



COMMONWEALTH of VIRGINIA

Department of Human Resource Management

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October 17, 2017

The Honorable Terry McAuliffe, Governor, Commonwealth of Virginia
The Honorable S. Chris Jones, Chairman, House Appropriations Committee
The Honorable Thomas K. Norment, Jr., Co-Chairman, Senate Finance Committee
The Honorable Emmett W. Hanger, Jr., Co-Chairman, Senate Finance Committee

Subject: Report on the Impact of Renewal Cost on Employee and Employer Premiums

The attached report is pursuant to Chapter 836, Item 84.G. of the 2017 Virginia Acts of the General Assembly.

Please contact me if there are any questions.

Sincerely,

A handwritten signature in cursive script that reads "Gene Raney".

Gene Raney
Director, Office of Health Benefits

cc: The Honorable Paul J. Reagan, Chief of Staff, Office of the Governor
The Honorable Nancy Rodrigues, Secretary of Administration
Sara R. Wilson, Director, Department of Human Resource Management

REPORT ON THE IMPACT OF RENEWAL COST ON EMPLOYEE AND EMPLOYER PREMIUMS

This report is submitted as required by Chapter 836, Item 84.G. of the 2017 Virginia Acts of the General Assembly, which states:

The Department of Human Resource Management shall report to the Governor and Chairmen of the House Appropriations and Senate Finance Committees, by October 15 of each year, on the renewal cost of the state employee health insurance program premiums that will go into effect on July 1 of the following year. This report shall include the impact of the renewal cost on employee and employer premiums and a valuation of liabilities as required by Other Post-Employment Benefits reporting standards.

Summaries of Rating Projections

Overview

The following information summarizes the renewal cost of the state employee premiums for fiscal year 2019 that will go into effect on July 1, 2018, and the key drivers of FY 2019 projections compared to the FY 2018 rates. The information package complies with all of prior actuarial methods / procedures endorsed and approved by the APA audit report of October 2011.

The three charts shown in this report provide summaries of rate projections for FY 2018 through FY 2020 and these include:

- Recast FY 2018 Projection
- FY 2019 Projection
- FY 2020 Projection

Each chart includes three scenarios (A, B, and C). Scenario A represents the most aggressive projection, Scenario B the most likely projection, and Scenario C the most conservative projection. It is important to note that each scenario represents a reasonable actuarial outcome. Historically, this range has been utilized in final budget setting based on the Commonwealth's fiscal priorities and internal assessment of the risk to be assumed for the applicable budget cycle.

Each chart shows the baseline rates under the three scenarios. Separate tables at the end of the document provide the underlying claim trend assumptions based on the IBNR valuation completed mid-September and Aon's current outlook for future trends.

- Projected Cost per Contract Unit is synonymous with *actuarial rate* or *per contract unit per month (PCUPM)*(for these projections, represent a per-employee equivalent unit cost and serve as the actuarial baseline for cost projections in the requested three FY iterations). The assumptions inherent in the contract unit measure take into account the relative cost of each dependent class (spouse or child) relative to an employee. The per-employee or contract unit equivalent is the “base” level of exposure for rating purposes. This method was approved by the APA actuarial methods audit report of October 2011.
- The COVA Care Basic plan is shown because it is the basis for employer contributions. This chart shows rate projections and percentage increases or decreases from each fiscal year's premium rates per contract unit.
- Claim trend analysis inherent in Aon's future trend outlook includes detailed claim patterns to forecast future inflationary impact. The latter includes: price inflation; utilization rates of health care providers; government (Medicare/ACA) cost shifting; plan changes; and, other current factors influencing health provider cost. Historical claim experience for the Commonwealth is also considered when establishing the estimated trends.
 - The updated trend analysis is based on review of the most recent 36_months of claims and Aon forward looking trends.
 - The trend tables for Fiscal Years 2018-2019 and 2019-2020 are shown in the “Trend Tables” section of this document. Overall Scenario B health plan trend is +8.1% and +8.5% respectively for these years.

Recast FY 2018 Projection

The recast is the first step in the three fiscal year projection process required by the Commonwealth. It provides an early estimate of how actual current FY costs compare to previously projected costs/rates. The recast is based on claim data through June 2017, consistent with the IBNR valuation completed in mid-September. This analysis also provides an updated important baseline for projecting rates for FY 2019.

- The chart compares the recast actuarial rate for FY 2018 with the previous year's FY 2018 rate projection (and the claim data used to establish the FY 2018 rates).
 - This recast projection utilized an additional year of claim experience and the updated trend outlook.
 - The chart shows the recast comparison for each plan component and rolls it up to the total. For Scenario B, Medical is -.2%, Dental -.4%, Rx -6.7%, MISA/Behavioral Health -.9%.
 - The overall recast total, based on the weighted value of each component's relativity to premium reflects a -1.8% reduction which is relatively close to the previous year's projection.
- The recast vs. FY 2018 rate comparison is shown for each component of the COVA Care Basic rate. However, the Total percentage increase is the critical cost impact factor in the table.

Commonwealth of VA Summary of FY2018 Rating Projections Actives, COBRAs, and Retirees without Medicare

	Enrollees(@July17)	Medical	Dental	Rx Drugs	Subtotal	MISA	Total
FY2018 COVA Rates	80,187	\$510.96	\$18.48	\$170.42	\$699.86	\$18.14	\$718.00
FY2018 Projected Cost per Contract Unit							
Scenario A							
COVA Care	80,187	\$505.12	\$18.24	\$156.26	\$679.62	\$17.82	\$697.45
% Increase		-1.1%	-1.3%	-8.3%	-2.9%	-1.7%	-2.9%
Scenario B							
COVA Care	80,187	\$509.70	\$18.41	\$159.02	\$687.12	\$17.97	\$705.10
% Increase		-0.2%	-0.4%	-6.7%	-1.8%	-0.9%	-1.8%
Scenario C							
COVA Care	80,187	\$514.28	\$18.57	\$161.79	\$694.64	\$18.11	\$712.75
% Increase		0.6%	0.5%	-5.1%	-0.7%	-0.1%	-0.7%

FY 2019 Projection

Developing an estimated cost for the upcoming fiscal year (FY 2019) is the second step in the Commonwealth's requested three year projection cycle. The Exhibit shown below contains the rate projections and expected cost increase for FY 2019, which will be effective on July 1, 2018, for COVA Care under its current plan design. This chart builds on the outcome of the recast step above and blends current experience and trends compared to current rates.

- The FY 2019 rate increase is shown for each component of the COVA Care Basic rate. For budget planning purposes, the total percentage increase is the critical cost impact factor in the table.
- The chart shows the rate change comparison for each plan component and rolls it up to the total. For Scenario B, Medical is +6.1%, Dental +3.6%, Rx +6.0%, MISA/Behavioral Health +7.3%.
- The overall projected total increase under Scenario B, based on the weighted value of each component's relativity to premium, is +6.1%.

Commonwealth of VA Summary of FY2019 Rating Projections Actives, COBRAs, and Retirees without Medicare								
	Enrollees(@July17)	Medical	Dental	Rx Drugs	Subtotal	MISA	Total	
FY2018 COVA Rates	80,187	\$510.96	\$18.48	\$170.42	\$699.86	\$18.14	\$718.00	
FY2019 Projected Cost per Contract Unit								
Scenario A	COVA Care	80,187	\$532.17	\$18.79	\$175.95	\$726.91	\$19.14	\$746.05
	% Increase		4.2%	1.7%	3.2%	3.9%	5.5%	3.9%
Scenario B	COVA Care	80,187	\$542.23	\$19.14	\$180.66	\$742.03	\$19.47	\$761.50
	% Increase		6.1%	3.6%	6.0%	6.0%	7.3%	6.1%
Scenario C	COVA Care	80,187	\$551.83	\$19.48	\$185.55	\$756.86	\$19.81	\$776.67
	% Increase		8.0%	5.4%	8.9%	8.1%	9.2%	8.2%

FY 2020 Projection

Development of the FY 2020 rate increase is the third and final step in the Commonwealth's requested three year projection cycle. Similar to the FY 2019 projection, the increase is shown for each component of the COVA Care Basic rate. The total percentage increase is the critical cost impact factor in the table.

The chart shows the rate change comparison for each plan component and rolls it up to the total. For Scenario B, Medical is +7.1%, Dental +3.9%, Rx +13.4%, MISA/Behavioral Health +8.6%.

The overall projected total increase under Scenario B, based on the weighted value of each component's relativity to premium, is +8.5%.

Commonwealth of VA Summary of FY2020 Rating Projections Actives, COBRAs, and Retirees without Medicare

	Enrollees(@July17)	Medical	Dental	Rx Drugs	Subtotal	MISA	Total
Estimated FY2018 COVA Rates (A Scenario)	80,187	\$532.17	\$18.79	\$175.95	\$726.91	\$19.14	\$746.05
Estimated FY2018 COVA Rates (B Scenario)	80,187	\$542.23	\$19.14	\$180.66	\$742.03	\$19.47	\$761.50
Estimated FY2018 COVA Rates (C Scenario)	80,187	\$551.83	\$19.48	\$185.55	\$756.86	\$19.81	\$776.67
FY2020 Projected Cost per Contract Unit							
Scenario A							
COVA Care	80,187	\$564.91	\$19.36	\$197.79	\$782.07	\$20.62	\$802.69
		6.2%	3.0%	12.4%	7.6%	7.7%	7.6%
Scenario B							
COVA Care	80,187	\$580.46	\$19.88	\$204.93	\$805.28	\$21.15	\$826.43
		7.1%	3.9%	13.4%	8.5%	8.6%	8.5%
Scenario C							
COVA Care	80,187	\$596.01	\$20.42	\$212.26	\$828.69	\$21.70	\$850.39
		8.0%	4.8%	14.4%	9.5%	9.5%	9.5%

Trend Tables

These tables show the trend for each plan component and roll it up to the total. For Scenario B, FY 2018-FY 2019 Medical is +6.8 %, Dental +4.0 %, Rx +12.0%, and MISA/Behavioral Health +9.0%. The overall projected total trend (Scenario B), based on the weighted value of each component's relativity to premium is +8.1%.

		FY2018-2019 Trend Assumptions					
		Medical	Dental	Rx Drugs	Subtotal	MISA	Total
Scenario A	COVA Care	5.8%	3.0%	11.0%	7.0%	8.0%	7.1%
Scenario B	COVA Care	6.8%	4.0%	12.0%	8.1%	9.0%	8.1%
Scenario C	COVA Care	7.8%	5.0%	13.0%	9.1%	10.0%	9.1%

For Scenario B, FY 2019-FY 2020 Medical is +7.3 %, Dental +4.0 %, Rx +12.0%, and MISA/Behavioral Health +8.5 %. The overall projected total trend (Scenario B), based on the weighted value of each component's relativity to premium is +8.5%.

		FY2019-2020 Trend Assumptions					
		Medical	Dental	Rx Drugs	Subtotal	MISA	Total
Scenario A	COVA Care	6.3%	3.0%	11.0%	7.5%	8.0%	7.5%
Scenario B	COVA Care	7.3%	4.0%	12.0%	8.5%	9.0%	8.5%
Scenario C	COVA Care	8.3%	5.0%	13.0%	9.5%	10.0%	9.5%

Other Post-Employment Benefits

The following actuarial report provides a valuation of liabilities as required by Other Post Employment Benefits (OPEB) reporting standards.



Actuarial Report for GASB OPEB Valuation

*Commonwealth of Virginia State Health Benefits Program
for Pre-Medicare Retirees, Survivors and LTD Participants*

Valuation Date: July 1, 2016

Fiscal Year Ending: June 30, 2017

Date of Report: August 9, 2017



August 9, 2017

Mr. Dan Hinderliter
Director, Contracts and Finance
Department of Human Resource Management
The Commonwealth of Virginia
101 North Fourteenth Street, 12th Floor
Richmond, VA 23219

Dear Dan,

Subject: Commonwealth of Virginia State Health Benefits Program for Pre-Medicare Retirees, Survivors and LTD Participants—July 1, 2016 Actuarial Valuation Report

This report contains the results of the July 1, 2016 actuarial valuation of the Commonwealth of Virginia's State Health Benefits Program for Retirees, Survivors and LTD Participants (the Plan). It provides results regarding accounting requirements for the Plan.

The accounting results are prepared in accordance with GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions* (GASB 45). The purposes of the accounting results are to:

- Develop the Annual Required Contribution (ARC) and the Annual OPEB Cost (AOC) for the fiscal year ending June 30, 2017.
- Provide information needed by the Commonwealth of Virginia's auditors for financial statement entries and footnote disclosures to conform to the disclosure requirements under GASB 45.

This report is prepared for the sole use of the Commonwealth of Virginia (the Commonwealth) and supplies information consistent with the stated purposes of the report. It may not be appropriate to use this report for other business applications. Accordingly, additional discussion may be helpful in understanding the assumptions, methodologies, and limitations applied in the report.

Aon is pleased to present this report, and we look forward to discussing it with you.

Respectfully submitted,

Aon

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cc: Mr. George Gibbs, Commonwealth of Virginia

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Section I—Executive Summary

Section I—Executive Summary

GASB 45 requires government entities that sponsor Other Postemployment Benefits (OPEB) to account for these benefits on an accrual basis. The Commonwealth adopted GASB 45 for the fiscal year beginning July 1, 2007.

The Commonwealth provides health insurance benefits to participating retirees, spouses, and survivors. Also, participants on long-term disability and their spouses can qualify for retiree health insurance benefits. The benefits considered under this valuation were medical, prescription drug, and dental coverage.

Participants pay the total subsidized contribution for benefit coverage. This amount may be reduced by the Virginia Retirement System's (VRS) health insurance credit (HIC) for those participants who are eligible. The Commonwealth's OPEB liability is the difference between the estimated true cost of coverage and the subsidized contribution for coverage (the implicit subsidy).

There are two tiers of participants for the Plan's purpose – primary retirees and spouses. The results of the valuation are presented on a combined basis.

It is assumed that approximately 70% of all of the active employees who retire directly from employment and meet the State Health Benefits Program's eligibility criteria will participate in the health insurance component of the Plan.

The table on the next page summarizes the valuation results. The results have been calculated based upon the actuarial assumptions as to current claim cost, projected increases in health insurance costs, mortality, turnover, retirement, disability and discount rate.

These results also assume there is no liability associated with those retirees eligible for Medicare, as costs for these members are not subsidized by the active nor early retiree population (no implicit subsidy), participants pay 100% of the costs, and the liability associated with the health insurance credit is measured and held by the Virginia Retirement System.

Additionally, the results do not consider the creation of a qualified OPEB funding vehicle. It is Aon's understanding that the Commonwealth does not plan to segregate and restrict assets such that the Commonwealth's contributions to the Plan are irrevocable, dedicated to providing benefits to retirees and their beneficiaries, and legally protected from creditors of the Commonwealth, solely for the payment of benefits in accordance with the terms of the Plan. Furthermore, the Commonwealth has no current plan to contribute funds to a qualified OPEB funding vehicle for the fiscal years beyond 2017.

This summary identifies the value of benefits on July 1, 2016 and costs for the 2017 fiscal year. The value of benefits on July 1, 2015 (the prior valuation date) and cost for the 2016 fiscal year are shown for comparison.

(\$ millions)		
Fiscal Year	2017	2016
Present Value of Benefits (PVB)	\$2,392.6	\$2,209.4
Actuarial Accrued Liability (AAL)	\$1,417.4	\$1,308.7
Annual Required Contribution (ARC) ¹	\$ 180.6	\$ 213.7
Annual OPEB Cost (AOC)	\$ 161.1	\$ 212.2

The balance of this report provides greater detail for the above results.

The fiscal year 2017 valuation was performed using a 4% discount rate. The 4% rate is appropriate for the current funding arrangement for the Plan, reflecting that the Commonwealth has not placed assets in an irrevocable trust specifically segregated for future retiree benefits. The fiscal year 2016 valuation was performed using a 4.0% discount rate, which was also appropriate at that time, reflecting the expected return on the general assets of the Commonwealth, from which future benefits are expected to be paid.

¹ The ARC reflects a 30-year open period, level dollar amortization of the Unfunded AAL. 30 years is the maximum period allowed under GASB 45.



Section II—Actuarial Certification

Section II—Actuarial Certification

Aon has prepared the July 1, 2016 actuarial valuation results of the Commonwealth of Virginia's State Health Benefits Program for Retirees, Survivors and LTD Participants. The purposes of this report are to:

- Present Aon's actuarial estimates of the Plan's GASB 45 liabilities and Annual Required Contribution (ARC) as of July 1, 2016 for the Commonwealth to incorporate, as the Commonwealth deems appropriate, in its financial statements; and;
- Provide the Annual Required Contribution for the period beginning July 1, 2016.

This report is intended for the sole use of the Commonwealth, and is intended only to supply information to comply with the stated purposes of the report and may not be appropriate for other purposes. Reliance on information contained in this report by anyone for other than the intended purposes, puts the relying entity at risk of being misled because of confusion or failure to understand applicable assumptions, methodologies, or limitations of the report's conclusions. Accordingly, no person or entity should base any representations or warranties in any agreement on any statements or conclusions contained in this report, without the written consent of Aon.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

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

Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements.

In conducting the valuation, we have used personnel and plan design information provided by the Commonwealth as of the valuation date. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonability. As a result of this review, we have no reason to doubt the substantial accuracy or completeness of the information and believe that it has produced appropriate results. This information along with any adjustments or modifications is summarized in various sections of this report.

This valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board. In addition, the valuation results are based on our understanding of the requirements of GASB Statement No. 45. The information in this report is not intended to supersede or supplant the advice and interpretations of the Commonwealth's auditors.

The actuarial assumptions and methods used in this valuation are described in the Actuarial Assumptions section of this report. The Retirement Plan Committee is responsible for selecting the Plan's funding policy, actuarial valuation methods, asset valuation methods and assumptions.

To the best of our knowledge, there is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise provided for in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.

If the Commonwealth disagrees with anything contained in the report or is made aware of any relevant information that may affect the results of the report which has not been previously provided to Aon, the Commonwealth should promptly notify Aon. The report will be deemed final and acceptable to the Commonwealth unless the Commonwealth provides such notice to Aon.

The undersigned are familiar with the near-term and long-term aspects of post-retirement benefits valuations and together meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions herein. All of the sections of this report are considered an integral part of the actuarial opinions.

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

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August 9, 2017



Section III—Principal Valuation Results

Section III—Principal Valuation Results

This section presents detailed valuation results as of July 1, 2016 for the Commonwealth's retiree health insurance benefits program.

- The Present Value of Benefits (PVB) is the total present value of all expected future benefits, based upon certain actuarial assumptions. Benefits are defined as estimated paid claims and expenses from the plan, net of total subsidized contributions for retirees. The PVB is a measure of total liability or obligation. Essentially, the PVB is the value (on the valuation date) of the benefits, as they exist today, for retirees, both currently retired and currently in active employment. The plan's PVB is \$2,392.6 million. A good portion of this liability (90%) is for the currently active employees (future retirees).
- The actuarial method selected by the Commonwealth is the Unit Credit method. The Actuarial Accrued Liability (AAL) is the liability or obligation for benefits earned through the valuation date, based on certain actuarial methods and assumptions. The plan's AAL is \$1,417.4 million.
- Normal Cost is the value of benefits expected to be earned during the year beginning on the valuation date, again based on certain actuarial methods and assumptions. The fiscal year 2017 Normal Cost at the beginning of the year is \$94.8 million.
- The Annual Required Contribution (ARC) is a combination of the Normal Cost and an amortization payment of the Unfunded AAL (UAAL). As there are no segregated assets as of July 1, 2016 to fund the retiree health insurance benefits, the Unfunded AAL (UAAL) is equal to the AAL. Using a 30-year open period level dollar amortization, the ARC for the Commonwealth is \$180.6 million, including interest to the end of the year. In addition, the amortization of the unfunded accrued liability can be determined as a level percentage of compensation rather than a level dollar amount. Aon has not performed any computations to determine the effect of utilizing different amortization periods or methods, although they could have a material impact on the amount of Net OPEB Obligation and the ARC.

The table on the following page shows results by participant status (active and retired), including results projected to the 2018 fiscal year, which could be used for reporting costs in the Commonwealth's fiscal year 2018 financial statements.

This page also shows projected results to July 1, 2017 (FY 2018).

(\$ millions)	FY 2017	Projected FY 2018
Present Value of Benefits		
Current Retirees	\$ 227.5	\$ 190.8
Actives	<u>2,165.1</u>	<u>2,235.5</u>
Total	\$ 2,392.6	\$ 2,426.3
Actuarial Accrued Liability		
Retirees	\$ 227.5	\$ 190.9
Actives	<u>1,189.9</u>	<u>1,319.9</u>
Total	\$ 1,417.4	\$ 1,510.8
Assets	\$ 0	\$ 0
Unfunded AAL	\$ 1,417.4	\$ 1,510.8
Annual Required Contribution		
Normal Cost	\$ 94.8	\$ 99.6
Amortization of Unfunded AAL ¹	\$ 78.8	\$ 84.0
Interest to End of Year	\$ 7.0	\$ 7.3
Total ARC	\$ 180.6	\$ 190.9
Expected Benefit Payments (pay-as-you-go) ²	\$ 60.7	\$ 70.2
Covered Payroll ³	\$ 4,136.9	\$ 4,302.4
ARC as % of pay-as-you-go	297.5%	271.9%
ARC as % of Covered Payroll	4.4%	4.4%

¹ At the beginning of the year.

² Net of total subsidized contributions for retirees.

³ Assumed payroll for the 2017 fiscal year; based on the 2016 fiscal year payroll (per the CAFR) increased at 4% per year for one year; payroll for FY 2018 increases this number by 4%.

The table below compares the results of the actual July 1, 2016 (2017 fiscal year) valuation with the expected results based on a “roll-forward” of the July 1, 2015 (2016 fiscal year) valuation:

(\$ millions)	AAL	ARC
Fiscal Year 2017 Based on a ‘Roll Forward’ from Fiscal Year 2016’s Valuation ¹	\$ 1,392.2	\$ 176.8
Fiscal Year 2017 Based on Valuation as of July 1, 2016 ²	<u>1,417.4</u>	<u>180.6</u>
Difference	\$ 25.2	\$ 3.8
Difference is due to:		
Actuarial (Gains)/Losses ³	\$ (87.9)	\$ (11.4)
Updated Baseline Claims and Premiums ⁴	\$ 31.3	\$ 4.0
Updated Trend Rates ⁵	\$ 46.4	\$ 6.3
Updated Excise Tax due to Health Care Reform ⁶	<u>35.4</u>	<u>4.9</u>
	\$ 25.2	\$ 3.8

The balance of this report provides greater detail for the above results.

¹ These are the expected valuation results from FY2016 actuarially projected to FY2017. That is, these results (a) assume no change in the population or assumptions from the FY2016 valuation, (b) reflect the expected increase in GASB OPEB costs due to employees accruing one additional year of service and (c) also reflect the expected increase in costs because future benefits are now one year closer to being paid.

² That is, a valuation based on census, claims and total subsidized contributions for retirees as of July 1, 2016.

³ Actuarial gains reflect the reduction in GASB OPEB costs from FY2016 to FY2017 due to (a) differences between the populations valued (including changes in the number of participants valued, and changes in accrued service, average ages, etc.), and (b) actual demographic experience from FY2016 to FY2017 being different from the demographic assumptions in the FY2016 valuation. Demographic assumptions include rates of mortality, termination, disability and retirement.

⁴ Baseline claims used in the FY2017 valuation were higher than expected, based on the claims from the FY2016 valuation trended to FY2017, and compared to the baseline claims used in the actual FY2017 valuation. Retiree premiums used in the FY2017 valuation were also higher than expected, based on the premiums from the FY2016 valuation trended to FY2017, and compared to the premiums reflected in the actual FY2017 valuation. In combination, the higher claims and premiums cause an increase in GASB OPEB costs.

⁵ Trend assumptions were updated to reflect current market projections.

⁶ The trend rate adjustments were updated to reflect the expected impact of the excise tax pursuant to health care reform.



Section IV—Accounting Results

Section IV—Account Information

The GASB OPEB accounting standards were first adopted by the Commonwealth for the fiscal year ending June 30, 2008. The following shows the Annual OPEB Cost (AOC), estimated Net OPEB Obligation (NOO), funding status, and required supplementary information for the Commonwealth for the fiscal year ending June 30, 2017.

Annual OPEB Cost (AOC)

The *Annual OPEB Cost (AOC)* is the accounting expense, and is made up of the ARC, plus an adjustment to the ARC, consisting of interest on the *Net OPEB Obligation (NOO)* at the beginning of the period, less an amortization of the *Net OPEB Obligation (NOO)*.

The amounts shown below are for the fiscal year ending June 30, 2017.

<i>(\$ millions)</i> Annual OPEB Cost (AOC)	Fiscal Year Ending June 30, 2017
ARC	\$ 180.6
Interest on Net OPEB Obligation (NOO)	50.0
Adjustment to ARC	<u>(69.5)</u>
Total	\$ 161.1

Net OPEB Obligation (NOO)

The NOO is the cumulative difference between the AOC and the Commonwealth's total contributions. Because the Commonwealth is not pre-funding the cost of future benefit payments, the Commonwealth's contributions will consist of the difference between total retiree health benefits, administration and other fixed fees paid during a year and retiree premiums received (including any subsidies from VRS paid on behalf of retirees for the health coverage).

The contributions shown below are estimates for the fiscal year ending June 30, 2017, and should be replaced by actual Commonwealth contributions before determining the NOO to be disclosed in the Commonwealth's FY2017 financial statements.

<i>(\$ millions)</i> Net OPEB Obligation (NOO)	Fiscal Year Ending June 30, 2017
AOC	\$ 161.1
Contributions Made (Expected Benefit Payments)	(60.7)
Increase In NOO	100.4
NOO-Beginning of Year	<u>1,251.1</u>
NOO-End of Year	\$ 1,351.5

The following is a history of the calculation of the Net OPEB Obligation. Before reporting information for the 2017 fiscal year, the Percentage of AOC Contributed and the Net OPEB Obligation for Fiscal Year Ended June 30, 2017 must first be updated to reflect actual Commonwealth contributions for the year. We also show the calculation of the estimated NOO for the fiscal year ending June 30, 2018.

Amounts shown are in millions.

Fiscal Year Ended	Annual OPEB Cost	Percentage of AOC Contributed	Net OPEB Obligation
06/30/2010	\$ 136.9	17.4%	\$ 309.4
06/30/2011	\$ 166.6	17.8%	\$ 446.4
06/30/2012	\$ 172.4	21.2%	\$ 582.2
06/30/2013	\$ 181.7	8.5%	\$ 748.5
06/30/2014	\$ 197.4	17.3%	\$ 911.7
06/30/2015	\$ 205.2	17.1%	\$ 1,081.8
06/30/2016	\$ 212.2	20.3%	\$ 1,251.1
06/30/2017 estimated	\$ 161.1	37.7%	\$ 1,351.5
06/30/2018 projected	\$ 169.8	41.4%	\$ 1,451.0

Required Supplementary Information

Below is the Schedule of Funding Progress. The Covered Payroll for the July 1, 2016 Valuation Date should be updated to reflect actual payroll for the year beginning July 1, 2016.

Amounts shown are in millions.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a percentage of Covered Payroll (b-a)/(c)
7/1/2009	\$0	\$1,298.2	\$1,298.2	0.0%	\$3,297.1	39.4%
7/1/2011	\$0	\$1,268.8	\$1,268.6	0.0%	\$3,566.0	35.6%
7/1/2012 projection	\$0	\$1,350.8	\$1,350.8	0.0%	\$3,708.7	36.4%
7/1/2013	\$0	\$1,261.5	\$1,261.5	0.0%	\$3,857.0	32.7%
7/1/2014 projection	\$0	\$1,341.6	\$1,341.6	0.0%	\$4,011.3	33.4%
7/1/2015	\$0	\$1,308.7	\$1,308.7	0.0%	\$3,977.8	32.9%
7/1/2016	\$0	\$1,417.4	\$1,417.4	0.0%	\$4,136.9	34.3%
7/1/2017 projection	\$0	\$1,510.8	\$1,510.8	0.0%	\$4,302.4	35.1%

Covered payrolls are estimates.

It is important to note that without any additional contributions towards the AOC besides current pay-as-you-go cost, the NOO will continue to increase, which will further increase the ARC and AOC for the following year (as the UAAL increases and interest on the NOO is accrued).



Section V—Sensitivity Analysis

Section V—Sensitivity Analysis

Below, we show the results using our assumed trend assumptions (as detailed in Section VIII) along with a 1% increase in trend rates for each projected year and a 1% decrease in trend rates, to illustrate the sensitivity of results to the trend rates.

July 1, 2016

4.00%

(\$ millions)	Valuation Trend
PVB	\$ 2,392.6
AAL	\$ 1,417.4
ARC	
Normal Cost	\$ 94.8
Amortization of UAL	78.8
Interest to EOY	<u>7.0</u>
Total ARC	\$ 180.6
	Trend +1%
PVB	\$ 2,752.9
AAL	\$ 1,569.6
ARC	
Normal Cost	\$ 108.9
Amortization of UAL	87.3
Interest to EOY	<u>7.8</u>
Total ARC	\$ 204.0
	Trend -1%
PVB	\$ 2,093.7
AAL	\$ 1,285.7
ARC	
Normal Cost	\$ 83.0
Amortization of UAL	71.5
Interest to EOY	<u>6.2</u>
Total ARC	\$ 160.7



Section VI—Demographic Information

Section VI—Demographic Information

In the following pages we summarize the demographic information for the current and future retirees in the State Health Benefits Program.

The table below shows a distribution of age and service for all active employees who currently participate in the State Health Benefits Program. All groups in total are shown.

Age	Completed Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-24	2,489	11	0	0	0	0	0	0	0	2,500
25-29	6,225	704	14	0	0	0	0	0	0	6,943
30-34	5,637	2,397	715	6	0	0	0	0	0	8,755
35-39	4,667	2,540	1,644	487	7	10	0	0	0	9,355
40-44	3,697	2,504	1,948	1,350	362	32	0	0	0	9,893
45-49	3,396	2,427	2,309	1,812	1,107	589	0	0	0	11,640
50-54	3,082	2,307	2,166	1,963	1,296	2,041	3	0	0	12,858
55-59	2,349	2,081	2,063	1,883	1,436	3,178	5	0	0	12,995
60-64	1,407	1,496	1,601	1,491	1,240	3,078	3	0	0	10,316
65-69	403	551	603	611	521	1,313	1	0	1	4,004
70+	88	109	177	153	142	522	0	0	0	1,191
Total	33,440	17,127	13,240	9,756	6,111	10,763	12	0	1	90,450

Average Age: 47.3

Average Service: 10.7

The next table shows headcounts and average age by group. Note in this table, the counts do not include spouses.

Group	Number of Lives	Average Age
Active	90,450	47.3
Inactive (under age 65) ¹	6,189	60.7

¹ Retirees, survivors, LTDs.



Section VII—Summary of Plan Provisions

Section VII—Summary of Plan Provisions

Plan Plan provisions in effect as of July 1, 2016 are shown.

Eligibility For a retiree to participate in the Plan, the participant must be eligible for a monthly annuity from the Virginia Retirement System (VRS) or a periodic benefit from one of the qualified Optional Retirement Plan (ORP) vendors, and:

- be receiving (not deferring) the annuity or periodic benefit immediately upon retirement*, and
- have his or her last employer before retirement be the state, and
- be eligible for coverage as an active employee in the State Health Benefits Program until his or her retirement date (not including Extended Coverage), and
- Have submitted within 31 days of his or her retirement date an Enrollment Form to his or her Benefits Administrator to enroll.

*For VRS retirees, this means that the employing agency reported a retirement contribution in the month immediately prior to an employee's retirement date.

Surviving spouses of a participating retiree may continue coverage after the death of the retiree.

For this valuation, employees were considered eligible to retire and receive medical, prescription drug and dental benefits if they are (a) age 50 with at least ten years of service for Plan 1 participants, (b) age 55 with 5 years of service for Plan 1 participants, (c) age 60 with 5 years of service for Plan 2 participants or (d) disabled and are eligible for a VRS or ORP benefit. Employees must retire directly from VRS or ORP sponsored employment and they must apply for coverage within 31 days of retirement. If a retiree fails to enroll initially or cancels their coverage subsequent to retirement, then they are not eligible to enroll at a later date.

Plan Benefit Summary

Health Benefits Effective July 1, 2016 Retiree Group Not Eligible for Medicare

Benefits	Plan			
	COVA Care	COVA HealthAware	COVA HDHP	Kaiser Permanente
	Participant Pays			
Deductible - per plan year - One person - Two or more persons	\$300 \$600	\$1,500 \$3,000	\$1,750 \$3,500	None None
Out-of-pocket expense limit - per plan year - One person - Two or more persons	\$1,500 \$3,000	\$3,000 \$6,000	\$5,000 \$10,000	\$1,500 \$3,000
Doctor's visits - Primary Care Physician - Specialist	\$25 \$40	20% after deductible 20% after deductible	20% after deductible 20% after deductible	\$25 \$40
Hospital Services - Inpatient - Outpatient	\$300 per stay \$125 per visit	20% after deductible 20% after deductible	20% after deductible 20% after deductible	\$300 per admission \$75 per visit
Emergency Room Visits	\$150 per visit (waived if admitted)	20% after deductible	20% after deductible	\$75 per visit (waived if admitted)
Outpatient diagnostic laboratory, test, shots and x-rays	20% after deductible	20% after deductible	20% after deductible	\$75 specialty imaging \$0 copayment lab, pathology, shots, radiology, diagnostic testing
Wellness & Preventive Services Through age 18 <i>(Office visits at specified intervals, immunizations, lab and x-rays. Annual check-up visit (primary care or specialist), immunizations, lab and x-rays)</i> 19 years and older <i>(Routine gynecological exam, Pap test, mammography screening, prostate exam (digital rectal exam), prostate specific antigen (PSA) test, and colorectal cancer screening)</i>	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0

Plan Benefit Summary (cont.)

Health Benefits Effective July 1, 2016
Retiree Group Not Eligible for Medicare

Benefits	Plan			
	COVA Care	COVA HealthAware	COVA HDHP	Kaiser Permanente
	Participant Pays			
Prescription drugs - mandatory generic				<i>Up to 30-day supply</i>
Retail Pharmacy	Up to 34-day supply: \$15/\$25/\$40/\$50	Up to 34-day supply: 20% after deductible	Up to 34-day supply: 20% after deductible	- Medical Center Pharmacy \$15/\$25/\$40 - Community Pharmacy \$20/\$40/\$60 (3x copayment for 90 days)
Home Delivery Pharmacy	Up to 90-day supply: \$30/\$50/\$80/\$100	Up to 90-day supply: 20% after deductible	Up to 90-day supply: 20% after deductible	<i>Up to 30-day supply</i> Mail Service \$13/\$23/\$38 (2x copayment for 90 days)
Out - of - Network	Buy-up available	Additional deductible out-of-pocket limits apply. 40% coinsurance after deductible. Provider may balance bill for amount above allowable charge.	Not available	Not available
Expanded Dental	Buy-up available	Buy-up available	Buy-up available	Not available
Vision & Hearing	Buy-up available	Buy-up available	Not available	Routine vision only
Dental -per plan year	Expanded – Buy-Up			Preventive – Included in Non-Kaiser Plans
	-\$50/\$100 /\$150 Deductible -Plan pays up to \$2,000 per member			In-plan:\$25 deductible per member; plan pays up to \$1,000 per member



Section VIII—Valuation Methods and Assumptions

Section VIII—Valuation Methods and Assumptions

Actuarial Cost Method	Unit Credit
Valuation Date	July 1, 2016
Discount Rate	4.0%

Assumed Trends on Retiree Costs (Unadjusted and Adjusted For Excise Tax)

Year Beginning	Medical/Rx Unadjusted*	Medical/Rx Adjusted*	Dental*
7/1/2016	8.37%	8.37%	4.00%
7/1/2017	8.62%	8.62%	4.00%
7/1/2018	8.21%	8.21%	4.00%
7/1/2019	7.78%	8.23%	4.00%
7/1/2020	7.34%	8.37%	4.00%
7/1/2021	6.89%	8.00%	4.00%
7/1/2022	6.42%	7.38%	4.00%
7/1/2023	5.95%	6.76%	4.00%
7/1/2024	5.48%	6.15%	4.00%
7/1/2025	5.00%	5.55%	4.00%
7/1/2026	5.00%	5.54%	4.00%
7/1/2027	5.00%	5.85%	4.00%
7/1/2028	5.00%	5.87%	4.00%
7/1/2029	5.00%	5.84%	4.00%
7/1/2030	5.00%	5.81%	4.00%
7/1/2031	5.00%	5.78%	4.00%
7/1/2032	5.00%	5.76%	4.00%
7/1/2033	5.00%	5.73%	4.00%
7/1/2034	5.00%	5.71%	4.00%
7/1/2035	5.00%	5.68%	4.00%
7/1/2036	5.00%	5.66%	4.00%
7/1/2037	5.00%	5.64%	4.00%
7/1/2038	5.00%	5.62%	4.00%
7/1/2039	5.00%	5.60%	4.00%
7/1/2040	5.00%	5.58%	4.00%
7/1/2041	5.00%	5.56%	4.00%
7/1/2042	5.00%	5.54%	4.00%
7/1/2043	5.00%	5.53%	4.00%
7/1/2044	5.00%	5.51%	4.00%
7/1/2045	5.00%	5.49%	4.00%
7/1/2046	5.00%	5.48%	4.00%
7/1/2047	5.00%	5.46%	4.00%
7/1/2048	5.00%	5.45%	4.00%
7/1/2049	5.00%	5.44%	4.00%
7/1/2050	5.00%	5.42%	4.00%
7/1/2051	5.00%	5.41%	4.00%
7/1/2052	5.00%	5.40%	4.00%

Year Beginning	Medical/Rx Unadjusted*	Medical/Rx Adjusted*	Dental*
7/1/2053	5.00%	5.38%	4.00%
7/1/2054	5.00%	5.37%	4.00%
7/1/2055	5.00%	5.36%	4.00%
7/1/2056	5.00%	5.35%	4.00%
7/1/2057	5.00%	5.34%	4.00%
7/1/2058	5.00%	5.33%	4.00%
7/1/2059	5.00%	5.32%	4.00%
7/1/2060	5.00%	5.31%	4.00%
7/1/2061	5.00%	5.30%	4.00%
7/1/2062	5.00%	5.29%	4.00%
7/1/2063	5.00%	5.28%	4.00%
7/1/2064	5.00%	5.28%	4.00%
7/1/2065	5.00%	5.27%	4.00%
7/1/2066	5.00%	5.26%	4.00%
7/1/2067	5.00%	5.25%	4.00%
7/1/2068	5.00%	5.25%	4.00%
7/1/2069	5.00%	5.24%	4.00%
7/1/2070	5.00%	5.23%	4.00%
7/1/2071	5.00%	5.22%	4.00%
7/1/2072	5.00%	5.22%	4.00%
7/1/2073	5.00%	5.21%	4.00%
7/1/2074	5.00%	5.21%	4.00%
7/1/2075	5.00%	5.20%	4.00%
7/1/2076	5.00%	5.19%	4.00%
7/1/2077	5.00%	5.19%	4.00%
7/1/2078	5.00%	5.18%	4.00%
7/1/2079	5.00%	5.18%	4.00%
7/1/2080	5.00%	5.17%	4.00%
7/1/2081	5.00%	5.17%	4.00%
7/1/2082	5.00%	5.16%	4.00%
7/1/2083	5.00%	5.16%	4.00%
7/1/2084	5.00%	5.15%	4.00%
7/1/2085	5.00%	5.15%	4.00%
7/1/2086	5.00%	5.15%	4.00%
7/1/2087	5.00%	5.14%	4.00%
7/1/2088	5.00%	5.14%	4.00%
7/1/2089	5.00%	5.13%	4.00%
7/1/2090	5.00%	5.13%	4.00%
7/1/2091	5.00%	5.13%	4.00%
7/1/2092	5.00%	5.12%	4.00%
7/1/2093	5.00%	5.12%	4.00%
7/1/2094	5.00%	5.12%	4.00%
7/1/2095	5.00%	5.11%	4.00%
7/1/2096	5.00%	5.11%	4.00%
7/1/2097	5.00%	5.11%	4.00%
7/1/2098	5.00%	5.10%	4.00%
7/1/2099	5.00%	5.10%	4.00%

* For purposes of this valuation we have assumed that the current level of retiree cost sharing will continue in the future. This may be accomplished by increasing retiree contributions, co-payments, or out-of-pocket limits so that the level of retiree cost sharing increases at least at the rate of assumed medical trend.

Excise tax The anticipated future impact of the excise tax due to Health Care Reform has been reflected by applying loads to the medical and prescription drugs trend rates. The effective date of this tax is in 2020.

Mortality Mortality rates vary by participant status.

Pre-Retirement

RP-2000 Combined Healthy Table with a fully generational projection.

Post-Retirement

RP-2000 Combined Healthy Table with a fully generational projection.

Post-Disablement

70% of PBGC Disabled Mortality Table 5a for males. 90% of PBGC Disabled Mortality Table 6a for females.

Retirement Rates
Plan 1 Members
Hired Before
July 1, 2010

Retirement rates vary by retirement benefit and gender and are shown below. The rates are for State Employees used in the July 1, 2011 valuation of the Virginia Retirement System.

Age	Retirements Per 100 Members			
	Less than 30 Years of Service		30 or more Years of Service	
	Male	Female	Male	Female
50	3.0	3.22	10.0	10.0
51	3.0	3.07	10.0	10.0
52	3.0	3.0	10.0	10.0
53	3.0	3.0	10.0	10.0
54	3.0	3.5	10.0	10.0
55	5.0	5.0	10.0	10.0
56	5.0	5.0	10.0	10.0
57	4.5	4.5	10.0	10.0
58	4.0	5.5	10.0	10.0
59	5.0	5.5	10.0	10.0
60	5.0	5.5	10.0	15.0
61	10.0	10.0	15.0	20.0
62	15.0	15.0	25.0	30.0
63	15.0	15.0	20.0	20.0
64	15.0	15.0	20.0	20.0
65	40.0	40.0	30.0	40.0
66	40.0	40.0	25.0	30.0
67	40.0	40.0	25.0	25.0
68	40.0	40.0	20.0	25.0
69	40.0	40.0	20.0	20.0
70	100.0	100.0	100.0	100.0

Retirement Rates
Plan 2 Members
Hired After
July 1, 2010

Retirement rates vary by retirement benefit and gender and are shown below. The rates are for State Employees used in the July 1, 2011 valuation of the Virginia Retirement System.

Age	Retirements Per 100 Members			
	Reduced Retirement		Unreduced Retirement	
	Male	Female	Male	Female
50	0.0	0.0	10.0	10.0
51	0.0	0.0	10.0	10.0
52	0.0	0.0	10.0	10.0
53	0.0	0.0	10.0	10.0
54	0.0	0.0	10.0	10.0
55	0.0	0.0	10.0	10.0
56	0.0	0.0	10.0	10.0
57	0.0	0.0	10.0	10.0
58	0.0	0.0	10.0	10.0
59	0.0	0.0	10.0	10.0
60	5.0	5.5	10.0	15.0
61	10.0	10.0	15.0	20.0
62	15.0	15.0	25.0	30.0
63	15.0	15.0	20.0	20.0
64	15.0	15.0	20.0	20.0
65	40.0	40.0	30.0	40.0
66	40.0	40.0	25.0	30.0
67	40.0	40.0	25.0	25.0
68	40.0	40.0	20.0	25.0
69	40.0	40.0	20.0	20.0
70	100.0	100.0	100.0	100.0

Disability Rates

As shown below for selected ages. 14% of disability cases are assumed to be service related. The rates are for State Employees used in the July 1, 2011 valuation of the Virginia Retirement System.

Age	Disabilities Per 100 Members	
	Male	Female
20	0.1	0.01
25	0.1	0.1
30	0.2	0.15
35	0.2	0.25
40	0.2	0.29
45	0.4	0.34
50	0.5	0.55
55	0.6	0.81
60	0.8	1.0
65	0.7	0.9

Withdrawal Rates
Plan 1 Members
Hired Before
July 1, 2010

The following withdrawal rates are used based on age and years of service (for causes other than death, disability, or retirement). The rates are for State Employees used in the July 1, 2011 valuation of the Virginia Retirement System.

Age	Male Members – Years of Service (%)											
	0	1	2	3	4	5	6	7	8	9	10+	
20	26.0	26.0	26.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	0.0
25	22.0	22.0	22.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	0.0
30	20.0	20.0	20.0	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	5.0
35	17.0	17.0	17.0	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	4.5
40	15.0	15.0	15.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	3.4
45	14.0	14.0	14.0	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	2.3
50	12.0	12.0	12.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	2.0
55	10.0	10.0	10.0	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	0.0
60	12.0	12.0	12.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0
65	12.0	12.0	12.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	0.0

Age	Female Members – Years of Service (%)											
	0	1	2	3	4	5	6	7	8	9	10+	
20	30.0	30.0	30.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	0.0
25	25.5	25.5	25.5	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	0.0
30	22.5	22.5	22.5	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	6.0
35	19.0	19.0	19.0	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	5.0
40	16.5	16.5	16.5	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	3.6
45	14.0	14.0	14.0	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	2.5
50	13.5	13.5	13.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	2.0
55	12.0	12.0	12.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0
60	12.5	12.5	12.5	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0
65	13.0	13.0	13.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	0.0

Withdrawal Rates
Plan 2 Members
Hired After
July 1, 2010

The following withdrawal rates are used based on age and years of service (for causes other than death, disability, or retirement). The rates are for State Employees used in the July 1, 2011 valuation of the Virginia Retirement System.

Male Members – Years of Service (%)

Age	0	1	2	3	4	5	6	7	8	9	10+
20	26.0	26.0	26.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	0.0
25	22.0	22.0	22.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	0.0
30	20.0	20.0	20.0	11.5	11.5	11.5	11.5	11.5	11.5	11.5	5.0
35	17.0	17.0	17.0	9.5	9.5	9.5	9.5	9.5	9.5	9.5	4.5
40	15.0	15.0	15.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	3.4
45	14.0	14.0	14.0	7.5	7.5	7.5	7.5	7.5	7.5	7.5	2.3
50	12.0	12.0	12.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	2.0
55	10.0	10.0	10.0	5.5	5.5	5.5	5.5	5.5	5.5	5.5	0.4
60	12.0	12.0	12.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0
65	12.0	12.0	12.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	0.0

Female Members – Years of Service (%)

Age	0	1	2	3	4	5	6	7	8	9	10+
20	30.0	30.0	30.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	0.0
25	25.5	25.5	25.5	16.0	16.0	16.0	16.0	16.0	16.0	16.0	0.0
30	22.5	22.5	22.5	14.0	14.0	14.0	14.0	14.0	14.0	14.0	6.0
35	19.0	19.0	19.0	11.5	11.5	11.5	11.5	11.5	11.5	11.5	5.0
40	16.5	16.5	16.5	9.0	9.0	9.0	9.0	9.0	9.0	9.0	3.6
45	14.0	14.0	14.0	7.5	7.5	7.5	7.5	7.5	7.5	7.5	2.5
50	13.5	13.5	13.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	2.0
55	12.0	12.0	12.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.4
60	12.5	12.5	12.5	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0
65	13.0	13.0	13.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	0.0

Participation Rate It was assumed that 70% of future eligible retirees will elect the plan coverage.

Spouse Coverage Seventy percent (70%) of actives are assumed to be married at retirement. It was assumed that males are three years older than females. Actual spousal data was used for current retirees. It was assumed that all surviving spouses retained coverage until their death.

New Entrants The valuation is performed on a closed group of current participants. Future entrants to the plan were not included.

Administrative Expenses No liability for administrative expenses is included in the valuation as both the baseline claims and the retiree contributions valued include expenses, and these expenses are assumed to cancel each other out.

**Health Care Claims
Cost**

The actual claims experience for the retiree group and the premium-equivalent rates of the program were collected. This data was used to calculate age-specific claim costs using factors developed by Aon. Representative 2016-2017 annual per capita medical, prescription drug, and dental plan costs at specific ages are shown below. The costs represent claims based on the plan design in effect on July 1, 2016. They are blended for healthy and disabled lives.

Age	Cost	
	Medical/Rx	Dental
30	\$4,784	\$406
31	\$4,942	\$406
32	\$5,105	\$406
33	\$5,273	\$406
34	\$5,447	\$406
35	\$5,627	\$406
36	\$5,813	\$406
37	\$6,005	\$406
38	\$6,203	\$406
39	\$6,407	\$406
40	\$6,619	\$406
41	\$6,837	\$406
42	\$7,063	\$406
43	\$7,296	\$406
44	\$7,537	\$406
45	\$7,786	\$406
46	\$8,081	\$406
47	\$8,389	\$406
48	\$8,707	\$406
49	\$9,038	\$406
50	\$9,382	\$406
51	\$9,785	\$406
52	\$10,206	\$406
53	\$10,645	\$406
54	\$11,102	\$406
55	\$11,580	\$406
56	\$12,089	\$406
57	\$12,621	\$406
58	\$13,176	\$406
59	\$13,756	\$406
60	\$14,362	\$406
61	\$14,907	\$406
62	\$15,474	\$406
63	\$16,062	\$406
64	\$16,672	\$406
65 and over	Not applicable	

**Baseline Retiree
Contributions (2017
Fiscal Year)**

Group	Medical/Rx	Dental
Retiree Contributions	\$8,109	\$348
Spouse Contributions	\$6,885	\$294