



Pennsylvania Public School Employees' Retirement System

Health Insurance Premium Assistance Program

Information Required Under Governmental Accounting Standards
Board Statement No. 74 as of June 30, 2021



200 Plaza Drive
1st Floor
Secaucus, NJ 07096

September 9, 2021

Board of Trustees
Pennsylvania Public School Employees'
Retirement System
5 North 5th Street
Harrisburg, Pennsylvania 17101

Members of the Board,

This valuation provides information concerning the Pennsylvania Public School Employees' Retirement System (PSERS) Health Insurance Premium Assistance Program (Plan) in accordance with the Governmental Accounting Standards Board (GASB) Statement No. 74, effective for the fiscal year ending June 30, 2021.

The Board of Trustees and staff of PSERS may use this report for the review of the operation of the Plan and as a source of information for the Commonwealth's financial statements. The report may also be used in the preparation of the Plan's audited financial statements.

Use of this report for any other purpose or by anyone other than the Board of Trustees or the staff of PSERS may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. Buck should be asked to review any statement to be made on the basis of the results contained in this report. Buck will accept no liability for any such statement made without prior review by Buck.

Future actuarial measurements may differ significantly from current measurements due to Plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in Plan provisions or applicable law. Liability models necessarily rely on the use of approximations and estimates and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements. An analysis of the potential range of such future differences is beyond the scope of this valuation.

Data, Assumptions, Methods and Plan Provisions

This valuation was performed using employee census data, asset information, and Plan provisions provided by PSERS. Although we did not audit the data, we reviewed the data for reasonableness and consistency. A detailed review of the data and its sources beyond that necessary to develop the analysis was not performed and is beyond the scope of the analysis. The accuracy of the results of the valuation is dependent on the accuracy of the data.

The data, assumptions, methods, and Plan provisions used were the same as those outlined in the PSERS June 30, 2020 actuarial valuation report, except for the following:

- The actual data for retirees benefiting under the Plan as of June 30, 2020 was used in lieu of the 63% utilization assumption for eligible retirees. Current retirees receiving premium assistance are assumed to receive premium assistance until death.
- For current retirees under age 65 and eligible for coverage but are not receiving premium assistance, it is assumed 40% will receive premium assistance beginning at age 65.
- For current active employees who terminate employment and become eligible for coverage under the Plan, it is assumed that 50% of members retiring prior to age 65 will receive premium assistance and on or after age 65 70% will receive premium assistance. For members retiring on or after age 65, it is assumed 70% will receive premium assistance.
- The discount rates used to determine the total OPEB liability are as follows:
 - 2.66% as of June 30, 2020, which is based on the S&P Municipal Bond 20-Year High Grade Rate Index as of June 30, 2020 (last business day of June)
 - 2.18% as of June 30, 2021, which is based on the S&P Municipal Bond 20-Year High Grade Rate Index as of June 30, 2021 (last business day of June)

We relied upon GASB Statement No. 74 and the GASB Implementation Guide for Statement No. 74. Given the short-term nature of investment mix for the current assets, the S&P 20 year Municipal Bond Rate as of the fiscal year end was used to measure the Plan's obligations without performing a depletion date projection. We understand PSERS' staff has confirmed that this approach is acceptable.

- Pre- and post-age 65 trend rates were used to reflect increases in health care premiums and corresponding increases in premium reimbursements for retirees currently receiving reimbursements less than \$1,200 per year. However, premium reimbursements have been capped at \$1,200 per year.
- Only liabilities of the Health Insurance Premium Assistance Program have been valued for this report. Any subsidies provided under the Health Options Plan or any employer plan have not been reflected in this report.
- The Board considered the potential impact of the ongoing COVID-19 pandemic on costs and liabilities but made no explicit adjustments to the calculations at this time due to lack of credible experience data and uncertainty around the long-term ramifications for the plan.
- The Board, at their meetings on March 5, 2021, June 11, 2021 and August 6, 2021, adopted new demographic and economic assumptions for the System effective for the June 30, 2021 valuation based on the experience study conducted for the period July 1, 2015 to June 30, 2020. The new demographic and economic assumptions included mortality, withdrawal, retirement, disability and future salary increases. The new assumptions are outlined in Section 3 of the report.

Use of Models

Actuarial Standard of Practice No. 56 (ASOP 56) provides guidance to actuaries when performing actuarial services with respect to designing, developing, selecting, modifying, using, reviewing, or evaluating models. Buck uses the following:

- third-party software in the performance of annual actuarial valuations and projections to calculate the liabilities associated with the provisions of the plan using data and assumptions as of the measurement date under the funding methods specified in this report.
- an internally developed model that applies applicable funding methods and policies to the liabilities derived from the output of the third-party software and other inputs, such as System assets and contributions, to generate many of the exhibits found in this report.

Buck has an extensive review process whereby the results of the liability calculations are checked using detailed sample output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other outputs and the internal model are similarly reviewed in detail and at a high level for accuracy, reasonability and consistency with prior results. Buck also reviews the third-party model when significant changes are made to the software or model. The review is performed by experts within the company who are familiar with applicable funding methods as well as the manner in which the model generates its output. If significant changes are made to the internal model, extra checking and review are completed. Significant changes to the internal model that are applicable to multiple clients are generally developed, checked and reviewed by multiple experts within the company who are familiar with the details of the required changes.

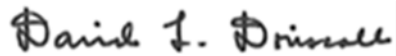
Certification

The assumptions used for financial accounting purposes were selected by the Plan sponsor with our advice. In our opinion, the actuarial assumptions used are appropriate for purposes of the valuation and are reasonably related to the experience of the Plan and reflect reasonable long-term expectations. The cost results and actuarial exhibits presented in this report were determined on a consistent and objective basis in accordance with applicable Actuarial Standards of Practice and generally accepted actuarial procedures. To the best of our knowledge, the information fairly presents the actuarial position of the PSERS Health Insurance Premium Assistance Program in accordance with the requirements of GASB Statement No. 74 as of June 30, 2021. Where presented, the "net OPEB liability" and "Plan fiduciary net position as a percentage of the total OPEB liability" are measured on a market value of assets basis. These items presented are not appropriate for evaluating the need and level of future contributions and make no assessment regarding the cost to settle (i.e., purchase annuities to cover) any portion of the Fund's liabilities.

It is important to note that the measurement of postretirement medical obligations is extremely sensitive to the assumptions chosen. The results presented in this report are based upon one set of reasonable assumptions. Other sets of equally reasonable assumptions can yield materially lesser or greater obligations.

This report represents a statement of actuarial opinion by the undersigned actuaries. We are Members of the American Academy of Actuaries. We meet the Qualification Standards of the Academy to render the actuarial opinions contained herein. David Driscoll and Edward Quinn meet the Qualification Standards in the pension areas of practice and have concentrated on the long-term aspects of this analysis. Stephen Oates meets the Qualification Standards in the health area of practice and has concentrated on the short-term aspects of this analysis. All of the undersigned actuaries have reviewed the overall reasonableness and consistency of these results. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions concerning it.

Respectfully submitted,



David L. Driscoll, FSA, EA, MAAA, FCA
Principal, Consulting Actuary



Edward Quinn, EA, MAAA, FCA
Director, Retirement Actuary



Stephen Oates, ASA, EA, MAAA, FCA
Principal, Health Actuary

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Section 1 – GASB 74 Information

Summary of Significant Accounting Policies

Method used to value investments: Investments are reported at fair value.

Actuarial cost method: Entry Age Normal – Level Percent of Pay

Plan Description

Plan administration: The administrative staff of the Pennsylvania Public School Employees' Retirement System (PSERS or System) administers the Health Insurance Premium Assistance Program (Plan). The Plan is a governmental cost-sharing multi-employer postretirement benefits plan that provides premium assistance to eligible public school employees of the Commonwealth of Pennsylvania (Commonwealth). The Plan covers eligible retirees of the System.

The control and management of the Plan, including the investment of its assets, is vested in the Board of Trustees (Board). The Board consists of 15 members: the Secretary of Education, ex officio; the State Treasurer, ex officio; the Secretary of Banking and Securities, ex officio; two Senators; two members of the House of Representatives; the executive director of the Pennsylvania School Boards Association, ex officio; one Governor appointee, who shall not be a school employee or an officer or employee of the State of Pennsylvania; three who are elected by the active professional members of the System from among their number; one who is elected by annuitants from among their number; one who is elected by the active nonprofessional members of the System from among their number; and one who is elected by members of Pennsylvania public school boards from among their number. The chairman of the Board is elected by the Board members. Each ex officio member of the Board and each legislative member of the Board may appoint a duly authorized designee to act in their stead.

The Commonwealth's General Assembly has the authority to amend the benefit terms of the Plan by passing bills in the Senate and House of Representatives and sending them to the Governor for approval.

Plan membership: Plan membership consisted of the following:

	<u>June 30, 2019</u>	<u>June 30, 2020</u>
Inactive Plan members currently receiving benefits	94,119	94,381
Inactive Plan members entitled to but not yet receiving benefits	452	472
Active Plan members	<u>255,749</u>	<u>256,306</u>
	350,320	351,159

Benefits provided: Please see Section 4 of this report for a summary of Plan provisions.

Contributions: The Board has a written contribution policy of contributing each year the amount necessary to assure the solvency of the Plan through the third fiscal year following the valuation date. The following liability and asset cost methods are used to determine contributions:

1. Expected eligible retirees are determined based on the assumptions outlined in Section 3 of this report.
2. Assets are valued at fair value.
3. The Plan is funded by employer contributions. For the year ended June 30, 2021, a contribution of \$116,519,000 was made to the Plan.

Receivables

Not applicable.

Net OPEB Liability

The components of the net OPEB liability were as follows:

(Amounts x \$ 1,000)	<u>June 30, 2020</u>	<u>June 30, 2021</u>
Total OPEB liability	\$ 2,291,114	\$ 2,502,598
Plan fiduciary net position	<u>(130,417)</u>	<u>(132,515)</u>
Commonwealth's net position	\$2,160,697	\$2,370,083
Plan fiduciary net position as a percentage of the total OPEB liability	5.69%	5.30%

Actuarial Assumptions and Methods

The total OPEB liability as of June 30, 2021 was determined by rolling forward the Plan's total OPEB liability as of June 30, 2020 to June 30, 2021 using the following actuarial assumptions, applied to all periods included in the measurement. All other methods and assumptions used to determine the total OPEB liability are set forth in Section 3.

a. Actuarial Cost Method

The actuarial cost method used to develop the total pension liability is the Entry Age Normal Cost - Level Percent of Pay method, as required by GASB Statement No. 74.

b. Discount Rate

The valuation uses a discount rate of 2.18%, the S&P Municipal Bond 20-Year High Grade Rate Index as of June 30, 2021. Although the Plan holds assets in a trust, the assets are invested on a short-term basis. Therefore, the S&P Municipal Bond 20-Year High Grade Rate Index as of the measurement date has been used to determine the discount rate to be used for calculating the Total OPEB Liability.

We relied upon GASB Statement No. 74 and the GASB Implementation Guide for Statement No. 74. Given the short-term nature of investment mix for the current assets, the S&P 20-year Municipal Bond Rate as of the fiscal year end was used to measure the Plan's obligations without performing a depletion date projection. We understand PSERS' staff has confirmed that this approach is acceptable.

We believe these assumptions are reasonable for the purposes of the measurements required by the Statement.

Schedule of Required Supplementary Information

a. Sensitivity of the Net OPEB Liability to Changes in the Discount Rate

The following presents the net OPEB liability, calculated using the discount rate of 2.18%, as well as what the Commonwealth's net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (1.18%) or 1-percentage-point higher (3.18%) than the current rate:

(Amounts x \$1,000)	1% Decrease (1.18%)	Current Discount Rate (2.18%)	1% Increase (3.18%)
Net OPEB Liability	\$ 2,719,966	\$ 2,370,083	\$ 2,081,902

b. Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rate

The following presents the net OPEB liability, calculated using the assumed healthcare cost trend rate, as well as what the Commonwealth's net OPEB liability would be if it were calculated using a healthcare cost trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

(Amounts x \$1,000)	<u>1% Decrease</u>	<u>Current Trend Rate</u>	<u>1% Increase</u>
Net OPEB Liability	\$ 2,369,814	\$ 2,370,083	\$ 2,370,295

c. Schedule of Changes in the Commonwealth's Net OPEB Liability and Related Ratios

(Amounts x \$1,000)	Plan Fiduciary		
	<u>Total OPEB Liability</u>	<u>Net Position</u>	<u>Net OPEB Liability</u>
Changes for the year	(a)	(b)	(a) – (b)
Balances as of 6/30/2020	\$ 2,291,114	\$ 130,417	\$ 2,160,697
Service Cost	\$ 44,699	\$ 0	\$ 44,699
Interest Cost	60,632	0	60,632
Difference between Expected and Actual Experience	7,272	0	7,272
Changes in Assumption	212,419	0	212,419
Contribution – Employer	0	116,519	(116,519)
Contribution – Member	0	0	0
Net Investment Income (actual)	0	260	(260)
Refunds of Contributions	0	0	0
Benefit Payments (actual)	(113,538)	(113,538)	0
Plan Administrative Expense	0	(1,143)	1,143
Other Changes	<u>0</u>	<u>0</u>	<u>0</u>
Net Changes	\$ 211,484	\$ 2,098	\$ 209,386
Balances as of 6/30/2021	\$ 2,502,598	\$ 132,515	\$ 2,370,083
Plan fiduciary net position as a percentage of the total OPEB liability			5.30%
Covered payroll as of the June 30, 2020 actuarial valuation			\$ 13,975,907
Net OPEB liability as a percentage of covered payroll			16.96%

Notes to Schedule:

- Benefit changes: None.
- Changes of assumptions: The discount rate changed from 2.66% as of June 30, 2020 to 2.18% as of June 30, 2021. The demographic and economic assumptions changed in accordance with the experience study for the System for the period July 1, 2015 to June 30, 2020 as adopted by the Board of Trustees at their March 5, 2021, June 11, 2021 and August 6, 2021 meetings. New demographic and economic assumptions are outlined in Section 3.

d. Schedule of Commonwealth Contributions

(Amounts x \$1,000)	<u>2020</u>	<u>2021</u>
Actuarially determined contributions	\$ 138,776	\$ 133,971
Contributions related to the actuarially determined contribution*	<u>117,723</u>	<u>116,365</u>
Contribution deficiency (excess)	\$ 21,053	\$ 17,606
Covered	\$ 13,671,927	\$ 13,975,907
Contribution as a percent of payroll	0.86%	0.83%

*The fiscal year 2020 amount excludes purchase of service contribution amounts of \$184. The fiscal year 2021 amount excludes purchase of service contribution amounts of \$154.

Notes to Schedule:

1. Valuation date: The actuarially determined contribution calculated as of June 30, 2018 applies for the fiscal year ended June 30, 2020 and the actuarially determined contribution calculated as of June 30, 2019 applies for the fiscal year ended June 30, 2021.
2. The fiscal year 2020 actuarially determined contribution was based on the Entry Age Normal Accrued Liability as of June 30, 2018 of \$1,461,583,000, assets of \$122,734,000, 30-year amortization of the unfunded accrued liability and a 0.13% normal cost rate.
3. The fiscal year 2021 actuarially determined contribution was based on the Entry Age Normal Accrued Liability as of June 30, 2019 of \$1,474,289,000 assets of \$125,185,000, 30-year amortization of the unfunded accrued liability and of 0.12% normal cost rate.
4. Discount Rate: 7.25% for the June 30, 2018 valuation and 7.25% for the June 30, 2019 valuation.

5. Methods and assumptions used to determine contributions:

Cost method:	Amount necessary to assure solvency of the Plan through the third fiscal year after the valuation date.
Asset valuation method:	Market Value
Inflation:	Not Applicable
Salary increases:	Not Applicable
Healthcare cost trend rates:	Not Applicable
Investment Rate of Return:	Not Applicable
Retirement age:	Age-related assumptions are used. Please see the retirement assumptions outlined in the PSERS June 30, 2019 actuarial valuation report (published August 5, 2020).
Mortality:	Please see the actuarial assumptions and methods outlined in the PSERS June 30, 2019 actuarial valuation report (published August 5, 2020).
Other information:	Please see the actuarial assumptions and methods outlined in the PSERS June 30, 2019 actuarial valuation report (published August 5, 2020).

Section 2 – Demographic Information

1. The following table shows a distribution of age, service for all active members:

Age	Completed Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
Under 25	6,548	44								6,592
25-29	14,300	4,033	30							18,363
30-34	9,727	11,285	4,870	38						25,920
35-39	8,065	5,701	14,463	5,306	31					33,566
40-44	7,939	4,270	6,631	12,990	3,535	14				35,379
45-49	7,599	4,531	4,934	6,495	10,859	2,384	51			36,853
50-54	6,281	4,539	5,383	5,397	5,932	6,598	1,862	27	1	36,020
55-59	4,816	3,724	5,194	5,967	4,662	3,079	3,308	532	35	31,317
60-64	3,556	2,600	3,334	4,338	4,033	2,003	1,072	540	184	21,660
65+	3,074	1,751	1,578	1,415	1,212	750	452	180	224	10,636
Total	71,905	42,478	46,417	41,946	30,264	14,828	6,745	1,279	444	256,306

2. The retiree, disabled and terminated vested counts are summarized below:

	Count	Avg. Age
Retirees < 65	6,862	62.0
Retirees >= 65	84,444	74.8
Disabled < 65	847	58.6
Disabled >= 65	2,228	72.8
Terminated Vested	<u>472</u>	58.0
Total	94,853	73.6

There are 12,361 eligible retirees under age 65 who are not receiving benefits from the Plan. 40% of these retirees are assumed to commence benefits at age 65.

Section 3 – Actuarial Assumptions and Methods

Discount Rate: 2.18% per annum. Since the assets of the Plan are invested in short term investments, the S&P Municipal Bond 20 – Year High Grade Rate Index as of June 30, 2021 has been used to determine the total OPEB liability.

Long Term Expected

Rate of Return: Not Applicable.

Actuarial Cost

Method: Entry Age Normal, level percent of pay.

Valuation Date: June 30, 2020.

Measurement Date: June 30, 2021.

Asset Valuation: Market value of assets.

Healthcare Cost Trend: Assumed healthcare cost trend applied to current retirees with less than \$1,200 in premium assistance per year. Premium assistance is capped at \$1,200 per year.

Year	Pre-Age 65 Trend Rate	Post Age 65 Trend Rate
2020	7.00	5.00
2021	7.00	5.00
2022	7.00	5.00
2023	6.80	5.00
2024	6.60	5.00
2025	6.40	5.00
2026	6.20	5.00
2027	6.00	5.00
2028	5.80	5.00
2029	5.60	5.00
2030	5.40	5.00
2031	5.20	5.00
2032 and later	5.00	5.00

The Post Age 65 Trend Rate is consistent with the prior valuation. The Pre-Age 65 Trend Rate has been updated to grade down more slowly, reaching the ultimate trend rate of 5.0% by 2032. The ultimate trend rate of 5.0% was reached by 2028 in the prior valuation. Trend does not have a significant impact on the Plan's liabilities as demonstrated by the sensitivity results.

Participation Rate: It is assumed that future eligible retirees will elect to participate in the Health Options Plan (HOP) or employer plan that is eligible for the Health Insurance Premium Assistance benefit as follows:

- Pre-age 65 – 50%
- Post-age 65 – 70%

In addition, 40% of eligible retirees under age 65 who are not currently receiving benefits under the Plan are assumed to elect coverage under the HOP or an employer plan that is eligible for the Health Insurance Premium Assistance at age 65 and receive premium assistance under the Plan. No assumption is made with respect to current eligible retirees over age 65 and who are not receiving premium assistance, electing coverage in a medical plan that is eligible for premium assistance in the future.

Persistence: Once in receipt of premium assistance, retirees are assumed to continue participation until death.

Spouse Coverage: N/A – spouses do not receive coverage.

Age Difference: N/A – spouses do not receive any premium assistance.

Administrative Expenses: Assumed \$1,901,000 for fiscal year 2021/2022, \$1,996,000 for fiscal year 2022/2023.

Employees Covered: Any employee or former employee who meets the eligibility requirements as outlined in Section 4 of this report is eligible to receive employer-provided benefits under the Premium Assistance Program. See above for assumed participation rates.

Retirees: PSERS provided actual data for retirees benefiting under the Plan. All current retired employees who are receiving premium assistance will continue participation in their current medical plan and, thus, coverage by the Health Insurance Premium Assistance Program. See above for other participation rate assumptions.

Assumptions - Total OPEB Liability as of June 30, 2020

The following is a summary of the demographic and economic assumptions recommended on the basis of the July 1, 2010 to June 30, 2015 Experience Review, which was adopted by the Board of Trustees at their June 10, 2016 meeting.

Salary Increase: Effective average of 5.00% per annum, compounded annually (adopted as of June 30, 2016). The components are 2.75% for inflation, and 2.25% for real wage growth and merit or seniority increases. Representative values are as follows:

Age	Annual Rate of Salary Increase
20	10.25%
30	7.75
40	5.75
50	3.75
55	3.25
60	3.25
65	3.25
70	3.25

Death after Retirement:

Male annuitants: RP-2014 male mortality table adjusted backward to 2006 with the MP-2014 mortality improvement scale and projected to the valuation date with the Buck Modified 2015 projection scale.

Female annuitants: RP-2014 female mortality table adjusted backward to 2006 with the MP-2014 mortality improvement scale, projected to 2013 with the Buck Modified 2015 projection scale and adjusted for credibility. This base mortality table will then be projected on a generational basis using the Buck Modified 2015 projection scale to the valuation date.

Disabled annuitants: RP-2014 male and female disabled mortality tables adjusted backward to 2006 with the MP-2014 mortality improvement scale and projected to the valuation date with the Buck Modified 2015 projection scale.

These base mortality tables will then be projected on a generational basis using the Buck Modified 2015 projection scale from the valuation date.

The Buck Modified 2015 projection scale is based on the same data and algorithm as the MP-2015 Projection Scale but trends to an ultimate improvement rate of 0.75% at most ages, achieving the ultimate rate over a fifteen year period following the end of the historic data used to construct MP-2015.

Separation from Service: Illustrative rates of assumed separation from service are shown in the following table.

Age	Annual Rate of:						
	Withdrawal			Death ¹	Disability	Early Retirement ²	Superannuation Retirement
	Less Than Five Years of Service	Five Years but Less Than 10 Years of Service	10 or More Years of Service				
MALES							
25	14.85%	5.70%	2.57%	.041%	.020%		
30	12.74	3.37	2.57	.039	.020		
35	13.39	3.21	1.50	.044	.058		
40	14.49	3.97	1.34	.050	.116		
45	14.42	4.53	1.37	.084	.160		19.16%
50	14.31	4.45	1.92	.138	.284		19.16
55	12.17	4.43	3.38	.233	.442	18.57%	26.59
60	12.43	5.58	5.57	.379	.582	14.42	30.87
65				.700	.087		21.39
69				1.067	.135		19.34
FEMALES							
25	13.41%	7.47%	5.02%	.013%	.018%		
30	13.81	6.05	4.02	.017	.023		
35	14.22	5.53	2.85	.024	.055		
40	11.79	4.87	1.60	.032	.096		
45	11.54	4.51	1.65	.051	.135		15.00%
50	11.66	4.43	2.06	.088	.229		15.00
55	11.75	4.38	3.11	.133	.368	18.59%	10.02
60	12.25	5.97	6.40	.196	.360	17.05	35.77
65				.327	.082		22.23
69				.443	.115		22.79

1. These base mortality tables will then be projected on a generational basis using the Buck Modified 2015 projection scale to the valuation date and thereafter.
2. Early Retirement – Age 55 with 25 years of service, but not eligible for Superannuation retirement.

Assumptions - Total OPEB Liability as of June 30, 2021

The following is a summary of the demographic and economic assumptions recommended on the basis of the July 1, 2015 to June 30, 2020 Experience Review and approved by the Board for use effective with the June 30, 2021 actuarial valuation:

- Non-mortality related demographic assumptions as adopted by the Board of Trustees at its March 5, 2021 Board meeting
- Mortality related demographic assumptions as adopted by the Board of Trustees at its June 11, 2021 Board meeting
- Economic assumptions, which include a 7.00% interest rate, as adopted by the Board of Trustees at its August 6, 2021 Board meeting.

Salary Increase: Effective average of 4.50% per annum, compounded annually (adopted as of June 30, 2021). The components are 2.50% for inflation, and 2.00% for real wage growth and merit or seniority increases. Representative values are as follows:

Age	Annual Rate of Salary Increase
20	9.65%
30	7.15
40	5.15
50	3.15
55	2.75
60	2.75
65	2.75
70	2.75

Death before Retirement:

Male annuitants: Blended table based on 50% PubT-2010 Employee (Total Teacher dataset) and 50% PubG-2010 Employee (Total General Employees dataset) Headcount Weighted Male Tables, adjusted for credibility and generationally projected with Buck Modified scale MP-2020.

Female annuitants: Blended table based on 50% PubT-2010 Employee (Total Teacher dataset) and 50% PubG-2010 (Total General Employees dataset) Headcount Weighted Female Tables, adjusted for credibility and generationally projected with Buck Modified scale MP-2020.

Death after Retirement:

Male annuitants: Blended table based on 50% PubT-2010 Retiree (Total Teacher dataset) and 50% PubG-2010 Retiree (Total General Employees dataset) Headcount Weighted Male Tables, adjusted for credibility and generationally projected with Buck Modified scale MP-2020.

Female annuitants: Blended table based on 50% PubT-2010 Retiree (Total Teacher dataset) and 50% PubG-2010 Retiree (Total General Employees dataset) Headcount Weighted Female Tables, adjusted for credibility and generationally projected with Buck Modified scale MP-2020.

Male disabled annuitants: Pub-2010 Disability Mortality Non-Safety Headcount Weighted Male Table, adjusted for credibility and generationally projected with Buck Modified scale MP-2020.

Female disabled annuitants: Pub-2010 Disability Mortality Non-Safety Headcount Weighted Female Table, adjusted for credibility and generationally projected with Buck Modified scale MP-2020.

The Buck Modified 2020 projection scale is based on the same data and similar models to those used for the development of the MP projection scales but trends to an ultimate improvement rate of 0.75% at most ages. The 0.75% ultimate improvement rate grades down after age 85 to 0.60% at age 95.

Separation from Service: Illustrative rates of assumed separation from service are shown in the following table.

Age	Class T-C and Class T-D Annual Rate of:						
	Withdrawal			Death ¹	Disability	Early Retirement ²	Superannuation Retirement ³
	Less Than Five Years of Service	Five Years but Less Than 10 Years of Service	10 or More Years of Service				
MALES							
25	21.83%	9.22%	4.55%	.028%	.01%		
30	14.93	3.84	4.55	.036	.01		
35	15.17	3.77	1.68	.046	.04		
40	16.04	4.44	1.42	.063	.06		
45	15.12	5.17	1.41	.094	.11		19.0%
50	15.81	4.96	1.89	.147	.23		19.0
55	15.54	4.96	3.63	.220	.37	14.5%	25.0
60	13.85	6.37	5.49	.325	.37	14.5	29.0
65				.499	.11		23.0
70				.782	.08		20.0
75				1.204	.08		25.0
79				1.892	.08		25.0
FEMALES							
25	18.33%	7.47%	3.90%	.010%	.01%		
30	15.16	5.92	3.90	.015	.02		
35	14.66	5.68	2.83	.021	.03		
40	12.86	5.16	1.67	.033	.06		
45	12.82	5.25	1.60	.050	.11		16.0%
50	13.02	5.23	2.08	.076	.18		16.0
55	13.43	5.31	3.66	.111	.29	14.5%	16.0
60	13.81	7.53	5.94	.166	.24	15.0	31.0
65				.266	.07		28.0
70				.442	.09		23.0
75				.762	.09		25.0
79				1.225	.09		25.0

1. These base mortality tables will then be projected on a generational basis using the Buck Modified 2020 projection scale to the valuation date and thereafter.
2. Early Retirement – Age 55 with 25 years of service, but not eligible for Superannuation retirement.
3. Superannuation Retirement – Class T-C and Class T-, age 62 or age 60 with at least 30 years of service or 35 or more years of service.

Age	Class T-E, Class T-F, Class T-G and Class T-H Annual Rate of:					
	Withdrawal		Death ¹	Disability	Early Retirement ²	Superannuation Retirement ³
	Less Than 10 Years of Service	10 or More Years of Service				
MALES						
25	17.02%	4.55%	.028%	.01%		
30	11.25	4.55	.036	.01		
35	12.09	1.68	.046	.04		
40	13.14	1.42	.063	.06		
45	13.87	1.41	.094	.11		
50	13.67	1.89	.147	.23		
55	11.91	3.63	.220	.37	14.5%	
60	11.19	5.49	.325	.37	14.5	16.3%
65	11.19		.499	.11		16.3
70	11.19		.782	.08		16.3
75	11.19		1.204	.08		16.3
79	11.19		1.892	.08		16.3
FEMALES						
25	14.54%	3.90%	.010%	.01%		
30	11.68	3.90	.015	.02		
35	12.39	2.83	.021	.03		
40	11.53	1.67	.033	.06		
45	10.99	1.60	.050	.11		
50	10.72	2.08	.076	.18		
55	10.75	3.66	.111	.29	14.5%	19.5%
60	11.62	5.94	.166	.24	15.0	19.5
65	11.62		.266	.07		19.5
70	11.62		.442	.09		19.5
75	11.62		.762	.09		19.5
79	11.62		1.225	.09		19.5

1. These base mortality tables will then be projected on a generational basis using the Buck Modified 2020 projection scale to the valuation date and thereafter.
2. Early Retirement – Age 55 with 25 years of service, but not eligible for Superannuation retirement. For Class T-G, age 57 with 25 years of service, but not eligible for Superannuation retirement.
3. Superannuation Retirement – Class T-E and Class T-F, age 65 with at least 3 years of service or any combination of age and service that totals to 92 years with at least 35 years of credited service. Class T-G, age 67 with at least 3 years of service or any combination of age and service that totals to 97 years with at least 35 years of credited service. Class T-H, age 67 with at least 3 years of service.

Section 4 – Summary of Plan Provisions

Plan sponsor: Pennsylvania Public Schools Employees' Retirement System

Plan name: Health Insurance Premium Assistance Program

Eligibility: Retirees can participate if they satisfy the following criteria:

- (a) Have 24 ½ or more years of service, or
- (b) Are disability retirees, or
- (c) Have 15 or more years of service and who both terminated school service and retired after attaining superannuation age, and
- (d) Participate in the PSERS health options program or in an employer-sponsored health insurance program.

Benefits: Participating eligible retirees receive health insurance premium assistance payments from the Health Insurance Account equal to the lesser of \$100 per month or the actual monthly premium.

Section 5 – Health Care Reform Considerations

Health care delivery in the U.S. continues to evolve since the enactment of Health Care Reform. The Patient Protection and Affordable Care Act (PPACA), was signed March 23, 2010, with further changes enacted by the Health Care and Education Affordability Reconciliation Act (HCEARA), signed March 30, 2010. This valuation uses various assumptions that were modified based on considerations under Health Care Reform legislation. This Section discusses particular legislative changes that were reflected in our assumptions. We have not identified any other specific provision of Health Care Reform that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we continue to monitor any potential impacts.

Removal of Lifetime Maximum – Effective 1/1/2011

The health insurance premium assistance benefit valued in this report is a retiree only benefit and does not consider underlying plan coverage concerns for which the premium assistance is applied. Retiree only arrangements are not subject to the lifetime maximum provision.

Expansion of Child Coverage to Age 26 - Effective 1/1/2011

The health insurance premium assistance benefit valued in this report is a retiree only benefit that is not available to children.

Medicare Part D Subsidy - Shrinking Medicare Prescription Drug “Donut Hole”- Starting 1/1/2011

The health insurance premium assistance benefit valued in this report is not impacted by Medicare Part D changes.

Other Revenue Raisers

The Health Care Reform includes a variety of other revenue raisers that involve additional costs on providers (such as medical device manufacturers) and insurers. The Further Consolidated Appropriations Act, 2020 was signed into law in late 2019 and repealed several ACA taxes including the Cadillac tax and two other ACA taxes - the medical device tax effective in 2020 and the health insurer tax (or HIT), which will no longer apply after 2020. We considered these factors when developing the trend assumptions.

Excise Tax on High-Cost Employer Health Plans (aka Cadillac Tax)

As noted above, the Cadillac tax has been repealed.

Other

We have not identified any other specific provision of health care reform that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will continue to monitor any potential impacts.

Section 6 – Summary of Key Accounting Terms

Actuarially determined contribution

A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

Actuarial present value of projected benefit payments

Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.

Actuarial valuation

The determination, as of a point in time (the actuarial valuation date), of the service cost, total OPEB liability, and related actuarial present value of projected benefit payments for OPEB performed in conformity with Actuarial Standards of Practice unless otherwise specified by the GASB.

Actuarial valuation date

The date as of which an actuarial valuation is performed.

Ad hoc postemployment benefit changes

Postemployment benefit changes that require a decision to grant by the authority responsible for making such decisions.

Automatic postemployment benefit changes

Postemployment benefit changes that occur without a requirement for a decision to grant by a responsible authority.

Covered payroll

The compensation to active employees on which the employer bases contributions to the OPEB plan.

Discount rate

The single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the following:

- a. The actuarial present value of benefit payments projected to be made in future periods in which (1) the amount of the OPEB plan's fiduciary net position is projected (under the requirements of this Statement) to be greater than the benefit payments that are projected to be made in that period and (2) OPEB plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, calculated using the long-term expected rate of return on OPEB plan investments
- b. The actuarial present value of projected benefit payments not included in (a), calculated using a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale).

Entry age actuarial cost method

A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is called the Actuarial accrued liability.

Healthcare cost trend rates

The rates of change in per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

Inactive employees Individuals no longer employed by an employer in the OP Measurement period

The period between the prior and the current measurement dates.

Net OPEB liability

The liability of employers and non-employer contributing entities to employees for benefits provided through a defined benefit OPEB plan that is administered through a trust that meets the criteria in paragraph 4 of this Statement. Other postemployment benefits (OPEB) Benefits (such as death benefits, life insurance, disability, and long-term care) that are paid in the period after employment and that are provided separately from a pension plan, as well as healthcare benefits paid in the period after employment, regardless of the manner in which they are provided. OPEB does not include termination benefits or termination payments for sick leave.

Projected benefit payments

All benefits (including refunds of employee contributions) estimated to be payable through the OPEB plan (including amounts to be paid by employers or non-employer contributing entities as the benefits come due) to current active and inactive employees as a result of their past service and their expected future service.

Real rate of return

The rate of return on an investment after adjustment to eliminate inflation.

Service costs

The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.

Total OPEB liability

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service.