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City of East Providence

GASB 45 Actuarial Valuation

Fiscal Year Ending October 31, 2013

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April 29, 2014

Malcolm Moore
City of East Providence
145 Taunton Avenue
East Providence, RI 02914

This report summarizes the GASB actuarial valuation for the City of East Providence 2012/13 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. 45 (Accounting and Financial Reporting by Employers for Post-Employment Benefits Other Than Pensions). The valuation is also based upon our understanding of the plan provisions as summarized within the report.

The information presented herein is based on the information furnished to us by the Plan Sponsor that has been reconciled and reviewed for reasonableness. We are not aware of any material inadequacy in employee census provided by the Plan Sponsor. We 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.

The actuarial assumptions were 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 computations have been made in accordance with generally accepted actuarial principles and practice.

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.

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

Randy Gomez, FSA, MAAA
Consulting Actuary

Evi Laksana, ASA, MAAA
Valuation Actuary

There have been changes to the plan provisions since the last full valuation, which was for the fiscal year ending October 31, 2011.

1. Retiree health eligibility requirements have changed due to the enactment RIRSA in 2011. For many employees, this change has delayed the earliest date an employee could retire. Refer to Substantive Plan Provisions section for the complete retiree health benefits eligibility requirements. This change reduced the City's liabilities.

2. Effective on November 1, 2012:
   a. All General employees are eligible for subsidized retiree health benefits for 1 year after retirement under the same contribution requirement as active employees. At the end of the 1-year period, retirees are offered COBRA coverage and once the COBRA coverage ends, retirees are no longer allowed to participate in the City's group health plan.
   b. EPPMTEA employees with 25 years of service as of November 1, 2012 will receive free family coverage at retirement until Medicare eligibility.
   c. 15509 and 15509A employees who retire with 30 years of service on/before October 31, 2017 will receive free family coverage until Medicare eligibility.

   Active employees are currently required to contribute the following percentage of premium based on base pay:
   - 10% of premium if base pay is less than $30,000
   - 15% of premium if base pay is less than $46,000 but more than $30,000
   - 20% of premium if base pay is less than $95,000 but more than $46,000
   - 25% of premium if base pay is more than $95,000

   This change reduced the City's liabilities.

Several actuarial assumptions have been updated since the last valuation:

1. Retirement rates have been updated to be consistent with the most recent assumption used in the Rhode Island Municipal Employees Retirement System (RI MERS) actuarial valuation as of June 30, 2012. This change increased the City's liabilities.

2. Medical trend rates have been reset to the prior valuation's levels. This caused an increase in the City's liabilities.

3. Health care coverage election rate for General employees have been reduced from 100% to 50%. This change decreased the City's liabilities.

Summary of Results

Presented below is the summary of GASB 45 results for the fiscal year ending October 31, 2013 compared to the prior fiscal years as shown in the City's Notes to Financial Statement.

		As of November 1, 2011[1]		As of November 1, 2012
Actuarial Accrued Liability	$	76,217,756	$	66,851,556
Actuarial Value of Assets	$	0	$	0
Unfunded Actuarial Accrued Liability	$	76,217,756	$	66,851,556
Funded Ratio		0.0%		0.0%

		FY 2011/12		FY 2012/13
Annual Required Contribution	$	5,547,669	$	4,330,882
Annual OPEB Cost	$	5,607,357	$	4,407,377
Annual Employer Contribution	$	3,728,228	$	3,424,015

		As of October 31, 2012		As of October 31, 2013
Net OPEB Obligation	$	8,553,228	$	9,536,590

	As of October 31, 2013
Total Active Participants	360
Total Retiree Participants	214

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.

[1] Interim report was not prepared for FY 2011/12. Results for FY 2011/12 are as shown in the FYE October 31, 2011 GASB 45 actuarial report.

Below is a breakdown of total GASB 45 liabilities allocated to past, current, and future service as of October 1, 2012 compared to the prior year.

	As of November 1, 2011[2]		As of November 1, 2012	
Present Value of Future Benefits	**$**	**94,480,377**	**$**	**78,748,303**
Active Employees		62,310,178		48,737,901
Retired Employees		32,170,199		30,010,402
Actuarial Accrued Liability	**$**	**76,217,756**	**$**	**66,851,556**
Active Employees		44,047,557		36,841,154
Retired Employees		32,170,199		30,010,402
Normal Cost	**$**	**2,678,961**	**$**	**1,837,743**
Future Normal Cost	**$**	**15,583,660**	**$**	**10,059,004**

Present Value of Future Benefits is the amount needed as of November 1, 2012 to fully fund the City's retiree health care subsidies for existing and future retirees and their dependents assuming all actuarial assumptions are met.

Actuarial Accrued Liability is the portion of PVFB considered to be accrued or earned as of November 1, 2012. This amount is a required disclosure in the Required Supplementary Information section.

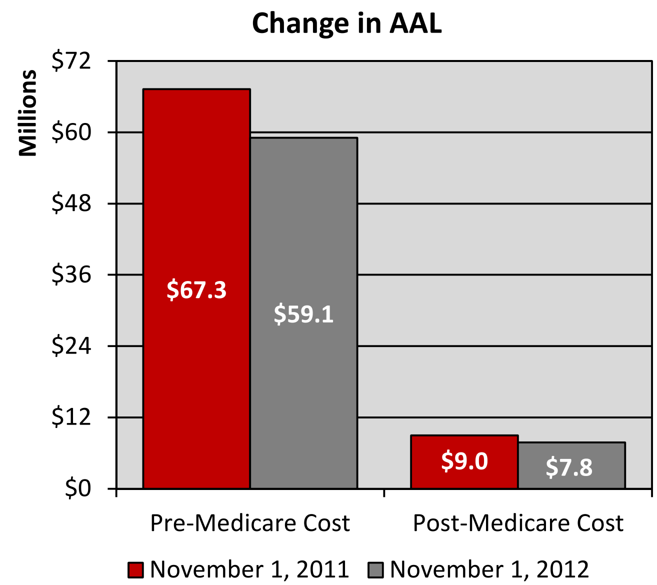
Normal Cost is the portion of the total liability amount that is attributed and accrued for current year's active employee service by the actuarial cost method.

Future Normal Cost is the portion of the total liability amount that is attributed to the future employee service by the current year's valuation by the actuarial cost method.

[2] Interim report was not prepared for FY 2011/12. Results for FY 2011/12 are as shown in the FYE October 31, 2011 GASB 45 actuarial report.

Below is a breakdown of total GASB 45 Actuarial Accrued Liability (AAL) 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.

Actuarial Accrued Liability (AAL)	*As of November 1, 2011*[3]	*As of November 1, 2012*
Active Pre-Medicare	$ 40,147,323	$ 34,168,529
Active Post-Medicare	3,900,234	2,672,625
Total Active AAL	$ 44,047,557	$ 36,841,154
Retirees Pre-Medicare	$ 27,112,144	$ 24,888,566
Retirees Post-Medicare	5,058,055	5,121,836
Total Retirees AAL	$ 32,170,199	$ 30,010,402
Total AAL	**$ 76,217,756**	**$ 66,851,556**



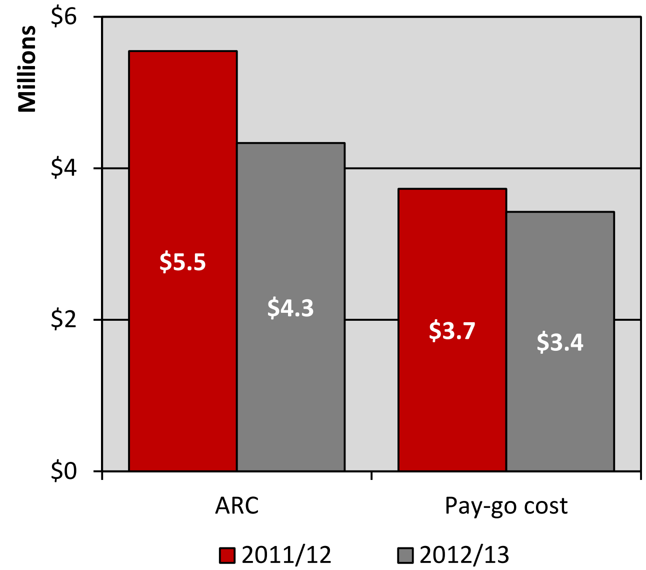
[3] Interim report was not prepared for FY 2011/12. Results for FY 2011/12 are as shown in the FYE October 31, 2011 GASB 45 actuarial report.

Development of Annual Required Contribution (ARC)

Required Supplementary Information		FY 2011/12[4]		FY 2012/13
Actuarial Accrued Liability as of beginning of year	$	76,217,756	$	66,851,556
Actuarial Value of Assets as of beginning of year		0		0
Unfunded Actuarial Accrued Liability (UAAL)	**$**	**76,217,756**	**$**	**66,851,556**
Covered payroll	$	22,886,101	$	20,204,098
UAAL as a % of covered payroll		333.0%		330.9%

Annual Required Contribution		FY 2011/12		FY 2012/13
Normal cost as of beginning of year	$	2,678,961	$	1,837,743
Amortization of the UAAL		2,629,813		2,306,642
Total normal cost and amortization payment	$	5,308,774	$	4,144,385
Interest to end of year		238,895		186,497
Total Annual Required Contribution (ARC)	**$**	**5,547,669**	**$**	**4,330,882**

Cash vs Accrual Accounting



Annual Required Contribution (ARC) is the annual expense recorded in the income statement under GASB 45 accrual accounting. It replaces the cash basis method of accounting recognition with an accrual method. The GASB 45 ARC is higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.

[4] Interim report was not prepared for FY 2011/12. Results for FY 2011/12 is as shown in the FYE October 31, 2011 GASB 45 actuarial report.

Development of Annual OPEB Cost and Net OPEB Obligation

Annual employer contribution for pay-go costs are estimated for 2011/12 and 2012/13.

Net OPEB Obligation		FY 2011/12		FY 2012/13
ARC as of end of year	$	5,547,669	$	4,330,882
Interest on Net OPEB Obligation (NOO) to end of year		300,334		384,895
NOO amortization adjustment to the ARC		(240,646)		(308,400)
Annual OPEB cost	$	5,607,357	$	4,407,377
Annual employer contribution for pay-go cost		(3,728,228)		(3,424,015)
Annual employer contribution for pre-funding		0		0
Change in NOO	$	1,879,129	$	983,362
NOO as of beginning of year		6,674,099		8,553,228
NOO as of end of year	**$**	**8,553,228**	**$**	**9,536,590**

Pay-as-you-go Cost is the expected total employer cash cost for the coming period based on all explicit and implicit subsidies. It is also the amount recognized as expense on the Income Statement under pay-as-you-go accounting.

Net OPEB Obligation is the cumulative difference between the annual OPEB cost and employer contributions. This obligation will be created if cash contributions are less than the current year expense under GASB 45 accrual rules.

The net obligation is recorded as a liability on the employer's balance sheet which will reduce the net fund balance.

The value of implicit subsidies is considered as part of cash contributions for the current period. Other cash expenditures that meet certain conditions are also considered as contributions for GASB 45 purposes.

Summary of GASB 45 Financial Results

Presented below is the summary of GASB 45 results for the fiscal year ending October 31, 2013 and prior fiscal years as shown in the City's Notes to Financial Statements.

Schedule of Funding Progress

As of	*Actuarial Accrued Liability (AAL)*	*Actuarial Value of Assets (AVA)*	*Unfunded Actuarial Accrued Liability (UAAL)*	*Funded Ratio*	*Covered Payroll*	*UAAL as % of Covered Payroll*
	A	*B*	*C = A - B*	*D = B / A*	*E*	*F = C / E*
November 1, 2012	$ 66,851,556	$ -	$ 66,851,556	0.0%	$ 20,204,098	330.9%
November 1, 2011	$ 76,217,756	$ -	$ 76,217,756	0.0%	$ 22,886,101	333.0%
November 1, 2010	$ 76,217,756	$ -	$ 76,217,756	0.0%	$ 22,886,101	333.0%

Schedule of Employer Contributions

FYE	*Employer Contributions*	*Annual Required Contribution (ARC)*	*% of ARC Contributed*
	A	*B*	*C = A / B*
October 31, 2013	$ 3,424,015	$ 4,330,882	79.1%
October 31, 2012	$ 3,728,228	$ 5,547,669	67.2%
October 31, 2011	$ 3,728,228	$ 5,547,669	67.2%

Historical Annual OPEB Cost

As of	*Annual OPEB Cost*	*% of Annual OPEB Cost Contributed*	*Net OPEB Obligation*
October 31, 2013	$ 4,407,377	77.7%	$ 9,536,590
October 31, 2012	$ 5,607,357	66.5%	$ 8,553,228
October 31, 2011	$ 5,590,701	66.7%	$ 6,674,099

The Actuarial Accrued Liability (AAL) 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 AAL and whether they increase or decrease the liability.

Expected Events

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

Unexpected Events

- Increases in AAL when actual premium rates increase more than expected. A liability decrease occurs when premium rates increase less than expected.
- Increases in AAL 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 AAL depending on whether benefit provisions are improved or reduced.

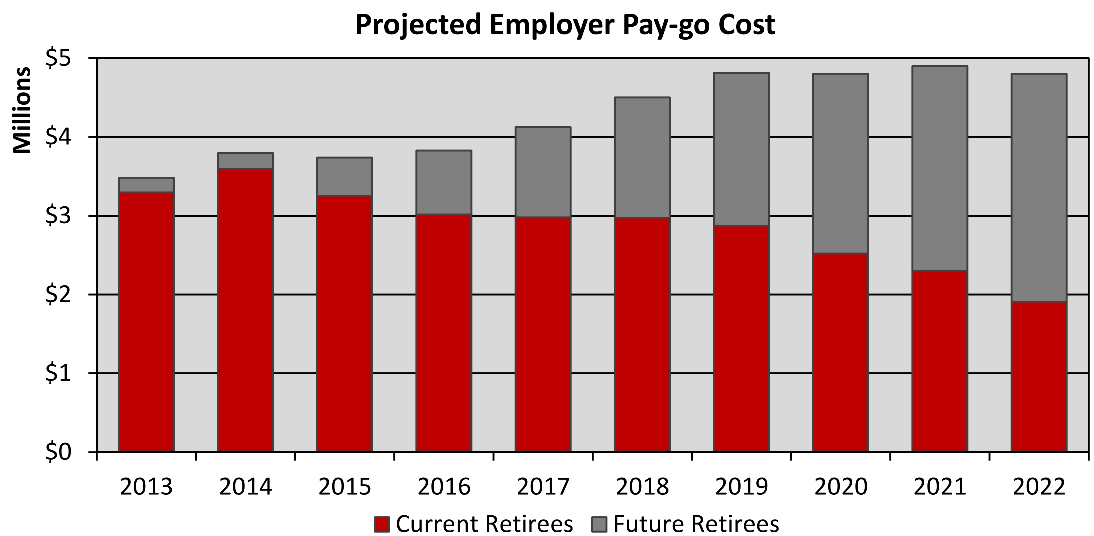
		2012/13[5]
Actuarial Accrued Liability as of beginning of year	$	66,851,556
Normal cost as of beginning of year		1,837,743
Expected benefit payments during the year		(3,424,015)
Interest adjustment to end of year		3,014,826
Expected Actuarial Accrued Liability as of end of year	$	68,280,110
Actuarial (gain) / loss due to experience		0
Actuarial (gain) / loss due to provisions / assumptions changes		0
Actual Actuarial Accrued Liability as of end of year	$	68,280,110

Reconciliation of AAL shows what the actuary expects the actuarial accrued liability to be at the beginning of the following fiscal year based on current assumptions and plan provisions. The expected end of year AAL will change as actual plan experience varies from assumptions. Generally, the AAL is expected to have a net increate each year.

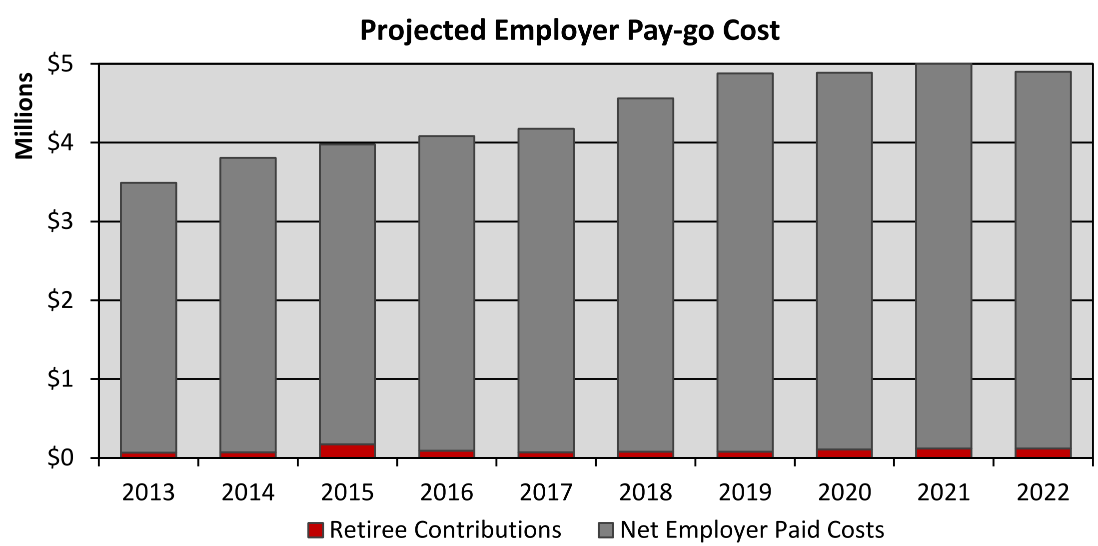
[5] Actuarial Accrued Liability (AAL) as of beginning of year was actuarially rolled-back from end of year AAL on a “no gain/loss” basis.

The below projections show the actuarially estimated employer-paid contributions for retiree health benefits for the next ten years. Results are shown separately for current /future retirees and gross claim costs/retiree contributions. These projections include explicit and implicit subsidies.

FYE	Current Retirees	Future Retirees[6]	Total
2013	$ 3,235,353	$ 188,662	$ 3,424,015
2014	$ 3,526,534	$ 205,642	$ 3,732,176
2015	$ 3,313,735	$ 488,064	$ 3,801,799
2016	$ 3,176,425	$ 813,093	$ 3,989,518
2017	$ 2,959,777	$ 1,144,424	$ 4,104,201
2018	$ 2,950,539	$ 1,529,018	$ 4,479,557
2019	$ 2,851,052	$ 1,943,896	$ 4,794,948
2020	$ 2,500,063	$ 2,278,078	$ 4,778,141
2021	$ 2,278,781	$ 2,599,089	$ 4,877,870
2022	$ 1,882,813	$ 2,896,557	$ 4,779,370



FYE	Estimated Claims Costs	Retiree Contributions	Net Employer-Paid Costs
2013	$ 3,491,087	$ 67,072	$ 3,424,015
2014	$ 3,805,285	$ 73,109	$ 3,732,176
2015	$ 3,977,880	$ 176,081	$ 3,801,799
2016	$ 4,082,178	$ 92,660	$ 3,989,518
2017	$ 4,176,799	$ 72,598	$ 4,104,201
2018	$ 4,560,603	$ 81,046	$ 4,479,557
2019	$ 4,877,230	$ 82,282	$ 4,794,948
2020	$ 4,886,573	$ 108,432	$ 4,778,141
2021	$ 4,999,226	$ 121,356	$ 4,877,870
2022	$ 4,899,864	$ 120,494	$ 4,779,370



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

Eligibility	General employees are eligible for retiree health benefits once they meet RI MERS pension eligibility requirements. Police and Fire employees are eligible for retiree health benefits once they meet the City of East Providence Police and Fire Retirement System pension eligibility requirements: 1. Age 60 with 10 years of service 2. 20 years of service (no age requirement)
MERS Eligibility Requirements	Employees eligible to retire as of 7/1/2012 are not impacted by the new eligibility requirements described below. Prior to 7/1/2012, employees were eligible to retire at the earlier of: (i) age 58 with 10 years of service credit or (ii) 30 years of service (no age requirement). For employees who are not eligible to retire as of 7/1/2012: a) Members with less than five years of contributing service credit on 6/30/2012 may retire at their Social Security normal retirement age. b) Members with at least five years of contributing service credit on 6/30/2012 may retire at an individually determined age, which is the result of interpolating the member’s prior Retirement Date (described in previous paragraph) and the retirement age applicable to members hired after 6/30/2012 (described in item (a) above). c) Members with at least ten years of contributing service credit on 6/30/2012 may retire at their prior Retirement Date (described in previous paragraph) if they continue to work and contribute until that date. All members who are within five years of reaching their retirement eligibility date (described in the paragraphs above) may retire at any time if they have at least 20 years of service.
Spouse Benefit	Surviving spouse receives COBRA coverage upon death of the retiree and must pay the required COBRA rate. Upon death of an active employee: • Surviving spouses of Police and Fire employees receive three years of free coverage paid by the City and then must elect COBRA coverage and pay the required COBRA rate. • Surviving spouses of General employees receive one year of subsidized coverage paid by the City and then must elect COBRA coverage and pay the required COBRA rate. City’s subsidy will be at the same level as existing active employees’ subsidy.

Benefit Duration

Police and Fire

Retiree health benefits cease at the later of: (a) the retiree attaining age 65 or (b) 3 years after retirement.

General

For employees who retired prior to November 1, 2012
Retiree health benefits cease at the later of: (a) the retiree attaining age 65 or (b) 3 years after retirement.

For employees who retired on/after November 1, 2012
General employees retiree health benefits will cease after one year after retirement plus 18 month of COBRA coverage, except for the following:

- Retiree health benefits for EPPMTEA employees with 25 years of service as of November 1, 2012 will terminate upon Medicare eligibility.
- Retiree health benefits for 15509 and 15509A employees who retire with 30 years of service on/before October 31, 2017 will terminate upon Medicare eligibility.

Disability Benefit

General employees are eligible for disability health benefit from their date of hire. The disabled employee will be treated as a regular retiree. The City will pay for the full cost of coverage for both retiree and spouse until the retiree is eligible for Medicare. Spouse's disability health benefit coverage will terminate upon death of the retiree.

Police and Fire employees are eligible for non-line of duty disability health benefit after ten years of service. There is no age or service requirement for line of duty disability health benefit. Upon retirement, disabled employees will be enrolled in specific plans as designated by the City (3A69 for disabled firefighters and 100699 for disabled police officers). The City will pay for the full cost of coverage for the disabled retiree for their lifetime (subject to annual medical documentation) while spouse coverage will be paid for by the City until the retiree is eligible for Medicare. Spouse's disability health benefit coverage will terminate upon death of the retiree.

Life Insurance

The City provides group life insurance of $7,500.

Dental

Retirees may elect dental coverage at their own cost.

Retiree Cost Sharing

Police and Fire

None; except for the following groups of grandfathered retirees:

1. Those enrolled in 8W555 plan must pay the full cost of coverage until eligible for Medicare.
2. Medicare retirees enrolled in Plan 65 (2H79) pay the full cost of coverage.

General Employees

For employees who retired prior to November 1, 2012
Same as Police and Fire employees and retirees.

For employees who retired on/after November 1, 2012
Retiree contribution requirements follow active employees, which is a percentage of premium contribution based on the employees' base pay:

- 10% of premium if base pay is less than $30,000
- 15% of premium if base pay is less than $46,000 but more than $30,000
- 20% of premium if base pay is less than $95,000 but more than $46,000
- 25% of premium if base pay is more than $95,000

Medical Benefit

Same benefit options are available to retirees as active employees. City of East Providence is a member of Rhode Island Trust. All health plans in this Trust are considered self-insured. Health plan options mapping for current active employees to retirees health plan options are as follows:

Employee group	Active plans	Retiree plans
Public works	6784	8V212
Managerial / Dept heads	9785	8V212
Municipal employees	257	8V212
Police	5578, H5578	8V210
Fire	5694	8V211

The monthly premiums by plan effective on July 1, 2013 are as shown below.

Employee group	New Suffix	Retiree Plans Old Suffix	Single	Family
General	0018	8V212	$ 556.21	$ 1,370.57
	0015		$ 492.75	$ 1,208.65
	0002	2H68	$ 683.77	$ 1,684.91
	0001	4R17 Classic	$ 677.22	$ 1,668.76
	0001	4R17 Healthmate	$ 582.72	$ 1,435.97
Police	0006	8V210	$ 556.21	$ 1,370.57
	0005	5E14 Classic	$ 662.78	$ 1,633.20
	0005	5E14 Healthmate	$ 582.72	$ 1,435.97
Disabled Police	0011	100699 Classic	$ 694.03	$ 1,710.17
	0011	100699 Healthmate	$ 582.18	$ 1,434.62
Fire	0019	8V211	$ 556.21	$ 1,370.57
	0022	4P21 Classic	$ 677.22	$ 1,668.76
	0022	4P21 Healthmate	$ 582.72	$ 1,435.97
Disabled Fire	0010	3A69 Classic	$ 694.03	$ 1,710.17
	0010	3A69 Healthmate	$ 582.72	$ 1,435.97
Special	0024	8W555	$ 492.75	$ 1,208.65
	0012	4P66 (no rx)	$ 685.21	$ 1,688.43
	0016	2H79 (post 65; no rx)	$ 155.23	N/A

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 October 31, 2011. Refer to Actuary's Notes section 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 and per capita costs again in the next full GASB valuation, which will be for the fiscal year ending October 31, 2014.

Measurement Date	October 31, 2013 with results actuarially rolled-back to November 1, 2012 on a "no loss/no gain" basis.
Discount Rate	4.50%
Payroll Growth	4.25% per year
Inflation Rate	3.00% per year
Cost Method	Projected Unit Credit with linear proration to full eligibility
Amortization	Level % of pay over thirty years based on an open group
Census Data	Census information was provided by the City and it was collected as of April 2014. We have reviewed it for reasonableness and no material modifications were made to the census data.
Health Care Coverage Election Rate	Active General employees (regardless of current health coverage election): 50% Active Police/Fire employees (regardless of current health coverage election): 100% 100% of retirees with current coverage are assumed to continue coverage. 0% of retirees without current coverage are assumed to elect coverage in the future.
Life Insurance	100% of future retirees with medical coverage are assumed to have life insurance coverage at retirement.
Spousal Coverage	Spousal coverage for current retirees is based on actual data. 85% of employees are assumed to be married at retirement. Husbands are assumed to be three years older than wives.
Employer Funding Policy	Pay-as-you-go cash basis

Mortality

Pre-retirement

General Employees: 75% of RP-2000 Combined Healthy Table with White Collar adjustments
Police and Fire: RP-2000 Combined Health Table with Blue Collar adjustments fully generational using Scale AA

Post-retirement

General Employees:

- Male: 115% of RP-2000 Combined Healthy Table with White Collar adjustments fully generational using Scale AA
- Female: 95% of RP-2000 Combined Healthy Table with White Collar adjustments fully generational using Scale AA

Police and Fire: RP-2000 Combined Health Table with Blue Collar adjustments fully generational using Scale AA

Post-disablement

All groups: 60% of PBGC Table for disabled males (Va) /females (VIa) eligible for Social Security disability benefits.

Disability

Police and Fire: 100% of disabilities are assumed to be a line of duty disability. Sample annual disability rates below are based on the 2012 City of East Providence Police and Firefighters Retirement System experience study.

Age	Unisex	Age	Unisex
25	0.50%	45	1.73%
30	0.70%	50	2.37%
35	0.90%	55	3.00%
40	1.10%	60	3.00%

General Employees: sample annual rates shown below are based on Municipal Employees Retirement System actuarial valuation for fiscal year ending June 30, 2010.

Age	Male	Female
25	0.06%	0.03%
35	0.11%	0.05%
45	0.25%	0.11%
55	0.71%	0.30%

Turnover Rate

Assumption used to project terminations (voluntary and involuntary) prior to meeting minimum retirement eligibility for retiree health coverage.

Sample annual rates shown below are based on Municipal Employees Retirement System actuarial valuation for fiscal year ending June 30, 2010 for general employees.

YOS	Male	Female	YOS	Male	Female
0	17.50%	18.00%	13	2.09%	1.81%
1	10.87%	11.43%	14	2.04%	1.69%
2	9.22%	9.73%	15	2.01%	1.59%
3	7.78%	8.24%	16	2.00%	1.52%
4	6.55%	6.95%	17	1.98%	1.45%
5	5.52%	5.84%	18	1.95%	1.37%
6	4.65%	4.91%	19	1.87%	1.27%
7	3.94%	4.12%	20	1.75%	1.12%
8	3.37%	3.48%	21	1.56%	0.92%
9	2.93%	2.96%	22	1.29%	0.65%
10	2.60%	2.55%	23	0.92%	0.30%
11	2.36%	2.23%	24	0.44%	0.00%
12	2.20%	1.99%			

Sample annual rates shown below are based on City of East Providence Police and Firefighters Retirement System 2012 experience study.

YOS	Unisex
0	4.00%
15	1.00%
20+	0.00%

Retirement Rate

Police and Fire

Annual rates of retirement are based on the 2012 City of East Providence Police and Firefighters Retirement System experience study. The rates below are applicable after age 40. 100% retirement is assumed at age 60.

YOS	Unisex
20	12%
21 – 23	14%
24 – 26	16%
27 – 29	18%
30+	20%

General Employees

RI MERS Members

For members who reach 30 years of service before age 58, service-based rates are used. For other members, age-based rates are used instead.

Because of the enactment of RIRSA in 2011, the retirement assumption was modified for members not eligible to retire by July 1, 2012. Members who would have been assumed to retire at an earlier age under the rules in effect before the enactment of the provision changes are assumed to retire when first eligible for an unreduced benefit. This demand is recognized by adding a 10% probability for every year the member has been deferred.

YOS	Male	Female
30	30%	30%
31	30%	25%
32 – 34	25%	10%
35	25%	15%
36	25%	20%
37	25%	25%
38	35%	25%
39	50%	25%
40	100%	100%

Age	Male	Female
58	12%	12%
59 – 61	10%	10%
62	30%	20%
63 – 64	20%	15%
65+	100%	100%

Per Capita Costs

Annual per capita costs were calculated based on the City's monthly premium rates effective on July 1, 2013 actuarially increased using health index factors and current enrollment. The costs are assumed to increase with health care trend rates.

Annual per capita costs by plan are as shown below:

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.

	Group A		Group B		Group C	
Age	Male	Female	Male	Female	Male	Female
45	$ 6,908	$ 8,665	$ 7,237	$ 9,078	$ 8,416	$ 10,555
50	$ 8,205	$ 9,334	$ 8,596	$ 9,779	$ 9,995	$ 11,371
55	$ 9,745	$ 10,056	$ 10,209	$ 10,535	$ 11,871	$ 12,250
60	$ 11,574	$ 10,833	$ 12,125	$ 11,349	$ 14,099	$ 13,197
65	$ 13,746	$ 11,670	$ 14,401	$ 12,226	$ 16,745	$ 14,217
70	$ 15,935	$ 12,572	$ 16,695	$ 13,171	$ 19,412	$ 15,315
75	$ 17,167	$ 13,544	$ 17,985	$ 14,189	$ 20,912	$ 16,499
80	$ 18,493	$ 14,590	$ 19,375	$ 15,286	$ 22,529	$ 17,774

Group A – 8V210, 8V211, 8V212
Group B – 5E14, 4P21, 4R17 (Healthmate), and 3A69 (Classic and Healthmate)
Group C – all others

Upon Medicare eligibility, the above per capita costs are reduced by 37.5% for current retirees and by 50.0% for future retirees.

Health Care Trend Rates

FYE	Medical	FYE	Medical
2014	9.0%	2019	6.5%
2015	8.5%	2020	6.0%
2016	8.0%	2021	5.5%
2017	7.5%	2022+	5.0%
2018	7.0%		

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

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

Explicit Subsidy

The difference between (a) the premium rate and (b) the retiree contribution. Below is an example of the monthly explicit subsidies for a retired Police and his spouse enrolled in 8V210 plan.

	Premium Rate	Retiree Contribution	Explicit Subsidy
	A	B	C = A – B
Retiree	$ 556.21	$ 0.00	$ 556.21
Spouse	$ 814.36	$ 0.00	$ 814.36

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 male retired Police with spouse of the same age enrolled in 8V210 plan.

	Per Capita Cost	Premium Rate	Implicit Subsidy
	A	B	C = A – B
Retiree	$ 964.50	$ 556.21	$ 408.29
Spouse	$ 902.75	$ 814.36	$ 88.39

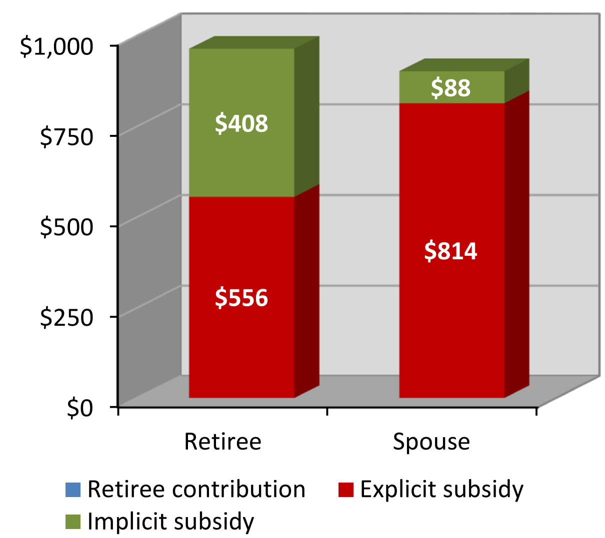
All employers that utilize premium rates based on blended active/retiree claims experience will have an implicit subsidy. There is an exception for plans using a true community-rated premium rate.

GASB Subsidy Breakdown

Below is a breakdown of the GASB 45 monthly total cost for a male retired Police and his spouse of the same age enrolled in 8V210 plan.

	Retiree	Spouse
Retiree contribution	$ 0.00	$ 0.00
Explicit subsidy	$ 556.21	$ 814.36
Implicit subsidy	$ 408.29	$ 88.39
Total monthly cost	$ 964.50	$ 902.75

GASB Subsidy Breakdown



Actives with coverage	Single	Family	Total	Avg. Age	Avg. Svc	Salary	
8V212	36	126	162	49.7	15.0	$	8,155,224
8V210	25	64	89	41.7	14.3	$	5,338,610
8V211	17	73	90	45.8	17.1	$	5,639,085
Total actives with coverage	**78**	**263**	**341**	**46.6**	**15.3**	**$**	**19,132,919**

Actives without coverage	Total	Avg. Age	Avg. Svc	Salary	
Total actives without coverage	**19**	**45.0**	**10.2**	**$**	**1,071,179**

Active employees who currently have no coverage are assumed to elect coverage at retirement based on the health care coverage election assumption shown in the Actuarial Methods and Assumptions section. They have been included in the GASB valuation.

Active 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	2										2
25 to 29	1	9	3								13
30 to 34	4	4	15	2	3						28
35 to 39		1	11	12	11						35
40 to 44		3	18	14	23	16	6				80
45 to 49	3	1	9	15	20	13	9				70
50 to 54	1	4	8	9	17	13	14	1			67
55 to 59		1	5	10	11	5	12	2			46
60 to 64	1		1	5	4	1	1				13
65 to 69	1		3	1							5
70 & up						1					1
Total	**13**	**23**	**73**	**68**	**89**	**49**	**42**	**3**	**0**	**0**	**360**

Disabled with coverage	*Single*	*Family*	*Total*	*Avg. Age*
100699	1		1	80.5
100699 Healthmate	5		5	70.9
3A69	2		2	73.8
3A69 Healthmate	5		5	72.9
Total disabled with coverage	**13**	**0**	**13**	**72.8**

Retirees with coverage	*Single*	*Family*	*Total*	*Avg. Age*
2H66	1	2	3	62.6
2H68	1	1	2	56.9
3A69	3		3	71.8
4P21 Healthmate	2	7	9	61.2
4P66		2	2	59.9
4R17	1	3	4	63.8
4R17 Healthmate	1	10	11	60.8
5E14		3	3	57.7
5E14 Healthmate	1	16	17	60.3
8V210	1	28	29	55.1
8V211	4	29	33	57.6
8V212	12	53	65	62.4
8W555	6		6	62.6
2H79	14		14	81.9
Total retirees with coverage	**47**	**154**	**201**	**61.6**

APPENDIX

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 October 31, 2011	*As of October 31, 2013*
Active Participants	389	360
Retired Participants	267	214
Averages for Active		
Age	46.0	46.5
Service	13.9	15.0
Averages for Inactive		
Age	58.1	62.3

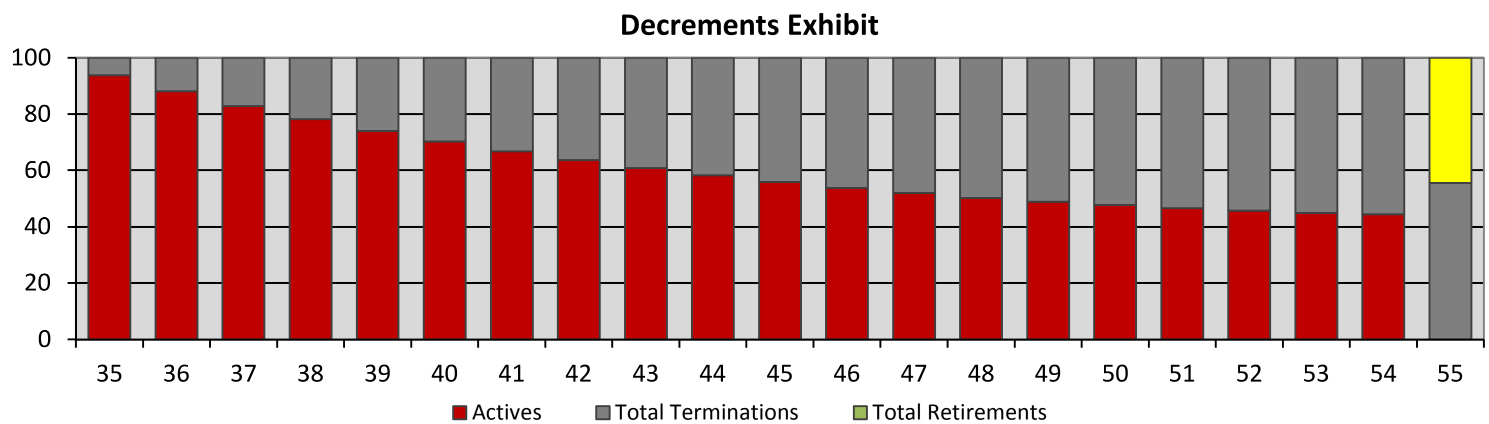
Glossary

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

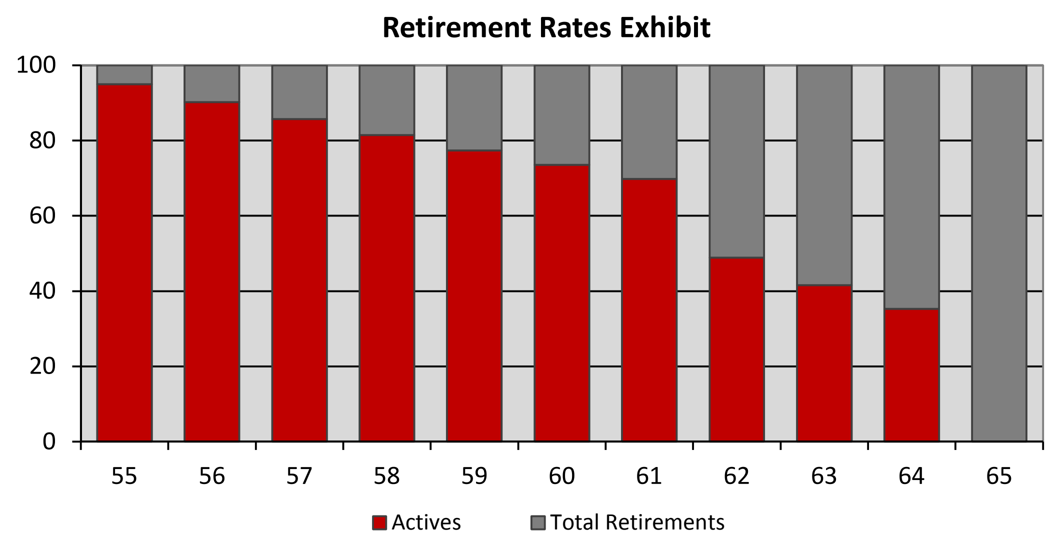


* The above rates are illustrative rates and are not used in our GASB calculations.

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.

Illustration of GASB Calculations

The purpose of the illustration is to familiarize non-actuaries with the GASB 45 actuarial calculation process.

I. Facts

1. The employer provides subsidized retiree health coverage worth $100,000 to employees retiring at age 55 with 25 years of service. The employer funds for retiree health coverage on a pay-as-you-go basis.
2. Employee X is age 50 and has worked 20 years with the employer.
3. Retiree health subsidies are paid from the general fund assets which are expected to earn 4.5% per year on a long-term basis.
4. Based on Employee X's age and sex he has a 98.0% probability of living to age 55 and a 95.0% probability of continuing to work to age 55.

II. Calculation of Present Value of Future Benefits

Present Value of Future Benefits represents the cost to finance benefits payable in the future to current and future retirees and beneficiaries, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.

	Value	Description
A.	$100,000	Projected benefit at retirement
B.	80.2%	Interest discount for five years = $(1 / 1.045)^5$
C.	98.0%	Probability of living to retirement age
D.	95.0%	Probability of continuing to work to retirement age
E.	$74,666	Present value of projected retirement benefit measured at employee's current age = A x B x C x D

Illustration of GASB Calculations (continued)

III. Calculation of Actuarial Accrued Liability

Actuarial Accrued Liability represents the portion of the Present Value of Future Benefits which has been accrued recognizing the employee's past service with the employer. The Actuarial Accrued Liability is a required disclosure in the Required Supplementary Information section of the employer's financial statement.

	Value	Description
A.	$74,666	Present value of projected retirement benefit measured at employee's current age
B.	20	Current years of service with employer
C.	25	Projected years of service with employer at retirement
D.	$59,733	Actuarial accrued liability measured at employee's current age = A x B / C

IV. Calculation of Normal Cost

Normal Cost represents the portion of the Present Value of Future Benefits allocated to the current year.

	Value	Description
A.	$74,666	Present value of projected retirement benefit measured at employee's current age
B.	25	Projected years of service with employer at retirement
C.	$2,987	Normal cost measured at employee's current age = A / B

V. Calculation of Annual Required Contribution

Annual Required Contribution is the total expense for the current year to be shown in the employer's income statement.

	Value	Description
A.	$2,987	Normal Cost for the current year
B.	$3,509	30-year amortization (level dollar method) of Unfunded Actuarial Accrued Liability using a 4.5% interest rate discount factor
C.	$292	Interest adjustment = 4.5% x (A + B)
D.	$6,788	Annual Required Contribution = A + B + C

Definitions

GASB 45 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 Accrued Liability** – That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of plan benefits and expenses which is not provided for by the future Normal Costs.

2. **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.

3. **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 Normal Cost and an Actuarial Accrued Liability.

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. **Annual OPEB Cost** – An accrual-basis measure of the periodic cost of an employer's participation in a defined benefit OPEB plan.

6. **Annual Required Contribution (ARC)** – The employer's periodic required contributions to a defined benefit OPEB plan, calculated in accordance with the parameters.

7. **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.

8. **Funded Ratio** – The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

9. **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.

Definitions (continued)

10. **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.

11. **Net OPEB Obligation** – The cumulative difference since the effective date of this Statement between annual OPEB cost and the employer's contributions to the plan, including the OPEB liability (asset) at transition, if any, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to OPEB-related debt.

12. **Normal Cost** – The portion of the Actuarial Present Value of plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

13. **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.

14. **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.

15. **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.

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. **Substantive Plan** – The terms of an OPEB plan as understood by the employer(s) and plan members.