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# Philadelphia Gas Works Pension Plan–Funding

Actuarial Valuation Report for the Plan Year
July 1, 2023–June 30, 2024

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September 20, 2023

Philadelphia Gas Works
1800 N. Ninth Street
Philadelphia, PA 19122

We have been retained by Philadelphia Gas Works to perform the actuarial valuation of the Philadelphia Gas Works Pension Plan as of July 1, 2023. This report sets forth the contribution range for the Plan Year, running from July 1, 2023 through June 30, 2024. The valuation is based on data sent to us by Philadelphia Gas Works, the Plan as described in the official Plan document, the assets of the Plan as reported by Philadelphia Gas Works, and the stated actuarial assumptions.

The purposes of the actuarial valuation are:

1. To determine the financial condition of the Plan and the contribution requirements for the Plan year;
2. To provide information to be used in the preparation of any required governmental forms;
3. To provide information for use in satisfying the requirements of your auditors;
4. To provide actuarial certification of the adequacy and appropriateness of the cost method and assumptions used for your Plan; and
5. To provide comments on the developing experience under your Plan, the need for changes in the Plan or funding, and other areas of concern to you. In this respect, the actuarial valuation report becomes an essential source of information for discussions throughout the year on the Pension Plan.

In our opinion, this report is complete and accurate, and the actuarial assumptions and methods, in the aggregate, are reasonably related to the experience of the Plan and represent our best estimate of future Plan experience as it should be considered for proper funding of your pension obligations. It is also our opinion that each of the actuarial assumptions and methods utilized in this valuation are reasonable (taking into account the experience of the plan and reasonable expectations) or, in the aggregate, result in total contribution equivalents that would be determined if each assumption and method were reasonable.

Aon is pleased to submit this report of the Pension Plan to you and will be pleased to discuss any aspects of the report with you after you have had a chance to review it.

Respectfully submitted,

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# Introduction

This report documents the results of the actuarial valuation for the plan year ending June 30, 2024 of the Philadelphia Gas Works Pension Plan. The plan is a single-employer plan and issues a separate financial statement. The information provided in this report is intended strictly for documenting the annual contribution for the plan year ending June 30, 2024.

Determinations for purposes other than the funding valuation may be significantly different from the results in this report. Thus, the use of this report for purposes other than those expressed here may not be appropriate.

This valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board and includes any guidance or interpretations provided by the Plan Sponsor prior to the issuance of this report.

A valuation model was used to develop the liabilities for the July 1, 2023 valuation. The valuation model relies on ProVal software, which was developed by Winklevoss Technologies, LLC. Experts within Aon selected this software and determined it is appropriate for performing valuations. We coded and reviewed the software for the provisions, assumptions, methods, and data of the Philadelphia Gas Works Pension Plan.

The undersigned relied on experts at PFM Asset Management LLC for the development of the capital market assumptions and the model underlying the expected rate of return.

The valuation model was used to project certain financial results for the funded status and contribution projections. The valuation model relies on ProVal software, which was developed by Winklevoss Technologies, LLC and selected, reviewed, and evaluated by experts within Aon as appropriate for use for developing liabilities for the funded status and contribution projections.

Future actuarial measurements may differ significantly from the current measurements presented in this report due (but not limited to) to such factors as the following:

- Plan experience differing from that anticipated by the economic or demographic assumptions;
- Changes in actuarial methods or in economic or demographic assumptions;
- Increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- Changes in plan provisions or applicable law.

Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements. However, an assessment and disclosure of risks pertaining to the funding valuation as required by the actuarial standards of practice is being provided in a separate report.

Funded status measurements shown in this report are determined based on various measures of plan assets and liabilities. For funding purposes, plan assets are measured based on the asset valuation method described in the Actuarial Assumptions and Methods section of this report. Plan liabilities are measured based on the interest rates and other assumptions summarized in the Actuarial Assumptions and Methods section of this report.

These funded status measurements may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations, and funded status measurements for Philadelphia Gas Works and plan disclosure and reporting purposes may not be appropriate for assessing the need for or the amount of future contributions.

In determining the annual contribution for the Philadelphia Gas Works Pension Plan, Aon may be assisting the appropriate plan fiduciary as it performs tasks that are required for the administration for an employee benefit plan. Aon may be consulting with Philadelphia Gas Works as it considers alternative strategies for funding the plan. Thus, Aon potentially will be providing assistance to Philadelphia Gas Works (and/or certain of its employees) acting in a fiduciary capacity (for the benefit of plan participants and beneficiaries) and to Philadelphia Gas Works (and/or its executives) acting in a settlor capacity (for the benefit of the employer sponsoring the Philadelphia Gas Works Pension Plan).

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by Philadelphia Gas Works as of the funding valuation date. While we cannot verify the accuracy of all the information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy or completeness of the information and believe that it has produced appropriate results.

The actuarial assumptions and methods used in this valuation are described in the Actuarial Assumptions and Methods section of this report. Philadelphia Gas Works selected the economic and demographic assumptions and prescribed them for use for purposes of compliance with the state's funding regulations. Aon provided guidance with respect to these assumptions, and it is our belief that the assumptions represent reasonable expectations of anticipated plan experience.

The undersigned are familiar with the near-term and long-term aspects of pension valuations and collectively meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. The information provided in this report is dependent upon various factors as documented throughout this report, which may be subject to change. Each section of this report is considered to be an integral part of the actuarial opinions.

To our knowledge, no colleague of Aon providing services to Philadelphia Gas Works has any material direct or indirect financial interest in Philadelphia Gas Works. Thus, we believe there is no relationship existing that might affect our capacity to prepare and certify this actuarial report for Philadelphia Gas Works.

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September 20, 2023

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# Executive Summary

The plan's actuarial funded ratio increased from 75.44% to 75.85% as of June 30, 2023 on a smoothed Actuarial Value of Assets basis. This ratio is above the 74.81% forecast in 2022. The main driver for the ratio exceeding expectations is actual investment returns for the year-end June 30, 2023 being above the long-term expectation of 7.00%. The impact of investment returns are smoothed over a period of five years under the plan's policy.

The number of active plan participants increased by 5.4% due to a higher than normal level of new hires for the year ending June 30, 2023. In the year ending June 30, 2023, about 66% of incoming employees chose the pension program with 34% choosing the Defined Contribution program. The expected employee contributions now equal about 2.2% of total payroll, and will, over time, grow to 6.0% of pay, once all active participants are in the contributory tier.

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# A. Comparative Summary of Principal Valuation Results

| | Actuarial Valuation for Plan Year Beginning | | |
|---|---|---|---|
| | ***July 1, 2022*** | ***July 1, 2023*** | ***Percent Change*** |
| 1. **Participant Data** | | | |
| Active Participants | 1,062 | 1,119 | 5.4 % |
| Retired Participants | 2,215 | 2,217 | 0.1 % |
| Vested Terminated Participants | 312 | 311 | (0.3) % |
| Total | 3,589 | 3,647 | 1.6 % |
| Total Payroll | 97,434,997 | 102,708,631 | 5.4 % |
| Average Pay | 91,747 | 91,786 | 0.0 % |
| Active Employee Average Age | 44.08 | 43.43 | (1.5) % |
| Active Employee Average Past Service | 14.08 | 13.25 | (5.9) % |

# A. Comparative Summary of Principal Valuation Results (cont.)

| | | Actuarial Valuation for Plan Year Ending | | | | |
|---|---|---|---|---|---|---|
| | | ***June 30, 2023*** | | ***June 30, 2024*** | ***Percent Change*** | |
| 1. **Contribution Range** | | | | | | |
| Normal Cost *(Exhibit D)* | $ | 7,732,051 | $ | 7,754,207 | 0.3 | % |
| Indicated Midyear | | | | | | |
| 20-Year-Contribution *(Exhibit E)* | $ | 26,084,108 | $ | 25,937,217 | (0.6) | % |
| 30-Year-Contribution *(Exhibit E)* | $ | 24,976,347 | $ | 25,141,571 | 0.7 | % |
| Directed Contribution[1] | $ | 30,000,000 | $ | 30,000,000 | 0.0 | % |
| Contribution as a Percentage of Compensation | | | | | | |
| 20-Year Contribution | | 26.77% | | 25.25% | (5.7) | % |
| 30-Year Contribution | | 25.63% | | 24.48% | (4.5) | % |
| Directed Contribution | | 30.79% | | 29.21% | (5.1) | % |

The Normal Cost above represents the cost of benefits being earned by additional years of service with PGW net of employee contributions. This figure has increased since the previous year primarily due to demographic changes.

The contribution levels are the sum of the Normal Cost and a level percent amortization of the unfunded actuarial liability. The contribution amounts decreased on a dollar basis over the prior period (20-year basis) for several reasons:

a) The contribution was expected to be $26.5 million based on the prior year projection of the funding policy with a $30 million contribution for the 2022 plan year. This projected contribution was higher than the plan year ending June 30, 2023 indicated contributions primarily due to investment losses that will be smoothed into the actuarial value of assets for funding purposes.

b) Investment returns and smoothed value of assets: The investment return for the period ending June 30, 2023 was approximately $66.8 million. Based on the 7.00% assumption in place on July 1, 2022, a return of $38.4 million was expected over this period. The plan recognizes a smoothed value of assets which reduces the impact of the asset returns. The impact of asset performance exceeding expectations and the impact of asset smoothing led to a decrease in the annual contribution of $0.5 million (0.5% of pay).

c) Demographic changes: The accrued actuarial liability as of July 1, 2023 was approximately $4.5 million higher than expected based on the prior year valuation. This increased the annual contribution by $0.4 million (0.4% of pay).

[1] The City of Philadelphia Director of Finance directed a contribution of $30,000,000 for plan year ending June 30, 2023 and potentially for the plan year ending June 30, 2024.

# A. Comparative Summary of Principal Valuation Results (cont.)

| | | Actuarial Valuation for Plan Year Beginning | | | Percent |
|---|---|---|---|---|---|
| | | ***July 1, 2022*** | | ***July 1, 2023*** | ***Change*** |
| 1. | **Liabilities** | | | | |
| | Unfunded Accrued Actuarial Liability *(Exhibit E)* | $ 198,032,687 | | $ 196,172,747 | (0.9) % |
| | Present Value of Accumulated Vested Benefits *(Exhibit F)* | $ 741,677,862 | | $ 746,739,869 | 0.7 % |
| | Present Value of Accumulated Plan Benefits *(Exhibit F)* | $ 760,155,318 | | $ 765,073,792 | 0.6 % |

2. **Development of Actuarial Liability**

| | | |
|---|---|---|
| (1) Liability at July 1, 2022 | | $ 806,257,382 |
| (2a) Normal Cost | $ 7,732,051 | |
| (2b) Interest Cost | $ 54,874,778 | |
| (2c) Expected Benefit Payments | $ (61,162,507) | |
| (2d) Total Increase/(Decrease) | $ 1,444,322 | |
| (3) Expected Liability at June 30, 2023 | | $ 807,701,704 |
| (3a) Demographic (Gain)/Loss | $ 4,529,513 | |
| (3b) Change in Assumptions (Gain)/Loss | $ 0 | |
| (3c) Total (Gain)/Loss | $ 4,529,513 | |
| (4) Actual Liability at July 1, 2023 | | $ 812,231,217 |

# A. Comparative Summary of Principal Valuation Results (cont.)

| | | | | | Actuarial Valuation for Plan Year Beginning | |
|---|---|---|---|---|---|---|
| | | | ***July 1, 2022*** | | ***July 1, 2023*** | ***Percent Change*** |
| 1. | **Assets** | | | | | |
| | Market Assets Value *(Exhibit C)* | $ | 565,748,328 | $ | 604,133,466 | 6.8 % |
| | Actuarial Asset Value *(Exhibit C)* | $ | 608,224,695 | $ | 616,058,470 | 1.3 % |

Plan assets are invested in a mix of stocks and bonds held by the Sinking Fund Commission. We understand the long-term asset allocation strategy to be an equity allocation of 60%, a fixed income allocation of 32.5% and an alternatives allocation of 7.5% of the portfolio. The total fund asset return was 12.56% for the plan year ending June 30, 2023 as provided by PFM in the monthly performance review for the period ended June 30, 2023. This represented an overperformance of plan investments versus the actuarial assumption of 7.00% for the period, but not necessarily an overperformance versus independent investment benchmarks. Review of performance against those benchmarks is outside the scope of this report.

# B. Discussion

Since the last actuarial valuation performed as of July 1, 2022, the demographics of the plan participants have changed as follows:

- The number of plan participants increased 1.6%
- The total number of actives in the plan increased 5.4%
- Total payroll increased 5.4%
- Average pay remained level
- Average age of active plan participants decreased 1.5%

For purposes of projections included in this report, PGW is assumed to contribute based on the plan's funding policy of the greater of a 20-year open amortization period and a 30-year closed amortization period of the unfunded liability. These schedules were included in the range of potential contribution levels and both are expected to gradually improve the funded status of the plan.

# C. Financial Summary[1]

| | | | |
|---|---|---|---|
| **Assets as of July 1, 2022** | | $ | 565,748,328 |
| | | | |
| **Receipts** | | | |
| Employer Contribution | 30,000,000 | | |
| Employee Contribution | 2,214,748 | | |
| Investment return* | 66,843,826 | | |
| Total Receipts | | $ | 99,058,574 |
| | | | |
| **Disbursements** | | | |
| Refund of Contributions | 0 | | |
| Benefit Payments | 60,312,348 | | |
| Administrative Expenses | 361,088 | | |
| Total Disbursements | | $ | 60,673,436 |
| | | | |
| **Assets as of July 1, 2023** | | $ | 604,133,466 |

**Asset Information as of July 1, 2023**

| Asset Allocations | Current Allocation | Target Allocation |
|---|---|---|
| Equity | 70.1% | 60.0% |
| Fixed Income | 26.1% | 32.5% |
| Alternatives | 0.0% | 7.5% |
| Cash and Other | 3.8% | 0.0% |

| Annual Rate of Return | Market Value | Assumed Rate |
|---|---|---|
| Rate[2] | 12.56% | 7.00% |

**Net of any additional fund expenses not included in Administrative Expenses under Disbursements*

[1] Asset information as reported by the City of Philadelphia.
[2] The total fund asset return of 12.56% for the plan year ending June 30, 2023 as provided by PFM in the monthly performance review for the period ended June 30, 2023.

# C. Financial Summary (cont.)

**Development of Actuarial Value of Assets**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Market Asset Value as of July 1, 2022 | | | | $ 565,748,328 |
| 2 | Expected Market Asset Value as of July 1, 2023 | | | | $ 575,895,969 |
| 3 | Market Asset Value as of July 1, 2023 | | | | $ 604,133,466 |
| 4 | Deferred Asset Gains/(Losses) | | | | |
| | **Fiscal Year Ending** | | **Total Gain/Loss** | **Percent Deferred** | **Amount Deferred** |
| | June 30, 2023 | | $ 28,237,497 | 80% | $ 22,589,998 |
| | June 30, 2022 | | $ (127,198,126) | 60% | $ (76,318,876) |
| | June 30, 2021 | | $ 117,116,450 | 40% | $ 46,846,580 |
| | June 30, 2020 | | $ (25,213,529) | 20% | $ (5,042,706) |
| | Total | | | | $ (11,925,004) |
| 5 | **Preliminary Actuarial Asset Value as of July 1, 2023: (3)-(4)** | | | | $ 616,058,470 |
| | **Corridor for Actuarial Value** | | | | |
| 6 | 80% of Market Value of Assets | | | | $ 483,306,773 |
| 7 | 120% of Market Value of Assets | | | | $ 724,960,159 |
| 8 | **Actuarial Asset Value as of July 1, 2023** | | | | $ 616,058,470 |
| 9 | **Actuarial Asset Value as a percent of Market Asset Value: (8)/(3)** | | | | 102.0% |

# D. Summary of Valuation Results

| | Retired | Vested Terminated | Active | Total |
|---|---|---|---|---|
| 1 Number of Participants Included in the Valuation | 2,217 | 311 | 1,119 | 3,647 |
| 2 Projected Annual Benefits | $ 60,660,229 | $ 3,159,835 | $ 152,005,470 | $ 215,825,534 |
| 3 Present Value of Projected Benefits as of July 1, 2023 | $607,052,611 | $ 14,656,042 | $ 309,852,181 | $ 931,560,834 |
| 4 Present Value of Future Normal Costs | $ - | $ - | $ 119,329,617 | $ 119,329,617 |
| 5 Accrued Actuarial Liability as of July 1, 2023: (3)-(4) | $607,052,611 | $ 14,656,042 | $ 190,522,564 | $ 812,231,217 |
| 6 Actuarial Asset Value | | | | $ 616,058,470 |
| 7 Unfunded Accrued Actuarial Liability: (5)-(6) | | | | $ 196,172,747 |
| 8 Normal Cost Payable on July 1, 2023 | | | | $ 9,807,046 |
| 9 Expected Employee Contributions | | | | $ 2,052,839 |
| 10 Net Employer Normal Cost (8)-(9) | | | | $ 7,754,207 |

# E. Contribution Levels

***Twenty Year Amortization (Open Amortization Period)***

1. Contribution for Normal Cost $ 7,754,207
2. Amortization Schedule

| ***Effective Date*** | ***Amortization Period*** | ***Initial Amount*** | ***Unfunded Accrued Actuarial Liability*** | ***BOY Annual Payment*** | |
|---|---|---|---|---|---|
| 7/1/2023 | 20 | $196,172,747 | $ 196,172,747 | $ 17,305,906 | $ 17,305,906 |

3. Contribution July 1, 2023: (1) + (2) $ 25,060,113

4. Contribution Mid-year (3) x 1.035 $ 25,937,217

5. Contribution June 30, 2024: (3) x 1.070 $ 26,814,321

***Thirty Year Amortization (Closed Amortization Period)***

1. Contribution for Normal Cost $ 7,754,207
2. Amortization Schedule

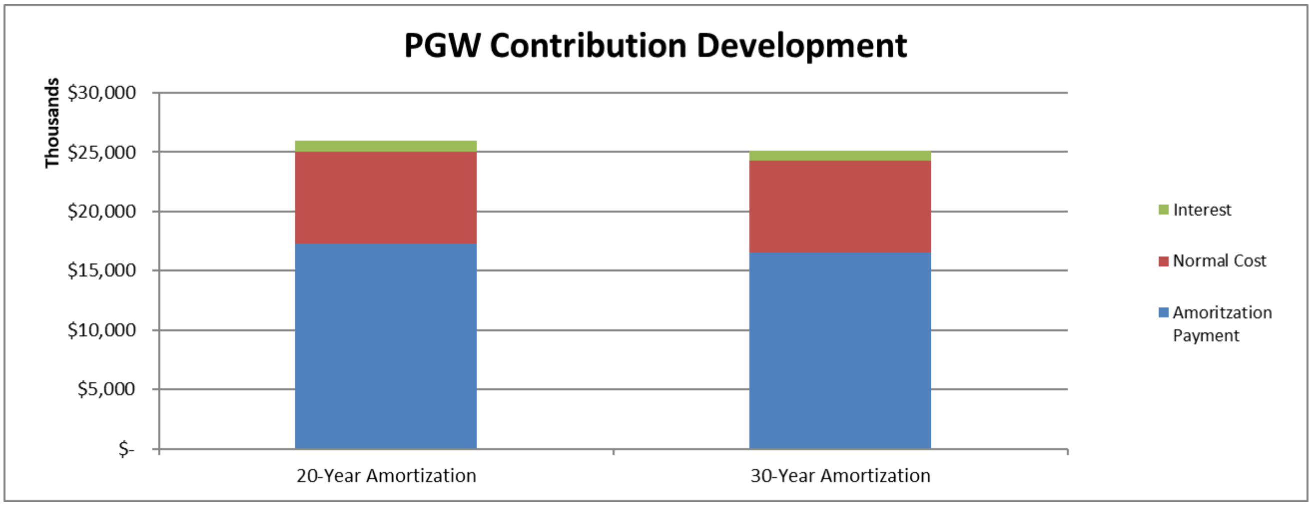
| ***Effective Date*** | ***Amortization Period*** | ***Initial Amount*** | ***Unamortized Amount*** | ***BOY Annual Payment*** |
|---|---|---|---|---|
| 7/1/2015 | 22 | $195,984,721 | $ 175,458,777 | $ 14,824,754 |
| 7/1/2016 | 23 | $ 30,648,588 | $ 27,925,567 | $ 2,315,315 |
| 7/1/2017 | 24 | $ (3,804,097) | $ (3,524,441) | $ (287,189) |
| 7/1/2018 | 25 | $ 6,379,537 | $ 6,001,686 | $ 481,316 |
| 7/1/2019 | 26 | $ (12,799,101) | $ (12,211,534) | $ (965,065) |
| 7/1/2020 | 27 | $ (20,595,398) | $ (19,905,677) | $ (1,552,005) |
| 7/1/2021 | 28 | $ 16,535,707 | $ 16,173,345 | $ 1,245,377 |
| 7/1/2022 | 29 | $ 4,476,987 | $ 4,429,593 | $ 337,182 |
| 7/1/2023 | 30 | $ 1,825,431 | $ 1,825,431 | $ 137,481 |
| **Total** | | | **$ 196,172,747** | **$ 16,537,166** |

3. Contribution July 1, 2023: (1) + (2) $ 24,291,373

4. Contribution Mid-year (3) x 1.035 $ 25,141,571

5. Contribution June 30, 2024: (3) x 1.070 $ 25,991,769

# E. Contribution Levels (cont.)



# F. Actuarial Present Value of Accumulated Benefits Determined

## Accounting Standards Codification Topic 960

| | | July 1, 2022 | July 1, 2023 |
|---|---|---|---|
| 1. | Actuarial Present Value of Accumulated Vested Benefits | | |
| | a. Participants currently receiving benefits | $ 603,404,958 | $ 607,052,611 |
| | b. Vested terminated participants | $ 14,460,751 | $ 14,656,042 |
| | c. Active Participants | $ 123,812,153 | $ 125,031,216 |
| | d. Total | $ 741,677,862 | $ 746,739,869 |
| 2. | Actuarial Present Value of Accumulated Non-Vested Benefits | $ 18,477,456 | $ 18,333,923 |
| 3. | Total Actuarial Present Value of Accumulated Plan Benefits: *(1d) + (2)* | $ 760,155,318 | $ 765,073,792 |
| 4. | Net Assets Available for Benefits *(Market Value, Exhibit C)* | $ 565,748,328 | $ 604,133,466 |
| 5. | Excess *(deficiency)* of Net Assets Available for Benefits over (under) Actuarial Present Value of Accumulated Plan Benefits: *(4) - (3)* | $ (194,406,990) | $ (160,940,326) |
| 6. | Active Participant Count | | |
| | a. 100% Vested | 836 | 829 |
| | b. Partially Vested | 0 | 0 |
| | c. Non-Vested | 226 | 290 |

# G. Estimated 10-Year Benefit Pay-Out Projections[1]

*Figures Shown in Thousands*

| Plan Year beginning July 1 | Expected Annual Benefit Pay-Out During Plan Year | Expected PGW Policy Contribution During Plan Year | Expected Employee Contributions During Plan Year | Expected Benefits Paid from Plan Assets |
|---|---|---|---|---|
| 2023 | $62,271 | $25,908 | $2,121 | $34,242 |
| 2024 | 62,949 | 25,601 | 2,260 | 35,088 |
| 2025 | 63,563 | 24,871 | 2,405 | 36,287 |
| 2026 | 64,069 | 26,459 | 2,551 | 35,058 |
| 2027 | 64,277 | 26,013 | 2,691 | 35,574 |
| 2028 | 64,370 | 26,064 | 2,829 | 35,476 |
| 2029 | 64,436 | 26,140 | 2,970 | 35,326 |
| 2030 | 64,877 | 26,213 | 3,101 | 35,563 |
| 2031 | 64,962 | 26,253 | 3,220 | 35,489 |
| 2032 | 64,963 | 26,326 | 3,336 | 35,302 |

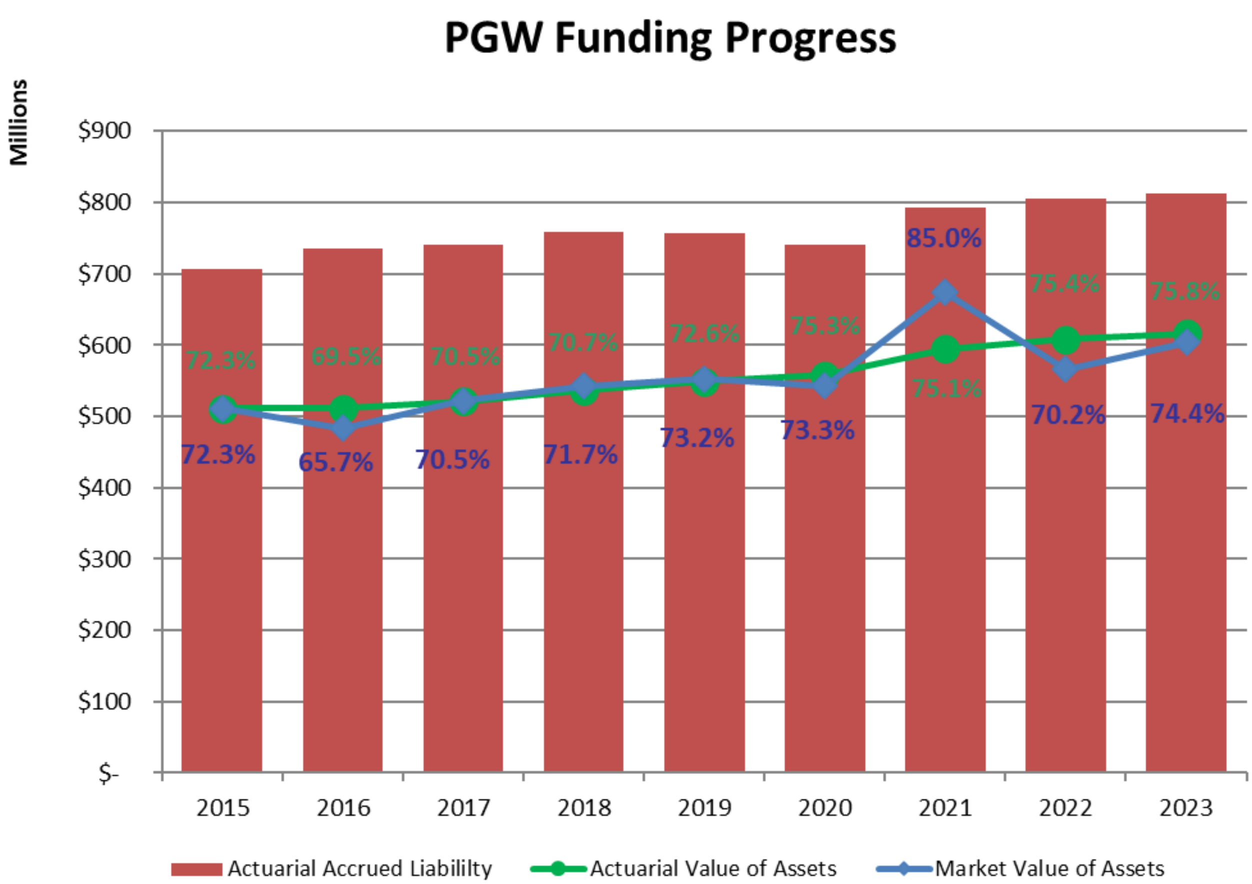
Note: The above projected pay-outs recognize expected mortality, termination, and incidence of disability and assume all benefits will commence at Assumed Retirement Date. No assumption has been made regarding possible retirements prior to Assumed Retirement Date. Investment returns assumed to be 7.00% per year. Covered payroll projected to increase based on valuation assumptions. Expected PGW contributions calculated assuming contributions made based on greater of 20-year open amortization policy and 30-year closed amortization policy. Expected employee contributions assume 50% of new employees select the PGW defined benefit pension plan and employee contribution rate remains 6% of pay.

[1] This exhibit is based on the PGW Pension Plan policy contribution. Beginning with the July 1, 2019 plan year, PGW has added a discretionary amount to the annual policy contribution in order to get to a total annual contribution of $30M to the plan trust. Discretionary contributions require approval of the City Finance Director and are not guaranteed to continue in future years. If $30M was reflected as PGW's expected annual contribution, it would have a positive impact on the figures shown in the exhibit.

# H. Schedule of Funding Progress

***($ thousands)***

| Actuarial Valuation Date | Actuarial Accrued Liability | Market Value of Assets (MVA) | MVA Funded Ratio | Actuarial Value of Assets (AVA) | AVA Funded Ratio | AVA Unfunded Actuarial Accrued Liability | Assumed Rate of Return | Covered Payroll | AVA UAAL as a % of Covered Payroll |
|---|---|---|---|---|---|---|---|---|---|
| 7/1/2015 | $706,704 | $510,719 | 72.27% | $510,719 | 72.27% | $195,985 | 7.65% | $95,187 | 205.89% |
| 7/1/2016 | 736,078 | 483,259 | 65.65% | 511,289 | 69.46% | 224,789 | 7.30% | 90,860 | 247.40% |
| 7/1/2017 | 739,872 | 521,526 | 70.49% | 521,305 | 70.46% | 218,567 | 7.30% | 94,768 | 230.63% |
| 7/1/2018 | 758,069 | 543,246 | 71.66% | 535,678 | 70.66% | 222,391 | 7.30% | 101,271 | 219.60% |
| 7/1/2019 | 755,782 | 553,240 | 73.20% | 548,997 | 72.64% | 206,785 | 7.30% | 98,454 | 210.03% |
| 7/1/2020 | 741,279 | 543,230 | 73.28% | 557,972 | 75.27% | 183,307 | 7.30% | 95,934 | 191.08% |
| 7/1/2021 | 792,325 | 673,542 | 85.01% | 595,369 | 75.14% | 196,956 | 7.00% | 97,959 | 201.06% |
| 7/1/2022 | 806,257 | 565,748 | 70.17% | 608,225 | 75.44% | 198,032 | 7.00% | 97,435 | 203.25% |
| 7/1/2023 | 812,231 | 604,133 | 74.38% | 616,058 | 75.85% | 196,173 | 7.00% | 102,709 | 191.00% |



# I. Calculation of Annual Pension Cost

## I-1. Calculation of Annual Pension Cost (20-Year Amortization)

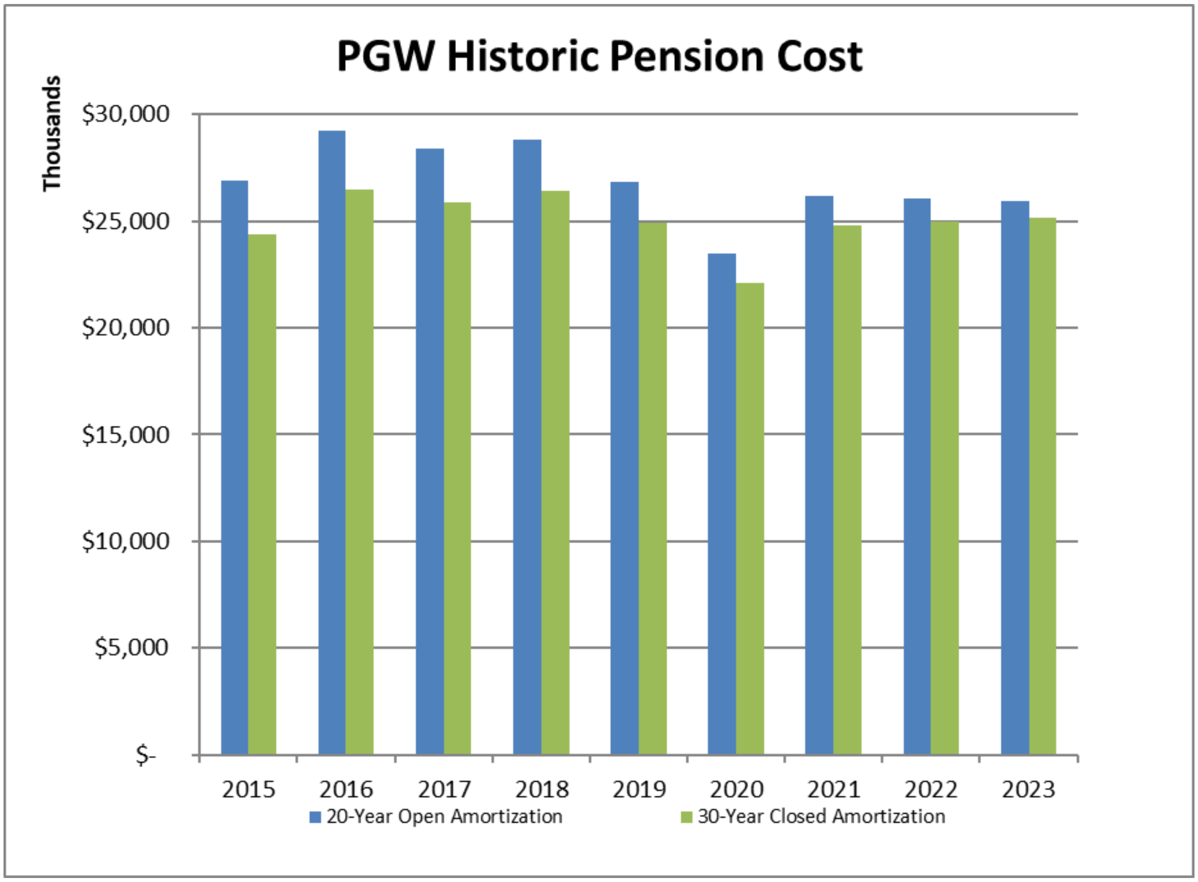
| Actuarial Valuation Date | Unfunded Actuarial Accrued Liability | Amortization Payment | Normal Cost | Employee Contribution | Mid-year Contribution |
|---|---|---|---|---|---|
| 7/1/2015 | $195,985 | $18,063 | $7,859 | $497 | $26,913 |
| 7/1/2016 | 224,789 | 20,238 | 7,992 | 658 | 29,260 |
| 7/1/2017 | 218,567 | 19,678 | 7,717 | 919 | 28,395 |
| 7/1/2018 | 222,391 | 20,022 | 7,760 | 1,182 | 28,797 |
| 7/1/2019 | 206,785 | 18,617 | 7,282 | 1,310 | 26,844 |
| 7/1/2020 | 183,307 | 16,504 | 6,161 | 1,495 | 23,492 |
| 7/1/2021 | 196,956 | 17,375 | 7,892 | 1,531 | 26,151 |
| 7/1/2022 | 198,033 | 17,470 | 7,732 | 1,719 | 26,084 |
| 7/1/2023 | 196,173 | 17,306 | 7,754 | 2,053 | 25,937 |

## I-2. Calculation of Annual Pension Cost (30-Year Closed Amortization)

| Actuarial Valuation Date | Unfunded Actuarial Accrued Liability | Amortization Payment | Normal Cost | Employee Contribution | Mid-year Contribution |
|---|---|---|---|---|---|
| 7/1/2015 | $195,985 | $15,641 | $7,859 | $497 | $24,398 |
| 7/1/2016 | 224,789 | 17,546 | 7,992 | 658 | 26,470 |
| 7/1/2017 | 218,567 | 17,252 | 7,717 | 919 | 25,880 |
| 7/1/2018 | 222,391 | 17,746 | 7,760 | 1,182 | 26,437 |
| 7/1/2019 | 206,785 | 16,755 | 7,282 | 1,719 | 24,914 |
| 7/1/2020 | 183,307 | 15,162 | 6,161 | 1,495 | 22,101 |
| 7/1/2021 | 196,956 | 16,063 | 7,892 | 1,531 | 24,793 |
| 7/1/2022 | 198,033 | 16,400 | 7,732 | 1,719 | 24,976 |
| 7/1/2023 | 196,173 | 16,537 | 7,754 | 2,053 | 25,142 |

Employee contributions estimated based on census data

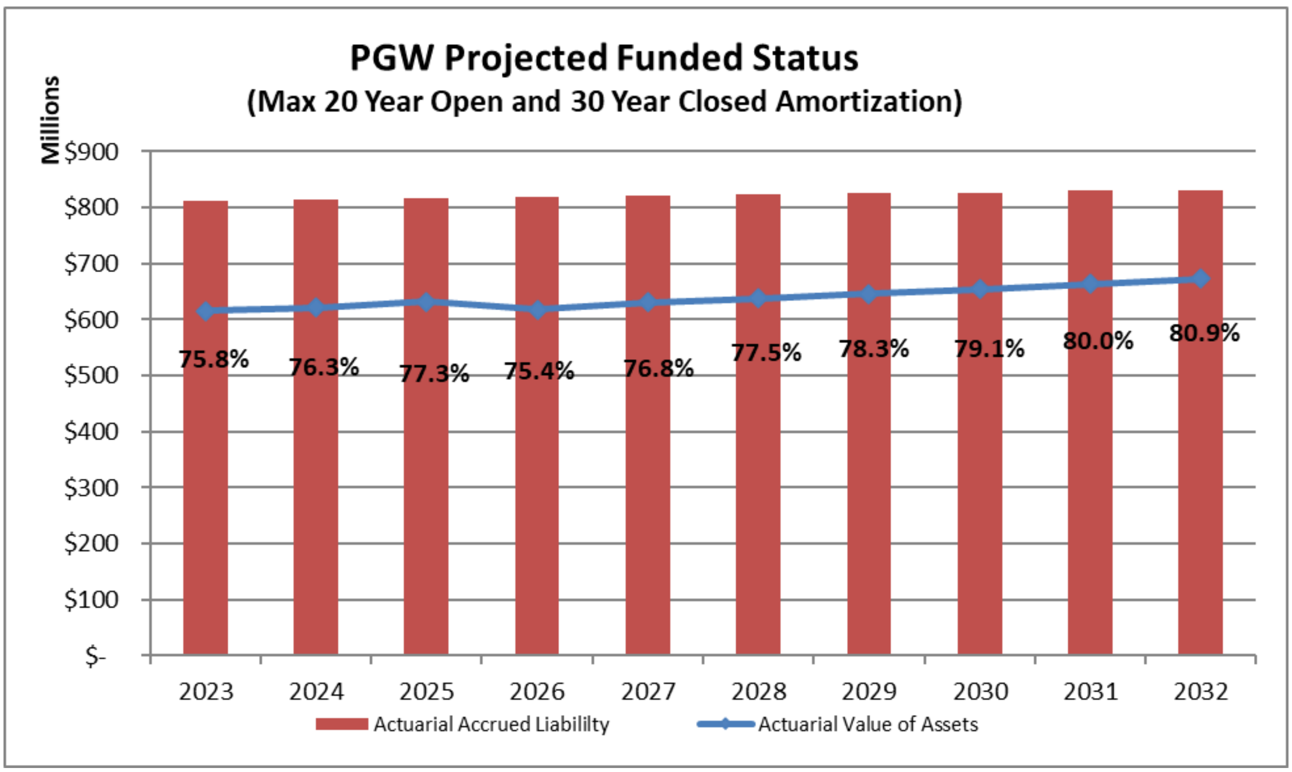
# I. Calculation of Annual Pension Cost (cont.)



# J. Schedule of Prospective Funded Status

**J. Schedule of Prospective Funded Status**
**(Funding Policy - Max 20-Year Open and 30-Year Closed Amortization) *($ thousands)***

| Actuarial Valuation Date | Actuarial Value of Assets | Actuarial Accrued Liability | Unfunded Actuarial Accrued Liability | Mid-Year Contribution | Funded Ratio | Covered Payroll | Contribution as % of Covered Payroll | UAAL as a % of Covered Payroll |
|---|---|---|---|---|---|---|---|---|
| 7/1/2023 | $616,058 | $812,231 | $196,173 | $25,908 | 75.85% | $101,899 | 25.42% | 192.52% |
| 7/1/2024 | 621,531 | 815,047 | 193,516 | 25,601 | 76.26% | 101,862 | 25.13% | 189.98% |
| 7/1/2025 | 631,653 | 817,409 | 185,756 | 24,871 | 77.28% | 102,111 | 24.36% | 181.91% |
| 7/1/2026 | 617,566 | 819,408 | 201,842 | 26,459 | 75.37% | 102,232 | 25.88% | 197.43% |
| 7/1/2027 | 630,589 | 821,160 | 190,571 | 26,013 | 76.79% | 102,660 | 25.34% | 185.63% |
| 7/1/2028 | 637,948 | 822,993 | 185,045 | 26,064 | 77.52% | 103,180 | 25.26% | 179.34% |
| 7/1/2029 | 645,923 | 825,064 | 179,140 | 26,140 | 78.29% | 103,941 | 25.15% | 172.35% |
| 7/1/2030 | 654,612 | 827,444 | 172,832 | 26,213 | 79.11% | 104,547 | 25.07% | 165.32% |
| 7/1/2031 | 663,663 | 829,765 | 166,101 | 26,253 | 79.98% | 105,009 | 25.00% | 158.18% |
| 7/1/2032 | 673,426 | 832,328 | 158,902 | 26,326 | 80.91% | 105,235 | 25.02% | 151.00% |




Investment returns assumed to be 7.00% per year

Covered payroll projected to increase based on valuation assumptions

# K. Low-Default Risk Obligation Measure (“LDROM”)

A key purpose of this report is to communicate an Actuarially Determined Contribution and Funded Percentage for the Philadelphia Gas Works Pension Plan. For both of these calculations, we use an Actuarial Accrued Liability that represents the present value of the portion of expected future benefit payments accrued under the plan’s actuarial cost method, discounted back to the valuation date using an asset return expectation of 7.00%. The asset return expectation is based on the plan’s diversified asset portfolio and long-term capital market return assumptions for the various asset classes represented in the portfolio. The objective of the portfolio is to maximize investment returns with a reasonable amount of risk.

For all funding valuations with measurement dates on or after February 15, 2023, and for which an actuarial report is issued on or after February 15, 2023, Actuarial Standard of Practice No. 4 (ASOP 4) now requires the calculation and disclosure of an additional measure of the plan’s liability using a discount rate or discount rates derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future.

This additional liability measure is referred to as the Low-Default-Risk Obligation Measure (LDROM). The LDROM shown in this report is based upon the Aon AA Bond Universe Full Yield Curve as of the measurement date, with effective rate 5.01%, although other discount rates may also be appropriate for this purpose.

The LDROM can be thought of as a measure of what the plan’s funding liability would be if the plan were to use an ultra-low-risk investment policy. Since plan assets are not invested in an all-bond portfolio, the LDROM may not be appropriate for assessing funding status progress on an Actuarial Accrued Liability basis, necessary plan contributions, or the security of participant benefits.

All assumptions and methods other than the asset return assumption are the same for the calculation of Actuarial Accrued Liability and LDROM.

| | **Fiscal Year Ending June 30, 2023** |
|---|---|
| LDROM | $ 1,013,917,914 |
| Interest Rate | 5.01% |
| Actuarial Cost Method | Projected Unit Credit |

# L. Distribution of Inactive Participants by Age and Years of Retirement

1. Receiving Benefits

| ***Years Receiving Benefits as of July 1, 2023*** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | ***Annual Benefits*** | |
| ***Age*** | ***0-4*** | ***5-9*** | ***10-14*** | ***15-19*** | ***20-24*** | ***25+*** | ***Total*** | ***Total*** | ***Average*** |
| *15-44* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *$0* | *$0* |
| *45-49* | *0* | *1* | *0* | *0* | *0* | *0* | *1* | *2,411* | *2,411* |
| *50-54* | *11* | *1* | *2* | *0* | *0* | *0* | *14* | *596,344* | *42,596* |
| *55-59* | *134* | *39* | *5* | *1* | *0* | *0* | *179* | *6,065,773* | *33,887* |
| *60-64* | *122* | *181* | *72* | *12* | *7* | *2* | *396* | *13,144,428* | *33,193* |
| *65-69* | *88* | *167* | *166* | *47* | *12* | *6* | *486* | *15,573,384* | *32,044* |
| *70-74* | *36* | *93* | *125* | *94* | *80* | *16* | *444* | *11,383,272* | *25,638* |
| *75-79* | *17* | *25* | *55* | *52* | *66* | *58* | *273* | *6,352,710* | *23,270* |
| *80-84* | *13* | *20* | *17* | *24* | *29* | *84* | *187* | *3,693,250* | *19,750* |
| *85-89* | *10* | *13* | *12* | *6* | *11* | *64* | *116* | *2,228,012* | *19,207* |
| *90+* | *5* | *8* | *14* | *13* | *9* | *72* | *121* | *1,620,645* | *13,394* |
| ***Total*** | ***436*** | ***548*** | ***468*** | ***249*** | ***214*** | ***302*** | ***2,217*** | ***60,660,229*** | ***27,361*** |
| *Average Age: 71.67 Average Retirement Years: 13.24* | | | | | | | | | |

2. Vested Terminated

| | | ***Annual Benefit*** | |
|---|---|---|---|
| ***Age*** | ***Number*** | ***Total*** | ***Average*** |
| *15-44* | *117* | *$1,049,664* | *$8,971* |
| *45-49* | *42* | *342,384* | *8,152* |
| *50-54* | *39* | *526,695* | *13,505* |
| *55-59* | *69* | *708,354* | *10,266* |
| *60-64* | *38* | *457,330* | *12,035* |
| *65+* | *6* | *75,408* | *12,568* |
| ***Total*** | ***311*** | ***$3,159,835*** | ***$10,160*** |

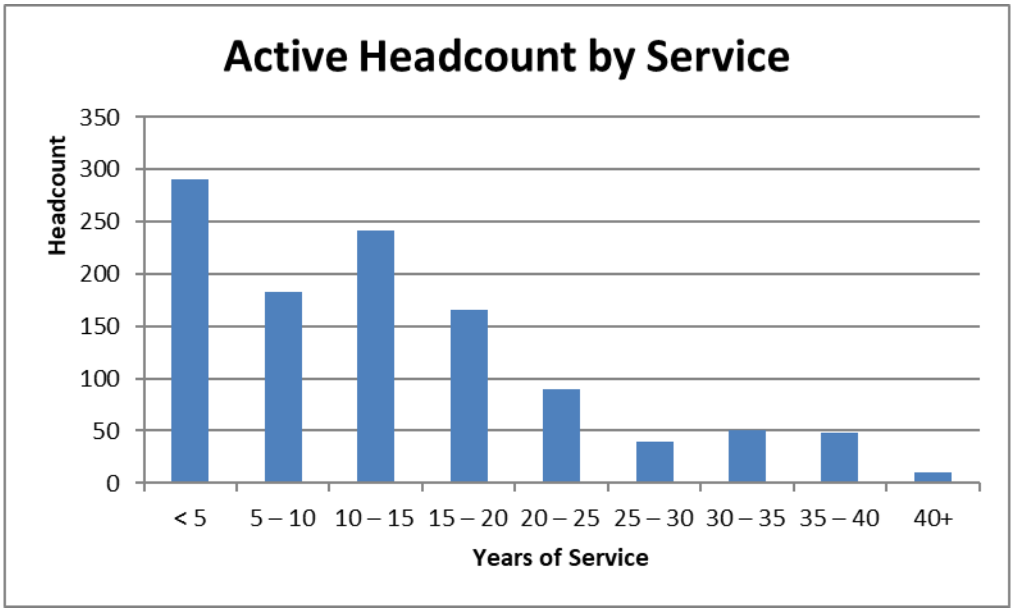
# M. Distribution of Active Participants by Age and Service

(Showing Number of Employees and Average Earnings)[1]

| Completed Years of Service as of July 1, 2023 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Earnings | |
| Age | 00-00 | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total | Total | Average |
| Under 25 | 35 | 26 | - | - | - | - | - | - | - | - | 61 | 3,187,921 | 52,261 |
| | 45,758 | 61,015 | - | - | - | - | - | - | - | - | 52,261 | | |
| 25-29 | 23 | 46 | 18 | - | - | - | - | - | - | - | 87 | 5,759,574 | 66,202 |
| | 48,307 | 69,401 | - | - | - | - | - | - | - | - | 66,202 | | |
| 30-34 | 23 | 33 | 49 | 46 | 1 | - | - | - | - | - | 152 | 11,970,304 | 78,752 |
| | 50,199 | 67,281 | 84,794 | 94,284 | - | - | - | - | - | - | 78,752 | | |
| 35-39 | 13 | 31 | 36 | 84 | 37 | 2 | - | - | - | - | 203 | 18,132,975 | 89,325 |
| | - | 64,704 | 87,572 | 98,720 | 103,430 | - | - | - | - | - | 89,325 | | |
| 40-44 | 7 | 9 | 16 | 38 | 39 | 19 | - | - | - | - | 128 | 12,948,608 | 101,161 |
| | - | - | - | 107,302 | 110,537 | - | - | - | - | - | 101,161 | | |
| 45-49 | 5 | 12 | 18 | 22 | 30 | 25 | 4 | 1 | - | - | 117 | 11,347,128 | 96,984 |
| | - | - | - | 110,215 | 104,447 | 101,249 | - | - | - | - | 96,984 | | |
| 50-54 | 4 | 11 | 19 | 21 | 23 | 17 | 11 | 20 | 3 | - | 129 | 13,466,310 | 104,390 |
| | - | - | - | 105,988 | 107,037 | - | - | 114,547 | - | - | 104,390 | | |
| 55-59 | 3 | 5 | 18 | 15 | 24 | 18 | 14 | 16 | 27 | - | 140 | 14,884,660 | 106,319 |
| | - | - | - | - | 107,538 | - | - | - | 117,764 | - | 106,319 | | |
| 60-64 | - | 3 | 7 | 13 | 7 | 7 | 7 | 13 | 12 | 6 | 75 | 7,708,425 | 102,779 |
| | - | - | - | - | - | - | - | - | - | - | 102,779 | | |
| 65-69 | - | 1 | 1 | 2 | 4 | 1 | 3 | - | 6 | 4 | 22 | 2,654,410 | 120,655 |
| | - | - | - | - | - | - | - | - | - | - | 120,655 | | |
| 70+ | - | - | 1 | 1 | 1 | 1 | - | 1 | - | - | 5 | - | - |
| | - | - | - | - | - | - | - | - | - | - | - | | |
| | 113 | 177 | 183 | 242 | 166 | 90 | 39 | 51 | 48 | 10 | 1,119 | 102,708,631 | 91,786 |
| Total | 51,125 | 70,767 | 87,895 | 101,211 | 105,622 | 106,064 | 101,304 | 112,040 | 115,501 | - | 91,786 | | |
| Average Age: 43.43 | | | | | | | | | Average Service: 13.25 | | | | |

[1] Average and total earnings are not shown for groups with fewer than 20 participants for confidentiality purposes. All earnings are included in calculations for totals and averages shown above as applicable.

# M. Distribution of Active Participants by Service (cont.)




| ***Service*** | ***Active Headcount*** |
|---|---|
| *< 5* | *290* |
| *5 – 10* | *183* |
| *10 – 15* | *242* |
| *15 – 20* | *166* |
| *20 – 25* | *90* |
| *25 – 30* | *39* |
| *30 – 35* | *51* |
| *35 – 40* | *48* |
| *40+* | *10* |
| ***Total*** | ***1,119*** |

# N. Data Reconciliation

| | | Actives | Term Vested | Retiree* | Total |
|---|---|---|---|---|---|
| 1. Participants as of 7/1/2022 | | **1,062** | **312** | **2,215** | **3,589** |
| a. | New Participants | 113 | 0 | 0 | **113** |
| b. | Return from Retirement | 0 | 0 | 0 | **0** |
| c. | Retirements | (29) | (14) | 43 | **0** |
| d. | Surviving Spouses | 0 | 0 | 0 | **0** |
| e. | Rehires | 0 | 0 | 0 | **0** |
| f. | Terminations | (13) | 13 | 0 | **0** |
| g. | Nonvested Terminations | (18) | 0 | 0 | **(18)** |
| h. | Deaths w/ Beneficiary | (2) | 0 | (17) | **(19)** |
| i. | New Beneficiary | 0 | 0 | 19 | **19** |
| j. | Deaths w/o Beneficiary | (1) | 0 | (46) | **(47)** |
| k. | Data Corrections | 7 | 0 | 0 | **7** |
| l. | New QDRO | 0 | 0 | 3 | **3** |
| m. | Total Increase / (Decrease) | 57 | (1) | 2 | **58** |
| 2. Actual Participants as of 6/30/2023 | | **1,119** | **311** | **2,217** | **3,647** |

**Includes Surviving Spouses and Alternate Payees*

# O. Actuarial Methods and Assumptions

1. *Cost Methods*

The cost method used is the Projected Unit Credit Cost method. Each year the projected benefits of each participant are estimated and their present value determined. The normal cost for each active participant is determined by dividing this present value by service from entry into the plan to assumed retirement age. The total normal cost is equal to the sum of individual normal costs.

The accrued actuarial liability for each active participant is equal to the normal cost multiplied by service since entry to valuation date. The accrued actuarial liability for inactive participants is equal to the present value of their benefits. The total accrued actuarial liability is equal to the sum of the individual accrued actuarial liabilities.

The Unfunded Accrued Actuarial Liability as of any date is equal to the accrued actuarial liability less the actuarial value of assets as of such date.

Each year actuarial gains and losses occur since actual experience under the Plan will vary from the actuarial assumptions. All gains and losses will be amortized in future years.

2. *Asset Valuation Technique*

The Actuarial Asset Value is equal to the value of fund assets as reported by the City of Philadelphia smoothed over a period of 5 years. The Actuarial Asset Value is further limited to fall within a corridor of 80% and 120% of the Market Value of Assets.

# O. Actuarial Methods and Assumptions (cont.)

3. *Actuarial Assumptions*

*(Unless otherwise specified, the same assumptions have been used for the determination of the Contribution Range and Accumulated Plan Benefits*)

a. *Mortality Rates:* Healthy: Pri-2012 employees and healthy annuitants mortality table projected generationally from the central year using Scale MP-2021

Disabled: Pri-2012 disabled retiree mortality table projected generationally from the central year using Scale MP-2021

Surviving Spouses: Pri-2012 contingent survivor mortality table projected generationally from the central year using Scale MP-2021

b. *Interest:* 7.00%, compounded annually.

c. *Turnover:* A scale varying by age and service with illustrative annual rates of turnover. See table 1 for details.

d. *Disability* A scale varying by age with illustrative annual rates of disability. See table 2 for details

e. *Salary Increase*

*Determination of Contribution Range* Salaries are assumed to increase by an amount based on years of service. See table 3 for details.

*Accumulated Plan Benefits* Past salaries are discounted at the same rate as described above. Future salaries are assumed to remain at the same level as on the valuation date.

# O. Actuarial Methods and Assumptions (cont.)

*f.* *Retirement Age* — Retirements are assumed to occur at the following ages:

| ***Age*** | ***Service < 30*** | ***Service > 30*** | ***Age*** | ***Service < 30*** | ***Service > 30*** |
|---|---|---|---|---|---|
| *50* | *0%* | *15%* | *61* | *10%* | *15%* |
| *51* | *0%* | *15%* | *62* | *10%* | *40%* |
| *52* | *0%* | *15%* | *63* | *10%* | *25%* |
| *53* | *0%* | *15%* | *64* | *10%* | *25%* |
| *54* | *0%* | *15%* | *65* | *20%* | *25%* |
| *55* | *5%* | *15%* | *66* | *20%* | *40%* |
| *56* | *5%* | *15%* | *67* | *20%* | *40%* |
| *57* | *10%* | *15%* | *68* | *20%* | *40%* |
| *58* | *10%* | *15%* | *69* | *20%* | *40%* |
| *59* | *10%* | *15%* | *70+* | *100%* | *100%* |
| *60* | *10%* | *15%* | | | |

*g.* *Salary* — Current year salary is assumed to be the greater of the annualized 2023 Taxable Gross Wages based on actual wages through June 30, 2023 and the annual pay rate as provided by Philadelphia Gas Works.

*h.* *Conversion of Time Off Balances* — Participant compensation is assumed to increase in the final year of employment prior to retirement due to conversion of time off balances based on the following schedule:

- Less than 30 years of service: 7.5% increase in final year compensation
- 30 of more years of service: 19.5% increase in final year compensation

*i.* *Optional payment form election percentage* — 40% single life annuity
25% joint and 50% survivor annuity
10% joint and 75% survivor annuity
25% joint and 100% survivor annuity

j. *Surviving spouse benefit* — It is assumed that 70% of males and 70% of females have an eligible spouse, and that males are two years older than their spouses.

*4. Change in Actuarial Assumptions*

- There have been no assumption changes since the prior year.

# O. Actuarial Methods and Assumptions (cont.)

**Table 1**

Turnover Rates

| Age | 0 Years of Service | 1 Year of Service | 2 Years of Service | 3 Years of Service | 4 Years of Service | 5 or More Years of Service |
|---|---|---|---|---|---|---|
| 20 or Younger | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 21 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 22 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 23 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 24 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 25 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 26 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 27 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 28 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 29 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 30 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 31 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 32 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 33 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 34 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 35 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 36 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 37 | 25.0% | 15.0% | 12.0% | 10.0% | 7.0% | 3.0% |
| 38 | 23.0% | 15.0% | 12.0% | 9.0% | 6.6% | 2.8% |
| 39 | 21.0% | 15.0% | 12.0% | 8.0% | 6.2% | 2.6% |
| 40 | 19.0% | 15.0% | 12.0% | 7.0% | 5.8% | 2.4% |
| 41 | 17.0% | 15.0% | 12.0% | 6.0% | 5.4% | 2.2% |
| 42 | 15.0% | 15.0% | 12.0% | 5.0% | 5.0% | 2.0% |
| 43 | 14.0% | 14.0% | 10.6% | 4.6% | 4.6% | 2.0% |
| 44 | 13.0% | 13.0% | 9.2% | 4.2% | 4.2% | 2.0% |
| 45 | 12.0% | 12.0% | 7.8% | 3.8% | 3.8% | 2.0% |
| 46 | 11.0% | 11.0% | 6.4% | 3.4% | 3.4% | 2.0% |
| 47 | 10.0% | 10.0% | 5.0% | 3.0% | 3.0% | 2.0% |
| 48 | 10.0% | 10.0% | 5.0% | 2.8% | 2.8% | 2.0% |
| 49 | 10.0% | 10.0% | 5.0% | 2.6% | 2.6% | 2.0% |
| 50 | 10.0% | 10.0% | 5.0% | 2.4% | 2.4% | 2.0% |
| 51 | 10.0% | 10.0% | 5.0% | 2.2% | 2.2% | 2.0% |
| 52 | 10.0% | 10.0% | 5.0% | 2.0% | 2.0% | 2.0% |
| 53 | 10.0% | 10.0% | 5.0% | 2.0% | 2.0% | 2.0% |
| 54 | 10.0% | 10.0% | 5.0% | 2.0% | 2.0% | 2.0% |
| 55 or Older | 10.0% | 10.0% | 5.0% | 2.0% | 2.0% | 2.0% |

# O. Actuarial Methods and Assumptions (cont.)

**Table 2**

Disability Rates

| Age | Males | Females |
|---|---|---|
| 27 and Younger | 0.03345% | 0.03345% |
| 28 | 0.03345% | 0.04460% |
| 29 | 0.03345% | 0.04460% |
| 30 | 0.03345% | 0.04460% |
| 31 | 0.03345% | 0.05575% |
| 32 | 0.03345% | 0.05575% |
| 33 | 0.03345% | 0.06690% |
| 34 | 0.03345% | 0.06690% |
| 35 | 0.04460% | 0.07805% |
| 36 | 0.04460% | 0.08920% |
| 37 | 0.05575% | 0.10035% |
| 38 | 0.06690% | 0.11150% |
| 39 | 0.07805% | 0.13380% |
| 40 | 0.08920% | 0.14495% |
| 41 | 0.10035% | 0.16725% |
| 42 | 0.11150% | 0.18955% |
| 43 | 0.13380% | 0.21185% |
| 44 | 0.15610% | 0.24530% |
| 45 | 0.17840% | 0.26760% |
| 46 | 0.20070% | 0.30105% |
| 47 | 0.23415% | 0.33450% |
| 48 | 0.27875% | 0.36795% |
| 49 | 0.31220% | 0.40140% |
| 50 | 0.36795% | 0.44600% |
| 51 | 0.43485% | 0.49060% |
| 52 | 0.51290% | 0.54635% |
| 53 | 0.59095% | 0.60210% |
| 54 | 0.68015% | 0.65785% |
| 55 | 0.76935% | 0.71360% |
| 56 | 0.85855% | 0.76935% |
| 57 | 0.95890% | 0.82510% |
| 58 | 1.05925% | 0.89200% |
| 59 | 1.17075% | 0.94775% |
| 60 | 1.28225% | 1.00350% |
| 61 | 1.40490% | 1.07040% |
| 62 | 1.53870% | 1.12615% |
| 63 | 1.68365% | 1.17075% |
| 64 | 1.82860% | 1.21535% |
| 65 and Older | 0.0% | 0.0% |

# O. Actuarial Methods and Assumptions (cont.)

**Table 3**

Assumed Salary Increases

| Years of Service | Annual Increase |
|---|---|
| 0 | 8.86% |
| 1 | 8.59% |
| 2 | 8.31% |
| 3 | 8.04% |
| 4 | 7.77% |
| 5 | 7.49% |
| 6 | 7.22% |
| 7 | 6.94% |
| 8 | 6.67% |
| 9 | 6.39% |
| 10 | 6.12% |
| 11 | 5.84% |
| 12 | 5.57% |
| 13 | 5.29% |
| 14 | 5.02% |
| 15 | 4.74% |
| 16 | 4.54% |
| 17 | 4.33% |
| 18 | 4.12% |
| 19 | 3.91% |
| 20 or more | 3.71% |

# P. Summary of the Principal Plan Provisions

*Any ambiguities or questionable provisions of this summary should be resolved by reference to the official Plan Document. This summary is not intended to be a source document, but merely an instrument of convenience for the administration of the Plan.*

1. *Effective Date:* March 24, 1967, most recently amended as of June 26, 2002.

2. *Eligibility:* Full-time employees hired prior to March 24, 1967 who will have completed 15 years of Credited Service at normal retirement occurring prior to January 1, 1979 or 5 years Credited Service at normal retirement occurring on or after January 1, 1979 became participants on March 24, 1967. Employees hired on or after March 24, 1967 will become participants on their date of employment. A full-time employee is one who works regularly for 20 or more hours each week.

3. *Contribution:* Philadelphia Gas Works pays the entire cost of the Plan for all employees hired prior to May 21, 2011. 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 Philadelphia Gas Works Pension Plan and contribute 6% of applicable wages to the Plan, or they may elect to participate in the 401(a) Plan with Philadelphia Gas Works contributing 5.5% of applicable wages.

4. *Credited Service:* Years and months of service credited prior to March 24, 1967 and years and months of continuous service thereafter; continuous service is reduced for periods of approved unpaid leaves (except for military leave) in excess of one month. Layoff periods are also excluded and, if in excess of one year, when approved, the employee is considered terminated.

5. *Final Average Compensation:* Average of the five highest calendar years' earnings during the last 10 years of Credited Service. Compensation includes overtime, bonus, shift differential, and any other special compensation. Per the amendment approved on November 14, 1986, compensation includes amounts deferred under the PGW Employees' Deferred Compensation Plan.

6. *Retirement Dates*

   a. *Normal Retirement:* First of the month next following attainment of age 65 and completion of 5 years of Credited Service.

   b. *Early Retirement*: First of any month after attaining age 55 and completing 15 years of Credited Service, or after completing 30 years of credited service.

   c. *Late Retirement:* First of any month after Normal Retirement up to age 70.

   d. *Disability Retirement*: If permanently disabled and has attained age 45 and completed at least 15 years of Credited Service, provided age plus years of Credited Service equals at least 65. Or after completion of at least 20 years of Credited Service regardless of age, upon recommendation of the Medical Director of the Company.

# P. Summary of the Principal Plan Provisions (cont.)

7. *Benefit Formula*

   a. *Normal Retirement:* The monthly equivalent of the greater of (i) or (ii) below, payable for life.

      i. 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 Credited Service; maximum of 60% of the highest annual earnings during any one of the last 10 years of Credited Service; applicable to all participants.

      ii. 2% of total earnings received during period of Credited Service plus 22.5% of the first $1,200 of such amount; applicable only to participants who were employees on or prior to March 24, 1967.

   b. *Early Retirement:* Same as 7(a) above, based upon Final Average Earnings and Credited Service as of the early retirement date and reduced by the percentage described in 8 below depending upon Credited Service as of the early retirement date.

   c. *Late Retirement:* Same as Normal Retirement Benefit based on Final Average Compensation and Credited Service as of Late Retirement Date.

   d. *Disability Retirement:* Same as Normal Retirement Benefit, based on Final Average Compensation and Credited Service as of date of disability.

8. *Benefits Upon Termination of Employment - Vesting:* All participants who terminate after having completed at least 5 years of Credited Service are entitled to a benefit as described in 7(a) above, based upon Final Average Compensation and Credited Service as of the date of termination.

   *Early Commencement of Payments:* A former participant who is entitled to a deferred benefit may elect to have his benefit commence on the first day of any month between his 55th and 65th birthdays. Such benefit will be reduced by 3% for each of the first 5 years and 5% for each of the next 5 years by which commencement of payments precedes age 65. If the participant has completed 25 years of Credited Service, his benefit will be unreduced for the first 3 years and reduced by 3% for each of the next 2 years and by 5% for the following 5 years by which commencement of payments precedes age 65.

If a participant has completed 30 or more years of credited service, payments are not reduced.

# P. Summary of the Principal Plan Provisions (cont.)

9. *Death Benefits*

   a. *Before Retirement:* Spouses of deceased active participants or of former 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 years or who have completed at least 15 years of Credited Service regardless of age.

      The benefit payable is an amount for the spouse's remaining lifetime equal to the amount the beneficiary of the participant would have received had the participant retired due to disability on the day preceding his death and elected the 100% Contingent Annuitant Option.

   b. *After Retirement:* None except as provided by election of an optional form.

10. *Normal Form of Benefits:* Life annuity

11. *Optional Benefit Forms:* 100%, 75%, or 50% Contingent Annuitant option, 75% or 50% Joint and Last Survivor option. Optional benefit forms are calculated to be actuarial equivalent to the normal form of benefits based on a 7.00% interest rate and the Pri-2012 base mortality table projected using scale MP-2020.

# About Aon

Aon plc (NYSE:AON) is a leading global professional services firm providing a broad range of risk, retirement, and health solutions. Our 50,000 colleagues in 120 countries empower results for clients by using proprietary data and analytics to deliver insights that reduce volatility and improve performance.