Sheet Metal Workers' National Pension Fund

Actuarial Valuation and Review as of January 1, 2024

Segal

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October 22, 2024

Board of Trustees
Sheet Metal Workers' National Pension Fund
3180 Fairview Park Drive, Suite 400
Falls Church, Virginia 22042

Dear Trustees:

We are pleased to submit the Actuarial Valuation and Review as of January 1, 2024. It establishes the funding requirements for the current year and analyzes the preceding year's experience. It also summarizes the actuarial data and includes the actuarial information that is required to be filed with Form 5500 to federal government agencies.

The actuarial valuation results are dependent on a single set of assumptions; however, there is a risk that emerging results may differ significantly as actual experience proves to be different from the current assumptions. A detailed analysis of the potential range of the impact of risk relative to the Plan's future financial condition is discussed in a separate report.

This report has been prepared for the exclusive use and benefit of the Board, based upon information provided by the Fund Office and the Fund's other service providers. Segal makes no representation or warranty as to the future status of the Plan and does not guarantee any particular result. This document does not constitute legal, tax, accounting or investment advice or create or imply a fiduciary relationship. The Trustees are encouraged to discuss any issues raised in this report with the Fund's legal, tax and other advisors before taking, or refraining from taking, any action. The actuarial calculations were completed under the supervision of William J. Gitterman, FSA, MAAA, Enrolled Actuary.

We look forward to reviewing this report with you at your next meeting and to answering any questions you may have.

Sincerely,

Segal

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Senior Vice President & Benefits Consultant	Consulting Actuary

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Introduction

There are several ways of evaluating funding adequacy for a pension plan. In monitoring the Plan's financial position, the Trustees should keep in mind all of these concepts.

Concept	Description
Funding Standard Account	The ERISA Funding Standard Account (FSA) measures the cumulative difference between actual contributions and the minimum required contributions. If actual contributions exceed the minimum required contributions, the excess is called the credit balance. If actual contributions fall short of the minimum required contributions, a funding deficiency occurs.
Zone Information	The Pension Protection Act of 2006 (PPA) called on plan sponsors to actively monitor the projected FSA credit balance, the funded percentage (the ratio of the actuarial value of assets to the present value of benefits earned to date) and cash flow sufficiency. Based on these measures, plans are then categorized as critical (Red Zone), endangered (Yellow Zone), or neither (Green Zone). The Multiemployer Pension Reform Act of 2014 (MPRA), among other things, made the zone provisions permanent.
Solvency Projections	Pension plan funding anticipates that, over the long term, both contributions and investment earnings will be needed to cover benefit payments and expenses. To the extent that contributions are less than benefit payments, investment earnings and fund assets will be needed to cover the shortfall. In some situations, a plan may be faced with insufficient assets to cover its current obligations and may need assistance from the Pension Benefit Guaranty Corporation (PBGC). MPRA and the Special Financial Assistance (SFA) program under the American Rescue Plan Act of 2021 (ARPA) provide options for some plans facing insolvency.
Scheduled Cost	The Scheduled Cost is an annual amount based on benefit levels and assets that allows a comparison to current contribution levels, given the expectation of a continuing plan. Scheduled Cost represents a reasonable Actuarially Determined Contribution (ADC), as defined in the Actuarial Standards of Practice.
Withdrawal Liability	ERISA provides for assessment of withdrawal liability to employers who withdraw from a multiemployer plan based on unfunded vested benefit liabilities. A separate report is available.

Important information about actuarial valuations

An actuarial valuation is a budgeting tool with respect to the financing of future uncertain obligations of a pension plan. As such, it will never forecast the precise future contribution requirements or the precise future stream of benefit payments. However, the valuation does provide the actuary's best estimate of plan liabilities based on current assumptions, participant population, and plan provisions. Since future experience will not exactly match expectations, the actual cost of the plan will be determined by the benefits and expenses paid, not by the actuarial valuation. In order to prepare a valuation, Segal relies on a number of input items. These include:

Item	Description
Plan Provisions	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important for the Trustees to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Participant Information	An actuarial valuation for a plan is based on data provided to the actuary by the plan. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. For most plans, it is not possible nor desirable to take a snapshot of the actual workforce on the valuation date. It is not necessary to have perfect data for an actuarial valuation. The uncertainties in other factors are such that even perfect data does not produce a "perfect" result. Notwithstanding the above, it is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Financial Information	Part of the cost of a plan will be paid from existing assets — the balance will need to come from future contributions and investment income. The valuation is based on the asset values as of the valuation date, typically reported by the auditor. A snapshot as of a single date may not be an appropriate value for determining a single year's contribution requirement, especially in volatile markets. Plan sponsors often use an "actuarial value of assets" that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
Actuarial Assumptions	In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of participants in each year, as well as forecasts of the plan's benefits for each of those events. The present value is determined by applying a discount rate to the forecasted benefits. All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions the actuary selects within that range. That is, there is no right answer (except with hindsight). It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model may use approximations and estimates that will have an immaterial impact on our results. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.

Introduction

Given the above, the user of Segal's actuarial valuation (or other actuarial calculations) needs to keep the following in mind:

- The actuarial valuation is prepared for use by the Trustees. It includes information for compliance with federal filing requirements and for the Plan's auditor. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement at a specific date — it is not a prediction of a plan's future financial condition. Accordingly, Segal did not perform an analysis of the potential range of financial measurements, except where otherwise noted.
- Critical events for a plan include, but are not limited to, decisions about changes in benefits and contributions. The basis for such decisions needs to consider many factors such as the risk of changes in employment levels and investment losses, not just the current valuation results.
- ERISA requires a plan's enrolled actuary to provide a statement in the plan's annual report disclosing any event or trend that the actuary has not taken into account, if, to the best of the actuary's knowledge, such an event or trend may require a material increase in plan costs or required contribution rates. If the Trustees are aware of any event that was not considered in this valuation and that may materially increase the cost of the Plan, they must advise Segal, so that an appropriate statement can be included.
- Segal does not provide investment, legal, accounting, or tax advice and is not acting as a fiduciary to the Plan. This valuation is based on Segal's understanding of applicable guidance in these areas and of the Plan's provisions, but they may be subject to alternative interpretations. The Trustees should look to their other advisors for expertise in these areas.
- While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.
- Segal's report shall be deemed to be final and accepted by the Trustees upon delivery and review. Trustees should notify Segal immediately of any questions or concerns about the final content.

Section 1: Trustee Summary

Summary of key valuation results

Valuation Result	Prior	Current
Plan Year Beginning	January 1, 2023	January 1, 2024
Certified Zone Status	"Green"	"Green"
VBAR	1.25%	0.50%
Demographic Data:		
• Number of active participants	61,272	63,530
• Number of inactive participants with vested rights	35,095	34,830
• Number of retired participants and beneficiaries	50,091	50,608
• Total number of participants	146,458	148,968
• Participant ratio: non-active to actives	1.39	1.34
Assets for valuation purposes:		
• Market value of assets (MVA)[1]	$6,576,005,315	$7,521,585,807
• Actuarial value of assets (AVA)	7,248,889,930	7,798,704,066
• Market value net investment return, prior year	-11.43%	13.77%
• Actuarial value net investment return, prior year	5.66%	7.05%
• AVA as a percent of MVA	110.2%	103.7%
Cash Flow:		
• Plan Year	**Actual 2023**	**Projected 2024[2]**
• Contributions, withdrawal liability payments, and other income	$629,591,569	$488,241,000
• Benefit payments	-576,004,193	-609,547,800
• Administrative expenses	-16,277,387	-16,500,000
• Net cash flow	$37,309,989	-$137,806,800
• Cash flow as a percentage of MVA	0.6%	-1.8%

[1] Excludes net receivable withdrawal liability payments
[2] Based on 90.0 million hours worked

Summary of key valuation results

Valuation Result	Prior	Current
Plan Year Beginning	January 1, 2023	January 1, 2024
Actuarial Liabilities based on Unit Credit:		
• Valuation interest rate	7.25%	7.25%
• Normal cost, including administrative expenses	$240,352,879	$108,960,364
• Actuarial accrued liability	8,824,196,100	9,109,283,572
• Unfunded actuarial accrued liability (using AVA)	1,575,306,170	1,310,579,506
Funded Percentages:		
• Actuarial accrued liabilities under unit credit method	$8,824,196,100	$9,109,283,572
• MVA funded percentage (using MVA)	74.5%	82.6%
• AVA funded percentage (PPA basis) (using AVA)	82.1%	85.6%
Statutory Funding Information:		
• Credit balance at the end of prior Plan Year [1]	$1,109,616,023	$1,262,673,582
• Minimum required contribution[2]	0	0
• Maximum deductible contribution	17,702,727,488	14,237,833,086
Scheduled Cost:		
• Interest rate	7.25%	7.25%
• Projected contributions amount[3]	$605,382,078	$624,729,739
• Projected contributions per hour	5.59	5.57
• Scheduled Cost amount	386,814,131	365,546,139
• Scheduled Cost per hour	3.57	3.26
• Margin amount	218,567,947	259,183,600
• Margin per hour	2.02	2.31

[1] Recognizes the five-year amortization extension for 2023
[2] Amount required to maintain a $0 credit balance
[3] Based on 1,766 hours per active (1,750 for construction employees and 2,000 for production employees)

Section 1: Trustee Summary

This January 1, 2024 actuarial valuation report is based on financial and demographic information as of that date. The Plan's actuarial status does not reflect short-term fluctuations of the financial markets or employment levels, but rather is based on the market value of assets on the last day of the preceding Plan Year. Future changes in economic conditions are uncertain, and Segal is available to prepare projections of potential outcomes upon request.

This report includes additional disclosures now required by the Actuarial Standards of Practice.

Developments since last valuation

The following are developments since the last valuation, from January 1, 2023 to January 1, 2024.

- **Participant demographics:** The number of active participants increased 3.7% from 61,272 to 63,530. The ratio of non-active to active participants, which is one measure of plan maturity, decreased from 1.39 to 1.34. The total hours of contributions increased by 5.8%, from 109.1 million to 115.5 million.

  Based on the census data used for this valuation (as of December 31, 2023), 68.1% of active participants were covered under the First Alternative Option (34.8% covered under 55/30 contracts), 27.5% were covered under the Default Option, 0.3% were covered under the benefit structure applicable to groups that did not continue bargaining increases under the Alternative Options and 4.1% were covered under the Second Alternative Option (0.3% covered under 60/30 contracts).

- **Assets returns:** The net investment return on the market value of assets was 13.77%. For comparison, the assumed rate of return on plan assets over the long term is 7.25%. The net investment return on the actuarial value of assets, which reflects smoothing of prior year gains and losses, was 7.05%. The calculation of the actuarial value of assets for the current Plan Year can be found in Section 2 and the change in the market value of assets over the last two Plan Years can be found in Section 3.

- **Cash flows:** Cash inflow includes contributions and withdrawal liability payments, and cash outflow includes benefits paid to participants and administrative expenses. In the Plan Year ending December 31, 2023, the Plan had a net cash inflow of $37.3 million, or about 0.6% of assets on a market value basis, and outflow is expected to be 1.8% for the current year based on 90 million hours of contributions.

- **Assumption changes:** Since the last valuation, the mortality assumption tables were updated from RP-2006 Blue Collar Mortality tables projected with mortality improvement scale MP-2018 to Pri-2012 Blue Collar tables with mortality improvement scale MP-2021, and administrative expenses were increased from $15.5 million to $16.5 million. We selected the new assumptions based on a review of recent plan experience, and they represent our best estimate of anticipated experience under the Plan. In total, the new mortality assumptions increased the actuarial accrued liability by 0.2% and the normal cost by 1.0%.

Section 1: Trustee Summary

- **Plan provisions:**
  - The 5-year amortization extension under IRC Section 431(d)(1) no longer applies effective for the Plan Year ending December 31, 2024.
  - Pre-retirement death benefits, effective January 1, 2024 including deaths occurring in the prior year:
    - Non-married participants: 36 monthly payments payable as a lump sum with a $5,000 minimum for those with 435 hours worked in the two years prior to death.
    - Married participants: For participants with 2,000 or more hours in the last five years prior to death, 75% pre-retirement spousal death benefit payable immediately upon death and recognizing early retirement subsidies as if the participant had obtained age 55. For all others, 50% pre-retirement spousal death benefit, payable at participant's earliest retirement eligibility age.
  - Variable Benefit Accrual Rate (VBAR) formula revised for prospective benefit accruals effective January 1, 2024:

3-Year Average of Market Value Investment Return (Old Formula)	Applicable Percentage of Contributions (Old Formula)	3-Year Average of Market Value Investment Return (New Formula)	Applicable Percentage of Contributions (New Formula)
10.0% or higher	1.25%	**9.5%** or higher	1.25%
8.5% or higher but less than **10.0%**	1.00%	**8.0%** or higher but less than **9.5%**	1.00%
6.5% or higher but less than **8.5%**	0.75%	**6.0%** or higher but less than **8.0%**	0.75%
Higher than **0%** but less than **6.5%**	0.50%	Less than **6.0%**	0.50%
0% or less	0.00%	---	

Based on the 3-year average market value investment return of 4.79% for the Plan Years ended December 31, 2020 - 2022, the Applicable Percentage under the VBAR formula is 0.50% for the 2024 Plan Year. Based on the 3-year average market value investment return of 5.51% for the Plan Years ended December 31, 2021 - 2023, the Applicable Percentage under the VBAR formula will be 0.50% for the 2025 Plan Year.

These changes increased the actuarial accrued liability of 0.3% and the normal cost by 1.1%. A summary of key plan provisions can be found in Section 3.

- **Contribution rates:** As a result of collective bargaining and the distribution of active participants, the average contribution rate for the Plan decreased from $5.46 per hour to $5.42 per hour. Recognizing a 2% increase in contribution rates for employers participating in the First Alternative Option and a 1% increase in contribution rates for employers participating in the Second Alternative Option during 2025 and 2026, the ultimate average hourly contribution rate is assumed to be $5.57.

Actuarial valuation results

The following commentary applies to various funding measures for the current Plan Year.

- **Zone status:** The Plan was certified to be neither in endangered status nor in critical status under the Pension Protection Act of 2006 (PPA) for the current Plan Year, in other words, the Plan is in the Green Zone. This certification result is due to the fact that the Plan's funded percentage for the current Plan Year was at least 80%, and the Plan had no projected deficiency in its funding standard account for the current or next nine Plan Years. Please refer to the actuarial certification dated March 21, 2024 for more information.
- **Funded percentages:** During the last Plan Year, the funded percentage that will be reported on the Plan's annual funding notice increased from 82.1% to 85.6%. The primary reason for the change in funded percentage was that the investment return on plan assets exceeded the actuarial assumed rate of return, partially offset by the increase in plan liabilities, due in part to a change in actuarial assumptions and plan provisions. Please note that there are different measurements of funded percentage for different purposes. More information can be found in Section 2.
- **Funding Standard Account:** The 5-year amortization extensions under Internal Revenue Code Section 431(d)(1) no longer applies effective for the Plan Year ending December 31, 2024 due to the adoption of the benefit improvements in 2024. During the last Plan Year, the credit balance increased from $1.1 billion to $1.3 billion. The increase in the credit balance was due to the fact that contributions exceeded the net charges in the FSA for the Plan Year. For the current Plan Year, the minimum required contribution is $0, compared with $488.2 million in expected contributions.
- **Scheduled Cost:** Scheduled Cost for the plan year is the sum of normal cost (the cost of benefit accruals plus administrative expenses) and an amortization of the unfunded liability. For the current Plan Year, there is a $259.2 million margin between expected contributions and Scheduled Cost, or about $2.31 per hour. Because there is a positive margin, the actuarial accrued liability is on pace to being fully funded faster than the amortization period, which is currently ten years.

Projections and risk

- **Importance of projections:** Most of the results included in this valuation report are snapshot measurements, showing the Plan's status as of the valuation date. In addition to understanding the Plan's current status, it is also important to understand where the Plan is headed through actuarial projections. Projections may evaluate various metrics, such as funded percentage, Funding Standard Account, zone status, cash flows and solvency.

  Baseline projections: Based on the actuarial assumptions included in this report, including an investment return assumption of 7.25% per year and level future covered employment of 90.0 million hours, a 15-year projection indicates that Funding Standard Account credit balance will remain positive throughout the projection period. The projections also reflect the Applicable Percentage under the VBAR formula of 0.50% in 2024, 0.50% in 2025 and the average expected long-term Applicable Percentage of 0.86% for 2026 and later. The average expected long-term Applicable Percentage was developed based on stochastic projections as described in Section 3, Exhibit L.

- **Understanding risk:** Projections can also help the Trustees understand the sensitivity of future results to various risk factors, such as investment volatility or changes in future contributions. For example, if future investment returns are less than the actuarial assumption, or future contributions are less than projected, the Plan may not meet its funding objectives or may face eventual insolvency. See Section 2 for a general discussion on the risks facing the Plan, and how they might be better evaluated, understood and addressed.

  A detailed analysis of the potential range of future measurements, based on a range of possible investment returns, is provided in a separate report, Updated Funding Projections and Sensitivity to Investment Risk. This report provides the Trustees with a better understanding of the risks inherent in the Plan. This assessment includes scenario testing, sensitivity testing, stress testing and stochastic modeling. A detailed risk assessment is important for your Plan because:

  – The outlook for financial markets and future industry activity is uncertain in the near future.

  – The Plan may re-enter endangered status in the near future.

  – The Plan's asset allocation has potential for a significant amount of investment return volatility.

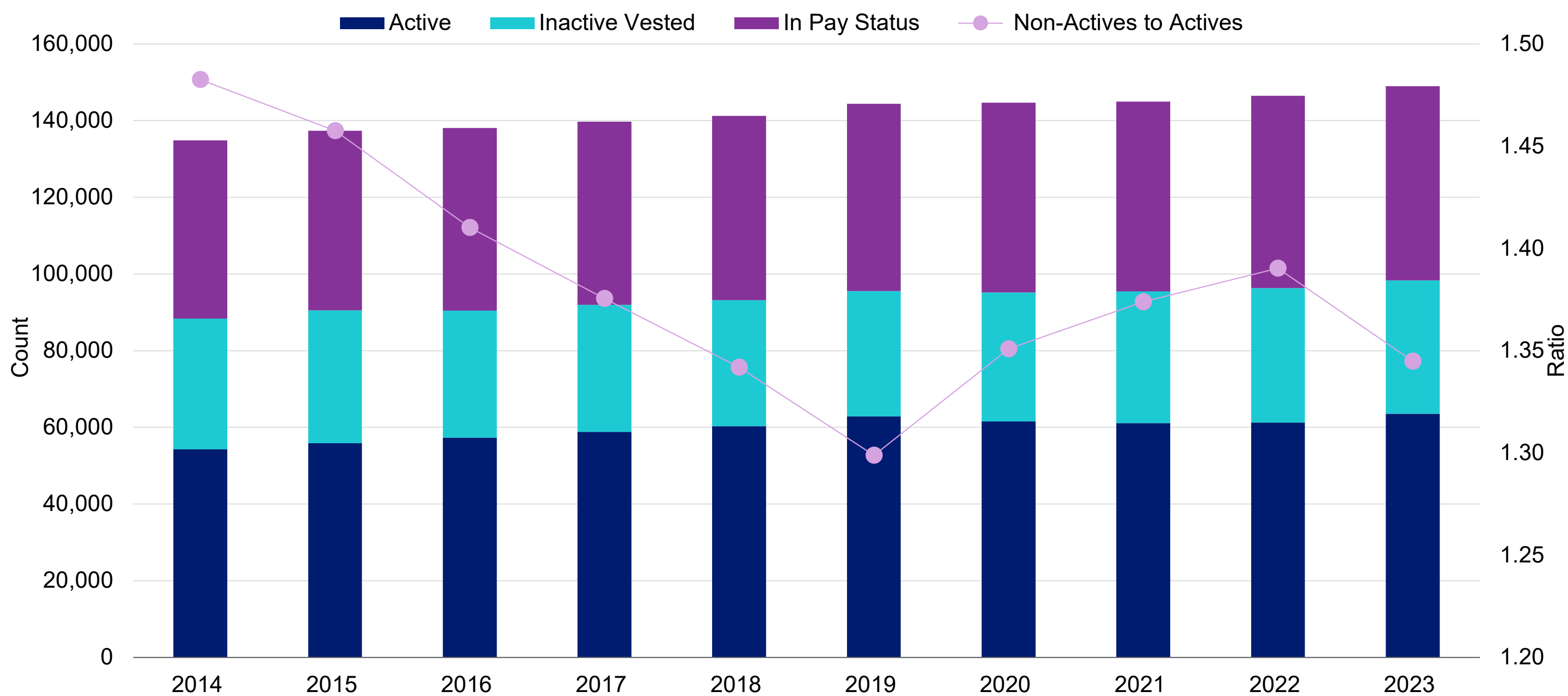
  – Potential changes in the covered population may result in participant choices that vary from those assumed.

Section 2: Actuarial Valuation Results

Participant information

- The ratio of non-active to active participants, which is one measure of plan maturity, decreased from 1.39 to 1.34.

Population as of December 31



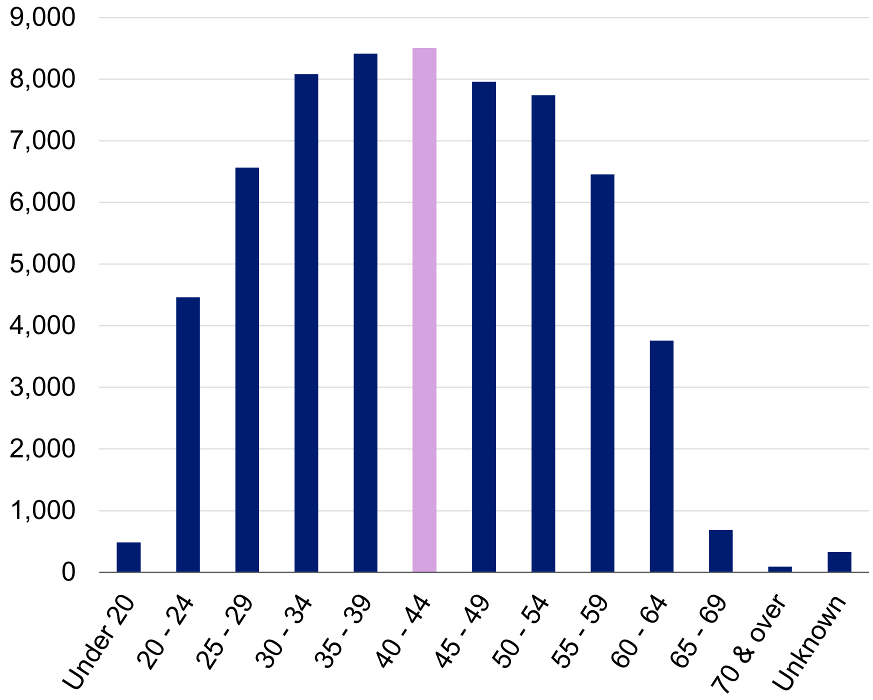
Legend	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
In Pay Status	46,501	46,876	47,652	47,843	48,067	48,834	49,524	49,475	50,091	50,608
Inactive Vested	34,033	34,596	33,149	33,089	32,850	32,750	33,641	34,425	35,095	34,830
Active	54,319	55,897	57,295	58,840	60,304	62,816	61,565	61,068	61,272	63,530
Ratio	1.48	1.46	1.41	1.38	1.34	1.30	1.35	1.37	1.39	1.34

Active participants

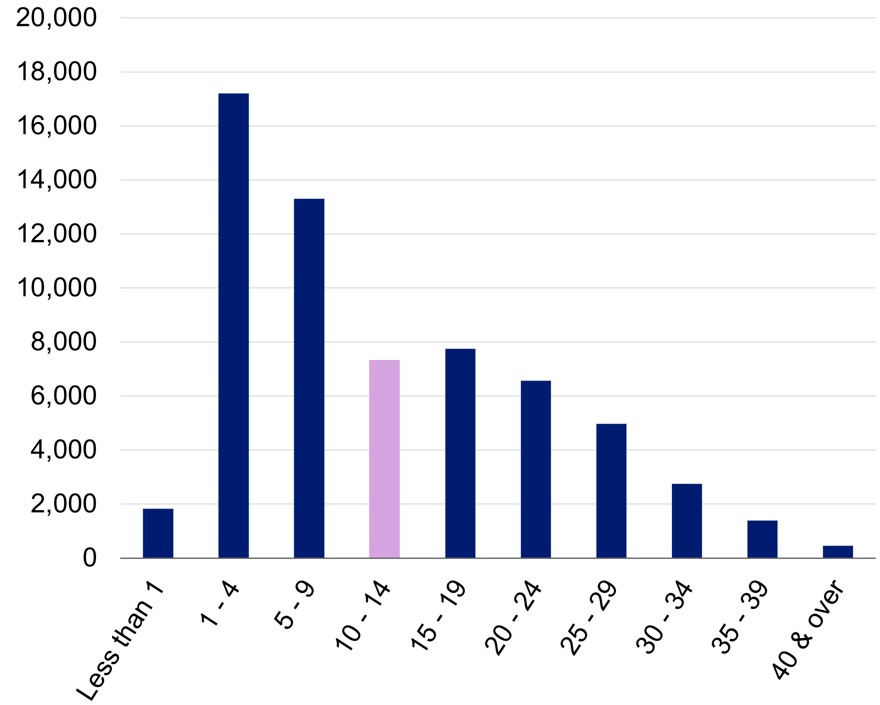
As of December 31,	2022	2023	Change
Active participants	61,272	63,530	3.7%
Average age	42.5	42.2	-0.3
Average pension credits	13.1	12.7	-0.4

Distribution of Active Participants as of December 31, 2023

by Age



By Pension Credits



Actives by Option

- Shown below is a distribution of active participants by Option.

Category	2022	2023	Change from Prior Year
First Alternative Schedule with 55/30:			
• Number	21,185	22,134	4.5%
• Percentage of total active population	34.58%	34.84%	N/A
• Average contribution rate as of the valuation date	$10.17	$10.10	-0.7%
First Alternative Schedule without 55/30:			
• Number	20,683	21,194	2.5%
• Percentage of total active population	33.76%	33.36%	N/A
• Average contribution rate as of the valuation date	$3.99	$3.91	-2.0%
Default Schedule:			
• Number	16,748	17,457	4.2%
• Percentage of total active population	27.33%	27.48%	N/A
• Average contribution rate as of the valuation date	$1.77	$1.76	-0.6%
No contribution increases but previously covered under an Alternative Schedule:			
• Number	169	170	0.6%
• Percentage of total active population	0.28%	0.27%	N/A
• Average contribution rate as of the valuation date	$0.81	$0.83	2.5%
Second Alternative Schedule without 60/30:			
• Number	2,338	2,410	3.1%
• Percentage of total active population	3.82%	3.79%	N/A
• Average contribution rate as of the valuation date	$3.12	$3.18	1.9%
Second Alternative Schedule with 60/30:			
• Number	149	165	10.7%
• Percentage of total active population	0.24%	0.26%	N/A
• Average contribution rate as of the valuation date	$9.86	$9.73	-1.3%
Total participants	**61,272**	**63,530**	**3.7%**
• Average contribution rate as of the valuation date	**$5.46**	**$5.42**	**-0.7%**

Comparison of active participants by local

Local	Number of Members as of 12/31/2022	Average Age as of 12/31/2022	Average Service as of 12/31/2022	2022 Average Hours	Average Rate as of 12/31/2022[1]	Number of Members as of 12/31/2023	Average Age as of 12/31/2023	Average Service as of 12/31/2023	2023 Average Hours	Average Rate as of 12/31/2023[1]
001	407	43.65	13.63	1,713.18	$8.32	413	43.84	13.58	1,701.48	$8.33
002	1,125	43.39	15.39	1,683.34	13.57	1,192	42.73	14.61	1,745.12	13.39
003	566	41.33	11.64	1,849.56	6.52	586	40.83	11.35	1,796.76	6.47
004	188	44.44	15.48	1,873.98	0.47	294	42.09	10.16	1,885.16	0.45
005	734	40.68	7.97	1,760.00	5.37	738	40.62	8.28	1,789.86	5.61
007	1,119	40.60	13.28	1,770.98	1.76	1,228	40.60	12.87	1,887.14	1.73
009	875	41.92	12.05	1,730.36	0.57	922	41.06	11.37	1,761.97	0.64
010	2,822	42.20	14.00	1,676.17	5.18	2,800	42.36	14.12	1,703.10	5.19
012	1,140	40.35	12.66	1,733.85	8.75	1,132	40.08	12.80	1,709.28	8.70
015	483	47.83	10.58	1,891.98	2.77	488	47.97	10.29	1,794.38	2.91
016	1,705	41.69	11.12	1,732.58	2.29	1,741	41.69	10.94	1,720.94	2.32
017	1,726	42.33	13.22	1,779.26	12.35	1,805	41.70	12.84	1,780.35	12.18
018	2,749	41.57	14.51	1,812.03	10.67	2,888	41.08	14.10	1,856.20	10.73
019	209	46.07	14.67	1,727.39	4.32	235	46.34	14.03	1,836.48	4.24
020	2,559	42.30	13.67	1,774.16	6.21	2,725	41.72	13.09	1,810.94	6.08
022	1	62.17	2.67	1,956.00	7.37	2	50.97	2.33	1,685.75	10.99
023	183	43.60	12.47	1,639.17	1.80	198	42.85	12.08	1,706.11	1.76
024	1,356	42.47	13.44	1,812.10	4.87	1,396	42.31	13.00	1,804.56	4.93
025	438	46.07	16.77	1,658.45	13.40	419	46.19	16.70	1,712.67	13.53
026	265	41.53	11.83	1,669.63	3.50	263	40.65	11.93	1,698.14	3.65
027	404	44.95	15.59	1,608.89	12.73	442	44.12	14.95	1,764.93	12.59
028	2,224	43.33	13.39	1,587.44	15.11	2,106	43.09	13.17	1,597.90	14.52

[1] Does not reflect contribution rate increases scheduled to occur during subsequent Plan years

Section 2: Actuarial Valuation Results

Local	Number of Members as of 12/31/2022	Average Age as of 12/31/2022	Average Service as of 12/31/2022	2022 Average Hours	Average Rate as of 12/31/2022[1]	Number of Members as of 12/31/2023	Average Age as of 12/31/2023	Average Service as of 12/31/2023	2023 Average Hours	Average Rate as of 12/31/2023[1]
029	176	38.97	14.10	1,842.96	$5.96	179	38.72	13.85	1,884.06	$6.08
032	317	47.38	12.11	1,735.91	3.18	365	47.68	10.55	1,738.85	3.17
033	2,299	42.12	13.82	1,791.52	6.81	2,345	41.87	13.67	1,765.99	6.90
036	1,824	43.47	14.76	1,736.96	2.87	1,967	42.55	13.84	1,801.68	2.92
038	455	43.69	14.59	1,675.46	12.72	466	42.68	13.98	1,651.68	12.68
040	307	47.19	17.36	1,660.08	0.86	321	46.03	16.93	1,651.01	0.84
044	211	44.26	14.69	1,686.97	1.02	196	43.54	14.12	1,691.73	1.01
045	160	34.09	6.00	1,733.18	6.68	194	33.54	6.30	1,796.64	6.92
046	349	40.54	13.37	1,765.06	3.41	357	40.19	13.14	1,811.52	3.46
048	216	42.65	13.47	1,918.93	8.70	226	42.25	12.89	1,927.44	8.30
049	622	41.43	9.60	1,776.12	7.04	757	40.50	8.51	1,835.43	6.90
054	491	44.75	14.05	1,859.95	7.07	552	44.26	12.68	1,897.51	7.14
055	1,238	40.59	10.57	1,741.50	1.37	1,317	40.19	10.05	1,765.66	1.38
058	182	43.22	10.76	1,654.61	8.86	177	44.08	11.27	1,589.12	8.81
063	412	43.32	12.10	1,644.13	8.11	425	43.30	11.97	1,647.02	8.29
066	2,541	43.26	12.88	1,601.76	3.53	2,519	43.17	12.88	1,630.76	3.52
067	871	41.59	11.72	1,820.75	8.98	970	41.39	10.69	1,921.09	9.11
068	381	43.94	12.55	1,832.03	6.06	385	43.42	12.32	1,865.24	5.96
071	311	42.11	14.21	1,716.81	7.68	314	41.82	14.04	1,777.36	7.75
073	1,874	45.73	16.42	1,744.37	5.49	1,885	45.50	15.99	1,809.48	5.49
080	82	35.54	4.32	1,409.26	9.35	91	34.19	4.14	1,317.78	9.23
083	259	44.11	15.27	1,697.70	12.23	232	45.68	16.52	1,695.38	12.37
085	1,030	40.67	11.86	1,801.14	1.45	1,022	40.91	12.27	1,864.25	1.36
088	727	44.05	12.33	1,802.84	3.10	770	43.46	11.97	1,803.47	3.08

Local	Number of Members as of 12/31/2022	Average Age as of 12/31/2022	Average Service as of 12/31/2022	2022 Average Hours	Average Rate as of 12/31/2022[1]	Number of Members as of 12/31/2023	Average Age as of 12/31/2023	Average Service as of 12/31/2023	2023 Average Hours	Average Rate as of 12/31/2023[1]
091	1,037	41.33	14.06	1,752.59	$6.58	1,053	41.30	14.03	1,774.26	$6.51
100	373	43.55	12.48	1,682.15	8.32	313	44.45	12.95	1,593.31	8.47
103	364	40.69	10.87	1,694.92	1.35	399	39.63	9.91	1,733.89	1.35
104	4,851	42.29	12.83	1,564.84	1.95	4,786	42.26	12.94	1,582.55	1.99
105	3,644	41.54	11.81	1,667.36	3.63	3,658	41.92	12.11	1,699.06	3.71
110	532	42.14	12.81	1,854.48	10.46	735	40.77	9.94	1,856.76	10.69
112	265	40.73	12.55	1,751.20	2.55	282	39.42	11.84	1,764.65	2.50
124	286	43.12	14.49	1,727.72	1.95	306	42.22	13.50	1,791.94	2.01
137	241	46.26	15.82	1,763.27	11.93	243	46.14	15.57	1,736.35	12.06
170	701	46.54	12.15	2,068.02	1.80	743	46.53	11.41	1,990.30	1.81
177	598	40.14	9.58	1,794.50	1.17	606	40.21	9.45	1,905.54	1.33
206	575	42.64	10.69	1,673.21	5.56	636	42.16	10.08	1,775.83	5.48
214	416	43.66	15.29	1,863.09	3.35	410	43.47	15.20	1,897.51	3.39
218	313	41.71	14.20	1,660.58	3.90	312	41.10	13.53	1,742.94	3.91
219	393	41.45	12.42	1,723.67	7.08	422	40.82	11.83	1,795.26	7.06
256	42	45.29	10.51	1,851.08	1.45	46	44.87	9.52	1,904.41	1.50
263	348	39.79	13.57	1,867.29	7.16	378	39.16	12.93	1,861.58	7.22
265	1,221	45.00	16.74	1,676.58	1.13	1,266	44.93	16.40	1,706.91	1.01
268	354	43.31	16.36	1,756.24	5.71	364	42.63	15.39	1,761.00	5.68
270	202	43.58	12.17	1,709.78	6.42	227	43.97	11.94	1,796.18	6.24
292	455	43.17	12.25	1,878.36	1.19	541	42.35	10.93	2,035.04	1.07
293	6	35.32	4.78	1,838.13	2.85	7	38.19	5.02	1,453.36	2.90
312	1,098	40.30	11.98	1,806.78	0.37	1,101	40.56	12.16	1,806.40	0.35
359	688	42.67	11.11	1,828.98	2.85	949	41.56	9.44	1,953.29	2.87

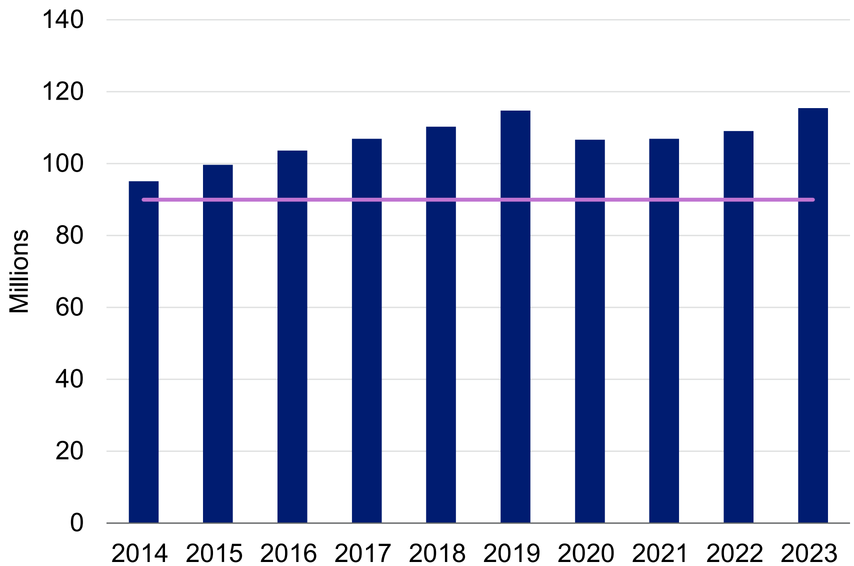
Section 2: Actuarial Valuation Results

Local	Number of Members as of 12/31/2022	Average Age as of 12/31/2022	Average Service as of 12/31/2022	2022 Average Hours	Average Rate as of 12/31/2022[1]	Number of Members as of 12/31/2023	Average Age as of 12/31/2023	Average Service as of 12/31/2023	2023 Average Hours	Average Rate as of 12/31/2023[1]
399	239	44.36	11.18	1,870.06	$7.15	243	44.71	11.38	1,961.06	$7.06
435	276	40.16	10.16	1,643.83	6.56	228	41.33	11.76	1,779.93	7.11
441	199	42.33	12.08	1,753.73	6.57	210	42.55	11.38	1,812.63	6.47
450	113	47.38	12.92	2,368.20	2.15	118	46.47	11.82	2,311.82	2.15
464	103	53.33	20.98	1,770.79	0.82	103	53.39	19.61	1,864.55	0.83
480	533	44.77	11.91	1,999.71	2.60	599	43.72	10.10	1,999.40	2.57
555	164	43.16	8.93	1,879.62	0.80	166	44.42	8.71	1,818.60	0.80
565	2	52.50	6.21	1,956.00	7.37	2	53.48	7.21	1,956.00	7.37
997	27	45.21	6.86	1,776.31	7.36	33	44.88	6.32	1,825.78	7.37
Total	**61,272**	**42.55**	**13.09**	**1,731.18**	**$5.46**	**63,530**	**42.28**	**12.71**	**1,763.52**	**$5.42**

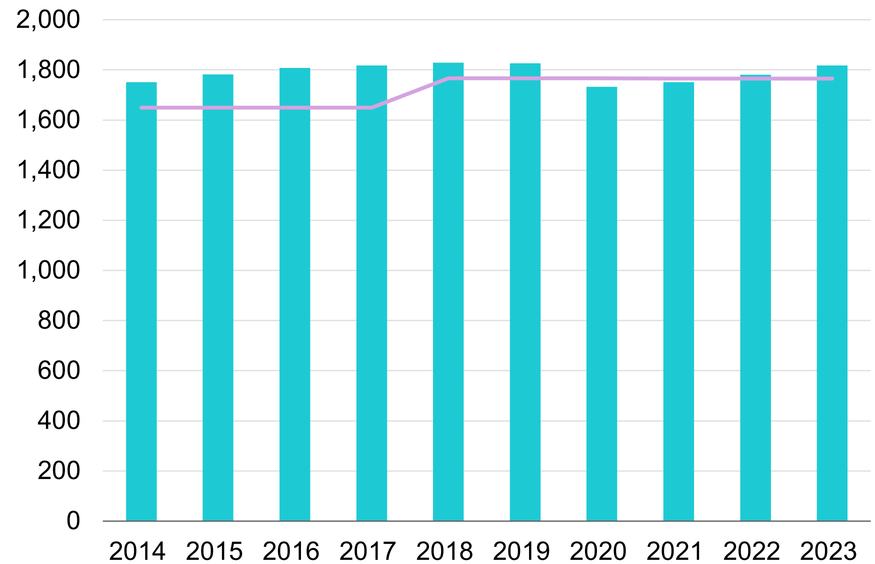
Historical employment

- The 2024 zone certification was based on an industry activity assumption of 90 million hours.
- The valuation is based on 63,530 actives and average assumed employment of 1,766 hours (1,750 for construction employees and 2,000 for production employees) for Scheduled Cost purposes.
- The total hours of contributions increased 5.8% from 109.1 million to 115.5 million during the past year.

Total Hours



Average Hours



Legend	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	5-year average	10-year average
Total Hours[1]	95.14	99.64	103.61	106.94	110.28	114.75	106.70	106.94	109.11	115.45	110.59	106.86
Average Hours	1,751	1,783	1,808	1,817	1,829	1,827	1,733	1,751	1,781	1,817	1,782	1,790

Note: The total hours of contributions are based on total hours reported in the census data. Lines in charts represent PPA assumption for industry activity following respective year.

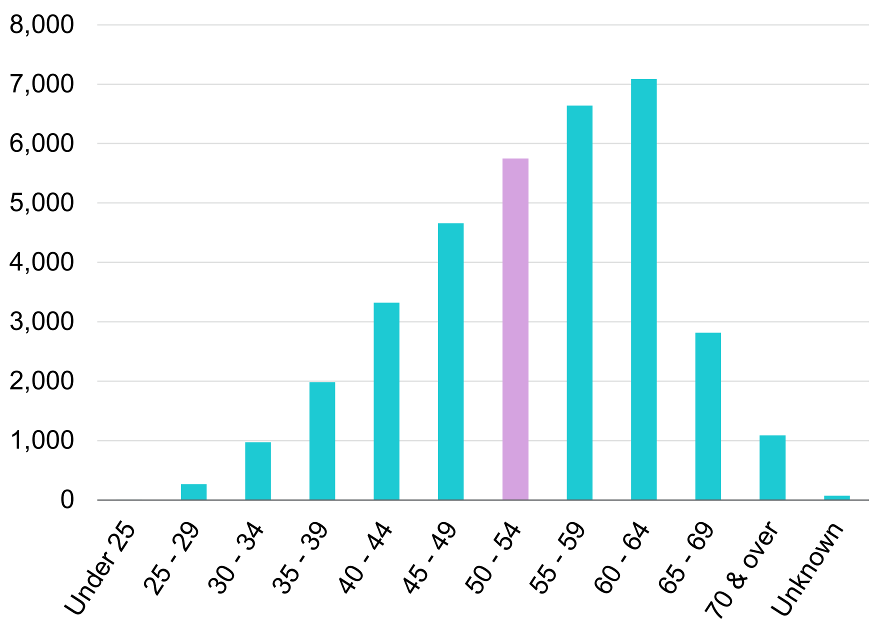
[1] In millions

Inactive vested participants

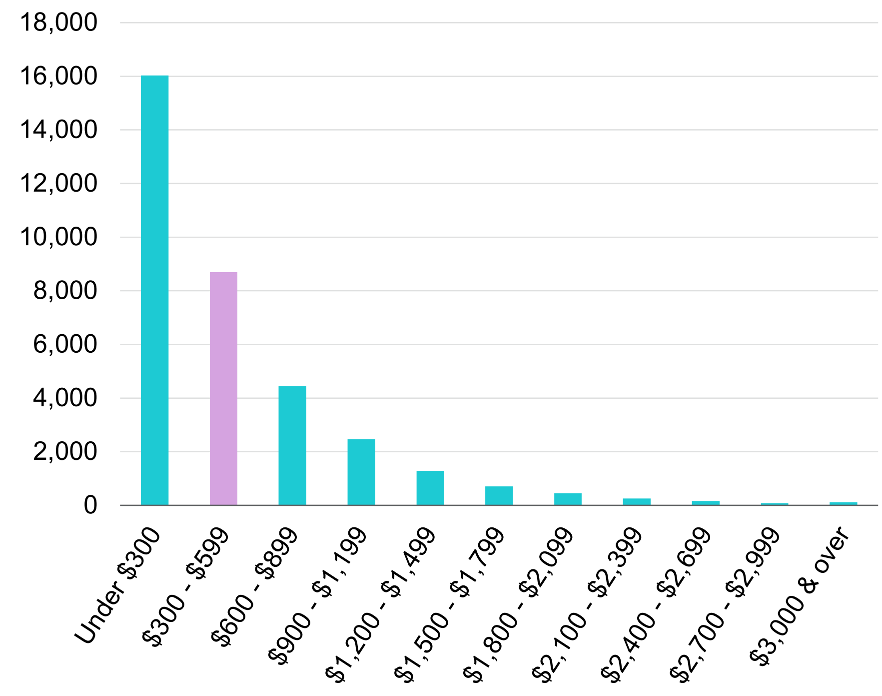
As of December 31,	2022	2023	Change
Inactive vested participants[1]	34,912	34,690	-0.6%
Average age	54.1	54.1	—
Average amount	$497	$496	-0.2%
Beneficiaries eligible for deferred benefits	183	140	-23.5%
Alternate payees eligible for deferred benefits	496	604	21.8%

Distribution of Inactive Vested Participants as of December 31, 2023

By Age



By Monthly Amount



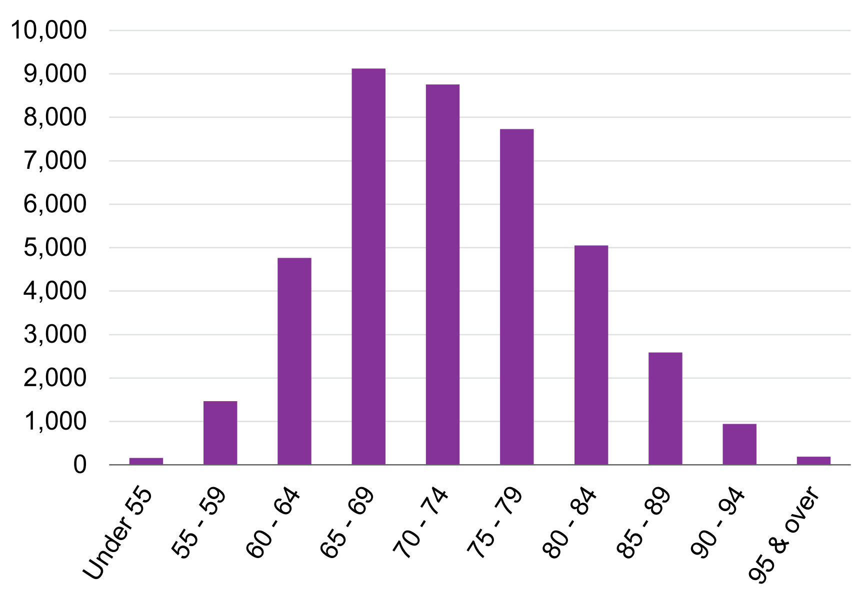
[1] A participant who is not currently active and has satisfied the requirements for, but has not yet commenced, a pension is considered an “inactive vested” participant.

Pay status information

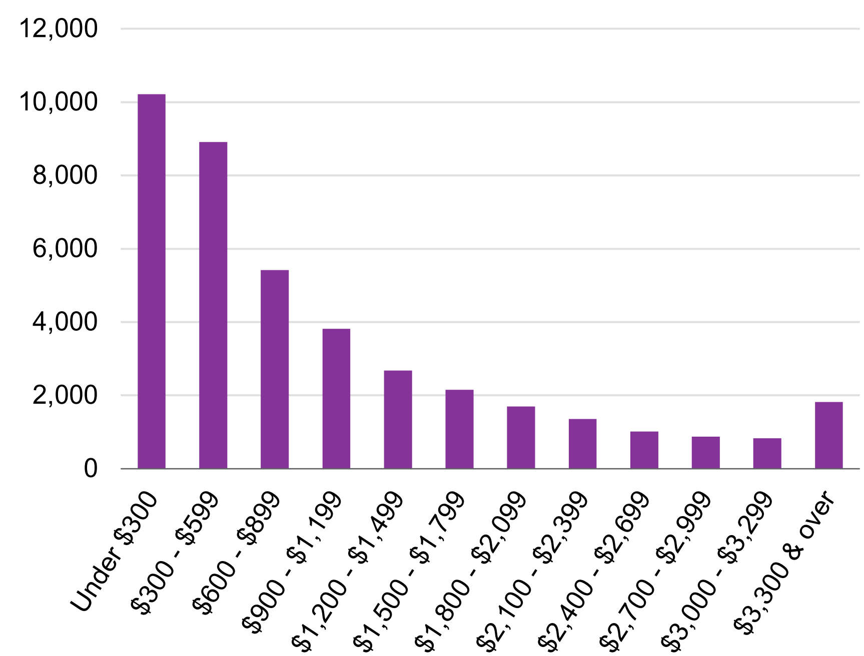
As of December 31,	2022	2023	Change
Pensioners	40,202	40,703	1.2%
Average age	73.2	73.3	0.1
Average amount	$1,033	$1,050	1.6%
Beneficiaries	9,778	9,835	0.6%
Total monthly amount	$46,433,201	$47,743,165	2.8%
Suspended pensioners	74	70	-5.4%
Suspended beneficiaries	37	0	-100.0%
Alternate payees in payment status	1,573	1,617	2.8%

Distribution of Pensioners as of December 31, 2023

By Age



By Monthly Amount



Progress of Pension Rolls

Year	Number in Pay Status	Average Age in Pay Status	Average Amount in Pay Status
2014	38,074	71.8	$888
2015	38,211	72.1	906
2016	38,952	72.2	919
2017	38,949	72.3	918
2018	39,019	72.6	954
2019	39,424	72.8	973
2020	39,898	72.9	990
2021	39,813	73.1	1,016
2022	40,202	73.2	1,033
2023	40,703	73.3	1,050

New Pension Awards

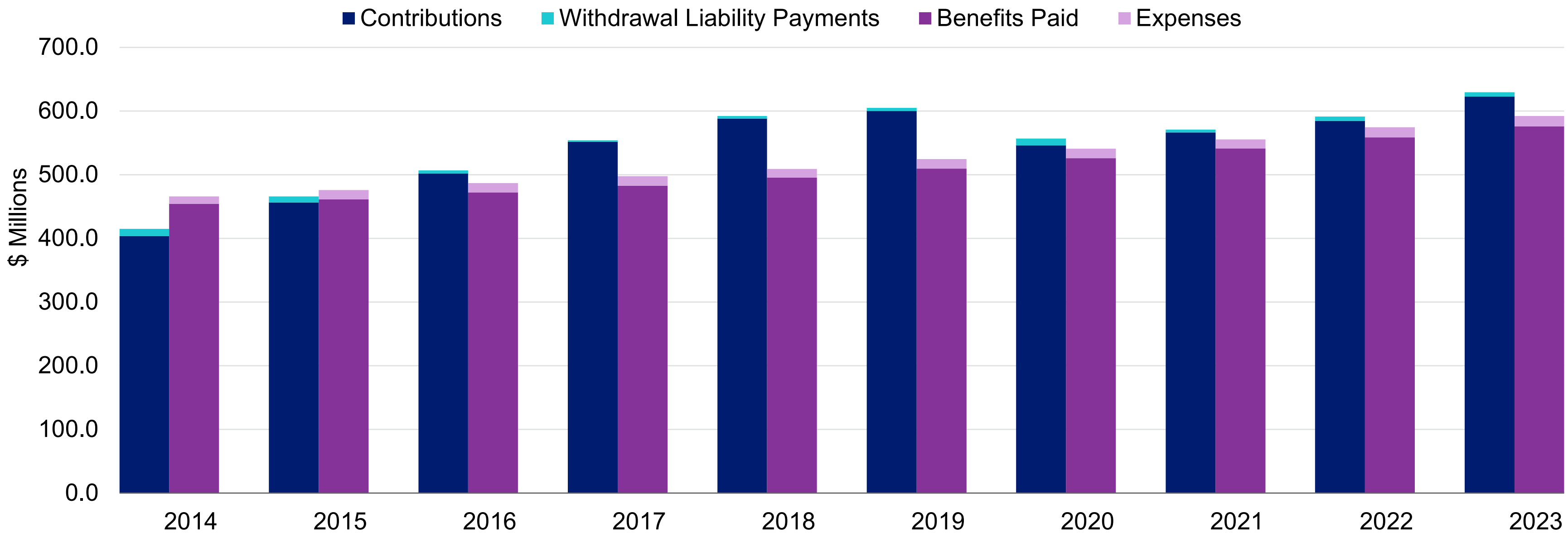
Year Ended December 31	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Normal	576	511	676	518	563	650	773	681	916	1,010
• **Average Amount**	$626	$732	$642	$771	$689	$714	$719	$814	$761	$729
• **Average Age**	66.7	66.5	66.2	66.5	66.7	66.7	66.6	66.5	66.5	66.2
Standard Early	569	94	150	79	106	129	124	32	75	100
• **Average Amount**	$402	$578	$517	$665	$659	$670	$575	$812	$664	$780
• **Average Age**	60.9	60.7	61.9	61.9	64.4	62.5	62.8	59.8	60.1	60.5
Unsubsidized Early[1]	--	370	410	374	370	431	488	239	294	350
• **Average Amount**	--	$385	$383	$514	$503	$690	$556	$498	$496	$514
• **Average Age**	--	60.8	59.6	61.6	61.9	61.9	62.4	60.9	61.0	61.4
Special Early[1]	504	446	660	409	472	509	607	529	570	651
• **Average Amount**	$1,077	$1,131	$1,072	$1,436	$1,433	$1,429	$1,442	$1,596	$1,485	$1,490
• **Average Age**	60.2	59.9	58.3	60.8	60.7	60.6	60.9	61.2	60.6	60.9
55/30 (60/30)	245	179	289	220	261	267	294	256	241	205
• **Average Amount**	$2,544	$2,623	$2,649	$2,744	$2,990	$2,990	$2,949	$2,954	$2,928	$2,923
• **Average Age**	57.5	57.7	57.7	57.8	57.2	57.9	57.8	57.9	57.7	57.7
Disability	68	55	52	33	41	32	33	20	25	36
• **Average Amount**	$611	$611	$765	$735	$691	$877	$820	$959	$885	$882
• **Average Age**	51.1	49.9	51.0	50.2	50.4	50.7	51.0	51.4	49.8	51.1
Total	1,962	1,655	2,237	1,633	1,813	2,018	2,319	1,757	2,121	2,352
• **Average Amount**	$916	$957	$975	$1,129	$1,174	$1,151	$1,143	$1,310	$1,163	$1,104
• **Average Age**	61.7	61.6	62.0	62.2	62.2	62.4	62.6	62.6	62.7	62.8

[1] Unsubsidized Early pensions not separately identified prior to 2015

Financial information

- Benefits and expenses are funded solely from contributions and investment earnings.
- Contributions (including withdrawal liability payments) have exceeded benefits paid and administrative expenses in the last several years, primarily due to the higher active population (17.0% higher this year than in 2014) and contribution rate increases required under the Rehabilitation/Funding Improvement Plan (24.6% increase in average rate since the end of 2013). Benefit payments have steadily increased over the last 10 years. Additional detail is in Section 3.

Cash Flow (in millions)



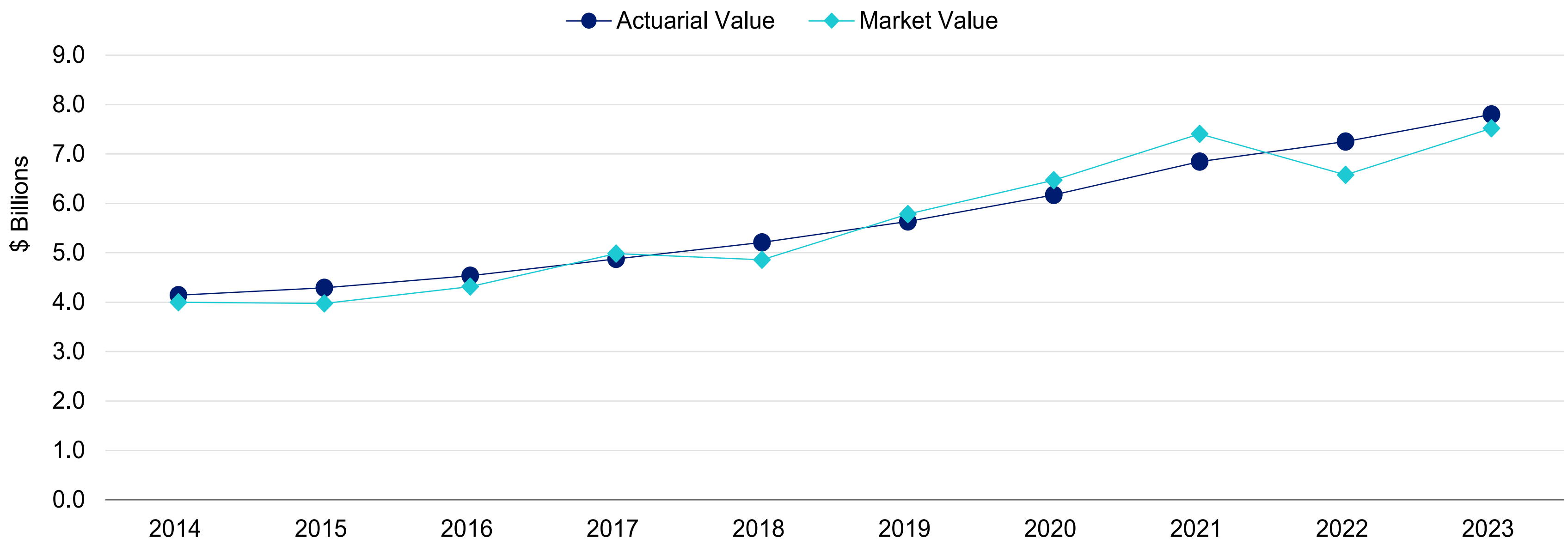
Legend	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Contributions	$403.43	$456.10	$501.80	$551.88	$588.28	$600.07	$545.85	$566.14	$584.60	$622.52
W/L Payments*	11.52	9.70	5.08	1.98	3.79	4.93	10.71	4.53	6.87	7.07
Benefits Paid	454.02	461.39	472.38	482.58	495.57	509.63	525.92	541.44	558.75	576.00
Expenses	12.01	14.40	14.46	14.85	13.60	14.69	14.90	13.73	15.54	16.28

* Includes adjustment for withdrawal liability receivable

Asset history for years ended December 31

- The market value rate of return was 13.77%, as compared to the assumed rate of 7.25%. Under the actuarial asset method, 20% of this deviation is recognized in this valuation and 80% is deferred to future years.
- As of January 1, 2024, the actuarial value of assets is 103.7% of the market value and there are $277 million of net investment loss that are deferred for future recognition.

Actuarial Value of Assets vs. Market Value of Assets

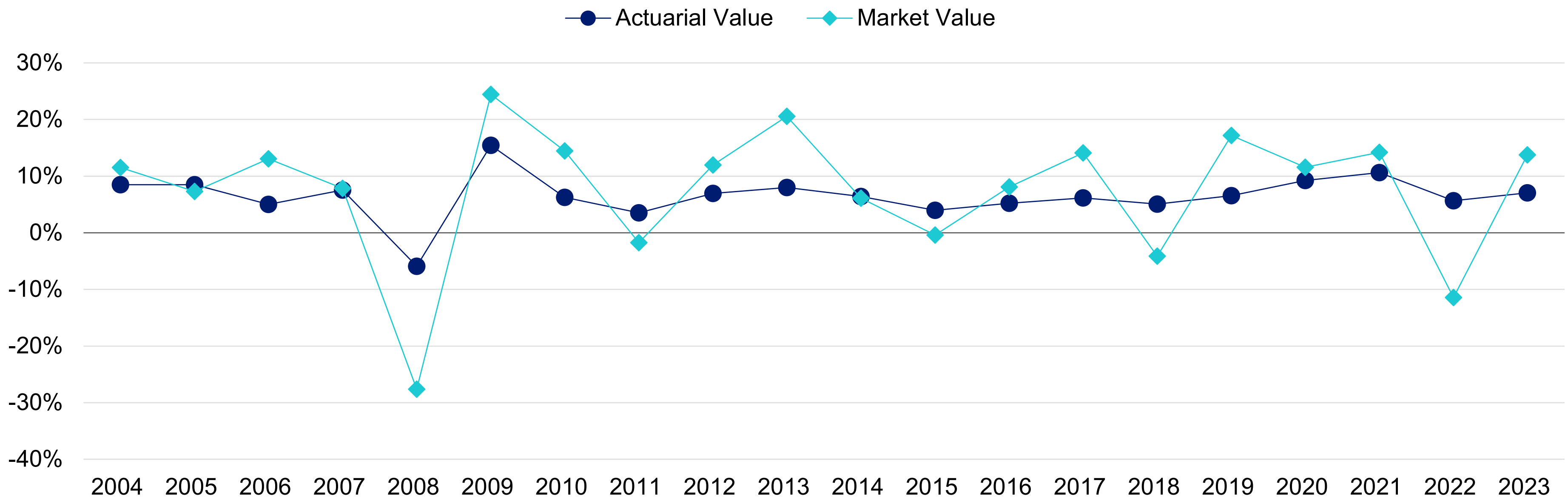


Legend	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Actuarial Value[1]	$4.14	$4.29	$4.54	$4.88	$5.21	$5.63	$6.17	$6.84	$7.25	$7.80
Market Value[1]	4.00	3.97	4.31	4.98	4.86	5.78	6.47	7.41	6.58	7.52
Ratio	103.5%	108.1%	105.2%	97.9%	107.2%	97.4%	95.4%	92.4%	110.2%	103.7%

[1] In billions

Historical investment returns

Actuarial and Market Value Rates of Return for Years Ended December 31



Legend	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
■ AVA	8.5%	8.5%	5.0%	7.6%	-5.9%	15.4%	6.2%	3.5%	6.9%	8.0%	6.4%	4.0%	5.2%	6.2%	5.1%	6.6%	9.2%	10.6%	5.7%	7.1%
■ MVA	11.5%	7.3%	13.1%	7.8%	-27.6%	24.5%	14.5%	-1.7%	12.0%	20.6%	6.1%	-0.4%	8.1%	14.1%	-4.1%	17.2%	11.6%	14.2%	-11.4%	13.8%

Average Rates of Return[1]	Actuarial Value	Market Value
Most recent three-year average return:	7.77%	5.51%
Most recent five-year average return:	7.77%	8.00%
Most recent ten-year average return:	6.77%	6.57%
20-year average return:	6.58%	6.86%

[1] Average return for the most recent three years is the arithmetic average of the returns. For average returns over five or more years, the average return is weighted by the asset value. The actuarial investment returns for 2006 and 2008 include the effect of a change in asset method.

Actuarial experience

- Assumptions should consider experience and should be based on reasonable expectations for the future.
- Each year actual experience is compared to that projected by the assumptions. Differences are reflected in the actuarial valuation.
- Assumptions are not changed if experience that is different than expected is believed to be a short-term development that will not continue over the long term. On the other hand, if experience is expected to continue, assumptions are changed.
- We previously performed a detailed experience analysis against the various demographic assumptions used for the actuarial valuation as shown in the Actuarial Experience Study as of April 2, 2019. Current data is reviewed in conjunction with each annual valuation. We recommend this detailed multi-year experience study be conducted periodically to review the actual versus anticipated historical experience and expected future experience. We are currently monitoring assumptions as data is gathered on a post-COVID basis.

Experience for the Year Ended December 31, 2023

	Item	Amount
1.	Loss from investments	-$14,392,860
2.	Loss from administrative expenses	-802,893
3.	Net gain from other experience (0.5% of projected accrued liability)	41,224,547
4.	**Net experience gain: 1 + 2 + 3**	**$26,028,794**

Investment experience

- Actuarial planning is long term. The obligations of a pension plan are expected to continue for the lifetime of all its participants.
- The assumed long-term rate of return of 7.25% considers past experience, the Trustees' asset allocation policy and future expectations.

Loss from Investments

	Item	Amount
1.	Average actuarial value of assets	$7,267,544,925
2.	Assumed rate of return	7.25%
3.	Expected net investment income: 1 × 2	$526,897,007
4.	Net investment income (7.05% actual rate of return)	512,504,147
5.	**Actuarial loss from investments: 4 − 3**	**-$14,392,860**

Mortality experience

- Mortality experience (more or fewer than expected deaths) yields actuarial gains or losses. The mortality tables have been updated to the Pri-2012 Blue Collar tables and the mortality improvement scale to MP-2021.

  The mortality rates were based on historical and current demographic data and estimated future experience and professional judgment. As part of the analysis, a comparison was made between the actual number of deaths by age and the projected number based on the prior year's assumption over the most recent five years, taking into consideration the results of Segal's industry mortality study.

Administrative expenses

- Administrative expenses for the year ended December 31, 2023 totaled $16,277,387, as compared to the assumption of $15,500,000. Based on past experience and a review of budgeted Plan expenses, the assumed administrative expenses were increased from $15,500,000 to $16,500,000 this year.

Other experience

- The net experience variation for the year, other than investment and administrative expenses experience, was 0.5% of the projected actuarial accrued liability from the prior valuation, and was not significant when compared to that liability. Some differences between projected and actual experience include:
  - Extent of turnover among the participants
  - Future benefit accruals more or less than projected
  - Retirement experience (earlier or later than projected)
  - Number of disability retirements

Plan funding

Comparison of Funded Percentages

Plan Year Beginning	January 1, 2023		January 1, 2024	
Item	**Amount**	**Funded %**	**Amount**	**Funded %**
Market Value of Assets	**$6,576,005,315**		**$7,521,585,807**	
Funding interest rate	7.25%		7.25%	
Present value (PV) of future benefits	$10,202,584,020	64.5%	$10,476,161,946	71.8%
PV of accumulated plan benefits (PVAB)	8,824,196,100	74.5%	9,109,283,572	82.6%
Current liability interest rate	2.55%		3.29%	
Current liability[1]	$17,191,126,894	38.3%	$15,549,675,493	48.5%
Actuarial Value of Assets	**$7,248,889,930**		**$7,798,704,066**	
Funding interest rate	7.25%		7.25%	
PV of future benefits	$10,202,584,020	71.0%	$10,476,161,946	74.4%
PPA liability and annual funding notice	8,824,196,100	82.1%	9,109,283,572	85.6%

These measurements are not necessarily appropriate for assessing the sufficiency of the Plan's assets to cover the estimated cost of settling the Plan's benefit obligations or the need for or the amount of future contributions. As shown above, the funded percentage differs depending on the purpose of measurement, and can vary significantly depending on the liability measure and asset value (i.e., actuarial value of assets or market value of assets).

[1] Assets for funded percentage include withdrawal liability receivables.

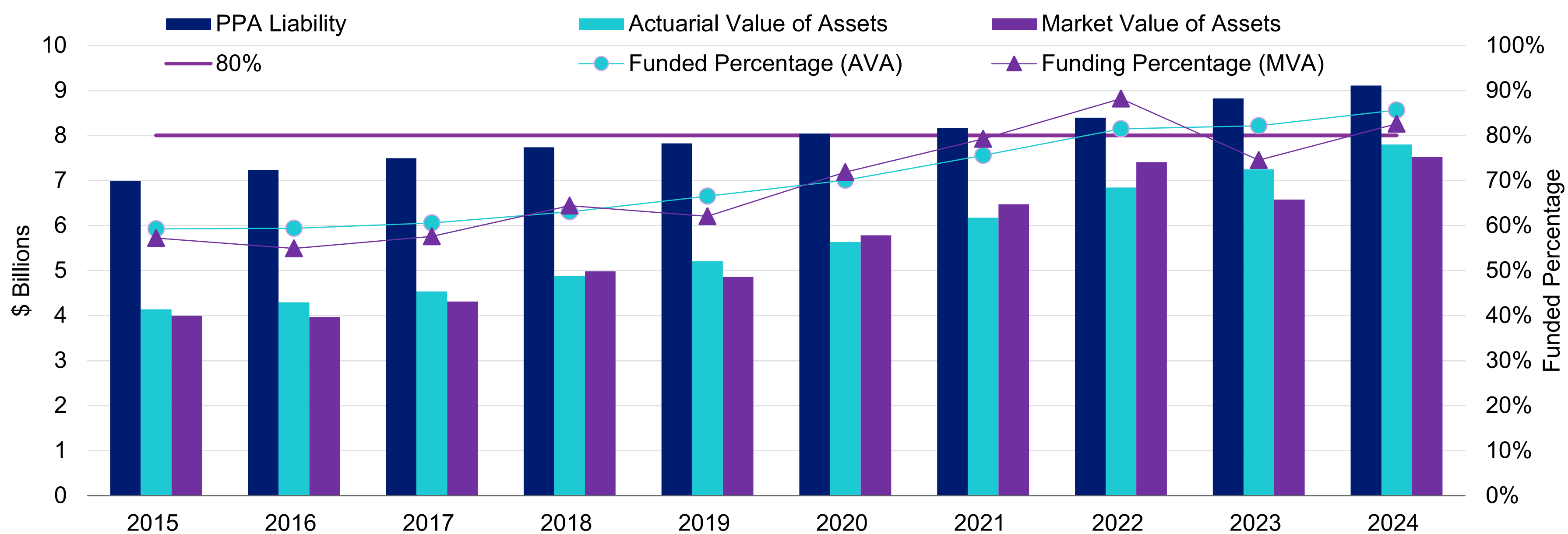
Pension Protection Act of 2006

2024 Actuarial status certification

- PPA requires trustees to actively monitor their plans' financial prospects to identify emerging funding challenges so they can be addressed effectively.
- As reported in the 2024 certification, the Plan was classified as neither endangered nor critical (that is, in the Green Zone) because the funded percentage was more than 80% and the credit balance in the FSA was projected to be positive for at least ten years.

Pension Protection Act of 2006 historical information

Funded Percentage and Zone



Plan Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Zone Status	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green
Valuation rate	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.25%	7.25%
■ PPA liability[1]	$6.99	$7.23	$7.49	$7.74	$7.83	$8.04	$8.17	$8.40	$8.82	$9.11
■ AVA[1]	4.14	4.29	4.54	4.88	5.21	5.63	6.17	6.84	7.25	7.80
● Funded % (AVA)	59.3%	59.4%	60.6%	63.0%	66.5%	70.0%	75.6%	81.5%	82.1%	85.6%
■ MVA	4.00	3.97	4.31	4.98	4.86	5.78	6.47	7.41	6.58	7.52
▲ Funded % (MVA)	57.2%	54.9%	57.6%	64.4%	62.1%	71.9%	79.2%	88.2%	74.5%	82.6%

[1] In billions

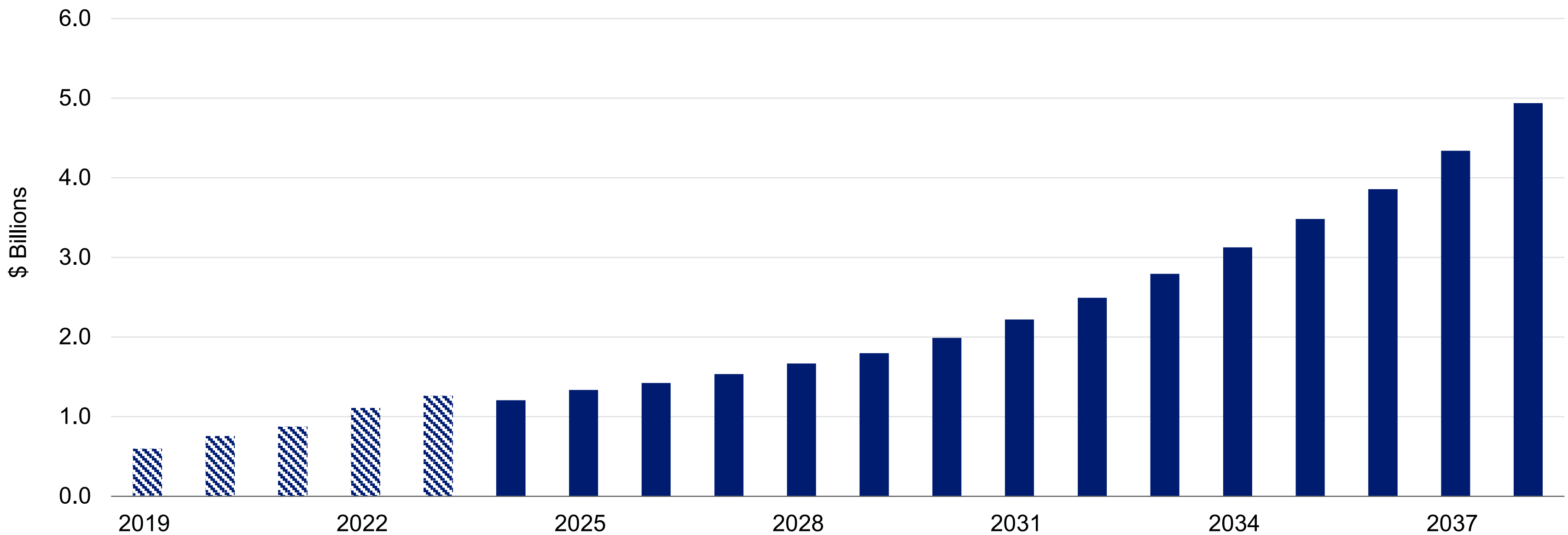
Projections

- The 15-year projection on the following page assumes the following, unless otherwise noted:
  - The Plan will earn a market rate of return equal to 7.25% each year.
  - The accrual rate will be 0.50% for the 2024 and 2025 Plan years.
  - The accrual rate in future years, based on a long-term applicable percentage under the VBAR, is assumed to be 0.86% for 2026 and after.
  - The projected industry activity assumption takes into account information provided by the plan sponsor as required by Internal Revenue Code Section 432, historical and current contribution levels. The industry activity is based on 90 million total hours each year.
  - The contribution rate includes the negotiated increases effective January 1, 2024. For employers that adopted an Alternative Option under the prior Funding Improvement Plan, required contribution rate increases in 2025 and 2026 (2% for the First Alternative, 1% for the Second Alternative) are recognized, based on the required increases in contribution rates under the Plan.
  - Administrative expenses are projected to increase 2.5% per year with a 7.5% additional increase in 2031 to reflect the increased PBGC premium rate under ARPA.
  - New entrants are assumed to have the same demographic mix as actual new hires in the last five years.
  - There are no plan amendments or changes in law/regulations.
  - All other experience emerges as assumed, and no assumption changes are made.
- The projections in this valuation illustrate the potential future impact of one given set of assumptions. Additional scenarios would demonstrate sensitivity to risk from investment return, employment and other factors.
- Additional projections discussing risk were provided to the Trustees separately.

Funding Standard Account (FSA)

- The minimum funding requirement for the year beginning January 1, 2024 is $0.
- Based on the assumption that 90.0 million total hours worked each year at a $5.4249 average contribution rate, the contributions projected for the year beginning January 1, 2024 are $0.49 billion. The credit balance is projected to decrease by approximately $0.05 billion to $1.21 billion as of December 31, 2024.
- A 15-year projection indicates the credit balance will remain positive, based on the assumptions detailed on the prior page and the following:

Credit Balance as of December 31



Scheduled Cost

- The Scheduled Cost is an annual contribution objective, reflecting benefit levels and current assets that is compared to projected contributions to assess the Plan's long-term financial position. Simply avoiding an FSA funding deficiency is not a stable basis for funding the Plan. The Scheduled Cost uses a single amortization schedule for the total unfunded actuarial accrued liability, rather than the ERISA minimum funding approach.
- The Scheduled Cost represents a reasonable Actuarially Determined Contribution (ADC), as defined in the Actuarial Standards of Practice. An ADC should balance benefit security, intergenerational equity, and stability or predictability of annual costs.
- The Scheduled Cost amount, if contributed, would result in a predictable level that amortizes any unfunded actuarial accrued liability over 10.0 years, providing benefit security to plan participants while balancing the needs of current and future participants.
- The plan of benefits and actuarial assumptions are the same as those used for the FSA except the normal cost is based on the average long-term expected VBAR percentage of 0.86% and the average ultimate hourly contribution rate of $5.57.

Scheduled Cost

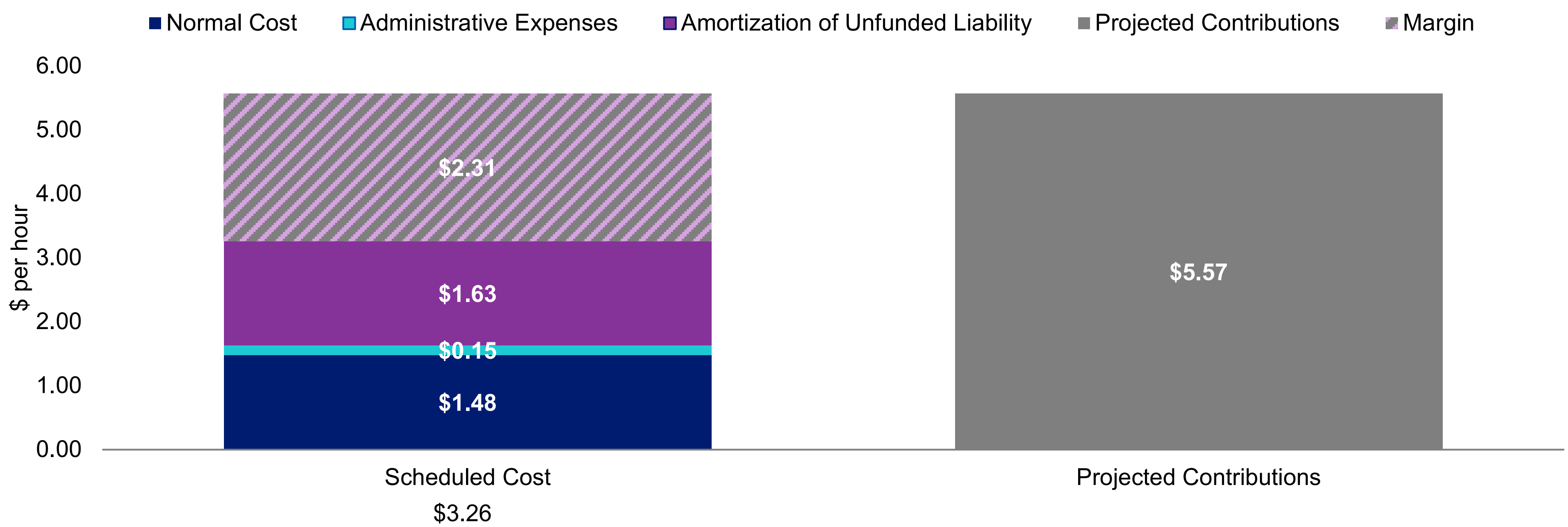
Cost Element	2023	2024
Normal cost[1]	$151,634,573	$166,283,237
Administrative expenses[1]	15,500,000	16,500,000
Amortization of the unfunded actuarial accrued liability[1]	219,679,558	182,762,902
Actuarial accrued liability	8,824,196,100	9,109,283,572
Actuarial value of assets	7,248,889,930	7,798,704,066
Unfunded actuarial accrued liability	1,575,306,170	1,310,579,506
Amortization period	10.0	10.0
Annual Scheduled Cost, payable monthly	**$386,814,131**	**$365,546,139**
Projected contributions	605,382,078	624,729,739
Number of active participants	61,272	63,530
Hours assumption	1,766	1,766
Ultimate negotiated contribution rate	$5.59	$5.57
Margin	**$218,567,947**	**$259,183,600**
Margin as a % of projected contributions	36.1%	41.5%

[1] Includes adjustment for monthly payments

Scheduled Cost margin

- Projected annual employer contributions are based on the assumption that 63,530 active participants will work 1,766 hours at the $5.57 average ultimate contribution rate (including two required increases in 2025 and 2026). The $2.31 per hour margin represents the difference between projected contributions at the average ultimate negotiated contribution rate and the Scheduled Cost.

Scheduled Cost versus Projected Contributions



- Prior net investment losses are not fully recognized in the actuarial value of assets. Using the current market value of assets, the margin would decrease to $220.5 million ($1.97 per hour, or 35.3% of projected contributions).

Low-Default-Risk Obligation Measure (LDROM)

The Actuarial Standards of Practice require the calculation and disclosure of a Low-Default-Risk Obligation Measure (LDROM) when performing a funding valuation. The LDROM represents the plan’s actuarial accrued liability measured using discount rates associated with fixed income securities with a high credit rating that would be expected to provide cash flows with approximately the same timing and magnitude as the plan’s expected future benefit payments.

The LDROM presented in this report is calculated using the same methodology and assumptions used to determine the actuarial accrued liability for the Scheduled Cost calculation, except for the discount rate. The discount rate selected and used for determining the LDROM is the interest rate used to determine the current liability, 3.29% as of January 1, 2024.

As of January 1, 2024, the LDROM for the Plan is $15,168,693,055. The difference between the LDROM and the actuarial accrued liability of $9,109,283,572 represents the expected savings and the related risk of investing in the Plan’s diversified portfolio compared to investing only in low-default-risk securities.

The Actuarial Standard requires commentary to help the intended user understand the significance of the LDROM with respect to the funded status of the plan, plan contributions, and the security of participant benefits. In general, if plan assets were invested exclusively in low-default-risk securities, the funded status would be lower and the Scheduled Cost would be higher. While investing in a portfolio with low-default-risk securities may be more likely to reduce investment volatility and the volatility of the Scheduled Cost, it also may be more likely to result in the need for higher contributions or lower benefits.

Risk

- The actuarial valuation results are dependent on a single set of assumptions; however, there is a risk that emerging results may differ significantly as actual experience proves to be different from the current assumptions.
- We recently performed a detailed analysis of the potential range of the impact of investment risk relative to the Plan's future financial condition. Those results are included in a separate report, **Updated Funding Projections and Sensitivity to Investment Risk.**
- Economic Shock Risk. Potential implications for the Plan that were not reflected as of the valuation date include:
  - Volatile financial markets and investment returns lower than assumed
  - Short-term or long-term employment far different than past experience, including a projected rate of recovery and possible "new normal" long-term state
  - Changes in future demographic experience, such as retirement, disability, turnover, and mortality patterns

  Economic Shock Risk, along with Investment Risk, are addressed in a separate report titled: **Updated Funding Projections and Sensitivity to Investment Risk**.
- Investment Risk (the risk that returns will be different than expected)
- Employment Risk (the risk that actual contributions will be different from projected contributions)
- Longevity Risk (the risk that mortality experience will be different than expected)
- Other Demographic Risk (the risk that participant experience will be different than assumed)

  Examples of this risk include:
  - Actual retirements occurring earlier or later than assumed. The value of retirement plan benefits is sensitive to the rate of benefit accruals and any early retirement subsidies that apply. While it is difficult to quantify the impact of potential experience, earlier retirements would generally result in higher costs for the Plan.
  - More or less active participant turnover than assumed. Lower turnover would generally result in higher costs for the Plan.
  - Return to covered employment of previously inactive participants. More rehires would generally result in higher costs for the Plan.

Section 2: Actuarial Valuation Results

- Actual Experience over the Last Ten Years

  Past experience can help demonstrate the sensitivity of key results to the Plan's risk profile. Over the past ten years ended December 31, 2023:

  – The investment gain (loss) on market value for a year has ranged from a loss of $1,404,064,771 to a gain of $474,280,281.

  – The non-investment gain (loss) for a year has ranged from a loss of $35,184,440 to a gain of $40,421,654.

- Maturity Measures

  The risk associated with a pension plan increases as it becomes more mature, meaning that the actives represent a smaller portion of the liabilities of a plan. When this happens, there is a greater risk that fluctuations in the experience of the non-active participants or of the assets of a plan can result in large swings in the contribution requirements.

  – Over the past ten years ended December 31, 2023, the ratio of non-active participants to active participants has ranged from a low of 1.30 in 2019 to a high of 1.48 in 2014.

  – As of December 31, 2023, the retired life actuarial accrued liability represents 56% of the total actuarial accrued liability. In addition, the actuarial accrued liability for inactive vested participants represents 13% of the total. The higher the non-active actuarial accrued liability is as a percent of the total liability, the greater the danger of volatility in results.

- There are external factors including legislative, regulatory or financial reporting changes that could impact the Plan's funding and disclosure requirements. While we do not assume any changes in such external factors, it is important to understand that they could have significant consequences for the Plan. Prior legislative proposals considered possible changes to funding requirements (such as changes to the zone rules) and increases in PBGC premiums for multiemployer plans.

- A detailed risk assessment is important for the Plan because:

  – The outlook for financial markets and future industry activity is uncertain in the near future.

  – Potential changes in the covered population and/or plan industry may result in participant choices that vary from those assumed.

  – The Plan's asset allocation has potential for a significant amount of investment return volatility.

Section 3: Certificate of Actuarial Valuation

October 22, 2024

Certificate of Actuarial Valuation

This is to certify that Segal has prepared an actuarial valuation of the Sheet Metal Workers' National Pension Fund as of January 1, 2024 in accordance with generally accepted actuarial principles and practices. It has been prepared at the request of the Board of Trustees to assist in administering the Fund and meeting filing requirements of federal government agencies. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Trustees and may only be provided to other parties in its entirety.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes 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 or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law.

The valuation is based on the assumption that the Plan is qualified as a multiemployer plan for the year and on information supplied by the auditor with respect to contributions and assets and reliance on the Plan Administrator with respect to the participant data. Segal does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. To the extent we can, however, Segal does review the data for reasonableness and consistency. Based on our review of the data, we have no reason to doubt the substantial accuracy of the information on which we have based this report and we have no reason to believe there are facts or circumstances that would affect the validity of these results. Adjustments for incomplete or apparently inconsistent data were made as described in the attached Exhibit L.

I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of my knowledge, the information supplied in this actuarial valuation is complete and accurate, except as noted in Exhibit A. Each prescribed assumption for the determination of Current Liability was applied in accordance with applicable law and regulations. In my opinion, each other assumption is reasonable (taking into account the experience of the Plan and reasonable expectations) and such other assumptions, in combination, offer my best estimate of anticipated experience under the Plan. In addition, in my opinion, the combined effect of these assumptions is expected to have no significant bias.

Bill Gitterman

William J. Gitterman, FSA, MAAA
Consulting Actuary
Enrolled Actuary No. 23-08743

Exhibit A: Table of plan coverage

The valuation was made with respect to the following data supplied to us by the Plan Administrator.

Category	December 31, 2022	December 31, 2023	Change from Prior Year
Participants in Fund Office tabulation	64,189	67,020	4.4%
Less: Participants with less than one year of vesting service	2,917	3,490	N/A
Active participants in valuation:			
• Number	61,272	63,530	3.7%
• Average age	42.5	42.2	-0.3
• Average pension credits	13.1	12.7	-0.4
• Average contribution rate for upcoming year	$5.46	$5.42	-0.7%
• Number with unknown age information	245	332	35.5%
• Total active vested participants	44,312	45,381	2.4%
Inactive participants with rights to a pension:			
• Number	34,912	34,690	-0.6%
• Average age	54.1	54.1	0.0
• Average monthly benefit	$497	$496	-0.2%
• Beneficiaries with rights to deferred payments	183	140	-23.5%
• Alternate payees with rights to deferred payments	496	604	21.8%
• Number with unknown age information	69	69	0.0%
Pensioners:			
• Number in pay status	40,202	40,703	1.2%
• Average age	73.2	73.3	0.1
• Average monthly benefit	$1,033	$1,050	1.6%
• Number of alternate payees in pay status	1,573	1,617	2.8%
• Number in suspended status	74	70	-5.4%

Section 3: Certificate of Actuarial Valuation

Category	December 31, 2022	December 31, 2023	Change from Prior Year
Beneficiaries:			
• Number in pay status	9,778	9,835	0.6%
• Number in suspended status	37	0	-100.0%
• Average age	77.4	77.4	0.0
• Average monthly benefit	$503	$510	1.4%
Total participants (excluding alternate payees)	**146,458**	**148,968**	**1.7%**

Exhibit B: Supporting information for minimum funding calculations

Description	2023	2024
Interest rate assumption	7.25%	7.25%
Normal cost, including administrative expenses	$240,352,879	$108,960,364
Market value as reported by Calibre CPA Group (MVA)[1]	6,576,005,315	7,521,585,807
Actuarial value of assets (AVA)	7,248,889,930	7,798,704,066
Actuarial accrued liability	**$8,824,196,100**	**$9,109,283,572**
• Pensioners and beneficiaries[2]	$4,934,987,166	$5,062,792,816
• Inactive participants with vested rights[3]	1,190,185,038	1,188,716,365
• Active participants	2,699,023,896	2,857,774,391
Unfunded actuarial accrued liability based on AVA	$1,575,306,170	$1,310,579,506

[1] Excludes net receivable withdrawal liability payments of $22,818,626 for 2023 and $20,996,497 for 2024.
[2] Includes liabilities for 1,573 former spouses in pay status for 2023 and 1,617 for 2024.
[3] Includes liabilities for 496 former spouses with deferred benefits in 2023 and 604 for 2024.

Exhibit C: Summary statement of income and expenses

Item	Income and Expenses	Assets for YE December 31, 2022	Income and Expenses	Assets for YE December 31, 2023
Market value of assets, beginning of the year[1]		$7,406,740,540		$6,576,005,315
Contribution income:				
• Employer contributions and withdrawal liability payments, net of amounts deemed uncollectible	$591,730,342		$629,521,646	
• Liquidated Damages	732,375		934,970	
Contribution income		**592,462,717**		**630,456,616**
Investment income:				
• Investment income:	-835,019,611		920,570,905	
• Less investment fees	-12,895,378		-12,300,402	
Net investment income		**-847,914,989**		**908,270,503**
Other income		**-995,007**		**-865,047**
Less benefit payments and expenses:				
• Pension benefits	-558,747,621		-576,004,193	
• Administrative expenses	-15,540,325		-16,277,387	
Total benefit payments and expenses		**-574,287,946**		**-592,281,580**
Market value of assets, end of the year[1]		**$6,576,005,315**		**$7,521,585,807**

[1] Excludes net withdrawal liability receivable

Exhibit D: Determination of actuarial value of assets

Step	MVA Rate of Return	Original Amount[1]	Unrecognized Return[2]	Amount
1. Market value of assets, December 31, 2023				$7,521,585,807
2. Calculation of unrecognized return				
a. Year ended December 31, 2023	13.77%	$430,157,631	$344,126,105	
b. Year ended December 31, 2022	-11.43%	-1,404,064,771	-842,438,862	
c. Year ended December 31, 2021	14.20%	434,389,255	173,755,702	
d. Year ended December 31, 2020	11.60%	237,193,981	47,438,796	
e. Year ended December 31, 2019	17.18%	474,280,281	0	
f. Total unrecognized return				**-277,118,259**
3. Preliminary actuarial value: 1 - 2f				7,798,704,066
4. Adjustment to be within 20% corridor				0
5. Final actuarial value of assets as of December 31, 2023: (3) + (4)				**7,798,704,066**
6. Actuarial value as a percentage of market value: (5) ÷ (1)				103.7%
7. Amount deferred for future recognition: (1) - (5)				-$277,118,259

[1] Total return minus expected return on a market value basis
[2] Recognition at 20% per year over five years

Exhibit E: Investment Return – Actuarial Value vs. Market Value

Plan Year Ended Dec 31	Actuarial Value Investment Return Amount	Actuarial Value Invest. Return	Market Value Investment Return	Market Value Invest. Return	Plan Year Ended Dec 31	Actuarial Value Investment Return Amount	Actuarial Value Invest. Return	Market Value Investment Return	Market Value Invest. Return
2004	$239,619,449	8.50%	$298,949,842	11.55%	2014	$250,531,303	6.40%	$232,193,895	6.12%
2005	249,128,731	8.50%	201,693,098	7.31%	2015	163,972,601	3.97%	-16,599,604	-0.42%
2006	153,183,390	5.01%	370,984,124	13.07%	2016	224,011,197	5.20%	321,747,587	8.08%
2007	235,073,194	7.57%	243,628,390	7.84%	2017	282,315,215	6.18%	612,744,159	14.11%
2008	-193,649,545	-5.93%	-905,604,097	-27.64%	2018	248,449,888	5.05%	-206,944,589	-4.12%
2009	463,585,989	15.45%	561,785,116	24.45%	2019	344,403,681	6.56%	841,807,966	17.18%
2010	209,948,846	6.25%	398,844,675	14.48%	2020	521,888,422	9.25%	671,534,081	11.60%
2011	122,036,155	3.52%	-52,598,539	-1.72%	2021	655,719,579	10.61%	920,292,079	14.20%
2012	243,627,164	6.95%	349,221,467	11.98%	2022	387,744,635	5.66%	-847,914,989	-11.43%
2013	$293,987,827	7.99%	$656,623,939	20.56%	2023	512,504,147	7.05%	908,270,503	13.77%
					Total	**$5,608,081,868**		**$5,560,659,103**	

Average Rates of Return[1]	Actuarial Value	Market Value
Most recent three-year average return:	7.77%	5.51%
Most recent five-year average return:	7.77%	8.00%
Most recent ten-year average return:	6.77%	6.57%
20-year average return:	6.58%	6.86%

[1] Average return for the most recent three years is the arithmetic average of the returns. For average returns over five or more years, the average return is weighted by the asset value. The actuarial investment returns for 2006 and 2008 include the effect of a change in asset method.

Exhibit F: Information on plan status as of January 1, 2024

Item	Amount
Plan status (as certified on March 21, 2024, for the 2024 zone certification)	"Green"
Actuarial value of assets for FSA	$7,798,704,066
Accrued liability under unit credit cost method	9,109,283,572
Funded percentage for monitoring plan status	85.6%

Annual Funding Notice for Plan Year Beginning January 1, 2024 and Ending December 31, 2024

Item	2024 Plan Year	2023 Plan Year	2022 Plan Year
Actuarial valuation date	January 1, 2024	January 1, 2023	January 1, 2022
Funded percentage	85.6%	82.1%	81.5%
Value of assets	$7,798,704,066	$7,248,889,930	$6,843,965,531
Value of liabilities	9,109,283,572	8,824,196,100	8,398,448,425
Market value of assets as of Plan Year end[1]	Not available	7,521,585,807	6,576,005,315

Critical or endangered status

The Plan was not in endangered or critical status in the Plan Year because it is not in critical status and its funded percentage was greater than 80%, and the credit balance was projected to be positive for at least ten years. In addition, the Plan is not projected to be in critical status for any of the five succeeding Plan years.

[1] Excludes net withdrawal liability payments receivable

Exhibit G: Schedule of active participant data

(Schedule MB, Line 8b(2))

The participant data is for the year ended December 31, 2023.

Pension Credits

Attained Age	Under 1 Number	Under 1 Average Accrued Mon. Ben.	1 to 4 Number	1 to 4 Avg Accrued Mon. Ben.	5 to 9 Number	5 to 9 Avg Accrued Mon. Ben.	10 to 14 Number	10 to 14 Avg Accrued Mon. Ben.	15 to 19 Number	15 to 19 Avg Accrued Mon. Ben.
Under 25	624	$29	3,967	$106	358	$282	—	—	—	—
25 to 29	313	36	3,462	133	2,646	366	141	$753	—	—
30 to 34	252	41	3,037	133	3,262	388	1,408	760	123	$957
35 to 39	190	40	2,261	139	2,499	394	1,841	813	1,577	1,105
40 to 44	134	43	1,568	143	1,752	410	1,465	795	2,173	1,139
45 to 49	92	51	1,027	147	1,162	410	979	789	1,564	1,099
50 to 54	67	46	753	148	727	397	663	719	1,065	1,061
55 to 59	45	43	517	149	462	373	454	749	721	1,024
60 to 64	23	42	307	152	313	392	297	714	430	988
65 to 69	4		63	114	80	302	66	597	82	869
70 & up	—	—	28	127	8		7		9	
Unknown	81	33	208	50	32	89	10		1	
Total	**1,825**		**17,198**		**13,301**		**7,331**		**7,745**	

Note: Excludes 3,490 participants with less than one year of vesting service

Pension Credits

Attained Age	20 to 24 Number	20 to 24 Avg Accrued Mon. Ben.	25 to 29 Number	25 to 29 Avg Accrued Mon. Ben.	30 to 34 Number	30 to 34 Avg Accrued Mon. Ben.	35 to 39 Number	35 to 39 Avg Accrued Mon. Ben.	40 & up Number	40 & up Avg Accrued Mon. Ben.
Under 25	—	—	—	—	—	—	—	—	—	—
25 to 29	—	—	—	—	—	—	—	—	—	—
30 to 34	—	—	—	—	—	—	—	—	—	—
35 to 39	47	$1,244	—	—	—	—	—	—	—	—
40 to 44	1,320	1,455	91	$1,511	—	—	—	—	—	—
45 to 49	1,918	1,523	1,173	1,793	41	$1,972	—	—	—	—
50 to 54	1,595	1,476	1,818	1,797	998	2,035	56	$2,420	—	—
55 to 59	1,067	1,390	1,239	1,723	1,166	2,091	749	2,246	33	$2,643
60 to 64	533	1,363	558	1,565	480	1,909	520	2,040	298	2,706
65 to 69	83	1,143	77	1,277	60	1,447	57	1,715	113	2,253
70 & up	7		10		5		2		16	
Unknown	—	—	—	—	—	—	—	—	—	—
Total	**6,570**		**4,966**		**2,750**		**1,384**		**460**	

Note: Excludes 3,490 participants with less than one pension credit.

Exhibit H: Funding Standard Account

- ERISA imposes a minimum funding standard that requires the Plan to maintain an FSA. The accumulation of contributions in excess of the minimum required contributions is called the FSA credit balance. If actual contributions fall short on a cumulative basis, a funding deficiency has occurred.
- The FSA is charged with the normal cost and the amortization of increases or decreases in the unfunded actuarial accrued liability due to plan amendments, experience gains or losses and changes in actuarial assumptions and funding methods. The FSA is credited with employer contributions and withdrawal liability payments.
- Increases or decreases in the unfunded actuarial accrued liability are amortized over 15 years except that short-term benefits, such as 13th checks, are amortized over the scheduled payout period.
- Beginning in 2009, the Funding Standard Account reflects the Trustees' election under PRA 2010 to extend the amortization of the 2008 investment loss, smooth those losses over 10 years in the actuarial value of assets, and increase the upper limit on the actuarial value of assets. The 5-year amortization extensions under Internal Revenue Code Section 431(d)(1) no longer applies effective for the Plan Year ending December 31, 2024 due to the adoption of the benefit improvements in 2024.

Item	December 31, 2023	December 31, 2024
1. Prior year funding deficiency	$0	$0
2. Normal cost, including administrative expenses	240,352,879	108,960,364
3. Amortization charges	508,208,397	685,992,523
4. Interest on **1, 2 and 3**	54,270,693	57,634,084
5. Total charges	**$802,831,969**	**$852,586,971**
6. Prior year credit balance	$1,109,616,023	$1,262,673,582
7. Employer contributions	630,456,616	TBD
8. Amortization credits	207,115,802	184,865,431
9. Interest on **6, 7 and 8**	118,317,110	104,946,578
10. Full funding limitation credits	0	0
11. Total credits	**$2,065,505,551**	**$1,552,485,591**
12. Credit balance: **11 − 5**	$1,262,673,582	TBD
13. Minimum contribution with interest required to avoid a funding deficiency: 5 −11 not less than zero	**N/A**	**$0**

Full Funding Limitation (FFL) and Credits for Plan Year January 1, 2024

Item	Amount
ERISA FFL (accrued liability FFL)	$3,173,883,260
RPA’94 override (90% current liability FFL)	6,397,637,456
FFL credit	0

Schedule of FSA Bases (Charges) (Schedule MB, Line 9c)

Type of Base	Date Established	Outstanding Balance	Years Remaining	Amortization Amount
Plan Amendment	01/01/1990	$4,745,945	1	$4,745,945
Plan Amendment	01/01/1991	9,431,483	1	9,431,483
Plan Amendment	01/01/1992	67,967,427	1	67,967,427
Plan Amendment	01/01/1993	18,706,959	1	18,706,959
Plan Amendment	01/01/1994	26,446,025	1	26,446,025
Plan Amendment	01/01/1995	7,658,335	1	7,658,335
Plan Amendment	01/01/1996	36,476,415	2	18,876,215
Change in Assumptions	01/01/1996	56,538,786	2	29,258,310
Plan Amendment	01/01/1997	55,773,965	3	19,906,672
Plan Amendment	01/01/1998	14,804,405	4	4,098,247
Plan Amendment	01/01/1999	4,093,883	5	937,205
Plan Amendment	01/01/2000	149,585,736	6	29,487,241
Plan Amendment	01/01/2001	1,597,138	7	278,734
Plan Amendment	01/01/2002	89,511,325	8	14,112,645
Plan Amendment	01/01/2003	33,914,317	9	4,905,253
Plan Amendment	01/01/2004	118,302,102	10	15,886,929
Actuarial Loss	01/01/2005	7,671,772	1	7,671,772
Actuarial Loss	01/01/2006	6,462,716	1	6,462,716
Plan Amendment	01/01/2006	32,485,962	12	3,864,533
Actuarial Loss	01/01/2007	12,846,401	1	12,846,401
Plan Amendment	01/01/2007	38,081,060	13	4,308,821
Change in Assumptions	01/01/2007	790,613,500	13	89,456,859
Actuarial Loss	01/01/2008	16,138,328	1	16,138,328
Actuarial Loss	01/01/2009	9,682,900	5	2,216,689

Section 3: Certificate of Actuarial Valuation

Type of Base	Date Established	Outstanding Balance	Years Remaining	Amortization Amount
Extended Recognition of 2008 Investment Loss	01/01/2009	504,851,921	15	52,502,082
Change in Assumptions	01/01/2011	30,570,794	2	15,820,109
Extended Recognition of 2008 Investment Loss	01/01/2011	232,675,891	14	25,180,026
Plan Amendment	01/01/2012	1,198,933	3	427,919
Actuarial Loss	01/01/2012	28,975,896	3	10,341,988
Extended Recognition of 2008 Investment Loss	01/01/2012	52,570,498	14	5,689,143
Plan Amendment	01/01/2013	1,750,847	4	484,680
Change in Assumptions	01/01/2013	16,719,215	4	4,628,316
Extended Recognition of 2008 Investment Loss	01/01/2013	60,081,903	14	6,502,022
Plan Amendment	01/01/2014	1,241,595	5	284,236
Extended Recognition of 2008 Investment Loss	01/01/2014	146,303,692	14	15,832,885
Plan Amendment	01/01/2015	1,819,133	6	358,598
Actuarial Loss	01/01/2015	38,298,249	6	7,549,581
Change in Assumptions	01/01/2015	86,174,711	6	16,987,278
Plan Amendment	01/01/2016	2,558,155	7	446,451
Actuarial Loss	01/01/2016	104,929,748	7	18,312,430
Plan Amendment	01/01/2017	763,648	8	120,399
Actuarial Loss	01/01/2017	86,007,460	8	13,560,214
Actuarial Loss	01/01/2018	68,849,030	9	9,958,093
Plan Amendment	01/01/2019	694,211	10	93,226
Actuarial Loss	01/01/2019	111,702,985	10	15,000,726
Plan Amendment	01/01/2020	256,846	11	32,336
Actuarial Loss	01/01/2020	58,309,206	11	7,340,836
Plan Amendment	01/01/2022	611,526	13	69,193
Actuarial Loss	01/01/2023	132,483,772	14	14,337,303
Change in Assumptions	01/01/2023	222,048,707	14	24,029,959

Section 3: Certificate of Actuarial Valuation

Type of Base	Date Established	Outstanding Balance	Years Remaining	Amortization Amount
Change in Assumptions	01/01/2024	17,246,239	15	1,793,523
Plan Amendment	01/01/2024	25,378,400	15	2,639,227
Total		**$3,644,610,096**		**$685,992,523**

Schedule of FSA Bases (Credits) (Schedule MB, Line 9h)

Type of Base	Date Established	Outstanding Balance	Years Remaining	Amortization Amount
Plan Amendment	07/01/1994	$72,295	6.5	$13,370
Plan Amendment	01/01/1996	28,477,728	2	14,736,967
Plan Amendment	09/01/2003	153,313,267	9.67	21,079,630
Plan Amendment	01/01/2005	24,198,799	11	3,046,507
Change in Asset Method (Funding Relief)	01/01/2009	175,109,087	15	18,210,472
Plan Amendment	01/01/2010	626,986	1	626,986
Actuarial Gain	01/01/2010	12,682,419	1	12,682,419
Extended Recognition of 2008 Investment Loss	01/01/2010	129,655,688	14	14,031,250
Plan Amendment	01/01/2011	2,618,020	2	1,354,802
Actuarial Gain	01/01/2011	58,267,105	2	30,152,700
Plan Amendment	01/01/2013	78,217	4	21,653
Actuarial Gain	01/01/2013	16,993,102	4	4,704,135
Actuarial Gain	01/01/2014	78,665,981	5	18,008,861
Plan Amendment	01/01/2018	5,595,594	9	809,328
Change in assumptions	01/01/2019	67,151,915	10	9,017,910
Plan Amendment	01/01/2021	391,603	12	46,585
Actuarial Gain	01/01/2021	111,445,387	12	13,257,554
Actuarial Gain	01/01/2022	178,437,783	13	20,189,996
Plan Amendment	01/01/2023	1,547,238	14	167,441
Actuarial Gain	01/01/2024	26,028,794	15	2,706,865
Total		**$1,071,357,008**		**$184,865,431**

Exhibit I: Maximum deductible contribution

- Employers that contribute to defined benefit pension plans are allowed a current deduction for payments to such plans. There are various measures of a plan's funded level that are considered in the development of the maximum tax-deductible contribution amount.
- The maximum deductible amount for this valuation is the excess of 140% of "current liability" over assets as shown below. "Current liability" is one measure of the actuarial present value of all benefits earned by the participants as of the valuation date. This limit is significantly higher than the current contribution level.
- Contributions in excess of the maximum deductible amount are not prohibited; only the deductibility of these contributions is subject to challenge and may have to be deferred to a later year. In addition, if contributions are not fully deductible, an excise tax in an amount equal to 10% of the non-deductible contributions may be imposed. However, the plan sponsor may elect to exempt the non-deductible amount up to the ERISA full-funding limitation from the excise tax.
- The Trustees should review the interpretation and applicability of all laws and regulations concerning any issues as to the deductibility of contribution amounts with Fund Counsel.

Item	Amount
1. Current liability for maximum deductible contribution, projected to the end of the Plan Year	$15,680,391,259
2. 140% of current liability	21,952,547,763
3. Actuarial value of assets, projected to the end of the Plan Year	7,714,714,677
4. Maximum deductible contribution: 2 − 3	**$14,237,833,086**

Exhibit J: Current Liability

The table below presents the current liability for the Plan Year beginning January 1, 2024.

Item[1]	Number of Participants	Current Liability
Interest rate assumption		3.29%
Retired participants and beneficiaries receiving payments	50,608	$7,141,310,763
Inactive vested participants	34,830	2,370,116,771
Active participants		
• Non-vested benefits		923,599,820
• Vested benefits		5,114,648,139
• **Total active**	**63,530**	**$6,038,247,959**
Total	**148,968**	**$15,549,675,493**

Item	Amount
Expected increase in current liability due to benefits accruing during the Plan Year	$231,777,430
Expected release from current liability for the Plan Year	610,233,130
Expected plan disbursements for the Plan Year, including administrative expenses of $16,500,000	626,733,130
Current value of assets[2]	$7,542,582,304
Percentage funded for Schedule MB	48.51%

1 The actuarial assumptions used to calculate these values are shown in Exhibit L
2 Includes net withdrawal liability receivables

Exhibit K: Actuarial present value of accumulated plan benefits

The actuarial present value of accumulated plan benefits calculated in accordance with FASB ASC 960 is shown below as of January 1, 2023 and as of January 1, 2024. In addition, a reconciliation between the two dates follows.

Item	January 1, 2023	January 1, 2024
Actuarial present value of vested accumulated plan benefits:		
• Participants currently receiving payments	$4,934,987,166	$5,062,792,816
• Other vested benefits	3,500,175,485	3,626,596,092
• **Total vested benefits**	**$8,435,162,651**	**$8,689,388,908**
Actuarial present value of non-vested accumulated plan benefits	389,033,449	419,894,664
Total actuarial present value of accumulated plan benefits	**$8,824,196,100**	**$9,109,283,572**

Factors	Change in Actuarial Present Value of Accumulated Plan Benefits
Plan amendments[1]	$25,378,400
Benefits accumulated, net experience gain or loss, changes in data	199,592,961
Benefits paid	-576,004,193
Changes in actuarial assumptions[2]	17,246,239
Interest	618,874,065
Total	**$285,087,472**

[1] Includes net impact of changes in individual participants' contribution rate and/or Benefit Option and changes to pre-retirement death benefits.
[2] Mortality tables were updated from RP-2006 to Pri-2012 Mortality tables.

Exhibit L: Statement of actuarial assumptions, methods and models

(Schedule MB, Line 6)

Rationale for demographic and noneconomic assumptions

The information and analysis used in selecting each demographic assumption that has a significant effect on this actuarial valuation is shown in the : "Demographic Experience Analysis: January 1, 2013 through December 31, 2017," dated April 2, 2019. Current data is reviewed in conjunction with each annual valuation. Mortality assumptions were updated based on review of recent experience and professional judgement.

Mortality rates

Non-retired participants: Pri-2012 Blue Collar Employee Mortality Tables (sex-distinct), projected generationally using Scale MP-2021

Healthy pensioners: Pri-2012 Blue Collar Healthy Retiree Mortality Tables (sex-distinct), projected generationally using Scale MP-2021

Survivor annuitants: Pri-2012 Blue Collar Healthy Contingent Survivor Mortality Tables (sex-distinct), projected generationally using Scale MP-2021

Disabled pensioners: Pri-2012 Disabled Retiree Mortality Tables (sex-distinct), projected generationally using Scale MP-2021

The mortality rates are based on historical and current demographic data, adjusted to reflect estimated future experience and professional judgment. As part of the analysis, a comparison was made between the actual number of deaths and the projected number based on the prior year's assumption over the most recent five years, taking into consideration the results of Segal's industry mortality study.

Annuitant mortality rates[1]

Age	Healthy Male	Healthy Female	Survivor Male	Survivor Female	Disabled Male	Disabled Female
55	0.61%	0.47%	1.60%	0.79%	2.06%	1.41%
60	0.94%	0.73%	2.07%	1.12%	2.37%	1.76%
65	1.29%	1.04%	2.62%	1.48%	2.90%	2.07%
70	1.94%	1.46%	3.23%	1.95%	3.71%	2.53%
75	3.01%	2.32%	4.25%	2.84%	5.24%	3.57%
80	5.18%	3.98%	6.14%	4.41%	8.08%	5.63%
85	9.07%	7.08%	9.45%	7.26%	12.71%	9.33%
90	15.63%	12.55%	15.43%	12.55%	19.40%	15.50%

Termination rates

Age	Mortality Male[1]	Mortality Female[1]	Disability[2]	Withdrawal Construction[3]	Withdrawal Production[3]
20	0.07%	0.02%	0.03%	18.00%	23.00%
25	0.08%	0.03%	0.03%	10.00%	20.00%
30	0.09%	0.04%	0.03%	6.00%	15.00%
35	0.11%	0.05%	0.03%	5.00%	13.00%
40	0.12%	0.07%	0.04%	4.00%	11.00%
45	0.13%	0.09%	0.15%	3.00%	7.00%
50	0.17%	0.12%	0.40%	2.00%	7.00%
55	0.27%	0.19%	0.10%	2.00%	7.00%
60	0.45%	0.31%	0.10%	2.00%	7.00%

[1] Mortality rates are projected on a generational basis using Scale MP-2021. Rates above are sample rates in 2024.
[2] Participants are assumed to elect non-disability pensions upon eligibility.
[3] Withdrawal rates do not apply at or beyond early retirement age.

Retirement rates for active participants

Age	Annual Retirement Rates Not Eligible for Special Early	Annual Retirement Rates Eligible for Special Early but not for 55/30 (60/30) Pension	Annual Retirement Rates Eligible for 55/30 (60/30) Pension[1]
55	5%	5%	30%
56-57	5	5	15
58	5	5	15
59	5	8	15
60	6	10	25
61	9	14	25
62	22	33	40
63	13	21	25
64	16	24	25
65-66	25	35	40
67-69	25	35	30
70	100	100	100

Description of weighted average retirement age for active participants

Age 62, determined as follows: The weighted average retirement age for each participant is calculated as the sum of the product of each potential current or future retirement age times the probability of surviving from current age to that age and then retiring at that age, assuming no other decrements. The overall weighted retirement age is the average of the individual retirement ages based on all the inactive vested participants included in the January 1, 2024 actuarial valuation.

[1] Rate at first eligibility for 55/30 (60/30, if applicable) Pension is 30% or above rate at applicable age, if higher

Retirement rates for inactive vested participants

Age	Annual Retirement Rates Not Eligible for Special Early	Annual Retirement Rates Eligible for Special Early but not for 55/30 (60/30) Pension	Annual Retirement Rates Eligible for 55/30 (60/30) Pension
55	5%	15%	65%
56	5	10	40
57	5	10	45
58	5	15	40
59	5	15	25
60	5	15	30
61	5	20	30
62	10	50	50
63	10	30	50
64	15	30	50
65	35	35	50
66-79	25	50	50
80	100	100	100

Description of weighted average retirement age for inactive vested participants

Age 67, determined as follows: The weighted average retirement age for each participant is calculated as the sum of the product of each potential current or future retirement age times the probability of surviving from current age to that age and then retiring at that age, assuming no other decrements. The overall weighted retirement age is the average of the individual retirement ages based on all the active participants included in the January 1, 2024 actuarial valuation.

Future benefit accruals

- For Construction employees: 1,750 hours per year
- For Production employees: 2,000 hours per year

The Funding Improvement Plan Option covering each participant, based on the current Option included in the census data provided for this valuation, is assumed to remain unchanged.

The Applicable Percentage under the Plan's benefit formula is 0.50% for 2024 and 2025. For 2026 and beyond, the average expected Applicable Percentage is 0.86%.

The average expected Applicable Percentage was determined by stochastically projecting the Plan's market investment returns after 2023. The stochastic projections were based on the long-term expected returns and volatility estimates as provided by the Plan's Investment Manager in 2024, as well as the Plan's target asset allocation.

Unknown data for participants

Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male.

Definition of active participants

Employees with at least 435 hours in the most recent plan year and who have accumulated at least one year of vesting service, excluding those who have retired as of the valuation date.

Percent married

80%

Age and Sex of spouse

Spouse of male participant is assumed to be three years younger than the participant and spouse of female participant is assumed to be three years older than the participant. If the spouse's sex is not provided, the spouse is assumed to be the opposite sex of the participant.

Benefit election

50% of participants are assumed to elect a single life annuity, 20% of participants are assumed to elect a 50% joint and survivor annuity (with popup, if available), and 30% of participants are assumed to elect a 100% joint and survivor annuity (with popup, if available).

Delayed retirement factors

Inactive vested participants after attaining age 65, with increases up to age 80.

Net investment return

7.25%

The net investment return assumption is a long-term estimate derived from historical data, current and recent market expectations, and professional judgment. As part of the analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classes as provided by Segal Marco Advisors, as well as the Plan's target asset allocation. In addition, stochastic modeling was performed based on the long-term expected returns and volatility estimates as provided by the Plan's Investment Manager.

Annual administrative expenses

$16,500,000 for the year beginning January 1, 2024 (equivalent to $15,889,373 payable at the beginning of the year) or 17.1% of Normal Cost.

The annual administrative expenses were based on historical and current data, adjusted to reflect estimated future experience and professional judgment.

Actuarial value of assets

The market value of assets less unrecognized returns in prior years. Unrecognized return is equal to the difference between the actual market return and the projected market return, and is recognized 20% per year over a five-year period. The actuarial value is further adjusted, if necessary, to be within 20% of the market value.

Actuarial cost method

Unit Credit Actuarial Cost Method. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis.

Benefits valued

Unless otherwise indicated, includes all benefits summarized in Exhibit M.

Current liability assumptions

- **Interest:** 3.29%, within the permissible range prescribed under IRC Section 431(c)(6)(E)
- **Mortality:** Mortality prescribed under IRS Regulations 1.431(c)(6)-1 and 1.430(h)(3)-1(a)(2): Pri-2012 employee and annuitant mortality tables, projected generationally using scale 2024 Adjusted MP-2021

Estimated rate of investment return

- **On actuarial value of assets (Schedule MB, line 6g):** 7.1%, for the Plan Year ending December 31, 2023
- **On current (market) value of assets (Schedule MB, line 6h):** 13.8%, for the Plan Year ending December 31, 2023

FSA contribution timing (Schedule MB, line 3a)

Unless otherwise noted, contributions are paid periodically throughout the year pursuant to collective bargaining agreements. The interest credited in the FSA is therefore assumed to be equivalent to a June 30 contribution date.

Actuarial models

Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are prepared to meet regulatory, legislative and client requirements. Deterministic cost projections are based on a proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible Enrolled Actuary.

Justification for change in actuarial assumptions (Schedule MB, line 11)

- Based on past experience and future expectations, the following actuarial assumptions were changed as of January 1, 2024 for funding purposes, and as applicable, December 31, 2023 for withdrawal liability purposes:
  - Mortality for Healthy Male Employees, previously 103% of the RP-2006 Blue Collar Male Employee Mortality Table, projected generationally from 2006 with scale MP-2018
  - Mortality for Healthy Female Employees, previously 108% of the RP-2006 Blue Collar Female Employee Mortality Table, projected generationally from 2006 with scale MP-2018
  - Mortality for Healthy Male Pensioners or Beneficiaries, previously 103% of the RP-2006 Blue Collar Healthy Annuitant Mortality Table, projected generationally from 2006 with scale MP-2018
  - Mortality for Healthy Female Pensioners or Beneficiaries, previously 108% of the RP-2006 Blue Collar Healthy Annuitant Mortality Table, projected generationally from 2006 with scale MP-2018
  - Mortality for Disabled Males, previously 90% of the RP-2006 Disabled Male Retiree Mortality Table, projected generationally from 2006 with scale MP-2018
  - Mortality for Disabled Females, previously 100% of the RP-2006 Disabled Female Retiree Mortality Table, projected generationally from 2006 with scale MP-2018
  - Annual administrative expenses, previously $15,500,000

Exhibit M: Summary of plan provisions

(Schedule MB, Line 6)

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan year

January 1 through December 31

Pension credit year

January 1 through December 31

Plan status

Ongoing plan

Normal retirement

- **Age Requirement:** None
- **Service Requirement:** Five years of participation in the Plan
- **Amount:** Described below:
  - **For service on and after January 1, 2014:**
    - Participant's Benefit Rate multiplied by the participant's Contribution Hours for the Plan Year multiplied by the Applicable Percentage for the Plan Year.
    - Benefit Rate is the portion of the participant's contribution rate that is subject to benefit accruals. For Participants working under a Collective Bargaining Agreement that qualifies for a 55/30 (or 60/30) Pension, the Benefit Rate is the total Contribution Rate less the 55/30 (or 60/30) Rate (30% of the Contribution Rate for periods after December 1, 2007).
    - Contribution Hours are the hours for which contributions are required to be made for the participant's work in Covered Employment.

- Applicable Percentage is based on the average of the Plan's rate of market value investment return for each of the three most recent Plan Years reported in the Actuarial Valuation and Review as of January 1 of the immediately preceding Plan Year and is defined in the following table:
- **For accruals between January 1, 2014 and December 31, 2023:**

Applicable Percentage	Average of Market Value Investment Return Percentages for 3 Most Recent Plan Years
1.25%	10.0% or higher
1.00%	8.5% or higher but less than 10.0%
0.75%	6.5% or higher but less than 8.5%
0.50%	Greater than 0% but less than 6.5%
0.00%	0% or less

- **For accruals on and after January 1, 2024:**

Applicable Percentage	Average of Market Value Investment Return Percentages for 3 Most Recent Plan Years
1.25%	9.5% or higher
1.00%	8.0% or higher but less than 9.5%
0.75%	6.0% or higher but less than 8.0%
0.50%	Less than 6.0%

- The above formula applies unless otherwise stated in a Funding Improvement Plan Option.
- The Applicable Percentage for the 2024 Plan Year is 0.50%.

– **For service and on and after adoption of Rehabilitation Plan Schedule and before January 1, 2014:**

- Default Schedule/Persons for Whom Contribution were Not Required to be Made ("Persons for Whom"): 1% of the amount determined by multiplying the participant's Benefit Rate by the participant's Contribution Hours for the Plan Year.
- First Alternative Schedule: Same as accrual for service on and after December 1, 2007 and before adoption of Rehabilitation Plan Schedule.
- Second Alternative Schedule: 1% of the amount determined by multiplying the participant's Benefit Rate by the participant's Contribution Hours for the Plan Year.

  - ❖ Formerly Alternative Schedule and Agreement Did Not Include Required Contribution Rate Increases - No Increase Consequences (“NIC”): 1% of the amount determined by multiplying the participant’s Benefit Rate by the participant’s Contribution Hours for the Plan Year.
- – **For service and on and after December 1, 2007 and before adoption of Rehabilitation Plan Schedule:**
  - ❖ Employers that have not made required contribution rate increases: Same as accrual for service after August 31, 2003.
  - ❖ Employers that have made required contribution rate increases: 1.5% of the amount determined by multiplying the participant’s Benefit Rate by the participant’s Contribution Hours for the Plan Year (up to 1,200 hours), plus 0.7% of the amount determined by multiplying the participant’s Benefit Rate by the participant’s Contribution Hours (over 1,200 hours). The 1.5% multiplier is applied to the first 1,200 hours at the highest Benefit Rate in effect during the Plan Year.
- – **For service and on and after August 31, 2003 and before December 1, 2007:**
  - ❖ 0.8571% of the amount determined by multiplying the participant’s Benefit Rate by the participant’s Contribution Hours (up to 1,400 hours), plus 0.3% of the amount determined by multiplying the participant’s Benefit Rate by the participant’s Contribution Hours (over 1,400 hours). For participants in 55/30 Locals, 80% of the total contribution rate is subject to benefit accruals. The 0.8571% multiplier is applied to the first 1,400 hours at the highest Benefit Rate in effect during the Plan Year.
  - ❖ Supplemental accruals:

    Locals are required to increase their contribution rates subject to benefit accruals by 10% annually for eligibility. Participants of Locals that make the required increases earn a supplemental accrual that brings the total accrual to twice the normal rate in the year following the increase.
- – **For service and on and after December 31, 1999 and before September 1, 2003:**
  - ❖ 1.7142% of the amount determined by multiplying the participant’s Benefit Rate by the participant’s Contribution Hours (up to 1,400 hours), plus 0.6% of the amount determined by multiplying the participant’s Benefit Rate by the participant’s Contribution Hours (over 1,400 hours). The 1.7142% multiplier is applied to the first 1,400 hours at the highest Benefit Rate in effect during the Plan Year.
- – **– For service before January 1, 2000:**
  - ❖ Benefit accrued according to the rules of the Plan in effect on December 31, 1999
- – **Past service:**
  - ❖ $10.00 for each year of Past Service Credit, if any, up to 10 years

• **Post-Normal Retirement Age Adjustment:** Regular pension accrued at Normal Retirement Age (NRA), increased by 1.0% for each month greater than NRA, and 1.5% for each month greater than age 70.

Early retirement

- The following applies to all participants with an effective date of pension on or after February 1, 2014 retiring under an early retirement provision (Standard Early Retirement, Special Early Retirement, Age 62 Pension, 55/30 Pension, and 60/30 Pension).
- Previously, the provisions described for benefits accrued before January 1, 2014 were in effect. Participant may be eligible for different early retirement provisions for pre-2014 and post-2013 accrued benefits. Portions of the post-2013 accrued benefits may also be subject different early retirement provisions depending on the classification of employment of the participant's Contribution Hours.

Standard Early Retirement

- **Age Requirement:** 55
- **Service Requirement:** Fulfill any one of the following:
  - 10 years of Pension Credits, including at least five years of Future Service Credit, or
  - 10 years of Vesting Service, or
  - 15 years of Pension Credits, including at least 12 months of Future Service Credit
- **Amount:** Normal Retirement benefit reduced as described below.
  - **For benefits accrued on and after January 1, 2014:**

    Reductions based on the participant's Funding Improvement Plan Option, which depends upon the Schedule or Rehabilitation Plan provision which applied to the classification of employment when the Plan was in critical status.

❖ Default Option	Actuarially from age 65 (Unsubsidized Early Retirement Pension)
❖ First Alternative Option	6% per year from age 65
❖ Second Alternative Option	Actuarially from age 65 (Unsubsidized Early Retirement Pension)

  - **For benefits accrued before January 1, 2014:**

    Reductions based on the participant's Funding Improvement Plan Option, which depends upon the Schedule or Rehabilitation Plan provision which applied to the classification of employment when the Plan was in critical status.

❖ Default Schedule/Persons for Whom	Actuarially from age 65 (Unsubsidized Early Retirement Pension)
❖ First Alternative Schedule	6% per year from age 65
❖ Second Alternative Schedule	Actuarially from age 65 (Unsubsidized Early Retirement Pension)
❖ NIC	Actuarially from age 65 (Unsubsidized Early Retirement Pension)

Special Early Retirement

- **Age Requirement:** 55
- **Service Requirement:** Fulfill any one of the following:
  - 10 years of Pension Credits, including at least five years of Future Service Credit, or
  - 10 years of Vesting Service, or
  - 15 years of Pension Credits, including at least 12 months of Future Service Credit
- **Active Service Requirement:** Complete at least 3,500 hours of work in covered employment during the five consecutive calendar years immediately preceding retirement
- **Amount:** Normal Retirement benefit reduced as described below.
  - **For benefits accrued on and after January 1, 2014:**

    Reductions based on the participant's Funding Improvement Plan Option, which depends upon the Schedule or Rehabilitation Plan provision which applied to the classification of employment when the Plan was in critical status.

❖ Default Option	Unavailable
❖ First Alternative Option	6% per year from age 62
❖ Second Alternative Option	Unavailable

  - **For benefits accrued before January 1, 2014:**

    Reductions based on the participant's Funding Improvement Plan Option, which depends upon the Schedule or Rehabilitation Plan provision which applied to the classification of employment when the Plan was in critical status.

❖ Default Schedule/Persons for Whom	Unavailable
❖ First Alternative Schedule	6% per year from age 62
❖ Second Alternative Schedule	Unavailable
❖ NIC	Unavailable

Age 62 Pension

- **Age Requirement:** 62
- **Service Requirement:** Same as Special Early Retirement
- **Active Service Requirement:** Same as Special Early Retirement
- **Amount:** Described below.
  - **For benefits accrued on and after January 1, 2014:**

    Reductions based on the participant's Funding Improvement Plan Option, which depends upon the Schedule or Rehabilitation Plan provision which applied to the classification of employment when the Plan was in critical status.

❖ Default Option	Unavailable
❖ First Alternative Option	Unavailable
❖ Second Alternative Option	Normal Retirement Benefit amount

  - **For benefits accrued before January 1, 2014:**

    Reductions based on the participant's Funding Improvement Plan Option, which depends upon the Schedule or Rehabilitation Plan provision which applied to the classification of employment when the Plan was in critical status.

❖ Default Schedule/Persons for Whom	Unavailable
❖ First Alternative Schedule	Unavailable
❖ Second Alternative Schedule	Normal Retirement Benefit amount
❖ NIC	Normal Retirement Benefit amount

55/30 Pension

- **Age Requirement:** 55
- **Service Requirement:** 30 years of Future Service Credit with at least 60 months of the last 120 months of Future Service Credit subject to a 55/30 Rate
- **Active Service Requirement:** Complete at least 3,500 hours of work in covered employment at 55/30 Rate during the five consecutive calendar years immediately preceding retirement
- **Amount:** Described below.
  - **For benefits accrued on and after January 1, 2014:**

    Reductions based on the participant's Funding Improvement Plan Option, which depends upon the Schedule or Rehabilitation Plan provision which applied to the classification of employment when the Plan was in critical status.

❖ Default Option	Unavailable
❖ First Alternative Option	Normal Retirement Benefit amount
❖ Second Alternative Option	Unavailable

  - **For benefits accrued before January 1, 2014:**

    Amount based on the participant's Home Local Schedule (Rehabilitation Plan Schedule) when the Plan was in critical status.

❖ Default Schedule/Persons for Whom	Unavailable
❖ First Alternative Schedule	Normal Retirement Benefit amount
❖ Second Alternative Schedule	Unavailable
❖ NIC	Unavailable

60/30 Pension

- **Age Requirement:** 60
- **Service Requirement:** Same as 55/30 Pension
- **Active Service Requirement:** Same as 55/30 Pension
- **Amount:** Described below.
  - **For benefits accrued on and after January 1, 2014:**

    Reductions based on the participant's Funding Improvement Plan Option, which depends upon the Schedule or Rehabilitation Plan provision which applied to the classification of employment when the Plan was in critical status.

    - Default Option — Unavailable
    - First Alternative Option — Unavailable
    - Second Alternative Option — Normal Retirement Benefit amount
  - **For benefits accrued before January 1, 2014:**

    Amount based on the participant's Home Local Schedule (Rehabilitation Plan Schedule) when the Plan was in critical status.

    - Default Schedule/Persons for Whom — Unavailable
    - First Alternative Schedule — Unavailable
    - Second Alternative Schedule — Normal Retirement Benefit amount
    - NIC — Unavailable

Full Disability

- **Age Requirement:** Under age 55
- **Service Requirement:** 10 years of Credited Service, including at least five years of Future Service Credit
- **Active Service Requirement:** Worked at least 435 hours in the 24-month period immediately preceding application date of disablement
- **Other Requirement:** Approved for disability benefit with the Social Security Administration or Railroad Retirement Board
- **Amount:** Early Retirement benefit amount, payable beginning in the seventh month of disability
- **Charge for Coverage:** None
- The Disability Benefit is not payable for participants categorized as Persons for Whom when the Plan was in critical status unless all eligibility conditions had been satisfied before January 1, 2010.

Vesting

- **Age Requirement:** None
- **Service Requirement:** Five years of Vesting Service.
- **Amount:** Regular or early pension accrued based on plan in effect when last active
- **Normal Retirement Age:** 65

Spouse's pre-retirement death benefit

- **Age Requirement:** None
- **Service Requirement:** Has attained Vested Status
- **Amount:** 50% of the monthly benefit the participant would have received had he/she terminated employment on his/her date of death and survived to his/her Early Retirement Date (or any later date elected by the spouse), retired and elected to receive benefits in the Normal Form of payment.

- **When Paid:** Immediately if participant's death occurred after attainment of his/her earliest retirement age, otherwise month in which the participant would have attained his/her earliest retirement age. If surviving spouse elects to receive payments before the month in which participant would have attained his/her earliest retirement age, the monthly benefit will be the actuarial equivalent of the amount described above.

  Or

- **Age Requirement:** None
- **Service Requirement:** Has attained Vested Status, 2,000 or more hours in the last five years prior to death, and died on or after January 1, 2023
- **Amount:** 75% of the monthly benefit the participant would have received if they retired and elected the 75% Joint and Survivor Benefit. If the participant dies prior to age 55, the monthly benefit will be calculated as though the Participant had attained age 55 at the time of death, had satisfied the eligibility requirements to receive a pension at age 55, and retired with a 75% Joint and Survivor Form of payment on the day before his or her death.
- **When Paid:** Immediately

Pre-retirement lump-sum death benefit

- **Age Requirement:** None
- **Eligibility:** Date of death after December 31, 2022; has attained Vested Status; no portion of the benefit assigned to an Alternative Payee under a QDRO; and worked at least 435 hours within 24-month period preceding death
- **Amount**: Greater of $5,000 or 36 times the monthly Lifetime Pension that the Participant accrued at the time of death, including any early retirement reductions. If the participant dies prior to age 55, the monthly Lifetime Pension will be calculated as though the Participant had attained at age 55 at the time of death and otherwise satisfied the requirements for a Lifetime Pension.

Post-retirement death benefit

- 50% Joint and Survivor: If married, pension benefits are paid in the form of a 50% joint and survivor annuity unless the participant and spouse reject this form. If not rejected, the benefit amount otherwise payable is reduced to reflect the joint and survivor coverage. If not rejected, the spouse predeceases the employee, and the employee retired on March 1, 1999 or later, the employee's benefit amount will subsequently be increased to the unreduced amount payable ("pop-up" feature) had the joint and survivor coverage been rejected. If rejected, or if not married, benefits are payable for the life of the employee, or in any other available optional form elected by the employee in an actuarially equivalent amount.

The "pop-up" feature is only applicable to pre-2014 benefits if the participant's Home Local Schedule/Rehabilitation Plan Schedule as of December 31, 2013 was the First Alternative Schedule or Second Alternative Schedule. It is only applicable to post-2013 benefits attributable to Contribution Hours worked under a collective bargaining agreement satisfying the required contribution rate increases under the Rehabilitation Plan First Alternative Schedule/Funding Improvement Plan First Alternative Option or Rehabilitation Plan Second Alternative Schedule/Funding Improvement Plan Second Alternative Option.

- 60-Month Certain: If the member has completed at least 15 years of Pension Credits before retirement and died within 5 years after retirement (if married, and taking joint and survivor pension, the spouse also died prior to receiving an amount equal to 60 times the amount of the pension the participant had been entitled), the pension benefit will continue to be paid to the participant's designated beneficiary until a total of 60 months payments had been made.

  The 60-month certain is only applicable to pre-2014 benefits if the participant's Home Local Schedule/Rehabilitation Plan Schedule as of December 31, 2013 was the First Alternative Schedule or Second Alternative Schedule. It is only applicable to post-2013 benefits attributable to Contribution Hours worked under a collective bargaining agreement satisfying the required contribution rate increases under the Rehabilitation Plan First Alternative Schedule/Funding Improvement Plan First Alternative Option or Rehabilitation Plan Second Alternative Schedule/Funding Improvement Plan Second Alternative Option.

Forms of benefits

The normal forms of payment are:

- Single life annuity for single participants, and
- 50% joint and survivor annuity with a "pop-up" feature for married participants (if applicable)

The available optional forms of payment are:

- Single life annuity with 60-month certain (if applicable)
- 50% joint and survivor annuity with a "pop-up" feature and 60-month certain (if applicable)
- 75% joint and survivor annuity with a "pop-up" feature (if applicable)
- 100% joint and survivor annuity with and without a "pop-up" feature (if applicable)

The "pop-up" feature and 60-month certain are only applicable to pre-2014 benefits if the participant's Home Local Schedule/Rehabilitation Plan Schedule as of December 31, 2013 was the First Alternative Schedule or Second Alternative Schedule. They are only applicable to post-2013 benefits attributable to Contribution Hours worked under a collective bargaining agreement satisfying the required contribution rate increases under the Rehabilitation Plan First Alternative Schedule/Funding Improvement Plan First Alternative Option or Rehabilitation Plan Second Alternative Schedule/Funding Improvement Plan Second Alternative Option.

Participation

After completion of 870 hours during a calendar year.

Past service credit

Service granted on the basis of days worked or amount earned in covered employment in calendar years prior to a participant's Contribution Date. For employers with a Contribution Date on or after January 1, 2000, the employer's initial contribution rate must be at least $0.50 per hour.

Future service credit

Service granted on the basis of hours of work in a calendar year after a Participant's Contribution Date in accordance with the following schedule:

Months of Future Service Credit	Hours of Work in Covered Employment During Calendar Year
0	Less than 100
1	100 - 199
2	200 - 299
3	300 - 399
4	400 - 499
5	500 - 599
6	600 - 699
7	700 - 799
8	800 - 899
9	900 - 999
10	1,000 - 1,099
11	1,100 - 1,199
12	1,200 & Over

Pension credit

Sum of the Past Service Credit and Future Service Credit (excluding service lost under the Plan's break in service rules).

Vesting credit

870 or more hours of work within a Plan year earns one year of Vesting Service.

Contribution rate

Varies from $0.05 to $19.88 per hour as of the valuation date. The average rate is $5.42 per hour as of December 31, 2023. 2.5% of certain employer contributions are allocated to 401(h) Medical Accounts but are subject to pension benefit accruals.

Required contribution rate increases

Contribution rate increases required under the Funding Improvement Plan Options are described below.

- First Alternative Option: 2.0% for 2025 and 2026.
- Second Alternative Option: 1.0% for 2025 and 2026.

Cost of Living Adjustment (COLA)

- **Eligibility:** Pensioners and beneficiaries whose benefits are based on contribution rates that were increased by the Required Pension Fund Increase and who separated and retired from Covered Employment on or after January 1, 1991 and before December 1, 2001. No payment is made after January 1, 2008 unless the annual supplement had been in effect 60 months before that date (i.e., the benefit must have been payable on the participant's Allocation Date for 2002 – October 31, 2002).
- **Amount:** An annual supplement equal to 2% of the participant's total monthly payments for the 12 months immediately preceding the Allocation Date, multiplied by the number of whole years preceding the Allocation Date that the participant or beneficiary has received benefits, up to a maximum of 15 years. If the participant had elected a level income option, the 2% factor is applied to the benefit prior to the adjustment for the form of payment.
  - Effective July 1, 1995, no NPF COLA Benefit is payable with respect to any benefits accrued after June 30, 1995.

A participant who was retired and received an annual supplemental increase under the NPF COLA Benefit for the 2002 Allocation Date will continue to receive the benefit, but it will not exceed the supplement that was paid for the 2002 Allocation Date (i.e., it remains fixed at that amount).

Changes in plan provisions

The following plan changes are first reflected in this valuation:

- Effective January 1, 2024, for deaths occurring on or after January 1, 2023, the amount of Spouse's Pre-Retirement Death Benefit was increased for vested participants who worked 2,000 or more hours in the last five years prior to death. The amount increased to 75% of the monthly benefit the participant would have received if they retired and elected the 75% Joint and Survivor Benefit. If the participant dies prior to age 55, the monthly benefit will be calculated as though the Participant had attained age 55 at the time of death, had satisfied the eligibility requirements to receive a pension at age 55, and retired with a 75% Joint and Survivor Form of payment on the day before his or her death.
- Effective January 1, 2024, for deaths occurring on or after December 31, 2022, the amount of Pre-Retirement Lump Sum Death Benefit was increased for those who were vested and worked at least 435 hours within 24-month period preceding death and had no portion of their benefit assigned to an Alternative Payee under a QDRO. The amount was increased to the greater of $5,000 or 36 times the monthly Lifetime Pension that the Participant accrued at the time of death, including any early retirement reductions. If the participant dies prior to age 55, the monthly Lifetime Pension will be calculated as though the Participant had attained at age 55 at the time of death and otherwise satisfied the requirements for a Lifetime Pension.
- Variable Benefit Accrual Rate (VBAR) formula revised for prospective benefit accruals effective January 1, 2024:

3-Year Average of Market Value Investment Return (Old Formula)	Applicable Percentage of Contributions (Old Formula)	3-Year Average of Market Value Investment Return (New Formula)	Applicable Percentage of Contributions (New Formula)
10.0% or higher	1.25%	**9.5%** or higher	1.25%
8.5% or higher but less than **10.0%**	1.00%	**8.0%** or higher but less than **9.5%**	1.00%
6.5% or higher but less than **8.5%**	0.75%	**6.0%** or higher but less than **8.0%**	0.75%
Higher than **0%** but less than **6.5%**	0.50%	Less than **6.0%**	0.50%
0% or less	0.00%	---	

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