

GASB 74/75 ACTUARIAL VALUATION

Fiscal Year Ending June 30, 2017

City of Dover, DE

8415 Allison Pointe Blvd., Ste. 300, Indianapolis, IN 46250 (317) 845-3500 – www.nyhart.com

Table of Contents

	Page
Certification	1
Executive Summary	3
GASB Disclosures Schedule of Changes in Net OPEB Liability and Related Ratios Schedule of Employer Contributions OPEB Expense Deferred Outflows / (Inflows) of Resources Sensitivity Results	5 6 7 8 9
Asset Information	10
Actuarially Determined Contributions	11
Projection of GASB Disclosures	12
Cash Flow Projection	13
Discussion of Discount Rates	14
Summary of Plan Participants	16
Substantive Plan Provisions	19
Actuarial Methods and Assumptions	21
Appendix Comparison of Participant Demographic Information Detailed Actuary's Notes Results by Group Summary of Medical Benefits	27 28 29 30 32
Glossary	33



November 2, 2017

Lori Peddicord City of Dover 5 E. Reed Street, Suite 300 Dover, DE 19904

This report summarizes the GASB actuarial valuation for the City of Dover, Delaware FY 2016/17 fiscal year. To the best of our knowledge, the report presents a fair position of the funded status of the plan in accordance with GASB Statement No. 74 (Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans) and GASB Statement No. 75 (Accounting and Financial Reporting by Employers for Post-Employment Benefits Other Than Pensions).

The information presented herein is based on the actuarial assumptions and substantive plan provisions summarized in this report and participant information furnished to us by the Plan Sponsor. We have reviewed the employee census provided by the Plan Sponsor for reasonableness when compared to the prior information provided but have not audited the information at the source, and therefore do not accept responsibility for the accuracy or the completeness of the data on which the information is based. When relevant data may be missing, we may have made assumptions we feel are neutral or conservative to the purpose of the measurement. We are not aware of any significant issues with and have relied on the data provided.

The discount rate, other economic assumptions, and demographic assumptions have been selected by the Plan Sponsor with the concurrence of Nyhart. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

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); and
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement.

To our knowledge, there have been no significant events prior to the current year's measurement date or as of the date of this report that could materially affect the results contained herein.



Neither Nyhart nor any of its employees has any relationship with the plan or its sponsor that could impair or appear to impair the objectivity of this report. Our professional work is in full compliance with the American Academy of Actuaries "Code of Professional Conduct" Precept 7 regarding conflict of interest. The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Should you have any questions please do not hesitate to contact us.

Randy Gomez, FSA, MAAA

Consulting Actuary

Suraj M. Datta, ASA, MAAA, MBA

Valuation Actuary

Summary of Results

Presented below is the summary of GASB 74/75 results for the fiscal year ending June 30, 2017.

	As of June 30, 2017
Total OPEB Liability	\$ 69,305,071
Actuarial Value of Assets	\$ (29,053,846)
Net OPEB Liability	\$ 40,251,225
Funded Ratio	41.9%
	FY 2016/17
OPEB Expense	\$ 3,782,913
Annual Employer Contribution	\$ 4,602,728
	As of June 30, 2017
Discount Rate	6.50%
Expected Return on Assets	6.50%
	As of June 30, 2017
Total Active Participants	338
Total Retiree, Surviving Spouse, and Terminated Vested Participants	275

The active participants' number above may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

Below is a breakdown of total GASB 74/75 liabilities allocated to past and current service. The table below also provides a breakdown of the Total OPEB Liability allocated to pre and post Medicare eligibility. The liability shown below includes explicit (if any) and implicit subsidies. Refer to the Substantive Plan Provisions section for complete information on the Plan Sponsor's GASB subsidies.

Present Value of Future Benefits	As of June 30, 2017			
Active Employees	\$ 35,226,938			
Retired Employees	46,414,015			
Total Present Value of Future Benefits	\$ 81,640,953			

Total OPEB Liability	As	of June 30, 2017
Active Pre-Medicare	\$	11,604,717
Active Post-Medicare		11,286,339
Active Liability	\$	22,891,056
Retiree Pre-Medicare	\$	16,450,877
Retiree Post-Medicare		29,963,138
Retiree Liability	\$	46,414,015
Total OPEB Liability	\$	69,305,071

	As of June 30, 2017
Discount Rate	6.50%

Present Value of Future Benefits (PVFB) is the amount needed as of June 30, 2017, to fully fund the City's retiree health care subsidies for existing and future retirees and their dependents assuming all actuarial assumptions are met.

Total OPEB Liability is the portion of PVFB considered to be accrued or earned as of June 30, 2017. This amount is a required disclosure in the Required Supplementary Information section.

Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability	FY 2016/17
Total OPEB Liability	
Total OPEB liability – beginning of year	\$ 73,334,826
Service cost	1,654,915
Interest	4,681,587
Changes of benefit terms	0
Changes in assumptions	(4,832,943)
Differences between expected and actual experience	(2,870,577)
Benefit payments	(2,662,737)
Net change in total OPEB liability	\$ (4,029,755)
Total OPEB liability – end of year	\$ 69,305,071
Plan Fiduciary Net Position	
Plan fiduciary net position – beginning of year	\$ 24,043,162
Contributions – employer	4,602,728
Contributions – retired members	0
Net investment income	3,073,693
Benefit payments	(2,662,737)
Trust administrative expenses	(3,000)
Net change in plan fiduciary net position	\$ 5,010,684
Plan fiduciary net position – end of year	\$ 29,053,846
Net OPEB Liability – end of year	\$ 40,251,225
Plan fiduciary net position as % of total OPEB liability	41.9%
Covered employee payroll	\$ 19,100,537
Net OPEB liability as % of covered payroll	210.7%

Schedule of Employer Contributions

The Actuarially Determined Contributions (ADC) shown below are based on the Annual Required Contribution (ARC) calculated in the prior GASB 45 actuarial valuations as shown in the Plan Sponsor financial statements.

	FY 2016/17	FY 2015/16	FY 2014/15	FY 2013/14	FY 2012/13
Actuarially Determined Contribution (ADC)	\$ 4,643,687	\$ 5,125,687	\$ 3,809,600	\$ 5,948,442	\$ 6,098,972
Contributions in relation to the ADC ¹	(4,602,728)	(3,567,744)	(5,305,007)	(5,086,180)	(4,019,778)
Contribution deficiency / (excess)	\$ 40,959	\$ 1,557,943	\$ (1,495,407)	\$ 862,262	\$ 2,079,194
Covered employee payroll	\$ 19,100,537	\$ 17,656,880	\$ 17,059,787	\$ 17,521,727	\$ 17,335,618
Contribution as a % of covered employee payroll	24.1%	20.2%	31.1%	29.0%	23.2%
	FY 2011/12	FY 2010/11	FY 2009/10	FY 2008/09	
Actuarially Determined Contribution (ADC)	\$ 7,653,379	\$ 7,690,991	\$ 5,891,919	\$ 6,227,825	
Contributions in relation to the ADC	(5,645,311)	(3,314,046)	(1,672,960)	(6,177,146)	
Contribution deficiency / (excess)	\$ 2,008,068	\$ 4,376,945	\$ 4,218,959	\$ 50,679	
Covered employee payroll	\$ 18,500,000	\$ 18,292,104	\$ 18,797,853	\$ 18,162,177	
Contribution as a % of covered employee payroll	30.5%	18.1%	8.9%	34.0%	

¹ Includes employer contribution for pay-go cost and pre-funding contributions deposited into the OPEB Trust.

OPEB Expense

OPEB Expense	FY 2016/17
Discount rate as of beginning of fiscal year	6.50%
Discount rate as of end of fiscal year	6.50%
Service cost	\$ 1,654,915
Interest	4,681,587
Changes of benefit terms	0
Projected earnings on OPEB plan investments	(1,624,863)
Reduction for contributions from active employees	0
OPEB plan administrative expenses	3,000
Current period recognition of deferred outflows / (inflows) of resources	
Differences between expected and actual experience	\$ (239,215)
Changes in assumptions	(402,745)
Net difference between projected and actual earnings on OPEB plan investments	(289,766)
Total current period recognition	\$ (931,726)
Total OPEB expense	\$ 3,782,913

(402,745) \$

Deferred Outflows / (Inflows) of Resources

Deferred Outflows / (Inflows) of Resources represents the following items that have not been recognized in the OPEB Expense:

- 1. Differences between expected and actual experience of the OPEB plan
- 2. Changes of assumptions

June 30, 2017

3. Difference between projected an actual earnings in OPEB plan investments

The initial amortization period for the first two items noted above is based on the average future service to retirement while the difference between projected and actual earnings in OPEB plan investment is amortized over five years. All balances are amortized linearly on a principal only basis and new bases will be created annually for each of the item above.

Differences between expected and actual experience for FYE	Initial Balance	Initial Amortization Period	Annu	al Recognition	 namortized nce as of June 30, 2017
June 30, 2017	\$ (2,870,577)	12	\$	(239,215)	\$ (2,631,362)
Changes in assumptions for FYE	Initial Balance	Initial Amortization Period	Annu	al Recognition	 namortized nce as of June 30, 2017

\$

Net difference between projected and actual earnings in OPEB plan investments for FYE	Initial Balance	Initial Amortization Period	Annuc	al Recognition	Jnamortized ance as of June 30, 2017
June 30, 2017	\$ (1,448,830)	5	\$	(289,766)	\$ (1,159,064)

(4,832,943)

12

\$

As of fiscal year ending June 30, 2017	year ending June 30, 2017 Deferred			Deferred Inflows		
Differences between expected and actual experience	\$	0	\$	(2,631,362)		
Changes in assumptions		0		(4,430,198)		
Net difference between projected and actual earnings in OPEB plan investments		0		(1,159,064)		
Total	\$	0	\$	(8,220,624)		

(4,430,198)

Deferred Outflows / (Inflows) of Resources - Continued

Annual Amortization of Deferred Outflows / (Inflows)

The balances of June 30, 2017 of the deferred outflows / (inflows) of resources will be recognized in OPEB expense in the future fiscal years as noted below.

FYE	Balance
2018	\$ (931,726)
2019	\$ (931,726)
2020	\$ (931,726)
2021	\$ (931,726)
2022	\$ (641,960)
Thereafter	\$ (3,851,760)

Sensitivity Results

The following presents the net OPEB liability as of June 30, 2017, calculated using the discount rate assumed and what it would be using a 1% higher and 1% lower discount rate.

- The current discount rate is 6.50%.
- The 1% decrease in discount rate would be 5.50%.
- The 1% increase in discount rate would be 7.50%.

As of June 30, 2017	Net O	PEB Liability
1% Decrease	\$	49,834,131
Current Discount Rate	\$	40,251,225
1% Increase	\$	32,446,160

The following presents the net OPEB liability as of June 30, 2017, using the health care trend rates assumed and what it would be using 1% higher and 1% lower health care trend rates.

- The current pre-65 / post-65 health care trend rate starts at an initial rate of 9.0% / 8.0% (pre / post-65) decreasing by 0.5% annually to an ultimate rate of 4.5%.
- The 1% decrease in health care trend rates would assume an initial rate of 8.0% / 7.0% (pre / post-65) decreasing by 0.5% annually to an ultimate rate of 3.5%.
- The 1% increase in health care trend rates would assume an initial rate of 10.0% / 9.0% (pre / post-65) decreasing by 0.5% annually to an ultimate rate of 5.5%.

As of June 30, 2017	Net	OPEB Liability
1% Decrease	\$	32,116,534
Current Health Care Trend Rates	\$	40,251,225
1% Increase	\$	50,279,418

Asset Information

Asset Breakdown	FY 2016/17
Assets	
Cash and cash equivalents	\$ 1,280,064
Securities lending cash collateral	0
Total cash	\$ 1,280,064
Receivables	
Contributions	\$ 0
Accrued interest	0
Total receivables	\$ 0
Investments	
Fixed income	\$ 0
Equities	0
Mutual Funds	28,248,757
Other	0
Total investments	\$ 28,248,757
Total assets	\$ 29,528,821
Liabilities	
Payables	
Accounts Payable	\$ 474,975
Securities lending expense	0
Total liabilities	\$ 474,975
Net position restricted to OPEB	\$ 29,053,846

Asset Reconciliation	FY 2016/17
Additions	
Contributions received	
Employer	\$ 4,602,728
Employee	0
Total contributions	\$ 4,602,728
Investment income	
Net increase in fair value of investments	\$ 2,431,974
Interests and dividends	667,669
Investment expense, other than from securities lending	(25,950)
Securities lending income	
Securities lending expense	
Net investment income	\$ 3,073,693
Total additions	\$ 7,676,421
Deductions	
Benefit payments	\$ (2,662,737)
Administrative expenses	0
Actuary expenses	(3,000)
Total deductions	\$ (2,665,737)
Net increase in net position	\$ 5,010,684
Net position restricted to OPEB	
Beginning of year	24,043,162
End of year	\$ 29,053,846

The Actuarially Determined Contributions calculated below are recommended target contributions and assumes that the Plan Sponsor has the ability to contribute these amounts on an annual basis. The Plan Sponsor has the responsibility to decide how much it should contribute after considering its other needs and the OPEB participants' needs.

	FY 20					3	
Discount rate		6.5%		6.5%		6.5%	6.5%
Actuarial cost method		ntry age normal evel % of Salary		ntry age normal evel % of Salary		intry age normal Level % of Salary	try age normal evel % of Salary
Amortization type		Level Dollar		Level Dollar		Level Dollar	Level Dollar
Amortization period		30 years		30 years		30 years	30 years
Fund		General (110)		Water (412)		Electric (480)	Total
Actuarial accrued liability (AAL) – beginning of year	\$	50,616,558	\$	5,406,880	\$	13,281,633	\$ 69,305,071
Actuarial value of assets – beginning of year		(22,109,789)		(1,760,270)		(5,183,787)	(29,053,846)
Unfunded AAL – beginning of year	\$	28,506,769	\$	3,646,610	\$	8,097,846	\$ 40,251,225
Normal Cost	\$	1,086,489	\$	77,128	\$	58,252	\$ 1,221,869
Amortization of UAAL		2,049,742		262,205		582,265	2,894,212
Total normal cost plus amortization	\$	3,136,231	\$	339,333	\$	640,517	\$ 4,116,081
Interest to the end of year		203,855		22,057		41,633	267,545
Actuarially Determined Contribution – Preliminary	\$	3,340,086	\$	361,390	\$	682,150	\$ 4,383,626
Expected benefit payments		2,233,989		310,811		858,376	3,403,176
Actuarially Determined Contribution – Final ²	\$	3,340,086	\$	361,390	\$	858,376	\$ 4,559,852

Actuarially Determined Contribution (ADC) is the target or recommended contribution to a defined benefit OPEB plan, which if paid on an ongoing basis, will provide sufficient resources to fund future costs for services to be earned and liabilities attributed to past services. This is typically higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.

 $^{^{\}rm 2}\,{\rm Set}$ to be the greater of the preliminary ADC and expected benefit payments.

The Total OPEB Liability (TOL) is expected to change on an annual basis as a result of expected and unexpected events. Under normal circumstances, it is generally expected to have a net increase each year. Below is a list of the most common events affecting the total OPEB liability and whether they increase or decrease the liability.

Expected Events

- Increases in TOL due to additional benefit accruals as employees continue to earn service each year
- Increases in TOL due to interest as the employees and retirees age
- Decreases in TOL due to benefit payments

Unexpected Events

- Increases in TOL when actual premium rates increase more than expected. A liability decrease occurs of the reverse happens.
- Increases in TOL when more new retirements occur than expected or fewer terminations occur than anticipated. Liability decreases occur when the opposite outcomes happen.
- Increases or decreases in TOL depending on whether benefits are improved or reduced.

Projection of Total OPEB Liability (TOL)	FY 2016/17	FY 2017/18
TOL as of beginning of year	\$ 73,334,826	\$ 69,305,071
Normal cost as of beginning of year	1,553,911	1,221,869
Exp. benefit payments during the year ⁴	(2,662,737)	(3,403,176)
Interest adjustment to end of year	4,782,591	4,475,389
Exp. TOL as of end of year	\$ 77,008,591	\$ 71,599,153
Actuarial Loss/(Gain)	(7,703,520)	TBD
Actual TOL as of end of year	\$ 69,305,071	\$ TBD
Discount Rate	6.50%	6.50%

Projection of Actuarial Value of Assets (AVA)	FY 2016/17	FY 2017/18
AVA as of beginning of year	\$ 24,043,162	\$ 29,053,846
Exp. employer contributions during the year ³	4,602,728	4,383,626
Exp. benefit payments during the year ⁴	(2,662,737)	(3,403,176)
Exp. investment income ⁵	1,624,863	1,919,863
Exp. Trust administrative expenses	(3,000)	0
Exp. AVA as of end of year	\$ 27,605,016	\$ 31,954,158
Differences between expected and actual experience	1,448,830	TBD
AVA as of end of year	\$ 29,053,846	\$ TBD

³ Employer contributions are actual for FY 2016/17 and are expected to equal the ADC as calculated on page 11 for FY 2017/18.

⁴ Actual for FY 2016/17

⁵ Fiscal years 2016/17 and 2017/18 expected investment income are calculated based on a 6.5% asset return.

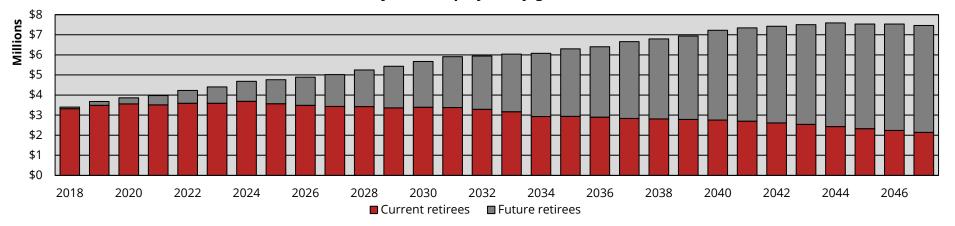
The below projections show the actuarially estimated employer-paid contributions for retiree health benefits for the next thirty years. Results are shown separately for a closed group of current / future retirees. These projections include explicit and implicit subsidies.

FYE	Current Retirees	ı	Future Retirees ⁶	Total
2018	\$ 3,318,066	\$	85,111	\$ 3,403,177
2019	\$ 3,485,887	\$	191,059	\$ 3,676,946
2020	\$ 3,560,984	\$	305,414	\$ 3,866,398
2021	\$ 3,514,665	\$	460,418	\$ 3,975,083
2022	\$ 3,589,181	\$	639,403	\$ 4,228,584
2023	\$ 3,592,978	\$	810,597	\$ 4,403,575
2024	\$ 3,690,818	\$	988,826	\$ 4,679,644
2025	\$ 3,565,619	\$	1,193,206	\$ 4,758,825
2026	\$ 3,488,021	\$	1,404,509	\$ 4,892,530
2027	\$ 3,430,084	\$	1,587,842	\$ 5,017,926

FYE	Current Retirees	ı	Future Retirees ⁸	Total
2028	\$ 3,424,321	\$	1,827,721	\$ 5,252,042
2029	\$ 3,358,738	\$	2,076,876	\$ 5,435,614
2030	\$ 3,391,200	\$	2,283,120	\$ 5,674,320
2031	\$ 3,377,636	\$	2,531,563	\$ 5,909,199
2032	\$ 3,291,124	\$	2,646,743	\$ 5,937,867
2033	\$ 3,169,590	\$	2,867,009	\$ 6,036,599
2034	\$ 2,932,535	\$	3,145,278	\$ 6,077,813
2035	\$ 2,936,413	\$	3,364,826	\$ 6,301,239
2036	\$ 2,897,993	\$	3,504,832	\$ 6,402,825
2037	\$ 2,834,699	\$	3,823,147	\$ 6,657,846

FYE	Current Retirees	ı	Future Retirees ⁸	Total
2038	\$ 2,807,732	\$	3,985,246	\$ 6,792,978
2039	\$ 2,784,185	\$	4,153,641	\$ 6,937,826
2040	\$ 2,753,827	\$	4,466,675	\$ 7,220,502
2041	\$ 2,703,944	\$	4,641,824	\$ 7,345,768
2042	\$ 2,609,786	\$	4,809,554	\$ 7,419,340
2043	\$ 2,543,307	\$	4,957,129	\$ 7,500,436
2044	\$ 2,428,313	\$	5,161,336	\$ 7,589,649
2045	\$ 2,325,984	\$	5,206,652	\$ 7,532,636
2046	\$ 2,236,752	\$	5,293,920	\$ 7,530,672
2047	\$ 2,141,805	\$	5,321,472	\$ 7,463,277

Projected Employer Pay-go Cost



⁶ Projections for future retirees do not take into account future new hires.

Under GASB 74, the discount rate used in valuing OPEB liabilities for funded plans as of the Measurement Date must be based on the long-term expected rate of return on OPEB plan investments that are expected to be used to finance future benefit payments to the extent that (a) they are sufficient to pay for the projected benefit payments and (b) the OPEB plan assets are invested using a strategy that will achieve that return. When the OPEB plan investments are insufficient to cover future benefit payments, a yield for 20-year tax-exempt general obligation municipal bonds with an average rating of AA /Aa or higher (or equivalent quality on another rating scale) must be used.

For the current valuation:

- 1. The long-term expected rate of return on OPEB plan investment is 6.50%.
- 2. The discount rate used when the OPEB plan investments are insufficient to pay for future benefit payments are selected from the range of indices as shown in the table below, where the range is given as the spread between the lowest and highest rate shown.
- 3. The City's funding policy is to make annual contributions to an OPEB trust fund equal to an Actuarially Determined Contribution (ADC) amount. The final equivalent single discount rate used for this year's valuation is 6.50% as of June 30, 2017.

	Bond Buyer Go 20- Bond Municipal Bond Index	S&P Municipal Bond 20-Year High Grade Rate Index	Fidelity 20-Year Go Municipal Bond Index	Bond Index Range
Yield as of July 1, 2016	2.85%	2.71%	2.92%	2.71% - 2.92%
Yield as of June 30, 2017	3.53%	3.13%	3.56%	3.13% - 3.56%

The long-term expected rate of return of 6.5% on OPEB plan investments was confirmed by the City's investment advisor based on the target allocation on the OPEB Trust. The OPEB plan's target asset allocation as of June 30, 2017 are summarized in the following table:

Asset Class	Target Allocation
Cash & Short-Term Bond	8%
Non-traditional Bond	5%
Inflation-Protected Bond	4%
Intermediate Term Bond	5%
Long-Term Bond	5%
High Yield Bond	6%
Large Value	12%
Large Growth	13%
Mid Cap Equity	7%
Small Cap Equity	9%
Foreign Equity	10%
Diversified Emerging Markets	9%
Real Estate	7%
Total	100.00%

Active Employees

Actives with coverage	Single	Non-Single ⁷	Total	Avg. Age	Avg. Svc	Salary
Aetna HMO	3	2	5	44.1	7.2	\$ 268,320
Blue Care HMO	33	12	45	45.3	14.2	\$ 2,526,597
Comp PPO	198	72	270	43.0	11.9	\$ 15,498,164
First State Basic	3		3	36.2	2.4	\$ 137,654
Total actives with coverage	237	86	323	43.3	12.1	\$ 18,430,735

Actives without coverage	Total	Avg. Age	Avg. Svc	Salary
Total actives without coverage	15	40.3	5.4	\$ 669,802

Actives eligible for retiree health benefits who currently have no coverage are assumed not to elect coverage at retirement. They have been excluded from the GASB valuation.

Terminated Vested Participants	Total	Avg. Age
Total terminated vested participants	7	53.5

All terminated vested participants are assumed to elect coverage once they turn age 65. They have been included in the GASB valuation.

 $^{^{\}rm 7}$ Includes 2-Person and Family coverage levels.

Age-Service Distribution

	Years of Service										
Age	< 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total
Under 25	3	8									11
25 to 29	8	22	8	1							39
30 to 34	2	17	13	10							42
35 to 39	1	8	11	16	6						42
40 to 44	5	10	9	15	8	2	1				50
45 to 49	4	6	4	13	14	8	3				52
50 to 54	1	5	1	6	8	11	12	1			45
55 to 59	2	4	2	5	8	6	8	1	3		39
60 to 64			3		3	4	1		1		12
65 to 69		1		1	2						4
70 & up					1		1				2
Total	26	81	51	67	50	31	26	2	4	0	338

Retirees

Retirees with coverage ⁸	Single	Non-Single ⁹	Total	Avg. Age
Aetna HMO	9	2	11	61.3
Comp PPO	91	36	127	58.5
Medicfill post-65 plan	92	38	130	74.0
Total retirees with coverage	192	76	268	66.6

In addition, there were 57 retirees and surviving spouses without health benefits as of the valuation date. They have been excluded in the GASB valuation.

Retiree Age Distribution⁸

Age	Retirees
< 45	1
45 to 49	10
50 to 54	23
55 to 59	41
60 to 64	57
65 to 69	48
70 to 74	37
75 to 79	22
80 to 84	16
85 to 89	12
90 & up	1
Total	268

 ⁸ Includes retirees and surviving spouses.
 ⁹ Includes 2-Person and Family coverage levels.

Eligibility

DOE / IBEW / Non-Union / AFSCME

Civilian employees are eligible for retiree health care benefit once they meet the following requirements:

- a. Age 65 with 10 years of service; or
- b. Earlier of (i) 25 years of service or (ii) age 50 with 20 years of service for employees hired prior to May 1, 1994 (unreduced pension); or
- c. Age 55 with 80 points (sum of age and years of service) for employees hired on/after May 1, 1994 (unreduced pension).

Police Officers

Sworn officers hired prior to September 1, 1982 are eligible for retiree health care benefit after attainment of 20 years of service.

Sworn officers hired on/after September 1, 1982 are eligible for retiree health care benefit once they meet the following requirements:

- a. Age 62 with 10 years of service; or
- b. 10 years of service and 75 points; or
- c. 20 years of service.

Deferred Retiree Health Benefits

For DOE and Non-Union members hired prior to July 1, 1994 completing 10 years of service, coverage commences at age 65. No other members are eligible for deferred benefits.

Spouse Benefit

Spouse coverage continues upon member's death for retirees or active employees eligible to retire. Spousal subsidies at the time of the member's death continue for the life of the spouse.

Medical Benefit

Same pre-65 benefit options are available to retirees as active employees. Medicfill coverage is available to Medicare retirees. The City participates in the state health plan where the premium rates are determined based on the statewide pool experience. Premium rates are self-insured and community-rated. Monthly premium rates by plan effective July 1, 2017 are as shown below.

Health Plans	EE	EE/Sp
First State Basic Plan	\$ 732.84	\$ 1,513.32
Aetna HMO	\$ 764.94	\$ 1,609.82
Blue Care HMO	\$ 765.56	\$ 1,614.90
Comprehensive PPO	\$ 836.26	\$ 1,732.42
Medicfill including Rx	\$ 485.06	\$ 970.12

Retiree Cost Sharing

Retirees are responsible for the portion of premium rates not covered by the City explicit subsidy.

Explicit Subsidy

The City shall pay 100% of the retiree and spousal premiums for those retired prior to July 1, 1991. The City Police

> shall pay 100% of the retiree's monthly premium and 75% of the retiree's dependent coverage for employees who retired on/after July 1, 1991 but before July 1, 2012. For those retiring on/after July 1, 2012 and hired prior to October 9, 2015, the City will pay 85% for both retiree and spousal premiums. For

> employees hired on/after October 9, 2015, the City will pay 80% for the retiree's monthly premium. All Police

hired on/after October 9, 2015 will be responsible for the full cost of spousal coverage at retirement.

DOE The City shall pay 100% of the retiree and spousal premiums for those retired prior to September 1, 1991.

> The City shall pay 100% of the retiree's monthly premium and 75% of the retiree's dependent coverage for employees who retired on/after September 1, 1991 but before June 1, 2013. For those retiring on/after June 1, 2013 and hired prior to December 22, 2015, the City will pay 85% for both retiree and spousal premiums.

> For those hired on or after December 22, 2015, the City will pay 80% for both retiree and spousal premiums.

The City shall pay 100% of the retiree's monthly premium and 75% of the retiree's dependent coverage for **IBEW**

> employees hired prior to July 1, 1986. The City shall pay 100% of the retiree's monthly premium for employees hired on/after July 1, 1986 but before July 1, 2014. For those hired on/after July 1, 2014, the City will pay 80% of the retiree's monthly premium. All IBEW employees hired on/after July 1, 1986 will be

responsible for the full cost of spousal coverage at retirement.

AFSCME The City shall pay 100% of the retiree and 75% of spousal premiums for those retired prior to July 1, 2015.

> The City shall pay 85% of the retiree and spousal monthly premium for employees hired prior to May 20, 2014 and retired on/after July 1, 2015. For those hired on/after May 20, 2014, the City will pay 80% of the retiree's monthly premium. All AFSCME employees hired on/after May 20, 2014 will be responsible for the

full cost of spousal coverage at retirement.

The City shall pay 100% of the retiree and spousal premiums for those retired prior to July 1, 1991. The City

shall pay 100% of the retiree's monthly premium and 75% of the retiree's dependent coverage for employees who retired on/after July 1, 1991 but before July 1, 2012. For those retiring on/after July 1, 2012,

the City will pay 85% for both retiree and spousal premiums.

Grandfathered retirees, non-bargaining active employees hired prior to July 27, 2009, and grandfathered AFSCME employees receiving an explicit subsidy are reimbursed for the cost of the monthly Medicare Part B

premium. Dependents are not eligible for this subsidy. The Medicare Part B monthly premium for 2017 was

\$134.

The actuarial assumptions used in this report represent a reasonable long-term expectation of future OPEB outcomes. As national economic and City experience change over time, the assumptions will be tested for ongoing reasonableness and, if necessary, updated.

There are changes to the actuarial methods and assumptions since the last GASB valuation, which was for the fiscal year ending June 30, 2015. Refer to Actuary's Notes section in Appendix B for complete information on these changes. For the current year GASB valuation, we have also updated the per capita costs. We expect to update health care trend rates, per capita costs, and review the discount rate again in the next full GASB valuation, which will be for the fiscal year ending June 30, 2019.

Measurement Date For the fiscal year ending June 30, 2017, a June 30, 2017 measurement date was used.

Actuarial Valuation Date June 30, 2017 with no adjustments to get to the June 30, 2017 measurement date. Liabilities as of July 1,

2016 are based on an actuarial valuation date of July 1, 2014 actuarially rolled forward to July 1, 2016 on a

"no gain/loss" basis.

Discount Rate 6.50% for accounting disclosures as of July 1, 2016

6.50% for accounting disclosures as of June 30, 2017

Refer to the Discussion of Discount Rates section for more information on selection of the discount rate.

Payroll GrowthGeneral wage inflation (2.5%) plus merit / productivity increases are as shown below, which are based on the Delaware State Employees' Pension valuation as of June 30, 2016.

 YOS
 Rates

 0
 11.50%

 5
 5.15%

 10
 3.80%

 15
 3.10%

 20
 2.60%

 21+
 2.50%

Inflation Rate 2.5% per year included in payroll growth

Census DataCensus information was provided by the City in June 2017. We have reviewed it for reasonableness and no

material modifications were made to the census data.

Experience Study

Best actuarial practices call for a periodic assumption review and Nyhart recommends the City to complete an actuarial assumption review (also referred to as an experience study). The actuarial assumptions have not been updated since at least the 2008 valuation.

Cost Method

Allocation of Actuarial Present Value of Future Benefits for services prior and after the Measurement Date was determined using Entry Age Normal Level % of Salary method where:

- service Cost for each individual participant, payable from date of employment to date of retirement, is sufficient to pay for the participant's benefit at retirement; and
- annual Service Cost is a constant percentage of the participant's salary that is assumed to increase according to the Payroll Growth.

Health Care Coverage Election Rate

Active employees with current coverage: 80%

Active employees with no coverage: 0%

Inactive employees with current coverage: 100%

Inactive employees with no coverage: 0%

100% of active AFSCME and Non-Union employees with current coverage eligible for Part B reimbursement are expected to elect this benefit at retirement.

Spousal Coverage

Spousal coverage and age for current retirees are based on actual data.

40% of male and 25% of female active employees are assumed to be married. Husbands are assumed to be three years older than wives.

Employer Funding Policy

The City's funding policy is to make annual contributions to an OPEB trust fund equal to an Actuarially Determined Contribution (ADC) amount. The Trust ADC is determined each year as the sum of (a) the actuarial normal cost for benefits accruing during the year, (b) an amortization component of the unfunded actuarial liability amortized over a declining number of years (but not less than five years) and (c) an interest adjustment to reflect quarterly contributions. The amortization amount is based on a principal and interest technique and expected to increase by a 3.5% payroll growth assumption.

Mortality

RPH-2016 Total Dataset Mortality Table fully generational using Scale MP-2016 (RPH-2016 table is created based on RPH-2014 Total Dataset Mortality Table with 8 years of MP-2014 mortality improvement backed out, projected to 2016 using MP-2016 improvement.)

Disability

None

Retirement Rate

Annual rates of retirement by group are as shown below:

	Police		
Age	Hired Prior to 5/1/1994	Hired On/After 5/1/1994	All
< 40	0%	0%	10%
41 – 45	0%	0%	20%
46 - 49	0%	0%	10%
50 – 51	4%	0%	10%
52 - 54	8%	0%	10%
55 – 57	8%	6%	100%
58	10%	6%	100%
59	15%	6%	100%
60	20%	10%	100%
61	25%	10%	100%
62	25%	20%	100%
63 - 64	25%	15%	100%
65	25%	50%	100%
66	50%	50%	100%
67 – 69	100%	50%	100%
70+	100%	100%	100%

Police members attaining 75 points prior to age 60 with 20 years of service are assumed to retire at a rate of 50% per year. Police members attaining age 46-54 with 20 years of service are assumed to retire at a rate of 20%.

Turnover Rate

DOE, IBEW, Police

Non-Union/AFSCME

Health Care Trend Rates

Assumption used to project terminations (voluntary and involuntary) prior to meeting minimum retirement eligibility for retiree health coverage. The rates represent the probability of termination in the next 12 months. Sample annual turnover rates are shown below:

Age	DOE/IBEW	Police
25	10.0%	2.2%
30	9.4%	1.7%
35	8.2%	1.1%
40	6.7%	0.5%
45	5.2%	0.1%
50	3.3%	0.0%
55	1.2%	0.7%

Age	0 - 2 YOS	3 - 4 YOS	5+ YOS
25	30.0%	27.0%	25.5%
30	30.0%	27.0%	23.4%
35	30.0%	27.0%	20.3%
40	30.0%	27.0%	16.6%
45	30.0%	27.0%	12.5%
50	30.0%	27.0%	7.5%
55	30.0%	27.0%	2.6%

FYE	Pre-65	Post-65	Part B
2018	9.0%	8.0%	4.5%
2019	8.5%	7.5%	4.5%
2020	8.0%	7.0%	4.5%
2021	7.5%	6.5%	4.5%
2022	7.0%	6.0%	4.5%
2023	6.5%	5.5%	4.5%
2024	6.0%	5.0%	4.5%
2025	5.5%	4.5%	4.5%
2026	5.0%	4.5%	4.5%
2027+	4.5%	4.5%	4.5%

The initial trend rate was based on a combination of employer history, national trend surveys, and professional judgment.

The ultimate trend rate was selected based on historical medical CPI information.

Retiree Contributions

Per Capita Costs

Retiree contributions are assumed to increase according to health care trend rates.

Annual per capita costs were calculated based on the weighted average of the July 1, 2017 premium rates actuarially increased using health index factors and substitute enrollment that is assumed to represent GIC members' demographic make-up. The costs are assumed to increase with health care trend rates. Annual per capita costs by plan are as shown below:

Age HI		HMO Plans	PPO Plans
	<55	\$ 9,900	\$ 10,800
	55 - 59	\$ 12,300	\$ 13,400
	60 - 64	\$ 15,900	\$ 17,300

The per capita costs represent the cost of coverage for a retiree-only population.

Actuarial standards require the recognition of higher inherent costs for a retired population versus an active population.

Explicit Subsidy

Post-65 per capita costs are equal to the Medicfill (including Rx) premium rates.

The difference between (a) the premium rate and (b) the retiree contribution. Below is an example of the monthly explicit subsidies for a pre-65 Police Officer who is enrolled in the Comprehensive PPO plan who retired on/after July 1, 2012 and was hired prior to October 9, 2015.

	Premium Rate		
	Α	B = A * 15%	C = A - B
Retiree	\$ 836.26	\$ 125.44	\$ 710.82
Spouse	\$ 896.16	\$ 134.42	\$ 761.74

Implicit Subsidy

The difference between (a) the per capita cost and (b) the premium rate. Below is an example of the monthly implicit subsidies for a Police Officer age 64 who is enrolled in the Comprehensive PPO plan who retired on/after July 1, 2012 and was hired prior to October 9, 2015.

	Per Capita	Premium	Implicit
	Cost	Rate	Subsidy
	Α	В	C = A - B
Retiree	\$ 1,441.67	\$ 836.26	\$ 605.41
Spouse	\$ 1,441.67	\$ 896.16	\$ 545.51

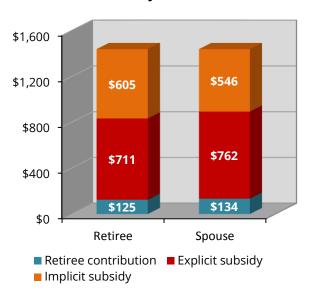
All employers that utilize premium rates based on blended active/retiree claims experience will have an implicit subsidy. There is an exception for Medicare plans using a true community-rated premium rate.

GASB Subsidy Breakdown

Below is a breakdown of the GASB 74/75 monthly total cost for a Police Officer age 64 who is enrolled in the Comprehensive PPO plan who retired on/after July 1, 2012 and was hired prior to October 9, 2015.

	Retiree	Spouse		
Retiree contribution	\$ 125.44	\$	134.42	
Explicit subsidy	\$ 710.82	\$	761.74	
Implicit subsidy	\$ 605.41	\$	545.51	
Total monthly cost	\$ 1,441.67	\$	1,441.67	

GASB Subsidy Breakdown



APPENDIX

Appendix A - Comparison of Participant Demographic Information

The active participants' number below may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

	As of July 1, 2014	As of June 30, 2017
Active Participants	326	338
Retired Participants ¹⁰	274	275
Averages for Active		
Age	43.5	43.2
Service	12.0	11.8
Average Age for Inactive		
Retired Participants	65.3	65.8

 $^{^{\}rm 10}$ Includes retired participants, surviving spouses, and deferred vested participants with health coverage.

Appendix B - Detailed Actuary's Notes

There have been no substantive plan provision changes since the last interim valuation, which was for the fiscal year ending June 30, 2016.

The City will disclose OPEB liabilities under GASB 74/75 for the current valuation. The prior valuation was disclosed under GASB 45. In accordance with GASB 74/75, the actuarial cost method has been updated from Projected Unit Credit linear proration to decrement to Entry Age Normal Level % of Salary.

Additionally, the following assumptions have also been updated:

- 1. Mortality table has been updated from the (a) RP-2000 fully generational Employees Mortality Table for general employees and RP-2000 fully generational Combined Mortality Table for police officers to (b) SOA RPH-2016 Total Dataset Mortality Table fully generational using Scale MP-2016 for all employees. The impact of this change is a slight increase in liabilities.
- 2. Payroll growth rates have been updated to reflect the most recent tables from the Delaware State Employees' Pension valuation as of June 30, 2016. The impact of these changes was a slight decrease in liabilities.
- 3. Pre-65 Medical / Rx trend rates have been reset to an initial rate of 9.0% decreasing by 0.5% annually to an ultimate rate of 4.5%. Post-65 Medical / Rx trend rates have been reset to an initial rate of 8.0% decreasing by 0.5% annually to an ultimate rate of 4.5%. This change caused a slight increase in liabilities.
- 4. The healthcare coverage election rate for active employees with current coverage was decreased from 100% to 80% based on City experience. This change caused a decrease in liabilities.

Appendix C - Results by Group

As of June 30, 2017	Total C	OPEB Liability Plan Fiduciary Net Position			on Net OPEB Liability		
General Fund (110)	\$	50,616,558	\$	(22,109,789)	\$	28,506,769	
Water Fund (412)		5,406,880		(1,760,270)		3,646,610	
Electric Fund (480)		13,281,633		(5,183,787)		8,097,846	
Total	\$	69,305,071	\$	(29,053,846)	\$	40,251,225	

As of June 30, 2017	Unamortized Balance of Deferred Inflows		tized Balance of red Outflows	OPEB Expense		
General Fund (110)	\$ (8,452,689)	\$	0	\$	2,919,001	
Water Fund (412)	(250,064)		1,005,965		315,476	
Electric Fund (480)	(523,836)		0		548,436	
Total	\$ (9,226,589)	\$	1,005,965	\$	3,782,913	

Appendix C - Results by Group (Continued)

OPEB Trust Funding FY 2017/18	Total	General Fund (110)	Water Fund (412)	Electric Fund (480)
(A) Recommended Covered Payroll	\$ 19,100,537	\$ 14,939,651	\$ 1,426,100	\$ 2,734,786
(B) Trust Funding as a % of Covered Payroll	11.2%	13.7%	2.2%	2.0% ¹¹
(C) Net Trust Funding (A) x (B)	\$ 2,132,802	\$ 2,046,732	\$ 31,374	\$ 54,696
(D) Estimated Claims Payments	3,403,176	2,233,989	310,811	858,376
(E) Total Estimated OPEB Funding (C) + (D)	\$ 5,535,978	\$ 4,280,721	\$ 342,185	\$ 913,072

OPEB Trust Funding FY 2018/19	Total	General Fund (110)	Water Fund (412)	Electric Fund (480)
(A) Recommended Covered Payroll	\$ 19,578,050	\$ 15,313,142	\$ 1,461,753	\$ 2,803,156
(B) Trust Funding as a % of Covered Payroll	11.2%	13.7%	2.2%	2.0%11
(C) Net Trust Funding (A) x (B)	\$ 2,186,122	\$ 2,097,900	\$ 32,159	\$ 56,063
(D) Estimated Claims Payments	3,676,946	2,453,144	323,391	900,411
(E) Total Estimated OPEB Funding (C) + (D)	\$ 5,863,068	\$ 4,551,044	\$ 355,550	\$ 956,474

¹¹ Set at 2.0% for conservatism.

Appendix D - Summary of Medical Benefits

A brief summary of health plans offered by the City effective on July 1, 2017 is as shown below. The out-of-pocket maximum includes the deductible, coinsurance, and copayments.

CITY Pre-65 Plans (In-Network)	First State Basic Plan	Aetna HMO Plan	Comprehensive PPO Plan
Deductible (Individual / Family)	\$500 / \$1,000	\$0 / \$0	\$0 / \$0
Coinsurance	90%	100%	100%
Out-of-Pocket Maximum (Individual / Family)	\$2,000 / \$4,000	\$4,500 / \$9,000	\$4,500 / \$9,000
Co-pay / co-insurances for:			
Office Visit PCP Office Visit SCP Emergency Room Urgent Care	Ded/coins Ded/coins Ded/coins \$25	\$15 \$25 \$150 \$25	\$20 \$30 \$150 \$20
Prescription drugs			
Retail (Generic / Pref / Non-Pref) Mail Order (Generic/ Pref / Non-Pref)	N/A N/A	\$8 / \$28 / \$50 \$16 / \$56 / \$100	N/A N/A

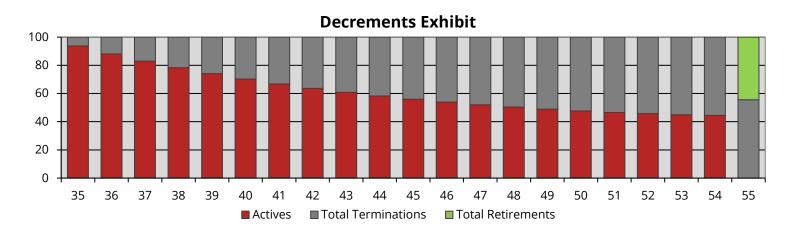
GLOSSARY

Decrements Exhibit

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. Starting with 100 employees at age 35, the illustrated actuarial assumptions show that 44.430 employees out of the original 100 are expected to retire and could elect retiree health benefits at age 55.

Age	# Remaining Employees	# of Terminations per Year*	# of Retirements per Year*	Total Decrements
35	100.000	6.276	0.000	6.276
36	93.724	5.677	0.000	5.677
37	88.047	5.136	0.000	5.136
38	82.911	4.648	0.000	4.648
39	78.262	4.209	0.000	4.209
40	74.053	3.814	0.000	3.814
41	70.239	3.456	0.000	3.456
42	66.783	3.131	0.000	3.131
43	63.652	2.835	0.000	2.835
44	60.817	2.564	0.000	2.564
45	58.253	2.316	0.000	2.316

Age	# Remaining Employees	# of Terminations per Year*	# of Retirements per Year*	Total Decrements
46	55.938	2.085	0.000	2.085
47	53.853	1.866	0.000	1.866
48	51.987	1.656	0.000	1.656
49	50.331	1.452	0.000	1.452
50	48.880	1.253	0.000	1.253
51	47.627	1.060	0.000	1.060
52	46.567	0.877	0.000	0.877
53	45.690	0.707	0.000	0.707
54	44.983	0.553	0.000	0.553
55	44.430	0.000	44.430	44.430

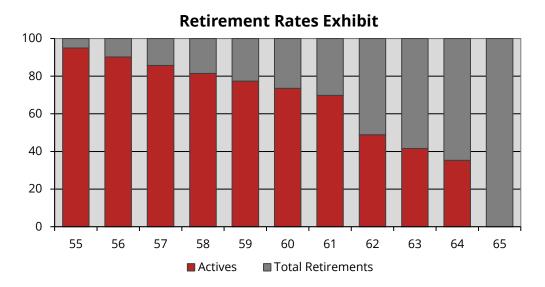


^{*} The above rates are illustrative rates and are not used in our GASB calculations.

Retirement Rates Exhibit

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. The illustrated retirement rates show the number of employees who are assumed to retire annually based on 100 employees age 55 who are eligible for retiree health care coverage. The average age at retirement is 62.0.

Age	Active Employees BOY	Annual Retirement Rates*	# Retirements per Year	Active Employees EOY
55	100.000	5.0%	5.000	95.000
56	95.000	5.0%	4.750	90.250
57	90.250	5.0%	4.513	85.738
58	85.738	5.0%	4.287	81.451
59	81.451	5.0%	4.073	77.378
60	77.378	5.0%	3.869	73.509
61	73.509	5.0%	3.675	69.834
62	69.834	30.0%	20.950	48.884
63	48.884	15.0%	7.333	41.551
64	41.551	15.0%	6.233	35.318
65	35.318	100.0%	35.318	0.000



^{*} The above rates are illustrative rates and are not used in our GASB calculations.

Definitions

GASB 74/75 defines several unique terms not commonly employed in the funding of pension and retiree health plans. The definitions of the terms used in the GASB actuarial valuations are noted below.

- 1. **Actuarial Assumptions** Assumptions as to the occurrence of future events affecting health care costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided health care benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.
- 2. **Actuarial Cost Method** A procedure for determining the Actuarial Present Value of Future Benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Service Cost and a Total OPEB Liability.
- 3. **Actuarially Determined Contribution** A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in accordance with the parameters and in conformity with Actuarial Standards of Practice.
- 4. **Actuarial Present Value** The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:
 - a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, Social Security, marital status, etc.);
 - b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned; and
 - c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.
- 5. **Deferred Outflow / (Inflow) of Resources** represents the following items that have not been recognized in the OPEB Expense:
 - a. Differences between expected and actual experience of the OPEB plan
 - b. Changes in assumptions
 - c. Differences between projected and actual earnings in OPEB plan investments (for funded plans only)
- 6. **Explicit Subsidy** The difference between (a) the amounts required to be contributed by the retirees based on the premium rates and (b) actual cash contribution made by the employer.
- 7. **Funded Ratio** The actuarial value of assets expressed as a percentage of the Total OPEB Liability.

Definitions - Continued

- 8. **Healthcare Cost Trend Rate** The rate of change in the per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.
- 9. **Implicit Subsidy** In an experience-rated healthcare plan that includes both active employees and retirees with blended premium rates for all plan members, the difference between (a) the age-adjusted premiums approximating claim costs for retirees in the group (which, because of the effect of age on claim costs, generally will be higher than the blended premium rates for all group members) and (b) the amounts required to be contributed by the retirees.
- 10. **OPEB** Benefits (such as death benefits, life insurance, disability, and long-term care) that are paid in the period after employment and that are provided separately from a pension plan, as well as healthcare benefits paid in the period after employment, regardless of the manner in which they are provided. OPEB does not include termination benefits or termination payments for sick leave.
- 11. **OPEB Expense** Changes in the Net OPEB Liability in the current reporting period, which includes Service Cost, interest cost, changes of benefit terms, expected earnings on OPEB Plan investments, reduction of active employees' contributions, OPEB plan administrative expenses, and current period recognition of Deferred Outflows / (Inflows) of Resources.
- 12. **Pay-as-you-go** A method of financing a benefit plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.
- 13. **Per Capita Costs** The current cost of providing postretirement health care benefits for one year at each age from the youngest age to the oldest age at which plan participants are expected to receive benefits under the plan.
- 14. **Present Value of Future Benefits** Total projected benefits include all benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members) as a result of their service through the valuation date and their expected future service. The actuarial present value of total projected benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. Expressed another way, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay total projected benefits when due.
- 15. **Real Rate of Return** the rate of return on an investment after adjustment to eliminate inflation.

Definitions – Continued

- 16. **Select and Ultimate Rates** Actuarial assumptions that contemplate different rates for successive years. Instead of a single assumed rate with respect to, for example, the investment return assumption, the actuary may apply different rates for the early years of a projection and a single rate for all subsequent years. For example, if an actuary applies an assumed investment return of 8% for year 20W0, then 7.5% for 20W1, and 7% for 20W2 and thereafter, then 8% and 7.5% select rates, and 7% is the ultimate rate.
- 17. **Service Cost** The portion of the Actuarial Present Value of projected benefit payments that are attributed to a valuation year by the Actuarial Cost Method.
- 18. **Substantive Plan** The terms of an OPEB plan as understood by the employer(s) and plan members.
- 19. **Total OPEB Liability** That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Benefits which is attributed to past periods of employee service (or not provided for by the future Service Costs).