

# 2020 Public Employees Benefits Board Other Postemployment Benefits Actuarial Valuation Report



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## LETTER OF INTRODUCTION PEBB OPEB ACTUARIAL VALUATION REPORT

June 2021

This report documents the results of an actuarial valuation of the subsidies provided by employers to retirees and their spouses in the Public Employee Benefits Board’s (PEBB) medical plans. PEBB was created within the Washington State Health Care Authority (HCA) to administer medical, dental, and life insurance plans for public employees, retirees, and their families.

The primary purpose of this valuation is to determine the state’s Other Postemployment Benefits (OPEB) liability under the Governmental Accounting Standards Board Statement No. 75 (GASB 75) financial reporting requirements. The GASB 75 information contained in this report will be used by the Office of Financial Management (OFM) in their [2021 Annual Comprehensive Financial Report](#). Liabilities associated with other major groups participating in PEBB, including K-12 school districts and political subdivisions, are included for informational purposes only.

The report is organized into the following sections:

- ❖ Key Results.
- ❖ Background.
- ❖ Actuarial Exhibits.
- ❖ Participant Data.
- ❖ Assumptions.
- ❖ Appendices.

The [Key Results](#) section summarizes the primary GASB 75 actuarial measures and provides an explanation for the change in liability since the last valuation. The [Background](#) section discusses the nature of the OPEB liabilities, who is affected by the GASB requirements, and how the liabilities are calculated. The [Actuarial Exhibits](#) section documents the GASB 75 results that OFM will need to satisfy their OPEB reporting requirements and provides more detailed results from this valuation. The [Participant Data](#) section has detailed information about the retired PEBB members who receive the subsidies and the active members who are potentially eligible for them upon retirement. The [Assumptions](#) section includes a summary of the actuarial assumptions and a summary of plan provisions. The [Appendices](#) share the liabilities for those other employers



participating in PEBB and an expanded sensitivity analysis about how the results can change under a different set of assumptions.

With the exception of the state, employers should not use this report to satisfy their individual employer reporting requirements under GASB 75. The Office of the State Actuary (OSA) created an online tool to help small employers calculate their individual reporting requirements. This online tool, available on our [website](#), utilizes the alternative measurement method allowed under GASB 75.

We encourage you to submit any questions you might have concerning this report to our office e-mail address: [state.actuary@leg.wa.gov](mailto:state.actuary@leg.wa.gov).

Lisa A. Won, ASA, FCA, MAAA  
Deputy State Actuary

Kyle Stineman, ASA, MAAA  
Actuary



# I. KEY RESULTS

## HOW HAS THE LIABILITY CHANGED?

This section summarizes some key GASB 75 results since the prior valuation for the state. For GASB 75, the Actuarial Accrued Liability (AAL) under the Entry Age Normal (EAN) cost method is referred to as the Total OPEB Liability (TOL).

GASB 75 Key Results		
(Dollars in Thousands)	Measurement Date	
	6/30/2019	6/30/2020
<b>TOL</b>	\$5,803,859	\$6,055,193
<b>OPEB Expense</b>	\$248,450	\$68,527
<b>Benefit Payments/Employer Contributions</b>	\$93,249	\$100,076

## WHY THE LIABILITY CHANGED SINCE THE LAST MEASUREMENT

A change in liability occurs between measurement dates due to: (1) passage of time; (2) unexpected changes in experience; and (3) other significant changes in plan provisions, actuarial assumptions, and methodology. In total, the liability increased by approximately 4 percent since the prior valuation.

Liabilities generally increase from one measurement date to the next because of increases in plan membership as well as the cost of benefits.

An unexpected change in experience occurs when actual demographic experience differs from what we expected in the valuation. Updated participant data is reflected every two years and a change in liability will emerge as a result of the actual data. In this case, the actual experience did not materially impact liabilities.

One significant plan change was the removal of the Excise Tax. This change decreased liabilities by approximately 4 percent.

Assumption changes are another source of significant change to the liabilities of the plan. The discount rate is updated annually and increased liabilities for this valuation by approximately 25 percent. Healthcare assumptions are updated every two years and decreased liabilities by approximately 9 percent since the last measurement. We also reflected new demographic assumptions, related to a recent experience study on the Washington State retirement systems, which decreased liabilities by approximately 14 percent.

The above summary is not intended to cover every change. Please see a more detailed analysis of the gain/loss found later in this report.

## WHAT'S NEW TO THE REPORT?

The only notable change we made to this report since the [2018 PEBB OPEB Report](#) includes a new section in the [Appendices](#) that summarizes the participant data by retirement system.



## II. BACKGROUND

## OTHER POSTEMPLOYMENT BENEFITS

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OPEB are benefits provided to retired employees (and their spouses) beyond those provided by their pension plans. Such benefits include medical, prescription drug, life, dental, vision, disability, and long-term care insurance. PEBB offers retirees access to all of these benefits. However, PEBB employers primarily provide monetary assistance, or subsidies, only for medical, prescription drug, dental and vision insurance.

The OPEB relationship between PEBB employers and their employees and retirees is not formalized in a contract or plan document. Rather, the benefits are provided in accordance with a substantive plan. A substantive plan is one in which the plan terms are understood by the employers and plan members. This understanding is based on communications between the employers and plan members and the historical pattern of practice with regard to the sharing of benefit costs.

## SUBSIDIES

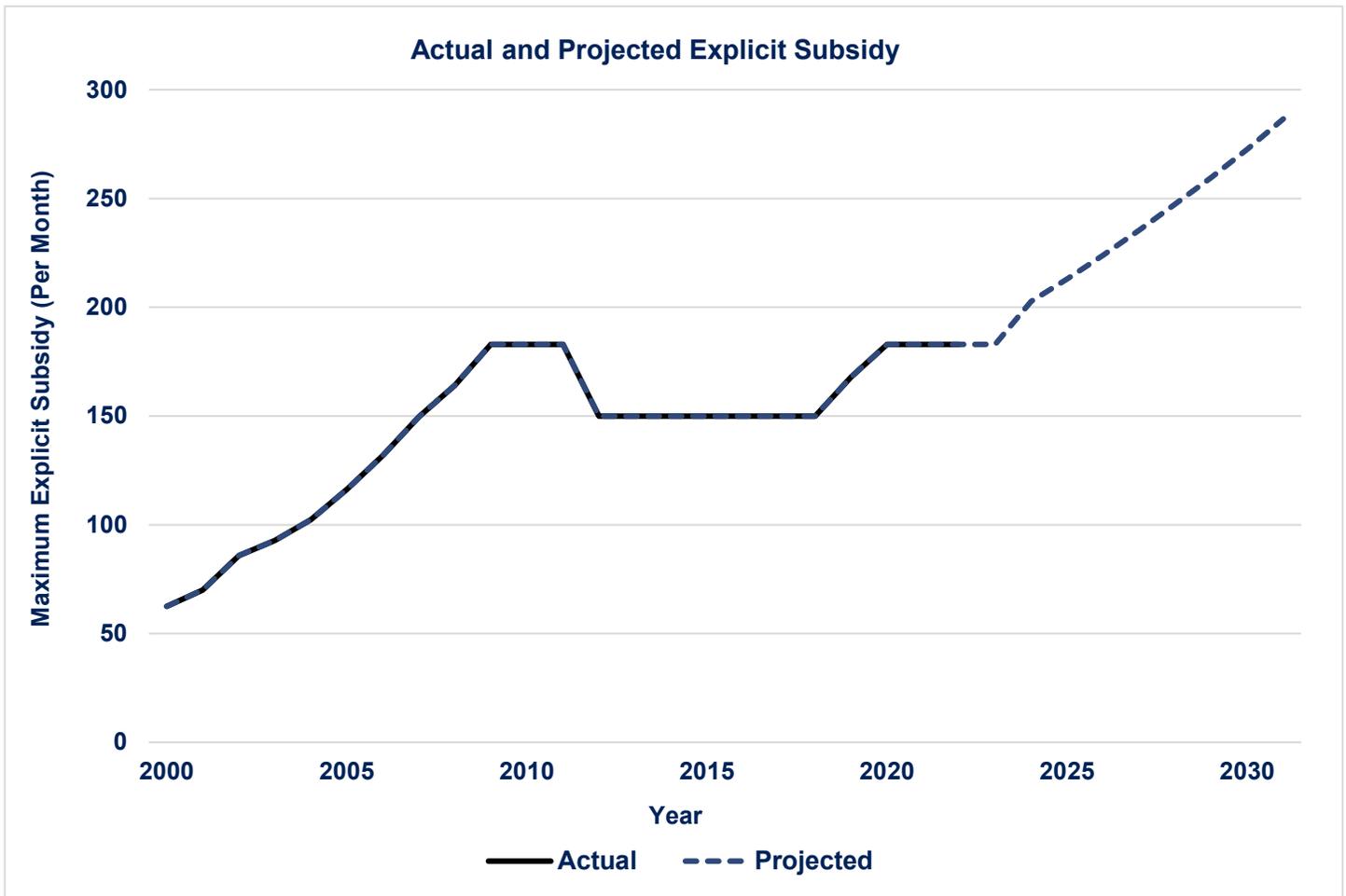
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HCA administers PEBB plan benefits. For medical insurance coverage, the HCA has two claims pools: one covering employees and non-Medicare eligible retirees, and the other covering retirees enrolled in Medicare Parts A and B. PEBB plan benefits provide two different subsidies for retirees: an explicit subsidy and an implicit subsidy. In addition, there is cost-sharing between employers and employees. Each participating employer pays a portion of the premium for active employees. Retirees are responsible for paying the full premium for participating in the program, which is reduced through the subsidies.

The explicit subsidy, permitted under the [Revised Code of Washington \(RCW\) 41.05.085](#), is a straightforward, set dollar amount for a specific group of people. The explicit subsidy lowers the monthly premium paid by members over the age of 65 enrolled in Medicare Parts A and B. Annually, the HCA administrator recommends an amount for the next Calendar Year's (CY) explicit subsidy for inclusion in the Governor's budget. The final amount is approved by the state Legislature. The explicit subsidy is the lesser of 50 percent of the monthly premium and the set dollar amount adopted by the Legislature. In 2022, the dollar amount remains at \$183, which was last increased in 2020. We expect increases to the dollar amount in the future.

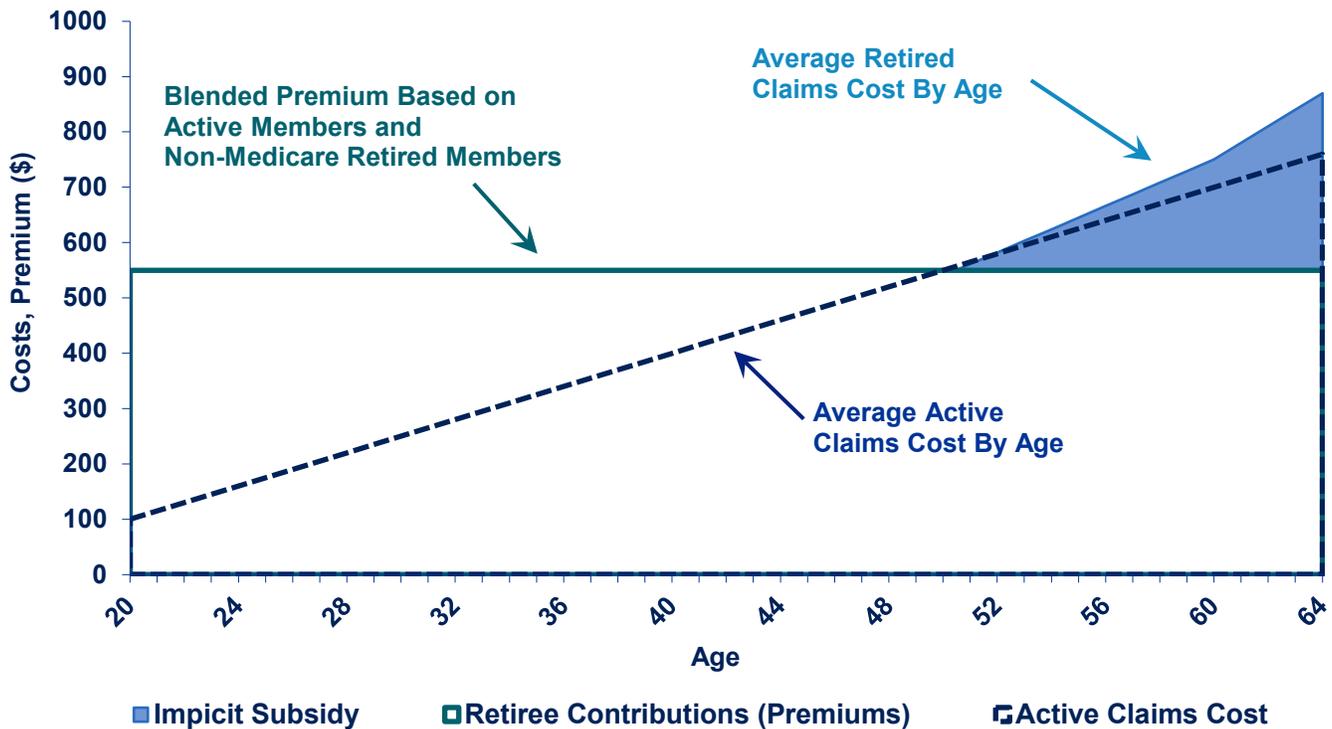
Based on discussions and input from HCA, OFM, OSA and other legislative staff, Milliman prepares trend assumptions that project the growth of the explicit subsidy. These assumptions have a significant impact on the liability. The current valuation assumes the \$183 explicit subsidy will remain constant through 2023 then grow with healthcare trends starting in 2024.

The following graph provides the projected monthly explicit subsidy based on current assumptions, as well as historical values for context.



The implicit subsidy, set up under [RCW 41.05.022](#), is more complex because it is not a direct payment from the employer on behalf of the member. Claims experience for employees and non-Medicare eligible retirees are pooled when determining premiums. Therefore, these retired members pay a premium based on a pool of members that, on average, are younger and healthier. There is an implicit subsidy from the employee group since the premiums paid by the retirees are lower than they would have been if the retirees were insured separately. The subsidies are valued using the difference between the age-based claims costs and the premiums paid by the retirees (referenced later in this report as “retiree contributions”). The following illustration shows an example of the expected average monthly claims costs and the blended premium.

### Implicit Subsidy Illustration Average Monthly Claims Cost vs. Premium by Age



The horizontal line shows the constant premium for all members participating in the employee and non-Medicare eligible retiree pool. The line increasing, by age, shows the average monthly claims cost for each age. An implicit subsidy (the shaded area in the graph) occurs whenever the monthly costs are above the horizontal line. As a theoretical example, an average monthly claims cost for 60-year-old retirees could be \$700, whereas an average monthly premium for 60-year-old retirees could be \$550. As a result, there would be an average implicit subsidy of \$150 per month for each 60-year-old PEBB retiree.

For dental benefits, there is only one claim pool. All retirees, both Medicare and non-Medicare eligible, are pooled with employees to determine a blended premium. Retirees pay the full premium so the only subsidy that exists is an implicit subsidy, since the premium retirees pay is lower due to being pooled with employees.

## OPEB FINANCIAL REPORTING REQUIREMENTS

Before 2007, these subsidies were not projected and accounted for under an accrual basis. Accrual accounting is meant to match the timing between when something occurs and when it is accounted for. In this case, it is intended to match the expense to the year in which the benefits are earned by the member.

Pay-as-you-go funding occurs when an employer chooses to contribute (pay) for benefits only when they occur or become due (after retirement). Before 2007 this cost was expensed as PEBB plan employers paid the current year's subsidies. However, the unfunded liability, the difference between what members accrue (assuming on-going future payments) and what the PEBB plan employers currently pay, was growing and was not accounted for under the pay-as-you-go method.

GASB Statements No. 43 and 45 (GASB 43 and GASB 45) were created in an attempt to:

- ❖ Create financial transparency.
- ❖ Create better alignment between public and private sector accounting.
- ❖ Provide clarity among bargaining groups to show the true cost of benefits over time.
- ❖ Provide employers knowledge of the true cost of benefits over time.
- ❖ Provide investors knowledge of the true long-term liabilities.
- ❖ Show the decision makers a cost that they need to recognize.

GASB 43 and 45 were replaced by GASB Statements No. 74 and 75 (GASB 74 and GASB 75). GASB 74 and 75 require more extensive disclosures and supplementary information than the prior reporting requirements. Most of GASB 74 does not apply to OPEB offered through PEBB since these benefits are not pre-funded through a qualifying trust. GASB 75 became effective for employers after June 15, 2017, and requires employers to disclose key plan measures relative to their plan members, including the TOL and OPEB expense.

In addition to requiring new tables, GASB 75 has two key changes in assumptions and methodology from GASB 45. First, GASB 75 requires the use of the EAN cost method to measure AAL while the previous statement allowed for various acceptable actuarial cost methods. Cost methods vary in the manner in which they allocate benefits to past and future time periods. The EAN cost method is referred to as the TOL in GASB 75. Also, the discount rate for plans without a dedicated trust fund will be based on a 20-year municipal bond index which means the discount rate will fluctuate from year-to-year.

The state also discloses GASB 75 information in the Office of the State Treasury Bond Prospectus. Rating agencies, such as Moody's, Fitch, and Standard & Poor's, analyze OPEB liabilities. Bond ratings, and the related cost of capital, may be impacted by a government's unfunded OPEB liabilities. However, the resulting analyses will not necessarily have a negative impact on ratings. These agencies will consider whether a plan is in place to manage these liabilities, look at the entity's ability to meet their budget, and analyze the size of the unfunded OPEB liability compared to payroll, budget, and tax base when making their determinations.

## ACTUARIAL VALUATION

An actuary performs an actuarial valuation to estimate what benefits will be paid throughout the future lifetimes of current members, and then discounts those payments back to the present. The result is the Present Value of Future Benefits (PVFB). For example, a dollar amount today, equal to the PVFB, could be invested during plan members' lifetimes to pay all future benefits when the members are eligible. In this case, the benefit payments are the subsidies provided to PEBB retirees and their spouses.

Under an actuarial valuation, an actuary needs inputs such as participant data, benefit provisions, and assumptions. Participant data includes age, membership service, medical and dental plan selection, spousal coverage, etc. Benefit provisions include the structure of the benefits that the members receive – in this case, the subsidies supporting PEBB member medical and dental benefits. Assumptions include the discount rate, medical and dental trends, decrement rates, participation rates, aging factors, etc.

An actuary values these inputs using an actuarial cost method. The cost method chosen allocates costs between past and future plan membership service before retirement. Distinct actuarial cost methods produce somewhat different allocations since each method allocates cost differently. The EAN cost method required under GASB 75 allocates plan benefits so they are earned, or accrued, as a level percentage of pay throughout an employee's working lifetime.

## FUNDING POLICY

In Washington State, the implicit and explicit subsidies are funded on a pay-as-you-go basis, meaning that PEBB employers pay these costs as they occur. This generally means today's taxpayers are paying for benefits that were earned in the past. This funding policy is in conflict with the principle of intergenerational equity, which requires that a member's benefits be funded over the member's working lifetime. Intergenerational equity occurs when the member's benefits are paid by the taxpayers who benefit from that member's service, as opposed to making future taxpayers, who do not benefit from that member's service, pay for the member's benefits.

In the future, employers can continue to fund these liabilities on a pay-as-you-go basis, or they can be pre-funded. If employers continue pay-as-you-go funding, then contributions to the PEBB plan are lower in the short-run but will steadily rise as the number, and benefits, of PEBB members grow. In addition, under a pay-as-you-go funding policy, there are no assets to invest; therefore, the GASB 75 required discount rate is typically lower, which means a larger reported liability. If, instead, employers fully pre-fund these liabilities, then annual contributions are made and placed in an irrevocable trust. Pre-funding will lead to larger current contributions in the short-run, a lower unfunded liability, and closer adherence to the principle of intergenerational equity. In addition, under pre-funding there will be assets to invest; the investment return applied to the liabilities will reflect the expected long-term yield of the assets used to finance the payment of the benefits. If these assets are invested similarly to those in a typical retirement plan then a higher discount rate can be assumed which results in a smaller reported overall liability.

An employer must consider many issues when creating a trust fund under a pre-funding policy. Such considerations include:

- ❖ Determining the level of pre-funding.
- ❖ Contractualizing retiree health subsidies.
- ❖ Making it difficult for employers to join or leave PEBB.
- ❖ Making larger contributions today to reduce future contributions.

Employers could also choose a combination of the two funding policies. Choosing this combination of funding methods allows for decision-makers to keep current contributions manageable, while still pre-funding part of the liability and being able to earn some investment returns from the assets.

Lastly, partial or full pre-funding could occur under a non-dedicated fund. Under this approach, future benefit payments are partially offset by anticipated investment earnings; however, GASB requires funding under an irrevocable and dedicated trust in order for the assets to offset the OPEB liability, i.e., reduce the unfunded OPEB liability, from a financial reporting standpoint. This approach would not contractualize retiree health subsidies and the discount rate would remain consistent with that of a pay-as-you-go plan.

## COST-SHARING POLICY

Cost-sharing policy determines the funding split between the employer and either the employee or the retiree. It is measured in terms of the percentage of the total amount that each pays. GASB requires that the cost-sharing policy be determined from the substantive plan. The substantive plan reveals the plan terms as understood by the employer(s) and the plan members. However, a comprehensive plan document does not always exist. In this case, GASB requires that the cost-sharing policy be determined from what is communicated between the employer and employees, as well as the cost-sharing historical pattern of practice. We must assume continuation of the current cost-sharing policy, since that is the best estimate of the policy which will be in place in the future.

In the actuarial valuation, this cost-sharing policy is used to project the retiree contributions and average retiree claims costs into the future. Generally, we use the same healthcare trend for projecting contributions and claims costs, so the percentage of the total cost that the employer pays will remain constant throughout the lives of the current active and inactive members for these ages. However, based on feedback from HCA, OFM and OSA, Milliman altered the medical healthcare inflation assumption for retiree contributions to reflect limited short-term growth in the explicit Medicare subsidies as well as to reflect the anticipated aging of the Medicare population. For more information please see the [Assumptions](#) section. Changing the cost sharing policy can significantly impact the liability. For example, reducing the cost-sharing policy, which will lead to larger retiree contributions, correspondingly reduces the state's OPEB liability.



# III. ACTUARIAL EXHIBITS



# Office of the State Actuary

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## **Actuarial Certification Letter PEBB OPEB Actuarial Valuation Report**

June 2021

This report documents the results of an actuarial valuation of the employer-provided subsidies offered to retirees and their spouses in the Public Employee Benefits Board’s (PEBB) medical plans. The primary purpose of this valuation is to determine the state’s, as an employer, Other Postemployment Benefits (OPEB) liability under the Governmental Accounting Standards Board Statement No. 75 (GASB 75) financial reporting requirements, as of June 30, 2020. This valuation should not be used for other purposes. Please replace this report with a future report or letter when available.

The Health Care Authority (HCA) and the Department of Retirement Systems (DRS) provided the data used in this report. The data from DRS is effective as of June 30, 2020, while HCA data is effective as of November 2020. As such, adjustments were made to the HCA data to ensure consistency with the June 30, 2020, measurement date. We have checked the data for reasonableness as appropriate based on the purpose of the valuation. An audit of the participant data was not performed. Unless noted otherwise, we relied on all the information provided as complete and accurate. In our opinion, the data is adequate and complete for the purpose of this valuation. For more information on the census data, including adjustments to data, please see the [Participant Data](#) section of the report.

The valuation results summarized in this report also require assumptions about future economic and demographic events. 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; changes in plan provisions or applicable law, including cost-sharing between employers and retirees.

There is no established trust fund dedicated to these benefits, therefore no assets were accounted for in this valuation. Further, GASB 75 requires the discount rate to be based on a 20-year, tax exempt, high-quality municipal bond rate if there is not a dedicated trust. We rely on the Bond Buyer General Obligation 20-Bond Municipal Index at the measurement date. The post-retirement participation percentage, percentage of spouses covered, and Medicare coverage demographic assumptions are determined by the Office of the State



Actuary (OSA) based on an experience study performed in 2017. The remaining non-healthcare economic and demographic assumptions are the same as those used in the [June 30, 2019, Actuarial Valuation Report](#) (AVR) on the DRS retirement systems, and were developed from the [2013-2018 Demographic Experience Study](#) and the [2019 Economic Experience Study](#) performed by OSA. Our office will complete a new economic experience study in the fall of 2021.

HCA contracted with Milliman to prepare the healthcare assumptions for this valuation, which include healthcare trend, claims costs, and aging factors. Robert Schmidt, a healthcare actuary in Milliman's Boise, Idaho office, provided these assumptions in a letter to HCA dated December 31, 2020. Beginning with this report, Milliman no longer prepares two sets of healthcare trends (inclusion of excise tax, exclusion of excise tax) due to recent federal legislation. [H.R. 1865](#), also referred to as the Further Consolidations Appropriations Act of 2020, repealed the excise tax so all results are prepared using assumptions that exclude the excise tax.

OSA does not employ healthcare actuaries so we are not qualified to judge the reasonableness of the complete set of assumptions. However, we did have discussions with HCA, OFM, and Milliman about the healthcare assumptions to understand how they were determined, ensure consistency with the other economic assumptions, and clarify what may have caused the assumptions to change from the prior valuation. We also reviewed the relationship between the claims and the premiums to ensure these assumptions are reasonable for purposes of this report.

We relied on the **ProVal**® software developed by [Winklevoss Technologies](#) to perform this retiree medical valuation. To assess the general operation of this model, we reviewed the output for reasonableness; this includes comparing the results to our simplified estimates done in Microsoft Excel and examining sample lives to confirm the programming is working as intended. We are not aware of any known weaknesses or limitations of the model that have a material impact on the results. Additionally, we considered how the use of different inputs to the model (e.g., data/assumptions/provisions) produce different results and evaluated the relative impacts to our expectations; this allows us to gain a deeper knowledge of the model's important dependencies and major sensitivities. The use of the model for this analysis is appropriate given its intended purpose.

We believe that the data, assumptions, and methods used in this valuation are reasonable and appropriate for the primary purpose stated above. The use of another set of data, assumptions, and methods, however, could also be reasonable and could produce materially different results. In our opinion, all data, assumptions, and methods are appropriate and conform to generally accepted actuarial principles and standards of practice as of the date of this publication.



The undersigned, with actuarial credentials, meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. While this report is intended to be complete, we are available to offer extra advice and explanations as needed.

Lisa A. Won, ASA, FCA, MAAA  
Deputy State Actuary

Michael T. Harbour, ASA, MAAA  
Actuary

## GASB 75 RESULTS FOR THE STATE OF WASHINGTON

### GASB 75 TABLES FOR MEASUREMENT DATE JUNE 30, 2020

The primary purpose of this valuation is to determine the state’s OPEB liability under the GASB 75 financial reporting requirements. The tables within this section meet the GASB 75 requirements and we intend for the tables to be used by OFM in their *2021 Annual Comprehensive Financial Report*. The tables include Schedule of Changes in the TOL, OPEB Expense, Sensitivity of the TOL to Changes in Discount Rate and Healthcare Trend Assumptions, Deferred Outflows and Inflows of Resources, Subsequent Recognition Years, and Summary of Plan Participants. GASB 75 also requires disclosing information about assumptions and methods, which can be found in the [Assumptions](#) section.

This section of the report focuses on state PEBB employers which contains all Washington State agency and higher education employers. Liabilities associated with other major groups, including K-12 school districts and political subdivisions, are disclosed in the [Appendices](#).

The following table shows the TOL as of June 30, 2019, and June 30, 2020, and it reconciles the change in the TOL as required under GASB 75. Three sources of volatility between measurement dates are the Differences Between the Expected and Actual Experience, the Changes in Assumptions, and Other changes in liabilities.

<b>Schedule of Changes in Total OPEB Liability and Related Ratios Postemployment Benefits Liability Measurement Date of June 30, 2020</b>	
(Dollars in Thousands)	
Total OPEB Liability	
Service Cost	\$251,272
Interest	210,193
Difference Between Expected and Actual Experience <sup>1</sup>	(32,210)
Changes in Benefit Terms	-
Changes of Assumptions <sup>1</sup>	136,252
Benefit Payments <sup>2</sup>	(100,076)
Other <sup>3</sup>	(214,097)
<b>Net Change in TOL</b>	<b>\$251,334</b>
TOL—Beginning	5,803,859
<b>TOL—Ending</b>	<b>\$6,055,193</b>
Covered Employee Payroll <sup>2</sup>	\$9,272,467
<b>TOL as a Percentage of Covered Payroll</b>	<b>65.30%</b>

Note: Figures may not total due to rounding.

<sup>1</sup> The recognition period for these changes is 9 years. This is equal to the average expected remaining service lives of all active and inactive members.

<sup>2</sup> Source: Office of Financial Management (OFM).

<sup>3</sup> Impact of removing trends that include Excise Tax. Legislation under H.R. 1865 repealed the excise tax after our previous measurement date.

The reconciliation of the TOL from one year to the next is also used to calculate the components of the OPEB Expense table. The Service Cost, Interest cost, and Other cost line items are taken directly from the TOL reconciliation. The amortization of differences between expected and actual experience, and the amortization of assumption changes, relies on the gain and loss components in the prior table as well as gain and loss components from prior years. Instead of recognizing the entire gain or loss immediately from these sources in the OPEB Expense, it is amortized, or spread out, over a specific period of time. Under GASB 75, that time period equals the average of the expected remaining service lives of all active and inactive members that are provided with OPEB through the OPEB plan. To calculate the amortization component, we divided the gain or loss to be amortized by the average expected future service, which as of the most recent measurement date is nine years.

<b>OPEB Expense for Measurement Date of June 30, 2020</b>	
<i>(Dollars in Thousands)</i>	
<b>Service Cost</b>	\$251,272
<b>Interest Cost</b>	210,193
<b>Amortization of Differences Between Expected and Actual Experience</b>	18,561
<b>Amortization of Assumptions Changes</b>	(197,403)
<b>Changes in Benefit Terms</b>	-
<b>Other Changes in Fiduciary Net Position</b>	(214,097)
<b>Total OPEB Expense</b>	<b>\$68,527</b>

The remaining portion of gains and losses that will be recognized in OPEB expense in future years are referred to as deferred inflows of resources and deferred outflows of resources. Deferred inflows of resources will decrease future OPEB expense, while deferred outflows of resources will increase future OPEB expense. The table below provides the total Deferred Inflows and Deferred Outflows for the various gain and loss components.

<i>Dollars in Thousands</i>	<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>
<b>Difference Between Expected and Actual Experience</b>	\$132,841	\$28,631
<b>Changes of Assumptions</b>	416,375	1,428,066
<b>Transactions Subsequent to the Measurement Date*</b>	-	-
<b>Total</b>	<b>\$549,217</b>	<b>\$1,456,697</b>

*Note: Deferred outflows will increase future OPEB expense and deferred inflows will decrease future OPEB expense.*

*\*OFM is the source of the Transactions Subsequent to the Measurement Date. Please see the 2021 Annual Comprehensive Financial Report.*

The amount of deferred outflows and deferred inflows of resources that will be recognized in future OPEB expense is summarized in the following table. It provides the net impact to OPEB expense annually over the next five years and combines the impact beyond five years.

<b>Subsequent Years</b>	
<b>2022</b>	(\$178,842)
<b>2023</b>	(178,842)
<b>2024</b>	(178,842)
<b>2025</b>	(178,842)
<b>2026</b>	(178,842)
<b>Thereafter</b>	<b>(\$13,271)</b>

*Note: Negative deferral reflects greater future inflows than outflows.*

GASB 75 also requires analysis of the impact of changing the Healthcare Trend and Discount Rate assumptions by 100 basis points.

Sensitivity Analysis—Healthcare Trend			
<i>(Dollars in Thousands)</i>	1% Decrease	Current Trend Rate	1% Increase
<b>TOL</b>	\$4,934,339	\$6,055,193	\$7,557,903

Sensitivity Analysis—Discount Rate			
<i>(Dollars in Thousands)</i>	1% Decrease	Current Discount Rate	1% Increase
<b>TOL</b>	\$7,331,346	\$6,055,193	\$5,061,527

We relied on data as of the June 30, 2020, valuation date and summarized the participant data below.

GASB 75 Summary of Plan Participants	
	State
<b>Active Employees*</b>	
<b>Number</b>	129,218
<b>Average Age</b>	45.4
<b>Average Service</b>	10.4
<b>Retirees Receiving Benefits**</b>	
<b>Number</b>	35,843
<b>Average Age</b>	74.1
<b>Retirees Not Receiving Benefits***</b>	
<b>Number</b>	6,000

\*Reflects active employees eligible for PEBB program participation as of June 30, 2020.

\*\*Headcounts exclude spouses of retirees that are participating in a PEBB program as a dependent.

\*\*\*This is an estimate of the number of retirees that may be eligible to join a post-retirement PEBB program in the future. They are not eligible for benefits unless they choose to join in the future. In order to do so, they must show proof of continuous medical coverage since their separation of employment with the State of Washington that meets the requirements set forth in Washington Administrative Code 182-12-205.

## ACTUARIAL ACCRUED LIABILITY

The EAN cost method is the only actuarial cost method allowed under GASB 75 reporting requirements. The prescribed method allocates plan benefits so they are earned as a level percentage of pay throughout an employee’s working lifetime. The liabilities under the EAN cost method are the employer’s total accrued (or earned) liability from the subsidies offered through the PEBB plan. These liabilities are based on all service earned as of the valuation date. The AAL under the EAN cost method is also referred to as the TOL in GASB 75.

The table below shows the state’s TOL as of the valuation date, June 30, 2020, grouped by current and future retirees. The table is broken into gross costs (total cost), cost sharing (retiree contributions), and net subsidy (gross cost minus cost sharing).

Total OPEB Liability	
<i>(Dollars in Thousands)</i>	
<b>Gross Costs</b>	
Actives (Future Retirees)	\$13,343,980
Retirees	6,779,346
<b>Gross Costs Total</b>	<b>\$20,123,326</b>
<b>Cost Sharing (Retiree Contributions)</b>	
Actives (Future Retirees)	\$9,442,821
Retirees	4,625,311
<b>Cost Sharing Total</b>	<b>\$14,068,132</b>
<b>Net Subsidy = Gross Costs - Cost Sharing</b>	
Actives (Future Retirees)	\$3,901,158
Retirees	2,154,035
<b>Net TOL as of 6/30/2020</b>	<b>\$6,055,193</b>

The net subsidy can also be summarized into the portion of the liability attributable to the implicit and explicit costs. The explicit subsidy represents approximately 90 percent of the TOL. Please see the [Appendices](#) section for additional detail.

## PRESENT VALUE OF FUTURE BENEFITS

The PVFB is the present value of expected future medical subsidies paid on behalf of the current actives (future retirees) and current retirees of the employers participating in the PEBB plan. In other words, this is the present value of all subsidies expected to be paid out in the future, whereas the TOL is the amount of the PVFB that has been accrued, or earned, as of the measurement date.

TOL and PVFB Liability		
<i>(Dollars in Thousands)</i>	TOL	PVFB
<b>Net Liability as of 6/30/2020</b>	\$6,055,193	\$10,941,669

## ASSETS

Currently, Washington State does not pre-fund these OPEB subsidies. Since the PEBB plan subsidies are paid for on a pay-as-you-go basis and there is no dedicated trust, the plan has no assets that are recognized under GASB 75.

## GAIN/LOSS ANALYSIS

The results of this report are based on assumptions about future economic and demographic events. It is important to note over time how actual events differed from those assumptions. An event that causes the plan to cost less than was expected is described as a gain to the plan. An event that causes the plan to cost more than was expected is described as a loss to the plan. An analysis of the gains and losses shows what events are attributable to the change in expected cost of the plan.

The first table shows the development of the expected change in the TOL since the 2018 PEBB OPEB Report (June 30, 2018, measurement date). We began with the 2018 PEBB OPEB Report as our starting point because data is updated every two years. Given this, we wanted to use a two-year period to capture how actual experience compared to what was expected the last time we updated our data. During this two-year period, we expected the TOL to increase by approximately 21 percent for two reasons:

- 1. Passage of Time** – Two years of interest increases costs since there are fewer years to discount future benefit payments. In addition, active members accrue additional benefits (Service Cost). The TOL is also expected to decrease by the benefit payments paid out during the two years; however, the cost increases exceed benefit payments at this time.
- 2. Change in Discount Rate Assumption** – The discount rate assumption was also updated for the June 30, 2019, measurement date as displayed in our letter to OFM, [FY 2020 State OPEB Liabilities](#).

Expected Change in TOL	
<i>(Dollars in Thousands)</i>	
<b>6/30/2018 TOL</b>	<b>\$5,078,633</b>
Service Cost	\$235,002
Interest	203,850
Benefit Payments	(93,249)
<b>6/30/2019 Expected TOL (a)</b>	<b>\$5,424,236</b>
Change to Discount Rate (b)	379,623
<b>6/30/2019 TOL (a + b)</b>	<b>\$5,803,859</b>
Service Cost	\$251,272
Interest	210,193
Benefit Payments	(100,076)
<b>6/30/2020 Expected TOL</b>	<b>\$6,165,249</b>
<b>Expected Change in TOL</b>	<b>\$1,086,615</b>

The June 30, 2020, TOL will change by more than just the expected change. The other two major sources of change are liability gain/loss and other changes. A liability gain/loss examines how new census data compares to what we expected. Other changes include changes in plan provisions, assumptions, and methodology since the prior TOL (June 30, 2019, measurement date). The next table reconciles the total change in TOL from these sources.

New participant data is reflected every two years, so the Liability (Gain)/Loss contains two years of differences in experience. In total, the Liability (Gain)/Loss section reduced TOL by less than one percent. We observed liability gains from more terminations than we expected as well as fewer PEBB retirees than expected. This was offset by new hires (or members hired since the last update to data).

The Other Changes include adjustments to assumptions and methodology since the prior measurement of June 30, 2019, and in total reduced TOL by less than one percent. For consistency with the Schedule of Changes in TOL table, we summarize the percent changes in TOL since the prior measurement of June 30, 2019. They are summarized below.

- ❖ **Discount Rate Change** – The discount rate decreased from 3.50 percent to 2.21 percent as of the new measurement date which increased liabilities by 25 percent.
- ❖ **Update Costs and Retiree Contributions** – We received new healthcare costs, retiree contributions, and aging factor assumptions from Milliman. Updating the healthcare costs/retiree contributions and aging decreased liabilities by less than 1 percent.

- o The claims and retiree contribution assumptions are developed using the most recent one to two years of data. The assumptions include a decrease in expected medical claims as a result of COVID-19.
- o Milliman relied on nationwide data to ensure the credibility of the data in setting the aging factors assumption. In comparison to the previous assumptions, the medical aging factors for Medicare members have not significantly changed.
- ❖ **Update Healthcare Trends** – We received new assumptions for healthcare trends from Milliman. The updated healthcare trends decreased liabilities by approximately 8 percent. Healthcare trends for medical costs are generally lower than the prior valuation due to lower prescription drug trends.
- ❖ **Update Demographic Assumptions** – Our office updated the demographic assumptions for the Washington State retirement systems during the 2013-18 *Demographic Experience Study*. This study examined the rates at which members of the retirement systems decrement (or leave) and adjusted the assumptions accordingly. This study directly impacts this report since we rely on those assumptions to help determine the number of future PEBB retirees (as well as how long they remain in PEBB). Updating these assumptions decreased liabilities by approximately 14 percent.
- ❖ **Removal of Excise Tax** – Recent legislation repealed the excise tax so our healthcare trends no longer include this tax. Removal of the excise tax decreased liabilities by approximately 4 percent.

Change in TOL by Source	
<i>(Dollars in Thousands)</i>	
<b>6/30/2018 TOL</b>	<b>\$5,078,633</b>
<b>Expected Change in Liability</b>	<b>\$1,086,615</b>
Liability (Gain)/Loss	
Termination	(\$125,437)
Retirement*	(171,741)
Mortality	(59,888)
Disability	(4,893)
New Hires	346,766
Other Liabilities	(17,017)
<b>Total Liability (Gains)/Losses</b>	<b>(\$32,210)</b>
Other Changes	
Plan Changes	0
Discount Rate Change	1,455,829
Update Costs/Premiums	(24,773)
Update Healthcare Trends	(482,455)
Update Demographic Assumptions**	(812,349)
Removal of Excise Tax	(214,097)
<b>Total Other Changes</b>	<b>(\$77,845)</b>
<b>Total Change</b>	<b>\$976,560</b>
<b>6/30/2020 TOL</b>	<b>\$6,055,193</b>

\* Includes gain/loss based on actual experience relative to our current assumptions. This includes retirement behavior, participation in PEBB upon retirement, and spouse coverage, etc.

\*\* Demographic assumptions were updated as part of our 2013-18 *Demographic Experience Study* for the Washington State Retirement Systems.

Please note that approximately 13 percent of the expected increase in TOL was recognized as part of the June 30, 2019, TOL measurement and does not impact the Schedule of Changes in TOL table found in this report. The prior TOL already recognized expected change in TOL for Fiscal Year 2019 as well as the change in discount rate at the June 30, 2019, measurement.

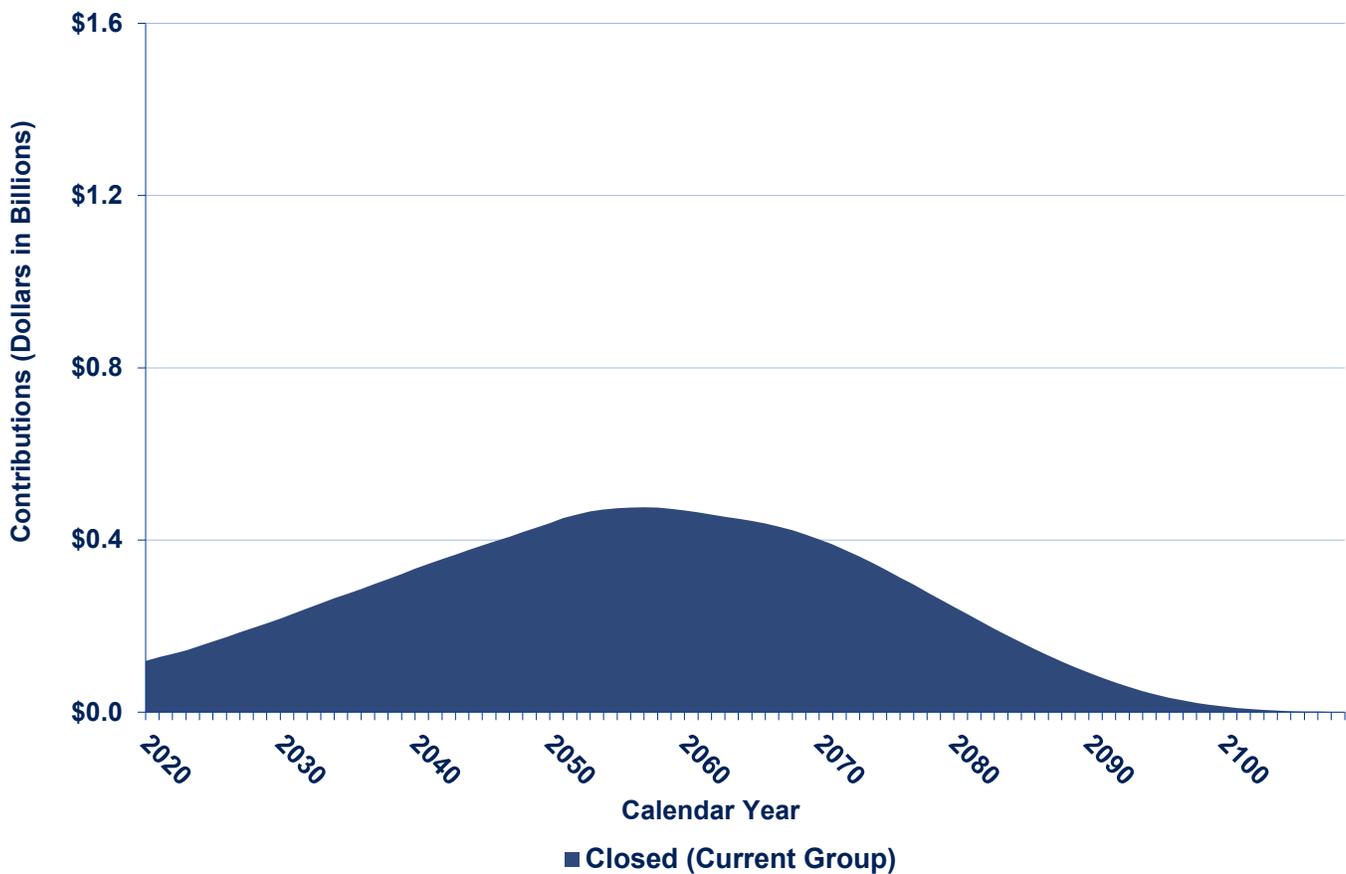
If additional information is needed about the healthcare assumptions or the gain/loss analysis, please contact our office.

## PROJECTIONS

It is important to look at the projections of the benefit payments (or employer contributions) in order to determine if the payments are manageable. Projections allow policy makers to determine the best funding policy for the state and their constituents while providing investors and stakeholders knowledge of what lies ahead.

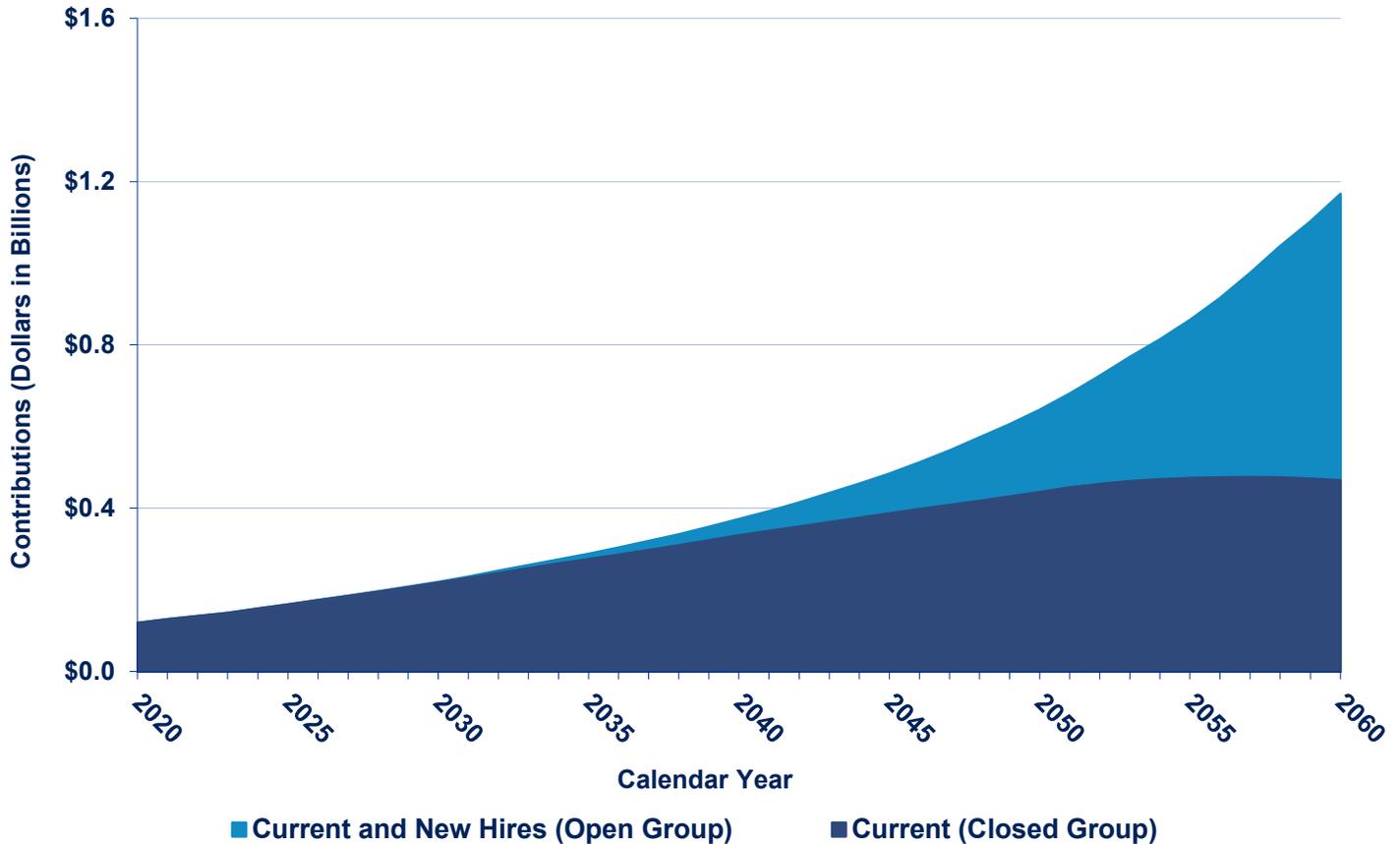
First, we observe what the stream of contributions will look like with a pay-as-you-go funding policy for the current members for the next 90 years. Over the next 40 years, the annual contributions increase as a result of the large number of active employees retiring and high assumed medical inflation. After 40 years, the annual contributions are expected to reach a peak and then decrease to zero in the long run as projected medical inflation slows down and the closed future retiree population starts to dwindle.

**Annual State Contributions on Pay-As-You-Go Basis  
(Closed Group Basis; Excludes New Hires)**



Thus far, we have only looked at contributions for a closed group. In other words, we have only looked at the contributions that would pay for the benefits of the current members. However, new hires will enter the plan, resulting in steady contribution increases into the future. These subsidies are also considered when choosing how to fund the current liabilities since they represent expected real cash flows in the future. The following graph illustrates expected state contributions on both an open and closed-group basis.

**Annual State Contributions on Pay-As-You-Go Basis  
(Open Group Basis; Includes New Hires)**



The graph that includes new hires is for illustrative purposes only, so we made simplifying assumptions for the future hires. We prepared new hire cohorts based on the Public Employees’ Retirement System (PERS) Plan 2 demographics displayed on our [website](#). Further, we assumed that the total active population will increase by our PERS Annual Growth in Membership assumption of 0.95 percent and that all members participate in the UMP medical and dental plans.

Contributions could also be more or less if the explicit subsidy grows more or less than assumed. In comparison to the 2018 PEBB OPEB Report, the projected future state contributions have declined. These future contributions have declined due to assumption changes summarized in the [Gain/Loss Analysis](#) section including new demographic assumptions and new healthcare assumptions from Milliman.



## **IV. PARTICIPANT DATA**

## SUMMARY OF PEBB MEMBERSHIP

The table below summarizes data used in the actuarial valuation for the June 30, 2020, measurement date. The Summary of Plan Participants includes K-12 and Political Subdivisions to help provide context on the size of all employers who offer PEBB plan benefits to their retirees.

Summary of Plan Participants				
	State	K-12	Political Subdivisions	Total
<b>Active Employees*</b>				
<b>Number</b>	129,218	142,617	16,003	287,838
<b>Average Age</b>	45.4	46.8	46.4	46.1
<b>Average Service</b>	10.4	10.8	11.0	10.6
<b>Retirees and Spouses**</b>				
<b>Number</b>	50,656	55,275	3,704	109,635
<b>Average Age</b>	73.6	73.8	70.6	73.6

\*Includes members who waived or did not select medical coverage, as those members may be eligible for PEBB at retirement.

\*\*Includes dependent spouses. These counts differ from the GASB 75 Summary of Plan Participants table which excludes dependent spouses, per GASB requirements.

The number of active K-12 employees currently participating in PEBB is significantly lower than counts in the table above. As of June 30, 2020, there were 907 active K-12 employees in PEBB. Prior to creation of the School Employees Benefit Board (SEBB) program, all school district employees were provided access to PEBB upon retirement even if their employer did not offer PEBB medical coverage during their employment. On the other hand, non-K-12 employees generally have access to PEBB upon retirement only if their current employer offers PEBB medical plans.

Beginning January 1, 2020, the SEBB program will offer medical plans outside of PEBB for K-12 employees prior to retirement and this program may change K-12 eligibility for PEBB. We will continue to monitor how K-12 members are impacted by the SEBB program.

## CHANGE IN COUNTS

For comparison purposes, we summarized how the state counts have changed since the 2018 PEBB OPEB Report. Please note that we performed a valuation between these two reports; however, we do not update the census data on odd numbered years.

Change in State PEBB Plan Participation		
	2018	2020
<b>Active Employees</b>		
<b>Total Number</b>	123,160	129,218
Actively Participating	112,689	117,794
Not Actively Participating	10,471	11,424
<b>Average Age</b>	45.9	45.4
<b>Average Service</b>	11.0	10.4
<b>Retirees and Spouses</b>		
<b>Total Number</b>	47,583	50,656
Retirees and Surviving Spouses	33,735	35,843
Covered (Dependent) Spouses	13,848	14,813
<b>Average Age</b>	73.3	73.6
<b>Average Monthly Subsidy</b>	\$176	\$195

## MEDICAL AND DENTAL PLANS

PEBB offers a variety of medical plans but there are four “families” of health insurances currently found<sup>1</sup> in our participant data including: Uniform Medical Plan, Kaiser Permanente Washington, Kaiser Permanente Northwest, and Medicare Supplement Plans (Plan F and Plan G). As of this valuation, the Uniform Medical Plan is the most commonly selected medical plan.

Dental benefits are offered to PEBB participants and members have the option of three plans including: Uniform, DeltaCare, and Willamette. As of this valuation, Uniform is the most commonly selected dental plan.

The table below summarizes the medical and dental plan selections for the state as of June 30, 2020.

Medical and Dental Plan Selection for State	
Medical Plan Selection	
Active Employees	Percent
Uniform Medical Plan	73%
Kaiser Permanente WA	26%
Kaiser Permanente NW	1%
Retirees and Spouses	Percent
Uniform Medical Plan	59%
Kaiser Permanente WA	29%
Kaiser Permanente NW	2%
Plan F	9%
Plan G	2%
Dental Plan Selection	
Active Employees	Percent
Uniform	77%
DeltaCare	12%
Willamette	11%
Retirees and Spouses	Percent
Uniform	93%
DeltaCare	2%
Willamette	5%

We expect the headcounts in [Plan F](#) to decline in future reports since new members are no longer eligible to participate in Plan F. [Plan G](#) is now open to participants who would like to participate in a Medicare Supplement plan.

## ADJUSTMENTS TO DATA

The raw data provided by HCA reflects members enrolled in a PEBB program as well as active employees who were eligible to join at that date but waived or did not select coverage. The data from HCA includes information on employers and we worked with OFM to confirm which employers to include in the state<sup>2</sup> results. For purposes of estimating liabilities, we assume the list of participating employers does not change (no employer ends participation and no new employers participating) in PEBB. The DRS census data supplements the HCA data. More specifically, we relied on DRS data for retirement plan and membership service to estimate active employee eligibility for post-retirement medical benefits.

When the medical or dental plan is not available for a member’s record, we rely on our Plan Choice assumptions summarized in the [Assumptions](#) section of this report. Additionally, we do not have accrued service for some active employees, in particular Higher Education, so we assume their accrued service based on the average active demographics in PERS.

For consistency with the measurement date of this report, we made an adjustment to certain participants within the HCA data. We assumed all participants found in the 2018 PEBB OPEB Report would age two years. Prior to this adjustment, we observed an approximate aging of this population of 2.3 years. We also considered an adjustment in headcounts but ultimately chose no adjustment after observing the difference in counts between June and November of 2020.

<sup>1</sup>Beginning in CY 2021, PEBB offered new medical plans that did not have participants as of the measurement date including United Healthcare Medicare Advantage/Prescription Drug Plans (PEBB Complete and PEBB Balance) as well as Uniform Medical Plan Select.

<sup>2</sup>For purposes of this report, state employers include all Washington State agencies and higher education employers.



# V. ASSUMPTIONS

We use both economic and demographic assumptions to determine liabilities for this valuation. This section summarizes our assumptions.

## ECONOMIC ASSUMPTIONS

Economic assumptions are used in the actuarial valuation to determine liabilities and benefit payments in the future. For presentation purposes, they are shown separately for non-healthcare and healthcare.

The **non-healthcare** economic assumptions are summarized in the table below.

Non-Healthcare Economic Assumptions		
Discount Rate*	Beginning of Year (June 30, 2019)	3.50%
	End of Year (June 30, 2020)	2.21%
Inflation**		2.75%

\*Per Bond Buyer General Obligation 20-Bond Municipal Index.

\*\*Based on the CPI: Urban Wage Earners & Clerical Workers, Seattle-Tacoma-Bellevue, WA—All Items.

The inflation assumption is a building block component of the healthcare trend rates and reflects our office's current assumption for future inflation. This assumption is studied by our office every two years as part of the economic experience study. Please see our [website](#) for the most recent study. The PEBB programs do not provide salary-based benefits, however we rely on a salary growth assumption to complete this analysis based on the GASB 75 prescribed EAN Percent of Salary cost method. All other non-healthcare economic assumptions, including salary growth, are consistent with assumptions presented in the 2019 AVR.

The **healthcare** economic assumptions specify how we expect the subsidies will grow in the future. We relied on Robert Schmidt, a healthcare actuary in Milliman's Boise office, contracted through the HCA, to determine the healthcare economic assumptions.

Medical costs and retiree contributions are expected to grow in the future, so we project future growth using the healthcare trend rates. Based on discussions with HCA, OFM, and OSA, Milliman prepared trend assumptions that assume no change in the explicit subsidy (\$183 per month) through the end of CY 2023. After that, claims and retiree contributions are expected to grow with the assumed healthcare trend. The healthcare trends vary by medical plan (UMP, Kaiser Permanente plans [Insured Medical], Medicare Supplement [Plan F and Plan G], and Dental) and by Medicare coverage (non-Medicare, Medicare). Trends for United Healthcare Medicare Advantage are not displayed in the table on the next page because there are no participants as of the measurement date of this report. The trends can also vary for costs and retiree contributions.

Medical and Dental Costs Healthcare Trend						
Fiscal Year	UMP		Insured Medical		Medicare Supplement	Dental
	Non-Medicare	Medicare	Non-Medicare	Medicare		
2021	7.4%	6.8%	2.3%	3.4%	3.8%	2.0%
2022	5.3%	10.7%	5.5%	5.4%	4.8%	2.5%
2023	5.3%	10.8%	5.1%	5.0%	5.0%	3.5%
2024	5.1%	5.1%	5.1%	5.0%	5.0%	4.0%
2025	5.1%	5.1%	5.1%	5.0%	5.0%	4.0%
2026	5.1%	5.1%	5.1%	5.0%	5.0%	4.0%
2027	5.1%	5.1%	5.1%	5.0%	5.0%	4.0%
2028	5.1%	5.0%	5.1%	5.0%	5.0%	4.0%
2029	5.1%	5.0%	5.1%	5.0%	5.0%	4.0%
2030	5.1%	5.1%	5.1%	5.0%	5.0%	4.0%
2040	5.2%	5.2%	5.2%	5.1%	5.1%	4.0%
2050	5.3%	5.2%	5.2%	5.2%	5.2%	4.0%
2060	5.1%	5.0%	5.0%	5.0%	5.0%	4.0%
2070	4.6%	4.6%	4.6%	4.5%	4.5%	4.0%
2080	4.3%	4.3%	4.3%	4.3%	4.3%	4.0%
2090	4.3%	4.3%	4.3%	4.3%	4.3%	4.0%
2100+	4.3%	4.3%	4.3%	4.3%	4.3%	4.0%

Note: For display purposes, tables were summarized. Please see our website for the full table.

The healthcare retiree contribution trends for dental benefits and non-Medicare aged members match the healthcare cost inflation assumptions. The Medicare aged retiree contribution trends are higher than the cost trends for two reasons: (1) in the near-term to reflect that the maximum explicit subsidy is assumed to remain at \$183 per month through 2023, and (2) in the long-term to reflect the projected aging of the retiree population.

Medical and Dental Retiree Contributions Healthcare Trend						
Fiscal Year	UMP		Insured Medical		Medicare Supplement	Dental
	Non-Medicare	Medicare	Non-Medicare	Medicare		
2021	7.4%	11.0%	2.3%	3.6%	4.0%	2.0%
2022	5.3%	16.5%	5.5%	7.5%	5.0%	2.5%
2023	5.3%	14.7%	5.1%	7.7%	5.2%	3.5%
2024	5.1%	5.3%	5.1%	5.2%	5.2%	4.0%
2025	5.1%	5.3%	5.1%	5.2%	5.2%	4.0%
2026	5.1%	5.3%	5.1%	5.2%	5.2%	4.0%
2027	5.1%	5.3%	5.1%	5.2%	5.2%	4.0%
2028	5.1%	5.2%	5.1%	5.2%	5.2%	4.0%
2029	5.1%	5.2%	5.1%	5.2%	5.2%	4.0%
2030	5.1%	5.3%	5.1%	5.2%	5.2%	4.0%
2040	5.2%	5.3%	5.2%	5.2%	5.2%	4.0%
2050	5.3%	5.3%	5.2%	5.3%	5.3%	4.0%
2060	5.1%	5.0%	5.0%	5.0%	5.0%	4.0%
2070	4.6%	4.6%	4.6%	4.5%	4.5%	4.0%
2080	4.3%	4.3%	4.3%	4.3%	4.3%	4.0%
2090	4.3%	4.3%	4.3%	4.3%	4.3%	4.0%
2100+	4.3%	4.3%	4.3%	4.3%	4.3%	4.0%

Note: For display purposes, tables were summarized. Please see our website for the full table.

The retiree claim costs and retiree contributions are displayed in the next two tables. The tables are broken into non-Medicare and Medicare aged populations. Beginning in CY 2021, PEBB offered new medical plans that are not displayed in the tables below. These new medical plans, United Healthcare Medicare Advantage/Prescription Drug Plans (PEBB Complete and PEBB Balance) as well as Uniform Medical Plan Select, did not have observed participants as of the measurement date of this report.

For display purposes, we show the retiree claim costs at age 65 which represent the expected average claim costs for a 65-year old retiree. On average, younger retirees cost less and older retirees cost more, prior to any Medicare offsets. The retiree contributions reflect the contributions used in this valuation and will not match actual plan premiums<sup>3</sup> because the contributions in this report exclude direct pass through expenses, like administration fees, that are paid 100 percent by the retirees.

Annual Costs and Retiree Contributions at Age 65 (Non-Medicare)			
Medical Plan	Costs		Retiree Contributions
	Males	Females	Males and Females
Kaiser Permanente WA Classic	\$20,109	\$18,070	\$9,104
Kaiser Permanente WA CDHP	8,985	8,074	6,554
Kaiser Permanente WA Value	14,069	12,642	8,187
Kaiser Permanente WA Sound Choice	11,856	10,653	7,499
Kaiser Permanente NW Classic	15,600	14,018	8,707
Kaiser Permanente NW CDHP	9,330	8,384	6,537
Uniform Medical Plan Classic	14,172	12,735	8,168
Uniform Medical Plan CDHP	9,468	8,508	6,539
Uniform Medical Plan Puget Sound	14,199	12,759	7,762
Uniform Medical Plan UW	\$14,428	\$12,964	\$7,762
Dental Plan	Costs		Retiree Contributions
	Males	Females	Males and Females
Uniform	\$638	\$625	\$570
DeltaCare	579	567	474
Willamette	\$618	\$605	\$533
Annual Costs and Retiree Contributions at Age 65 (Medicare)			
Medical Plan	Costs		Retiree Contributions
	Males	Females	Males and Females
Kaiser Permanente WA Medicare	\$3,667	\$3,561	\$2,046
Kaiser Permanente NW Classic	3,627	3,522	2,026
Uniform Medical Plan Classic	\$5,455	\$5,297	\$3,877
Dental Plan	Costs		Retiree Contributions
	Males	Females	Males and Females
Uniform	\$638	\$625	\$570
DeltaCare	579	567	474
Willamette	\$618	\$605	\$533
Medical Cost Supplement Plan	Costs		Retiree Contributions
	Males	Females	Males and Females
Plan F Retired	\$2,378	\$2,309	\$1,313
Plan G Retired	\$2,146	\$2,084	\$1,121

The retiree contributions used in this report do not vary by age. Non-Medicare medical retiree contributions are based on pooled claim costs for active employees and non-Medicare retirees. Medicare medical retiree contributions reflect the reduction from the explicit subsidy. Dental retiree contributions are based on pooled claims for all members and the contribution does not change based on eligibility for Medicare.

<sup>3</sup>Please see the [Washington State Health Care Authority](https://www.wahealthcareauthority.com/) website for actual premiums.

Unlike retiree contributions, the medical and dental costs vary by age. We use aging factors to determine the expected average claims cost at different ages. As an illustrative example, to determine the average medical claims cost for a 66-year-old, apply an example aging factor of 4 percent to a 65-year-old hypothetical cost [ $\$10,000 * (1 + 0.04)$ ]. This formula results in a 66-year-old theoretical retiree medical cost of \$10,400.

Aging Factors for Costs				
Age	Medical		Dental	
	Males	Females	Males	Females
0-26	4.26%	6.31%	2.99%	0.89%
27-31	4.38%	2.82%	1.89%	1.08%
32-36	4.54%	0.71%	0.60%	0.67%
37-41	3.38%	6.66%	0.76%	0.49%
42-46	2.05%	1.36%	1.41%	0.96%
47-51	2.33%	(1.72%)	2.10%	1.76%
52-56	1.86%	0.59%	2.96%	1.76%
57-61	3.77%	2.19%	2.27%	1.45%
62-64	5.94%	2.92%	1.93%	0.52%
65-68	2.19%	1.49%	1.93%	0.52%
69-71	2.19%	1.49%	0.00%	0.00%
72-76	1.49%	0.72%	0.00%	0.00%
77-81	0.50%	0.18%	0.00%	0.00%
82-88	(0.43%)	(0.48%)	0.00%	0.00%
89+	0.00%	0.00%	0.00%	0.00%

## DEMOGRAPHIC ASSUMPTIONS

Demographic assumptions include rates of decrement (reasons members would exit employment: retirement, termination, disability, and mortality), as well as participation percentage, percentage of spouses covered, and Medicare coverage. The rates of decrement are consistent with those presented in the 2019 AVR which were updated during our 2013-18 *Demographic Experience Study* for the Washington State retirement systems. We expect these members will have the same rates of decrement as those studied during the 2013-18 *Demographic Experience Study* so we apply decrement rates to each participant based on the retirement system they participate in. Please see the [Appendices](#) section for the demographics by retirement system. We do not have experience on members employed by Higher Education institutions, so we rely on our PERS 2 assumption for this population.

We rely on HCA data to determine the participant’s status (active employee, retiree, etc.) but the data does not distinguish between a “healthy” and “disabled” retiree. We use different mortality assumptions based on the type of retiree (healthy or disabled), but given the lack of data, we assume all current retirees in PEBB are “healthy” retirees. Based on the DRS supplemental information, the actual number of “disabled” retirees is approximately 1 percent of the PEBB retirees. Similarly, we assume all Medicare Supplement Plan participants are healthy retirees.

Participation percentage refers to how many current active members, who meet the eligibility requirements, will elect to enroll in a PEBB plan as a retiree. Percentage of spouses covered, and Medicare coverage refer to how many current active members will cover a spouse and what percentage will enroll in Medicare Parts A & B once eligible. These assumptions can be seen in the table below.

Demographic Assumptions	
Participation Percentage	65%
Percentage of Spouses Covered	45%
Medicare Coverage After Initial Participation	100%

In addition to post-retirement participation assumptions, we also make an assumption on the medical plan a member will select upon attaining eligibility for Medicare. We assume that members will select the Medicare plan within the same “family” of health insurances. For example, we assume non-Medicare retirees in Kaiser Permanente Washington Classic will select Kaiser Permanente Washington Medicare upon turning age 65.

We further make a Plan-Choice assumption for (1) active employees in K-12 (i.e., Teachers’ Retirement System and School Employees’ Retirement System members), that are not PEBB subscribers prior to retirement and (2) members that waived or did not select PEBB coverage. Specifically, we assume that they will elect to join one of three medical and dental plans using percentages displayed in the table below. These assumptions are based on observed plan selection behavior from our most recent census data.

Default Medical and Dental Coverage	
<b>Medical Coverage</b>	
Uniform Medical Plan	78%
Kaiser Permanente Washington Classic	9%
Kaiser Permanente Washington Value	13%
<b>Dental Coverage</b>	
Uniform	83%
DeltaCare	9%
Willamette	8%

Survivors of PEBB members that deace prior to retirement are eligible for PEBB. We considered valuing this benefit but ultimately did not include this liability. We tested the impact of this liability and determined it was not material to the plan as a whole.

## PLAN ELIGIBILITY

A future retiree’s access to PEBB depends on meeting the retirement eligibility of their respective retirement plan at the time they leave active service. For employees of the Washington State retirement systems, we summarized the retirement eligibility as part of the [Summary of Plan Provisions](#) on our website. For other employees, we made a simplifying assumption based on retirement eligibility provisions of all the plans. The following table shows the assumed retirement eligibility for active participants employed by institutions of Higher Education.

Retirement Eligibility		
Plan	Years of Service	Age
Higher Education*	10	55
	Any	62

*\*Retirement eligibility may vary by institution. The retirement eligibility in the table above was used for all institutions in our report.*



# VI. APPENDICES

## OTHER LIABILITY INFORMATION

### LIABILITY ESTIMATES BEYOND THE STATE

For informational purposes only, we provide the TOL for the other major groups participating in PEBB. Individual employers within these groups are generally required to calculate and report their OPEB liability. We show the total across all groups in the PEBB program for context below.

Total OPEB Liability				
(Dollars in Thousands)	State	K-12	Political Subdivisions	Total
<b>Net Subsidy = Gross Costs - Cost Sharing</b>				
<b>Actives (Future Retirees)</b>				
Implicit Medical Subsidy	\$466,375	\$359,203	\$58,766	\$884,343
Explicit Medical Subsidy	3,434,784	3,333,296	446,371	7,214,451
<b>Total</b>	<b>\$3,901,158</b>	<b>\$3,692,499</b>	<b>\$505,136</b>	<b>\$8,098,794</b>
<b>Retirees</b>				
Implicit Medical Subsidy	\$71,972	\$50,723	\$9,024	\$131,719
Explicit Medical Subsidy	2,082,063	2,239,937	171,733	4,493,733
<b>Total</b>	<b>\$2,154,035</b>	<b>\$2,290,660</b>	<b>\$180,757</b>	<b>\$4,625,452</b>
<b>Total (Actives and Retirees)</b>				
<b>Net TOL as of 6/30/2020</b>	<b>\$6,055,193</b>	<b>\$5,983,159</b>	<b>\$685,893</b>	<b>\$12,724,246</b>

### SENSITIVITY ANALYSIS

A single point estimate is only the start of understanding the GASB 75 liabilities. This estimate will only be realized if future economic and demographic experience matches our assumptions. It is equally important to understand what will happen if the economic and demographic experience is different than we assumed. For instance, as part of the [Actuarial Exhibits](#) section, we analyze the impact of changing the Healthcare Trend and Discount Rate assumptions by 100 basis points. In this section, we also consider the impact of varying the participation percentage.

We considered 15 percent lower and higher participation percentages than our expectation. The table below shows the results of the sensitivity around the participation percentage for the state, as a PEBB plan employer.

Sensitivity Analysis—Participation Percentage			
(Dollars in Thousands)	Low (50%)	Expected (65%)	High (80%)
<b>TOL</b>	\$5,154,926	\$6,055,193	\$6,955,461

## PARTICIPATION BY RETIREMENT SYSTEM

The valuation relies on assumed rates of decrement based on the participant's retirement plan. To help provide information on the participants, per system, we summarized the state counts and demographics. The below table reflects our best estimate for retirement system of each member based on data from HCA and DRS.

Plan Participation by Retirement System for State								
	PERS	TRS	SERS	PSERS	LEOFF	WSPRS	JRS	Higher Ed
<b>Active Employees</b>								
<b>Number</b>	86,247	1,314	234	5,629	381	1,167	0	34,246
<b>Average Age</b>	46.1	47.9	46.3	40.0	47.7	42.0	N/A	44.7
<b>Average Service</b>	10.7	7.4	5.9	4.6	15.6	14.8	N/A	10.6
<b>Retirees and Spouses</b>								
<b>Number</b>	34,620	1,532	116	28	79	648	62	13,571
<b>Average Age</b>	72.8	77.4	70.8	65.6	66.2	71.7	80.1	75.0

## THE OFFICE OF THE STATE ACTUARY'S WEBSITE

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Our [website](#) contains additional information and educational material not included in this report. The site also contains an archive of prior actuarial valuation reports and other recent studies that OSA had produced. The following is a list of materials found on our website that could be useful to the reader.

### [Glossary](#)

Definitions for frequently used actuarial terms.

### [Prior OPEB Valuations](#)

Archive of prior OPEB valuations.

### [OPEB Tools](#)

Employers other than the state should not use this report to satisfy their individual employer reporting requirements under GASB 75. OSA created an online tool to help small employers calculate their individual reporting requirements. This online tool utilizes the alternative measurement method allowed under GASB 75 and can be used by employers with fewer than one hundred total plan members.

### [PEBB OPEB Healthcare Trend Assumptions](#)

Tables display annual healthcare trends.

### [2013-2018 Demographic Experience Study](#)

Most recent report examining demographic behavior within each retirement system.

### [2019 Report on Financial Condition and Economic Experience Study](#)

Report examining the financial health of the retirement systems and long-term economic assumptions.



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