



Commonwealth of Pennsylvania
Retired Employees Health Program
GASB Statement Nos. 74 and 75 Valuation Report

Measurement date of June 30, 2021

Prepared by Deloitte Consulting LLP

September 2021

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Actuarial Valuation Opinion

This report presents results of the actuarial valuation of the Commonwealth of Pennsylvania's Retired Employees Health Program ("the Plan" or "REHP") measured as of June 30, 2021. In this report, we present disclosure information measured as of June 30, 2021 as required by Government Accounting Standards Board Statement Nos. 74 and 75 (GASB Nos. 74 and 75). In our opinion, this report is complete and accurate and represents fairly the actuarial position of the Plan for the purposes stated herein.

Actuarial information under GASB Nos. 74 and 75 is for purposes of fulfilling trust and employer financial accounting requirements. The results have been prepared on a basis consistent with our understanding of GASB Nos. 74 and 75 and are based upon assumptions prescribed by the Commonwealth of Pennsylvania. Determinations for purposes other than meeting employer financial accounting requirements may be significantly different from the results reported herein.

The Commonwealth of Pennsylvania provided the participant data, financial information, and plan descriptions used in this valuation. The actuary has analyzed the data and other information provided for reasonableness but has not independently audited the data or other information provided. The actuary has no reason to believe the data or other information provided is not complete and accurate and knows of no further information that is essential to the preparation of the actuarial valuation.

In our opinion, all costs, liabilities, rates of interest, and other factors underlying these actuarial computations have been determined on the basis of actuarial assumptions and methods that are each reasonable (or consistent with authoritative guidance) for the purposes herein taking into account the experience of the Plan and future expectations.

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 operations of the methodology used for these measurements (such as the additional cost or contribution requirements based on the Plan's funded status); and changes in program provisions or applicable law. Our scope for this actuarial valuation did not include analyzing the potential range of such future measurements, and we did not perform that analysis.

The undersigned with actuarial credentials collectively meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

This report was prepared solely for the benefit and internal use of the plan sponsor. This report is not intended for the benefit of any other party and may not be relied upon by any third party for any purpose, and Deloitte Consulting accepts no responsibility or liability with respect to any party other than the plan sponsor.

To the best of our knowledge, no employee of the Deloitte U.S. Firms is an officer or director of the employer. In addition, we are not aware of any relationship between the Deloitte U.S. Firms and the employer that may impair or appear to impair the objectivity of the work detailed in this report.

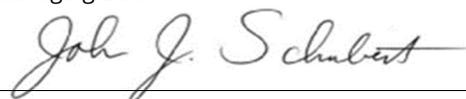
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Executive Summary

Governmental Accounting Requirements and Report Purpose

The Governmental Accounting Standards Board released the Statement of Governmental Accounting Standards Nos. 74 and 75 in June 2015. GASB No. 74 establishes financial reporting requirements for OPEB plans that have assets accumulated in a trust or equivalent arrangement for the purpose of funding OPEB. GASB No. 75 details the reporting and disclosure requirements for employers with payables (OPEB liabilities) to employees of state and local governmental employers through defined benefit OPEB plans that are administered through trusts or equivalent arrangements. The Commonwealth of Pennsylvania adopted GASB No. 74 in the fiscal year ended June 30, 2017 and GASB No. 75 in the fiscal year ended June 30, 2018.

The purpose of this actuarial valuation report is to provide information for the Commonwealth's trust and employer financial reporting. The information provided herein will be used for the fiscal year ended June 30, 2021 GASB No. 74 disclosures and fiscal year ending June 30, 2022 GASB No. 75 disclosures (the Commonwealth has elected to use a measurement date as of the end of the prior fiscal year end for GASB No. 75).

Summary of Results

The key results for the measurement period ended June 30, 2021 are:

- Net OPEB Liability (NOL) is \$10.2 billion, 245.9% of covered employee payroll.
- Plan Fiduciary Net Position (FNP) as a percentage of Total OPEB Liability (TOL) is 6.1%.
- OPEB Expense/(Income) is \$(1.6) billion.

Significant Changes from the Previous Actuarial Valuation

For the June 30, 2021 measurement, there was a decrease in TOL of \$1.9 billion compared to the previous valuation, with the decrease primarily due to the following:

- There was an expected \$0.4 billion increase in TOL due to the passage of time (service cost, interest, benefit payments, retiree contributions);
- There was a \$1.2 billion decrease in TOL due to changes in actuarial assumptions, driven primarily by an increase in the discount rate assumption due to partial pre-funding and partially offset by the mortality assumption update;
- The actual experience over the past year was different than expected, resulting in a \$1.1 billion decrease in TOL. This experience gain was caused primarily by decreases in per capita claims costs due to favorable claims experience.

Background and Comments

Overview of Plan

The Commonwealth sponsors the Retired Employees Health Program (REHP) for eligible retirees and their dependents to receive subsidized health coverage for the retiree's lifetime.

Funding Policy

The Commonwealth created the OPEB Investment Pool, a Trust Equivalent Arrangement, during the fiscal year ended June 30, 2008. The Commonwealth plans to contribute \$50 million annually until assets cover the present value of future benefits, subject to annual evaluation.

During the fiscal year ended June 30, 2021, employing agencies and certain plan members contributed \$230 per biweekly pay period for each current REHP eligible active employee to the REHP Trust for the first seven months. Contributions were temporarily eliminated the last five months of the fiscal year ended June 30, 2021. Certain employing agencies contribute under a separate payment arrangement. Employer contributions made to the REHP Trust, a Trust Equivalent Arrangement, are irrevocable. Plan assets are restricted for use for the provision and administration of REHP retirees' health benefits. Employers maintain no rights of ownership to the assets and the trust.

The OPEB Investment Pool's target asset allocation as of June 30, 2021 is shown in the table below.

Asset Class	Target Allocation
US Equity	40.0%
Non-US Equity	27.0%
Real Estate	8.0%
Private Equity	0.5%
US Fixed Income	23.0%
Cash Equivalent	1.5%
Total	100%

Health Care Reform

The Patient Protection and Affordable Care Act ("PPACA") was signed into law on March 23, 2010. The primary objective of the act is to increase the number of Americans with health insurance coverage. There are several provisions within PPACA with potentially significant short- and long-term cost implications for employers. The applicable provisions of PPACA were first accounted for in the July 1, 2010 valuation. On December 18, 2015, the Consolidated Appropriations Act, 2016 became law. This legislation delayed the effective date of the high cost plan excise tax from 2018 to 2020 and made it tax deductible. On January 22, 2018, the Federal Register Printing Savings Act further delayed the effective date from 2020 to 2022. On December 20, 2019, the excise tax and the health insurance provider fee for calendar years beginning after December 31, 2020 were repealed.

The provisions of PPACA considered are as follows:

- Prohibiting lifetime and annual limits on the dollar value of coverage for "essential health benefits"
- Increasing the dependent child age limit to age 26
- Elimination of cost sharing for in-network preventive services
- Reflecting manufacturer discounts available to certain Medicare beneficiaries receiving applicable covered Part D drugs (mostly brand) while in the coverage gap
- Out-of-pocket limit includes both medical and Rx expenses.

The impact of applicable provisions was incorporated in the per capita claims costs summarized in the Actuarial Assumptions section of this report.

Actuarial Methods and Assumptions

The Commonwealth of Pennsylvania State Employees' Retirement System (SERS) performs experience studies periodically to determine reasonable and appropriate economic and demographic assumptions for purposes of valuing the defined benefit pension plan. The most recent SERS experience study covered the years 2015 through 2019 and was presented to the State Employees' Retirement Board in July 2020. The approved recommendations from that study were used to determine the assumptions for this valuation, where applicable. Consistent with prior valuations, these demographic assumptions assume beginning of year decrements (retirement, withdrawal, death, disability, etc.). In addition, Deloitte periodically reviews actuarial assumptions only applicable to the postemployment medical plan outside of the experience study, such as medical trend rates and age-graded medical rates.

One significant assumption where the recommendation of the experience study is not applicable to this retiree health benefit valuation is the discount rate. As prescribed by GASB Nos. 74 and 75, the June 30, 2021 single discount rate of 3.63% was based on the long-term expected rate of return on assets held in the OPEB investment pool (6.75%) and a municipal bond rate of 2.16% (based on the 20-year Bond Buyer GO Index as of the end of June 2021). Based on the stated assumptions and the projection of cash flows, the Plan's Fiduciary Net Position and future contributions were not sufficient to finance all future benefit payments of the current plan members. Therefore, the long-term expected rate of return on the OPEB investment pool was applied to projected benefit payments through the year 2047 (the last year in which the Plan's Fiduciary Net Position is projected to be sufficient to meet projected benefit payments) and the municipal bond rate was applied to all remaining future years to determine the Total OPEB Liability. The projection of cash flows used to determine the single discount rate for each fiscal year end assumed that employer contributions were made based on the current funding policy for all future years. The analysis is provided in the Development of June 30, 2021 Discount Rate section of this report.

The actuarial methods and assumptions are described in the Basis of the Valuation section of this report.

Summary of Actuarial Valuation

This section provides a summary of the actuarial valuation results for REHP in total. All information is provided as of the measurement date except for the census data. The valuation results as of the June 30, 2020 measurement date were based on December 31, 2019 census data, and valuation results as of the June 30, 2021 measurement date were based on December 31, 2020 census data. All liabilities are net of expected retiree contributions.

(All dollar amounts are in thousands)

Measurement Date	June 30, 2021	June 30, 2020
Total OPEB Liability	\$ 10,899,184	\$ 12,788,546
Plan Fiduciary Net Position	\$ 666,929	\$ 469,053
Net OPEB Liability	\$ 10,232,255	\$ 12,319,493
Plan Fiduciary Net Position As A Percentage Of Total OPEB Liability	6.1%	3.7%
Net OPEB Liability As A Percentage Of Covered Employee Payroll	245.9%	301.7%
Discount Rate	3.63%	2.21%
Participant Counts		
Active Participants	68,336	69,070
Retired Participants*	<u>64,251</u>	<u>64,509</u>
Total	132,587	133,579
Covered Employee Payroll	\$ 4,161,481	\$ 4,083,699

* Retired participants include retirees, disabled participants, and surviving family members.

GASB Nos. 74 and 75 Disclosures

GASB Nos. 74 and 75 requires disclosure of notes to the financial statements and required supplementary information that includes information shown in this section. The valuation results as of the June 30, 2020 measurement date were based on December 31, 2019 census data and employer contributions for the fiscal year ended June 30, 2020. The valuation results as of the June 30, 2021 measurement date were based on December 31, 2020 census data and employer contributions for the fiscal year ended June 30, 2021.

For reporting purposes, the associated liabilities, expenses and other disclosure items are reported for different covered populations:

- Most primary government agencies and component units contribute at the retiree health assessment rate.
- One primary government agency and three component units participate under separate contribution arrangements. The agency and the component units contribute the actual fiscal year benefit payments attributable to their respective retirees.
 1. Health Care Cost Containment (FT = 001; BA = 43)
 2. PHEAA (FT = 079; BA = AA)
 3. Philadelphia Regional Port Authority (FT = 140; BA = 88)
 4. Port of Pittsburgh Commission (FT = 141; BA = 88)
- The primary results are presented for REHP in total.

Schedule of Changes in Net OPEB Liability

(All dollar amounts are in thousands)

	Discount Rate	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a)-(b)
Measurement Date of June 30, 2020	2.21%	\$ 12,788,546	\$ 469,053	\$ 12,319,493
Service Cost		473,034		473,034
Interest		288,619		288,619
Changes In Benefit Terms		-		-
Changes In Assumptions - Discount Rate		(2,198,913)		(2,198,913)
Changes In Assumptions - Others		1,027,844		1,027,844
Differences Between Expected And Actual Experience		(1,073,951)		(1,073,951)
Benefit Payments				
Insurance Premiums - Employer Paid	\$ (405,995)			
Insurance Premiums - Retiree Paid	<u>(49,517)</u>			
Total		(455,512)	(455,512)	-
GASB 75 Defined Employer Contributions	\$ 451,879		451,879	(451,879)
Contributions - Employee			-	-
Contributions - Retiree		49,517	49,517	-
Administrative Expenses			(5,807)	5,807
Net Investment Income				
Expected Investment Earnings	\$ 24,442			
Differences Between Projected And Actual Investment Earnings	<u>133,357</u>			
Total			157,799	(157,799)
Net Change		\$ (1,889,362)	\$ 197,876	\$ (2,087,238)
Measurement Date of June 30, 2021	3.63%	\$ 10,899,184	\$ 666,929	\$ 10,232,255
Measurement Date			June 30, 2021	June 30, 2020
Plan Fiduciary Net Position As A Percentage Of Total OPEB Liability			6.1%	3.7%
Covered Employee Payroll			\$4,161,481	\$ 4,083,699
Net OPEB Liability As A Percentage Of Covered Employee Payroll			245.9%	301.7%
Sensitivity of Liability to Changes in Discount Rate			\$ Change	% Change
A one percentage point change in discount rate would have the following effect on Total OPEB Liability as of June 30, 2021:				
One Percentage Increase (4.63%)			\$ (1,240,422)	-11%
One Percentage Decrease (2.63%)			\$ 1,492,109	14%
Net OPEB Liability at a one percentage point change in discount rate as of June 30, 2021 is as follows:				Net OPEB Liability
One Percentage Increase (4.63%)				\$ 8,991,833
One Percentage Decrease (2.63%)				\$ 11,724,364
Sensitivity of Liability to Changes in Trend Rate			\$ Change	% Change
A one percentage point change in trend rate would have the following effect on Total OPEB Liability as of June 30, 2021:				
One Percentage Increase (7.9% / 7.7% grading to 5.0%)			\$ 1,908,893	18%
One Percentage Decrease (5.9% / 5.7% grading to 3.0%)			\$ (1,530,618)	-14%
Net OPEB Liability at a one percentage point change in trend rate as of June 30, 2021 is as follows:				Net OPEB Liability
One Percentage Increase (7.9% / 7.7% grading to 5.0%)				\$ 12,141,148
One Percentage Decrease (5.9% / 5.7% grading to 3.0%)				\$ 8,701,637
Key Assumptions			June 30, 2021	June 30, 2020
Discount Rate			3.63%	2.21%
Investment Rate of Return			6.75%	5.00%
Inflation			2.50%	2.60%
Initial Medical Trend Rate			6.9% / 6.7%	6.6% / 6.1%
Ultimate Medical Trend Rate			4.0%	4.1%
Year Ultimate Trend Rate Reached			2075	2075

**Development of OPEB Expense for Fiscal Year Ending June 30, 2022
(Measurement Year June 30, 2021)**

(All dollar amounts are in thousands)

Components of OPEB Expense	Measurement Year Ended 06/30/2021	Measurement Year Ended 06/30/2020
Service Cost	\$ 473,034	\$ 353,220
Interest	288,619	384,165
Expected Investment Earnings	(24,442)	(21,835)
Contributions - Employee	-	-
Administrative Expenses	5,807	5,707
Changes In Benefit Terms	-	-
Recognition of Current Period Deferred Outflows and (Inflows)		
Changes in assumptions	(202,958)	281,737
Differences between expected and actual experience	(186,127)	2,254
Differences between expected and actual investment earnings	(26,671)	3,883
Recognition of Beginning Deferred Outflows	358,158	70,284
Recognition of Beginning Deferred Inflows	(2,329,148)	(2,329,150)
OPEB Expense	\$ (1,643,728)	\$ (1,249,735)
Assumptions Used to Determine OPEB Expense	Measurement Year Ended 06/30/2021	Measurement Year Ended 06/30/2020
Assumptions as of Measurement Date*	6/30/2020	6/30/2019
Discount Rate	2.21%	3.50%
Investment Rate of Return	5.00%	5.00%
Inflation	2.60%	2.60%
Initial Medical Trend Rate	6.6% / 6.1%	6.0% / 5.9%
Ultimate Medical Trend Rate	4.1%	4.1%
Year Ultimate Trend Rate Reached	2075	2075

* Per Q&A 4.114 and 4.115 of GASB Implementation Guide No. 2017-3, Service Cost and Interest are determined "based on the results of the actuarial valuation that determined the beginning net OPEB liability".

Schedule of Deferred Outflows and Deferred Inflows of Resources

(All dollar amounts are in thousands)

Measurement Date Established	Initial Amount	Deferred Outflows of Resources as of 06/30/2021	Deferred (Inflows) of Resources as of 06/30/2021*	Initial Years	Remaining Years	Outflows/(Inflows) Recognized in Measurement Year Ended 06/30/2021
Changes In Assumptions						
06/30/2017	\$ (2,228,187)	\$ -	\$ (292,142)	5.08 - 8.54	0.08 - 3.54	\$ (387,199)
06/30/2018	(576,855)	-	(174,867)	5.74	1.74	(100,497)
06/30/2019	403,428	192,576	-	5.74	2.74	70,284
06/30/2020	1,617,170	1,053,696	-	5.74	3.74	281,737
06/30/2021	(1,171,069)	-	(968,111)	5.77	4.77	(202,958)
Total		\$ 1,246,272	\$ (1,435,120)			\$ (338,633)
Differences Between Expected And Actual Plan Experience						
06/30/2018	\$ (5,445,495)	-	\$ (1,650,723)	5.74	1.74	\$ (948,693)
06/30/2019	(5,082,545)	-	(2,426,162)	5.74	2.74	(885,461)
06/30/2020	12,936	8,428	-	5.74	3.74	2,254
06/30/2021	(1,073,951)	-	(887,824)	5.77	4.77	(186,127)
Total		\$ 8,428	\$ (4,964,709)			\$ (2,018,027)
Net Difference Between Projected And Actual Earnings On Investments						
06/30/2017	\$ (20,568)	-	-	5.00	0.00	\$ (4,112)
06/30/2018	(12,635)	-	(2,527)	5.00	1.00	(2,527)
06/30/2019	(3,298)	-	(1,321)	5.00	2.00	(659)
06/30/2020	19,414	11,648	-	5.00	3.00	3,883
06/30/2021	(133,357)	-	(106,686)	5.00	4.00	(26,671)
Total**		\$ 11,648	\$ (110,534)			\$ (30,086)
Contributions subsequent to measurement date***						
To be determined by each participating employer.						
Balance as of 06/30/2021 Measurement Date		\$ 1,266,348	\$ (6,510,363)			\$ (2,386,746)
Deferred Outflows And Deferred (Inflows) Of Resources Will Be Recognized In Expense As Follows:						
Measurement Year Ending:						Outflows/(Inflows)
06/30/2022						\$ (2,271,958)
06/30/2023						(1,726,287)
06/30/2024						(737,256)
06/30/2025						(208,919)
06/30/2026						(299,595)
Thereafter						-

* Deferred (Inflows) should be disclosed as positive numbers in the CAFR.

** Per GASB 75 Paragraph 43.b, Deferred outflows of resources and deferred inflows of resources arising from differences between projected and actual OPEB plan investment earnings in different measurement periods should be aggregated and reported as a net deferred outflow of resources related to OPEB or a net deferred inflow of resources related to OPEB. Therefore, a net deferred inflow of \$(98,886) is recognized as of 06/30/2021.

*** Reflects employer contributions made subsequent to 06/30/2021. This will be recognized as a reduction in Net OPEB Liability next year.

10-Year Schedule of Net OPEB Liability

(All dollar amounts are in thousands)

Measurement Year Ended	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (c)	Plan Fiduciary Net Position As A Percentage Of Total OPEB Liability (d)	Covered Employee Payroll (e)	Net OPEB Liability As A Percentage Of Covered Employee Payroll (f)
			(a)-(b)	(b)/(a)		(c)/(e)
June 30, 2016	\$21,910,888	\$200,596	\$21,710,292	0.9%	N/A	N/A
June 30, 2017	\$20,336,764	\$282,429	\$20,054,335	1.4%	\$3,902,336	513.9%
June 30, 2018	\$15,015,975	\$333,848	\$14,682,127	2.2%	\$3,911,464	375.4%
June 30, 2019	\$10,821,333	\$407,480	\$10,413,853	3.8%	\$3,992,729	260.8%
June 30, 2020	\$12,788,546	\$469,053	\$12,319,493	3.7%	\$4,083,699	301.7%
June 30, 2021	\$10,899,184	\$666,929	\$10,232,255	6.1%	\$4,161,481	245.9%

Participating Employers Results

The REHP is a single-employer defined-benefit OPEB Plan that is established and sponsored by the Commonwealth. In addition to the Commonwealth agencies, there are several component units that have elected to participate in the REHP. Both GASB 74 and GASB 75 consider a primary government and its component units to be one employer. Hence, if a defined-benefit OPEB plan is used to provide OPEB to the employees of only one employer, the OPEB plan should be classified for financial reporting as a single-employer defined benefit OPEB plan. GASB 75, paragraph 24 requires the Commonwealth as the financial reporting entity to follow the single-employer reporting and disclosure requirements identified in GASB 75, paragraphs 47-58. Further, GASB 75, paragraph 24 requires the component units to follow the cost-sharing employer reporting and disclosure requirements identified in GASB 75, paragraphs 59-98. To satisfy the component unit reporting requirements, a proportionate share was determined for each Commonwealth agency and component unit. For the entities that contribute at the same employer health assessment rate, the proportionate share is based on current year contractually required contributions. For the one Commonwealth agency and three component units that participated under contribution terms unique to their agencies, the proportionate share is based on their subset demographics' Total OPEB Liability.

Basis for the Valuation

Plan Participation Summary

The participant data used in the valuation was provided by the Commonwealth as of December 31, 2020. While the participant data was checked for reasonableness, the data was not audited, and the valuation results presented in this report are dependent upon the accuracy of the participant data provided. This section presents a summary of the basic participant information for the active and retired participants covered under the terms of the Plan.

<hr/>			
a. Active Participants			
Total Counts		68,336	
Average Age		47.15	
Average Service		12.81	
b. Retired Participants			
	Employees*		Spouses
Counts			
Under Age 65 Non-Medicare	12,182		10,425
Under Age 65 Medicare	2,796		1,088
Over age 65 Non-Medicare	12		8
Over age 65 Medicare	49,261		21,434
Total Counts	<hr/>	64,251	<hr/>
Average Age		71.59	
c. Total Participants**			
		132,587	
d. Inactive Participants Entitled To But			
Not Yet Receiving Benefits***		18,188	

* Employees include retirees and 3,091 surviving spouses

** Total participant count excludes dependent spouses

*** These retirees who currently elect to waive coverage are assumed to remain uncovered in the future; therefore, they are excluded from the valuation.

Plan Participation Summary (cont.)

Distribution of Service Groups by Age Groups									
Age Group	Retired Participant	Active Participants - Years of Service							Total
		0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	
<20	-	14	-	-	-	-	-	-	14
20-24	-	722	17	-	-	-	-	-	739
25-29	1	3,311	1,061	19	-	-	-	-	4,391
30-34	15	3,000	2,966	922	45	-	-	-	6,933
35-39	59	2,182	2,309	2,403	1,050	50	-	-	7,994
40-44	119	1,825	1,783	1,933	2,180	854	37	1	8,613
45-49	376	1,584	1,555	1,716	1,978	1,885	884	60	9,662
50-54	1,622	1,506	1,481	1,625	1,909	1,665	1,691	799	10,676
55-59	3,922	1,257	1,384	1,593	1,800	1,440	1,178	1,499	10,151
60-64	8,864	767	1,120	1,198	1,471	786	512	637	6,491
65-69	13,824	143	353	450	536	235	139	193	2,049
70-74	15,111	26	68	112	111	77	36	71	501
75-79	8,839	2	3	21	25	12	7	27	97
80-84	5,576	-	1	2	2	5	5	4	19
85-89	3,472	-	-	1	1	-	-	4	6
90+	2,451	-	-	-	-	-	-	-	-
Total	64,251	16,339	14,101	11,995	11,108	7,009	4,489	3,295	68,336

Participant Reconciliation				
	<u>Active</u>	<u>Retirees</u>	<u>Beneficiaries</u>	<u>Total</u>
Beginning of Year (12/31/2019)	69,070	61,698	2,811	133,579
New Hire	3,626	0	0	3,626
Opt-In	1,143	0	0	1,143
New Retiree/Beneficiary	(2,292)	2,292	580	580
Death/Termination/Opt-Out	<u>(3,211)</u>	<u>(2,830)</u>	<u>(300)</u>	<u>(6,341)</u>
End of Year (12/31/2020)	68,336	61,160	3,091	132,587

Program Provisions Summary

This section summarizes overall eligibility provisions for retiree health coverage, the various plans offered by the Commonwealth.

Eligibility

Eligible employees who retire from the state and meet one of the following eligibility criteria are eligible to receive REHP benefits

- 25 or more years of service;
- 20 or more years of service and superannuation age as follows:
 - Hired before 1/1/2011: Age 50 for Park Rangers, Capitol Police, and certain enforcement officers or 60 for general employees;
 - Hired between 1/1/2011 – 12/31/2018: Age 55 for Park Rangers, Capitol Police and certain enforcement officers or 65 for general employees;
 - Hired on or after 1/1/2019: Age 55 for Park Rangers, Capitol Police, and certain enforcement officers or 67 for general employees;
- Disability retirement – requires five years of service (no service requirement for enforcement officers).

Covered Family Members

Spouses and dependents are eligible for subsidized postemployment medical coverage while the retiree is alive. The PPACA, signed into law on March 23, 2010, increased the dependent child age limit to age 26 and applied to the Commonwealth effective January 1, 2011.

Retiree Contribution*

Retirement before July 1, 2005: Commonwealth pays full cost.

Retirement after June 30, 2005 and before July 1, 2007: retiree contributions are 1% of final annual salary.

Retirement on or after July 1, 2007 and before July 1, 2011: retiree contributions are 3% for non-Medicare and 1.5% for Medicare of either final gross annual base salary or Final Average Salary, whichever is less.

Retirement on or after July 1, 2011: retiree contributions are 3% of Final Average Salary for non-Medicare and 1.5% of Final Average Salary for Medicare.

Hired on or after August 1, 2003: In addition to the retiree contributions above, non-Medicare retirees who elect the Choice PPO plan are required to pay the incremental cost between the Choice PPO plan and the least expensive plan (LEP) in county of residence through monthly pension deductions (PPO buy-up).

Surviving spouses of deceased retirees may continue to participate in the plan if they pay the full cost of the coverage.

* Certain bargaining units may have different retiree contribution arrangements

Changes in Program Provisions

General employees hired on or after 1/1/2019 are eligible with 20 years of service and a superannuation age of 67.

Benefit Provisions Summary

Medical Plans

This section summarizes the various medical and prescription drug plans offered by the Commonwealth effective January 1, 2021.

Medical	Benefit Provisions	Eligibility
Basic PPO	<p><u>In Network</u></p> <p>Deductible \$1,500 individual, \$3,000 family</p> <p>Out-of-Pocket Limit (including deductibles and co-pays) \$8,550 individual, \$17,100 family</p> <p>Doctor Office Visits PCP: \$20 co-pay Specialist: \$45 co-pay</p> <p>Inpatient Covered in full (after deductible)</p> <p>Lifetime Maximum None</p> <p><u>Out of Network</u></p> <p>Deductible \$3,000 individual, \$6,000 family</p> <p>Out-of-Pocket Limit (including deductibles) \$8,550 individual, \$17,100 family</p> <p>Doctor Office Visits PCP: 30% coinsurance (after deductible) Specialist: 30% coinsurance (after deductible)</p> <p>Inpatient 30% coinsurance (after deductible)</p> <p>Lifetime Maximum None</p>	<p>Non-Medicare eligible annuitants retired from the Commonwealth and their eligible dependents.</p>
Choice PPO	<p><u>In Network</u></p> <p>Deductible \$400 individual, \$800 family</p> <p>Out-of-Pocket Limit (including deductibles and co-pays) \$8,550 individual, \$17,100 family</p> <p>Doctor Office Visits PCP: \$20 co-pay Specialist: \$45 co-pay</p> <p>Inpatient Covered in full (after deductible)</p> <p>Lifetime Maximum None</p> <p><u>Out of Network</u></p> <p>Deductible \$800 individual, \$1,600 family</p> <p>Out-of-Pocket Limit (including deductibles) \$8,550 individual, \$17,100 family</p> <p>Doctor Office Visits PCP: 30% coinsurance (after deductible) Specialist: 30% coinsurance (after deductible)</p> <p>Inpatient 30% coinsurance (after deductible)</p> <p>Lifetime Maximum None</p>	<p>Non-Medicare eligible annuitants retired from the Commonwealth and their eligible dependents.</p>

Benefit Provisions Summary (cont.)

Medical Plans (cont.)

Medical	Benefit Provisions	Eligibility
Custom HMO	<p><u>In Network</u></p> <p>Deductible: None</p> <p>Out-of-Pocket Limit (including deductible and co-pays): \$8,550 individual, \$17,100 family</p> <p>Doctor Office Visits: PCP: \$5 co-pay Specialist: \$10 co-pay (Referral Required)</p> <p>Inpatient: Covered in full</p> <p>Lifetime Maximum: None</p>	Non-Medicare eligible annuitants retired from the Commonwealth and their eligible dependents living within the HMO service area.
Medicare Open-Access PPO	<p><u>In and Out-of-Network</u></p> <p>Deductible: Annual Medicare Part B deductible</p> <p>Out-of-Pocket Limit (including deductible): \$2,500 per person</p> <p>Doctor Office Visits: PCP: \$20 co-pay (after deductible) Specialist: \$30 co-pay (after deductible)</p> <p>Inpatient: Covered in full (after deductible)</p> <p>Lifetime Maximum: None</p>	Medicare eligible annuitants retired from the Commonwealth and their eligible dependents.

Prescription Drug

Non-Medicare:

The co-payments for all prescriptions covered by the plan are:

- Prescriptions at a Network Pharmacy (30-day supply): \$15 Generic / \$40 Preferred* / \$80 Non-Preferred*
- Mail Order or Retail Maintenance at a CVS Pharmacy (90-day supply): \$22.50 Generic / \$60 Preferred* / \$120 Non-Preferred*
- Retail Maintenance at a Rite Aid Pharmacy (90-day supply): \$30 Generic / \$80 Preferred* / \$160 Non-Preferred*

*Plus an additional out-of-pocket cost for the difference between brand and generic, if one exists.

Medicare:

The co-payments for all prescriptions covered by the plan are:

- Prescriptions at a Network Pharmacy (30-day supply): \$12 Generic / \$30 Preferred* / \$60 Non-Preferred*
- Mail Order or Retail Maintenance at a CVS Pharmacy (90-day supply): \$18 Generic / \$45 Preferred* / \$90 Non-Preferred*
- Non-Preferred Retail Network (up to a 90-day supply): \$24 Generic / \$60 Preferred* / \$120 Non-Preferred*

*Plus an additional out-of-pocket cost for the difference between brand and generic, if one exists.

Actuarial Methods Summary

Actuarial Cost Method

The Actuarial Cost Method used to determine the Total OPEB Liability is the Entry Age Normal (EAN) method as prescribed by GASB Nos. 74 and 75. This method is in the family of future benefit cost methods, which requires an estimate of the projected benefit payable at retirement to determine costs and liabilities.

The Normal Cost (or Service Cost) is the annual allocation required for each participant from entry date to the assumed retirement date so that the accumulated allocation at retirement is equal to the liability for the projected benefit. The projected benefits are based on estimates of future years of service and projected health benefit costs. The normal cost is developed as a level percent of compensation as prescribed by GASB Nos. 74 and 75.

The Present Value of Future Benefits is equal to the value of the projected benefit payable at retirement discounted back to the participant's current age. Discounts include such items as interest and mortality. The present value of future normal cost allocations is equal to the discounted value of the normal costs allocated from the participant's current age to retirement age.

The difference between the Present Value of Future Benefits and the Present Value of Future Normal Cost allocations represents the Total OPEB Liability at the participant's current age.

The Total OPEB Liability for participants currently receiving payments is calculated as the actuarial present value of future benefits expected to be paid. No normal cost is allocated for these participants.

Financial and Census Data

The Commonwealth of Pennsylvania provided the participant data, financial information and plan descriptions used in this valuation. The actuary has checked the data for reasonableness but has not independently audited the data. The actuary has no reason to believe the data is not complete and accurate and knows of no further information that is essential to the preparation of the actuarial valuation.

Plan Fiduciary Net Position

Market value of assets as of the measurement date.

Census Date

December 31, 2020 for June 30, 2021 measurements.

Measurement Date

June 30, 2021 for fiscal year ended June 30, 2021 trust financial statements (GASB No. 74) and for fiscal year ending June 30, 2022 participating employer financial statements (measurement date as of the end of the prior fiscal year end for GASB No. 75).

Method Changes Since Prior Valuation

None

Actuarial Assumptions Summary

Economic Assumptions

The economic assumptions were selected for consistency with SERS where applicable. The discount rate was selected based on the requirements prescribed in GASB Nos. 74 and 75.

Discount Rate	3.63% as of June 30, 2021 (2.21% as of June 30, 2020)																																																																
Long-Term Expected Rate of Return	6.75%																																																																
Inflation¹	2.50%																																																																
Payroll Growth¹	2.80%																																																																
Salary Scale¹	<p>The career salary scale shown below includes average increases in the employee salary due to promotions and longevity growth. In addition to the career salary scale below, it is assumed that the salary schedules will increase by 2.80 percent per year.</p> <p><u>Career Salary Scale for Members</u></p> <table border="1"> <thead> <tr> <th>Completed Years of Service</th> <th>Annual Increase</th> <th>Completed Years of Service</th> <th>Annual Increase</th> </tr> </thead> <tbody> <tr><td>1</td><td>4.15%</td><td>16</td><td>1.25%</td></tr> <tr><td>2</td><td>3.25</td><td>17</td><td>1.20</td></tr> <tr><td>3</td><td>2.90</td><td>18</td><td>1.15</td></tr> <tr><td>4</td><td>2.70</td><td>19</td><td>1.15</td></tr> <tr><td>5</td><td>2.50</td><td>20</td><td>1.10</td></tr> <tr><td>6</td><td>2.35</td><td>21</td><td>1.00</td></tr> <tr><td>7</td><td>2.15</td><td>22</td><td>0.95</td></tr> <tr><td>8</td><td>2.10</td><td>23</td><td>0.90</td></tr> <tr><td>9</td><td>2.00</td><td>24</td><td>0.85</td></tr> <tr><td>10</td><td>1.60</td><td>25</td><td>0.80</td></tr> <tr><td>11</td><td>1.55</td><td>26</td><td>0.70</td></tr> <tr><td>12</td><td>1.45</td><td>27</td><td>0.60</td></tr> <tr><td>13</td><td>1.40</td><td>28</td><td>0.50</td></tr> <tr><td>14</td><td>1.35</td><td>29</td><td>0.50</td></tr> <tr><td>15</td><td>1.30</td><td>30+</td><td>0.50</td></tr> </tbody> </table>	Completed Years of Service	Annual Increase	Completed Years of Service	Annual Increase	1	4.15%	16	1.25%	2	3.25	17	1.20	3	2.90	18	1.15	4	2.70	19	1.15	5	2.50	20	1.10	6	2.35	21	1.00	7	2.15	22	0.95	8	2.10	23	0.90	9	2.00	24	0.85	10	1.60	25	0.80	11	1.55	26	0.70	12	1.45	27	0.60	13	1.40	28	0.50	14	1.35	29	0.50	15	1.30	30+	0.50
Completed Years of Service	Annual Increase	Completed Years of Service	Annual Increase																																																														
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2	3.25	17	1.20																																																														
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¹ For consistency with the pension plan of which these participants are members, these assumptions are based on those disclosed in the Commonwealth of Pennsylvania SERS 2015-2019 experience study and adopted by the Board in July 2020.

Actuarial Assumptions Summary (cont.)

Demographic Assumptions

The demographic assumptions were selected for consistency with SERS where applicable. The retiree health specific assumptions were selected based on recent experience.

Mortality	<p>Pre-Retirement Mortality:</p> <p>Pub-2010 General Employees Headcount Weighted Mortality Tables, and adjusted for mortality improvements using projection scale MP-2020.</p> <p>Post Retirement Mortality:</p> <p>Healthy Participants: Pub-2010 General Healthy Retiree Headcount Weighted Mortality Tables, with rates set forward one year for females, and adjusted for mortality improvements using projection scale MP-2020.</p> <p>Disabled Participants: Pub-2010 Non-Safety Disabled Retiree Headcount Weighted Mortality Tables, with rates set forward two years for males and females, and adjusted for mortality improvements using projection scale MP-2020.</p>																								
Disability Incidence¹	<p>Pre-Retirement Disability:</p> <table border="1"> <thead> <tr> <th>Age</th> <th>Male</th> <th>Female</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>0.01%</td> <td>0.02%</td> </tr> <tr> <td>30</td> <td>0.03</td> <td>0.05</td> </tr> <tr> <td>35</td> <td>0.06</td> <td>0.08</td> </tr> <tr> <td>40</td> <td>0.09</td> <td>0.16</td> </tr> <tr> <td>45</td> <td>0.20</td> <td>0.26</td> </tr> <tr> <td>50</td> <td>0.33</td> <td>0.40</td> </tr> <tr> <td>55</td> <td>0.44</td> <td>0.50</td> </tr> </tbody> </table>	Age	Male	Female	25	0.01%	0.02%	30	0.03	0.05	35	0.06	0.08	40	0.09	0.16	45	0.20	0.26	50	0.33	0.40	55	0.44	0.50
Age	Male	Female																							
25	0.01%	0.02%																							
30	0.03	0.05																							
35	0.06	0.08																							
40	0.09	0.16																							
45	0.20	0.26																							
50	0.33	0.40																							
55	0.44	0.50																							

¹ For consistency with the pension plan of which these participants are members, these assumptions are based on those disclosed in the Commonwealth of Pennsylvania SERS 2015-2019 experience study and adopted by the Board in July 2020.

Actuarial Assumptions Summary (cont.)

Withdrawal¹

General employees*:

Age	Male				Female			
	Years of Service				Years of Service			
	0	5	9	14	0	5	9	14
20	30.0%	N/A	N/A	N/A	40.0%	N/A	N/A	N/A
25	21.0	6.1%	3.0%	N/A	24.8	8.5%	2.4%	N/A
30	18.5	6.1	3.0	1.9%	21.3	7.7	2.3	2.9%
35	18.5	4.9	1.6	1.9	16.6	4.5	2.4	2.1
40	18.2	3.4	2.8	1.9	14.8	4.5	2.3	1.6
45	17.4	3.4	1.6	0.6	17.8	4.3	1.1	1.6
50	19.1	3.1	1.6	0.6	15.8	4.3	1.8	1.6
55	19.1	2.6	0.8	0.4	15.8	4.0	1.3	1.0

* For the one primary government agency and three component units with separate contribution arrangements, the assumption is increased by a factor of 1.67 for one year of service or less and increased by 8.35 percentage points for years of service 2 through 9. This assumption was determined based on an analysis of data covering the period from January 1, 2015 to January 1, 2018. Based on conversations with the Commonwealth, the excluded withdrawal experience from 2018 – 2020 is higher than prior years and not indicative of future withdrawal expectations due to contracting a portion of the workforce.

Hazardous Duty employees:

Years of Service	Rate
0	9.0%
1	5.0
2	3.0
3	3.0
4	2.0
5	2.0
6	1.0
7	0.6
8	0.6
9	0.6
10+	0.3

¹ For consistency with the pension plan of which these participants are members, these assumptions are based on those disclosed in the Commonwealth of Pennsylvania SERS 2015-2019 experience study and adopted by the Board in July 2020.

Actuarial Assumptions Summary (cont.)

Early Retirement¹

(based on early retirement as defined by SERS; retirement prior to OPEB eligibility, as described above in the Program Provisions Summary section, will not receive other postemployment benefit)

General employees:

Hired prior to January 1, 2011:

Age	5 – 14 Years of Credited Service		15 or More Years of Credited Service	
	Male	Female	Male	Female
25	2.2%	4.0%	N/A	N/A
30	2.2	2.0	N/A	N/A
35	1.3	2.0	0.8%	1.4%
40	1.0	1.4	0.6	1.3
45	1.0	1.4	0.6	1.3
50	1.0	1.4	1.1	1.6
55	2.0	2.3	5.0	4.5

Hired on or after January 1, 2011*:

Age	Hired prior to January 1, 2019	Hired on or after January 1, 2019
35	1.5%	1.5%
40	1.5	1.5
45	1.5	1.5
50	2.0	2.0
55	5.5	5.5
60	5.5	5.5
61	6.0	6.0
62	20.0	8.0
63	10.0	10.0
64	15.0	10.0
65	0.0	15.0
66	0.0	20.0

*Early retirement rates for participants hired on or after January 1, 2011 apply only to those with 10 or more years of credited service.

Hazardous Duty employees:

1.5% at each age

¹ For consistency with the pension plan of which these participants are members, these assumptions are based on those disclosed in the Commonwealth of Pennsylvania SERS 2015-2019 experience study and adopted by the Board in July 2020.

Actuarial Assumptions Summary (cont.)

Normal Retirement¹
(based on normal retirement as defined by SERS; retirement prior to OPEB eligibility, as described above in the Program Provisions Summary section, will not receive other postemployment benefit)

General employees:

Hired prior to January 1, 2011:

Age	Male	Female
51 - 52	15.0%	15.0%
53 - 54	15.0	23.0
55 - 57	20.0	23.0
58	25.0	23.0
59	25.0	28.0
60	20.0	23.0
61 - 64	20.0	20.0
65 - 67	26.0	26.0
68 - 70	23.0	23.0
71 - 79	20.0	20.0
80	100.0	100.0

Hired on or after January 1, 2011:

Age	Hired prior to January 1, 2019	Hired on or after January 1, 2019
55	15.0%	15.0%
56	16.0	16.0
57	17.0	17.0
58	18.0	18.0
59	19.0	19.0
60	20.0	20.0
61	20.0	20.0
62	25.0	25.0
63	20.0	20.0
64	20.0	20.0
65	25.0	25.0
66 - 79	20.0	20.0
80	100.0	100.0

Hazardous Duty employees:

Age	Rate	Age	Rate
49	10.0%	62 - 64	20.0%
50	15.0	65	23.0
51 - 54	10.0	66	30.0
55	12.0	67 - 68	25.0
56 - 58	10.0	69 - 79	20.0
59	12.0	80	100.0
60 - 61	16.0		

¹ For consistency with the pension plan of which these participants are members, these assumptions are based on those disclosed in the Commonwealth of Pennsylvania SERS 2015-2019 experience study and adopted by the Board in July 2020.

Actuarial Assumptions Summary (cont.)

Spouse Age Difference¹	Females are assumed to be 2 years younger than males.
Participation Rate	100% of employees who currently participate in the active health plan are assumed to elect coverage at retirement. Employees who are eligible for but currently opt out of active health coverage are excluded from the valuation. Retirees who currently elect to waive their coverage are assumed to remain uncovered in the future.
Coverage Level Election Rates	Employees are assumed to maintain their current coverage election when they retire. Current retirees are assumed to continue their current coverage election.
Surviving Spouse Continuing Coverage	45% of spouses are assumed to elect to continue coverage after the retiree's death.

¹ For consistency with the pension plan of which these participants are members, these assumptions are based on those used for the SERS Actuarial Valuation Report as of December 31, 2019.

Actuarial Assumptions Summary (cont.)

Benefit Assumptions

Per Capita Claims Costs

The per capita claims costs used in the valuation were developed from 2021 fully insured premiums, self-insured claims experience, and projected administrative expenses that represent the expected claims costs and administrative expenses for 2021, including an adjustment to premiums to remove anticipated vaccination costs .

The first-year per capita claims costs below are on a “net basis” – they reflect plan costs after reduction from the total benefit costs of the member cost-sharing (deductibles, coinsurance, co-pays, provider savings, Medicare, etc.). These claims were blended based on the prior year enrollment mix by plan (see Coverage section below), separately for the non-Medicare eligible and Medicare eligible population, resulting in an average claims cost per member.

Average claims costs were age-graded using the retiree age and gender distribution, separately for the non-Medicare eligible and Medicare eligible population. These age-graded claims costs are the basis for projecting the gross cost for each individual, before member contributions for coverage. The aging factors are based on the Society of Actuaries age-curve study “Health Care Costs—From Birth to Death.” Future year per capita costs were projected by applying trend assumptions to the first-year costs.

Since the claims costs table below is specific to the experience of the Commonwealth’s retirees (i.e., not blended with active employees) separately for non-Medicare and Medicare, there is no implicit subsidy. However, age-graded claims were developed to project the increases in costs related to aging for retirees, spouses, and surviving spouses.

For Non-Medicare Eligible retirees hired on or after August 1, 2003, the curve below is multiplied by a factor of 0.999 to reflect a difference in participation rates.

2021 Annual Per Capita Claims Costs			
Age	Non-Medicare		Medicare Eligible
	Eligible		
45	\$	7,902	\$ 1,560
50		9,638	1,560
55		11,872	1,560
60		14,533	1,560
64		17,301	1,560
65		18,092	1,560
70		21,747	1,922
75		25,767	2,102
80		29,957	2,171
85		34,054	2,082
90		37,696	1,908
95		39,826	1,760

Expenses

Per Capita Claims Costs were developed to include administrative expenses.

Actuarial Assumptions Summary (cont.)

Trend Rates

The trend rates illustrated below are used to project age-graded claims and flat rates into future years. Trend rates were developed based on the most recently published SOA-Getzen trend rate model, version 2021_b (previously version 2020_b). The short-term trend assumptions were based on a review of the Commonwealth's historical trend rates during the years 2017 through 2019 and emerging experience, along with industry surveys, separately for non-Medicare and Medicare benefits. The Commonwealth's experience along with industry surveys were used to predict short-term future per capita cost increases. The most recently published SOA-Getzen model was then used to determine the trend rates beginning in 2025 and thereafter, based on the plan's long-term inflation assumption and reasonable macro-economic assumptions for the growth of health care expenditures during this period relative to the general economy. The 2024 Medicare trend rate below is increased by 12.88 percentage points to reflect expiration of the negotiated \$0 premium through 2024 for the REHP Aetna Medicare Advantage Plan.

Year	January 1, 2020 Assumption	
	Non-Medicare Benefits	Medicare Benefits
2021	6.9%*	6.7%
2022	6.6%	6.4%
2023	6.3%	6.2%
2024	6.0%	5.9%
2025	5.9%	5.8%
2030	5.2%	
2040	5.2%	
2050	5.2%	
2060	4.8%	
2070	4.4%	
2075+	4.0%	

*2021 non-Medicare trend is reduced by 2.1% to remove the temporary deferred care load built into 2021 rates.

Medicare Eligibility

Current non-Medicare eligible retirees and spouses (if covered) over age 65 are assumed to remain non-Medicare eligible.
 Current Medicare eligible retirees and spouses (if covered) under age 65 are assumed to remain Medicare eligible.
 All other retirees and spouses (if covered) are assumed to be non-Medicare eligible prior to age 65 and Medicare eligible at age 65, unless their spouse is over age 65 and non-Medicare eligible.

Actuarial Assumptions Summary (cont.)

<p>Coverage</p>	<p>Current retirees are assumed to remain in their currently elected plan, as summarized below.</p> <p>Current employees are assumed to enroll at retirement in the same proportion as the prior year retiree mix. These proportions are established separately by non-Medicare/Medicare coverage and Non-Medicare further by participants hired before/on or after August 1, 2003 to reflect enrollment when PPO buy up applies. The table below shows the prior year enrollment percentage by plan.</p> <table border="1"> <thead> <tr> <th>Non-Medicare</th> <th>Adult Member Enrollment (Pre-03)</th> <th>Adult Member Enrollment (Post-03)</th> </tr> </thead> <tbody> <tr> <td>Highmark Basic PPO</td> <td>16.1%</td> <td>24.0%</td> </tr> <tr> <td>Aetna Choice PPO</td> <td>71.6%</td> <td>58.3%</td> </tr> <tr> <td>Aetna HMO SE Region</td> <td>0.5%</td> <td>0.1%</td> </tr> <tr> <td>Aetna HMO Central Region</td> <td>2.1%</td> <td>4.2%</td> </tr> <tr> <td>Aetna HMO Western Region</td> <td>2.1%</td> <td>4.0%</td> </tr> <tr> <td>Geisinger HMO NE Region</td> <td>7.6%</td> <td>9.4%</td> </tr> <tr> <td colspan="2">Medicare</td> <td>Adult Member Enrollment</td> </tr> <tr> <td>Aetna Medicare Advantage</td> <td colspan="2">100.0%</td> </tr> </tbody> </table>	Non-Medicare	Adult Member Enrollment (Pre-03)	Adult Member Enrollment (Post-03)	Highmark Basic PPO	16.1%	24.0%	Aetna Choice PPO	71.6%	58.3%	Aetna HMO SE Region	0.5%	0.1%	Aetna HMO Central Region	2.1%	4.2%	Aetna HMO Western Region	2.1%	4.0%	Geisinger HMO NE Region	7.6%	9.4%	Medicare		Adult Member Enrollment	Aetna Medicare Advantage	100.0%	
Non-Medicare	Adult Member Enrollment (Pre-03)	Adult Member Enrollment (Post-03)																										
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Medicare		Adult Member Enrollment																										
Aetna Medicare Advantage	100.0%																											
<p>Changes in Assumptions</p>	<ul style="list-style-type: none"> • The discount rate was decreased from 2.21% to 3.63%. • The long-term expected rate of return was increased from 5.00% to 6.75%. • Per capita claims costs were updated based on changes in the underlying claims and benefit provisions. • The aging factors used to age grade Medicare per capita claims costs were updated to be reflect the expected future costs by medical service cost category. • The trend rates were updated based on the SOA-Getzen trend rate model version 2021_b. The short-term trend assumptions were based on a review of the Commonwealth's historical trend rates during the years 2017 through 2019 and emerging experience, along with industry surveys, separately for non-Medicare and Medicare benefits. The trend rates reflect the negotiated \$0 premium through 2024 for the REHP Aetna Medicare Advantage Plan. • The withdrawal, disability incidence, early retirement, and normal retirement rate assumptions were updated based on the assumptions from the Commonwealth of Pennsylvania SERS 2015-2019 experience study and adopted by the Board in July 2020. • The salary scale, inflation rate (decreased from 2.60% to 2.50%), and payroll growth rate (decreased from 2.90% to 2.80%) assumptions were updated based on the assumptions from the Commonwealth of Pennsylvania SERS 2015-2019 experience study and adopted by the Board in July 2020. • The mortality assumptions for annuitants, survivors, and disabled participants were updated based on the assumptions from the Commonwealth of Pennsylvania SERS 2015-2019 experience study and adopted by the Board in July 2020, with the exception of using the Headcount-Weighted instead of the Amount-Weighted Mortality Tables, and Scale MP-2020 to project for mortality improvements rather than Scale MP-2019. • The mortality assumption for active employees was updated to Pub-2010 General Employees Headcount-Weighted Mortality Tables, and adjusted for mortality improvements using projection scale MP-2020. 																											
<p>Model Use</p>	<p>Actuarial Standard of Practice No. 56 – Modeling requires disclosure of certain information regarding the actuary's use of models when issuing actuarial reports for work performed on or after October 1, 2020. For this valuation, the liability calculations and open group projections to develop service cost of future employees used in the development of the single discount rate were determined using industry-leading defined benefit valuation software developed and maintained by a third-party vendor. The model was designed specifically for the measurement of defined benefit pension and postretirement medical plan liabilities and the actuary has updated the applicable parameters for the specific plan provisions and assumptions selected for this valuation.</p> <p>An Excel-based model that calculates a long-term rate of return on assets using a target asset allocation and publicly available capital market assumptions by asset class were used to assess the reasonableness of the long-term rate of return assumption.</p> <p>The medical inflation trend rate assumptions were set using the Getzen Model of Long-Run Medical Cost Trends ("Getzen Model"), which adds transparency to the economic assumptions behind medical and prescription drug trends. The Getzen Model is an excel based projection of expected growth rates in medical premiums and expenditures from 2025 to 2100. Development of the model was sponsored by the Society of Actuaries ("SOA"), and it is used primarily in the estimation of reportable liabilities for retiree health benefits in accordance with FASB and GASB standards. It projects medical care cost increases and the health share of GDP for the next 80 years using linked formulas and assumptions developed by the author, Professor Thomas Getzen, with the assistance of a SOA project oversight group.</p>																											

Rationale for Assumptions

<p>Discount Rate</p>	<p>As prescribed by GASB Nos. 74 and 75, the June 30, 2021 single discount rate of 3.63% was based on the long-term expected rate of return on assets held in the OPEB investment pool (6.75%) and a municipal bond rate of 2.16% (based on the 20-year Bond Buyer GO Index as of the end of June 2021). Based on the stated assumptions and the projection of cash flows, the Plan's Fiduciary Net Position and future contributions were not sufficient to finance all future benefit payments of the current plan members. Therefore, the long-term expected rate of return on the OPEB Investment Pool was applied to projected benefit payments through the year 2047 (the last year in which the Plan's Fiduciary Net Position is projected to be sufficient to meet projected benefit payments) and the municipal bond rate was applied to all remaining future years to determine the Total OPEB Liability. The projection of cash flows used to determine the single discount rate for each fiscal year end assumed that employer contributions were made based on the current funding policy for all future years.</p>
<p>Long-Term Expected Rate of Return</p>	<p>The expected return in the OPEB Investment Pool is based on a building block method incorporating the underlying inflation assumption and expected real returns and investment expenses. The selected rate was supported by analyzing the target asset allocation and benchmark return expectations from PA Treasury and publicly available sources.</p>
<p>Inflation, Payroll Growth, Salary Scale, Disability Incidence, Withdrawal, Early and Normal Retirement</p>	<p>Assumptions updated to be consistent with assumptions recommended by the Commonwealth of Pennsylvania SERS 2015-2019 experience study and adopted by the Board in July 2020.</p>
<p>Mortality</p>	<p>The annuitant, survivor, and disabled participant base mortality table is consistent with the Commonwealth of Pennsylvania SERS 2015-2019 experience study, with the exception of using a headcount-weighted instead of an amount-weighted mortality table.</p> <p>The PUB-2010 tables were released by the Retirement Plans Experience Committee ("RPEC") of the Society of Actuaries ("SOA") in January 2019. The PUB-2010 tables represent a complete benchmark of U.S. public pension plan mortality experience. The plan does not have fully credible pre-retirement mortality experience, so the Pub-2010 General Employees Headcount Weighted Mortality Tables were used for the pre-retirement mortality assumption.</p> <p>Beginning in 2015, the SOA RPEC has released an annual update to the mortality improvement scale, with each of these scales reflecting an additional year of Social Security Administration ("SSA") data. Scale MP-2020 was used for this valuation as the most recently available mortality improvement scale from the SOA.</p>

Development of June 30, 2021 Discount Rate

This section provides the development of the June 30, 2021 single discount rate consistent with the requirements of GASB 74/75.

Projection of Contributions

(All dollar amounts are in thousands)

Year Ending June 30	Total Employer Contributions	Contributions Related to Service Cost of Future Employees*	Employer Contributions for Current Participants
	(a)	(b)	(c) = (a)-(b)
2022	499,864	5,860	494,004
2023	510,933	11,752	499,181
2024	526,036	18,243	507,793
2025	553,359	25,198	528,161
2026	582,453	32,894	549,559
2027	602,041	40,750	561,291
2028	621,851	48,839	573,012
2029	642,037	57,542	584,495
2030	661,871	66,313	595,558
2031	682,769	75,647	607,122
2032	704,056	85,795	618,261
2033	723,629	96,386	627,243
2034	740,520	107,268	633,252
2035	754,450	118,811	635,639
2036	765,268	130,959	634,309
2037	774,121	143,683	630,438
2038	783,892	157,162	626,730
2039	794,608	171,808	622,800
2040	807,477	186,294	621,183
2041	823,278	201,312	621,966
2042	839,820	217,162	622,658
2043	854,997	233,390	621,607
2044	868,042	250,117	617,925
2045	877,642	267,685	609,957
2046	883,250	285,571	597,679
2047	886,013	304,197	581,816
2048	885,686	323,529	562,157
2049	883,352	343,785	539,567
2050	879,242	364,893	514,349
2051	870,842	386,369	484,473

* Determined using an open group valuation assuming a level population.

Development of June 30, 2021 Discount Rate (cont.)

Projection of Fiduciary Net Position

(All dollar amounts are in thousands)

Year Ending June 30	Beginning Fiduciary Net Position	Employer Contributions for Current Participants	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 6.75%	Ending Fiduciary Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
2022	666,929	494,004	449,864	5,700	44,634	750,003
2023	750,003	499,181	460,933	5,578	50,050	832,723
2024	832,723	507,793	476,036	5,427	55,423	914,476
2025	914,476	528,161	503,359	5,260	60,716	994,734
2026	994,734	549,559	532,453	5,049	65,885	1,072,676
2027	1,072,676	561,291	552,041	4,843	70,892	1,147,975
2028	1,147,975	573,012	571,851	4,650	75,712	1,220,198
2029	1,220,198	584,495	592,037	4,444	80,305	1,288,517
2030	1,288,517	595,558	611,871	4,260	84,632	1,352,576
2031	1,352,576	607,122	632,769	4,077	88,652	1,411,504
2032	1,411,504	618,261	654,056	3,876	92,300	1,464,133
2033	1,464,133	627,243	673,629	3,683	95,507	1,509,571
2034	1,509,571	633,252	690,520	3,503	98,219	1,547,019
2035	1,547,019	635,639	704,450	3,320	100,369	1,575,257
2036	1,575,257	634,309	715,268	3,133	101,878	1,593,043
2037	1,593,043	630,438	724,121	2,945	102,662	1,599,077
2038	1,599,077	626,730	733,892	2,761	102,628	1,591,782
2039	1,591,782	622,800	744,608	2,559	101,656	1,569,071
2040	1,569,071	621,183	757,477	2,396	99,648	1,530,029
2041	1,530,029	621,966	773,278	2,236	96,519	1,473,000
2042	1,473,000	622,658	789,820	2,066	92,149	1,395,921
2043	1,395,921	621,607	804,997	1,911	86,413	1,297,033
2044	1,297,033	617,925	818,042	1,763	79,188	1,174,341
2045	1,174,341	609,957	827,642	1,613	70,328	1,025,371
2046	1,025,371	597,679	833,250	1,484	59,683	847,999
2047	847,999	581,816	836,013	1,356	47,096	639,542
2048	639,542	562,157	835,686	1,239	32,387	397,161
2049	397,161	539,567	833,352	1,107	15,358	117,627
2050	117,627	514,349	829,242	968	-	-
2051	-	484,473	820,842	846	-	-

Development of June 30, 2021 Discount Rate (cont.)

Development of the Single Discount Rate

(All dollar amounts are in thousands)

Year Ending June 30	Beginning Fiduciary Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments at 6.75%	Present Value of	Present Value of
						Unfunded Benefit Payments at 2.16%	Benefit Payments Using the Single Discount Rate of 3.63%
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
2022	666,929	449,864	449,864	-	435,409	-	441,912
2023	750,002	460,933	460,933	-	417,913	-	436,919
2024	832,722	476,036	476,036	-	404,315	-	435,423
2025	914,475	503,359	503,359	-	400,489	-	444,282
2026	994,733	532,453	532,453	-	396,850	-	453,493
2027	1,072,675	552,041	552,041	-	385,432	-	453,701
2028	1,147,973	571,851	571,851	-	374,017	-	453,513
2029	1,220,197	592,037	592,037	-	362,735	-	453,069
2030	1,288,517	611,871	611,871	-	351,183	-	451,840
2031	1,352,576	632,769	632,769	-	340,213	-	450,898
2032	1,411,504	654,056	654,056	-	329,422	-	449,735
2033	1,464,133	673,629	673,629	-	317,826	-	446,962
2034	1,509,570	690,520	690,520	-	305,195	-	442,115
2035	1,547,018	704,450	704,450	-	291,665	-	435,229
2036	1,575,256	715,268	715,268	-	277,418	-	426,428
2037	1,593,042	724,121	724,121	-	263,093	-	416,578
2038	1,599,076	733,892	733,892	-	249,783	-	407,405
2039	1,591,781	744,608	744,608	-	237,405	-	398,869
2040	1,569,071	757,477	757,477	-	226,237	-	391,544
2041	1,530,029	773,278	773,278	-	216,352	-	385,705
2042	1,473,000	789,820	789,820	-	207,008	-	380,152
2043	1,395,922	804,997	804,997	-	197,644	-	373,880
2044	1,297,033	818,042	818,042	-	188,147	-	366,625
2045	1,174,341	827,642	827,642	-	178,319	-	357,930
2046	1,025,371	833,250	833,250	-	168,175	-	347,728
2047	847,998	836,013	836,013	-	158,064	-	336,656
2048	639,540	835,686	-	835,686	-	474,351	324,731
2049	397,158	833,352	-	833,352	-	463,024	312,477
2050	117,625	829,242	-	829,242	-	451,000	300,041
2051	-	820,842	-	820,842	-	436,992	286,594

Glossary

Brief explanations of terms used in this report:

Annual OPEB Expense

The change in Net OPEB Liability less the change in the Deferred Outflows of Resources plus the change in the Deferred Inflows of Resources.

Collective deferred outflows of resources and deferred inflows of resources related to OPEB

Deferred outflows of resources and deferred inflows of resources related to OPEB arising from certain changes in the collective net OPEB liability or collective total OPEB liability.

Covered Employee Payroll

Annual compensation paid (or expected to be paid) to active employees covered by an OPEB plan, in aggregate.

Final Average Salary

Final Average Salary as determined by the State Employees' Retirement System for pension purposes.

Implicit Rate Subsidy

Many post-employment health plans charge the same premium rates for all participants in a non-Medicare plan regardless of their age. This single premium rate is called a blended premium rate because it blends the expected claims of both active and retired participants. Retirees are generally older than the average participant in a non-Medicare plan, which means they are expected to generate higher claims than the average participant of the plan; therefore, they are receiving a subsidy even if they pay 100% of the blended premium rate because they would be paying less in premiums than their expected claims costs. This subsidy is referred to as the "Implicit Rate Subsidy".

Net OPEB liability (NOL)

The liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit OPEB plan that is administered through a trust that meets the criteria of the GASB Statements.

Normal Cost or Service Cost

The portion of the Total Present Value of Future Benefits attributed to employee service during the current fiscal year by the actuarial cost method. These terms are used interchangeably.

Other Postemployment Benefits (OPEB)

Retiree health care benefits and post-employment benefits provided separately from a pension plan (excluding termination offers and benefits).

Fiduciary Net Position (FNP)

Set equal to the market value of assets as of the measurement date

Present Value of Future Benefits (PVFB)

The value, as of the valuation date, of the projected benefits payable to all members for their accrued service and their expected future service, discounted to reflect the time value (present value) of money and adjusted for the probabilities of retirement, withdrawal, death and disability.

Total OPEB liability (TOL)

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service in conformity with the GASB Statements. The total OPEB liability is the liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit OPEB plan that is not administered through a trust that meets the criteria of the GASB Statements.