

The State of Tennessee - Tennessee Plan

GASB Statement No. 75, Accounting and Financial Reporting for
Postemployment Benefits Other Than Pensions

For the Fiscal Year Ending June 30, 2018



September 27, 2018

Mr. Ike Boone
Financial Oversight Coordinator
F&A Division of Accounts
State of Tennessee
14th Floor, William Snodgrass Tower
312 Rosa L. Parks Avenue
Nashville, TN 37243

**Re: State of Tennessee - Tennessee Plan
GASB Statement No. 75 Actuarial Valuation of Other Post-Employment Benefits (OPEB)**

Dear Mr. Boone:

Gabriel, Roeder, Smith & Company (GRS) has been engaged by the State of Tennessee to perform an Actuarial Valuation of its Other Post-Employment Benefits (OPEB) provided through the State's group insurance plans. We are pleased to present herein the aggregate results of the valuation of benefits provided to retirees covered under the Tennessee Plan (The Medicare Supplement). Results specific to individual employers will be transmitted separately.

This report provides information on behalf of the State of Tennessee in connection with the Governmental Accounting Standards Board (GASB) Statement No. 75 "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions." This information is intended to assist in preparation of the financial statements of the State of Tennessee related to benefits provided through the Tennessee Plan. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

This Actuarial Valuation and Report covers the OPEBs provided to the retirees through the Tennessee Plan (the Medicare Supplement). As indicated, benefits are provided by the State and the respective employers. This report does not address liabilities for benefits provided through the State Employee Group Plan, Local Education Employee Group Plan and Local Government Employee Group Plan. The Substantive Plan provisions for the OPEBs provided through the Tennessee Plan are described in the Section at the end of this Report entitled "Summary of Substantive Plan Provisions."

The calculation of the liability associated with the benefits described in this report and accompanying deliverables was performed for the purpose of satisfying the requirements of GASB Statement No. 75. Documents and tables presenting results applicable to individual employers are considered as parts of this report. The calculation of the plan's liability for this report is not applicable for funding purposes of the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement No. 75 may produce significantly different results. This report may be provided to parties other than the State of Tennessee only in its entirety and only with the permission of the State. GRS is not responsible for unauthorized use of this report.

This report is based upon information through June 30, 2017, furnished to us by the State, concerning OPEB, active members, deferred vested members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not audited.

The calculations are based upon assumptions regarding future events, which may or may not materialize. They are also based upon plan provisions outlined in this report. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important relevant plan provisions are not described, or that conditions have changed since the calculations were made, you should contact the authors of this report prior to relying on information in the report.

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; and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

James J. Rizzo and Piotr Krekora are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor.

This report and accompanying deliverables have been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly represents the actuarial position of the plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice, and with applicable statutes. If you have reason to believe that the information provided in this report is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this report, please contact the author of the report prior to making such decision.

We will be pleased to answer any questions pertaining to the Actuarial Valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH AND COMPANY



James J. Rizzo, ASA, EA, MAAA, FCA
Senior Consultant & Actuary



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SECTION A

EXECUTIVE SUMMARY

Executive Summary

	2018
Actuarial Valuation Date	June 30, 2017
Measurement Date of the Total OPEB Liability	June 30, 2017
Employer's Fiscal Year Ending Date (Reporting Date)	June 30, 2018

Membership as of the Measurement Date

Number of	
- Retirees and Beneficiaries (Currently Receiving Benefits)	31,930
- Inactive, Nonretired Members	15,550
- Active Members	137,559
- Total	185,039
Covered-Employee Payroll (State Employees Only)	\$ 3,084,980,820

Total State OPEB Liability

State Employees (Subsidies by State)	\$ 177,260,824
Local Education Employees (Subsidies by State)	\$ 215,044,051

Development of the Single Discount Rate

Long-Term Municipal Bond Rate*	3.56 %
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State OPEB Expense (State subsidy, State Retirees)	\$ 7,602,587
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State OPEB Expense (State Subsidy, Retired Teachers)	\$ 9,948,291
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State's Deferred Outflows and Deferred Inflows of Resources by Source

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience		
State Employees (Subsidies by State)	\$ 0	\$ 0
Local Education Employees (Subsidies by State)	0	0
Changes in assumptions		
State Employees (Subsidies by State)	0	12,548,500
Local Education Employees (Subsidies by State)	0	17,963,025
Estimated Benefits/Contributions paid after the Measurement Date		
State Employees (Subsidies by State)	7,541,894	0
Local Education Employees (Subsidies by State)	7,353,496	0
Total	\$ 14,895,390	\$ 30,511,525

*Source: "Fidelity General Obligation AA" rate as of June 30, 2017. This is the rate for Fixed Income Yield Curve Data for Municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity's "20-Year Municipal GO AA Index." In describing this index, Fidelity notes that the municipal curves are constructed using option adjusted analytics of a diverse population of over 10,000 tax exempt securities.

Discussion

OPEB Plans

This report provides information on behalf of the State of Tennessee in connection with the Governmental Accounting Standards Board (GASB) Statement No. 75 “Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions.” This information is intended to assist in preparation of the State’s accounting recognition and disclosures related to benefits provided to retirees covered under the Tennessee Plan – a Medicare supplemental plan administered by the State’s Benefits Administration. There are three broad categories of benefits taken into account in this valuation:

- Fixed subsidy towards premium provided by the State to state and higher education retirees. This is considered a single employer plan for financial accounting purposes. Actuarial disclosures pertaining to this program are presented within the body of this report.
- Fixed subsidy towards premium provided by the State to retired teachers. The State is considered a non-employer contributing entity and benefits paid by the State constitute a special funding situation as described in paragraph 18 of GASB Statement 75 because the State is required by the State Statutes (Tenn. Code Ann. § 8-27-209) to make contributions on behalf of retirees toward the cost of supplemental medical insurance provided through the Tennessee Plan. The State is the sole contributor for this program and therefore, the state recognizes 100 percent of the collective total OPEB liability associated with this benefit. Actuarial disclosures pertaining to this program are presented within the body of this report.
- Subsidies offered by other local governmental entities. Some of the local governmental agencies offer subsidies to their retirees. Those include local boards of education offering subsidies to retired teachers in addition to the subsidy provided by the State and subsidies to non-instructional personnel (generally not eligible for State subsidies) as well as other local governmental agencies. We list those entities, along with a summary of subsidies provided, in the section of this report titled “Summary of Substantive Plan Provisions.” Those programs are considered as single employer plans and accounting recognition and disclosures applicable to individual agencies are provided separately.

Accounting Standard

GASB Statement No. 75 replaces the requirements of Statements No. 45, Accounting and Financial Reporting by Employers for Postemployments Benefits Other Than Pensions, as amended, and No. 57, OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans, for OPEB.

Reporting under GASB Statement No. 75 is effective for fiscal years commencing after June 15, 2017.

The following discussion provides a summary of the actuarially related information that is required to be disclosed under this new accounting standard. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies, plan provisions and governance matters, are not included in this report. As a result, the employer is responsible for preparing and disclosing the non-actuarial information needed to comply with these accounting standards.

Financial Statements

GASB Statement No. 75 requires state and local government employers to recognize the net OPEB liability and the OPEB expense on their financial statements, along with the related deferred outflows and inflows of resources. The net OPEB liability is the difference between the total OPEB liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets. Since the plan is currently unfunded, the net OPEB liability is equal to the total OPEB liability.

The OPEB expense recognized each fiscal year is equal to the change in the total OPEB liability from the beginning of the year to the end of the year, not including the impact of employer contributions, adjusted for deferred recognition of the liability.

GASB Statement No. 75 states the employer contributions made to the OPEB plan subsequent to the measurement date and before the end of the employer's reporting period should be reported as a deferred outflow of resources.

Special Funding Situation for Retired Teachers

Results presented in this report were developed for employers providing coverage to their employees and retirees through the Tennessee Plan. That includes employers such as the State, local education agencies and other local governments. Although the group health plan is administered by the State, OPEB plans are considered single employer plans administered by individual employers.

However, the State is legally responsible for making payments when benefits are due towards the cost of coverage for retired teachers meeting certain eligibility requirements. This creates a special funding situation resulting in a liability for the State. The total amount of the State's liability is calculated by aggregating proportionate shares developed for each of the affected employers.

Employers' proportions are developed separately for each OPEB plan by dividing the Actuarial Accrued Liability associated with the portion of the benefit paid by the employer over the total Actuarial Accrued Liability for the plan. Proportions can vary significantly from one employer to the next depending on the level of local subsidies. Consequently, amounts presented in this report have been aggregated by adding results applicable to all individual employers, rather than by application of a single percentage to the aggregate total amount developed for all members in the plan.

Notes to Financial Statements

GASB Statement No. 75 requires numerous note disclosures to the employer's financial statements concerning the plan.

Required Supplementary Information for Plans that Do Not Have Formal Assets

GASB Statement No. 75 requires a 10-year fiscal history (to be built prospectively) of:

- Sources of changes in the total OPEB liability
- Information about the total OPEB liability and related ratios, including the total OPEB liability as a percent of covered payroll

Timing and Frequency of the Actuarial Valuation

An actuarial valuation to determine the total OPEB liability is required to be performed at least every two years. For the employer's financial reporting purposes, the total OPEB liability and OPEB expense should be measured as of the employer's "measurement date" which may not be earlier than the employer's prior fiscal year end-date. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total OPEB liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total OPEB liability shown in this report is based on an actuarial valuation performed as of June 30, 2017 and a measurement date of June 30, 2017.

Discount Rate

For plans that do not have formal assets, the discount rate should equal a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher as of the measurement date. For the purpose of this valuation, the municipal bond rate is 3.56% (based on the weekly rate closest to but not later than the measurement date of the Fidelity General Obligation AA index).

Actuarial Assumptions

The actuarial assumptions used to value the liabilities are outlined in detail in Section E. The assumptions include details on the health care trend assumption, the aging factors as well as the cost method used to develop the OPEB expense.

Future Uncertainty or Risk

Future results may differ from those anticipated in this valuation. Reasons include, but are not limited to:

- Actual medical trend differing from expected;
- Changes in the healthcare plan designs offered to active and retired members;
- Participant behavior differing from expected;
 - Elections at retirement;
 - Time of retirement or termination.

Benefits Valued

The benefit provisions that were valued are summarized in Section C. The valuation is required to be performed on the current benefit terms and existing legal agreements. Consideration is to be given to the written plan document as well as other communications between the employer and plan members and an established pattern of practice for cost sharing. The summary of major plan provisions is designed to outline principal plan benefits. If the plan summary is not in accordance with the actual provisions, please alert the actuary immediately so they can both be sure the proper provisions are valued.

Effective Date and Transition

GASB Statement No. 75 is effective for an employer's fiscal years beginning after June 15, 2017.

SECTION B

FINANCIAL SCHEDULES

Schedule of Changes in Total OPEB Liability and Related Ratios Measurement Year Ended June 30, 2017 (Ultimately 10 Years Will Be Displayed)

Measurement Year Ended June 30,	<u>2017</u>	<u>2017</u>	<u>2017</u>
	State Employees Subsidy	Local Education Subsidy	Local Government Subsidy
A. Total OPEB Liability			
1. Service cost	\$ 4,111,648	\$ 18,040,730	\$ 712,428
2. Interest on the Total OPEB Liability	5,548,070	12,596,955	431,487
3. Changes of benefit terms	0	0	0
4. Difference between expected and actual* experience of the Total OPEB Liability	0	0	0
5. Changes in assumptions and other inputs	(14,605,630)	(41,553,655)	(1,604,678)
6(a). Benefit payments by State	(7,368,000)	(7,123,794)	(89,925)
6(b). Benefit payments by Local Employers	0	(2,866,343)	0
7. Net change in Total OPEB Liability	<u>\$ (12,313,912)</u>	<u>\$ (20,906,107)</u>	<u>\$ (550,688)</u>
8. Total OPEB Liability – Beginning	<u>189,574,736</u>	<u>418,356,791</u>	<u>14,109,464</u>
9. Total OPEB Liability – Ending	<u>\$ 177,260,824</u>	<u>\$ 397,450,684</u>	<u>\$ 13,558,776</u>
B. Covered-Employee Payroll	\$ 3,084,980,820	TBD	TBD
C. Total OPEB liability as a percentage of Covered-Employee Payroll	5.75%	TBD	TBD
D. Total of Proportionate Shares			
Beginning of the Measurement Period (Restated) Amounts:			
1. Total of Local Employers' Proportionate Shares	N/A	188,499,466	14,109,464
2. Total of State's Proportionate Shares	189,574,736	229,857,325	N/A
3. Aggregate Total OPEB Liability	\$ 189,574,736	\$ 418,356,791	\$ 14,109,464
End of the Measurement Period Amounts:			
1. Total of Local Employers' Proportionate Shares	N/A	182,406,633	\$ 13,558,776
2. Total of State's Proportionate Shares	177,260,824	\$ 215,044,051	N/A
3. Aggregate Total OPEB Liability	\$ 177,260,824	\$ 397,450,684	\$ 13,558,776

* Total OPEB Liability at the beginning of the initial period of implementation was developed by rolling back the liability from the measurement as permitted by Q&A 4.499 of the Implementation Guide No. 2017-3. Consequently, there was no difference between expected and actual experience.

Note: Aggregate amounts of Employers' shares represent sums of separately determined proportionate shares for individual employers. The local education and local government entities will be provided actuarial reports for the preparation of their own disclosures.

Notes to Schedule of Change in Total OPEB Liability and Related Ratios

Valuation Date: June 30, 2017

Methods and Assumptions Used to Determine Total OPEB Liability:

Actuarial Cost Method	Entry Age Normal
Inflation	2.25%
Discount Rate	3.56%
Salary Increases	Salary increase rates used in the July 1, 2017 actuarial valuation of the Tennessee Consolidated Retirement System (TCRS); 3.44% - 8.72%, including inflation.
Retirement Age	Retirement rates used in the July 1, 2017 actuarial valuation of the Tennessee Consolidated Retirement System (TCRS). They are based on the results of a statewide experience study (undertaken on behalf of TCRS).
Mortality	Mortality tables used in the July 1, 2017 actuarial valuation of the Tennessee Consolidated Retirement System (TCRS). They are based on the results of a statewide experience study (undertaken on behalf of TCRS).
Healthcare Cost Trend Rates	With the exception of four school districts, premium subsidies provided by the State and local governments are assumed to remain unchanged for the entire projection. Premium subsidies provided by Carter County Schools, Kingsport County Schools, Maury County Schools and Sullivan County Schools are expected to grow with the total premiums charged by the Tennessee Plan. These premiums are expected to increase 0.00% for 2018 plan year, 4.60% for 2019 plan year and grade down to the ultimate level of 3.53% over a period of 33 years according to the SOA model developed by Professor Getzen.
Aging factors	Based on the 2013 SOA Study "Health Care Costs - From Birth to Death".
Expenses	Administrative expenses are included in the per capita health costs.

Other Information:

Notes Changes in assumptions and other inputs included the discount rate was changed from 2.92% as of the beginning of the measurement period to 3.56% as of June 30, 2017. This change is reflected in the Schedule of Changes in Total OPEB Liability.

There were no benefit changes during the year.

Statement of OPEB Expense
Employer Fiscal Year Ended June 30, 2018
(Based on Measurement Year Ended June 30, 2017)

	State Employees <u>Subsidy</u>	Local Education <u>Subsidy</u>	Local Government <u>Subsidy</u>
OPEB Expense			
1. Service Cost	\$ 4,111,648	\$ 18,040,730	\$ 712,428
2. Interest on the Total OPEB Liability	5,548,070	12,596,955	431,487
3. Current-Period Benefit Changes	0	0	0
4. OPEB Plan Administrative Expense	0	0	0
5. Recognition of Outflow/(Inflow) of Resources due to Liabilities	<u>(2,057,131)</u>	<u>(5,592,498)</u>	<u>(178,737)</u>
6. Total OPEB Expense	\$ 7,602,587	\$ 25,045,187	\$ 965,178
 State Support			
1. Grand Total of all OPEB Expenses	7,602,587	25,045,187	965,178
2. Total of State's OPEB Expense Support for Local Employers	N/A	9,948,291	N/A
3. Net Total of Local Employers' OPEB Expenses	N/A	15,096,896	965,178

Note: OPEB Expense details for local employers are provided separately. Figures in the above exhibit showing total amounts for local education and local government agencies are presented for illustration only. These figures were obtained by aggregating amounts developed for each employer separately.

Differences between expected and actual experience and changes in assumptions are recognized in OPEB expense using a systematic and rational method over a closed period equal to the average of the expected remaining service lives of all employees that are provided with OPEB through the OPEB plan (active employees and inactive employees) determined as of the beginning of the measurement period. Expected remaining service lives excludes current actives that are over age 65. Results applicable to each of the employers are based on periods specific to that entity.

**Statement of Outflows and Inflows Arising
from Current and Prior Reporting Periods
Employer Fiscal Year Ended June 30, 2018
(Based on Measurement Year Ended June 30, 2017)
State Employees Subsidy**

A. Outflows and Inflows of Resources by Source to be Recognized in Current OPEB Expense

	<u>Outflows of Resources</u>	<u>Inflows of Resources</u>	<u>Net Outflows of Resources</u>
1. Differences between expected and actual experience	\$ 0	\$ 0	\$ 0
2. Assumption changes	0	2,057,131	(2,057,131)
3. Total	\$ 0	\$ 2,057,131	\$ (2,057,131)

B. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future OPEB Expenses

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>	<u>Net Deferred Outflows of Resources</u>
1. Differences between expected and actual experience	\$ 0	\$ 0	\$ 0
2. Assumption changes	0	12,548,500	(12,548,500)
3. Total	\$ 0	\$ 12,548,500	\$ (12,548,500)

C. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future OPEB Expenses

<u>Year Ending June 30</u>	<u>Net Deferred Outflows of Resources</u>
2019	\$ (2,057,131)
2020	(2,057,131)
2021	(2,057,131)
2022	(2,057,131)
2023	(2,057,131)
Thereafter	(2,262,845)
Total	\$ (12,548,500)

D. Estimated Outflow of Resources due to Benefits Paid After the Measurement Date \$ 7,541,894

**Statement of Outflows and Inflows Arising
from Current and Prior Reporting Periods
Employer Fiscal Year Ended June 30, 2018
(Based on Measurement Year Ended June 30, 2017)
Local Education (Including State Subsidy for Teachers)**

A. Outflows and Inflows of Resources by Source to be Recognized in Current OPEB Expense

	<u>Outflows of Resources</u>	<u>Inflows of Resources</u>	<u>Net Outflows of Resources</u>
1. Differences between expected and actual experience	\$ 0	\$ 0	\$ 0
2. Assumption changes	0	5,592,498	(5,592,498)
3. Total	\$ 0	\$ 5,592,498	\$ (5,592,498)

B. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future OPEB Expenses

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>	<u>Net Deferred Outflows of Resources</u>
1. Differences between expected and actual experience	\$ 0	\$ 0	\$ 0
2. Assumption changes	0	35,961,157	(35,961,157)
3. Total	\$ 0	\$ 35,961,157	\$ (35,961,157)

C. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future OPEB Expenses

<u>Year Ending June 30</u>	<u>Net Deferred Outflows of Resources - Total</u>	<u>Net Deferred Outflows of Resources - State</u>
2019	\$ (4,561,075)	\$ (2,072,869)
2020	(4,561,075)	(2,072,869)
2021	(4,561,045)	(2,072,839)
2022	(4,561,043)	(2,072,837)
2023	(4,561,043)	(2,072,837)
Thereafter	(13,155,876)	(7,598,774)
Total	\$ (35,961,157)	\$ (17,963,025)

D. Estimated Outflow of Resources due to Benefits Paid After the Measurement Date

1. Benefits Paid by the State	\$ 7,353,496
2. Benefits Paid by Local Employers	3,030,569
3. Total	\$ 10,384,065

Note: Details pertaining to deferred in/outflows of resources for local employers are provided separately

**Statement of Remaining Deferred Outflows and
Inflows of Resources
Employer Fiscal Year Ended June 30, 2018
(Based on Measurement Year Ended June 30, 2017)**

State Employees Subsidy

<u>Date Established</u>	<u>Source</u>	<u>Recognition Period (years)</u>	<u>Original Amount</u>	<u>Years Remaining</u>	<u>Amount Unrecognized Beg of Period</u>	<u>Amount Recognized in Current Expense</u>	<u>Amount Deferred to Future Periods</u>
<u>Deferred Outflows of Resources</u>							
-	None	-	-	-	-	-	-
		SUBTOTAL:	-		-	-	-
<u>Deferred Inflows of Resources</u>							
6/30/2018	Assumption Changes	7.1	14,605,630	7.1	14,605,631	2,057,131	12,548,500
		SUBTOTAL:	14,605,630		14,605,631	2,057,131	12,548,500
		GRAND TOTAL:			\$ 14,605,631	\$ 2,057,131	\$ 12,548,500

Local Education (Including State Subsidy for Teachers)

<u>Date Established</u>	<u>Source</u>	<u>Recognition Period (years)</u>	<u>Original Amount</u>	<u>Years Remaining</u>	<u>Amount Unrecognized Beg of Period</u>	<u>Amount Recognized in Current Expense</u>	<u>Amount Deferred to Future Periods</u>
<u>Deferred Outflows of Resources</u>							
-	None	-	-	-	-	-	-
		SUBTOTAL:	-		-	-	-
<u>Deferred Inflows of Resources</u>							
6/30/2018	Assumption Changes	N/A	41,553,655	N/A	41,553,655	5,592,498	35,961,157
		SUBTOTAL:	41,553,655		41,553,655	5,592,498	35,961,157
		GRAND TOTAL:			\$ 41,553,655	\$ 5,592,498	\$ 35,961,157
		State Share:			20,756,544	2,793,519	17,963,025

Note: Details pertaining to deferred in/outflows of resources for local employers are provided separately

Discount Rate

For plans that do not have formal assets, the discount rate should equal the tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date. For the purpose of this valuation, the municipal bond rate is 3.56% (based on the weekly rate closest to but not later than the measurement date of the Fidelity's "20-Year Municipal GO AA Index"). The discount rate was 2.92% as of the beginning of the measurement year.

Plan Assets

There are no plan assets accumulated in a trust that meets the criteria in paragraph 4 of GASB Statement No. 75.

Summary of Membership Information

The following table provides a summary of the number of participants in the plan as of the measurement date:

	<u>State</u>	<u>Local Education</u>	<u>Local Government</u>	<u>Total</u>
Inactive Plan Members or Beneficiaries				
Currently Receiving Benefits	17,173	14,593	164	31,930
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	7,235	8,282	33	15,550
Active Plan Members	56,677	66,278	14,604	137,559
Total Plan Members	<u>81,085</u>	<u>89,153</u>	<u>14,801</u>	185,039

Sensitivity of Total OPEB Liability

Regarding the sensitivity of the total OPEB liability to changes in the discount rate, the following presents the plan's total OPEB liability, calculated using a discount rate of 3.56%, as well as what the plan's total OPEB liability would be if it were calculated using a discount rate that is one percent lower or one percent higher:

Sensitivity of Total OPEB Liability to the Discount Rate Assumption

	1% Decrease 2.56%	Current Discount Rate Assumption 3.56%	1% Increase 4.56%
State Retirees Subsidy	\$ 200,693,563	\$ 177,260,824	\$ 157,345,446
State Subsidy for Teachers	\$ 248,782,671	\$ 215,044,051	\$ 187,450,861

Regarding the sensitivity of the total OPEB liability to changes in the healthcare cost trend rates, the following presents the plan's total OPEB liability, calculated using the assumed trend rates as well as what the plan's total OPEB liability would be if it were calculated using a trend rate that is one percent lower or one percent higher:

Sensitivity of Total OPEB Liability to the Healthcare Cost Trend Rate Assumption

	1% Decrease (-1.00% ranging to 2.53%)	Current Healthcare Cost Trend Rate Assumption (0% ranging to 2.53%)	1% Increase (1.00% ranging to 4.53%)
State Retirees Subsidy	\$ 177,260,824	\$ 177,260,824	\$ 177,260,824
State Subsidy for Teachers	\$ 215,044,051	\$ 215,044,051	\$ 215,044,051

SECTION C

SUMMARY OF SUBSTANTIVE PLAN PROVISIONS

Summary of Substantive Plan Provisions as of June 30, 2017

Eligibility for Retiree Benefits

All full-time employees (hired before July 1, 2015), retirees and vested terminated participants of the State of Tennessee, Local Education Agencies, and participating Local Government Agencies who satisfy the Disability, Vested Termination, Early or Normal Retirement provisions of the Tennessee Consolidated Retirement System (TCRS) may be eligible for certain post-employment benefits under the Local Education Employee Group Plan. Any employee, with the exception of state judges, first hired on or after July 1, 1976 enters TCRS *Group I* regardless of employment classification. The following presents the Group I eligibility requirements for retirement under the Tennessee Consolidated Retirement System (TCRS):

VESTED TERMINATION	Full vesting starts after 5 years of creditable service.
DISABILITY RETIREMENT	5 years of creditable service regardless of age.
EARLY RETIREMENT	Earlier of (i) age 55 with 10 years of creditable service, or (ii) Any age with 25 years of service.
NORMAL RETIREMENT	Earlier of (i) Age 60 with 5 years of creditable service (ii) Any age with 30 years of creditable service.

All retirees of the State of Tennessee's Higher Education institutions who participated in an optional retirement plan, instead of TCRS, may also be eligible for the post-employment benefits under The Tennessee Plan upon attaining Medicare-eligibility.

No other postemployment benefits are available to employees retiring with less than 10 years of service.

The Tennessee Plan coverage may commence upon the retiree's attainment of Medicare eligibility (age 65), even if the former employee chooses not to enroll in pre-65 retiree health coverage under the State program.

Members whose first employment with a participating local education or state agency began prior to July 1, 2015, who meet the eligibility rules may continue health insurance at retirement until age-eligible for Medicare. Employees whose first employment with a participating local education agency (and state agency, if applicable) began on or after July 1, 2015, will not be eligible to continue insurance coverage at retirement.

Other Post-Employment Benefits – For Medicare Supplement Under “The Tennessee Plan”

Certain Other Post-Employment Benefits (OPEB) are available to current retirees and all employees (hired before July 1, 2015) retiring from the State under the provisions of Disability, Early or Normal Retirement, as described above (except some grandfathered employees and retirees). The OPEB benefits include lifetime access to coverage for the retiree and spouse eligible for Medicare Part A under the Medicare Supplement (The Tennessee Plan), State provided subsidy for retiree premiums, as well as additional subsidies for retiree premiums provided by some local government or education employers.

Health-Related Benefits

Medicare-eligible retirees may choose to participate in the State-sponsored Medicare Supplement plan, called “The Tennessee Plan”. Spouses of retirees may be covered at the retiree’s option upon reaching Medicare eligibility. Beginning July 1, 2015 only spouses of covered retirees will be offered coverage under the plan. Retirees and their dependents eligible for the Medicare benefits are required to enroll for Parts A and B under Medicare.

Retired teachers in the Bartlett Municipal Schools, Collierville Municipal Schools, Davidson County Schools, Germantown Municipal School District, Rutherford County Schools, and Shelby County Schools are additionally offered participation in a local-sponsored Medicare Supplement Plan.

Survivorship Benefits

The surviving spouse of a retiree is eligible to continue coverage under The Tennessee Plan subject to payments of the applicable premiums at the unsubsidized rate.

Funding Vehicle

There is no separate trust through which benefits for retirees are funded. No assets are currently accumulated or earmarked for this purposes. All approved benefits are paid by the State or the employer when due.

Termination and Amendment

The post-employment benefits are extended to retirees and continued at the discretion of the State, which reserves the right (subject to State Statute and any collective bargaining agreements) to change or terminate benefits and to change contributions required from retirees in the future as circumstances change.

Premium Subsidy Provided by the State to Retirees Participating in the Tennessee Plan

State retirees and retired teachers covered under the Tennessee Plan are eligible for a premium subsidy from the State. The amount of subsidy depends on the service at the time of retirement as illustrated below:

Monthly State Contributions		
Service at Retirement	For State Retirees and Retired Teachers	For Dependents, Education Support Staff and Local Government
30+ years of service	\$50.00	\$0.00
20-29 years of service	\$37.50	\$0.00
15-19 years of service	\$25.00	\$0.00
Less than 15 years of service	\$0.00	\$0.00

There are no provisions for automatic escalation of the amounts illustrated above and they may not be increased without legislative approval. Consequently, this benefit is considered a flat dollar subsidy for the purpose of this valuation.

Premium Subsidy Provided by Employers to Retirees Participating in the Tennessee Plan

Some local education employers offer premium subsidies in addition to amounts contributed by the State. Specific employers, eligibility and subsidy amounts are listed in the following table:

Local Education Employers Providing Subsidy in Addition to the State				
Local Education Agency	30+ Y.O.S.	20-29 Y.O.S.	<20 Y.O.S.	Support Staff
Bells City Board of Education ¹	\$50.00	\$37.50	\$25.00	Same as teachers
Carter County Schools	Difference between the full premium and the State Subsidy			
Clay County Schools ¹	\$50.00	\$37.50	\$25.00	Same as teachers
Clinton Schools ¹	\$50.00	\$37.50	\$25.00	Same as teachers
Greenville City Schools ²	\$50.00	\$37.50	\$25.00	Same as teachers
Hamblen County Schools	\$50.00	\$37.50	\$25.00	Same as teachers
Hawkins County Schools ³	\$50.00	\$37.50	\$25.00	\$100-\$50
Hickman County Schools ⁴	\$76.17	\$48.46	\$27.69	Same as teachers
Humboldt City Schools ⁵	\$50.00	\$37.50	\$25.00	Same as teachers
Jackson County BOE ¹	\$50.00	\$37.50	\$25.00	Same as teachers
Kingsport County Schools	Difference between the full premium and the State Subsidy			
Maury County Schools	Difference between the full premium and the State Subsidy			
McNairy County Schools	\$88.47	100.97\$	\$113.47	Same as teachers
Monroe County BOE	\$50.00	\$37.50	\$25.00	Same as teachers
Morristown Schools ¹	\$50.00	\$37.50	\$25.00	Same as teachers
Overton County Schools	\$50.00	\$37.50	\$25.00	Same as teachers
Polk County Schools	\$121.00	\$121.00	\$121.00	Same as teachers
Scott County Schools	\$50.00	\$37.50	\$25.00	Same as teachers
Sevier County Schools	\$50.00	\$37.50	\$25.00	Same as teachers
Sullivan County BOE	Difference between the full premium and the State Subsidy			
Sumner County BOE	\$50.00	\$37.50	\$25.00	Same as teachers
Tri County Vocational School ¹	\$50.00	\$37.50	\$25.00	Same as teachers
Union County Schools	\$50.00	\$37.50	\$25.00	\$37.50
Williamson County Schools	\$87.50	N/A	N/A	N/A

1. Requires at least 15 Y.O.S.
2. Requires instructional staff to be age 60 or older.
3. For Hawkins County Schools Support Staff subsidy for 30+ Y.O.S. at \$100.00, 20-29 Y.O.S. at \$75.00 and <20 Y.O.S. at \$50.00.
4. For Hickman County Schools subsidy amounts are based on the following service ranges: 30+ Y.O.S., 25-29 Y.O.S. and <25 Y.O.S. Employees are directly reimbursed monthly amounts on the state Medicare plan. Checks are written to the employees once a year.
5. For Humboldt City Schools subsidy amounts are based on the following service ranges: 20+ Y.O.S., 10-19 Y.O.S. and 5-9 Y.O.S.

Retirees of other local governmental employers are not eligible for any premium subsidy from the State. However, certain local employers subsidize retiree premiums with amounts matching those provided by the State to similarly situated State retirees. Such employers are listed in the table below:

Local Government Employers Providing Subsidy	
Association of County Mayors	Mid-W Community Service Agency
Bells, City Of	Milan, City of
Bloomington Utility	Monroe County
Bolivar	Monroe County Highway
Buffalo River Regional Lib	Natural Gas Acquisition Co Clarksville
Caney Fork Regional Lib	Nolichucky Regional Lib
City of Humboldt	Norris
City of Lakewood	Norris Fire and Police
City of Portland	Obion River Regional Lib
Clarksville Gas Water Sewer	Overton County
Clarksville General Fund	Overton County Highway Department
Clarksville Public Safety	Overton County Nursing Home
Clarksville Transportation	Overton County 911
Clinton, Town of	Scott County
Clinton Fire and Police	Scott County Ambulance Service
Clinton Housing Authority	Scott County Road Department
Forked Deer Regional Lib	Sevier County
Ft Loudon Regional Lib	Sevier County Fee Officers
Goodlettsville Board Members	Sevier County Highway
Goodlettsville, City of	Sevier County Lib
Greeneville Fire and Police	Stoned River Regional Lib
Greeneville Water Commission	Sumner County
Greeneville, Town of	Sumner County Highway
Hamblen Co Courthouse	Tennessee Co Commissioners Association
Hamblen County Highway Department	Tennessee CSA
Hamblen County Board Members	Tennessee Education Association
Hamblen County Garbage Collectors	TN Co Hwy Officials Association
Hamblen County Highway Commission	TN Co Service Association
Hamblen County Parks	TN Sec Schools Athletic Association
Hamblen County Public Safety	TN State Employees Assn.
Hartsville/Trousdale County Government	Union County EMS
Humboldt Utilities- Elec Co	Union County General Fund
Humboldt Utilities- Gas and Water	Union County Highway Department
Jefferson City	Union County Officials
Jefferson City Public Safety	Washington County- Johnson City 911
Kingston Spring	White House, City of
Linebaugh Pub Lib	Williamson County
Madison Suburban Utility District	Town of Woodbury
Middle Tennessee UT District	

SECTION D

SUMMARY OF PARTICIPANT DATA

Age/Service Distribution for Future Medicare Supplement Plan Participants: Current State Employees and Retirees

Age Group	Years of Service to Valuation Date - Active State Employees							Total
	0-5	6-9	10-14	15-19	20-24	25-29	30&Up	
0 - 14	-	-	-	-	-	-	-	-
15 - 19	12	-	-	-	-	-	-	12
20 - 24	232	9	-	-	-	-	-	241
25 - 29	1,955	480	18	-	-	-	-	2,453
30 - 34	2,052	1,719	482	14	-	-	-	4,267
35 - 39	1,798	1,731	1,791	550	19	-	-	5,889
40 - 44	1,359	1,500	1,677	1,663	435	10	-	6,644
45 - 49	1,299	1,473	1,670	1,580	1,360	424	8	7,814
50 - 54	1,036	1,247	1,530	1,362	1,204	1,244	743	8,366
55 - 59	951	1,165	1,375	1,337	1,165	1,129	1,769	8,891
60 - 64	708	915	1,120	1,027	974	883	1,737	7,364
65 - 69	235	389	546	450	398	398	900	3,316
70 - 74	57	108	188	137	136	125	336	1,087
75 - 99	15	19	41	51	36	43	128	333
Total	11,709	10,755	10,438	8,171	5,727	4,256	5,621	56,677

Age Group	State Retirees in Tennessee Plan			Age Group	State Retirees not yet in Tennessee Plan		
	Male	Female	Total		Male	Female	Total
0 - 44	2	4	6	0 - 44	18	20	38
45 - 49	1	3	4	45 - 49	26	43	69
50 - 54	4	5	9	50 - 54	185	272	457
55 - 59	6	6	12	55 - 59	814	1,226	2,040
60 - 64	82	116	198	60 - 64	1,750	2,881	4,631
65 - 69	1,926	2,578	4,504	65 - 69	-	-	-
70 - 74	2,100	2,515	4,615	70 - 74	-	-	-
75 - 79	1,615	1,813	3,428	75 - 79	-	-	-
80 - 84	1,030	1,272	2,302	80 - 84	-	-	-
85 - 89	561	844	1,405	85 - 89	-	-	-
90 - 94	182	396	578	90 - 94	-	-	-
95 - +	30	82	112	95 - +	-	-	-
Total	7,539	9,634	17,173	Total	2,793	4,442	7,235

Age/Service Distribution for Future Medicare Supplement Plan Participants: Current Local Education Employees and Retirees

Age Group	Years of Service to Valuation Date - Active Local Education Employees							
	0-5	6-9	10-14	15-19	20-24	25-29	30&Up	Total
0 - 14	-	-	-	-	-	-	-	-
15 - 19	3	-	-	-	-	-	-	3
20 - 24	138	1	-	-	-	-	-	139
25 - 29	3,765	917	4	-	-	-	-	4,686
30 - 34	1,753	5,122	843	7	-	-	-	7,725
35 - 39	1,194	2,778	4,743	837	7	-	-	9,559
40 - 44	1,040	1,825	2,439	4,639	605	1	-	10,549
45 - 49	880	1,629	1,797	2,440	3,819	510	2	11,077
50 - 54	566	1,016	1,306	1,404	1,679	1,970	461	8,402
55 - 59	397	689	918	1,341	1,117	976	1,660	7,098
60 - 64	237	466	612	730	797	583	1,467	4,892
65 - 69	90	187	217	225	228	181	470	1,598
70 - 74	31	40	59	69	52	43	126	420
75 - 99	7	12	24	21	12	8	46	130
Total	10,101	14,682	12,962	11,713	8,316	4,272	4,232	66,278

Age Group	Local Education Retirees in Tennessee Plan			Age Group	Local Education Retirees not yet in Tennessee Plan		
	Male	Female	Total		Male	Female	Total
0 - 44	1	1	2	0 - 44	2	9	11
45 - 49	1	1	2	45 - 49	9	24	33
50 - 54	-	6	6	50 - 54	59	245	304
55 - 59	4	13	17	55 - 59	335	1,519	1,854
60 - 64	41	177	218	60 - 64	1,110	4,970	6,080
65 - 69	1,250	3,863	5,113	65 - 69	-	-	-
70 - 74	1,103	2,756	3,859	70 - 74	-	-	-
75 - 79	621	1,648	2,269	75 - 79	-	-	-
80 - 84	400	1,108	1,508	80 - 84	-	-	-
85 - 89	255	825	1,080	85 - 89	-	-	-
90 - 94	79	333	412	90 - 94	-	-	-
95 - +	9	98	107	95 - +	-	-	-
Total	3,764	10,829	14,593	Total	1,515	6,767	8,282

Age/Service Distribution for Future Medicare Supplement Plan Participants: Current Local Government Employees and Retirees

Age Group	Years of Service to Valuation Date - Active Local Government Employees							
	0-5	6-9	10-14	15-19	20-24	25-29	30&Up	Total
0 - 14	-	-	-	-	-	-	-	-
15 - 19	15	-	-	-	-	-	-	15
20 - 24	430	1	-	-	-	-	-	431
25 - 29	879	200	4	-	-	-	-	1,083
30 - 34	569	413	172	4	-	-	-	1,158
35 - 39	492	291	385	173	5	-	-	1,346
40 - 44	522	314	321	478	139	1	-	1,775
45 - 49	517	382	365	373	406	135	3	2,181
50 - 54	391	344	408	324	339	257	92	2,155
55 - 59	372	294	323	367	291	212	187	2,046
60 - 64	246	213	214	234	233	158	170	1,468
65 - 69	110	104	94	87	65	62	90	612
70 - 74	52	29	35	35	22	25	28	226
75 - 99	12	14	23	14	10	13	22	108
Total	4,607	2,599	2,344	2,089	1,510	863	592	14,604

Age Group	Local Government Retirees in Tennessee Plan			Age Group	Local Government Retirees not yet in Tennessee Plan		
	Male	Female	Total		Male	Female	Total
0 - 44	-	-	-	0 - 44	-	-	-
45 - 49	-	-	-	45 - 49	-	-	-
50 - 54	1	-	1	50 - 54	3	-	3
55 - 59	-	-	-	55 - 59	6	3	9
60 - 64	2	-	2	60 - 64	12	9	21
65 - 69	22	14	36	65 - 69	-	-	-
70 - 74	27	18	45	70 - 74	-	-	-
75 - 79	11	23	34	75 - 79	-	-	-
80 - 84	10	9	19	80 - 84	-	-	-
85 - 89	8	12	20	85 - 89	-	-	-
90 - 94	2	3	5	90 - 94	-	-	-
95 - +	-	2	2	95 - +	-	-	-
Total	83	81	164	Total	21	12	33

SECTION E

ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Assumptions and Methods

Actuarial Valuation Date:	June 30, 2017 for employee and retiree population purposes, for development of per capita cost purposes and for Valuation purposes.
Actuarial Cost Method:	Individual Entry Age Normal Cost Method with an increasing Normal Cost pattern consistent with the salary increase assumptions.
Discount Rate:	Under GASB Statement No. 75, since there are currently no invested plan assets held in trust to finance the OPEB obligations, the discount rate equals the tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date. For the purpose of this valuation, the municipal bond rate is 3.56% (based on the daily rate closest to but not later than the measurement date of the Fidelity General Obligation AA index).
Price Inflation:	Long-term price inflation is assumed to be 2.25% per year.
Tennessee Consolidated Retirement System:	<p>Unless noted otherwise, demographic assumptions employed in this Actuarial Valuation were the same as those employed in the July 1, 2017 for a Group I employees in the Pension Actuarial Valuation of the Tennessee Consolidated Retirement System (TCRS). These demographic assumptions were developed by TCRS from an Actuarial Experience Study (undertaken on behalf of TCRS), and are considered appropriate for use in this OPEB Actuarial Valuation. These include assumed rates of future salary increases, termination, mortality, disability, and retirement.</p> <p>In the following pages, we outline assumptions used in this Actuarial Valuation.</p>
Data Assumptions:	Upon advice from the TCRS representatives whenever we encountered a discrepancy between expected service and service reported for this valuation, imputed service was used.
Salary Increases:	Assumed salary increases are the same as used by TCRS: 8.72% at age 20 graded to 3.44% at age 70 (with 4.00% weighted average).
Mortality Tables:	Mortality tables are used to measure the probabilities of participants dying before and after retirement. The mortality rates employed in this valuation are taken from the RP-2014 Healthy Participant Mortality Table for pre-retirement mortality and the RP-2014 Mortality Table for Annuitants for non-disabled post-retirement mortality, with mortality improvement projected to all future years using Scale MP-2016. For State and Local Government, post-retirement tables are Blue Collar and adjusted with a 2% load for males and -3% load for females. For Local Education, post-retirement tables are White Collar and adjusted with a 11% load for males and a -2% load for females.

Mortality rates for impaired (from disability) lives are the same as those used by TCRS and are taken from the gender distinct table published in the IRS Revenue Ruling 96-7 for disabled lives with a 10% load.

These mortality rates were developed by the TCRS in a recent experience study.

Rates of Disability:

Disability rates are used to measure the probabilities of active participants becoming disabled.

% Becoming Disabled Within Next Year				
Sample Ages	Group I - Teachers		Group I - General Employees	
	Male	Female	Male	Female
20	0.01%	0.01%	0.06%	0.03%
25	0.01%	0.01%	0.06%	0.03%
30	0.01%	0.01%	0.07%	0.04%
35	0.03%	0.03%	0.11%	0.06%
40	0.08%	0.08%	0.16%	0.14%
45	0.14%	0.14%	0.22%	0.24%
50	0.17%	0.17%	0.27%	0.33%
55	0.17%	0.17%	0.27%	0.38%
60	--	--	--	--
65	--	--	--	--

% Becoming Disabled Within Next Year		
Sample Ages	Group I - Political Subdivision	
	Male	Female
20	0.03%	0.03%
25	0.03%	0.03%
30	0.03%	0.03%
35	0.03%	0.03%
40	0.08%	0.08%
45	0.20%	0.20%
50	0.38%	0.38%
55	0.49%	0.49%
60	--	--
65	--	--

Rates of Retirement:

Rates of retirement are used to measure the probabilities of an eligible active employee retiring during the next year.

Unreduced Retirement Annual Rates						
Sample Ages	Group I					
	Teachers		State		Political Subdivision	
	Male	Female	Male	Female	Male	Female
50	6.5%	6.5%	6.0%	7.5%	9.0%	8.0%
55	10.0%	10.0%	6.5%	7.5%	9.0%	8.0%
60	15.0%	17.0%	8.5%	9.0%	10.5%	11.0%
65	35.0%	37.5%	22.0%	22.0%	24.0%	22.0%
70	16.0%	34.0%	15.5%	17.0%	18.0%	19.0%
75	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Additional increments for retirees who have 15 or more years of service at retirement on or after age 60					
Teachers		State		Political Subdivision	
Male	Female	Male	Female	Male	Female
8.0%	8.0%	2.0%	2.0%	2.0%	2.0%

Additional increments for retirees in the year in which they are first eligible for unreduced retirement prior to age 60					
Teachers		State		Political Subdivision	
Male	Female	Male	Female	Male	Female
12.5%	12.5%	7.5%	7.5%	7.5%	7.5%

Rates of Termination from Active Employment:

These rates do not apply to participants eligible for Normal Retirement and do not include separation on account of death or disability. Termination rates are used to measure the probabilities of participants terminating employment for other reasons. The rates are based on the number of years of service and age.

% Separating Within Next Year - Group I - Teachers										
Years of Service	Male									
	Attained Age									
	20	25	30	35	40	45	50	55	60	65
0	18.0%	18.0%	18.0%	18.0%	18.0%	18.4%	19.7%	22.1%	25.5%	28.0%
1	13.5%	13.5%	13.5%	13.5%	13.5%	13.5%	14.2%	16.8%	21.6%	23.5%
2	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%	--
3	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%	--
4	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%	--
5	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%	--
6	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%	--
7	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%	--
8	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%	--
9	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%	--
10 or more	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%	--
Years of Service	Female									
	Attained Age									
	20	25	30	35	40	45	50	55	60	65
0	18.0%	18.0%	18.0%	18.0%	18.0%	18.4%	19.7%	22.1%	25.5%	28.0%
1	13.5%	13.5%	13.5%	13.5%	13.5%	13.5%	14.2%	16.8%	21.6%	23.5%
2	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	--
3	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	--
4	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	--
5	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	--
6	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	--
7	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	--
8	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	--
9	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	--
10 or more	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	--

% Separating Within Next Year - Group I - General Employees										
Years of Service	Male									
	Attained Age									
	20	25	30	35	40	45	50	55	60	65
0	30.0%	25.4%	23.0%	20.8%	18.6%	16.5%	14.8%	15.3%	17.9%	24.0%
1	24.6%	21.4%	18.6%	16.1%	13.8%	12.0%	11.1%	11.6%	14.4%	20.5%
2	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	--
3	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	--
4	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	--
5	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	--
6	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	--
7	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	--
8	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	--
9	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	--
10 or more	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	--
Years of Service	Female									
	Attained Age									
	20	25	30	35	40	45	50	55	60	65
0	30.0%	25.4%	23.0%	20.8%	18.6%	16.5%	14.8%	15.3%	17.9%	24.0%
1	24.6%	21.4%	18.6%	16.1%	13.8%	12.0%	11.1%	11.6%	14.4%	20.5%
2	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	--
3	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	--
4	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	--
5	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	--
6	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	--
7	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	--
8	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	--
9	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	--
10 or more	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	--

% Separating Within Next Year - Group I - Political Subdivision										
Years of Service	Male									
	Attained Age									
	20	25	30	35	40	45	50	55	60	65
0	26.2%	23.0%	21.8%	20.7%	19.2%	17.7%	17.0%	17.4%	20.4%	26.3%
1	21.8%	19.1%	17.9%	17.0%	15.9%	14.1%	13.0%	13.0%	14.9%	19.1%
2	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	--
3	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	--
4	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	--
5	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	--
6	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	--
7	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	--
8	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	--
9	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	--
10 or more	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	--
Years of Service	Female									
	Attained Age									
	20	25	30	35	40	45	50	55	60	65
0	26.2%	23.0%	21.8%	20.7%	19.2%	17.7%	17.0%	17.4%	20.4%	26.3%
1	21.8%	19.1%	17.9%	17.0%	15.9%	14.1%	13.0%	13.0%	14.9%	19.1%
2	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	--
3	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	--
4	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	--
5	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	--
6	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	--
7	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	--
8	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	--
9	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	--
10 or more	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	--

Health Coverage Assumptions

Coverage Acceptance Rates:

Not all retirees will accept coverage and pay the required premium upon becoming eligible. Acceptance rates presented below are from an analysis of the choice pattern exhibited by employees retiring in recent years.

Coverage Acceptance for Post-65 Elections	
Subsidy Level	Total Acceptance Rate*
Full Premium Paid by the Employer	100%
\$50.00	75%
\$37.50	60%
\$25.00	50%
None	25%
Acceptance decrease due to diminishing value of the subsidy	0.50%
Minimum Ultimate Acceptance Rate	25.00%

*Acceptance rates listed above are increased by 20% for members in the Bartlett Municipal Schools, Collierville Municipal Schools, Davidson County Schools, Germantown Municipal School District, Rutherford County Schools, or Shelby County Schools.

Future participation:

Active employees currently declining coverage are assumed to opt into the plan in the future and accept retiree coverage at a 10% rate. Covered employees are assumed to remain covered until retirement.

Expected Retiree Contributions:

Members are required to make monthly contributions in order to maintain their coverage. However, for the purpose of this Valuation we have only included the direct premium subsidy provided by employers and retiree contributions are not relevant to the OPEB calculations.

Administrative Expenses:

Administrative expenses are included in the Per Capita Costs.

Healthcare Cost Trend Rates:

With the exception of four school districts, premium subsidies provided by the State and local governments are assumed to remain unchanged for the entire projection. Subsidies provided by Carter County Schools, Kingsport County Schools, Maury County Schools and Sullivan County Schools are expected to grow with the total premiums charged by the Tennessee Plan. These premiums are expected to increase 0.00% for 2018

plan year, 4.60% for 2019 plan year and grade down to the ultimate level of 3.53% over a period of 33 years according to the SOA model developed by Professor Getzen.

Consideration of Health Care Reform

Summary of Selected Provisions and Their Effects

Excise Tax on High-Cost Employer Health Plans (aka “Cadillac” Tax) Effective 1/1/2022: The “Cadillac” tax is a 40% excise tax paid by the coverage provider (employer and/or insurer) on the value of health plan costs in excess of certain thresholds. The thresholds for active employees and Medicare eligible retirees are \$10,200 for single coverage or \$27,500 for family coverage in 2018 and increased with inflation to 2022. Respective thresholds for retirees not eligible for Medicare are \$11,850 and \$30,950 for year 2018 and increased with inflation to 2022. Many plans are below the thresholds today, but are likely to exceed them in the next decade. The thresholds will be indexed at CPI-U, which is lower than the medical inflation rates affecting the cost of the plans. There is considerable uncertainty about how the tax would be applied, and considerable latitude in grouping of participants for tax purposes. Combining early retiree and Medicare eligible retiree costs is allowed and can keep plans under the thresholds for a longer period of time.

Based on the assumptions used for this Valuation, premiums required to be paid are projected to remain below the taxable threshold for at least 80 years. As such, the Tennessee Plan is not expected to be materially affected by implementation of the Excise Tax on High-Cost Employer Health Plans in the foreseeable future.

Medicare Payment Reforms: The health care reform legislation includes a variety of Medicare payment reforms and limits intending to reduce the overall cost of Medicare to the federal government. These reforms also serve to restrain the growth in costs that are paid by Medicare supplement arrangements such as the Tennessee Plan. However, since the State obligation is limited to providing a flat premium subsidy, these efforts will have no effect on the results of this valuation.

Implementation of the new requirements: We have not identified any other specific provision of health care reform that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued we will review and monitor the impact.

Miscellaneous and Technical Assumptions

Roll Forward Disclosure:	Since the measurement date and the valuation date are the same, no update procedures were used to roll forward the total OPEB liability from the June 30, 2017 valuation date to the June 30, 2017 measurement date.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Pay Increase Timing:	End of (fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year starting on the valuation date.
Decrement Timing:	Decrements of all types are assumed to occur at the middle of the year.
Decrement Operation:	All decrements operate simultaneously. Disability and termination rates cease upon eligibility for normal or early retirement.
Decrement Relativity:	Decrement rates are treated as absolute rates of decrement.
Adjustments:	None.

Assumption, Method, and Plan Changes

Assumption and Other Input Changes:

1. The discount rate was changed from 2.92% as of the beginning of the measurement period to 3.56% as of June 30, 2017 (based on the Long-Term Municipal Bond rate). This change decreased the Total OPEB Liability.

SECTION F

GLOSSARY OF TERMS

Glossary of Terms

Accrued Service	Service credited under the system that was rendered before the date of the actuarial valuation.
Actuarial Accrued Liability (AAL)	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."
Actuarial Assumptions	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the OPEB trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
Actuarial Equivalent	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
Actuarial Gain (Loss)	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
Actuarial Present Value (APV)	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
Actuarial Valuation	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total OPEB liability, and related actuarial present value of projected benefit payments for OPEB.
Actuarial Valuation Date	The date as of which an actuarial valuation is performed.

Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)	A calculated contribution into an OPEB plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.
Amortization Method	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
Amortization Payment	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
Cost-of-Living Adjustments	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Cost-Sharing Multiple-Employer Defined Benefit OPEB Plan (cost-sharing OPEB plan)	A multiple-employer defined benefit OPEB plan in which the OPEB obligations to the employees of more than one employer are pooled and OPEB plan assets can be used to pay the benefits of the employees of any employer that provides benefits through the OPEB plan.
Covered Payroll	The payroll of employees that are provided with benefits through the OPEB plan.
Deferred Inflows and Outflows	The deferred inflows and outflows of OPEB resources are amounts used under GASB Statement No. 75 in developing the annual OPEB expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in the OPEB expense should be included in the deferred inflows or outflows of resources.
Discount Rate	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: <ol style="list-style-type: none"> 1. The benefit payments to be made while the OPEB plans’ fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and 2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

Entry Age Actuarial Cost Method (EAN)

The EAN is a cost method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit ages(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.

Fiduciary Net Position

The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.

GASB

The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Long-Term Expected Rate of Return

The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.

Money-Weighted Rate of Return

The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 74, the money-weighted rate of return is calculated as the internal rate of return on OPEB plan investments, net of OPEB plan investment expense.

Multiple-Employer Defined Benefit OPEB Plan

A multiple-employer plan is a defined benefit OPEB plan that is used to provide OPEB payments to the employees of more than one employer.

Municipal Bond Rate

The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.

Net OPEB Liability (NOL)

The NOL is the liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit OPEB plan.

Non-Employer Contributing Entities

Non-employer contributing entities are entities that make contributions to an OPEB plan that is used to provide OPEB payments to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contributing entities.

Normal Cost	The portion of the actuarial present value allocated to a valuation year is called the normal cost. For purposes of application to the requirements of this Statement, the term normal cost is the equivalent of service cost.
Other Postemployment Benefits (OPEB)	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.
Real Rate of Return	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
Service Cost	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
Total OPEB Expense	The total OPEB expense is the sum of the following items that are recognized at the end of the employer’s fiscal year: <ol style="list-style-type: none"> 1. Service Cost 2. Interest on the Total OPEB Liability 3. Current-Period Benefit Changes 4. Employee Contributions (made negative for addition here) 5. Projected Earnings on Plan Investments (made negative for addition here) 6. OPEB Plan Administrative Expense 7. Other Changes in Plan Fiduciary Net Position 8. Recognition of Outflow (Inflow) of Resources due to Liabilities 9. Recognition of Outflow (Inflow) of Resources due to Assets
Total OPEB Liability (TOL)	The TOL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
Unfunded Actuarial Accrued Liability (UAAL)	The UAAL is the difference between actuarial accrued liability and valuation assets.
Valuation Assets	The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement Nos. 74 and 75, the valuation assets are equal to the market value of assets.