, the UAL, the funded ratio, covered payroll and UAL, as a percentage of covered payroll for the Municipal Pension Fund on actuarial and market value bases, respectively.

Table 27
Schedule of Funding Progress (Actuarial Value)
(Dollar Amounts in Millions of USD)

Actuarial Valuation Date (July 1)	Actuarial Value of Assets[1] (a)	Actuarial Liability (b)	UAL (Actuarial Value) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAL as a % of Covered Payroll [(b-a)/c]
2010	$4,380.9	$9,317.0	$4,936.1	47.0%	$1,421.2	347.3%
2011	$4,719.1[2]	$9,487.5	$4,768.4	49.7%	$1,371.3	347.7%
2012	$4,716.8[2]	$9,799.9	$5,083.1	48.1%	$1,372.2	370.4%
2013	$4,799.3	$10,126.2	$5,326.9	47.4%	$1,429.7	372.6%
2014	$4,814.9	$10,521.8	$5,706.9	45.8%	$1,495.4	381.6%
2015	$4,863.4	$10,800.4	$5,937.0	45.0%	$1,597.8	371.6%
2016	$4,936.0	$11,024.8	$6,088.8	44.8%	$1,676.5	363.2%
2017	$5,108.6	$11,275.7	$6,167.1	45.3%	$1,744.7	353.5%
2018	$5,397.4	$11,521.0	$6,123.5	46.8%	$1,805.4	339.2%
2019	$5,852.5	$11,783.1	$5,930.6	49.7%	$1,842.6	321.9%

Source: July 1, 2019 Valuation.

(1) The July 1, 2010 Actuarial Value of Assets includes the $150 million deferred contribution from Fiscal Year 2010 and each of the July 1, 2011 and July 1, 2012 Actuarial Value of Assets includes the total deferred contribution of $230 million.

(2) Reflects the assumed rate of return on deferred contributions at the time of the deferral.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Table 28
Schedule of Funding Progress (Market Value)
(Dollar Amounts in Millions of USD)

Actuarial Valuation Date (July 1)	Market Value of Net Assets[1] (a)	Actuarial Liability (b)	UAL (Market Value) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAL as a % of Covered Payroll [(b-a)/c]
2010	$3,650.7	$9,317.0	$5,666.3	39.2%	$1,421.2	398.7%
2011	$4,259.2	$9,487.5	$5,228.3	44.9%	$1,371.3	381.3%
2012	$4,151.8	$9,799.9	$5,648.1	42.4%	$1,372.2	411.6%
2013	$4,444.1	$10,126.2	$5,682.1	43.9%	$1,429.7	397.4%
2014	$4,854.3	$10,521.8	$5,667.6	46.1%	$1,495.4	379.0%
2015	$4,636.1[2]	$10,800.4	$6,164.3	42.9%	$1,597.8	385.8%
2016	$4,350.8[2]	$11,024.8	$6,674.0	39.5%	$1,676.5	398.1%
2017	$4,873.0[2]	$11,275.7	$6,402.7	43.2%	$1,744.7	367.0%
2018	$5,340.1[2]	$11,521.0	$6,180.9	46.4%	$1,805.4	342.4%
2019	$5,687.2[2]	$11,783.1	$6,095.9	48.3%	$1,842.6	330.8%

Source: 2010-2019 Actuarial Valuation Reports.

(1) The July 1, 2010 Market Value of Net Assets includes the $150 million deferred contribution from Fiscal Year 2010 and each of the July 1, 2011 and July 1, 2012 Market Value of Net Assets includes the total deferred contribution of $230 million.

(2) For purposes of this table, the Market Value of Net Assets excludes the PAF, which as of June 30, 2015 equaled $38,198,762; as of June 30, 2016 equaled $7,223,000; as of June 30, 2017 equaled $1,097,499; as of June 30, 2018 equaled $1,160,247; and as of June 30, 2019 equaled $1,225,114.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Annual Contributions

Annual Municipal Pension Contributions

Table 29 shows the components of the City's annual pension contributions to the Municipal Pension Fund for the Fiscal Years 2010-2019.

Table 29
Total Contribution to Municipal Pension Fund
(Dollar Amounts in Millions of USD)

Fiscal Year	General Fund Contribution (A)	Commonwealth Contribution (B)	Aggregate General Fund Contribution (A+B)	Water Fund Contribution	Aviation Fund Contribution	Grants Funding and Other Funds Contribution[1]	Contributions from Quasi-governmental Agencies	Pension Bond Proceeds	Total Contribution (C)	MMO (D)	MMO (Deferred) Makeup Payments	% of MMO Contributed (C/D)
2010	$190.8[2]	$59.2	$250.0	$25.1	$11.6	$10.8	$15.1	$0.0	$312.6[2]	$447.4	$(150.0)[3]	100.0%[4]
2011	$325.8[2]	$61.8	$387.6	$37.7	$17.1	$13.6	$14.2	$0.0	$470.2[2]	$511.0	$(80.0)[3]	100.0%[4]
2012	$352.7	$95.0	$447.7	$43.8	$20.6	$27.4	$16.2	$0.0	$555.7	$507.0	-	109.7%
2013	$356.5	$65.7	$422.2	$41.4	$20.3	$27.2	$18.1	$252.6[3]	$781.8	$492.0	$230.0[3]	100.0%[4]
2014	$365.8	$69.6	$435.4	$45.5	$22.5	$30.0	$19.8	$0.0	$553.2	$523.4	-	105.7%
2015	$388.5	$62.0	$450.5	$48.3	$23.9	$33.4	$21.1	$0.0	$577.2	$556.0	-	103.8%
2016	$449.6	$62.6	$512.2	$55.1	$27.1	$34.8	$31.0	$0.0	$660.2	$595.0	-	110.0%
2017	$487.0	$68.7	$555.7	$61.0	$28.8	$33.3	$27.4	$0.0	$706.2	$629.6	-	112.2%
2018	$559.7	$72.4	$632.1	$62.7	$28.8	$32.5	$25.9	$0.0	$782.0	$661.3	-	118.3%
2019	$567.7	$74.8	$642.5	$64.7	$31.6	$33.8	$25.2	$0.0	$797.8	$668.3	-	119.4%

(1) Other Funds Contributions represents contributions to the Municipal Pension Fund from the City's Special Gasoline Tax Fund, Community Development Block Grant Fund, Municipal Pension Fund, and Parks and Recreation Programs and Facilities Fund.

(2) Reflects the actual cash outlays for Fiscal Year 2010 and Fiscal Year 2011, which do not include the deferred contributions authorized pursuant to Act 44. See "– Funding Requirements; Funding Standards – Pennsylvania Law" above for a discussion of pension contribution deferrals authorized pursuant to Act 44.

(3) As authorized pursuant to Act 44, the City deferred payments to the Municipal Pension Fund of $150 million in fiscal year 2010 and $80 million in fiscal year 2011. Those amounts were repaid in fiscal year 2013, in which year the City made a contribution of $252.6 million to the Municipal Pension Fund, consisting of $230 million of proceeds of Pension Bonds that were issued in October 2012 and $22.6 million in refunding savings from a refunding Pension Bond financing in December 2012. See "– *Annual Debt Service Payments on the Pension Bonds*" below.

(4) Act 205 directs the Actuary, in performing the actuarial valuations, to disregard deferrals, and therefore for ease of presentation 100.0% is reflected in this column for both the years in which the deferrals occurred and the year in which the makeup payment was made.

Annual Debt Service Payments on the Pension Bonds

Pension funding bonds ("Pension Bonds") were initially issued in Fiscal Year 1999 (the "1999 Pension Bonds"), at the request of the City, by PAID. Debt service on the Pension Bonds is payable pursuant to a Service Agreement between the City and PAID. The Service Agreement provides that the City is obligated to pay a service fee from its current revenues and the City covenanted in the agreement to include the annual amount in its operating budget and to make appropriations in such amounts as are required. If the City's revenues are insufficient to pay the full service fee in any Fiscal Year as the same becomes due and payable, the City has covenanted to include amounts not so paid in its operating budget for the ensuing Fiscal Year.

The 1999 Pension Bonds were issued in the principal amount of $1.3 billion, and the net proceeds were used, together with other funds of the City, to make a contribution in Fiscal Year 1999 to the Municipal Pension Fund in the amount of approximately $1.5 billion.

In October 2012, PAID, at the request of the City, issued Pension Bonds in the principal amount of $231.2 million, the proceeds of which were used principally to make the $230 million repayment of deferred contributions to the Municipal Pension Fund reflected in Table 29 above. These bonds had maturities of April 1, 2013 and 2014, and have been repaid.

In December 2012, PAID, at the request of the City, issued Pension Bonds in the approximate principal amount of $300 million, the proceeds of which were used to current refund a portion of the 1999 Pension Bonds. The refunding generated savings of approximately $22.6 million, which the City deposited into the Municipal Pension Fund.

Table 30 shows the components of the City's annual debt service payments on the Pension Bonds for the Fiscal Years 2010-2019.

Table 30
Total Debt Service Payments on Pension Bonds
(Amounts in Millions of USD)

Fiscal Year	General Fund Payment	Water Fund Payment	Aviation Fund Payment	Other Funds Payment[1]	Grants Funding	Total Payment
2010	$96.7	$7.6	$3.4	$0.6	$1.5	$109.8
2011	$97.7	$10.3	$4.6	$0.8	$1.5	$114.9
2012	$100.1	$10.7	$4.8	$0.7	$3.4	$119.7
2013[2]	$196.6	$21.5	$10.1	$1.3	$3.8	$233.3
2014[2]	$211.0	$23.6	$11.2	$1.4	$3.7	$250.9
2015	$107.7	$12.6	$5.9	$0.8	$4.0	$131.0
2016	$109.9	$13.7	$6.4	$0.9	$3.8	$134.7
2017	$109.5	$14.5	$6.6	$0.9	$3.3	$134.8
2018	$110.1	$14.3	$6.3	$0.9	$3.1	$134.7
2019	$109.8	$14.2	$6.6	$1.1	$3.0	$134.7

(1) Other Funds Payments represents the allocable portion of debt service payments on the City's Pension Bonds from the City's Community Development Block Grant Fund and Municipal Pension Fund.

(2) The increase in debt service payments in fiscal years 2013 and 2014 over the fiscal year 2012 amounts reflect the debt service payments on the Pension Bonds that were issued in October 2012.

Annual Pension Costs of the General Fund

Table 31 shows the annual pension costs of the General Fund for the Fiscal Years 2010-2019, being the sum of the General Fund Contribution to the Municipal Pension Fund (column (A) in Table 29 above) and the General Fund debt service payments on Pension Bonds (Table 30 above).

Table 31
Annual Pension Costs of the General Fund
(Amounts in Millions of USD)

Fiscal Year	General Fund Pension Fund Contribution (A)[1]	General Fund Pension Bond Debt Service Payment (B)	Annual Pension Costs (A+B)	Total General Fund Expenditures (C)	General Fund portion of Annual Pension Costs as % of Total General Fund Expenditures (A+B) / C
2010	$190.8	$96.7	$287.5	$3,653.73	7.87%
2011	$325.8	$97.7	$423.5	$3,785.29	11.19%
2012	$352.7	$100.1	$452.8	$3,484.88	12.99%
2013	$356.5	$196.6	$553.1	$3,613.27	15.31%
2014	$365.8	$211.0	$576.8	$3,886.56	14.84%
2015	$388.5	$107.7	$496.2	$3,831.51	12.95%
2016	$449.6	$109.9	$559.5	$4,015.80	13.93%
2017	$487.0	$109.5	$596.5	$4,139.80	14.41%
2018	$559.7	$110.1	$669.8	$4,402.85	15.21%
2019	$567.7	$109.8	$677.5	$4,772.39	14.20%

(1) Does not include Commonwealth contribution. See Table 29.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

The following table shows the annual City contribution to the Municipal Pension Fund as a percentage of the covered employee payroll.

Table 32
Annual City Contribution as % of Covered Employee Payroll
(Dollar Amounts in Thousands of USD)

Fiscal Year	Annual City Contribution	Fiscal Year Covered Employee Payroll(1)	ACC as % of Payroll
2010	$312,556	$1,421,151	21.99%
2011	$470,155	$1,371,274	34.29%
2012	$555,690	$1,372,174	40.50%
2013	$781,823	$1,429,723	54.68%
2014	$553,179	$1,495,421	36.99%
2015	$577,195	$1,597,849	36.12%
2016	$660,247	$1,676,549	39.38%
2017	$706,237	$1,744,728	40.48%
2018	$781,984	$1,805,400	43.31%
2019	$797,806	$1,842,555	43.30%

Source: Municipal Pension Fund Financial Statements, June 30, 2019.

(1) The definition of "covered-employee payroll" in GASB 68 differs slightly from the "covered payroll" definition in GASB 27. See "PENSION SYSTEM – Funding Requirements; Funding Standards – *GASB; City Funding Policy*."

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Actuarial Projections of Funded Status

Cautionary Note. The information under this subheading, "Actuarial Projections of Funded Status," was prepared by Cheiron. The table below shows a five-year projection of Revenue Recognition Policy ("RRP") payments, Actuarial Value of Assets, Actuarial Liability, UAL, and Funded Ratio. The charts below show projections of funded ratios and City contributions based on the RRP through Fiscal Year 2039. All projections, whether for five years or for twenty years, are subject to actual experience deviating from the underlying assumptions and methods, and that is particularly the case for the charts below for the periods beyond the projections in the five-year table. **Projections and actuarial assessments are "forward looking" statements and are based on assumptions which may not be fully realized in the future and are subject to change, including changes based on the future experience of the City's Municipal Pension Fund and Municipal Pension Plan.**

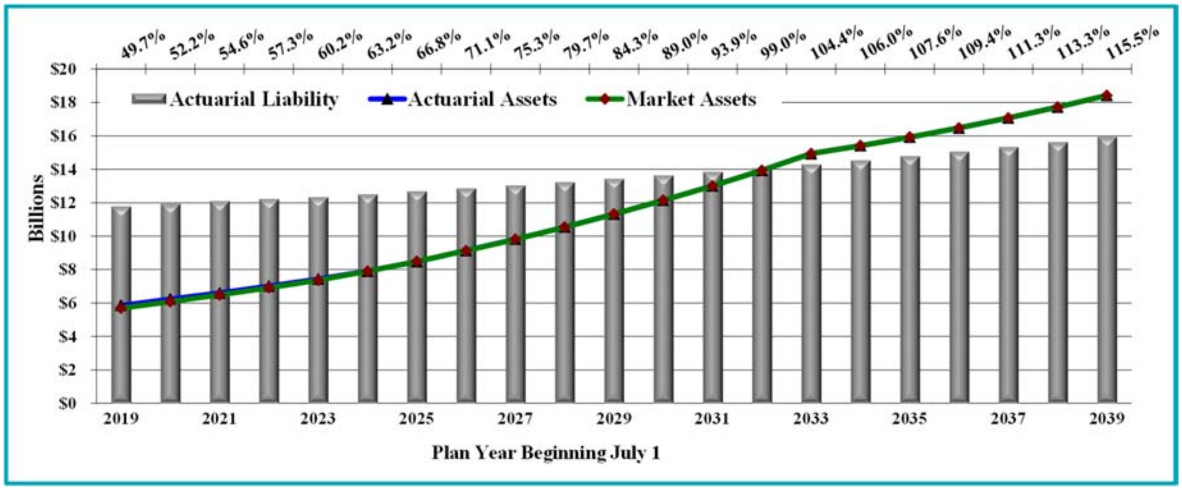
The projections are on the basis that all assumptions as reflected in the July 1, 2019 Valuation are exactly realized and the City makes all future RRP payments on schedule as required by the funding policy adopted by the Pension Board, and must be understood in the context of the assumptions, methods and benefits in effect as described in the July 1, 2019 Valuation. Included among such assumptions are: (i) the rates of return for the Municipal Pension Fund over the projection period will equal 7.55% annually, (ii) RRP contributions will be made each year, (iii) the provisions of Act 205 as amended by Act 44 will remain in force during the projection period, and (iv) the future population changes of the participants in the pension plan will follow the demographic actuarial assumptions with the active population remaining constant in the future. The July 1, 2019 Valuation includes charts reflecting the contributions based on MMO (Baseline projection set 1), and charts reflecting the additional contributions in accordance with the RRP (Baseline projection set 2). The charts provided below reflect the RRP contributions, which are higher than the MMO required under Pennsylvania law. Using the RRP, the System is projected to be 80% funded by 2029 and 100% funded by 2033, three years earlier than under the MMO projections. By the end of the projection period, the System is expected to be funded at 115.5% compared to 103.9% when MMO contributions are made. See the July 1, 2019 Valuation for further discussion of the assumptions and methodologies used by the Actuary in preparing the July 1, 2019 Valuation and the following projections, all of which should be carefully considered in reviewing the projections. The July 1, 2019 Valuation is available for review on the website of the City's Board of Pensions. The table and charts below separately set forth estimates of Sales Tax revenues that will be deposited by the City into the Municipal Pension Fund, which were provided by the City to Cheiron at the time of the valuation and differ from the current estimates or budgeted amounts of such revenues as included in the FY 2020 Fourth Quarter QCMR, the Twenty-Ninth Five-Year Plan or the Fiscal Year 2021 Adopted Budget, as applicable. Cheiron has not analyzed and makes no representation regarding the validity of the sales tax revenue assumptions and estimates provided by the City. See "REVENUES OF THE CITY – Sales and Use Tax." Each of the tables and graphs that follow are part of the July 1, 2019 Valuation and such report should be referenced regarding the underlying benefits, methods, and assumptions utilized in the production of these values.

Five-Year Projection. The following chart provides dollar amounts in millions of USD.

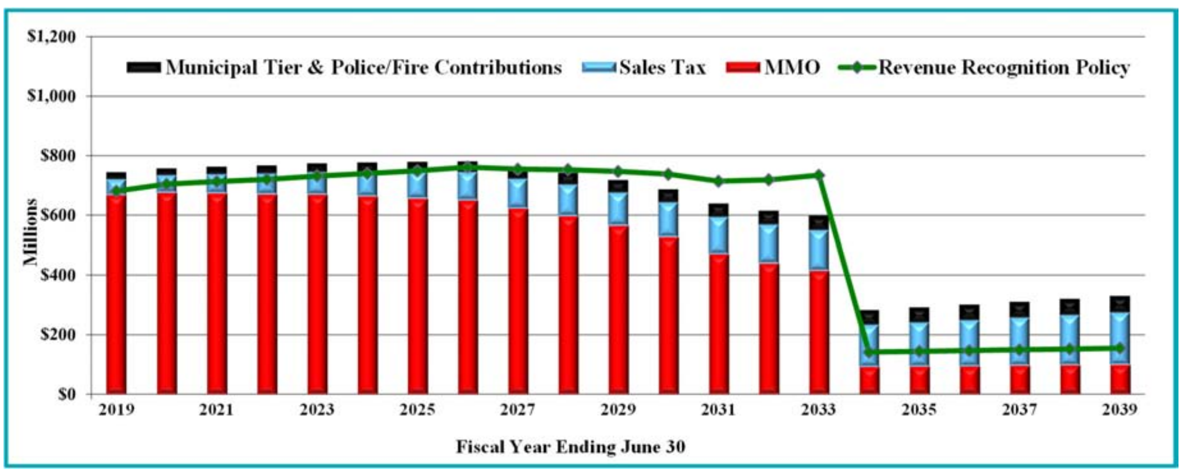
Fiscal Year End	RRP	Sales Tax Contribution	Value of Assets	Actuarial Liability	UAL	Funded Ratio
2020	$ 704.6	$ 58.1	$ 5,852.5	$ 11,783.1	$ 5,930.6	49.7%
2021	713.0	63.7	6,238.1	11,945.8	5,707.7	52.2%
2022	720.5	69.7	6,599.2	12,094.2	5,495.0	54.6%
2023	731.7	75.7	7,010.9	12,226.8	5,216.0	57.3%
2024	740.1	82.2	7,432.3	12,342.6	4,910.4	60.2%
2025	749.4	89.4	7,908.6	12,508.0	4,599.4	63.2%

Twenty-Year Projections.

Funded Ratio Chart based on the RRP:



Expected City Contribution Chart based on the RRP:



OTHER POST-EMPLOYMENT BENEFITS

The City self-administers a single employer, defined benefit plan for post-employment benefits other than pension benefits ("OPEB"), and funds such plan on a pay-as-you-go basis. The City's OPEB plan provides for those persons who retire from the City and are participants in the Municipal Pension Plan: (i) post-employment healthcare benefits for a period of five years following the date of retirement and (ii) lifetime life insurance coverage ($7,500 for firefighters who retired before July 1, 1990; $6,000 for all other retirees). In general, retirees eligible for OPEB are those who terminate their employment after ten years of continuous service to immediately become pensioned under the Municipal Pension Plan.

To provide health care coverage, the City pays a negotiated monthly premium for retirees covered by the union contract for AFSCME DC 33 and is self-insured for all other eligible pre-Medicare retirees. Aside from AFSCME DC 33, the City is responsible for the actual health care cost that is invoiced to the City's unions by their respective vendors. The actual cost can be a combination of self-insured claim expenses, premiums, ancillary services, and administrative expenses. Eligible union represented employees receive five years of coverage through their union's health fund. The City's funding obligation for pre-Medicare retiree benefits is the same as for active employees. Union represented and non-union employees may defer their retiree health coverage until a later date. For some groups, the amount that the City pays for their deferred health care is based on the value of the health benefits at the time the retiree claims the benefits, but for police and fire retirees who retired after an established date, the City pays the cost of five years of coverage when the retiree claims the benefits.

The annual payments made by the City for OPEB for Fiscal Years 2015-2019 are shown in Table 33 below.

Table 33
Annual OPEB Payment
(Amounts in Thousands of USD)

Fiscal Year ended June 30,	Annual OPEB Payment
2015	$95,300
2016	$107,200
2017	$114,800
2018	$96,400
2019	$96,900

Source: See Note IV.3 to the City's audited Financial Statements for such Fiscal Years (as included in the City's CAFRs).

For financial reporting purposes, although the City funds OPEB on a pay-as-you-go basis, it is required to include in its financial statements (in accordance with GASB Statement No. 75) a calculation similar to that performed to calculate its pension liability. Pursuant to GASB 75, an annual required contribution is calculated which, if paid on an ongoing basis, is projected to cover normal costs each year and to amortize any unfunded actuarial liability over a period not to exceed 30 years. As of June 30, 2018, the date of the most recent actuarial valuation, the UAL for the City's OPEB was $1.824 billion, the covered annual payroll was $1.805 billion, and the ratio of UAL to the covered payroll was 101.02%. See Note IV.3 to the City's audited Financial Statements for the Fiscal Year ended June 30, 2019.

PGW PENSION PLAN

General

PGW consists of all the real and personal property owned by the City and used for the acquisition, manufacture, storage, processing, and distribution of gas within the City, and all property, books, and records employed and maintained in connection with the operation, maintenance, and administration of PGW. The City Charter provides for a Gas Commission (the “Gas Commission”) to be constituted and appointed in accordance with the provisions of contracts between the City and the operator of PGW as may from time to time be in effect, or, in the absence of a contract, as may be provided by ordinance. The Gas Commission consists of the City Controller, two members appointed by City Council and two members appointed by the Mayor.

PGW is operated by PFMC, pursuant to an agreement between the City and PFMC dated December 29, 1972, as amended, authorized by ordinances of City Council (the “Management Agreement”). Under the Management Agreement, various aspects of PFMC’s management of PGW are subject to review and approval by the Gas Commission. The Pennsylvania Public Utility Commission (the “PUC”) has the regulatory responsibility for PGW with regard to rates, safety, and customer service.

The City sponsors the Philadelphia Gas Works Pension Plan (the “PGW Pension Plan”), a single employer defined benefit plan, to provide pension benefits for certain current and former PGW employees and other eligible class employees of PFMC and the Gas Commission. As plan sponsor, the City, through its General Fund, could be responsible for plan liabilities if the PGW Pension Plan does not satisfy its payment obligations to PGW retirees. At June 30, 2020, the PGW Pension Plan membership total was 3,673, comprised of: (i) 2,512 retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them; and (ii) 1,162 participants, of which 898 were vested and 264 were nonvested.

PGW Pension Plan

The PGW Pension Plan provides retirement benefits as well as death and disability benefits. Retirement benefits vest after five years of credited service. Retirement payments for vested employees commence: (i) at age 65 and five years of credited service; (ii) age 55 and 15 years of credited service; or (iii) without regard to age, after 30 years of credited service. For covered employees hired prior to May 21, 2011 (union employees) or prior to December 21, 2011 (non-union employees), PGW pays the entire cost of the PGW Pension Plan. Union employees hired on or after May 21, 2011 and non-union employees hired on or after December 21, 2011 have the option to participate in the PGW Pension Plan and contribute 6% of applicable wages, or participate in a plan established in compliance with Section 401(a) of the Internal Revenue Code (deferred compensation plan) and have PGW contribute 5.5% of applicable wages.

PGW is required by statute to contribute the amounts necessary to fund the PGW Pension Plan. The PGW Pension Plan is being funded with contributions by PGW to the Sinking Fund Commission of the City, together with investment earnings and employee contributions required for new hires after December 2011 who elect to participate in the PGW Pension Plan. Benefit and contribution provisions are established by City ordinance and may be amended only as allowed by City ordinance. The pension payments are treated as an operating expense of PGW and are included as a component of PGW’s base rate. The PUC approves all items that are to be included in PGW’s base rates.

Effective October 2015, payments to beneficiaries of the PGW Pension Plan are made by the PGW Retirement Reserve Fund. Prior to October 2015, payments to beneficiaries of the PGW Pension

Plan were made by PGW through its payroll system. The financial statements for the PGW Pension Plan for the fiscal year ended June 30, 2019, show an amount due to PGW of approximately $0.1 million, which represents the cumulative excess of payments made to the retirees and administrative expenses incurred by PGW, over the sum of PGW's required annual contribution and reimbursements received from the PGW Pension Plan.

Pension Costs and Funding

PGW pays an annual amount that is projected to be sufficient to cover its normal cost and an amortization of the PGW Pension Plan's UAL. The following table shows the normal cost, the amortization payment, and the resulting annual required contribution as of the last five actuarial valuation dates for the PGW Pension Plan. Prior to fiscal year 2016, PGW had been using a 20-year open amortization period (and the payments in Table 34 are on the basis of a 20-year open amortization). Commencing in PGW's fiscal year 2016, PGW calculated an annual required contribution on the basis of both a 20-year open amortization period and a 30-year closed amortization period, and contributed the higher of the two amounts. An open amortization period is one that begins again or is recalculated at each actuarial valuation date. With a closed amortization period, the unfunded liability is amortized over a specific number of years to produce a level annual payment. Because the final amortization date is fixed, if all actuarial assumptions are achieved, the unfunded liability would decline to zero as of the final amortization date. To the extent future experience differs from the assumptions used to establish the 30-year fixed amortization payment schedule, new amortization bases attributable to a particular year's difference would be established and amortized over their own 30-year schedule. For PGW fiscal years 2020 and 2021, PGW's annual contribution is anticipated to be $29.3 million. The contribution amount exceeds the suggested level of funding in the actuarial report that was presented to the Sinking Fund Commission for review and is consistent with the contribution amount in PGW's base rates.

Table 34
PGW Pension – Annual Required Contributions
(Dollar Amounts in Thousands of USD)

Calculation of ARC for the 12-month period ended:	Normal Cost[(1)] (A)	Amortization Payment[(1)] (B)	ARC[(1), (2)] (A + B)	Payments to Beneficiaries[(3)]
7/1/2015	$7,859	$18,063	$25,922	$46,917
7/1/2016	$7,992	$20,238	$28,230	$50,447
7/1/2017	$7,717	$19,678	$27,395	$51,376
7/1/2018	$7,760	$20,022	$27,782	$52,627
7/1/2019	$7,282	$18,617	$25,899	$53,893

(1) Source: The Actuarial Valuation Report (Funding) for the Plan Year July 1, 2019 – June 30, 2020 for the PGW Pension Plan.

(2) As described above, until October 2015, PGW did not make a net cash contribution to the PGW Pension Plan, but rather paid beneficiaries through its payroll system, and then was reimbursed by the Plan. Effective October 2015, payments to beneficiaries of the PGW Pension Plan are made by the PGW Retirement Reserve Fund. Each ARC is the sum reflected in this table, but the "Calculated Mid-Year Contribution" in Tables 36 and 37 more closely approximates the actual pension contributions made by PGW.

(3) Sources: For 2015, PGW's CAFR for the fiscal year ended August 31, 2015. For 2016, the audited financial statements for PGW for the fiscal years ended August 31, 2016 and 2015. For 2017, the audited financial statements for PGW for the fiscal years ended August 31, 2017 and 2016. For 2018, the audited financial statements for PGW for the fiscal years ended August 31, 2018 and 2017. For 2019, the audited financial statements for PGW for the fiscal years ended August 31, 2019 and 2018.

Although PGW has paid its annual required contribution each year, the market value of assets for the PGW Pension Plan is less than the actuarial accrued liability, as shown in the next table.

Table 35
Schedule of Pension Funding Progress
(Dollar Amounts in Thousands of USD)[(1)]

Actuarial Valuation Date	Market Value of Assets	Actuarial Liability	UAL (Market Value)	Funded Ratio
7/1/2015	$510,719	$706,704	$195,985	72.27%
7/1/2016	$483,259	$736,078	$252,819	65.65%
7/1/2017	$521,526	$739,872	$218,346	70.49%
7/1/2018	$543,246	$758,069	$214,823	71.66%
7/1/2019	$553,240	$755,782	$202,542	73.20%

(1) Source: The Actuarial Valuation Report (Funding) for the Plan Year July 1, 2019 – June 30, 2020 for the PGW Pension Plan.

The current significant actuarial assumptions for the PGW Pension Plan are: (i) investment return rate of 7.30% compounded annually; (ii) salary increases assumed to reach 4.5% per year; and (iii) retirements that are assumed to occur, for those with 30 or more years of service, at a rate of 15% at ages 55 to 60, 30% at age 61, 50% at ages 62-69, and 100% at age 70 and older.

PGW uses a September 1 – August 31 fiscal year, while the PGW Pension Plan uses a July 1 – June 30 fiscal year (the same as the City's fiscal year). The last five actuarial valuation reports for the PGW Pension Plan utilized a plan year of July 1 to June 30. This is reflected in Table 35 above.

The PGW Pension Plan actuary prepared a separate actuarial valuation report ("GASB 67 Report") for the fiscal year ending June 30, 2019, for purposes of plan reporting information under Governmental Accounting Standards Board Statement No. 67, "Financial Reporting for Pension Plans." The GASB 67 Report shows for the fiscal year ending June 30, 2019, an unfunded liability of approximately $247.2 million (rather than the approximately $202.5 million reflected in Table 35), which results in a funded ratio of 69.11%. In addition, that report provides an interest rate sensitivity, which shows that were the investment rate to be 6.30% (1% lower than the assumed investment rate of 7.30%), the unfunded liability would be approximately $338.4 million.

Projections of Funded Status

The information under this subheading, "Projections of Funded Status," is extracted from tables prepared by Aon Hewitt, as actuary to the PGW Pension Plan, which were included in their "Actuarial Valuation Report (Funding) for the Plan Year July 1, 2019 – June 30, 2020," dated October 10, 2019. The charts show 10-year projections, using both the current amortization method (20-year, open) and the alternative amortization method (30-year, fixed). See "– Pension Costs and Funding" above. Projections are subject to actual experience deviating from the underlying assumptions and methods. **Projections and actuarial assessments are "forward looking" statements and are based upon assumptions that may not be fully realized in the future and are subject to change, including changes based upon the future experience of the PGW Pension Plan.**

Table 36
Schedule of Prospective Funded Status (20-Year Open Amortization)
(Dollar Amounts in Thousands of USD)

Actuarial Valuation Date (July 1)	Actuarial Value of Assets	Actuarial Accrued Liability	UAL (Actuarial Value)	Calculated Mid-Year Contribution(1), (2)	Funded Ratio
2019	$548,997	$755,782	$206,785	$29,227	72.64%
2020	561,303	765,294	203,991	26,472	73.34%
2021	577,462	773,638	196,176	25,601	74.64%
2022	587,183	780,981	193,798	25,263	75.19%
2023	594,998	787,203	192,205	24,911	75.58%
2024	603,173	792,179	189,006	24,347	76.14%
2025	610,629	796,040	185,412	23,905	76.71%
2026	617,480	799,478	181,998	23,558	77.24%
2027	623,944	802,474	178,530	23,001	77.75%
2028	629,894	804,699	174,805	22,486	78.28%

(1) Source: The Actuarial Valuation Report (Funding) for the Plan Year July 1, 2019 – June 30, 2020 for the PGW Pension Plan.

(2) PGW makes monthly contributions to the PGW Retirement Reserve Fund. The actuary's report assumes contributions at the beginning, middle, and end of the plan year. PGW utilizes the mid-year contribution level to approximate the actual funding methodology.

Table 37
Schedule of Prospective Funded Status (30-Year Closed Amortization)
(Dollar Amounts in Thousands of USD)

Actuarial Valuation Date (July 1)	Actuarial Value of Assets	Actuarial Accrued Liability	UAL (Actuarial Value)	Calculated Mid-Year Contribution(1), (2)	Funded Ratio
2019	$548,997	$755,782	$206,785	$29,227	72.64%
2020	561,303	765,294	203,991	24,809	73.34%
2021	575,738	773,638	197,900	24,428	74.42%
2022	584,117	780,981	196,864	24,492	74.79%
2023	590,910	787,203	196,293	24,528	75.06%
2024	598,389	792,179	193,790	24,370	75.54%
2025	605,520	796,040	190,521	24,333	76.07%
2026	612,442	799,478	187,037	24,381	76.61%
2027	619,391	802,474	183,083	24,214	77.19%
2028	626,266	804,699	178,433	24,087	77.83%

(1) Source: The Actuarial Valuation Report (Funding) for the Plan Year July 1, 2019 – June 30, 2020 for the PGW Pension Plan.

(2) PGW makes monthly contributions to the PGW Retirement Reserve Fund. The actuary's report assumes contributions at the beginning, middle, and end of the plan year. PGW utilizes the mid-year contribution level to approximate the actual funding methodology.

Additional Information

The City issues a publicly available financial report that includes financial statements and required supplementary information for the PGW Pension Plan. The report is not incorporated into this Official Statement by reference. The report may be obtained by writing to the Office of the Director of Finance of the City.

Further information on the PGW Pension Plan, including with respect to its membership, plan description, funding policy, actuarial assumptions and funded status is contained in the Fiscal Year 2019 CAFR.

PGW OTHER POST-EMPLOYMENT BENEFITS

PGW provides post-employment healthcare and life insurance benefits to its participating retirees and their beneficiaries and dependents. The City, through its General Fund, could be responsible for costs associated with post-employment healthcare and life insurance benefits if PGW fails to satisfy its post-employment benefit obligations.

PGW pays the full cost of medical, basic dental, and prescription coverage for employees who retired prior to December 1, 2001. Employees who retire after December 1, 2001 are provided a choice of three plans at PGW's expense and can elect to pay toward a more expensive plan. Union employees hired prior to May 21, 2011 and non-union employees hired prior to December 21, 2011 who retire from active service to immediately begin receiving pension benefits are entitled to receive lifetime post-retirement medical, prescription, and dental benefits for themselves and, depending on their retirement plan elections, their dependents. Employees hired on or after those dates are entitled to receive only five years of post-retirement benefits. Currently, PGW provides for the cost of healthcare and life insurance benefits for retirees and their beneficiaries on a pay-as-you-go-basis.

As part of a July 29, 2010 rate case settlement (the "Rate Settlement"), which provided for the establishment of an irrevocable trust for the deposit of funds derived through a rider from all customer classes to fund OPEB liabilities (the "OPEB Surcharge"), PGW established the trust in July 2010, and began funding the trust in accordance with the Rate Settlement in September 2010. The Rate Settlement provided that PGW was to deposit $15.0 million annually for an initial five-year period towards the ARC, and an additional $3.5 million annually, which represented a 30-year amortization of the OPEB liability at August 31, 2010. These deposits were funded primarily through increased rates of $16.0 million granted in the Rate Settlement. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal costs each year and amortize any unfunded actuarial liabilities (or funding excesses) over a period of 30 years. In PGW's 2015-2016 Gas Cost Rate ("GCR") proceeding, PGW proposed to continue its OPEB Surcharge. The parties to the GCR proceeding submitted a settlement agreement continuing the OPEB Surcharge at the same level of revenue ($16.0 million annually) and funding ($18.5 million annually). Such settlement agreement was approved by the PUC.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Table 38 provides detail of actual PGW OPEB payments for the last five PGW Fiscal Years and projected PGW OPEB payments for PGW Fiscal Years 2020-2024. Table 39 is the schedule of PGW OPEB funding progress.

Table 38
PGW OPEB Payments
(Amounts in Thousands of USD)

	Calculation of OPEB Payment for the 12-month period ended:	Healthcare	Life Insurance	OPEB Trust	Total
Actual[(1)]					
	8/31/2015	$28,598	$1,749	$18,500	$48,847
	8/31/2016	$29,251	$1,800	$18,500	$49,551
	8/31/2017	$27,788	$1,777	$18,500	$48,065
	8/31/2018	$26,953	$1,661	$18,500	$47,114
	8/31/2019	$27,419	$1,629	$18,500	$47,548
Projections[(2)]					
	12/31/2020	$30,592	$1,700	$18,500	$50,792
	12/31/2021	$32,121	$1,700	$18,500	$52,321
	12/31/2022	$33,445	$1,700	$18,500	$53,645
	12/31/2023	$34,909	$1,700	$18,500	$55,109
	12/31/2024	$35,782	$1,700	$18,500	$55,982

(1) Source: PGW records.
(2) The Actuarial Valuation Report for the PGW Health and Life Insurance Plan for Retired Employees GASB 75 Financial Disclosure Report for the Fiscal Year Ended August 31, 2019.

Table 39
Schedule of OPEB Funding Progress
(Dollar Amounts in Thousands of USD)

Actuarial valuation date	Actuarial value of assets	Actuarial liability	Unfunded actuarial liability	Funded ratio
8/31/2014[(1)]	$90,838	$450,289	$359,451	20.2%
12/31/2015[(1)]	$110,443	$512,527	$402,083	21.6%
12/31/2016[(1)]	$139,624	$489,979	$350,356	28.5%
12/31/2017[(1)]	$180,743	$559,631	$378,888	32.3%
12/31/2018[(1)]	$184,455	$520,533	$336,078	35.4%
12/31/2019[(2)]	$245,361	$493,570	$248,209	49.7%

(1) The Actuarial Valuation Report for the PGW Health and Life Insurance Plan for Retired Employees GASB 75 Financial Disclosure Report for the Fiscal Year Ended August 31, 2019.
(2) The Actuarial Valuation Report for the PGW Health and Life Insurance Plan for Retired Employees December 31, 2019 GASB 74 Actuarial Valuation.

CITY CASH MANAGEMENT AND INVESTMENT POLICIES

General Fund Cash Flow

Because the receipt of revenues into the General Fund generally lags behind expenditures from the General Fund during each Fiscal Year, the City issues notes in anticipation of General Fund revenues and makes payments from the Consolidated Cash Account (described below) to finance its on-going operations.

The timing imbalance referred to above results from a number of factors, principally the following: (i) Real Estate Taxes, BIRT, and Net Profits Taxes are not due until the latter part of the Fiscal Year; and (ii) the City experiences lags in reimbursement from other governmental entities for expenditures initially made by the City in connection with programs funded by other governments.

From time to time, the City issues, or PICA has issued on behalf of the City, tax and revenue anticipation notes. Each issue was repaid when due, prior to the end of the particular Fiscal Year. The City did not issue any tax and revenue anticipation notes in Fiscal Year 2019 or Fiscal Year 2020. In September 2020, the City issued $300 million in tax and revenue anticipation notes, which mature on June 30, 2021.

The repayment of the tax and revenue anticipation notes is funded through cash available in the General Fund.

Consolidated Cash

The Act of the General Assembly of June 25, 1919 (Pa. P.L. 581, No. 274, Art. XVII, § 6) authorizes the City to make temporary inter-fund loans between certain operating and capital funds. The City maintains a Consolidated Cash Account for the purpose of pooling the cash and investments of all City funds, except those which, for legal or contractual reasons, cannot be commingled (e.g., the Municipal Pension Fund, sinking funds, sinking fund reserves, funds of PGW, the Aviation Fund, the Water Fund, and certain other restricted purpose funds). A separate accounting is maintained to record the equity of each member fund that participates in the Consolidated Cash Account. The City manages the Consolidated Cash Account pursuant to the procedures described below.

To the extent that any member fund temporarily experiences the equivalent of a cash deficiency, an advance is made from the Consolidated Cash Account, in an amount necessary to result in a zero balance in the cash equivalent account of the borrowing fund. All subsequent net receipts of a member fund that has negative equity are applied in repayment of the advance.

All advances are made within the budgetary constraints of the borrowing funds. Within the General Fund, this system of inter-fund advances has historically resulted in the temporary use of tax revenues or other operating revenues for capital purposes and the temporary use of capital funds for operating purposes. With the movement of the reimbursable component of DHS activities from the General Fund to the Grants Revenue Fund, a similar system of advances has resulted in the use of tax revenues or other operating revenues in the General Fund to make expenditures from the Grants Revenue Fund, which advances may be outstanding for multiple Fiscal Years, but which are expected to be reimbursed by the Commonwealth.

The City, in addition to maintaining an ongoing cash reconciliation process, is reviewing and reconciling certain unidentified variances in the Consolidated Cash Account. The reconciliation process, in short, reconciles the account balance and activity shown on the records of the bank at which the cash balance of the Consolidated Cash Account is maintained to that shown on the City's records. The City's records were not consistently reconciled for the period of July 1, 2014 – June 30, 2017. The balance in the Consolidated Cash Account on the City's records was higher than the account balance on the bank's records by approximately $40 million, which is attributable principally to unidentified historic variances. The City engaged the services of an auditing firm to undertake a complete reconciliation and resolve the unidentified variances. In January 2019, a final audit report was delivered. The final reported variance was $528,606 and the City has written-off such amount, which completes the reconciliation efforts for the period of July 1, 2014 – June 30, 2017.

Procedures governing the City's cash management operations require the General Fund-related operating fund to borrow initially from the General Fund-related capital fund, and only to the extent there is a deficiency in such fund may the General Fund-related operating fund borrow money from any other funds in the Consolidated Cash Account.

Investment Practices

Cash balances in each of the City's funds are managed to maintain daily liquidity to pay expenses, and to make investments that preserve principal while striving to obtain the maximum rate of return. Pursuant to the City Charter, the City Treasurer is the City official responsible for managing cash collected into the City Treasury. The available cash balances in excess of daily expenses are placed in demand accounts, swept into money market mutual funds, or used to make investments directed by professional investment managers. These investments are held in segregated trust accounts at a separate financial institution. Cash balances related to revenue bonds for water and sewer and the airport are directly deposited and held separately in trust. A fiscal agent manages these cash balances in accordance with the applicable bond documents and the investment practice is guided by administrative direction of the City Treasurer per the Investment Committee and the Investment Policy (as described below). In addition, certain operating cash deposits (such as Community Behavioral Health, Special Gas/County Liquid and "911" surcharge) of the City are restricted by purpose and required to be segregated into accounts in compliance with federal or Commonwealth reporting.

Investment guidelines for the City are embodied in section 19-202 of the Philadelphia Code. In furtherance of these guidelines, as well as Commonwealth and federal legislative guidelines, the Director of Finance adopted a written Investment Policy (the "Policy") that went into effect in August 1994 and was most recently revised in September 2014. The Policy supplements other legal requirements and establishes guiding principles for the overall administration and effective management of all of the City's monetary funds (except the Municipal Pension Fund, the PGW Retirement Reserve Fund, the PGW OPEB Trust and the PGW Workers' Compensation Reserve Fund).

The Policy delineates the authorized investments as authorized by the Philadelphia Code and the funds to which the Policy applies. The authorized investments include U.S. government securities, U.S. treasuries, U.S. agencies, repurchase agreements, commercial paper, corporate bonds, money market mutual funds, obligations of the Commonwealth, collateralized banker's acceptances and certificates of deposit, and collateralized mortgage obligations and pass-through securities directly issued by a U.S. agency or instrumentality, all of investment grade rating or better and with maturity limitations.

U.S. government treasury and agency securities carry no limitation as to the percent of the total portfolio. Repurchase agreements, money market mutual funds, commercial paper, and corporate bonds are limited to investment of no more than 25% of the total portfolio. Obligations of the Commonwealth and collateralized banker's acceptances and certificates of deposit are limited to no more than 15% of the total portfolio. Collateralized mortgage obligations and pass-through securities directly issued by a U.S. agency or instrumentality are limited to no more than 5% of the total portfolio.

U.S. government securities carry no limitation as to the percent of the total portfolio per issuer. U.S. agency securities are limited to no more than 33% of the total portfolio per issuer. Repurchase agreements and money market mutual funds are limited to no more than 10% of the total portfolio per issuer. Commercial paper, corporate bonds, obligations of the Commonwealth, collateralized banker's acceptances and certificates of deposit, and collateralized mortgage obligations and pass-through securities directly issued by a U.S. agency or instrumentality are limited to no more than 3% of the total portfolio per issuer.

The Policy provides for an ad hoc Investment Committee consisting of the Director of Finance, the City Treasurer and one representative each from the Water Department, the Division of Aviation, and PGW. The Investment Committee meets quarterly with each of the investment managers to review each manager's performance to date and to plan for the next quarter. Investment managers are given any changes in investment instructions at these meetings. The Investment Committee approves all modifications to the Policy. The Investment Committee may from time to time review and revise the Policy and does from time to time approve temporary waivers of the restrictions on assets based on cash management needs and recommendations of investment managers.

The Policy expressly forbids the use of any derivative investment product as well as investments in any security whose yield or market value does not follow the normal swings in interest rates. Examples of these types of securities include, but are not limited to: structured notes, floating rate (excluding U.S. Treasury and U.S. agency floating rate securities) or inverse floating rate instruments, securities that could result in zero interest accrual if held to maturity, and mortgage derived interest and principal only strips. The City currently makes no investments in derivatives.

DEBT OF THE CITY

General

Section 12 of Article IX of the Constitution of the Commonwealth provides that the authorized debt of the City "may be increased in such amount that the total debt of [the] City shall not exceed 13.5% of the average of the annual assessed valuations of the taxable realty therein, during the ten years immediately preceding the year in which such increase is made, but [the] City shall not increase its indebtedness to an amount exceeding 3.0% upon such average assessed valuation of realty, without the consent of the electors thereof at a public election held in such manner as shall be provided by law." The Supreme Court of Pennsylvania has held that bond authorizations once approved by the voters need not be reduced as a result of a subsequent decline in the average assessed value of City property. The general obligation debt subject to the limitation described in this paragraph is referred to herein as "Tax-Supported Debt."

The Constitution of the Commonwealth further provides that there shall be excluded from the computation of debt for purposes of the Constitutional debt limit, debt (herein called "Self-Supporting Debt") incurred for revenue-producing capital improvements that may reasonably be expected to yield revenue in excess of operating expenses sufficient to pay interest and sinking fund charges thereon. In the case of general obligation debt, the amount of such Self-Supporting Debt to be so excluded must be determined by the Court of Common Pleas of Philadelphia County upon petition by the City. Self-Supporting Debt is general obligation debt of the City, with the only distinction from Tax-Supported Debt being that it is not used in the calculation of the Constitutional debt limit. Self-Supporting Debt has no lien on any particular revenues.

For purposes of this Official Statement, Tax-Supported Debt and Self-Supporting Debt are referred to collectively as "General Obligation Debt." The term "General Fund-Supported Debt" is comprised of: (i) General Obligation Debt; and (ii) PAID, PMA, PPA, and PRA bonds, which are secured by agreements with the City to appropriate and pay amounts sufficient to pay principal, interest, or redemption price when due on the bonds.

Using the methodology described above, as of June 30, 2020, the Constitutional debt limitation for Tax-Supported Debt was approximately $11,052,153,000. The total amount of authorized debt applicable to the debt limit was $2,591,357,000, including $867,427,000 of authorized but unissued debt, leaving a legal debt margin of $8,823,319,000. Based on the foregoing figures, the calculation of the legal debt margin is as follows:

Table 40
General Obligation Debt Limit
As of June 30, 2020
(Amounts in Thousands of USD)

Authorized, issued and outstanding	$1,723,930
Authorized and unissued	867,427
Total	$2,591,357
Less: Self-Supporting Debt	($352,838)
Less: Serial bonds maturing within a year	(9,685)
Total amount of authorized debt applicable to debt limit	2,228,834
Legal debt limit	11,052,153
Legal debt margin	$8,823,319

As a result of the implementation of the City's AVI, the assessed value of taxable real estate within the City has increased substantially. See "REVENUES OF THE CITY – Real Property Taxes." The $11.052 billion Constitutional debt limit calculation includes seven years of property values certified under the City's AVI program, and three years of property values under the City's former property valuation process. Assuming no increase or decrease in property values used to calculate the Constitutional debt limit in Table 40, the Constitutional debt limit is estimated to be $16.950 billion by 2028.

The City is also empowered by statute to issue revenue bonds and, as of June 30, 2020, had outstanding $2,149,469,340 aggregate principal amount of Water and Wastewater Revenue Bonds ("Water and Wastewater Bonds"), $939,940,000 aggregate principal amount of Gas Works Revenue Bonds, and $1,469,785,000 aggregate principal amount of Airport Revenue Bonds. The City has also enacted ordinances authorizing the issuance of (i) up to $350 million aggregate principal amount in Airport Revenue Commercial Paper Notes for the Division of Aviation, (ii) up to $400 million of Airport Revenue Bonds to finance capital projects for the Division of Aviation, (iii) up to $270 million of Gas Works Revenue Notes to finance working capital and capital projects for PGW, (iv) up to $460 million of Gas Works Revenue Bonds to finance capital projects for PGW (a portion of which is being utilized for certain of the Bonds offered pursuant to this Official Statement), and (v) up to $800 million of Water and Wastewater Revenue Bonds for the Philadelphia Water Department, of which approximately $250.7 million has been issued. For information on recent and upcoming financings, see "OTHER FINANCING RELATED MATTERS – Recent and Upcoming Financings."

As of June 30, 2020, the principal amount of PICA Bonds outstanding was $56,075,000. For more information on PICA Bonds, see "– PICA Bonds" below.

Short-Term Debt

As provided in the PICA Act, the City's tax and revenue anticipation notes are general obligations of the City, but do not constitute debt of the City subject to the limitations of the Constitutional debt limit. The City does not have any tax and revenue anticipation notes outstanding. The City did not issue any tax and revenue anticipation notes in Fiscal Year 2019 or Fiscal Year 2020. In September 2020, the City issued $300 million in tax and revenue anticipation notes, which mature on June 30, 2021. See "OTHER FINANCING RELATED MATTERS – Recent and Upcoming Financings" and "CITY CASH MANAGEMENT AND INVESTMENT POLICIES – General Fund Cash Flow."

Long-Term Debt

The following table presents a synopsis of the bonded debt of the City and its component units as of the date indicated. Of the total balance of the City's general obligation bonds issued and outstanding as of June 30, 2020, approximately 28% is scheduled to mature within five Fiscal Years and approximately 59% is scheduled to mature within ten Fiscal Years. When PICA's outstanding bonds are included with the City's general obligation bonds, approximately 61% is scheduled to mature within ten Fiscal Years.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Table 41
Bonded Debt
as of June 30, 2020
(Amounts in Thousands of USD)[(1), (2)]

General Obligation Debt and PICA Bonds				
General Obligation Bonds		$1,723,930		
PICA Bonds		56,075		
Subtotal: General Obligation Debt and PICA Bonds			**$1,780,005**	
Other General Fund-Supported Debt[(3)]				
Philadelphia Municipal Authority				
Juvenile Justice Center	$79,385			
Public Safety Campus	61,095			
Energy Conservation	7,625			
		$148,105		
Philadelphia Authority for Industrial Development				
Pension capital appreciation bonds	$225,111			
Pension fixed rate bonds	761,655			
Stadiums	215,270			
Library	3,670			
Cultural and Commercial Corridor	76,115			
One Parkway	22,225			
Affordable Housing	49,325			
400 N. Broad[(4)]	240,024			
Art Museum	9,580			
Rebuild	76,635			
		$1,679,610		
Philadelphia Parking Authority		9,350		
Philadelphia Redevelopment Authority		185,150		
Subtotal: Other General Fund-Supported Debt			**$2,022,215**	
Revenue Bonds				
Water Fund		$2,149,469		
Aviation Fund[(5)]		1,469,785		
Gas Works[(5)]		939,940		
Subtotal: Revenue Bonds			**$4,559,194**	
Grand Total				**$8,361,414**

---

(1) Unaudited; figures may not sum due to rounding.

(2) For tables setting forth a ten-year historical summary of Tax-Supported Debt of the City and the School District and the debt service requirements to maturity of the City's outstanding bonded indebtedness as of June 30, 2018, see the Fiscal Year 2019 CAFR.

(3) The principal amount outstanding relating to the PAID 1999 Pension Obligation Bonds, Series B (capital appreciation bonds) is reflected as the accreted value thereon as of June 30, 2020.

(4) Includes (i) sublease payments of approximately $15.2 million annually for the police headquarters renovation; and (ii) an assumption that the City issues approximately $200 million in bonds in 2026 to acquire the project at an assumed interest rate of 5% over the next 20 years.

(5) Does not include any outstanding commercial paper or short-term note issuances for the Division of Aviation or PGW, as applicable.

Table 42
Annual Debt Service on General Fund-Supported Debt
(as of June 30, 2020)
(Amounts in Millions of USD)[1]

Fiscal Year	General Obligation Debt[2] Principal	Interest[3]	Total	Other General Fund-Supported Debt[4], [5] Principal	Interest[5]	Total	Aggregate General Fund-Supported Debt Principal	Interest	Total
2021	$88.11	$79.81	$167.92	$91.74	$142.54	$234.28	$179.85	$222.35	$402.20
2022	92.16	75.40	167.56	90.36	144.18	234.54	182.51	219.58	402.10
2023	97.59	70.85	168.44	128.39	106.13	234.51	225.98	176.98	402.96
2024	102.06	66.19	168.25	127.77	105.48	233.25	229.83	171.67	401.51
2025	106.79	61.22	168.01	132.95	100.31	233.25	239.74	161.53	401.27
2026	104.42	56.12	160.54	149.28	83.15	232.42	253.70	139.27	392.97
2027	109.36	50.89	160.25	170.42	58.04	228.47	279.78	108.93	388.72
2028	115.16	45.48	160.64	180.05	51.32	231.37	295.21	96.80	392.01
2029	90.98	40.76	131.74	281.74	33.55	315.28	372.71	74.31	447.02
2030	107.66	36.29	143.94	69.60	23.34	92.94	177.25	59.63	236.88
2031	113.45	31.26	144.71	73.00	19.92	92.92	186.45	51.18	237.63
2032	118.83	25.96	144.78	33.21	16.93	50.14	152.03	42.89	194.92
2033	87.01	21.26	108.27	26.22	15.50	41.72	113.23	36.76	149.99
2034	76.43	17.52	93.94	27.51	14.20	41.71	103.93	31.72	135.65
2035	64.91	14.20	79.10	28.87	12.84	41.71	93.77	27.04	120.81
2036	68.07	11.03	79.09	30.30	11.42	41.71	98.36	22.44	120.80
2037	56.21	8.02	64.23	31.80	9.92	41.71	88.01	17.94	105.94
2038	59.15	5.16	64.31	33.37	8.34	41.71	92.52	13.50	106.02
2039	41.79	2.70	44.49	23.00	6.80	29.79	64.78	9.50	74.28
2040	7.58	0.96	8.54	14.24	5.74	19.98	21.82	6.70	28.51
2041	7.93	0.61	8.54	14.94	5.03	19.97	22.87	5.65	28.51
2042	8.34	0.21	8.54	15.68	4.30	19.97	24.01	4.51	28.52
2043	0.00	0.00	0.00	16.45	3.53	19.98	16.45	3.53	19.98
2044	0.00	0.00	0.00	17.26	2.72	19.98	17.26	2.72	19.98
2045	0.00	0.00	0.00	14.04	1.86	15.90	14.04	1.86	15.90
2046	0.00	0.00	0.00	14.76	1.14	15.90	14.76	1.14	15.90
2047	0.00	0.00	0.00	15.52	0.39	15.90	15.52	0.39	15.90
Total	**$1,723.93**	**$721.91**	**$2,445.84**	**$1,852.40**	**$988.61**	**$2,841.02**	**$3,576.33**	**$1,710.52**	**$5,286.86**

(1) Does not include letter of credit fees. Figures may not sum due to rounding.
(2) Includes both Tax-Supported Debt and Self-Supporting Debt. See "– General." Does not include PICA Bonds.
(3) Assumes interest rate on hedged variable rate bonds to be the associated fixed swap rate.
(4) Includes PAID, PMA, PPA, and PRA bonds, which are secured by agreements with the City to appropriate and pay amounts sufficient to pay principal, interest, or redemption price when due on such bonds, with capital appreciation bonds including only actual amounts payable. The original issuance amount of such capital appreciation bonds is included under the "Principal" column in the Fiscal Year such bonds mature and the full accretion amount at maturity less the original issuance amount is included in the "Interest" column in the Fiscal Year such bonds mature.
(5) Includes (i) sublease payments of approximately $15.2 million annually for the police headquarters renovation; and (ii) an assumption that the City issues approximately $200 million in bonds in 2026 to acquire the project at an assumed interest rate of 5% over the next 20 years.
(6) Assumes interest rate on hedged variable rate bonds to be the associated fixed swap rate, plus any fixed spread. Net of capitalized interest on PAID City Service Agreement Revenue Refunding Bonds, Series 2012 (Federally Taxable).

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Other Long-Term Debt Related Obligations

The City has entered into other contracts and leases to support the issuance of debt by public authorities related to the City pursuant to which the City is required to budget and appropriate tax or other general revenues to satisfy such obligations, as shown in Table 41. The City budgets all other long-term debt-related obligations as a single budget item with the exception of PPA.

The Hospitals Authority and the State Public School Building Authority have issued bonds on behalf of the Community College of Philadelphia ("CCP"). Under the Community College Act (Pa. P.L. 103, No. 31 (1985)), each community college must have a local sponsor, which for CCP is the City. As the local sponsor, the City is obligated to pay up to 50% of the annual capital expenses of CCP, which includes debt service. The remaining 50% is paid by the Commonwealth. Additionally, the City annually appropriates funds for a portion of CCP's operating costs (less tuition and less the Commonwealth's payment). The amount paid by the City in Fiscal Year 2019 was \$32.4 million. The budgeted amount for Fiscal Year 2020 is \$33.8 million. The current estimate for Fiscal Year 2020 is \$36.1 million. The budgeted amount for Fiscal Year 2021 is \$44.1 million.

PICA Bonds

PICA has issued 11 series of bonds at the request of the City (the "PICA Bonds"). PICA no longer has authority under the PICA Act to issue bonds for new money purposes, but may refund bonds previously issued. The proceeds of the PICA Bonds were used to: (i) make grants to the City to fund its General Fund deficits, to fund all or a portion of the costs of certain City capital projects, to provide other financial assistance to the City to enhance operational productivity, and to defease certain of the City's general obligation bonds; (ii) refund other PICA Bonds; and (iii) pay costs of issuance.

On December 3, 2019, PICA issued \$31,085,000 of its Series 2019 Special Tax Refunding Bonds (the "2019 PICA Bonds") to provide funds, together with other available funds, to defease certain of its PICA Bonds. On March 17, 2020, PICA issued \$24,990,000 Series 2020 Special Tax Refunding Bonds (the "2020 PICA Bonds") to provide funds, together with other available funds, to defease certain of its PICA Bonds. Following the issuance of the 2019 PICA Bonds and 2020 PICA Bonds and the related defeasances, PICA has, as of June 30, 2020, \$56,075,000 in PICA Bonds outstanding with a final maturity date of June 15, 2023.

The PICA Act authorizes the City to impose a tax for the sole and exclusive purposes of PICA. In connection with the adoption of the Fiscal Year 1992 budget and the execution of the PICA Agreement, as so authorized by the PICA Act, the City reduced the wage, earnings, and net profits taxes on City residents by 1.5% and enacted a new tax of 1.5% on wages, earnings, and net profits of City residents (the "PICA Tax"), which continues in effect. The PICA Tax secures the PICA Bonds. Pursuant to the PICA Act, at such time when no PICA Bonds are outstanding, the PICA Tax will expire. At any time, the City is authorized to increase for its own use its various taxes, including its wage, earnings, and net profits taxes on City residents and could do so upon the expiration of the PICA Tax. Certain taxes, such as sales, liquor, and hotel taxes, among others, cannot be increased by the City without Commonwealth approval.

The PICA Tax is collected by the City's Department of Revenue, as agent of the State Treasurer, and deposited in the Pennsylvania Intergovernmental Cooperation Authority Tax Fund (the "PICA Tax Fund") of which the State Treasurer is custodian. The PICA Tax Fund is not subject to appropriation by City Council or the General Assembly. See "THE GOVERNMENT OF THE CITY OF PHILADELPHIA – Local Government Agencies – *Non-Mayoral-Appointed or Nominated Agencies* – PICA."

The PICA Act authorizes PICA to pledge the PICA Tax to secure its bonds and prohibits the Commonwealth and the City from repealing the PICA Tax or reducing its rate while any PICA Bonds are outstanding. PICA Bonds are payable from PICA revenues, including the PICA Tax, pledged to secure PICA's bonds, the Bond Payment Account (as described below) and any debt service reserve fund established for such bonds and have no claim on any revenues of the Commonwealth or the City.

The PICA Act establishes a "Bond Payment Account" for PICA as a trust fund for the benefit of PICA bondholders and authorizes the creation of a debt service reserve fund for bonds issued by PICA. The State Treasurer is required to pay the proceeds of the PICA Tax held in the PICA Tax Fund directly to the Bond Payment Account. The proceeds of the PICA Tax in excess of amounts required for: (i) debt service; (ii) replenishment of any debt service reserve fund for bonds issued by PICA; and (iii) certain PICA operating expenses, are required to be deposited in a trust fund established exclusively to benefit the City and designated the "City Account." Amounts in the City Account are required to be remitted to the City not less often than monthly, unless PICA certifies the City's non-compliance with the then-current five-year financial plan.

The total amount of PICA Tax remitted by the State Treasurer to PICA (which is net of the costs of the State Treasurer in collecting the PICA Tax), PICA annual debt service and investment expenses, and net PICA tax revenue remitted to the City for Fiscal Years 2017-2019, the budgeted amounts and current estimates for Fiscal Year 2020, and the budgeted amounts for Fiscal Year 2021 are set forth below.

Table 43
Summary of PICA Tax Remitted by the State Treasurer to PICA and Net Taxes Remitted by PICA to the City
(Amounts in Millions of USD)(1)

Fiscal Year	PICA Tax(2)	PICA Annual Debt Service and Expenses(2)	Net taxes remitted to the City(3)
2017 (Actual)	$469.2	$59.7	$409.5
2018 (Actual)	$497.0	$42.8	$454.2
2019 (Actual)	$528.7	$35.2	$493.6
2020 (Adopted Budget)	$546.1	$46.8	$499.3
2020 (Current Estimate)(4)	$544.5	$46.8	$497.7
2021 (Adopted Budget)	$507.8	$37.2	$470.6

(1) Figures may not sum due to rounding.
(2) Source: The City's Quarterly City Manager's Reports or the budget for the applicable Fiscal Year.
(3) Source: For Fiscal Years 2017-2019, the City's CAFRs for such Fiscal Years. For Fiscal Year 2020, the Fiscal Year 2020 Adopted Budget and the FY 2020 Fourth Quarter QCMR, as applicable. For Fiscal Year 2021, the Fiscal Year 2021 Adopted Budget.
(4) Does not reflect the bond issuances and related defeasances described in the second paragraph under the caption "– PICA Bonds" above.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

OTHER FINANCING RELATED MATTERS

Swap Information

The City is a party to various swaps related to its outstanding General Fund-Supported Debt as detailed in the table below.

Table 44
Summary of Swap Information
for General Fund-Supported Debt (as of June 30, 2020)

City Entity	City GO	City Lease PAID	City Lease PAID
Related Bond Series	2009B[(1)]	2007B-2 (Stadium)[(3)]	2007B-2 (Stadium)[(4)]
Initial Notional Amount	$313,505,000	$217,275,000	$72,400,000
Current Notional Amount	$100,000,000	$54,303,091	$18,096,909
Termination Date	8/1/2031	10/1/2030	10/1/2030
Product	Fixed Payer Swap	Fixed Payer Swap	Fixed Payer Swap
Rate Paid by Dealer	SIFMA	SIFMA	SIFMA
Rate Paid by City Entity	3.829%	3.9713%	3.9713%
Dealer	Royal Bank of Canada	JPMorgan Chase Bank, N.A.	Merrill Lynch Capital Services, Inc.
Fair Value[(2)]	($30,551,542)	($10,614,808)	($3,537,168)
Additional Termination Events	For Dealer: Rating change below BBB- or Baa3 For City: Rating change below BBB- or Baa3 upon insurer event (includes insurer being rated below A- or A3)	For Dealer: Rating change below BBB- or Baa3 For PAID: Rating change below BBB- or Baa3 upon insurer event (includes insurer being rated below A- or A3)	For Dealer: Rating change below BBB- or Baa3 For PAID: Rating change below BBB- or Baa3 upon insurer event (includes insurer being rated below A- or A3)

(1) On July 28, 2009, the City terminated a portion of the swap in the amount of $213,505,000 in conjunction with the refunding of its Series 2007B bonds with the Series 2009A fixed rate bonds and the Series 2009B variable rate bonds. The City made a termination payment of $15,450,000.

(2) Fair values are as of June 30, 2020, and are shown from the City's perspective and include accrued interest.

(3) On July 15, 2014, PAID terminated a portion of the swap in the amount of $41,555,000 in conjunction with the refunding of a portion of its Series 2007B bonds with the Series 2014B fixed rate bonds. PAID made a termination payment of $4,171,000 to JPMorgan. On September 11, 2019, PAID terminated a portion of the swap in the amount of $33,455,654 in conjunction with the refunding of a portion of its Series 2007B bonds with the Series 2019 fixed rate bonds. PAID made a termination payment of $6,051,000 to JPMorgan.

(4) On July 15, 2014, PAID terminated a portion of the swap in the amount of $13,840,000 in conjunction with the refunding of a portion of its Series 2007B bonds with the Series 2014B fixed rate bonds. PAID made a termination payment of $1,391,800 to Merrill Lynch. On September 11, 2019, PAID terminated a portion of the swap in the amount of $11,149,346 in conjunction with the refunding of a portion of its Series 2007B bonds with the Series 2019 fixed rate bonds. PAID made a termination payment of $1,998,000 to Merrill Lynch.

While the City is party to several interest rate swap agreements, for which there is General Fund exposure and on which the swaps currently have a negative mark against the City, the City has no obligation to post collateral on these swaps while the City's underlying ratings are investment grade.

For more information related to certain swaps entered into in connection with revenue bonds issued for PGW, the Water Department, and the Division of Aviation, see the Fiscal Year 2019 CAFR. In addition, PICA has entered into swaps, which are detailed in the Fiscal Year 2019 CAFR.

Swap Policy

The City has adopted a swap policy for the use of swaps, caps, floors, collars and other derivative financial products (collectively, "swaps") in conjunction with the City's debt management. The swap program managed by the City includes swaps related to the City's general obligation bonds, tax-supported service contract debt issued by related authorities, debt of the Water Department, Division of Aviation, and debt of PGW. Swaps related to debt of the PICA, the School District, and the PPA are managed by those governmental entities, respectively.

The Director of Finance has overall responsibility for entering into swaps. Day-to-day management of swaps is the responsibility of the City Treasurer, and the Executive Director of the Sinking Fund Commission is responsible for making swap payments. The Office of the City Treasurer and the City Solicitor's Office coordinate their activities to ensure that all swaps that are entered into are in compliance with applicable federal, state, and local laws.

The swap policy addresses the circumstances when swaps can be used, the risks that need to be evaluated prior to entering into swaps and on an ongoing basis after swaps have been executed, the guidelines to be employed when swaps are used, and how swap counterparties will be chosen. The swap policy is used in conjunction with the City's Debt Management Policy, reviewed annually, and updated as needed.

Under the swap policy, permitted uses of swaps include: (i) managing the City's exposure to floating interest rates through interest rate swaps, caps, floors and collars; (ii) locking in fixed rates in current markets for use at a later date through the use of forward starting swaps and rate locks; (iii) reducing the cost of fixed or floating rate debt through swaps and related products to create "synthetic" fixed or floating rate debt; and (iv) managing the City's credit exposure to financial institutions and other entities through the use of offsetting swaps.

Since swaps can create exposure to the creditworthiness of financial institutions that serve as the City's counterparties on swap transactions, the City has established standards for swap counterparties. As a general rule, the City enters into transactions with counterparties whose obligations are rated in the A rated category or better from two nationally recognized rating agencies. If counterparty's credit rating is below the double-A rating category, the swap policy requires that the City's exposure be collateralized. If a counterparty's credit is downgraded below the A category, even with collateralization, the swap policy requires a provision in the swap permitting the City to exercise a right to terminate the transaction prior to its scheduled termination date.

Letter of Credit Agreements

The City has entered into various letter of credit agreements related to its General Fund-Supported Debt as detailed in the table below. Under the terms of such letter of credit agreements, following a purchase of the applicable bonds, the City may be required to amortize such bonds more quickly than as originally scheduled at issuance.

Table 45
Summary of Letter of Credit Agreements
for General Fund-Supported Debt
as of June 30, 2020

Variable Rate Bond Series	Amount Outstanding	Bond Maturity Date	Provider	Expiration Date	Rating Thresholds [1]
General Obligation Multi-Modal Refunding Bonds, Series 2009B	$100,000,000	August 1, 2031	Barclays Bank PLC	May 24, 2023	The long-term rating assigned by any one of the rating agencies to any unenhanced long-term parity debt of the City is (i) withdrawn or suspended for credit-related reasons or (ii) reduced below investment grade.
PAID Multi-Modal Lease Revenue Refunding Bonds, Series 2007B-2	$72,400,000	October 1, 2030	TD Bank	May 29, 2024	The long-term ratings assigned by at least two of the rating agencies to any unenhanced general obligation bonds of the City is (i) withdrawn or suspended for credit-related reasons, or (ii) reduced below investment grade.

[1] The occurrence of a Rating Threshold event would result in an event of default under the reimbursement agreement with the related bank.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Recent and Upcoming Financings

Recent Financings. The following is a list of financings that the City has entered into since the beginning of Fiscal Year 2020.

- In October 2020, the City issued $389,215,000 in Airport Revenue and Revenue Refunding Bonds.
- In October 2020, the City issued $127,740,000 in Water and Wastewater Revenue Refunding Bonds pursuant to a Forward Delivery Bond Purchase Agreement signed in February 2019.
- In September 2020, the City issued $300,000,000 in tax and revenue anticipation notes.
- In August 2020, the City issued $296,555,000 in Water and Wastewater Revenue and Revenue Refunding Bonds.
- In January 2020, the City issued $118,030,000 in General Obligation Refunding Bonds.
- In September 2019, PAID issued $147,615,000 in Lease Revenue Refunding Bonds for the benefit of the City.
- In August 2019, the City issued $293,360,000 in General Obligation Bonds.
- In August 2019, the City issued $250,660,000 in Water and Wastewater Revenue Bonds.

Upcoming Financings. In addition to the financing contemplated by this Official Statement, the following is a list of financings that the City expects to enter into in Fiscal Year 2021.

- In the winter of 2020, the City expects to issue approximately $375 million in Water and Wastewater Revenue Refunding Bonds.
- In the spring of 2021, the City expects to issue approximately $175 million in Airport Revenue Refunding Bonds.
- In the spring of 2021, the City expects to issue approximately $250 million in General Obligation Refunding Bonds.
- In the spring of 2021, PMA expects to issue approximately $60 million in City Service Agreement Refunding Bonds for the benefit of the City.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

CITY CAPITAL PROGRAM

As part of the annual budget process, the Mayor submits for approval a six-year capital program to City Council, together with the proposed operating budget. For more information on the City's budget process, see "DISCUSSION OF FINANCIAL OPERATIONS – Budget Procedure."

Certain Historical Capital Expenditures

Table 46 shows the City's historical expenditures for Fiscal Years 2015-2019 for certain capital purposes, including expenditures for projects related to transit, streets and sanitation, municipal buildings, recreation, parks, museums, and stadia, and economic and community development. The source of funds used for such expenditures are primarily general obligation bond proceeds, but also include federal, state, private, and other government funds and operating revenue. Figures in the table below are generated after the Fiscal Year closes and may not sum due to rounding.

Table 46
Historical Expenditures for Certain Capital Purposes
Fiscal Years 2015-2019

Purpose Category	2015	2016	2017	2018	2019
Transit	$ 1,283,307	$ 3,223,431	$ 378,229	$ 7,284,978	$7,511,909
Streets & Sanitation	63,612,248	76,350,266	43,772,678	27,626,173	51,724,238
Municipal Buildings	53,419,449	50,653,561	45,002,188	75,096,668	76,886,156
Recreation, Parks, Museums & Stadia	29,875,633	35,963,360	37,323,288	61,839,958	42,098,687
Economic & Community Development	12,714,468	16,176,644	4,570,196	18,288,380	17,060,541
TOTAL	**$160,905,105**	**$182,367,262**	**$131,046,579**	**$190,136,157**	**$195,281,531**

Table 47 shows the City's historical expenditures for Fiscal Years 2015-2019 for certain capital purposes from general obligation bond proceeds only and the percentage of the total costs covered by such proceeds in such Fiscal Years. Figures in the table below are generated after the Fiscal Year closes and may not sum due to rounding.

Table 47
Historical Expenditures for Certain Capital Purposes
(General Obligation Bond Proceeds Only)
Fiscal Years 2015-2019

Purpose Category	2015	2016	2017	2018	2019
Transit	$ 1,274,467	$ 3,223,431	$ 414,434	$ 7,227,880	$7,509,010
Streets & Sanitation	24,887,488	23,963,058	21,952,654	19,601,019	27,508,365
Municipal Buildings	47,163,418	40,036,844	43,400,701	70,850,458	70,306,949
Recreation, Parks, Museums & Stadia	25,494,778	25,364,901	29,135,962	54,534,870	35,427,491
Economic & Community Development	12,714,468	12,474,164	4,570,196	18,288,380	17,060,541
TOTAL	**$111,534,619**	**$105,062,398**	**$99,473,947**	**$170,502,607**	**$157,812,356**
Percentage of Total Costs	**69%**	**58%**	**76%**	**90%**	**81%**

Fiscal Year 2021-2026 Adopted Capital Program

The Fiscal Year 2021-2026 Adopted Capital Program contemplates a total budget of $11.29 billion (an increase from $10.92 billion as budgeted in the Fiscal Year 2020-2025 Adopted Capital Program). In the Fiscal Year 2021-2026 Adopted Capital Program, approximately $3.32 billion is expected to be provided from federal, Commonwealth, and other sources and approximately $7.97 billion through City funding. For Fiscal Year 2021, the City has budgeted $3.39 billion for capital projects (an increase from $3.08 billion in Fiscal Year 2020). The following table shows the amounts budgeted each year from various sources of funds for capital projects in the Fiscal Year 2021-2026 Adopted Capital Program.

Table 48
Fiscal Year 2021-2026 Adopted Capital Program
(Amounts in Thousands of USD)

Funding Source	2021	2022	2023	2024	2025	2026	2021-2026
City Funds--Tax Supported							
Carried-Forward Loans	$394,162	-	-	-	-	-	$394,162
Operating Revenue	129,902	$12,200	$12,200	$12,200	$1,700	$700	168,902
New Loans	128,260	199,734	199,944	199,432	190,033	191,058	1,108,461
Prefinanced Loans	4,958	-	-	-	-	-	4,958
PICA Prefinanced Loans	4,279	-	-	-	-	-	4,279
Tax Supported Subtotal	**$661,561**	**$211,934**	**$212,144**	**$211,632**	**$191,733**	**$191,758**	**$1,680,762**
City Funds--Self Sustaining							
Self-Sustaining Carried Forward Loans	$475,968	-	-	-	-	-	$475,968
Self-Sustaining Operating Revenue	228,810	$74,019	$73,907	$72,206	$67,873	$78,887	595,702
Self-Sustaining New Loans	818,600	798,334	969,168	750,958	859,811	941,170	5,138,041
Self-Sustaining Subtotal	**$1,523,378**	**$872,353**	**$1,043,075**	**$823,164**	**$927,684**	**$1,020,057**	**$6,209,711**
Other City Funds							
Revolving Funds	$17,000	$15,000	$13,000	$13,000	$13,000	$5,000	$76,000
Other Than City Funds							
Carried-Forward Other Government	$28,614	-	-	-	-	-	$28,614
Other Government Off Budget	2,257	$2,120	$1,621	$1,681	$1,664	$1,639	10,982
Other Governments/Agencies	3,100	2,100	100	100	100	100	5,600
Carried-Forward State	211,974	-	-	-	-	-	211,974
State Off Budget	205,112	234,393	201,119	210,933	201,948	194,362	1,247,867
State	61,900	51,937	46,029	50,681	47,833	47,881	306,261
Carried-Forward Private	118,108	-	-	-	-	-	118,108
Private	35,220	31,382	28,291	27,442	27,654	27,707	177,696
Carried-Forward Federal	366,520	-	-	-	-	-	366,520
Federal Off-Budget	35,284	77,752	21,212	16,000	8,800	9,600	168,648
Federal	124,950	135,354	99,188	108,707	106,963	106,542	681,704
Other Than City Funds Subtotal	**$1,193,039**	**$535,038**	**$397,560**	**$415,544**	**$394,962**	**387,831**	**$3,323,974**
TOTAL	**$3,394,978**	**$1,634,325**	**$1,665,779**	**$1,463,340**	**$1,527,379**	**$1,604,646**	**$11,290,447**

LITIGATION

Generally, judgments and settlements on claims against the City are payable from the General Fund, except for claims against the Water Department, the Division of Aviation, and PGW, which are paid out of their respective funds or revenues and only secondarily out of the General Fund.

The Act of October 5, 1980, P.L. 693, No. 142, known as the "Political Subdivision Tort Claims Act," (the "Tort Claims Act") establishes a $500,000 aggregate limitation on damages for injury to a person or property arising from the same cause of action or transaction or occurrence or series of causes of action, transactions or occurrences with respect to governmental units in the Commonwealth such as the City. The constitutionality of that aggregate limitation on damages has been upheld by the Pennsylvania appellate courts, including in the recent decision of the Supreme Court of Pennsylvania in *Zauflik v. Pennsbury School District*, 104 A.3d 1096 (Pa. 2014). Under Pennsylvania Rule of Civil Procedure 238, delay damages are not subject to the $500,000 limitation. The limit on damages is inapplicable to any suit against the City that does not arise under state tort law, such as claims made against the City under federal civil rights laws.

General Fund

The following table presents the City's aggregate losses from settlements and judgments paid out of the General Fund for Fiscal Years 2017-2019, and the budgeted amounts for Fiscal Years 2020-2021.

Table 49
Aggregate Losses – General and Special Litigation Claims (General Fund)
Fiscal Years 2017-2019 (Actual) and 2020-2021 (Budget)
(Amounts in Millions of USD)

	Actual 2017	Actual 2018	Actual 2019	Budget 2020	Budget 2021
Aggregate Losses	$38.3	$44.6	$45.3	$49.2	$49.2

Sources: The City, Office of Budget and Program Evaluation – Budget Bureau, Indemnity Account, Status Reports.

The current estimate of settlements and judgments from the General Fund for Fiscal Year 2020 is $47.7 million. Such estimate is based on internal calculations using (i) the "Possible Costs" listed in its Quarterly Litigation Reports, (ii) the 3-year average cost for closed cases, and (iii) current year-to-date spending reports. Current year spending includes payments made for settled cases pursuant to payment plans over multiple years. Such payments are generally made at the start of a Fiscal Year, which can result in the current estimate being skewed higher during the early part of such Fiscal Year. By the end of Fiscal Year 2020, the City expects that the actual amount of settlements and judgments paid from the General Fund will be at or near the budgeted amount of $49.2 million.

Based on the Twenty-Ninth Five-Year Plan, the City expects settlements and judgments from the General Fund for Fiscal Years 2021-2025 to range from $49.2 million in Fiscal Year 2021 to $50.3 million in Fiscal Year 2025.

In budgeting for settlements and judgments in the annual operating budget and projecting settlements and judgments for each five-year plan, the City bases its estimates on past experience and on an analysis of estimated potential liabilities and the timing of outcomes, to the extent a proceeding is sufficiently advanced to permit a projection of the timing of a result. General and special litigation claims are budgeted separately from back-pay awards and similar settlements relating to labor disputes. Usually, some of the costs arising from labor litigation are reported as part of current payroll expenses.

In addition to routine litigation incidental to performance of the City's governmental functions and litigation arising in the ordinary course relating to contract and tort claims and alleged violations of law, certain special litigation matters are currently being litigated and/or appealed and adverse final outcomes of such litigation could have a substantial or long-term adverse effect on the General Fund. These proceedings involve: (i) environmental-related actions and proceedings in which it has been or may be alleged that the City is liable for damages, including but not limited to property damage and bodily injury, or that the City should pay fines or penalties or the costs of response or remediation, because of the alleged generation, transport, or disposal of toxic or otherwise hazardous substances by the City, or the alleged disposal of such substances on or to City-owned property; (ii) contract disputes and other commercial litigation; (iii) union arbitrations and other employment-related litigation; (iv) potential and certified class action suits; and (v) civil rights litigation. The ultimate outcome and fiscal impact, if any, on the General Fund of the claims and proceedings described in this paragraph are not currently predictable.

In addition, see "REVENUES OF THE CITY – Real Property Taxes" for a discussion of litigation relating to the reassessment of commercial property in tax year 2018.

Water Fund

Various claims have been asserted against the Water Department and in some cases lawsuits have been instituted. Many of these Water Department claims have been reduced to judgment or otherwise settled in a manner requiring payment by the Water Department. The following table presents the Water Department's aggregate losses from settlements and judgments paid out of the Water Fund for Fiscal Years 2017-2019, and the budgeted amounts for Fiscal Years 2020-2021. The current estimate for Fiscal Year 2020 is $3.9 million. The Water Fund is the first source of payment for any of the claims against the Water Department.

Table 50
Aggregate Losses – General and Special Litigation Claims (Water Fund)
Fiscal Years 2017-2019 (Actual) and 2020-2021 (Budget)
(Amounts in Millions of USD)

	Actual 2017	Actual 2018	Actual 2019	Budget 2020	Budget 2021
Aggregate Losses	$7.0	$6.3	$3.3	$7.5	$7.5

Sources: The City, Office of Budget and Program Evaluation – Budget Bureau, Indemnity Account, Status Reports.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Aviation Fund

Various claims have been asserted against the Division of Aviation and in some cases lawsuits have been instituted. Many of these Division of Aviation claims have been reduced to judgment or otherwise settled in a manner requiring payment by the Division of Aviation. The following table presents the Division of Aviation's aggregate losses from settlements and judgments paid out of the Aviation Fund for Fiscal Years 2017-2019, and the budgeted amounts for Fiscal Years 2020-2021. The current estimate for Fiscal Year 2020 is $1.2 million. The Aviation Fund is the first source of payment for any of the claims against the Division of Aviation.

Table 51
Aggregate Losses – General and Special Litigation Claims (Aviation Fund)
Fiscal Years 2017-2019 (Actual) and 2020-2021 (Budget)
(Amounts in Millions of USD)

	Actual 2017	Actual 2018	Actual 2019	Budget 2020	Budget 2021
Aggregate Losses	$1.6	$1.1	$1.7	$2.5	$2.5

Sources: The City, Office of Budget and Program Evaluation – Budget Bureau, Indemnity Account, Status Reports.

PGW

Various claims have been asserted against PGW and in some cases lawsuits have been instituted. Many of these PGW claims have been reduced to judgment or otherwise settled in a manner requiring payment by PGW. The following table presents PGW's settlements and judgments paid out of PGW revenues, with accompanying reserve information, in PGW Fiscal Years 2016 through 2020. PGW revenues are the first source of payment for any of the claims against PGW. PGW currently estimates approximately $2.1 million and $3.8 million in settlements and judgments for PGW Fiscal Years 2020 and 2021, respectively.

Table 52
Claims and Settlement Activity (PGW)
PGW Fiscal Years 2016-2020
(Amounts in Thousands of USD)

Fiscal Year (ending August 31)	Beginning of Year Reserve	Current Year Claims and Adjustments	Claims Settled	End of Year Reserve	Current Liability Amount
2016	$11,512	$2,022	($3,041)	$10,493	$5,307
2017	$10,493	$6,681	($2,797)	$14,377	$4,627
2018	$14,377	$2,910	($3,223)	$14,064	$6,100
2019	$14,064	($1,582)	($2,922)	$9,560	$3,925
2020[1]	$9,560	$4,674	($1,988)	$12,246	$6,611

Sources: For fiscal years ended August 31, 2016 through August 31, 2018, PGW's audited financial statements. For fiscal year ended August 31, 2019, PGW records.

[1] The balances for PGW Fiscal Year 2020 represent PGW's General Ledger balances as of July 31, 2020, and are not reflective of the results of an actuary report for this liability which is prepared on an annual basis. The final report will not be available until November 2020.

APPENDIX D

THE CITY OF PHILADELPHIA SOCIOECONOMIC INFORMATION

[THIS PAGE INTENTIONALLY LEFT BLANK]

TABLE OF CONTENTS

COVID-19

This APPENDIX D includes historical demographic and socioeconomic information regarding the City of Philadelphia (the "City" or "Philadelphia"), which describes periods of time prior to the outbreak of the COVID-19 pandemic. The reader is cautioned that this APPENDIX D does not reflect the impact of COVID-19 on the City's demographic and socioeconomic conditions; nor does it address the impact of anticipated government, business, or policy initiatives. As such, historical and current data points and trends included in this APPENDIX D should be viewed in such context.

The COVID-19 pandemic has resulted in stay-at-home orders, travel bans, and closures of schools and non-essential businesses, and the United States economy is now experiencing a sharp contraction, with COVID-19 impacting almost every industry. The City continues to monitor such impact, which is expected to be substantial. There are significant uncertainties and risks in the City's key economic sectors and industries and the circumstances related thereto continue to evolve.

As noted in this Official Statement, the City has taken various emergency measures and other actions to respond to the spread of COVID-19 in the City. While the City continues to closely monitor and assess the effects of the COVID-19 pandemic and its impact on the City's financial position and operations, the City also expects COVID-19 to have a substantial impact on its demographic and socioeconomic conditions. The City expects reductions to job growth, population growth, resident employment, and personal income growth, as well as an increase in the unemployment rate and uncertain impacts on retail sales and commercial real estate occupancy.

In addition to the impact to the City's existing economic and employment base, the City expects that COVID-19 will result in a downturn in economic development and the tourism and hospitality industries in the City. Uncertainties regarding the economic impact of COVID-19 on the City's public educational institutions and private colleges and universities, with the possibility that remote learning arrangements will continue for an indefinite period of time, and uncertainties in the healthcare sector, are also being closely monitored.

The transportation sector, particularly mass transit and air travel, in the City has also been uniquely impacted by COVID-19. There have been significant interruptions to normal service and passenger fares and other revenues, with the implementation of stay-at-home orders, remote work arrangements, travel bans, and social distancing guidelines, among other public health safety measures.

It is likely that the impact of COVID-19 on the City, its economy and financial position, and its demographic and socioeconomic conditions will continue to change as circumstances and events evolve. The duration, severity, and degree of the impact of COVID-19 is extremely difficult to predict at this time due to the dynamic nature of the outbreak. The City believes that it may be some time before it is able to determine the full impact of the various events surrounding COVID-19.

For more information on the City's response to COVID-19 and the related financial impact on the City, see the forepart of this Official Statement and "INTRODUCTION – COVID-19 Response" and APPENDIX C – "OVERVIEW – Fiscal Health of the City – COVID-19."

INTRODUCTION

The City is the sixth largest city in the nation by population, and is at the center of the United States' eighth largest metropolitan statistical area, according to 2018 estimates. The Philadelphia MSA (further described below) includes a substantial retail sales market, as well as a diverse network of business suppliers and complementary industries. Some of the City's top priorities include attracting and retaining knowledge workers, increasing educational attainment and employment skills among Philadelphians, attracting real estate development, and promoting Philadelphia as a desirable location for business.

According to the 2010 U.S. Census, the City increased its population by 0.7% to 1.53 million residents in the ten years from 2000 to 2010, ending six decades of population decline. Although the increase was modest, it was an indicator of more recent growth and development in Philadelphia. From 2010 to 2018, the City increased its population by 3.6% to 1.584 million residents. As described below, the 25 to 39 year-old age group is the largest age group in Philadelphia.

Philadelphia's recent population and job growth, the latter of which outpaced the national average for three of the past four years, is expected to provide additional resources to tackle the City's largest challenges. These challenges include underfunded pension liabilities, low estimated General Fund balances in Fiscal Years 2020-2025, high rates of poverty, and the School District of Philadelphia's (the "School District") ongoing fiscal challenges. Given the population shifts and economic development taking place nationwide, coupled with the City's strategic geographical location, relative affordability, diversified economy, cultural and recreational amenities, and its growing strength in key industries, Philadelphia is well-positioned to attract new businesses and investment over the coming years.

Geography

The City has an area of approximately 134 square miles, and is located along the southeastern border of the Commonwealth of Pennsylvania (the "Commonwealth"), at the confluence of the Delaware and Schuylkill Rivers. The City, highlighted in orange in Figure 1, lies at the geographical and economic center of the MSA and PMSA (described below). Philadelphia is both the largest city and the only city of the first class in the Commonwealth, and is coterminous with the County of Philadelphia.

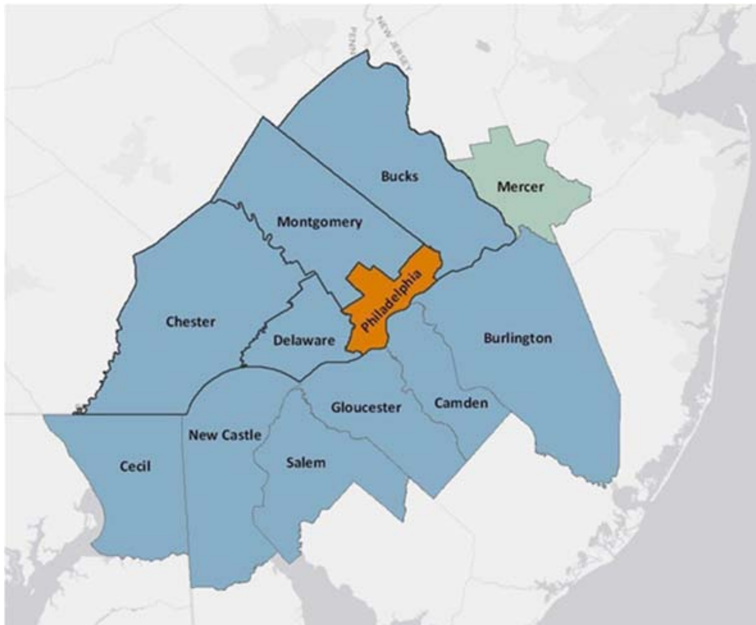
Philadelphia Metropolitan Statistical Area (the "MSA"), highlighted in blue in Figure 1, is the eleven-county area named the Philadelphia-Camden-Wilmington metropolitan statistical area, representing an area of approximately 5,118 square miles with approximately 6,096,372 residents according to 2018 estimates by the U.S. Census Bureau.[1]

Philadelphia Primary Metropolitan Statistical Area (the "PMSA"), highlighted with bold black outlines, in Figure 1, is a five-county area within the MSA that lies in the Commonwealth and is sometimes called the Philadelphia Metropolitan Division. The counties of Bucks, Chester, Delaware, and Montgomery are referred to as the Suburban PMSA herein.

---

[1] Due to its close proximity and impact on the region's economy, Mercer County, New Jersey, highlighted in green in Figure 1, is included in the MSA by many regional agencies, although it is not included in the area defined by the U.S. Office of Management and Budget.

Figure 1
Map of Philadelphia Region including the MSA, PMSA, and Mercer County, NJ



Source: 2009 TIGER County Shapefiles

Strategic Location

Philadelphia is at the center of the fourth largest MSA on the East Coast, and is served by a robust transportation infrastructure, including: the Philadelphia International Airport, Amtrak's Northeast Corridor rail service, major interstate highway access, regional train service provided by Southeastern Pennsylvania Transportation Authority ("SEPTA") and New Jersey's PATCO (as defined herein), and the Port of Philadelphia. Due to the transportation infrastructure centered in the City, Philadelphia is accessible to regional and international markets, and is within a day's drive of 50% of the nation's population. Philadelphia's central location along the East Coast, an hour from New York City and less than two hours from Washington, D.C. by high-speed rail, also allows for convenient access to these significant economic centers.

Population and Demographics

Philadelphia is the nation's sixth most populous city, with 1.584 million residents, based on 2018 estimates. The 2000 and 2010 U.S. Census reflect the City's first population gain in 60 years. The City's population reached its nadir in 2006 with 1.45 million residents. Philadelphia's population has increased by 135,744 residents from 2006 – 2018, or by 8.57%.

In 2018, 26% of Philadelphia's population was comprised of "millennials," or those within the 25 to 39 year-old age bracket. This demographic group tends to be better educated than the City's and the nation's adult population as a whole. In 2018, 45.1% of 25- to 34-year-olds in Philadelphia held a bachelor's degree or higher, while only 36.2% of 25 to 34-year-olds in the United States held a bachelor's degree or higher. The City's many universities, diverse employment opportunities, and relative affordability are likely reasons for Philadelphia's large millennial population.

Philadelphia is also a highly diverse city in terms of race and ethnicity. In 2018, 43.7% of the population identified as Black or African American, 42.1% identified as white, 8.4% identified as Asian, and 9.9% identified as some other race. Additionally, 15.2% of the population identified as Hispanic or Latino/a.

Table 1
Population: City, MSA, Pennsylvania & Nation

	1990	2000	2010	2018	Percent Change 2000 - 2010	Percent Change 2010 - 2018
Philadelphia	1,585,577	1,517,550	1,528,427	1,584,138	0.7%	3.6%
Philadelphia-Camden-Wilmington MSA	5,435,468	5,687,147	5,972,049	6,096,372	5.0%	2.1%
Pennsylvania	11,881,643	12,281,054	12,712,343	12,807,060	3.5%	0.7%
United States	248,709,873	281,421,906	309,348,193	327,167,434	9.9%	5.8%

Source: U.S. Census Bureau, Population Estimates 2018, Census 2010, Census 2000, Census 1990.

Approximately 26% of Philadelphia's population is enrolled in some level of school. In 2018, Philadelphia exceeded many selected peer cities in its share of students who are enrolled in an undergraduate, graduate or professional education program. Selected peer cities (as shown in Table 2) reflect characteristics consistent with Philadelphia, such as geography, socio-economic statistics, industrial legacies, or port facilities. Among these cities, Philadelphia had the sixth highest percentage of its population enrolled in higher education and the fifth largest higher education population.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Table 2
2018 Total Number of Students, as a Percent of Total Population of Selected Cities, Ranked by Total Number of Students Enrolled in Higher Education

City	Total Number of Students Enrolled in School (all years)	Total Number of Students Enrolled in Higher Education	Percent of All Students Enrolled in Higher Education	Percent of Total Population Enrolled in Higher Education
United States	**80,916,775**	**22,068,328**	**27.3%**	**7.0%**
Los Angeles, CA	991,864	350,505	35.3%	9.1%
Chicago, IL	635,175	204,890	32.3%	7.9%
Houston, TX	611,029	163,203	26.7%	7.3%
Phoenix, AZ	416,980	94,430	22.6%	5.9%
San Antonio, TX	411,539	114,828	27.9%	7.8%
Philadelphia, PA	**400,437**	**131,063**	**32.7%**	**8.6%**
San Diego, CA	365,477	143,203	39.2%	10.4%
Boston, MA	197,849	109,912	55.6%	16.3%
Washington, D.C.	173,303	72,478	41.8%	10.7%
Detroit, MI	166,076	36,610	22.0%	5.7%
Milwaukee, WI	165,341	44,798	27.1%	7.9%
Memphis, TN	163,610	42,531	26.0%	6.8%
Baltimore, MD	147,836	53,692	36.3%	9.2%
Cleveland, OH	89,569	23,782	26.6%	6.5%

Source: 2018 American Community Survey, 1-Year Estimates.

ECONOMIC BASE AND EMPLOYMENT

The Philadelphia Economy

The City's economy is composed of diverse industries, with virtually all classes of industrial and commercial businesses represented. The City is a major regional business and personal services center with strengths in insurance, law, finance, health, education, utilities, and the arts. The City also provides a destination for entertainment, arts, dining and sports for residents of the suburban counties, as well as for those residents of the counties comprising the MSA plus Mercer County, New Jersey.

As shown in Table 10, the cost of living in the City is relatively moderate and affordable compared to other major metropolitan areas along the East Coast. For example, Philadelphia's cost of living is 29% less than the Washington D.C. metropolitan area and 54% less than Manhattan. The City, as the commercial center of an MSA of 6.1 million people, offers its business community access to a large, diverse, and industrious labor pool. As one of country's education centers, these businesses also enjoy access to a large pool of recent graduates from the institutions of higher education in the MSA.

Key Industries

Table 3 provides location quotients for Philadelphia's most concentrated industry sectors. Location quotients quantify how concentrated a particular industry is in a region as compared to a base reference area, usually the nation. A location quotient greater than 1.00 indicates an industry with a greater share of the local area employment than is the case in the reference area.

As shown in Table 3, compared to the nation, Philadelphia County has higher concentrations in eight sectors: 1. educational services; 2. health care and social assistance; 3. professional and technical services; 4. other services, except public administration; 5. arts, entertainment, and recreation; 6. management of companies and enterprises; 7. finance and insurance; and 8. transportation and warehousing.[2] Of these eight sectors, the City has a higher concentration of employment than the Commonwealth in four sectors: educational services; health care and social assistance; professional and technical services; and other services, except public administration.

Table 3

Ratio of Philadelphia County and Pennsylvania Industry Concentrations Compared to the United States

Industry	Philadelphia County to the US	Pennsylvania to the US
Educational Services	4.24	1.55
Health Care and Social Assistance	1.79	1.30
Professional and Technical Services	1.25	0.95
Other Services, Except Public Administration	1.13	1.11
Arts, Entertainment, and Recreation	1.09	1.12
Management of Companies and Enterprises	1.07	1.41
Finance and Insurance	1.06	1.10
Transportation and Warehousing	1.01	1.20

Source: Bureau of Labor Statistics: June 2019 Employment Location Quotient, Quarterly Census of Employment and Wages

The concentration of educational services not only provides stable support to the local economy, but also generates a steady and educated workforce, fueling the City's professional services and healthcare industries. As of 2018, there were 118,580 Philadelphia residents between the ages of 25 and 34 with college degrees, and a 2019 Campus Philly report found that 54% of recent graduates in the Greater Philadelphia area have remained in the area, outpacing the retention rate of Boston (42%).

The City is also capitalizing on the region's assets to become a leader in research generated by life sciences and educational institutions. Several sites now foster life science incubator facilities, including University City Science Center, The Wistar Institute, University of Pennsylvania ("Penn"), and Drexel University. University Place Associates (UPA) recently announced a strategic collaboration to

[2] The Bureau of Labor Statistics ("BLS") defines the "Other Services" (except Public Administration) sector as establishments engaged in providing services not specifically provided for elsewhere in the BLS classification system, such as equipment and machinery repairing, promoting or administering religious activities, grant making, advocacy, providing dry cleaning and laundry services, personal care services, death care services, pet care services, photofinishing services, temporary parking services, and dating services.

curate a 240,000 square foot building to be dedicated to supporting the life sciences industry with state-of-the-art laboratory/office space in the heart of Philadelphia's University City District. It is expected to be completed early 2021. Johnson & Johnson utilizes Pennovation Works as the site for JPOD, an interactive, high-tech conference space. Announced in June 2019, Pennovation Works is to enter its next phase with a $35 million project to renovate the existing building into lab-related space. The four-story, 73,400-square-foot structure will have 65,000 square feet of wet lab space. It is expected to be completed by September 2020. Penn's Penn Center for Innovation and Temple University's Office of Technology Development and Commercialization are two of several organizations driving tech transfer and commercialization of innovations developed at Philadelphia's major research institutions. The Cambridge Innovation Center, in partnership with Biolabs, occupies part of uCity Square, which includes state-of-the-art wet lab and shared working space. The project expanded the one million square feet in facilities offered by the University City Science Center to 6 million square feet, with a projected investment of over $1 billion. It is expected to be completed in 2027.

Employment

Table 4 shows non-farm payroll employment in the City over the last decade by industry sectors. In the past 10 years, growth has occurred in Leisure and Hospitality; Mining, Logging, and Construction; Professional and Business Services; Education and Health Services; Other Services; Trade, Transportation, and Utilities; and Financial Activities. These sectors provide stability to the City's overall economy.

Table 4
Philadelphia Non-Farm Payroll Employment[(1)] (Amounts in Thousands)

Sector	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% Change 2010-2019
Leisure and hospitality	58.4	60.6	63.2	64.8	66.9	68.5	70.8	73.1	74.3	78.6	34.6%
Mining, logging, and construction	10.0	10.0	10.2	10.4	11.0	11.5	12.0	12.1	12.6	13.2	32.0%
Professional and business services	81.9	83.3	84.4	86.7	88.6	91.2	95.2	97.4	99.6	103.4	26.3%
Education and health services	202.4	206.6	208.4	209.7	213.2	217.3	223.8	230.2	238.2	243.1	20.1%
Other services	26.5	26.4	26.8	26.9	26.8	27.1	27.8	27.8	28.3	28.7	8.3%
Trade, transportation, and utilities	86.5	87.3	88.8	89.4	90.9	92.1	92.5	92.3	92.8	93.4	8.0%
Financial activities	42.6	41.6	41.0	41.1	41.7	42.3	42.4	41.6	42.5	44.2	3.8%
Information	12.2	12.0	12.0	11.5	11.5	11.8	11.6	11.6	12.1	12.1	-0.8%
Manufacturing	24.7	23.7	22.9	21.8	21.5	21.0	20.5	20.2	19.9	19.3	-21.9%
Private Sector Total	*545.2*	*551.5*	*557.7*	*562.3*	*572.1*	*582.8*	*596.6*	*606.3*	*620.3*	*636.0*	16.7%
Government	112.1	109.0	105.3	103.5	102.2	101.6	101.3	102.2	103.7	105.4	-6.0%
Total	***657.4***	***660.4***	***662.9***	***665.9***	***674.3***	***684.4***	***698.0***	***708.6***	***724.0***	***741.2***	***12.7%***

Source: Bureau of Labor Statistics, 2019.
[1]Includes person employed within the City, without regard to residency.

Table 5
Philadelphia Change in Share of Employment Sectors, Ranked by Percent Change of Share

Sector	Share of Total Employment 2010	Share of Total Employment 2019	Change 2010-2019
Education and health services	31.0%	32.8%	1.8%
Leisure and hospitality	8.9%	10.6%	1.7%
Professional and business services	12.5%	14.0%	1.4%
Mining, logging, and construction	1.5%	1.8%	0.2%
Other services	4.1%	3.9%	-0.2%
Information	1.9%	1.6%	-0.2%
Financial activities	6.5%	6.0%	-0.6%
Trade, transportation, and utilities	13.2%	12.6%	-0.6%
Manufacturing	3.8%	2.6%	-1.2%
Government	17.2%	14.2%	-2.9%
Total	**100.0%**	**100.0%**	**0.0%**

Source: Bureau of Labor Statistics, 2019.
[1] Includes persons employed within the City, without regard to residency.

Bureau of Labor Statistics data show that in 2019, the Education and Health Services, Professional and Business Services, Trade, Transportation and Utilities, and Leisure and Hospitality sectors collectively represented 70% of total employment in the City for the year. From 2010 to 2019, Philadelphia gained 90,800 private sector jobs.

Unemployment

Although Philadelphia has recently narrowed the gap between its unemployment levels and the national unemployment levels, the effects of the 2007-2009 recession on unemployment endured longer in Philadelphia than in many other parts of the country.

As shown in Table 6, employment gains in the latter part of 2013 through 2019 have resulted in a decline in Philadelphia's unemployment rate from a high of 10.9% in 2012 to 5.2% in 2019.

Table 6 below shows unemployment information for Philadelphia, the MSA, the Commonwealth and the United States.

Table 6
Unemployment Rate in Selected Geographical Areas
(Annual Average 2010-2019)

Geographical Area	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change in rate from 2010-2019
United States	9.6	8.9	8.1	7.4	6.2	5.3	4.9	4.4	3.9	3.7	-5.9
Pennsylvania	8.5	7.9	7.8	7.4	5.9	5.3	5.4	4.9	4.3	4.1	-4.4
Philadelphia-Camden-Wilmington MSA	8.8	8.5	8.4	7.8	6.2	5.4	5.1	4.7	4.2	3.9	-4.9
Philadelphia	10.6	10.7	10.9	10.3	8.1	7.1	6.8	6.2	5.5	5.2	-5.4

Source: Local Area Unemployment Statistics, Bureau of Labor Statistics, 2019.

Principal Private Sector Employers in the City

Table 7 lists the 20 largest private employers that are based in Philadelphia. Penn and Thomas Jefferson University and Jefferson Health top this list.

Fortune 500 companies headquartered or maintaining a major presence in Philadelphia include the Comcast Corporation and the Aramark Corporation. Three Fortune 1000 companies are also headquartered within the City: FMC Corporation, Urban Outfitters, and Carpenter Technology.

Table 7
Largest Private Employers Based in Philadelphia
Ranked by Number of Local Employees, 2020

Employer	Local Employees
University of Pennsylvania	41,676
Thomas Jefferson University and Jefferson Health	30,500
Comcast Corporation	14,444
Drexel University	10,225
Temple University Health System	9,722
Einstein Healthcare Network	8,800
Temple University	9,722
Independence Health Group	7,403
Wells Fargo	6,138
Accenture	2,236
PricewaterhouseCoopers	1,900
Community College of Philadelphia	1,813
Deloitte	1,775
Rivers Casino	1,581
Ernst & Young LLP	1,336
KPMG	1,321
Saint Joseph's University	1,308
Willis Towers Watson	1,300
LaSalle University	1,002
Health Partners Plans	971
Total	**155,173**

Source: Philadelphia Business Journal, 2020 Book of Lists (published in December 2019)

Hospitals and Medical Centers

The City is a center for health, education, research and science facilities with the nation's largest concentration of healthcare resources within a 100-mile radius. There are presently more than 30 hospitals, five medical schools, two dental schools, two pharmacy schools, as well as schools of optometry, podiatry and veterinary medicine located in the City. The City is one of the largest health care and health care education centers in the world, and several of the nation's largest pharmaceutical companies are located in the Philadelphia area.

Major research facilities are also located in the City, including those located at its universities and medical schools: Children's Hospital of Philadelphia, the Hospital of the University of Pennsylvania, The Wistar Institute, the Fox Chase Cancer Center, and the University City Science Center. Philadelphia is home to two of the nation's 41 National Cancer Institute ("NCI")-designated Comprehensive Cancer Centers (the Abramson Cancer Center at the University of Pennsylvania and Fox Chase Cancer Center, which is part of the Temple University Health System). Additionally, Philadelphia is also home to two NCI-designated Cancer Centers (Kimmel Cancer Center and The Wistar Institute Cancer Center).

Penn Medicine University of Pennsylvania Health System

Penn Medicine includes Pennsylvania Hospital, the nation's first hospital, founded in 1751 and the nation's first medical school, the University of Pennsylvania School of Medicine, opened in 1765. In addition, the Hospital of the University of Pennsylvania was established in 1874 as the nation's first teaching hospital. Penn Medicine's hospitals have been named among the top ten hospitals in the country with the combined University of Pennsylvania and Penn Presbyterian Medical Center ranked #1 in the region by *U.S. News and World Report*. Penn Medicine, which has invested more than $200 million in major capital investments between 2014 and 2015, began construction in 2016 on a new 1.5 million square foot Patient Pavilion, a clinical facility that is projected to be occupied by spring of 2021.

Children's Hospital of Philadelphia Expansion

Children's Hospital of Philadelphia ("CHOP") is the oldest children's hospital in the nation and one of the largest in the world. CHOP was ranked #2 in the nation in 2017-2018 according to the *U.S. News and World Report*. Since 2002, CHOP has invested over $5.3 billion in its expansion in Philadelphia. In 2017, CHOP opened two facilities as a part of this expansion: the $500 million, 700,000 square foot Buerger Center for Advanced Pediatric Care, and the $275 million, 466,000 square foot Roberts Center for Pediatric Research.

Temple University Hospital, Inc.

Temple University Hospital, Inc. ("TUH") is one of the region's most respected academic medical centers. The 732-bed Philadelphia hospital is also the chief clinical training site for the Lewis Katz School of Medicine at Temple University. TUH was ranked among the "Best Regional Hospitals" in six different specialties in *U.S. News & World Report* 2015-2016 regional rankings.

Thomas Jefferson University and Jefferson Health

Thomas Jefferson University Hospitals ("TJUH") has been at the top of the list of hospitals in Pennsylvania (3rd) and the Philadelphia metro area (2nd) in *U.S. News & World Report*'s annual listing of the best hospitals and specialties. TJUH also ranked 16th overall in the U.S. News and World Report listing. Jefferson Health has recently participated in several significant mergers, integrating Magee Hospital, Kennedy Health System, the Aria Health system and Abington Hospital into its system. In 2017, Thomas Jefferson University acquired Philadelphia University to become the fifth largest educational institution in Philadelphia.

Einstein Healthcare Network

Einstein Healthcare Network is a private, not-for-profit organization with several major facilities and many outpatient centers that has been in existence for nearly 150 years. The Einstein Health and Medical Center in Philadelphia has been listed as a top hospital in *U.S. News & World Report*.

In September 2018, Einstein Healthcare Network and Thomas Jefferson University announced a merger agreement and such entities are seeking necessary state and federal regulatory approvals to close the transaction. Such merger has not been completed at this time and is being challenged by the Federal Trade Commission.

Educational Institutions

The MSA plus Mercer County, New Jersey, has the second largest concentration of undergraduate and graduate students on the East Coast, with approximately 100 degree granting institutions of higher education and a total enrollment of over 434,000 full and part-time students. Approximately 137,807 students lived within the geographic boundaries of the City in 2016. Included among these institutions are Penn, Temple University, Drexel University, St. Joseph's University, and LaSalle University. Within a short drive from the City are such schools as Princeton University, Villanova University, Bryn Mawr College, Haverford College, Swarthmore College, Lincoln University, and the Camden Campus of Rutgers University.

University of Pennsylvania

Penn, the first university in the U.S., founded in 1740, and a prominent Ivy League institution, is located in West Philadelphia across the Schuylkill River from downtown Philadelphia. In the fall of 2018, more than 21,000 full-time undergraduate, graduate and professional full-time students attended Penn, 5,333 of whom are international students. Approximately 3,900 part-time students were enrolled. As of the fall 2018, Penn had a total workforce of over 18,000 faculty and staff, and the University of Pennsylvania Health System had a workforce of 23,275 employees. In September 2016, Penn opened Pennovation Works, a 55,000 square foot business incubator and laboratory that houses researchers, innovators, and entrepreneurs for the commercialization of research discoveries.

Penn has undergone significant expansion in the last decade and has a growing endowment currently valued at $13.8 billion. In 2015, Penn, and related third-party developers, spent $932 million dollars on new buildings and renovations. A recent independent report conducted by Econsult Solutions, Inc. found that Penn and the University of Pennsylvania Health System had a combined economic impact on the City and the Commonwealth of more than $14 billion in Fiscal Year 2015, including $10.8 billion to the City. According to the same study, such Penn entities generate $1 out of every $20 of Philadelphia's general fund and one out of every nine jobs in the Philadelphia economy.

In Fiscal Year 2018, Penn was the fifth largest recipient of funding from the National Institutes of Health ("NIH"), receiving approximately $405.6 million. Penn is consistently one of the largest annual recipients of NIH funding.

Drexel University

Founded in 1891 as the Drexel Institute of Science, Art and Industry, Drexel University ("Drexel") is one of Philadelphia's top 10 private employers, and a major engine for economic development in the region. Drexel is known for its innovation and civic engagement, ranked a "top 15 most innovative school" by *U.S. News and World Report*. Drexel's student body consists of approximately 26,000, making it one of the 15 largest private universities in the country. Drexel is unique in that it provides its students with a co-op work experience every six months throughout the four-year college experience. Over the last decade, Drexel has undergone significant expansion and has major plans for future development. In 2011, Drexel opened the doors to the $69 million Constantine N. Papadakis Integrated Sciences Building, a $92 million facility for its LeBow School of Business, and a new mixed use residential and retail project, Chestnut Square.

Temple University

Temple University ("Temple"), founded in 1884, has undergone a significant transformation over the past three decades from a university with a mostly commuter-based enrollment to one in which on and near-campus housing is now in high demand. Temple features 17 schools and colleges, eight campuses, hundreds of degree programs and nearly 40,000 students. Currently, an estimated 12,000 students live on or around the Temple campus.

"Visualize Temple," approved in 2014, is Temple's campus master plan to guide the continued growth and evolution of the City's leading public research university. It is the culmination of an 18-month long process driven by the input of over 3,000 Temple students, alumni, faculty, and staff. Such plan identifies challenges and opportunities at each campus and defines a collective vision for further campus transformation. Temple continues to implement key elements of this master plan.

Thomas Jefferson University

In 2017, Thomas Jefferson University and Philadelphia University merged to create the fifth largest university in the City. The new Thomas Jefferson University ("Jefferson") creates a national comprehensive university designed to deliver high-impact education and value for students in medicine, science, architecture, design, fashion, textiles, health, business, engineering, and other disciplines.

In addition to nine colleges and three schools from both universities, the formation of the Philadelphia University Honors Institute and the Philadelphia University Design Institute are key components of the combined university's educational ecosystem. Jefferson includes (i) campuses in Center City, Philadelphia ("Center City"), East Falls, Montgomery County, Bucks County, and Atlantic County (NJ); (ii) a growing online presence; (iii) numerous clinical sites; and (iv) an extensive global footprint with locations in Italy and Japan, study abroad sites and curricular and co-curricular partnerships and networks. Jefferson is home to more than 7,800 students, 4,000 faculty members and 63,000 alumni.

Community College of Philadelphia

The Community College of Philadelphia (the "College") serves over 19,000 students in associate's degree and certificate programs. The College operates four campuses: its main Campus in Center City Philadelphia and three regional campuses in West Philadelphia, Northeast Philadelphia, and Northwest Philadelphia. The College offers more than 70 associate's degree, academic and proficiency certificate, and workforce programs. Graduates continue to strengthen Philadelphia's local economy and workforce, both in Philadelphia and the Greater Philadelphia region.

The College enables students to embark on a smart path to a bachelor's degree program, with transfer agreements and partnerships to assist in the transition. In the 2015-16 academic year, approximately 30,194 students took credit and noncredit courses. The College is embarking on an expansion of its West Philadelphia Campus, to expand its Automotive Center and to establish a Workforce Campus with a new $20 million facility in the heart of Philadelphia's Promise Zone.

The College is one of 30 community colleges in the nation to undertake a new Career Pathways model under which it has expanded its dual enrollment programs, including establishing the first Middle College in the Commonwealth, with the School District of Philadelphia. Upon completion of high school, enrolled students will receive both a high school degree and an associate's degree.

The College has vastly expanded its role in workforce development and economic innovation, establishing a division that is responsible for working directly with Philadelphia employers to meet their workforce hiring and professional development needs. The College has established new post-secondary programs matched with Philadelphia's high priority occupations enabling Philadelphians to earn family sustaining wages without a degree.

Family and Household Income

Table 8 shows median family income, which includes related people living together, and Table 9 shows median household income, which includes unrelated individuals living together, for Philadelphia, the MSA, the Commonwealth and the United States. Over the period 2009-2018, median family income for Philadelphia increased by 20.6% (see Table 8), while median household income increased by 24.6% over the period 2009-2018 as a result of an influx of higher income households (see Table 9).

Table 8
Median Family Income* for Selected Geographical Areas, 2009-2018
(Dollar Amounts in Thousands)

Year	Philadelphia	Philadelphia-Camden-Wilmington MSA	Pennsylvania	United States	Philadelphia as a percentage of the US
2009	$45.70	$76.90	$62.20	$61.10	74.8%
2010	$43.10	$74.50	$61.90	$60.60	71.1%
2011	$42.70	$75.70	$63.30	$61.50	69.4%
2012	$44.30	$77.00	$65.10	$62.50	70.9%
2013	$44.60	$78.20	$66.50	$64.00	69.7%
2014	$47.00	$80.60	$67.90	$65.90	71.3%
2015	$49.30	$83.00	$70.20	$68.30	72.2%
2016	$50.30	$84.80	$72.30	$71.10	70.7%
2017	$50.40	$86.20	$72.70	$70.90	71.1%
2018	$55.10	$90.43	$77.49	$76.40	72.1%
Change 2009-2018	20.6%	17.6%	24.6%	25.0	

* Includes related people living together.
Source: 2018 American Community Survey 1-Year Estimates

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Table 9
Median Household Income* for Selected Geographical Areas, 2009-2018
(Dollar Amounts in Thousands)

Year	Philadelphia	Philadelphia-Camden-Wilmington MSA	Pennsylvania	United States	Philadelphia as a percentage of the US
2009	$37.00	$60.10	$49.50	$50.20	73.7%
2010	$34.40	$58.10	$49.30	$50.00	68.8%
2011	$34.20	$58.30	$50.20	$50.50	67.7%
2012	$35.40	$60.10	$51.20	$51.40	68.9%
2013	$36.80	$60.50	$52.00	$52.30	70.4%
2014	$39.00	$62.20	$53.20	$53.70	72.6%
2015	$41.20	$65.10	$55.70	$55.80	73.8%
2016	$41.40	$66.00	$56.90	$57.60	71.9%
2017	$41.00	$66.30	$57.00	$57.70	71.1%
2018	$46.12	$70.75	$60.91	$61.94	74.5%
Change 2009-2018	24.6%	17.7%	23.1%	23.4%	

* Includes unrelated people living together.
Source: 2018 American Community Survey 1-Year Estimates

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Cost of Living Index

Philadelphia has the lowest cost of living index among major urban areas in the Northeast, as shown in Table 10 below. Additionally, the City's Wage, Earnings, and Net Profits Tax Rates have decreased in each of Fiscal Years 2013-2019. See "REVENUES OF THE CITY – Wages, Earnings, and Net Profits Taxes" in APPENDIX C for this Official Statement.

Table 10
2019 Cost of Living Index
Philadelphia Indexed to 100

Urban Area	Cost of Living Index
New York- Manhattan	215
San Francisco	178
D.C.	144
Seattle	142
Boston	136
Los Angeles-Long Beach	132
Chicago	109
Baltimore	102
Denver	100
Philadelphia	**100**
Dallas	97
Pittsburgh	93
Atlanta	93
Detroit	90
Austin	90

Source: Council for Community and Economic Research (C2ER), Cost of Living Index (COLI)

Housing

Growing rapidly from its founding in 1682, Philadelphia's historic housing stock reflects its past roles as the largest city in the British Empire and as "the workshop of the world" during the peak of the industrial revolution. However, its condition and age (among the oldest of any city in the country) is also a reflection of the decades of depopulation and abandonment that marked the second half of the 20th Century. Nevertheless, Philadelphia has undergone a significant revitalization in the most recent decades, particularly in the neighborhoods within and around its downtown core. The period between the 2000 and 2010 Censuses was the first wherein Philadelphia experienced a net population increase since 1940 to 1950, due both to rapid growth in the number of higher income households in these core neighborhoods and to a significant influx in the foreign-born population in more peripheral neighborhoods of the City.

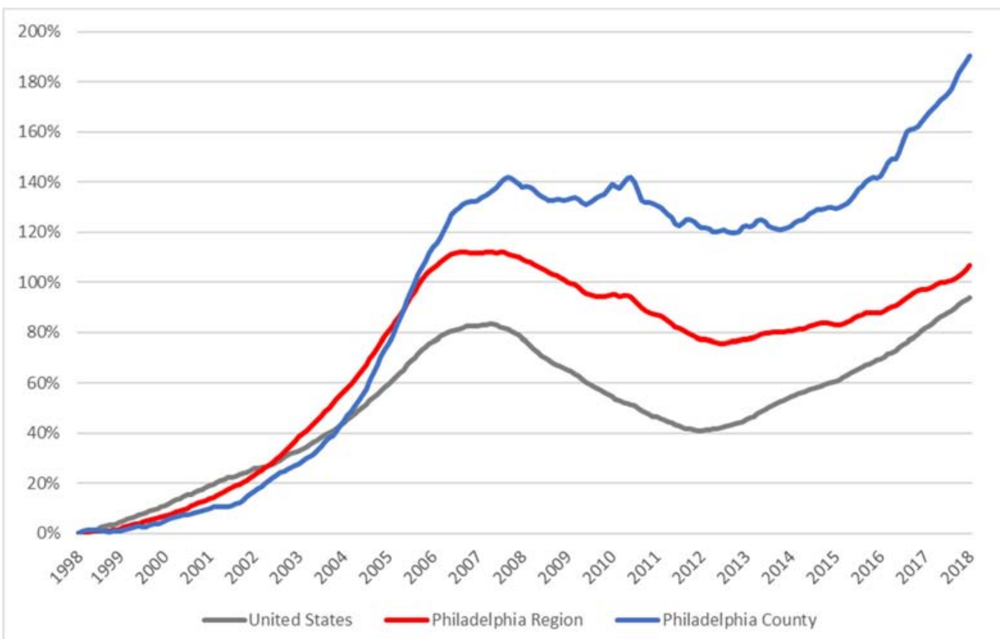
The City's population growth has driven significant new construction and investment in many of its neighborhoods resulting in increases in the value of the City's housing stock. Most housing indicators for Philadelphia indicate an upward outlook, in terms of prices, construction, and sales, for the near future. Nevertheless, the City continues to face significant challenges caused by the persistent problems of poverty, crime, underperforming schools, and lack of employment opportunities.

The total housing stock, measured by the number of units, increased by 0.7% from 2010-2016, for a total of 674,500 in 2016.[3] This increase of 4,500 units is the result of a net increase of 6,000 multifamily units and 500 “other” units (such as mobile homes and boats), off-set by a net loss of 2,000 single-family homes (due to multifamily conversions and demolitions).[3] The homeownership rate in the City in 2016 was 52.1%, which represents a decline from 54.1% in 2000.[3] Accordingly, properties in the City have continued to command higher rents, with the median monthly rent in June 2018 equal to $1,214, representing a 10.9% increase over the prior five-year period.[4]

Home Prices

As shown in the chart below, after eight years of moderate house price deflation following the peak of the 2007 recession, Philadelphia’s housing market began posting rapid increases in prices, citywide, starting in 2013. In 2015, home values in Philadelphia recovered to their pre-recession peak and have continued to climb to 20% above that peak as of January 2018. The following chart uses the Home Value Index to chart changes in home values in Philadelphia, the Philadelphia region, and the U.S. as a whole over the 20-year period from February 1998 through January 2018.[5]

Percent Change in Median Nominal Home Value (Zillow Home Value Index), 1998-2018



Source: Zillow Research, ZHVI Time Series

In the first years shown in this chart, housing values in Philadelphia were not only lower than the region and country as a whole, in nominal terms, but they also grew at a lower rate. From 2002 to 2007, however, the rate of growth in the City’s home values significantly outpaced these comparison regions. Although home values in the City stagnated and declined for eight years, after hitting a peak in 2007, the

---

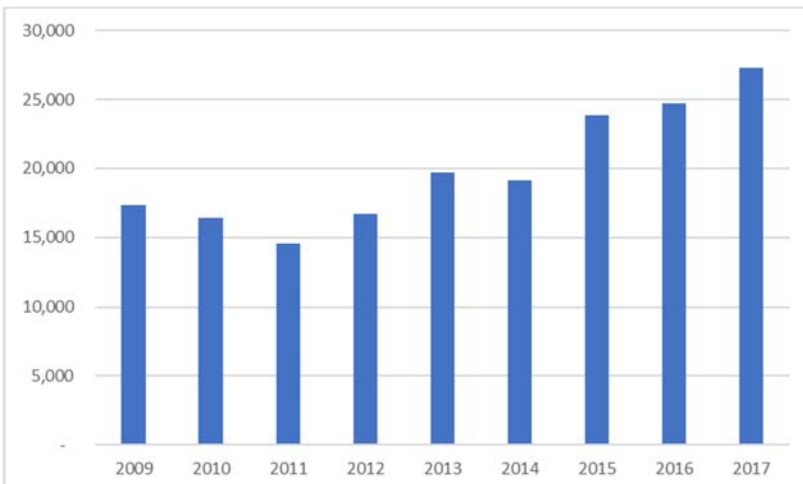
[3] US Census Bureau, American Communities Survey, 1-Year Survey
[4] Zillow Research, ZRI Time Series
[5] Zillow Research, ZHVI Time Series

housing market in Philadelphia retained a much greater share of its pre-recession gains during this period than did either the region or country as a whole. Since then, Philadelphia's housing market has surged, such that, in nominal terms, housing values within the City have nearly tripled since 1998, a rate of growth that is more than 50% greater than the rest of the country.

Home Sales

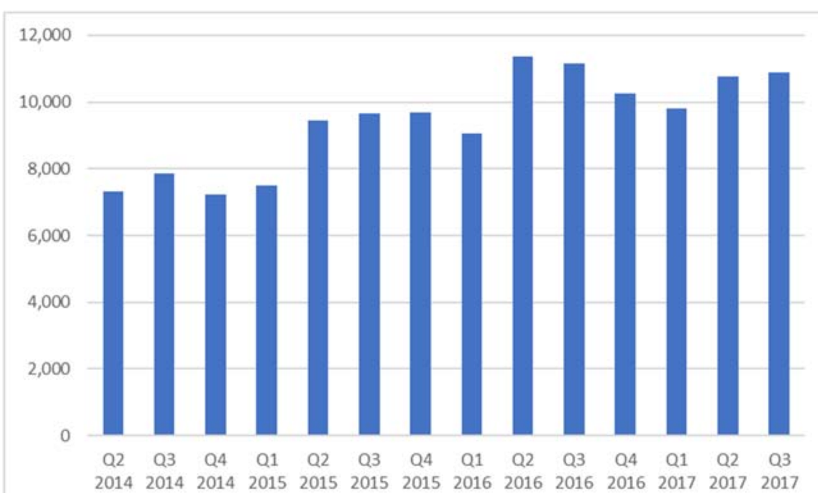
Another indicator of the housing market's recovery is home sales. The following chart shows the annual number of home sales in Philadelphia since 2009. Like prices, home sales dropped significantly following the 2007 recession, but have, seasonal variations notwithstanding, steadily increased since 2011. In 2017, there were 27,327 home sales, nearly double their post-recession nadir of 2011 of 14,542. This trend reflects a recovery of the City's housing market and is likely to continue as the significant increment of new housing construction (described below) is absorbed.

Home Sales in Philadelphia, 2009-2017



Source: Zillow Research, Home Sales Time Series

Home Sales in Philadelphia, April 2014 through September 2017

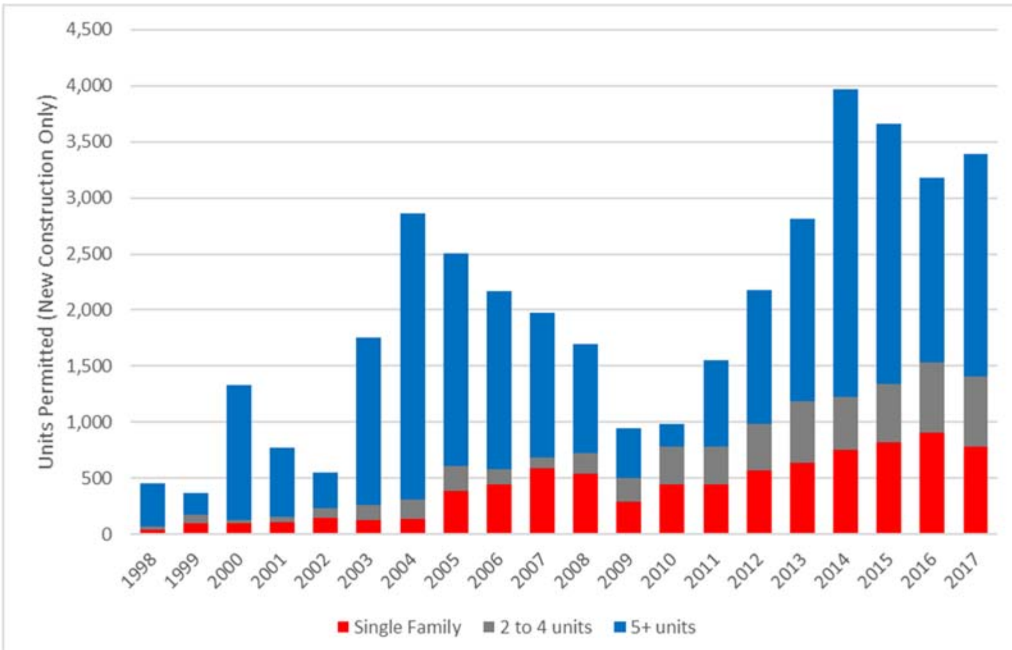


Source: Philadelphia Department of Revenue

Home Construction

Home building activity in Philadelphia has also made significant progress since hitting its recessionary low in 2009. The following chart shows the number of newly constructed units being added to Philadelphia's housing stock, as represented by the number of building permits issued for such units, from 1998 through 2017.

Building Permits Issued in Philadelphia, New Construction Only (Number of Units by Building Type), 1998-2017



Source: US Census, Building Permits Survey

Prior to 2000, construction of new housing units in Philadelphia was low by both absolute and relative measures, averaging only 507 units per year in the decade from 1990 through 1999. However, since 2003, permits for new construction have not been for less than 947 units in any single year, including during the nadir of the 2007 recession. In 2014, permits were issued to approve the construction of nearly 4,000 new housing units in Philadelphia—an all-time high. Notably, these data do not include additions or substantial alteration to existing buildings, which together account for nearly a third of all new housing units in Philadelphia from 2013 to 2017, based on permit issuance data from the Department of Licenses and Inspections. Although total permitting activity declined in 2015 and 2016, recovering somewhat in 2017, total residential development activity has remained high.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Office Market

The City currently has approximately 48.0 million square feet of office space in the Central Business District ("CBD"), with an additional 231,000 square feet under construction according to Jones Lang LaSalle's ("JLL") statistics for the fourth quarter of 2019.

The average direct asking rental rates in the City's CBD rose slightly to $32.37 per square foot in the fourth quarter of 2019. Markedly, the City's CBD enjoys rising rents with low overall total vacancy, while its suburban counterparts have higher overall total vacancy and lower rents during the same period, at 15.9% and $28.10 per square foot.

Table 11 shows comparative overall fourth quarter 2019 office vacancy rates for selected office markets.

Table 11
Total Office Vacancy Rates of Selected Office Markets
Fourth Quarter 2019

Market	Vacancy Rate
San Francisco	5.2%
New York	7.7%
Austin	9.2%
Seattle	9.9%
Charlotte	10.3%
Philadelphia	**10.6%**
San Diego	11.2%
Boston	11.9%
Chicago	12.1%
Los Angeles	13.0%
San Antonio	13.3%
Washington, DC	13.8%
United States CBD, All Markets	14.3%
Baltimore	15.1%
Phoenix	16.9%
Atlanta	17.7%
Detroit	18.6%
Cleveland	19.3%
Dallas	20.1%
Houston	22.8%

Source: Jones Lang LaSalle, National CBD Data, Fourth Quarter 2019

ECONOMIC DEVELOPMENT STRATEGIES AND IMPLEMENTATION

City of Philadelphia Economic Development Mission and Goals

The City's economic development strategy is to (1) spur job-creation by fostering an improved business environment; (2) increase the City's population and visitation; and (3) enhance quality of life within the City. The City partners with numerous quasi-city and private agencies to accomplish these objectives.

The City utilizes several place-based economic development strategies to spur development in Philadelphia. These strategies include: (i) a 10-year real estate tax abatement on all new construction, as well as on improvements to existing properties (which program was modified for new construction of residential properties; see APPENDIX C – "REVENUES OF THE CITY – Real Property Taxes – Assessment and Collection"); (ii) Commonwealth-designated Keystone Opportunity Zones in which eligible businesses may be exempt from all Commonwealth and local business taxes until a specified date; (iii) Commonwealth-designated Keystone Innovation Zones in which energy, defense, technology, and life-sciences companies may be eligible for saleable tax credits worth $100,000 annually for the first eight years of operations; (iv) tax increment financing; and (v) commercial corridor revitalization through support of Business Improvement Districts and reimbursement for certain storefront and interior retail improvements.

The City has also actively worked to raise its profile in the international business community. In 2015, Philadelphia received the designation of the first World Heritage City in the United States by the Organization of World Heritage Cities. In 2015, the City entered into a "sister city" agreement with Frankfurt, Germany, considered the largest financial center in continental Europe. This agreement is Philadelphia's first sister city since 1992. In recent years, the City has hosted delegations of business leaders and officials on trade missions to the United States and participated in trade missions to Germany, France, Portugal, China, South Korea, and Canada. In 2018, a website was launched, philadelphiadelivers.com, which showcases all that the City has to offer businesses including location, talent, affordability, and amenities. Also in 2018, Philadelphia was one of four cities selected by the Brookings Institute to join the Global Identity Cohort. As such, more than 80 local stakeholders have been engaged to begin crafting a shared brand and narrative around Philadelphia in order to attract residents, businesses and events.

City and Quasi-City Economic Development Agencies and Related Programs

City of Philadelphia Department of Commerce

The mission of the Department of Commerce is to (i) ensure that Philadelphia is a globally-competitive city where employers hire, entrepreneurs thrive, and innovation abounds; (ii) recruit and retain a diverse set of businesses; (iii) foster economic opportunities for all Philadelphians in all neighborhoods; and (iv) partner with workforce development programs and local businesses on talent development with the goal of ensuring that all Philadelphians can find and retain living-wage jobs. The Department of Commerce has three major divisions: Neighborhood & Business Services; Office of Business Development and Office of Economic Opportunity.

City of Philadelphia Department of Planning and Development

The Department of Planning and Development ("Planning and Development") oversees all planning, real estate development support, and commissions such as the Historical Commission, Planning

Commission, Art Commission and Civic Design Review. Planning and Development also oversees all housing initiatives and plays a key role in community development.

Philadelphia Industrial Development Corporation ("PIDC")

PIDC is a non-profit organization founded by the City of Philadelphia and the Greater Philadelphia Chamber of Commerce in 1958. PIDC offers flexible financing tools, a targeted portfolio of industrial and commercial real estate, and expertise to help clients invest, develop, and grow in Philadelphia. PIDC also structures and invests in public-private partnerships for key City policy areas and development priorities. Over the past 62 years, PIDC and its affiliates have settled over 7,500 transactions, including more than $17 billion in financing that has leveraged over $30 billion in total investment and assisted in creating and retaining hundreds of thousands of jobs in Philadelphia. Its direct loan and managed third-party portfolio at year-end 2019 was more than $518 million, representing 500 loans.

Philadelphia Redevelopment Authority ("PRA")

In 1945, the Commonwealth enacted the Urban Renewal Law and created the PRA as the City's urban renewal agency. Today, the PRA continues its role as a key financer, project manager, leader, and expert of developing and maintaining land in the City. The PRA is one of five municipal land holding agencies. Its Real Estate Division facilitates the redevelopment of PRA assets and it provides project management and analysis for real estate sales, acquisitions, redeveloper agreements, developer submissions, and required approvals. Its Housing Department leads the underwriting and loan closing process for all affordable housing projects within the City and works primarily with non-profit and for-profit developers as a lender.

Philadelphia Land Bank ("PLB")

Established in 2013, the PLB is a new institutional partner in land use. The aim of the PLB is to consolidate many of the land acquisition and disposition processes of the City under one umbrella, making it easier for private individuals and organizations to acquire properties that otherwise contribute to neighborhood disinvestment and turn them into assets for the community in which they are located. The PLB can: (i) consolidate properties owned by multiple public agencies into single ownership to speed property transfers to new, private owners; (ii) acquire tax-delinquent properties through purchase or by bidding the City's lien interests at a tax foreclosure; (iii) with consent of the City, clear the title to those properties so new owners are not burdened by old liens; and (iv) assist in the assemblage and disposition of land for community, non-profit, and for-profit uses.

The Division of Housing and Community Development ("DHCD")

DHCD, formerly known as the Office of Housing and Community Development and now part of Planning and Development, manages planning, policy, and investment in low-income housing through several assistance programs. Most significantly, the DHCD creates and manages implementation of the Consolidated Plan, a federally-mandated plan and budget that must be updated yearly in order to receive federal Community Development Block Grant funding.

The Philadelphia Housing Authority ("PHA")

PHA is funded primarily by the federal government and is the largest landlord in Pennsylvania. PHA develops, acquires, leases and operates affordable housing for City residents with limited incomes. PHA works in partnership with the City and Commonwealth governments, as well as private investors.

Over 93% of PHA's annual budget is funded directly or indirectly by the U.S. Department of Housing and Urban Development, and most of the balance of PHA's budget is derived from resident rent payments. Neither PHA's funds nor its assets are available to pay City expenses, debts, or other obligations, and the City has no power to tax PHA or its property. Neither the City's funds nor its assets are subject to claims for the expenses, debts, or other obligations of PHA.

Rebuilding Community Infrastructure Program ("Rebuild")

The Rebuild program, using funds from the Philadelphia Beverage Tax, will invest hundreds of millions of dollars in Philadelphia's parks, recreation centers, and libraries over a seven-year period. Rebuild prioritizes sites in high-need neighborhoods, as well as sites that are in extremely poor condition. This program is intended to catalyze economic development in some of Philadelphia's most impoverished communities and neighborhoods. Rebuild is not only committed to making transformative capital improvements in neighborhood public and shared spaces, but will also strive to build capacity and opportunities for minority and women-owned businesses and job opportunities for local residents. In November 2018, the Philadelphia Authority for Industrial Development issued $79,460,000 in City Service Agreement Revenue Bonds to finance certain costs of the Rebuild program.

Key Commercial Districts and Development

Over the last two decades the efforts of Philadelphia's economic development agencies and others have spurred significant economic revitalization throughout the City. In particular, a number of geographic areas have experienced concentrated developments: Philadelphia's Historic District, Avenue of the Arts, North Broad Street, and the Benjamin Franklin Parkway. Many of these developments, such as a significant increase to Philadelphia's hotel room inventory in Center City and expansion of the Pennsylvania Convention Center, are key to the growth of Philadelphia's leisure and hospitality sector. Several key areas within the City have been instrumental in the economic and commercial development of Philadelphia over the past twenty-five years and the population growth since 2000. Recent and current developments in the key commercial districts described below are listed in Table 12.

Center City

A district that has seen a resurgence over the last two and a half decades, Center City is Philadelphia's central business and office region within the City. Center City is the strongest employment center in the City. In addition, the area contains a sizeable residential population and provides ample access to retail, dining, arts and culture, entertainment, and mass transportation services, to both residents and daily commuters. Center City is flanked by neighborhoods that are considered "Greater Center City." Approximately 309,000 riders take public transit into Greater Center City every weekday. Over the last two decades, as there has been an influx of new businesses and residents in these neighborhoods, the boundaries of Greater Center City have moved significantly further North and South, with the Delaware and Schuylkill rivers remaining boundaries on the East and West.

Old City

Old City is home to some of the country's oldest historical assets and is considered America's "most historic square mile." Independence National Historical Park is an international destination, attracting 3.6 million visitors annually. Important culturally and economically, Old City is also home to world-class museums, theaters and art galleries. The neighborhood offers excellent hotels, a wide range of dining and nightlife establishments, independent retailers and a diverse mix of technology, media, professional, and service organizations. Some 8,000 residents live in historic townhouses, industrial loft apartments, and new condominium properties. Old City is located within a Keystone Innovation Zone, meaning that technology, energy, and life sciences businesses may be eligible for up to $100,000 in tax credits.

Old City District ("OCD") is a business improvement district that promotes the area and fosters economic development locally. OCD helps companies find suitable real estate and actively promotes the sector to attract businesses. Over the last few years, technology and creative businesses have established an increasingly important presence in the area.

University City

Located west of Center City, University City is a hub for the health care, life sciences, and higher education sectors and accounted for approximately 11% of the City's employment in 2017. It includes the campuses of Penn, Drexel University, University of the Sciences, the University of Pennsylvania Health System, the Children's Hospital of Philadelphia, and The Wistar Institute, as well as the University City Science Center, a biomedical incubator. University City has experienced significant real estate development, driven mostly through the investment of its universities and research institutional anchors.

Penn built the $88 million Singh Center for Nanotechnology in 2013 and invested $127 million in a new residence hall called New College House at Hill Field. Drexel University invested nearly $300 million in University City in 2013, and is planning for an additional $3.5 billion over 20 years in the development of Schuylkill Yards in partnership with Brandywine Realty Trust. Such project will develop 14 acres of underutilized land near Philadelphia's 30th Street Station into an innovation neighborhood, which will feature a mix of entrepreneurial spaces, educational facilities and research laboratories, corporate offices, residential and retail spaces, hospitality and cultural venues and public open spaces.

The Navy Yard

The Navy Yard is a 1,200 acre mixed-use office, research and industrial campus with over 15,000 people working on site across 170 companies. The Navy Yard has diverse tenants such as Philly Shipyard, one of the world's most advanced commercial shipbuilding facilities; the global headquarters for retailer Urban Outfitters, Inc.; a 208,000 square foot, double LEED Platinum corporate office for pharmaceutical company GlaxoSmithKline; and a LEED Silver bakery facility for the Tasty Baking Company. More than 7.5 million square feet of space is currently occupied or in development with significant additional capacity available for office, industrial, retail and residential development.

PIDC and its partners released an updated Navy Yard master plan in 2013, detailing a comprehensive vision for the Navy Yard. The plan calls for a total of over 13.5 million square feet of new construction and historic renovation supporting office, research and development, industrial and residential development, complemented with commercial retail amenities, open spaces and expanded mass transit. Under such plan, the fully built out Navy Yard would support more than 30,000 employees and over $3 billion in private investment. PIDC continues to work on this long-term plan for the Navy Yard.

The Navy Yard continues to grow bringing it closer to its strategic targets. Since 2000, the Navy Yard has leveraged more than $170 million in publicly funded infrastructure improvements to spur more than $850 million in new private investment.

Table 12
Recently Completed Projects or Projects Under Construction in the Key Commercial Districts

Project Name, by Neighborhood	Project Type	Cost in Millions	Est. Completion Date
CENTER CITY			
Comcast Innovation and Technology Center	Commercial/Hotel	$1,200	Completed 2019
2400 Market	Commercial	$230	2020
W Hotel/Element	Hotel	$359	2020
Fashion District Philadelphia	Commercial	400	Q2 2020
1911 Walnut	Mixed Use	$300	2021
SLS Residences	Residential and Hotel	$253	2021
Police Headquarters in Inquirer Building	Public	$300	Q1 2021
OLD CITY			
I-95 Overcap Park	Public	$225	2024
OTHER NEIGHBORHOODS			
2100 Hamilton	Residential	$24	2021
Piers at Penn's Landing	Mixed Use		
UNIVERSITY CITY			
4601 Market	Mixed Use	$250	2021
Penn Health Tower	Health Care	$1,500	2021
TOTAL		**$5,041**	

Source: Philadelphia Department of Planning and Development.

Waterfront Developments

Taking advantage of the City's geographic assets, the Schuylkill River and the Delaware River, the City is redeveloping its waterfront to accommodate a variety of developments, including mixed-use projects and housing, parks and recreational trails, and hotels. These projects improve quality of life for residents and improve the visitor experience, but also are an impetus for environmental remediation and private development of former industrial property within the City.

Delaware River Waterfront Corporation (the "DRWC")

The Delaware River has historically been a center of activity, industry, and commerce, bounded at its north and south ends by active port facilities. The City adopted a Master Plan for the central Delaware River in 2011. DRWC, in partnership with the City, is a nonprofit corporation that works to transform the central Delaware River waterfront into a vibrant destination for recreational, cultural, and commercial activities. Over the last ten years, DRWC has successfully opened four adaptive reuse park projects built on former pier structures, including the newly-renovated Cherry Street Pier in 2018. I-95 Overcap Park will cap a section of I-95 and connect Old City Philadelphia with the Delaware River. The proposed 4-acre multimillion-dollar park project is in the planning stages. The current work schedule will last from 2021 to 2024.

DRWC, the City, and the Commonwealth have partnered to redevelop Penn's Landing, a major public space along the Delaware River waterfront. The resulting civic space will leverage investment from private sources for the redevelopment of the adjoining parcels.

Schuylkill River Development Corporation (the "SRDC")

Redevelopment along the Schuylkill River is managed by a partnership among SRDC, the Department of Parks & Recreation, and the Department of Commerce. SRDC works with federal, Commonwealth, City, and private agencies to coordinate, plan and implement economic, recreational, environmental and cultural improvements, and tourism initiatives on the Schuylkill River. From 1992 to 2017, $70 million was invested by SRDC, the City, and their partners along the tidal Schuylkill to create 3.65 miles of riverfront trails within 30 acres of premiere park space in the heart of the City, and has added amenities to the Schuylkill River Park such as floating docks, fishing piers, a composting toilet, and architectural bridge lighting. SRDC continues to work towards meeting its goal of creating and maintaining trails and green space along the tidal Schuylkill River in Philadelphia, such as the Christian to Crescent Connection. This trail section will connect neighborhoods on both sides of the Schuylkill River to a vast existing network of parks and trails, including the Schuylkill River trail, Fairmount Park, and the regional network of recreational trails and related facilities known as the Circuit. It will also provide those neighborhoods with a direct pedestrian and bicycle route to Center City's jobs and services. In addition, it will help complete Philadelphia's segment of the East Coast Greenway.

Since 2005, Philadelphia has benefitted from more than $1 billion in development along the Schuylkill River, with more planned by private developers, universities, and healthcare institutions.

Casinos

Rivers Casino

Philadelphia's first casino, Rivers (originally SugarHouse), opened in September 2010. Rivers Casino sits on the Delaware River waterfront offering an array of slot machines, table games and dining options. Its operations also include a multi-purpose event space with waterfront views, restaurants, and a parking garage. As of August 2018, Rivers had approximately 1,500 employees. As reported to the Pennsylvania Gaming Control Board, River's gaming revenue was approximately $299.1 million in Fiscal Year 2018.

Cordish Live!

Scheduled to open by the end of 2020, Live! (Live!) Casino & Hotel Philadelphia will be a $700 million world-class hotel, gaming, dining and entertainment destination featuring 2,200 slot machines and 150+ live action table games, an upscale 200+ room hotel, a new 2,700-space parking garage, locally and nationally-recognized restaurants and live entertainment venues. The project will be located in the heart of the Stadium District in South Philadelphia, immediately proximate to Xfinity Live!, The Cordish Companies' premier dining & entertainment district. The project will create the first comprehensive gaming, resort, entertainment and sports destination in the United States, making it a true regional destination

TOURISM AND HOSPITALITY

Philadelphia has experienced a significant increase in tourism over the last decade, fueled by several high profile, global events that the City hosted, notably the 2015 World Meeting of Families, culminating in a papal visit from Pope Francis, and the Democratic National Convention in 2016. In April 2017, Philadelphia hosted the NFL Draft on the Benjamin Franklin Parkway in Center City, with an estimated attendance of more than 250,000. Both business and convention tourism, as well as leisure tourism continue to grow and set a new record-high for room revenue generated for lodging in 2019. In 2016, Lonely Planet named Philadelphia on its top-10 best list of "unexpectedly exciting places to see," in 2017, Travel and Leisure named Philadelphia as one of the best places to visit in the world, and in November 2019, National Geographic named Philadelphia "one of the 25 must-visit destinations in the world in 2020" and was the only U.S. city included.

The Philadelphia Convention and Visitors Bureau ("PHLCVB") books meetings, conventions and sporting events and supports international marketing of Philadelphia to overseas markets. PHLCVB also books domestic group tours. Tourism Economics, an Oxford Economics Company, reported that international visitors from overseas to Philadelphia in 2018 – the most recent numbers publicly available - numbered more than 696,000, spending $723 million generating $1.2 billion in total economic impact to the Philadelphia region. According to the same source, Philadelphia ranks as the 16th most visited city in the U.S. by overseas travelers. Philadelphia's international visitation has seen significant growth over the past decade, a 18% growth in overseas travelers since 2009 (up from 593,000 in 2009).

The PHLCVB currently has 635 meetings, conventions, and sporting events booked for future years. These groups will bring a total of 3 million attendees to Philadelphia consuming 3.6 million room nights. *It should be noted that some of such events could be cancelled or postponed as a result of COVID-19.*

Visit Philadelphia markets Philadelphia domestically, as well as in Canada and Mexico, to promote leisure travel. Philadelphia has attracted more overnight leisure travelers than ever before and Center City hotels reached a landmark 1 million leisure room nights in 2016 which has grown to 1.1 million in 2019. Further, several big and new-to-the-city brands are entering the market, along with smaller boutique hotels. Leisure hotel room stays have increased 334% since 1997 and in 2018 the estimated economic impact of all visitors to Philadelphia was an estimated $7.1 billion according to the Visit Philly 2019 Annual Report.

Table 13
Greater Philadelphia Visitor Growth, 1997-2017
(In Millions)

	1997	2017	Net Change	% Change
Total Visitation	26.7	43.3	16.6	62%
Leisure- Overnight	7.3	15.1	7.8	107%
Leisure- Day	15.5	23.1	7.6	49%
Business- Overnight	1.4	2.3	0.9	64%
Business- Day	2.5	2.8	0.3	12%

Source: EConsult: Visit Philadelphia Annual Report, 2018

Philadelphia has seen an influx in new hotel development, with numerous new developments underway or confirmed. Since 2015, there has been notable hotel development in the City, representing over $1 billion in investment. The number of hotel rooms available in the City in 1993 was 5,613, with occupancy at 65%. In 2019, two major hotels opened – the Four Seasons and Pod Philly – bringing the City's hotel room inventory to 17,279 rooms at year-end, with occupancy at 76.4% Several hotel projects are currently under development, which will increase hotel room inventory by close to 1,660 rooms.

Museum and Cultural Centers

Crucial to tourism is the City's robust arts and culture sector. One in three tourists who come to Center City cite museums and cultural events as the primary reason for their visit. Top attractions in

Philadelphia include Independence National Park, the Philadelphia Museum of Art, the Philadelphia Zoo, and Reading Terminal Market.

Organizations like the Philadelphia Museum of Art, the Kimmel Center, FringeArts, and more than 430 smaller cultural organizations throughout the City help improve the quality of life for residents and visitors. The Greater Philadelphia Cultural Alliance reported in 2017 that arts and culture produced $3.4 billion in economic impact and contributed $930 million in household income in the City.

Avenue of the Arts (South Broad Street) Investments

The Avenue of the Arts is located along a mile-long section of South Broad Street between City Hall and Washington Avenue, in the heart of Center City. Reinventing South Broad Street as the Avenue of the Arts, a world class cultural destination, has been a civic goal in Philadelphia for more than two decades. Cultural institutions, the William Penn Foundation, local property owners and civic leaders advanced the idea of a performing arts district on South Broad Street anchored by the Academy of Music and modeled after successful performing arts districts around the country. The Avenue of the Arts became a key element of the City's strategy to strengthen Center City as the region's premier cultural destination and an important element in the City's bid to expand its convention and tourism industries.

The Benjamin Franklin Parkway

Complementing the Avenue of the Arts theater district developments, the Benjamin Franklin Parkway (the "Parkway") is considered the spine of Philadelphia's museum district. Designed by French architect Jacques Gréber, to emulate the Champs Elysées of Paris, the Parkway opened in 1929. It runs from the area of City Hall to the Philadelphia Museum of Art and is a central public space and tourist attraction. Key Parkway features include Love Park (which has undergone major renovations and was reopened in the spring of 2018), the Philadelphia Museum of Art, the Rodin Museum, the Franklin Institute, The Barnes Foundation, the Free Library of Philadelphia, the Academy of Natural Sciences, the Swann Memorial Fountain, Sister Cities Park, Cathedral Basilica of Saints Peter and Paul on Logan Square, and numerous pieces of public art.

The Barnes Foundation, which opened on the Parkway in 2012, is a welcome addition to the City's impressive roster of arts facilities and has had a significant impact on the City's leisure and hospitality industry. As of 2018, the Barnes has welcomed over 1.8 million visitors from all 50 states and 70 countries. With 18,000 household memberships, it is ranked among the top institutions of its kind in the country.

Historic District

Key to the City's leisure and hospitality growth is the maintenance and investment in the City's extraordinary historic assets. As the birthplace of the country, Philadelphia remains a major tourist destination year-round, particularly the City's Historic District, which includes various museums and cultural centers, as well as such national treasures as the Liberty Bell, Independence Hall, Carpenters' Hall, the Betsy Ross House and Elfreth's Alley, the Nation's oldest residential street. The City continues to invest in the maintenance and expansion of the Historic District's tourist experience. Such district is expected to remain competitive in the national and international tourism markets for years to come.

North Broad Street and the Philadelphia Convention Center

In 1993, with support from the Commonwealth, the Pennsylvania Convention Center (the "Convention Center") was completed, providing a total of 624,000 square feet of saleable space across its four exhibit halls, ballroom and banquet spaces. In 2011, a $786 million expansion, across 20 acres of central Philadelphia real estate, increased the facility to 2.3 million square feet. It is the largest single public works project in Pennsylvania history.

In 2014, SMG began managing and operating the Convention Center, instituting a number of measures intended to reduce and control show costs and improve customer service. In 2019, hotel rooms booked related to events taking place at the Convention Center grew by 11% year-over-year.

Following the 2011 expansion of the Convention Center, development efforts in the North Broad Street area increased. This includes improvements to the Lenfest Plaza at the Pennsylvania Academy of Fine Arts, the opening of the Aloft Hotel, the re-opening of the Philadelphia Metropolitan Opera House, the revitalization of the Divine Lorraine and the Studebaker Building, and much more. Development continues to move north along Broad Street, with significant investment taking place to restore the Beury Building and the Uptown Theater, and to establish the North Station District, a transit-oriented, mixed-use development. There is approximately $1 billion in assessed commercial property value along North Broad Street between City Hall and Germantown Avenue.

South Philadelphia Sports Complex

Another key element of Philadelphia's hospitality industry is professional sports. Philadelphia is the only city to have a professional hockey, basketball, baseball, and football team playing in a single district within the City, the Sports Complex Special Services District, created by the City in 2000.

The South Philadelphia Sports Complex houses three professional sports facilities: The Wells Fargo Center opened in 1996 and is home to the Philadelphia Flyers (National Hockey League) and Philadelphia 76ers (National Basketball Association); Lincoln Financial Field opened in 2003 and is home to the Philadelphia Eagles (National Football League); and Citizens Bank Park opened in 2004 and is home to the Philadelphia Phillies (Major League Baseball). The Phillies and the Eagles are contractually obligated to play in Philadelphia until 2033 and 2034, respectively.

Within the South Philadelphia Sports Complex is Xfinity Live!, a sports entertainment and dining complex. There are also plans to expand this area to include retail, hotel, and theater space, a casino, a spa, and a conference center.

Retail Market, Food and Dining

In the last five years, the City's retail market has grown substantially, attracting 90 national retailers. With nearly 193,000 residents, 308,000 workers, 3.6 million occupied hotel room nights and 111,000 college students in and around Center City, the market generates more than $1 billion in annual retail demand. More than 1.4 million square feet of retail space is currently under construction with significant development surging east of Broad Street, with some of Philadelphia's most ambitious retail and mixed-use projects.

Market East, an important commercial area between City Hall and the City's Historic District is experiencing significant development. New developments in Market East represent a $910 million investment that is creating a continuous shopping and dining experience from Independence Mall to the major Center City convention hotels, just east of City Hall. In late 2019, Fashion District Philadelphia opened to the public. A $420 million redevelopment project, the Fashion District is a unique retail development offering fashion, dining, entertainment, and arts and culture. The revitalization of this section of the City, containing a major transport hub, is expected to be transformative.

Complementing the rise of retail in Philadelphia, the City has experienced a revival of restaurant establishments, especially in Center City and Greater Center City, indicating an improved quality of life and vibrancy of those neighborhoods. Increased investment in Center City to beautify the area, as well as the City's support in making the area more welcoming to visitors and diners, has sparked a significant increase in the number of indoor/outdoor dining establishments throughout Center City, which now total over 1,058.

TRANSPORTATION

The residents of the City and surrounding counties are served by a commuter transportation system operated by SEPTA. This system includes two subway lines, a network of buses and trolleys, and a commuter rail network joining Center City and other areas of the City to PHL (as defined herein) and to the surrounding counties. For more information on SEPTA, see "– Southeastern Pennsylvania Transportation Authority" and APPENDIX C – "EXPENDITURES OF THE CITY – City Payments to SEPTA."

A high-speed train line runs from southern New Jersey to Center City and is operated by the Port Authority Transit Corporation ("PATCO"), a subsidiary of the Delaware River Port Authority. On the average weekday, PATCO brings approximately 30,000 riders to Philadelphia.

New Jersey Transit operates 19 different bus routes and the Atlantic City Train Line, all of which serve to connect Philadelphia and New Jersey. On the average weekday, the New Jersey Transit bus routes bring approximately 4,000 riders to Philadelphia and the Atlantic City Line brings approximately 1,400 riders to Philadelphia.

Amtrak, SEPTA, Norfolk Southern, CSX Transportation, Conrail and the Canadian Pacific provide inter-city commuter and freight rail services connecting the City to other major cities and markets in the United States. According to Amtrak, Philadelphia's 30th Street Station is the third busiest station in the United States. Structural improvements of $30 million were recently completed to the station, and an additional $60 million restoration project is awaiting federal approval. SEPTA was recently awarded a $15 million federal grant towards a $37 million project to renovate the Market Frankford Line subway entrances at 30th Street, the busiest transit route in the Philadelphia region.

The City now has one of the most accessible downtown areas in the nation with respect to highway transportation by virtue of Interstate 95 ("I-95"); Interstate 676 (the "Vine Street Expressway"), running east-to-west through the CBD between Interstate 76 (the "Schuylkill Expressway") and I-95; and Interstate 476 (the "Blue Route") in suburban Delaware and Montgomery Counties, which connects the Pennsylvania Turnpike and I-95 and connects to the Schuylkill Expressway, which runs to Center City. In addition, more than 100 truck lines serve the Philadelphia area.

The City is served within city limits by numerous private buses and shuttles. These buses and shuttles are operated by apartment complexes, universities, and private companies. These buses and shuttles connect Philadelphians to transit hubs, employment, and residences. A rail line reaches PHL in less than 20 minutes from the City's central business district and connects directly with the commuter rail network and the Pennsylvania Convention Center.

Philadelphia launched the Indego bike share program, sponsored by Independence Blue Cross, in April 2015. The system launched with 600 bicycles and 70 stations throughout the City from Temple University in North Philadelphia to Tasker Street in South Philadelphia and from the Delaware River on the east to 44th Street in West Philadelphia. Indego is the first bike share system in the United States to launch with a cash payment option for members. Over the past five years, the City expanded Indego to

1,400 bicycles and 141 bike share stations, with stations as far north as Diamond Street in North Philadelphia, down to the Navy Yard in South Philadelphia, and from the Delaware River in the east to 48th Street in the west. In 2019, electric-assist bicycles were added to the fleet and proved extremely popular with users – they were used approximately 4 times as often as standard bicycles. Over the course of the year, 742,000 trips were taken.

Southeastern Pennsylvania Transportation Authority

SEPTA operates facilities across the PMSA, encompassing approximately 2,200 square miles and serving approximately 4.1 million inhabitants. SEPTA operates service 24 hours a day, seven days a week, 365 days a year. A significant segment of the region relies on SEPTA for public transportation and annual SEPTA ridership totaled more than 292.9 million in Fiscal Year 2019.

SEPTA's operations are accounted for in three separate divisions: City Transit; Regional Rail; and Suburban Transit. The City Transit Division serves the City with a network of 89 subway-elevated, light rail, trackless trolley and bus routes, providing approximately 852,000 unlinked passengers trips per weekday. The Regional Rail Division serves the City and the local counties with a network of 13 commuter rail lines providing approximately 120,000 passenger trips per weekday.

SEPTA continues to rehabilitate and replace critical infrastructure and systems, such as substations, bridges, and stations. Its long-term capital program includes (i) safety and security enhancements, (ii) modernization of communication, signal equipment, and fare collection systems, (iii) replacement of rail vehicles that have exceeded their useful life, (iv) enhancing accessibility, (v) expanding capacity to address ridership growth, (vi) expanding its fleet of hybrid buses, and (vii) performing vehicle overhauls to optimize vehicle performance.

Airport System

The Airport System serves residents and visitors from a broad geographic area that includes eleven counties within four states: Pennsylvania, New Jersey, Delaware, and Maryland. The Airport System consists of the Philadelphia International Airport ("PHL" or the "Airport") and Northeast Philadelphia Airport ("PNE").

Philadelphia International Airport

PHL is classified by the Federal Aviation Administration as a large air traffic hub (enplaning 1.0% or more of the total passengers enplaned in the U.S.). According to data reported by Airports Council International – North America, PHL was ranked the twentieth busiest airport in the United States, serving 31.7 million passengers in calendar year 2018. PHL is located approximately seven miles from Center City on approximately 2,598 acres.

PHL has four runways, consisting of two parallel runways, a crosswind runway, and a commuter runway, as well as interconnecting taxiways. PHL's terminal facilities consist of seven terminal units, totaling approximately 3.2 million square feet. Such terminal facilities include ticketing areas, passenger and baggage screening areas, passenger hold rooms and other amenities, baggage claim areas, approximately 175 food, retail and service establishments, and other support areas. PHL also has six active cargo facilities, a variety of support buildings, training areas, an air traffic control tower, a fixed-base operator, corporate hangars, a fueling supply facility, two American Airlines aircraft maintenance hangars, and a first-class office complex.

Outside of the PHL terminal area, there are a 14-story, 419-room hotel, seven rental car facilities, a 150-vehicle cell-phone lot, and two employee parking lots with more than 4,000 spaces. This area also includes five parking garages and surface lots consisting of more than 18,900 vehicle spaces, operated by the Philadelphia Parking Authority.

The current Airport-Airline Use and Lease Agreement (the "Airline Agreement") between PHL and the airlines began July 1, 2015 and has a five-year term with options for two one-year extensions. The Airline Agreement was approved by City Council in June 2015.

Capital Development. The Airport System's long-term capital program includes (i) terminal and landside improvements, (ii) airfield improvements, (iii) security and information technology improvements, and (iv) land acquisition and ground transportation improvements, among other things.

PHL Passenger and Other Traffic Activity. The table below shows PHL passenger and cargo activity. In Fiscal Year 2019, PHL enplaned passenger traffic increased by 5.5%, domestic enplanements increased by 5.0%, international enplanements increased by 9.0%, and total cargo traffic increased by 12.9%.

	Fiscal Year 2019	**Fiscal Year 2018**
Domestic Enplanements	14,046,663	13,372,943
International Enplanements	2,041,761	1,872,510
Total Enplanements	16,088,424	15,245,453
Freight (US tons)	554,606	487,086
Mail (US tons)	21,664	23,344
Total (US tons)	576,270	510,430

Northeast Philadelphia Airport

PNE is located approximately ten miles northeast of Center City on approximately 1,118 acres. PNE serves as a reliever airport for PHL and provides for general aviation, air taxi, corporate, and occasional military use. PNE currently has no scheduled commercial service. There are a variety of hangars (corporate and general aviation) at PNE. There are approximately 175 general aviation aircraft based at PNE. The Airport System's long-term capital program includes PNE improvement projects.

Port of Philadelphia

The Port of Philadelphia (the "Port") is located on the Delaware River within the City limits. The Port's facilities are serviced by two Class I railroads (CSX and Norfolk Southern) and provide service to major eastern Canadian points, as well as Midwestern, southern and southeastern U.S. destinations. Terminal facilities, encompassing four million square feet of warehousing, are located in close proximity to Interstate 95 and Interstate 76. Over 1,600 local general freight trucking companies operate in the MSA, according to Hoover's Inc.

The Philadelphia Regional Port Authority (the "PRPA") reported approximately 6.3 million metric tons of cargo moved through the Port in 2016, the second year of more than 6 million tons of cargo in a single calendar year, representing a 2.7% increase over 2015. The Port is the top-ranked port for meat importing in the United States, and is among the nation's leaders for fruit, cocoa, forest products and steel imports. In December 2015, the PRPA secured a new shipping service that will link directly with burgeoning port operations on the Gulf of Mexico at Veracruz and Altamira. This service will target commodities including goods such as avocados, lemons, tomatoes and commercial cargo.

As part of an ongoing project, the PRPA has been working to increase the Port's competitiveness by increasing capacity by deepening the main channel of the Delaware River from 40 to 45 feet. Improvements will double container and auto capacity at the Port and increase the Port's ability to handle wood pulp, a food grade commodity.

KEY CITY-RELATED SERVICES AND BUSINESSES

Water and Wastewater

The water and wastewater systems of the City are owned by the City and operated by the City's Water Department (the "Water Department"). The water and wastewater systems are referred to herein individually as the "Water System" and "Wastewater System", respectively.

The Water System's service area includes the City and has one wholesale water service contract. Based on the 2018 U.S. Census Bureau estimate, the Water System served 1,584,138 individuals. As of June 30, 2019, the Water System served approximately 490,000 active customer accounts using approximately 3,100 miles of mains and approximately 25,000 fire hydrants.

The City obtains approximately 58% of its water from the Delaware River and the balance from the Schuylkill River. The City is authorized by the Pennsylvania Department of Environmental Protection (the "PaDEP") to withdraw up to 423 million gallons per day ("MGD") from the Delaware River and up to 258 MGD from the Schuylkill River. On September 27, 2016, the PaDEP issued the Water Department a new water allocation permit, which expires on September 27, 2041. Under the new permit, the amount the City is authorized to withdraw from each river has not changed.

Water treatment is provided by the Samuel S. Baxter Water Treatment Plant on the Delaware River and by the Belmont and Queen Lane Water Treatment Plants on the Schuylkill River. The combined rated treatment capacity of these plants under the Water Department's Partnership for Safe Water procedures is 546 MGD. The combined maximum source water withdrawal capacity from the two rivers that supply these plants is 680 MGD. The excess source water capacity enables higher than normal withdrawal from either river should conditions limit withdrawals from one.

The Wastewater System's service area includes the City and ten wholesale wastewater service contracts. Based on the 2018 U.S. Census Bureau estimate, the Water System served 1,584,138 individuals that live in the City and ten wholesale contracts.

As of June 30, 2019, the Wastewater System served approximately 545,000 accounts, including approximately 60,000 stormwater-only accounts and ten wholesale contracts with neighboring municipalities and authorities.

The Wastewater System consists of three water pollution control plants, the Northeast, Southwest and Southeast water pollution control plants (the "WPCPs"), 29 pumping stations, approximately 3,700 miles of sewers, and a privately managed centralized biosolids handling facility. It includes approximately 1,850 miles of combined sewers, 770 miles of sanitary sewers, 750 miles of stormwater sewers, 16 miles of force mains (sanitary and storm) and 330 miles of appurtenant piping. The three WPCPs processed a combined average of 484 MGD of wastewater in Fiscal Year 2019, have a 522 MGD combined average daily design capacity and a peak capacity of 1,059 MGD.

Solid Waste Disposal

The City is responsible for collecting solid waste, including recycling, from residential households and some commercial establishments. On average, approximately 2,300 tons of solid waste per day are collected by the City. Municipal solid waste is disposed of through a combination of recycling processing facilities, private and City transfer stations within the City limits, and at various landfills operated outside the City limits.

Parks

The City was originally designed by William Penn and Thomas Holme around five urban parks, each of which remains in Center City to this day. The City's parklands total over 10,300 acres, and include Fairmount Park, the world's largest landscaped urban park at 9,200 acres, Pennypack Park, and the Philadelphia Zoo, the country's first zoo. The City also offers its residents and visitors America's most historic square mile, which includes Independence Hall and the Liberty Bell. Under the Rebuild initiative, an estimated $500 million will be invested in Philadelphia parks, recreation centers, playgrounds and libraries in the next several years.

Libraries

The Free Library of Philadelphia, the City's public library system, comprises 54 branches and an extensive online resource system.

Streets and Sanitation

The Philadelphia Streets Department (the "Streets Department") and the divisions within it are responsible for the City's large network of streets and roadways. The City's pavement condition is considered to be a "Fair" pavement condition. In order for the City to maintain its pavement in a state of good repair, local streets should be repaved once every 20 years and arterials should be repaved once every 10 years. This requires approximately 131 miles of paving every year. The pavement program has accumulated a backlog of approximately 1,100 miles since 1996. As a result of the new funding under Act 89, the Streets Department has funds to address long standing state of good repair needs without an additional allocation from the General Fund. During Fiscal Years 2014-2017, the Streets Department invested in critical equipment replacements and began to implement a strategy to address recurring state of good repair needs. This includes critical equipment replacement, street paving and pothole repair, and replacement of traffic control equipment.

The Streets Department is also responsible for the ongoing collection and disposal of residential trash and recyclables, as well as the construction, cleanliness and maintenance of the street system. The streets system in Philadelphia totals 2,575 miles - 2,180 miles of City streets, 35 miles of Fairmount Park roads and 360 miles of state highways. The Highway Unit and Sanitation Division annually collects and disposes of approximately 600,000 tons of rubbish and 125,000 tons of recycling, completes over 48,000 miles of mechanical street cleaning, clears 1,800 major illegal dump sites, and removes over 155,000 abandoned tires.

Sustainability and Green Initiatives

Mayor Kenney continues the City's commitment to make Philadelphia the greenest and most sustainable city in America. To aid in achieving this goal, the Philadelphia Energy Authority has been tasked with improving energy sustainability and affordability in the City and with educating consumers on their energy choices. The City is investing in and evaluating additional options and investing in green infrastructure to better manage storm water reclamation and reduce pollution of the City's public waters. There has been extensive investment in creating more and better public green spaces, such as Love Park in Center City, as well as green spaces along both the Delaware and Schuylkill Rivers. Finally, the City has been taking steps to further reduce automobile traffic, congestion and pollution by making Philadelphia's streets increasingly friendly to bicyclists. The City introduced its new bicycle sharing system, Indego, in 2015, as further described in "TRANSPORTATION."

[THIS PAGE INTENTIONALLY LEFT BLANK]

APPENDIX E

SUMMARY OF THE 1998 GENERAL ORDINANCE

The following are summaries of certain provisions of the 1998 General Ordinance. The summary does not purport to be comprehensive or definitive and is subject to the complete text of the terms and provisions of the 1998 General Ordinance, to which reference is hereby made. Copies of the complete text of the 1998 General Ordinance are available from the Office of the Director of Finance, Municipal Services Building, 1401 John F. Kennedy Boulevard, Suite 1330, Philadelphia, Pennsylvania 19102.

Certain Definitions

Set forth below are definitions in summary form of certain terms used in the forepart of this Official Statement and in this APPENDIX E – "SUMMARY OF THE 1998 GENERAL ORDINANCE." Many of these terms and the complete text of the definitions can be found in the 1998 General Ordinance. Certain terms in this APPENDIX E vary from the terms defined in the 1998 General Ordinance. In that event, the defined term used in the 1998 General Ordinance is included in parentheses with the applicable summary definition below.

"Accreted Value" means, with respect to any Capital Appreciation 1998 Ordinance Bond as of any specified date, the Original Value of such 1998 Ordinance Bond plus interest accreted on such 1998 Ordinance Bond to such date, all as may be provided in an applicable Supplemental Ordinance.

"Act" means The First Class City Revenue Bond Act approved October 18, 1972 (Act No. 234, 53 P.S. 15901 to 15924), as from time to time amended.

"Bond Counsel" means any firm of nationally recognized bond counsel acceptable to the City.

"Bondholder or Holder" means the registered owner of any 1998 Ordinance Bonds.

"Bond Register" means the list of the names and addresses of Bondholders and the principal amounts and numbers of the 1998 Ordinance Bonds held by them maintained by the Fiscal Agent on behalf of the City.

"Capital Appreciation 1998 Ordinance Bonds" (Capital Appreciation Bonds) means any 1998 Ordinance Bonds issued under the 1998 General Ordinance which do not pay interest until maturity or until a specified date prior to maturity, but whose Original Value accretes periodically to the amount due on the maturity date.

"City Charges" means the proportionate charges, if any, for services performed for the Gas Works by all officers, departments, boards or commissions of the City which are contained in the computation of operating expenses of the Gas Works including, without limitation, the expenses of the Gas Commission, and also means the base payments to the City contained in the Management Agreement and all other payments made to the City from Gas Works Revenues.

"City Solicitor" means the head of the City's law department as provided by the Philadelphia Home Rule Charter.

"Code" means the Internal Revenue Code of 1986, as amended, or any successor legislation, and the regulations and published rulings promulgated thereunder or applicable thereto.

"Credit Facility" means any letter of credit, standby bond purchase agreement, line of credit, surety bond, insurance policy or other insurance commitment or similar agreement (other than a Qualified Swap or an Exchange Agreement) that is provided by a commercial bank, insurance company or other institution, with a current long term rating (or whose obligations thereunder are guaranteed by a financial institution with a long term rating) from Moody's and S&P not lower than "A" provided that, with respect to the Sixteenth Series Bonds, the term "Credit Facility" means any letter of credit, standby bond purchase agreement, line of credit, surety bond, insurance policy or other insurance commitment or similar agreement (other than a Qualified Swap or an Exchange Agreement) that is provided by a commercial bank, insurance company or other institution, with a current long term rating (or whose obligations thereunder are guaranteed by a financial institution with a long term rating) from Moody's or S&P not lower than "A".

"Credit Facility Issuer or issuer of a Credit Facility" means each issuer of a Credit Facility then in effect, and its successors. References to the Credit Facility Issuer shall be read to mean the issuer of the Credit Facility applicable to a particular Series of 1998 Ordinance Bonds or each issuer of a Credit Facility, as the context requires.

"Debt Service Requirements" means, for a specified period, the sum of (i) the principal of (whether at maturity or pursuant to mandatory redemption) and interest (other than capitalized interest) on Outstanding 1998 Ordinance Bonds payable during the period and (ii) all net amounts due and payable by the City under Qualified Swaps and Exchange Agreements during the period. For purposes of estimating Debt Service Requirements for any future period, (i) any Option 1998 Ordinance Bond outstanding during such period shall be assumed to mature on the stated maturity date thereof, except that the principal amount of any Option 1998 Ordinance Bond tendered for payment and cancellation before its stated maturity date shall be deemed to accrue on the date required for payment pursuant to such tender; (ii) Debt Service Requirements on 1998 Ordinance Bonds for which the City has entered into a Qualified Swap or an Exchange Agreement shall be calculated assuming that the interest rate on such 1998 Ordinance Bonds shall equal the stated fixed or variable rate payable by the City on the Qualified Swap or Exchange Agreement or, if applicable and if greater than such stated rate, the applicable rate for any 1998 Ordinance Bonds issued in connection with the Qualified Swap or Exchange Agreement adjusted, in the case of variable rate obligations, as described below in the second to last paragraph under the heading "**Covenants** − *Rate Covenant*"; and (iii) Debt Service Requirements with respect to Variable Rate 1998 Ordinance Bonds shall be subject to adjustments as described below in the second to last paragraph under the heading "**Covenants** − *Rate Covenant*."

"Director of Finance" means the chief financial, accounting and budget officer of the City as established by the Philadelphia Home Rule Charter, including a person acting as Director of Finance under applicable law.

"Engineer" means a consulting engineer or a firm of consulting engineers, in either case having broad experience in the design and analysis of the operation of gas works or gas distribution systems of the magnitude and scope of the Gas Works and a favorable reputation for competence in such field.

"Exchange Agreement" means, with respect to a Series of 1998 Ordinance Bonds, or any portion thereof to the extent from time to time permitted by applicable law, any interest exchange agreement, interest rate swap agreement, currency swap agreement or other contract or agreement, other than a Qualified Swap, authorized, recognized and approved by a Supplemental Ordinance as an Exchange Agreement and providing for payments to and from an entity whose senior long term debt obligations, other senior unsecured long term obligations, or claims paying ability or whose obligations under an Exchange Agreement are guaranteed by an entity whose senior long term debt obligations, other senior unsecured long term obligations or claims paying ability, are rated not less than "A3" by Moody's, "A-" by S&P or "A-" by Fitch, or the equivalent thereof by any successor thereto as of the date the Exchange Agreement is entered into, which payments are calculated by reference to fixed or variable rates and constituting a financial accommodation between the City and the counterparty.

"Fiscal Agent" means any bank, bank and trust company or trust company named as such pursuant to the 1998 General Ordinance or its successor.

"Fiscal Year" means the Fiscal Year of the Gas Works.

"Fitch" means Fitch IBCA, Inc., a corporation organized and existing under the laws of the State of New York, its successors and assigns and if such corporation shall for any reason no longer perform the functions of a securities rating agency, "Fitch" shall be deemed to refer to any other nationally recognized securities rating agency designated by the City. Whenever rating categories of Fitch are specified in the 1998 General Ordinance, such categories shall be irrespective of gradations within a category.

“Gas Commission” means the Gas Commission provided for by the Philadelphia Home Rule Charter as presently constituted or hereafter reconstituted in accordance with law.

“Gas Works” means all property, real and personal, owned by the City and used in the acquisition or manufacture, storage and distribution of natural, liquefied, synthetic or manufactured gas or in the maintenance, management or administration thereof and all activities ancillary and related thereto, and also means, as the context may require, the business entity managed by the Manager.

“Gas Works Revenues” means all operating and nonoperating revenues of the Gas Works derived from its activities and assets involved in the supply, manufacture, storage and distribution of gas, including all rents, rates and charges imposed or charged by the City upon the owners or occupants of properties connected to, and upon all users of, gas distributed by the Gas Works and all other revenues derived therefrom and all other income derived by the City from the Gas Works. Revenues derived from activities unrelated to the supply, manufacture, storage and distribution of gas or assets related thereto shall not be included in Gas Works Revenues, provided that the Gas Works receives fair payment for the use of gas related assets and personnel of the Gas Works used in such activities, which payments shall be included in Gas Works Revenues. In particular, Gas Works Revenues do not include revenues from enterprises or functions not related to gas activities (e.g., activities involving the supply, generation or distribution of electricity). Gas Works Revenues shall not include those portions of the Gas Works’ rents, rates and charges which are securitized and sold pursuant to the 1998 General Ordinance as described below under “Permitted Securitization of Gas Works Revenues.” Gas Works Revenues may be divided into separate components in one or more Supplemental Ordinances and any Series of 1998 Ordinance Bonds issued thereafter may be limited as to source of payment to one or more of such components as provided in the Supplemental Ordinance authorizing the particular Series of 1998 Ordinance Bonds.

“Government Obligations” means any of the following which are noncallable and which at the time of investment are legal investments under the Act for the moneys proposed to be invested therein:

(a) direct general obligations of, or obligations the payment of principal of and interest on which are unconditionally guaranteed as to full and timely payment by the United States of America;

(b) direct obligations and fully guaranteed certificates of beneficial interest of the Export-Import Bank of the United States; consolidated debt obligations and letter of credit-backed issues of the Federal Home Loan Banks; participation certificates and senior debt obligations of the Federal Home Loan Mortgage Corporation; debentures of the Federal Housing Administration; mortgage-backed securities (except stripped mortgage securities which are valued greater than par on the portion of unpaid principal) and senior debt obligations of the Federal National Mortgage Association; participation certificates of the General Services Administration; guaranteed mortgage-backed securities and guaranteed participation certificates of the Government National Mortgage Association; guaranteed participation certificates and guaranteed pool certificates of the Small Business Administration; debt obligations and letter of credit-backed issues of the Student Loan Marketing Association; local authority bonds of the U.S. Department of Housing & Urban Development; guaranteed Title XI financings of the U.S. Maritime Administration; or

(c) obligations issued by the Resolution Funding Corporation pursuant to the Financial Institutions Reform, Recovery and Enforcement Act of 1989 (the “FIRRE Act”), (i) the principal of which obligations is payable when due from payments of the maturing principal of non-interest bearing direct obligations of the United States of America which are issued by the Secretary of the Treasury and deposited in the Funding Corporation Principal Fund established pursuant to the FIRRE Act, and (ii) the interest on which obligations, to the extent not paid from other specified sources, is payable when due by the Secretary of the Treasury pursuant to the FIRRE Act.

“Independent” means a person who is not a salaried employee or elected or appointed official of the City; provided, however, that the fact that such person is retained regularly by or transacts business with the City shall not make such person an employee within the meaning of this definition.

“Interim Debt” means any bond anticipation notes or other temporary borrowing which the City anticipates permanently financing with 1998 Ordinance Bonds or other long term indebtedness under the 1998 General Ordinance or otherwise.

“Management Agreement” means the Agreement dated December 29, 1972 between the City and the Manager for the management and operation of the Gas Works, as presently or hereafter amended, or any successor agreement which may be entered into by the City pertaining to the management of the Gas Works.

“Manager” means Philadelphia Facilities Management Corporation, currently managing the Gas Works pursuant to the Management Agreement, or its successor or such other person, corporation, board, commission or department of the City, which may be designated by the City to manage the Gas Works.

“Moody’s” means Moody’s Investors Service, Inc., a corporation organized and existing under the laws of the State of Delaware, its successors and assigns, and if such corporation shall for any reason no longer perform the functions of a securities rating agency, “Moody’s” shall be deemed to refer to any other nationally recognized securities rating agency designated by the City. Whenever rating categories of Moody’s are specified in the 1998 General Ordinance, such categories shall be irrespective of gradations.

“Net Operating Expenses” means Operating Expenses exclusive of City Charges.

“1998 Ordinance Bond or Bonds” (Bond or Bonds) means any Gas Works Revenue bond or note issued and outstanding pursuant to the Act under the 1998 General Ordinance and any Supplemental Ordinance.

“Operating Expenses” means all costs and expenses of the Gas Works necessary and appropriate to operate and maintain the Gas Works in good operable condition during each Fiscal Year, and shall include, without limitation, the Manager’s fee, salaries and wages, purchases of service by contract, costs of materials, supplies and expendable equipment, maintenance costs, costs of any property or the replacement thereof or for any work or project, related to the Gas Works, which does not have a probable useful life of at least five years, pension and welfare plan and workmen’s compensation requirements, provision for claims, refunds and uncollectible receivables and for City Charges, all in accordance with generally accepted municipal accounting principles consistently applied, but shall exclude depreciation and interest and sinking fund charges. Operating Expenses shall not include Unrelated Expenses.

“Option 1998 Ordinance Bond” (Option Bond) means any 1998 Ordinance Bond which by its terms may be tendered by and at the option of the Holder thereof for payment by the City prior to its stated maturity date or the maturity date of which may be extended by and at the option of the Holder thereof.

“Original Value,” with respect to a Series of 1998 Ordinance Bonds issued as Capital Appreciation 1998 Ordinance Bonds, means the principal amount paid by the initial purchasers thereof on the date of original issuance.

“Outstanding,” when used with reference to the 1998 Ordinance Bonds, means, as of any particular date, all 1998 Ordinance Bonds which have been authenticated and delivered under the 1998 General Ordinance, except:

(a) 1998 Ordinance Bonds canceled after purchase in the open market or because of payment or redemption prior to maturity;

(b) 1998 Ordinance Bonds for the payment or redemption of which sufficient moneys shall have been theretofore deposited with the Fiscal Agent (whether upon or prior to the maturity or redemption date of any such 1998 Ordinance Bonds), provided that, if such 1998 Ordinance Bonds are to be redeemed prior to the maturity thereof, notice of such redemption shall have been given as provided in the 1998 General Ordinance or arrangements satisfactory to the Fiscal Agent shall have been made therefor, or waiver of such notice satisfactory in form to the Fiscal Agent shall have been filed with the Fiscal Agent; and

(c) 1998 Ordinance Bonds in lieu of which or in substitution for which others have been authenticated and delivered pursuant to the 1998 General Ordinance.

1998 Ordinance Bonds paid with the proceeds of any Credit Facility shall be Outstanding until the issuer of such Credit Facility has been reimbursed for the amount of the payment or has presented the 1998 Ordinance Bonds for cancellation.

"Philadelphia Home Rule Charter" means the Philadelphia Home Rule Charter, as amended or superseded by any new home rule charter, adopted pursuant to authorization of the First Class City Home Rule Act approved April 21, 1949, P.L. 665, §1 et seq. (53 P.S. §13101 et seq.).

"Qualified Escrow Securities" means funds which are represented by (i) demand deposits, interest-bearing time accounts, savings deposits or certificates of deposit, but only to the extent such deposits or accounts are fully insured by the Federal Deposit Insurance Corporation or any successor United States governmental agency, or to the extent not insured, fully secured and collateralized by Government Obligations having a market value (exclusive of accrued interest) at all times at least equal to the principal amount of such deposits or accounts, (ii) if at the time permitted under the Act, obligations of any state or political subdivision thereof or any agency or instrumentality of such state or political subdivision for which cash, Government Obligations or a combination thereof have been irrevocably pledged to or deposited in a segregated escrow account for the payment when due of principal or redemption price of and interest on such obligations, and any such cash or Government Obligations pledged and deposited are payable as to principal or interest in such amounts and on such dates as may be necessary without reinvestment to provide for the payment when due of the principal or redemption price of and interest on such obligations, and such obligations are rated by any Rating Agency in the highest rating category assigned by such Rating Agency to obligations of the same type, or (iii) noncallable Government Obligations. In each case such funds (i) are subject to withdrawal, mature or are payable at the option of the holder at or prior to the dates needed for disbursement, provided such deposits or accounts, whether deposited by the City or by such depository, are insured or secured as public deposits with securities having at all times a market value exclusive of accrued interest equal to the principal amount thereof, (ii) are irrevocably pledged for the payment of such obligations and (iii) are sufficient, together with the interest to the disbursement date payable with respect thereto, if also pledged, to meet such obligations in full.

"Qualified Swap or Swap Agreement" means, with respect to a Series of 1998 Ordinance Bonds or any portion thereof, any financial arrangement that (i) is entered into by the City with an entity that is a Qualified Swap Provider at the time the arrangement is entered into; (ii) provides that (a) the City shall pay to such entity an amount based on the interest accruing at a fixed rate on an amount equal to the principal amount of the Outstanding 1998 Ordinance Bonds of such Series or portion thereof, and that such entity shall pay to the City an amount based on the interest accruing on a principal amount initially equal to the same principal amount as such 1998 Ordinance Bonds, at either a variable rate of interest or a fixed rate of interest computed according to a formula set forth in such arrangement (which need not be the same as the actual rate of interest borne by the 1998 Ordinance Bonds) or that one shall pay to the other any net amount due under such arrangement or (b) the City shall pay to such entity an amount based on the interest accruing on the principal amount of the Outstanding 1998 Ordinance Bonds of such Series or portion thereof at a variable rate of interest as set forth in the arrangement and that such entity shall pay to the City an amount based on interest accruing on a principal amount equal to the same principal amount of such 1998 Ordinance Bonds at a variable rate of interest or a fixed rate of interest computed according to a formula set forth in such arrangement (which need not be the same as the actual rate of interest borne by the 1998 Ordinance Bonds) or that one shall pay to the other any net amount due under such arrangement; and (iii) which has been designated in writing to the Fiscal Agent by the City as a Qualified Swap with respect to such 1998 Ordinance Bonds.

"Qualified Swap Provider" means, with respect to a Series of 1998 Ordinance Bonds, an entity whose senior long term debt obligations, other senior unsecured long term obligations or claims paying ability, or whose payment obligations under a Qualified Swap are guaranteed by an entity whose senior long term debt obligations, other senior unsecured long term obligations or claims paying ability, are rated (at the time the subject Qualified

Swap is entered into) at least as high as "Aa" by Moody's and "AA" by S&P, or the equivalent thereof by any successor thereto.

"Rate Covenant" means the covenant described below under the subheading "**Covenants** – *Rate Covenant*."

"Rating Agency" means Moody's, S&P or Fitch, to the extent that any of such rating services have issued a credit rating on any of the Outstanding 1998 Ordinance Bonds or, upon discontinuance of any of such rating services, such other nationally recognized rating service or services if any such rating service has issued a credit rating on any of the Outstanding 1998 Ordinance Bonds.

"Rebate Amount" means the amount with respect to a Series of 1998 Ordinance Bonds, which is required to be paid to the United States of America, as of any computation date, in compliance with the restrictions imposed by the Code.

"S&P" means Standard & Poor's Ratings Services, a corporation organized and existing under the laws of the State of New York, its successors and assigns, and if such corporation shall for any reason no longer perform the functions of a securities rating agency, "S&P" shall be deemed to refer to any other nationally recognized securities rating agency designated by the City. Whenever rating categories of S&P are specified in the 1998 General Ordinance, such categories shall be irrespective of gradations within a category.

"Senior 1998 Ordinance Bonds" (Senior Bonds) means 1998 Ordinance Bonds which shall be first in right of payment and as to which the coverage requirement under the Rate Covenant shall be 150%.

"Series," when applied to 1998 Ordinance Bonds, means collectively all of the 1998 Ordinance Bonds of a given issue authorized by Supplemental Ordinance as described below under "Conditions to Issuing 1998 Ordinance Bonds – Additional Conditions" and may also mean, if appropriate, a subseries of any such issue if, for any reason, the City should determine to divide any such issue into one or more subseries of 1998 Ordinance Bonds.

"Sinking Fund" means the 1998 General Ordinance Gas Works Revenue Bond Sinking Fund established by the 1998 General Ordinance, as described below under "Sinking Fund."

"Sinking Fund Depositary" means the Fiscal Agent or any other bank, bank and trust company or trust company appointed as such by the City.

"Sinking Fund Reserve" means the Sinking Fund Reserve established by the 1998 General Ordinance, as described below under "Sinking Fund Reserve."

"Sinking Fund Reserve Requirement" means, with respect to all 1998 Ordinance Bonds secured by the Sinking Fund Reserve, an amount equal to the greatest amount of Debt Service Requirements payable in any Fiscal Year (except that such Debt Service Requirements will be computed as if any Qualified Swap did not exist and the Debt Service Requirements attributable to any Variable Rate Bonds may be based upon the fixed rate of interest as set forth in the Supplemental Ordinance for such 1998 Ordinance Bonds), determined as of any particular date.

"Subordinate 1998 Ordinance Bonds" (Subordinate Bonds) means those 1998 Ordinance Bonds which shall be subordinate in right of payment to Senior 1998 Ordinance Bonds and as to which the coverage requirement under the Rate Covenant shall be 100%.

"Supplemental Ordinance" means an ordinance supplemental to the 1998 General Ordinance enacted pursuant to the Act and the 1998 General Ordinance by the Council of the City authorizing the issuance of a Series of 1998 Ordinance Bonds.

"Unrelated Expenses" means expenses unrelated to the supply, manufacture, storage and distribution of gas or assets related thereto.

"Variable Rate 1998 Ordinance Bond" (Variable Rate Bond) means any 1998 Ordinance Bond, the rate of interest on which is subject to change prior to maturity and cannot be determined in advance of such change.

Purpose of 1998 Ordinance Bonds

1998 Ordinance Bonds shall be issued for the purposes of (1) paying the cost of projects, as such term is defined in the Act, related to the Gas Works, (2) reimbursing any City fund from which such costs have been paid or advanced, (3) funding any such cost for which the City shall have outstanding bond anticipation notes or other obligations, (4) refunding any bonds of the City issued for the foregoing purposes under the Act, (5) refund any general obligation bonds of the City issued for the foregoing purposes, or (6) financing anything else relating to the Gas Works permitted under the Act.

The Act defines "projects" as any buildings, structures, facilities or improvements of a public nature, the related land, rights or leasehold estates in land, and the related furnishings, machinery, apparatus or equipment of a capital nature, which the City is authorized to own, construct, acquire, improve, lease as lessor or lessee, operate, maintain or support; any item of construction, acquisition or extraordinary maintenance or repair thereof, the City's share of the cost of any of the foregoing or any combination thereof undertaken jointly with others; and any combination of the foregoing or any undivided portion of the cost of any of the foregoing as may be designated a "project" by the City for financing purposes and in respect of which the City may reasonably be expected to receive Gas Works Revenues.

Pledge of Revenues; Grant of Security Interest; Limitation on Recourse

The City pledges, in the 1998 General Ordinance, for the security and payment of all 1998 Ordinance Bonds issued under the 1998 General Ordinance and grants a lien on and security interest in, all Gas Works Revenues, all accounts, contract rights and general intangibles representing the Gas Works Revenues and all funds and accounts established under the 1998 General Ordinance, and in each case, the proceeds of the foregoing, except as limited for a Series of 1998 Ordinance Bonds in the Supplemental Ordinance authorizing the issuance of such Series of 1998 Ordinance Bonds; provided, however, that the pledge of the 1998 General Ordinance may also be for the benefit of the provider of a Credit Facility, Qualified Swap or Exchange Agreement, or any other person who undertakes to provide moneys for the account of the City for the payment of principal or redemption price of and interest on any Series of 1998 Ordinance Bonds on an equal and ratable basis with the related Series of 1998 Ordinance Bonds, to the extent provided by any Supplemental Ordinance.

Neither the 1998 Ordinance Bonds nor the City's reimbursement or other contractual obligations with respect to any Credit Facility, Qualified Swap or Exchange Agreement shall constitute a general indebtedness or a pledge of the full faith and credit of the City within the meaning of any constitutional or statutory provision or limitation of indebtedness. No Bondholder or beneficiary of any of the foregoing agreements shall ever have the right, directly or indirectly, to require or compel the exercise of the ad valorem taxing power of the City for the payment of the principal and redemption price of or interest on the 1998 Ordinance Bonds or the making of any payments under the 1998 General Ordinance. The 1998 Ordinance Bonds and the obligations evidenced thereby and by the foregoing agreements shall not constitute a lien on any property of the City other than the Gas Works Revenues.

Parity and Priority of 1998 Ordinance Bonds

All 1998 Ordinance Bonds issued pursuant to the 1998 General Ordinance shall be secured by the pledge of, and grant of a security interest in, the Gas Works Revenues, except as limited for a Series of 1998 Ordinance Bonds in the Supplemental Ordinance authorizing the issuance of such Series of 1998 Ordinance Bonds. Subordinate 1998 Ordinance Bonds shall be subordinate to Senior 1998 Ordinance Bonds in right of payment of principal, premium, if any, and interest. Senior 1998 Ordinance Bonds and Subordinate 1998 Ordinance Bonds shall not have any preference, priority or distinction as to lien or otherwise, except as otherwise provided in the 1998 General Ordinance or in a Supplemental Ordinance, over and other Senior 1998 Ordinance Bonds or Subordinate 1998 Ordinance Bonds, respectively.

Credit Enhancement; Exchange Agreements; Qualified Swaps

As provided by Supplemental Ordinance and subject to the requirements of the 1998 General Ordinance, the City may provide for a Credit Facility, Exchange Agreement or Qualified Swap with respect to any Series of 1998 Ordinance Bonds or portion thereof.

Order of Application of Gas Works Revenues

The 1998 General Ordinance provides that all Gas Works Revenues as and when collected in each Fiscal Year shall be applied in the following order, to the extent then payable:

First, to Net Operating Expenses then payable;

Second, to debt service on Senior 1998 Ordinance Bonds and payments (other than termination payments) due to the issuers of Qualified Swaps and Exchange Agreements related to Senior 1998 Ordinance Bonds;

Third, to payments due to issuers of Credit Facilities related to Senior 1998 Ordinance Bonds;

Fourth, to debt service on Subordinate 1998 Ordinance Bonds and payments due in respect of obligations of the Gas Works on a parity with Subordinate 1998 Ordinance Bonds (including notes issued under the Note Ordinance, or any similar ordinance, and amounts payable to the provider of a Credit Facility in respect of such notes) and payments (other than termination payments) due to the issuers of Qualified Swaps and Exchange Agreements related to Subordinate 1998 Ordinance Bonds;

Fifth, to payments due to issuers of Credit Facilities related to Subordinate 1998 Ordinance Bonds;

Sixth, to required payments of the Rebate Amount to the United States;

Seventh, to replenishment of any deficiency in the Sinking Fund Reserve;

Eighth, to payment of general obligation bonds of the City adjudged to be self-liquidating from Gas Works Revenues[†];

Ninth, to debt service on other general obligation issued for the Gas Works[†]; and

Tenth, to City Charges and any other proper purpose of the Gas Works (including any termination payments to issuers of Qualified Swaps and Exchange Agreements and fees and expenses due under Credit Facilities), except Unrelated Expenses.

The 1998 General Ordinance does not require the segregation of revenues upon collection.

Covenants

Rate Covenant

The City covenants with the Holders of all 1998 Ordinance Bonds from time to time and at the time outstanding under the 1998 General Ordinance that, so long as any such 1998 Ordinance Bonds shall remain outstanding, the City will, at a minimum, impose, charge and collect in each Fiscal Year such gas rates and

---

[†] No general obligation bonds of the City described in items *Eighth* and *Ninth* above are currently outstanding.

charges as shall, together with all other Gas Works Revenues to be received in such Fiscal Year, equal not less than the greater of:

A. The sum of:

i. all Net Operating Expenses payable during such Fiscal Year;

ii. 150% of the amount required to pay Sinking Fund deposits required during such Fiscal Year in respect of all Outstanding Senior 1998 Ordinance Bonds;

iii. the amount required to pay Sinking Fund deposits required during such Fiscal Year in respect of all Outstanding Subordinate 1998 Ordinance Bonds and other obligations of the Gas Works on a parity with Subordinate 1998 Ordinance Bonds payable during such Fiscal Year;

iv. the amount, if any, required to be paid into the Sinking Fund Reserve during such Fiscal Year;

v. the Rebate Amount required to be paid to the United States during such Fiscal Year; and

vi. the amounts required to be paid to the issuers of Credit Facilities and the providers of Qualified Swaps and Exchange Agreements during such Fiscal Year;

OR

B*:* The sum of:

i. all Net Operating Expenses payable during such Fiscal Year;

ii. all Sinking Fund deposits required during such Fiscal Year in respect of all Outstanding 1998 Ordinance Bonds and all amounts payable in respect of obligations of the Gas Works which are on a parity with any of the 1998 Ordinance Bonds and in respect of general obligation bonds issued for improvements to the Gas Works and all amounts, if any, required during such Fiscal Year to be paid into the Sinking Fund Reserve[†];

iii. the Rebate Amount required to be paid to the United States during such Fiscal Year; and

iv. the amounts required to be paid to the issuers of Credit Facilities and the providers of Qualified Swaps and Exchange Agreements during such Fiscal Year.

For purposes of estimating Sinking Fund deposits with respect to Interim Debt and Variable Rate 1998 Ordinance Bonds, the City shall be entitled to assume that (1) Interim Debt will be amortized over a period of up to the maximum term permitted by the Act, but not in excess of the useful life of the assets to be financed, on an approximately level debt service basis and bear interest at the average interest rate on bonds of a similar maturity and credit rating (without any credit enhancement) as the 1998 Ordinance Bonds Outstanding under the 1998 General Ordinance and (2) Variable Rate 1998 Ordinance Bonds will bear interest at a rate equal to the average interest rate on such Variable Rate 1998 Ordinance Bonds during the period of twenty-four (24) consecutive calendar months immediately preceding the date of calculation or during such shorter period that such Variable Rate 1998 Ordinance Bonds have been Outstanding.

The Gas Commission is authorized and directed, without further authorization, to impose and charge and to collect, or cause to be collected, rents rates and charges which shall be sufficient in each Fiscal Year to comply with the Rate Covenant.[†]

Additional Covenants

The City covenants with the Holders of all 1998 Ordinance Bonds from time to time outstanding under the 1998 General Ordinance and at the time outstanding thereunder that: (1) it will pay or cause the Fiscal Agent

[†] No general obligation bonds described in item B.ii above are currently outstanding.

or any paying agent appointed by the City to pay from the Gas Works Revenues deposited in the Sinking Fund the principal of, and premium, if any, and interest on all 1998 Ordinance Bonds as the same shall become due and payable and as more particularly set forth in such 1998 Ordinance Bonds; (2) it will continuously maintain in good condition and continuously operate the Gas Works; and (3) it will not, in any Fiscal Year, pay from the Gas Works Revenues any City Charges or deposit from the Gas Works Revenues in the general sinking fund of the City any sinking fund charges in respect of general obligation bonds of the City unless, prior thereto or concurrently therewith, all sinking fund charges then payable in respect of Outstanding 1998 Ordinance Bonds shall have been deposited in the Sinking Fund, all amounts then payable in respect of obligations of the Gas Works which are on a parity with 1998 Ordinance Bonds shall have been paid, all amounts then payable to issuers of Credit Facilities and providers of Qualified Swaps and Exchange Agreements shall have been paid and all deposits then required to the Sinking Fund Reserve shall have been made.

Report Requirements

The City covenants with the Holders of all 1998 Ordinance Bonds from time to time outstanding under the 1998 General Ordinance and at the time outstanding thereunder that the City shall file with the Fiscal Agent, not later than 120 days after the close of each Fiscal Year, a report of the operation of the Gas Works that sets forth, (1) in reasonable detail, financial data concerning the Gas Works for such Fiscal Year (including a balance sheet, statements of income, equity and changes in financial condition, and an analysis of funds available to cover debt service (in each case not inconsistent with the statements of income, expenses, and other accounts of the City audited by the City Comptroller) prepared by the Manager in accordance with generally recognized municipal accounting principles consistently applied; and (2) complies with the Rate Covenant; which report is accompanied by a certificate of the Manager that the Gas Works are in good operating condition and by a certificate of the Director of Finance that, as of the date of such report, the City has complied with all covenants and requirements of the 1998 General Ordinance and of the ordinances supplemental thereto to be performed by the City. The Fiscal Agent will keep on file a copy of each such report and its accompanying certificates for a period of ten (10) years, and will make each available to any Bondholder or his authorized representative for inspection and copying at all reasonable times.

General Obligation Bonds - Junior Lien Revenue Bonds

The City reserves the right, and nothing in the 1998 General Ordinance shall be construed to impair such right, to finance improvements to the Gas Works by the issuance of its general obligation bonds or by the issuance, under ordinances other than the 1998 General Ordinance and Supplemental Ordinances, of Gas Works obligations for the payment of which Gas Works Revenues may be pledged subject and subordinate in each Fiscal Year to the prior payment from such revenues of all principal, premium, interest and sinking fund requirements payable during such Fiscal Year under the 1998 General Ordinance.

Conditions to Issuing 1998 Ordinance Bonds

Financial Report of the Director of Finance

The City covenants with the Holders of all 1998 Ordinance Bonds from time to time and at the time outstanding under the 1998 General Ordinance that, so long as any such 1998 Ordinance Bonds shall remain outstanding, the City will not issue any 1998 Ordinance Bonds unless the CFO Financial Report (as defined below) is filed with the City Council. The CFO Financial Report may be given in reliance on an engineering report of an Independent Engineer setting forth the qualifications of the Engineer and containing:

(a) a statement that the Engineer has made an investigation of the physical properties included in the Gas Works and of the books and records of the Gas Works maintained by the City or by the Manager, as it deemed necessary; and

(b) on the basis of such investigation containing:

(i) the same matters, statements and opinion as are required to be contained in the CFO Financial Report supported by appropriate schedules and summaries;

(ii) a statement that Gas Works rents, rates and charges, on the basis of which the statements required by clause (i) are made, are currently and will be sufficient to comply with the Rate Covenant; and

(iii) a statement that, in the opinion of the Engineer, the Gas Works are in good operating condition or that adequate steps are being taken to make them so.

The "CFO Financial Report" means the financial report required by the Act to be signed by the Director of Finance and to contain (supported by appropriate schedules and summaries): (1) a brief description of the project or projects related to the Gas Works for which the 1998 Ordinance Bonds are to be issued; (2) a statement identifying the sources from which the Gas Works Revenues are to be derived; (3) a statement that, on the basis of actual, if appropriate, and estimated future annual financial operations of the Gas Works, the Gas Works will, in the opinion of the Director of Finance, yield Gas Works Revenues over the amortization period of the 1998 Ordinance Bonds sufficient to meet the payment or deposit requirements of (a) all expenses of operation, maintenance, repair and replacement of the Gas Works, (b) all reserve or special funds established under the 1998 General Ordinance, (c) the principal of and interest on all 1998 Ordinance Bonds, as the same shall become due and payable, for which Gas Works Revenues are pledged, (d) any State taxes assumed by the City to be paid on 1998 Ordinance Bonds, and (e) the surplus requirements contained in the Rate Covenant; and (4) a statement that the Gas Works Revenues upon which the statements set forth in clause (3) are based comply with the definition of "Project Revenues" contained in the Act.

Additional Conditions

Prior to the issuance of any Series of 1998 Ordinance Bonds, the Council of the City shall adopt a Supplemental Ordinance that (1) authorizes the issuance of such 1998 Ordinance Bonds; (2) specifies the aggregate principal amount or maximum aggregate principal amount of the Series to be issued; (3) states that such 1998 Ordinance Bonds are issued in respect of capital costs of a Gas Works project or projects of the City or to fund or refund bond anticipation or other obligations of the City issued in respect thereof or for the purpose of refunding debt issued for such purpose; (4) makes a finding based on the required CFO Financial Report described above that the Gas Works Revenues pledged under the 1998 General Ordinance will be sufficient to comply with the Rate Covenant and also to pay all costs, expenses and payments required to be paid therefrom and in the order and priority stated in the 1998 General Ordinance; and (5) contains the covenant that, so long as any such 1998 Ordinance Bonds shall remain unpaid, the City will make payments or cause payments to be made out of the Sinking Fund at such times and in such amounts as shall be sufficient for the payment of the interest thereon and principal thereof when due (as required by Article IX, Section 10 of the Constitution of the Commonwealth).

Prior to the issuance of any 1998 Ordinance Bonds, the Director of Finance shall file with the Fiscal Agent a transcript of the proceedings authorizing the issuance of such 1998 Ordinance Bonds, which shall include (1) a certified copy of the 1998 General Ordinance (unless previously so filed); (2) a certified copy of the Supplemental Ordinance described in the immediately preceding paragraph; (3) an executed or certified copy of the CFO Financial Report; (4) an executed copy of an opinion of the City Solicitor to the effect that, under the 1998 General Ordinance and the related Supplemental Ordinance, the holders or registered holders of the 1998 Ordinance Bonds to be issued will have no claim upon the taxing power or general revenues of the City nor any lien upon any of the property of the City other than Gas Works Revenues pledged therefor; and (5) an opinion of Bond Counsel to the effect that (a) the Series of 1998 Ordinance Bonds has been duly issued for a permitted purpose under the Act and under the 1998 General Ordinance, (b) all conditions precedent to the issuance of the Series of 1998 Ordinance Bonds pursuant to the Act and the 1998 General Ordinance have been satisfied, (c) the Series of 1998 Ordinance Bonds has been duly authorized, executed and delivered and constitutes the legal, valid and binding obligation of the City, and (d) if the interest on the Series of 1998 Ordinance Bonds is intended to be excluded from gross income for Federal income tax purposes, interest on the Series of 1998 Ordinance Bonds will be so excluded.

The Director of Finance is also required, under the Act, prior to the issuance of any 1998 Ordinance Bonds, to file with court of common pleas of Philadelphia County items (1), (2), (3) and (4) described in the immediately preceding paragraph.

Sinking Fund

The 1998 General Ordinance establishes the Sinking Fund for the benefit and security of the Holders of all 1998 Ordinance Bonds. The Sinking Fund shall be held in the name of the City in an account or accounts separate and apart from all other accounts of the City and payments therefrom are made only as provided in the 1998 General Ordinance. The City covenants and the Director of Finance is directed to deposit in, and the 1998 General Ordinance appropriates to, the Sinking Fund from the Gas Works Revenues in each Fiscal Year such amounts as will, together with interest and profits earned and to be earned on investments held in the Sinking Fund, be sufficient to accumulate therein (exclusive of the amount in the Sinking Fund Reserve), on or before each interest and principal payment date of the 1998 Ordinance Bonds, the amounts required to pay the principal of and the interest on the 1998 Ordinance Bonds then becoming due and payable. Payments into the Sinking Fund shall be scheduled at such times and in such amounts in relation to the receipt of revenues and the operation and maintenance requirements of the Gas Works as the Director of Finance shall determine.

The Sinking Fund Depositary shall, on direction of the Director of Finance, or if for any reason he should fail to give such direction, on the direction of the Fiscal Agent, liquidate investments, if necessary, and pay over from the Sinking Fund in cash to the Fiscal Agent not later than the due date thereof the full amount of the principal, interest on, and premium, if any, payable upon redemption of, 1998 Ordinance Bonds. Any excess moneys in the Sinking Fund, including any excess amount in the Sinking Fund Reserve, shall be transferred to the operating accounts of the Gas Works.

The Sinking Fund shall be a consolidated fund for the equal and proportionate benefit of the Holders of all 1998 Ordinance Bonds from time to time Outstanding and may be invested and reinvested on a consolidated basis. The principal of and interest on and profits (and losses if any) realized on investments in the Sinking Fund are allocated pro rata for the Series of 1998 Ordinance Bonds or the specific 1998 Ordinance Bonds in respect of which such investments were made without distinction or priority, but moneys (and the investments thereof) specifically deposited for the payment of any particular installment of principal, interest (including capitalized interest) or premium in respect of particular 1998 Ordinance Bonds shall be held and applied exclusively to the payment of such particular principal, interest or premium.

Sinking Fund Reserve

The Sinking Fund Reserve is established as a separate account in the Sinking Fund and shall be held by the Sinking Fund Depositary as part of the Sinking Fund, but for which a separate account shall be maintained. Unless otherwise provided in the applicable Supplemental Ordinance, the City shall, under direction of the Director of Finance, deposit in the Sinking Fund Reserve from the proceeds of sale of each Series of 1998 Ordinance Bonds issued under the 1998 General Ordinance and/or Gas Works Revenues an amount which, together with other amounts in the Sinking Fund Reserve, will cause the amount in the Sinking Fund Reserve to equal the Sinking Fund Reserve Requirement. The money and investments (valued at market) in the Sinking Fund Reserve and amounts which can be drawn under Credit Facilities held for the Sinking Fund Reserve shall be held and maintained in an amount equal to the Sinking Fund Reserve Requirement.

In lieu of a deposit to the Sinking Fund Reserve or in substitution for amounts in the Sinking Fund Reserve, the City may provide one or more letters of credit or other Credit Facilities in the same aggregate amount issued by a provider or providers whose credit facilities are such that bonds secured by such credit facilities are rated in one of the three highest rating categories by Moody's or S&P, provided that (1) in the case of a substitution for moneys in the Sinking Fund Reserve, an opinion of Bond Counsel is delivered to the Fiscal Agent that such substitution will not adversely affect the exclusion from gross income for Federal income tax purposes of interest on the 1998 Ordinance Bonds the interest on which is intended to be so excluded, (2) each such Credit Facility permits the Fiscal Agent to make a draw thereon up to the principal amount thereof if the

Sinking Fund Reserve is needed to cover a shortfall in the Sinking Fund and other moneys in the Sinking Fund Reserve are insufficient, and (3) each such Credit Facility provides that a draw will be made thereon to replenish the Sinking Fund Reserve on the expiration thereof unless the City has otherwise made such deposit to the Sinking Fund Reserve or has obtained another Credit Facility meeting the above requirements.

If, at any time and for any reason, the moneys in the Sinking Fund, other than in the Sinking Fund Reserve, shall be insufficient to pay as and when due, the principal of, and premium, if any, and interest on, any 1998 Ordinance Bond or Bonds secured by the Sinking Fund Reserve, the Sinking Fund Depositary is authorized and directed by the 1998 General Ordinance to withdraw from the Sinking Fund Reserve and to draw on Credit Facilities held for the Sinking Fund Reserve and pay over to the Fiscal Agent the amount of such deficiency. If by reason of such withdrawal (including draws on any Credit Facilities held to satisfy the Sinking Fund Reserve Requirement) or for any other reason there shall be a deficiency in the Sinking Fund Reserve, the City covenants in the 1998 General Ordinance to restore such deficiency (either by a deposit of funds or the reinstatement of the cash limits of Credit Facilities) within twelve months. The Sinking Fund Reserve shall be valued by the Sinking Fund Depositary promptly after any withdrawal from the Sinking Fund Reserve or any other event indicating a possible deficiency in the Sinking Fund Reserve and on August 31 of each Fiscal Year.

Investment of Funds

The moneys on deposit in the funds and accounts established under the 1998 General Ordinance, to the extent not currently required, shall be invested and secured as required by the Act, all at the direction and under the management of the Director of Finance. All moneys deposited in any fund or account established under the 1998 General Ordinance or any Supplemental Ordinance may be invested by the Fiscal Agent, at the direction of the Director of Finance, in any investments then permitted by law, provided that any investments with respect to amounts on deposit in the funds and accounts established under the 1998 General Ordinance shall mature or shall be subject to redemption by the holder thereof upon demand at par no later than the date when such amounts are needed for the purposes of such funds or accounts. Investment earnings shall be included in Gas Works Revenues and, to the extent not require to be retained in the fund or account to which such earnings related, shall be transferred to the operating accounts of the Gas Works.

Defaults and Remedies

Defaults and Statutory Remedies

If the City shall fail or neglect to pay or to cause to be paid the principal of, redemption premium, if any, or the interest on any 1998 Ordinance Bond, whether at stated maturity or upon call for prior redemption, or if the City, after written notice to it, shall fail or neglect to make any payment owed by it to the provider of a Credit Facility, a Qualified Swap or an Exchange Agreement provided with respect to the 1998 Ordinance Bonds and such provider gives the Fiscal Agent written notice of such failure or neglect, or if the City shall fail to comply with any provision of the 1998 Ordinance Bonds or with any covenant of the City contained in the 1998 General Ordinance, then, under and subject to the terms and conditions stated in the Act, the Holder or Holders of any 1998 Ordinance Bond or 1998 Ordinance Bonds shall be entitled to all of the rights and remedies provided in the Act, which are as follows:

(1) if the City fails or neglects to pay or cause to be paid the principal of or the interest on any 1998 Ordinance Bonds as the same shall become due, whether at the stated maturity or upon call for prior redemption, the right to recover the amount due in an action in assumpsit in the court of common pleas of Philadelphia County;

(2) if the City defaults in the payment of the principal or of the interest on any Series of 1998 Ordinance Bonds after the same shall become due, whether at the stated maturity or upon call for prior redemption, and such default continues for 30 days, or if the City fails to comply with any provision of the 1998 Ordinance Bonds or the 1998 General Ordinance, the right, at the request of the Holders of 25% in aggregate

principal amount of the 1998 Ordinance Bonds of such Series then outstanding, to appoint a trustee (who may be the Sinking Fund Depositary) to represent the Holders of all such 1998 Ordinance Bonds; and

(3) the right to instruct an appointed trustee, upon the written request of the Holders of 25% in principal amount of such 1998 Ordinance Bonds then outstanding and after furnishing indemnity satisfactory to such trustee, to take one or more of the following actions:

(a) by mandamus or other suit, action or proceeding at law or in equity enforce all rights of the Holders of the 1998 Ordinance Bonds, including the right to require the City to impose and collect rents, rates, tolls and charges for the use of the Gas Works, or to require the City to carry out any other agreements with the Holders of such 1998 Ordinance Bonds;

(b) bring suit on the 1998 Ordinance Bonds without the necessity for producing the bonds, and with the same effect as a suit by any Holder of the 1998 Ordinance Bonds;

(c) bring suit in equity to require the City to account as if it were a trustee of an express trust for the Holders of such 1998 Ordinance Bonds, for any Gas Works Revenues received and/or to enjoin any acts or things which may be unlawful or in violation of the rights of the Holders of any 1998 Ordinance Bonds; and

(d) after 30 days prior written notice to the City, declare the unpaid principal of all 1998 Ordinance Bonds to be immediately due and payable, together with interest thereon at the rates stated in the 1998 Ordinance Bonds until final payment, and, if all defaults shall be made good, to annul such declaration and its consequences.

Notwithstanding the foregoing and in accordance with the 1998 General Ordinance, the remedy described in paragraph 3(d) above may be exercised only upon the failure of the City to pay, when due, principal and redemption price of (including principal due as a result of a scheduled mandatory redemption) and interest on a Series of 1998 Ordinance Bonds. Upon the occurrence of an event of default described above, the Fiscal Agent shall, within thirty (30) days, give written notice thereof by first class mail to all Bondholders.

If and when a trustee takes any of the actions described in paragraph (3) above, individual Bondholders will be precluded from taking similar action, regardless of whether such action was previously or subsequently initiated. The court, in cases of extreme hardship, may provide for the payment of sums levied in five or less annual installments with interest at a rate sufficient to cover the interest accruing on the 1998 Ordinance Bonds. In any suit, action or proceeding by or on behalf of Holders of 1998 Ordinance Bonds, the fees and expenses of a trustee, including operating costs of the Gas Works and reasonable counsel fees, shall constitute taxable costs, and all such costs and disbursements allowed by the court shall be deemed additional principal due on the 1998 Ordinance Bonds and shall be paid in full from any recovery prior to any distribution to the Holders of the 1998 Ordinance Bonds.

Remedies Not Exclusive; Effect of Delay on Exercise of Remedies

No remedy in the 1998 General Ordinance or in the Act conferred upon or reserved to the trustee, if one be appointed, or to the Holder of any 1998 Ordinance Bonds is intended to be exclusive (except as specifically provided in the Act, as described above under "Defaults and Statutory Remedies") of any other remedy or remedies, and each and every such remedy shall be cumulative, and shall be in addition to every other remedy given under the 1998 General Ordinance or now or existing at law or in equity or by statute. No delay or omission of the trustee, if one be appointed, or of any Holder of any 1998 Ordinance Bond to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver of any such default, or an acquiescence therein; and every power and remedy given by the 1998 General Ordinance, by the Act or otherwise may be exercised from time to time as often as may be deemed expedient.

Remedies to be Enforced Only Against Pledged Revenues

Any decree or judgment for the payment of money against the City by reason of default under the 1998 General Ordinance shall be enforceable only against the Gas Works Revenues, amounts in the Sinking Fund

Reserve and other amounts which may be specifically pledged therefor and investments thereof, and no decree or judgment against the City upon any action brought under the 1998 General Ordinance shall order, or be construed to permit the occupation, attachment, seizure or sale upon execution of any other property of the City.

Fiscal Agent

Such state or federally chartered bank, bank and trust company or trust company as may from time to time be appointed by the City in accordance with law, shall act as Fiscal Agent in respect of all 1998 Ordinance Bonds or in respect of any particular Series of 1998 Ordinance Bonds. The Fiscal Agent also acts as Sinking Fund Depositary of the Sinking Fund and as paying agent and registrar of the 1998 Ordinance Bonds in respect of which it is Fiscal Agent, unless others are appointed in such capacity by the City. The Fiscal Agent is the representative of the Holders of the 1998 Ordinance Bonds for the purpose of executing and filing financing statements to perfect the security interest granted in the 1998 General Ordinance under the Pennsylvania Uniform Commercial Code. Nothing in the 1998 General Ordinance shall be construed to prevent the City from engaging other or additional Sinking Fund Depositories, paying agents or registrars of the 1998 Ordinance Bonds or any Series thereof.[†]

Permitted Securitization of Gas Works Revenues

Notwithstanding the requirements of the Rate Covenant described under "Covenants – Rate Covenant" above and the pledge described above under "Pledge of Revenues; Grant of Security Interest; Limitation on Recourse," the City may, at such time as there are no bonds outstanding under the 1975 General Ordinance, pursuant to a Supplemental Ordinance, securitize and sell that portion of the Gas Works rents, rates and charges which relate to assets which are designated as non-performing by the Gas Commission[††] and as to which the Gas Commission[††] has designated specific rents, rates or charges (such rents, rates and charges are excluded from the definition of Gas Works Revenues); provided that prior to any such securitization and sale the City delivers to the Fiscal Agent (1) an Engineer's report including a statement that, for the three year period following such securitization and sale, the Gas Works rents, rates and charges (excluding those securitized and sold) are currently and will be sufficient to comply with the Rate Covenant applied as if the percentage in subsection A.iii under the heading "Covenants – Rate Covenant" were 175% rather than 150% and (2) an opinion of Bond Counsel that such securitization and sale will not adversely affect the exclusion from gross income for Federal income tax purposes of interest on any Outstanding 1998 Ordinance Bonds the interest on which is intended to be so excluded. Proceeds received from any such securitization and sale shall be excluded from Gas Works Revenues in all calculations relating to the Rate Covenant and, notwithstanding any provision of the 1998 General Ordinance to the contrary, may be used to redeem or refund obligations issued to finance the related assets designated as non-performing.

Amendments and Modifications

In addition to the adoption of Supplemental Ordinances supplementing or amending the 1998 General Ordinance in connection with the issuance of successive Series of 1998 Ordinance Bonds, the 1998 General Ordinance and any Supplemental Ordinance may be further supplemented, modified or amended: (a) to cure any ambiguity, formal defect or omission therein; (b) to make such provisions in regard to matters or questions arising thereunder which shall not be inconsistent with the provisions thereof and which shall not adversely affect the interests of Bondholders; (c) to grant to or confer upon Bondholders or a trustee, if any, for the benefit of Bondholders any additional rights, remedies, powers, authority or security that may be lawfully granted or conferred; (d) to incorporate modifications requested by any Rating Agency to obtain or maintain a credit rating on any Series of 1998 Ordinance Bonds; (e) to comply with any mandatory provision of state or federal law or

† Under the terms of the Fiscal Agent Agreement, made as of January 1, 1993, by and between the City and the predecessor to the current Fiscal Agent, as amended and supplemented, the Fiscal Agent is the secured party with the right to enforce the City pledge of Gas Work Revenues on behalf of the holders of 1998 Ordinance Bonds, the issuers of any Credit Facilities and the providers of any Qualified Swaps and Exchange Agreements.
†† The PUC now has jurisdiction to make the designations described under this subheading.

with any permissive provision of such law or regulation which does not substantially impair the security or right to payment of the 1998 Ordinance Bonds, but no amendment or modification shall be made with respect to any Outstanding 1998 Ordinance Bonds to alter the amount, rate or time of payment, respectively, of the principal thereof or the interest thereon or to alter the redemption provisions thereof without the written consent of the Holders of all affected Outstanding 1998 Ordinance Bonds; and (f) except as aforesaid, in such other respect as may be authorized in writing by the Holders of a majority in principal amount (using Accreted Value in the case of Capital Appreciation 1998 Ordinance Bonds) of the 1998 Ordinance Bonds Outstanding and affected. The written authorization of Bondholders of any supplement to or modification or amendment of the 1998 General Ordinance or any Supplemental Ordinance need not approve the particular form of any proposed supplement, modification or amendment but only the substance thereof.

Deposit of Funds for Payment of 1998 Ordinance Bonds

When interest on, and principal or redemption price (as the case may be) of, all 1998 Ordinance Bonds issued under the 1998 General Ordinance, and all amounts owed under any Credit Facility, Qualified Swap and Exchange Agreement entered into under the 1998 General Ordinance (other than termination payments), have been paid, or there shall have been deposited with the Fiscal Agent an amount, evidenced by moneys or Qualified Escrow Securities the principal of and interest on which, when due, will provide sufficient moneys to fully pay the 1998 Ordinance Bonds at the maturity date or date fixed for redemption thereof, and all amounts owed under any Credit Facility, Qualified Swap and Exchange Agreement entered into under the 1998 General Ordinance (other than termination payments), the pledge and grant of security interest in the Gas Works Revenues made under the 1998 General Ordinance shall cease and terminate, and the Fiscal Agent and any other depository of funds and accounts established under the 1998 General Ordinance shall turn over to the City or to such person, body or authority as may be entitled to receive the same all balances remaining in any funds and accounts established thereunder.

If the City deposits with the Fiscal Agent moneys or Qualified Escrow Securities sufficient to pay the principal or redemption price of any particular 1998 Ordinance Bond or 1998 Ordinance Bonds becoming due, either at maturity or by call for redemption or otherwise, together with all interest accruing thereon to the due date, interest on such 1998 Ordinance Bond or 1998 Ordinance Bonds shall cease to accrue on the due date and all liability of the City with respect to such 1998 Ordinance Bond or 1998 Ordinance Bonds shall likewise cease, except as provided in the following paragraph. From and after such deposit, such 1998 Ordinance Bond or 1998 Ordinance Bonds shall be deemed not to be Outstanding under the 1998 General Ordinance and the Holder or Holders thereof shall have recourse solely and exclusively to the funds so deposited for any claims of whatsoever nature with respect to such 1998 Ordinance Bond or 1998 Ordinance Bonds, and the Fiscal Agent shall hold such funds in trust for the Holder or Holders of such 1998 Ordinance Bond or 1998 Ordinance Bonds.

Moneys deposited with the Fiscal Agent pursuant to the preceding paragraphs which remain unclaimed two (2) years after the date payment thereof becomes due shall, upon written request of the City, if the City is not at the time to the knowledge of the Fiscal Agent (the Fiscal Agent having no responsibility to independently investigate) in default with respect to any covenant in the 1998 General Ordinance or the 1998 Ordinance Bonds, be paid to the City, and the Holders of the 1998 Ordinance Bond for which the deposit was made shall thereafter be limited to a claim against the City; provided, however, that before making any such payment to the City, the Fiscal Agent shall, at the expense of the City, publish in a newspaper of general circulation published in the City, a notice that said moneys remain unclaimed and that, after a date named in said notice, which date shall not be less than thirty (30) days after the date of publication of such notice, the balance of such moneys then unclaimed will be paid to the City.

Ordinances are Contracts with Bondholders

The 1998 General Ordinance and Supplemental Ordinances adopted pursuant thereto are contracts with the Holders of all 1998 Ordinance Bonds from time to time Outstanding under the 1998 General Ordinance and are enforceable in accordance with the provisions of the 1998 General Ordinance and the laws of the Commonwealth of Pennsylvania.

Parties Interested in the 1998 General Ordinance

Nothing in the 1998 General Ordinance expressed or implied is intended or shall be construed to confer upon, or to give to, any person or entity, other than the City, the Holders of 1998 Ordinance Bonds, the Fiscal Agent, and each provider of a Credit Facility, Qualified Swap or Exchange Agreement, any right, remedy or claim under or by reason of the 1998 General Ordinance or any covenants, condition or stipulation therefor; and all the covenants, stipulations, promises and agreements in the 1998 General Ordinance by and on behalf of the City shall be for the sole and exclusive benefit of the City, the Fiscal Agent, the Holders of 1998 Ordinance Bonds and each provider of a Credit Facility, Qualified Swap or Exchange Agreement.

Closure of the 1975 General Ordinance

After the adoption of the 1998 General Ordinance, the City shall not issue any bonds under the 1975 General Ordinance except to refund bonds issued under the 1975 General Ordinance or to replace bonds issued thereunder which have been mutilated, destroyed, lost or stolen as provided therein or in substitution for bonds issued thereunder upon transfer or exchange as provided therein.

Severability

In case any one or more of the provisions contained in the 1998 General Ordinance or in any 1998 Ordinance Bond issued pursuant to the 1998 General Ordinance shall for any reason to be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions in the 1998 General Ordinance or said 1998 Ordinance Bonds, and the 1998 General Ordinance or said 1998 Ordinance Bonds shall be construed and enforced as if such invalid, illegal or unenforceable provisions had never been contained therein.

[THIS PAGE INTENTIONALLY LEFT BLANK]

APPENDIX F

FORM OF CONTINUING DISCLOSURE AGREEMENT

[THIS PAGE INTENTIONALLY LEFT BLANK]

CONTINUING DISCLOSURE AGREEMENT

This Continuing Disclosure Agreement (this "Agreement") dated October 29, 2020 is by and between THE CITY OF PHILADELPHIA, PENNSYLVANIA (the "City") and DIGITAL ASSURANCE CERTIFICATION, L.L.C., as dissemination agent (the "Dissemination Agent") in connection with the issuance and sale by the City of $253,925,000 aggregate principal amount of its Gas Works Revenue Bonds, Sixteenth Series (1998 General Ordinance) consisting of $203,160,000 Gas Works Revenue Bonds, Sixteenth Series A (the "Series A Bonds") and $50,765,000 Gas Works Revenue Refunding Bonds, Sixteenth Series B (the "Series B Bonds" and together with the Series A Bonds, the "Bonds"). The Bonds are being issued pursuant to the Act, the General Ordinance and the Bond Authorization. Capitalized terms used in this Agreement shall have the respective meanings specified above or in Article IV hereof.

In consideration of the mutual covenants, promises and agreements contained herein and intending to be legally bound hereby, the parties hereto agree as follows:

ARTICLE I
The Undertaking

Section 1.1. Purpose. This Agreement is authorized to be executed and delivered by the City pursuant to the General Ordinance and Section 11 of the Bond Authorization solely in order to assist the Underwriters in complying with subsection (b)(5) of the Rule.

Section 1.2. Annual Financial Information.

(a) Commencing with the PGW Fiscal Year ending August 31, 2020, the Disclosure Representative shall deliver the Annual Financial Information to the Dissemination Agent for filing by the Dissemination Agent (on behalf of the City) with EMMA (as defined herein) no later than April 26, 2021, and no later than each succeeding April 26th for each preceding fiscal year thereafter (the "Annual Filing Date"). The Dissemination Agent shall promptly upon receipt thereof file the Annual Financial Information with EMMA.

(b) The Dissemination Agent shall provide, in a timely manner, notice of any failure of the City to provide the Annual Financial Information by the date specified in subsection (a) hereof.

Section 1.3. Audited Financial Statements. If not provided as part of Annual Financial Information by the date required by Section 1.2(a) hereof, the Disclosure Representative shall provide Audited Financial Statements, when and if available, to the Dissemination Agent. The Dissemination Agent shall promptly upon receipt thereof file such Audited Financial Statements with EMMA.

Section 1.4. Notice Events.

(a) If a Notice Event occurs, the Disclosure Representative shall provide through the Dissemination Agent, in a timely manner not in excess of ten (10) business days after the occurrence of such Notice Event, notice of such Notice Event to the MSRB Internet website (currently www.emma.msrb.org).

(b) Any notice of a defeasance of the Bonds shall state whether the Bonds have been escrowed to maturity or to an earlier redemption date and the timing of such maturity or redemption.

(c) Each Notice Event notice relating to the Bonds shall include the CUSIP numbers of the Bonds to which such Notice Event notice relates or, if the Notice Event notice relates to all bonds issues of the City including the Bonds, such Notice Event notice need only include the CUSIP number of the City.

(d) The Dissemination Agent shall promptly advise the City whenever, in the course of performing its duties as Dissemination Agent under this Agreement, the Dissemination Agent has actual notice of an occurrence which, if material, would require the City to provide notice of a Notice Event hereunder; provided, however, that the failure of the Dissemination Agent so to advise the City shall not constitute a breach by the Dissemination Agent of any of its duties and responsibilities under this Agreement.

Section 1.5. Additional Information. Nothing in this Agreement shall be deemed to prevent the City from disseminating any other information, using the means of dissemination set forth in this Agreement or any other means of communication, or including any other information in any Annual Financial Information or notice of Notice Event hereunder, in addition to that which is required by this Agreement. If the City chooses to do so, the City shall have no obligation under this Agreement to update such additional information or include it in any future Annual Financial Information or notice of a Notice Event hereunder.

Section 1.6. Additional Disclosure Obligations. The City acknowledges and understands that other state and federal laws, including but not limited to the Securities Act of 1933, as amended, and Rule 10b-5 promulgated under the Securities Exchange Act of 1934, as amended, may apply to the City and that, under some circumstances, compliance with this Agreement without additional disclosures or other action may not fully discharge all duties and obligations of the City under such laws.

ARTICLE II
Operating Rules

Section 2.1. Reference to Other Filed Documents. It shall be sufficient for purposes of Section 1.2 hereof if the City provides Annual Financial Information by specific reference to documents (i) available to the public on the MSRB Internet website (currently www.emma.msrb.org) or (ii) filed with the SEC. The provisions of this Section shall not apply to notices of Notice Events pursuant to Section 1.4 hereof.

Section 2.2. Submission of Information. Annual Financial Information may be set forth or provided in one document or a set of documents, and at one time or in part from time to time.

Section 2.3. Dissemination Agent. The City has designated the Dissemination Agent as its agent to act on its behalf in providing or filing notices, documents and information as required of the City under this Agreement. The City may revoke or modify such designation. Upon any revocation of such designation, the City shall comply with its obligation to provide or file notices, documents and information as required under this Agreement or may designate another agent to act on its behalf.

Section 2.4. Transmission of Notices, Documents and Information.

(a) Unless otherwise required by the MSRB, all notices, documents and information provided to the MSRB shall be provided to the MSRB's Electronic Municipal Markets Access system ("EMMA"), which is currently accessible at the following web address: emma.msrb.org.

(b) All notices, documents and information provided on EMMA shall be provided in an electronic format as prescribed by the MSRB and shall be accompanied by identifying information as prescribed by the MSRB.

Section 2.5. Fiscal Year.

(a) The Disclosure Representative shall file promptly a notification on EMMA, through the Dissemination Agent, of any change in the City Fiscal Year or the PGW Fiscal Year.

(b) Annual Financial Information shall be provided at least annually notwithstanding any fiscal year longer than 12 calendar months.

ARTICLE III
Effective Date, Termination, Amendment and Enforcement

Section 3.1. Effective Date; Termination.

(a) This Agreement shall be effective upon the issuance of the Bonds.

(b) The City's and the Dissemination Agent's obligations under this Agreement shall terminate upon a legal defeasance, prior redemption or payment in full of all of the Bonds.

Section 3.2. Amendment.

(a) This Agreement may be amended, by written agreement of the parties, without the consent of the holders of the Bonds (except to the extent required under clause (4)(ii) below), if all of the following conditions are satisfied: (1) such amendment is made in connection with a change in circumstances that arises from a change in legal (including regulatory) requirements, a change in law (including rules or regulations) or in interpretations thereof, or a change in the identity, nature or status of the City or the type of business conducted thereby, (2) this Agreement as so amended would have complied with the requirements of the Rule as of the date of this Agreement, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances, (3) the City shall have delivered to the Dissemination Agent an opinion of Counsel, addressed to the City and the Dissemination Agent, to the same effect as set forth in clause (2) above, (4) either (i) the City shall have delivered to the Dissemination Agent an opinion of Counsel or a determination by an entity, in each case unaffiliated with the City (such as bond counsel or the Dissemination Agent), addressed to the City and the Dissemination Agent, to the effect that the amendment does not materially impair the interests of the holders of the Bonds or (ii) the holders of the Bonds consent to the amendment to this Agreement pursuant to the same procedures as are required for amendments to the General Ordinance with consent of holders of Bonds pursuant to the General Ordinance as in effect at the time of the amendment, and (5) the Disclosure Representative shall have delivered a copy of the amendment, accompanied by copies of such opinion(s), to the Dissemination Agent. The items provided in clause (5) shall be promptly filed by the Dissemination Agent on EMMA and sent to each Registered Owner.

(b) This Agreement may be amended, by written agreement of the parties, without the consent of the holders of the Bonds, if all of the following conditions are satisfied: (1) an amendment to the Rule is adopted, or a new or modified official interpretation of the Rule is issued, after the effective date of this Agreement which is applicable to this Agreement, (2) the City shall have delivered to the Dissemination Agent an opinion of Counsel, addressed to the City and the Dissemination Agent, to the effect that performance by the City and the Dissemination Agent under this Agreement as so amended will not result in a violation of the Rule and (3) the Disclosure Representative shall have delivered a copy of the amendment, accompanied by a copy of such opinion, to the Dissemination Agent. Such amendment shall be filed promptly by the Dissemination Agent on EMMA and sent to each Registered Owner.

(c) This Agreement may be amended by written agreement of the parties, without the consent of the holders of the Bonds, if all of the following conditions are satisfied: (1) the City shall have delivered to the Dissemination Agent an opinion of Counsel, addressed to the City and the Dissemination Agent, to the effect that the amendment is permitted by rule, order or other official pronouncement, or is consistent with any interpretive advice or no-action positions of Staff of the SEC, and (2) the Disclosure Representative shall have delivered a copy of the amendment, accompanied by a copy of such opinion, to the Dissemination Agent. Such amendment shall be filed promptly by the Dissemination Agent on EMMA and sent to each Registered Owner.

(d) To the extent any amendment to this Agreement results in a change in the type of financial information or operating data provided pursuant to this Agreement, the first Annual Financial Information provided thereafter shall include a narrative explanation of the reasons for the amendment and the impact of the change in the type of operating data or financial information being provided.

(e) If an amendment is made pursuant to this Section 3.2 hereof to the accounting principles to be followed by the City in preparing the financial statements of the City or PGW in preparing the financial statements of PGW, the Annual Financial Information for the fiscal year in which the change is made shall present a comparison between the financial statements or information prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles. Such comparison shall include a qualitative and, to the extent reasonably feasible, quantitative discussion of the differences in the accounting principles and the impact of the change in the accounting principles on the presentation of the financial information.

Section 3.3. Benefit; Third-Party Beneficiaries; Enforcement.

(a) The provisions of this Agreement shall constitute a contract with and inure solely to the benefit of the holders from time to time of the Bonds, except that beneficial owners of Bonds shall be third-party beneficiaries of this Agreement. The provisions of this Agreement shall create no rights in any person or entity except as provided in this subsection (a) and in subsection (b) of this Section.

(b) The obligations of the City to comply with the provisions of this Agreement shall be enforceable by any holder of Outstanding Bonds. The holders' rights to enforce the provisions of this Agreement shall be limited solely to a right, by action in mandamus or for specific performance, to compel performance of the City's obligations under this Agreement. In consideration of the third-party beneficiary status of beneficial owners of Bonds pursuant to subsection (a) of this Section, beneficial owners shall be deemed to be holders of Bonds for purposes of this subsection (b).

(c) Any failure by the City or the Dissemination Agent to perform in accordance with this Agreement shall not constitute a default or an Event of Default under the General Ordinance, and the rights and remedies provided by the General Ordinance upon the occurrence of a default or an Event of Default shall not apply to any such failure.

(d) This Agreement shall be construed and interpreted in accordance with the laws of the Commonwealth, and any suits and actions arising out of this Agreement shall be instituted in a court of competent jurisdiction in the Commonwealth; provided, however, that to the extent this Agreement addresses matters of federal securities laws, including the Rule, this Agreement shall be construed in accordance with such federal securities laws and official interpretations thereof.

ARTICLE IV
Definitions

Section 4.1. Definitions. The following terms used in this Agreement shall have the following respective meanings:

(1) "Act" means The First Class City Revenue Bond Act, approved October 18, 1972 (Act No. 234, 53 P.S. §§15901 to 15924), as amended.

(2) "Annual Financial Information" means, collectively:

(i) The Comprehensive Annual Financial Report of the Philadelphia Gas Works ("PGW's CAFR") for the most recently ended PGW Fiscal Year, which contains the Audited Financial Statements, and if PGW's CAFR is not otherwise prepared, the Audited Financial Statements;

(ii) the City's Comprehensive Annual Financial Report (the "City's CAFR") for the most recently ended City Fiscal Year;

(iii) financial information or operating data with respect to PGW and the City, substantially similar to the type set forth in: (A) the Official Statement in Tables 1 through 14 (except Table 3 and excluding any portions of tables not reflective of a full fiscal year) and the Tables entitled “Percent of Gas Sales By Customer Type”, “Historical Revenues by Customer Type”, “Supply Mix Used to Meet Peak Demand”, “Existing Tariff Charges and Effective Date”, and “Budgeted Statement of Income”; and (B) Tables 1 through 52 in Appendix C attached to the Official Statement (except Tables 19, 36, 37 and 48); and

(iv) the information regarding amendments to this Agreement required pursuant to Sections 3.2(d) and (e) of this Agreement.

Annual Financial Information shall include Audited Financial Statements; provided however if Audited Financial Statements are not available by the Annual Filing Date, then the City shall cause Unaudited Financial Statements to be included in the Annual Financial Information, and subsequently file Audited Financial Statements as soon as they become available.

Annual Financial Information shall be delivered at least annually pursuant to Section l.2 (a) hereof. In connection with Section 4.1(2), it is the City’s intention to satisfy all or a portion of the obligations set forth therein by submitting to EMMA” (x) PGW’s CAFR, (y) the City’s CAFR, and (z) to the extent not otherwise updated in either PGW’s CAFR or the City’s CAFR, (1) an official statement or comparable offering document, or an appendix thereto, that includes annual updates to the Tables specified in clause 4.1(2)(iii) herein or (2) if the City does not have such an official statement, offering document or appendix prepared, then annual updates to the Tables specified in clause 4.1(2)(iii) herein. If at any time the City deletes, for purposes of a then-current offering document or appendix thereto, certain financial information or operating data from such then- current offering document or appendix that is included in one of the Tables specified in clause 4.1(2)(iii) above, such deleted information will be submitted separately from the updated offering document or appendix.

The descriptions contained in this Section 4.1(2) of financial information and operating data constituting Annual Financial Information are of general categories of financial information and operating data. When such descriptions include information that no longer can be generated because the operations to which it related have been materially changed or discontinued, a statement to that effect shall be provided in lieu of such information. Any Annual Financial Information containing modified financial information or operating data shall explain, in narrative form, the reasons for the modification and the impact of the modification on the type of financial information or operating data being provided.

(3) “Audited Financial Statements” means the annual financial statements, if any, of PGW, audited by KPMG LLP, or such other auditor as shall then be required or permitted by Commonwealth law. Audited Financial Statements shall be prepared in accordance with GAAP; provided, however, that pursuant to Section 3.2 hereof, the City may from time to time, if required by federal or Commonwealth legal requirements, modify the accounting principles to be followed in preparing the financial statements of the City or PGW. The notice of any such modification

required by Section 3.2 hereof shall include a reference to the specific federal or Commonwealth law a regulation describing such accounting principles, or other description thereof.

(4) "Bond Authorization" means the Bond Authorization for the Bonds adopted by the Bond Committee of the City (consisting of the Mayor, the City Solicitor and the City Controller and acting by a majority thereof) on October 21, 2020.

(5) "City Fiscal Year" means the fiscal year of the City, currently beginning on July 1 and ending on June 30, as may be changed as contemplated under Section 2.5 hereof.

(6) "Commonwealth" means the Commonwealth of Pennsylvania.

(7) "Counsel" means any nationally recognized bond counsel or counsel expert in federal securities laws.

(8) "Disclosure Representative" means the Director of Finance of the City, the City Treasurer or such other official or employee of the City as the Director of Finance or the City Treasurer shall designate in writing to the Dissemination Agent.

(9) "Financial Obligation" means "financial obligation" as such term is defined in the Rule.

(10) "Fiscal Agent" means U.S. Bank National Association, as fiscal agent and registrar for the Bonds.

(11) "GAAP" means generally accepted accounting principles as prescribed from time to time for governmental units by the Governmental Accounting Standards Board, the Financial Accounting Standards Board, or any successor to the duties and responsibilities of either of them.

(12) "General Ordinance" means the City's General Gas Works Revenue Bond Ordinance of 1998, as amended and supplemented, including as supplemented by the Thirteenth Supplemental Ordinance adopted by the City Council on March 26, 2015 and signed by the Mayor on March 26, 2015 and the Fifteenth Supplemental Ordinance adopted by the City Council on June 25, 2020 and signed by the Mayor on June 26, 2020.

(13) "MSRB" means the Municipal Securities Rulemaking Board established pursuant to Section 15B(b)(1) of the Securities Exchange Act of 1934, as amended, or any successor thereto or to the functions of the MSRB contemplated by this Agreement.

(14) "Notice Event" means any of the following events with respect to the Bonds, whether relating to the City or otherwise:

(i) principal and interest payment delinquencies;

(ii) non-payment related defaults, if material;

(iii) unscheduled draws on debt service reserves reflecting financial difficulties;

(iv) unscheduled draws on credit enhancements reflecting financial difficulties;

(v) substitution of credit or liquidity providers, or their failure to perform;

(vi) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices of determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the Bonds;

(vii) modifications to rights of Bondholders, if material;

(viii) Bond calls, if material, and tender offers;

(ix) defeasances;

(x) release, substitution, or sale of property securing repayment of the Bonds, if material;

(xi) rating changes;

(xii) bankruptcy, insolvency, receivership or similar event of the City (this event is considered to occur when any of the following occur" the appointment of a receiver, fiscal agent or similar officer for the City in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the City, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the City);

(xiii) the consummation of a merger, consolidation, or acquisition involving the City or the sale of all or substantially all of the assets of the City, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;

(xiv) appointment of a successor or additional paying agent, or the change of name of a paying agent, if material;

(xv) incurrence of a Financial Obligation of the City, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the City, any of which affect security holders, if material; and

(xvi) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the City, any of which reflect financial difficulties.

(15) "Official Statement" means the Official Statement dated October 21, 2020 of the City relating to the Bonds.

(16) "PGW" means the Philadelphia Gas Works of the City of Philadelphia.

(17) "PGW Fiscal Year" means the fiscal year of PGW, currently beginning on September 1 and ending on August 31, as may be changed as contemplated under Section 2.5 hereof.

(18) "Registered Owner" or "Registered Owners" means the person or persons in whose name a Bond is registered on the books of the City maintained by the Fiscal Agent in accordance with the General Ordinance and the Bonds. For so long as the Bonds shall be registered in the name of the Securities Depository or its nominee, the term "Registered Owner" or "Registered Owners" also means and includes, for the purposes of this Agreement, the owners of book-entry credits in the Bonds evidencing an interest in the Bonds; provided, however, that the Dissemination Agent shall have no obligation to provide notice hereunder to owners of book-entry credits in the Bonds except those who have filed their names and addresses with the Dissemination Agent for the purposes of receiving notices or giving direction under this Agreement.

(19) "Rule" means Rule 15c2-12 promulgated by the SEC under the Securities Exchange Act of 1934 (17 CFR Part 240, §240.15c2-12), as amended, as in effect on the date of this Agreement, including any official interpretations thereof issued either before or after the effective date of this Agreement which are applicable to this Agreement.

(20) "SEC" means the United States Securities and Exchange Commission.

(21) "Securities Depository" shall mean The Depository Trust Company, New York, New York, or its nominee, Cede & Co., or successor thereto appointed pursuant to the General Ordinance.

(22) "Unaudited Financial Statements" means the same as Audited Financial Statements, except that they shall not have been audited.

(23) "Underwriters" means the financial institutions named on the cover of the Official Statement.

ARTICLE V
Miscellaneous

Section 5.1. Duties, Immunities and Liabilities of the Dissemination Agent. The Dissemination Agent shall have only such duties under the Agreement as are specifically set forth in this Agreement, and the City agrees to indemnify and save the Dissemination Agent, its officers, directors, employees and agents, harmless against any loss, expense and liabilities which it may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorney's fees) of defending against any claim of liability, but excluding liabilities due to the Dissemination Agent's negligence or willful misconduct in the performance of its duties hereunder. The obligations of the City under this Section shall survive resignation or removal of the Dissemination Agent and payment of the Bonds.

Section 5.2. Counterparts. This Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, THE CITY OF PHILADELPHIA, PENNSYLVANIA, has caused this Continuing Disclosure Agreement to be executed by the Director of Finance and **DIGITAL ASSURANCE CERTIFICATION, L.L.C.,** as Dissemination Agent, has caused this Disclosure Agreement to be executed by one of its authorized officers, all as of the day and year first above written.

CITY OF PHILADELPHIA, PENNSYLVANIA

By:_____________________________
Name: Rob Dubow
Title: Director of Finance

DIGITAL ASSURANCE CERTIFICATION, L.L.C, as Dissemination Agent

By: ____________________________
Name: __________________________
Title: ___________________________

[THIS PAGE INTENTIONALLY LEFT BLANK]

APPENDIX G

BOOK-ENTRY ONLY SYSTEM

The information set forth herein concerning The Depository Trust Company, New York, New York ("DTC") and the book-entry system described below has been extracted from materials provided by DTC for such purpose, is not guaranteed as to accuracy or completeness and is not to be construed as a representation by the City, PGW or the Underwriters. The websites referenced below are included for reference only and the information contained therein is not incorporated by reference in this Official Statement.

DTC, New York, New York, will act as securities depository for the Bonds. The Bonds will be issued as fully-registered Bonds registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered certificate will be issued for the Bonds of each maturity and Series, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of the Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Bonds on DTC's records. The ownership interest of each actual purchaser of each Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Bonds, except in the event that use of the book-entry system for the Bonds is discontinued.

To facilitate subsequent transfers, all Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Bond documents. For example, Beneficial Owners of Bonds may wish to ascertain that the nominee holding the Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the Bonds within a maturity and Series are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant of such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to an issuer as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Redemption proceeds, payments of principal, premium, if any, and interest on the Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the City or the Fiscal Agent, on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with Bonds held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the City or the Fiscal Agent, subject to any statutory or regulatory requirements as may be in effect from time to time. Payments of redemption proceeds, principal, premium, if any, and interest on the Bonds to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of City or the Fiscal Agent, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Bonds at any time by giving reasonable notice to the City or the Fiscal Agent. Under such circumstances, in the event that a successor depository is not obtained, Bond certificates are required to be printed and delivered.

The information in this section concerning DTC and DTC's book-entry system has been obtained from DTC, and the City takes no responsibility for the accuracy thereof.

THE CITY, PGW AND THE FISCAL AGENT CANNOT AND DO NOT GIVE ANY ASSURANCES THAT DTC, THE DIRECT PARTICIPANTS OR THE INDIRECT PARTICIPANTS WILL DISTRIBUTE TO THE BENEFICIAL OWNERS OF THE BONDS (1) PAYMENTS OF PRINCIPAL OR INTEREST ON THE BONDS, (2) CONFIRMATION OF BENEFICIAL OWNERSHIP INTEREST IN THE BONDS, OR (3) NOTICES SENT TO DTC OR CEDE & CO., ITS NOMINEE, AS THE REGISTERED OWNER OF THE BONDS, OR THAT THEY WILL DO SO ON A TIMELY BASIS, OR THAT DTC, DIRECT PARTICIPANTS OR INDIRECT PARTICIPANTS WILL SERVE AND ACT IN THE MANNER DESCRIBED IN THIS OFFICIAL STATEMENT. THE CURRENT "RULES" APPLICABLE TO DTC ARE ON FILE WITH THE SECURITIES AND EXCHANGE COMMISSION, AND THE CURRENT "PROCEDURES" OF DTC TO BE FOLLOWED IN DEALING WITH DIRECT PARTICIPANTS ARE ON FILE WITH DTC.

NEITHER THE CITY, PGW NOR THE FISCAL AGENT SHALL HAVE ANY RESPONSIBILITY OR OBLIGATION TO ANY DIRECT PARTICIPANT, INDIRECT PARTICIPANT OR ANY BENEFICIAL OWNER OR ANY OTHER PERSON NOT SHOWN ON THE REGISTRATION BOOKS OF THE FISCAL

AGENT AS BEING A BONDHOLDER WITH RESPECT TO (1) THE BONDS; (2) THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC OR ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT; (3) THE PAYMENT BY DTC OR ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT OF ANY AMOUNT DUE TO ANY BENEFICIAL OWNER IN RESPECT OF THE PRINCIPAL OR INTEREST ON THE BONDS; (4) THE DELIVERY BY DTC OR ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT OF ANY NOTICE TO ANY BENEFICIAL OWNER WHICH IS REQUIRED OR PERMITTED UNDER THE TERMS OF THE APPLICABLE GENERAL ORDINANCE TO BE GIVEN TO BONDHOLDERS; OR (5) ANY CONSENT GIVEN OR OTHER ACTION TAKEN BY DTC AS REGISTERED OWNER OF THE BONDS.

The City may determine to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository). In that event, bond certificates will be prepared and delivered as described in the applicable Supplemental Ordinance.

So long as Cede & Co. is the registered owner of the Bonds as nominee of DTC, references herein to the Holders, holders, owners or registered owners of such Bonds shall mean Cede & Co. and shall not mean the Beneficial Owners of the Bonds.

In the event that the Book-Entry Only System is discontinued and the Beneficial Owners become registered owners of the Bonds, the following provisions applicable to registered owners would apply: (i) Bonds may be exchanged for an equal aggregate principal amount of Bonds of the same maturity and Series in other authorized denominations, upon surrender thereof at the designated corporate trust office of the Fiscal Agent; (ii) the transfer of any Bonds may be registered on the books maintained by the Fiscal Agent for such purpose only upon the surrender thereof to the Fiscal Agent together with a duly executed assignment in form satisfactory to the City and the Fiscal Agent; and (iii) for every exchange or registration of transfer of Bonds, the Fiscal Agent may impose a charge sufficient to reimburse it for any tax, fee or governmental charge required to be paid with respect to such exchange or registration of transfer of the Bonds.

[THIS PAGE INTENTIONALLY LEFT BLANK]

APPENDIX H

PROPOSED FORM OF OPINIONS OF CO-BOND COUNSEL

[THIS PAGE INTENTIONALLY LEFT BLANK]

October 29, 2020

Re: $253,925,000, aggregate principal amount, City of Philadelphia, Pennsylvania, Gas Works Revenue Bonds, Sixteenth Series (1998 General Ordinance) consisting of $203,160,000, aggregate principal amount, Gas Work Revenue Bonds, Sixteenth Series A and $50,765,000, aggregate principal amount, Gas Works Revenue Refunding Bonds, Sixteenth Series B

To the Purchasers of the Within-Described Bonds:

We have acted as Co-Bond Counsel to the City of Philadelphia, Pennsylvania ("City"), in connection with the authorization and issuance by the City of its Gas Works Revenue Bonds, Sixteenth Series (1998 General Ordinance) consisting of $203,160,000, aggregate principal amount, Gas Works Revenue Bonds, Sixteenth Series A (the "Series A Bonds") and $50,765,000, aggregate principal amount Gas Works Revenue Refunding Bonds, Sixteenth Series B ("Series B Bonds" and, together with the Series A Bonds, the "Bonds").

The Bonds are issued under and pursuant to provisions of: (i) the Constitution of the Commonwealth of Pennsylvania ("Commonwealth"); (ii) the First Class City Revenue Bond Act, approved October 18, 1972 (P.L. 955), Act No. 234 ("Act"); (iii) the City of Philadelphia General Gas Works Revenue Bond Ordinance of 1998, as amended and supplemented prior to March 26, 2015 and the Fourteenth Supplemental Ordinance thereto enacted by the Council of the City ("City Council") on June 15, 2017 and approved by the Mayor of the City ("Mayor") on June 21, 2017 (collectively, the "Original Ordinance"); (iv) the Thirteenth Supplemental Ordinance to the 1998 General Ordinance (Bill No. 150159), enacted by City Council on March 26, 2015 and approved by the Mayor on March 26, 2015 ("Thirteenth Supplemental Ordinance"); (v) the Fifteenth Supplemental Ordinance to the 1998 General Ordinance (Bill No. 200296), enacted by the City Council on June 25, 2020 and approved by the Mayor on June 26, 2020 ("Fifteenth Supplemental Ordinance" and, together with the Original Ordinance, the "1998 General Ordinance"); and (vi) a Bond Authorization of the Bond Committee of the City, comprised of the Mayor, the City Controller and the City Solicitor, and acting by at least a majority thereof, dated October 21, 2020 ("Bond Authorization"). Capitalized terms not otherwise defined herein shall have the meanings ascribed to such terms in the 1998 General Ordinance.

The Series A Bonds are being issued by the City to provide funds to (i) finance a portion of Philadelphia Gas Works' ongoing Capital Improvement Program, (ii) make a deposit to the Sinking Fund Reserve held under the 1998 General Ordinance, and (iii) pay the costs of issuing the Series A Bonds. The Series B Bonds are being issued by the City to provide funds to (i) refund all of the City's Gas Works Revenue Bonds, Ninth Series maturing on August 1 in the years 2021 through 2024, inclusive, and 2040 currently outstanding under the 1998 General Ordinance, and (ii) pay the costs of issuing the Series B Bonds.

The Bonds, together with all Senior Bonds presently Outstanding under the 1998 General Ordinance and any parity obligations hereafter issued under the 1998 General Ordinance (collectively, the "Senior Bonds"), are equally and ratably payable solely from and secured solely by a lien on and security interest in all Gas Works Revenues, all accounts, contract rights and general intangibles representing Gas Works

Revenues, and the Sinking Fund, including the Sinking Fund Reserve established under the 1998 General Ordinance.

As Co-Bond Counsel, we have examined: (i) the relevant provisions of the Constitution of the Commonwealth; (ii) the Act; (iii) the Original Ordinance; (iv) the Thirteenth Supplemental Ordinance; (v) the Fifteenth Supplemental Ordinance; (vi) the Bond Authorization; and (vii) certain statements, certifications, affidavits and other documents and matters of law as we have deemed necessary to enable us to render the opinion set forth below, including, without limitation, a certificate of officials of the City and of the Gas Works having responsibility for issuing the Bonds ("Tax Compliance Certificate"), intended to satisfy certain provisions of the Internal Revenue Code of 1986, as amended ("Code"), and applicable Treasury Regulations, and the other documents and instruments listed on the Index of Closing Documents relating to the Bonds dated the date hereof. We have also examined the fully executed and authenticated Bonds.

In rendering the opinion set forth below, we have relied upon the genuineness, accuracy and completeness of all of the documents, records, certifications and other instruments examined including, without limitation, the authenticity of all signatures appearing thereon. We have also relied, in the opinion set forth below, upon the opinion of the City Solicitor as to all matters of fact and law set forth therein. We have not made any independent examination in rendering this opinion other than the examination referred to above. Our opinion is therefore qualified in all respects by the scope of that examination.

Except with respect to Paragraph 5 below, our opinion is given only with respect to the internal laws of the Commonwealth of Pennsylvania as enacted and construed on the date hereof.

Based upon and subject to the foregoing and subject to the qualifications hereinafter set forth, we are of the opinion that:

1. The City is authorized under the provisions of the Constitution and laws of the Commonwealth to perform its obligations under the Original Ordinance, the Thirteenth Supplemental Ordinance, the Fifteenth Supplemental Ordinance and the Bonds and to issue the Bonds for the purposes set forth in the Thirteenth Supplemental Ordinance and the Fifteenth Supplemental Ordinance.

2. The City has duly and properly authorized the issuance of the Bonds.

3. The Bonds have been duly executed, authenticated, issued and delivered, and are the legal, valid and binding obligations of the City, enforceable in accordance with the terms thereof, except as enforcement may be affected by bankruptcy, insolvency, reorganization, moratorium, fraudulent transfer or other similar laws or legal or equitable principles affecting the enforcement of creditors' rights.

4. Under the laws of the Commonwealth as presently enacted and construed, interest on the Bonds is exempt from Pennsylvania personal income tax and Pennsylvania corporate net income tax; however, any profits, gains or income derived from the sale, exchange or other disposition of the Bonds will be subject to Commonwealth taxes and local taxes within the Commonwealth.

5. Under existing statutes, regulations, rulings and court decisions, interest on the Bonds will not be includible in the gross income of the holders thereof for federal income tax purposes, assuming continuing compliance by the City with the requirements of the Code.

In rendering this opinion, we have assumed compliance by the City with its covenants contained in the 1998 General Ordinance, the Bond Authorization and the Tax Compliance Certificate that are intended to comply with the provisions of the Code relating to actions to be taken by the City in respect of the Bonds after the issuance thereof to the extent necessary to effect or maintain the exclusion of interest on the Bonds from gross income for federal income tax purposes. These covenants relate to, *inter alia*, the use and investment of proceeds of the Bonds and the rebate to the United States Treasury of specified arbitrage earnings, if required. Failure to comply with such covenants could result in the interest on the Bonds becoming includible in gross income for federal income tax purposes from the date of issuance of the Bonds.

We call to your attention the fact that the Bonds are special obligations of the City payable solely from and secured solely by the Gas Works Revenues and amounts in the Sinking Fund, including the Sinking Fund Reserve, established pursuant to the 1998 General Ordinance. The Bonds are not general obligations of the City and do not pledge the full faith, credit or taxing power of the City or create any debt or charge against the general revenues of the City or create a lien or charge against any property of the City other than Gas Works Revenues.

We express no opinion as to any matter not set forth in the numbered paragraphs herein. This opinion is given as of the date hereof and we assume no obligation to supplement this opinion to reflect changes in law that may hereafter occur or changes in facts or circumstances that may hereafter come to our attention. Without limiting the generality of the foregoing, we express no opinion herein with respect to, and assume no responsibility for, the accuracy, adequacy or completeness of the Preliminary Official Statement or Official Statement prepared in respect of the Bonds, and make no representation that we have independently verified the contents thereof.

Very truly yours,

[THIS PAGE INTENTIONALLY LEFT BLANK]

CITY OF PHILADELPHIA, PENNSYLVANIA • GAS WORKS REVENUE BONDS, SIXTEENTH SERIES (1998 GENERAL ORDINANCE)

Mixed Sources
Product group from well managed forests, controlled sources and recycled wood or fiber.

Printed by: ImageMaster, LLC
www.imagemaster.com