



Actuarial Valuation as at December 31, 2023 for Supplementary Retirement Plan for Public Service Managers

January 11, 2025





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Executive Summary

An actuarial valuation has been prepared for the Supplementary Retirement Plan for Public Service Managers (the "Plan") as at December 31, 2023 for the primary purpose of establishing a funding range in accordance with legislative requirements for the Plan until the next actuarial valuation is performed. This section provides an overview of the important results and the key valuation assumptions which have had a bearing on these results. The next actuarial valuation for the purposes of developing funding requirements should be performed no later than as at December 31, 2026.

Summary of Principal Results

Financial Position

	December 31, 2023	December 31, 2021
Assets	\$ 230,671,000	\$ 230,897,000
Liabilities	<u>262,324,000</u>	<u>229,798,000</u>
Excess/(Deficit)	\$ (31,653,000)	\$ 1,099,000

Contribution Requirements

	December 31, 2023	December 31, 2021
Member contribution rate to RCA Fund / RTA	12.00%	12.00%*
Matching employer contribution rate to RCA Fund / RTA	12.00%	12.00%*
Employer contribution rate to Reserve Fund	19.70%	19.70%**

*Effective April 1, 2023

**Effective April 1, 2022

Membership Data

	December 31, 2023	December 31, 2021
Active members	563	431
Potential active members	196	403
Pending members	25	33
Deferred vested members	192	161
Hold on deposit members	54	103
Retired members and beneficiaries	1,492	1,378



Key Assumptions

The principal assumptions to which the valuation results are most sensitive are outlined in the following table.

	December 31, 2023	December 31, 2021
Going Concern		
Rate of return on assets	RCA Fund: 3.30% per year Reserve Fund: 5.60% per year	RCA Fund: 1.50% per year Reserve Fund: 4.99% per year
Discount rate	5.10% per year	4.65% per year
Margin for adverse deviation	Included in asset return, 0.50% on RCA Fund and 0.37% on Reserve Fund	Included in asset return, 0.50% on RCA Fund and 0.67% on Reserve Fund
Inflation rate	2.00% per year	Same
Earnings – Base	2.75% per year	Same
Earnings – Merit and Promotion	0.5% per year	Same
Maximum pension increase	2.75% per year	Same
Mortality table	95% of 2014 Canadian Public Pensioner Mortality with generational improvements using Scale MI-2017	Same
Retirement rates	Rates following 2021 experience study for MEPP	Same

Section 1: Introduction

Purpose and Terms of Engagement

We have been engaged by the Supplementary Retirement Plan for Public Service Managers Advisory Committee, and hereafter referred to as the Committee, to conduct an actuarial valuation of the Plan, as at December 31, 2023 for the general purpose of determining recommended funding contributions, based on the actuarial assumptions and methods summarized herein. Specifically, the purposes of the valuation are to:

- Determine the financial position of the Plan on a going concern basis as at December 31, 2023; and
- Determine a recommended contribution rate that is sufficient to meet the funding requirements to the Reserve Fund to eliminate the deficit.

The results of this report may not be appropriate for accounting purposes or any other purposes not listed above.

The next required valuation will be as at December 31, 2026.

Summary of Changes Since the Last Valuation

The last such actuarial valuation in respect of the Plan was performed as at December 31, 2021. Since the time of the last valuation, we note that the following event has occurred:

- Going concern actuarial assumptions have been revised. The changes and financial impact of these changes are summarized on page 9 of this report.

Information and Inputs

In order to prepare our valuation, we have relied upon the following information:

- A copy of the previous valuation report as at December 31, 2021;
- A copy of the Statement of Investment Policies and Procedures for the Plan (“SIPP”);
- Membership data compiled as at December 31, 2023 by Alberta Pension Services Corporation (“APS”); and
- Asset data taken from the Plan’s preliminary financial statements.

Furthermore, our actuarial assumptions and methods have been chosen to reflect our understanding of the Committee’s desired funding objectives with due respect to accepted actuarial practice and regulatory constraints.



Subsequent Events

As of the date of this report, we have not been made aware of any subsequent events which would have an effect on the results of this valuation. However, the following points should be noted in this regard:

- Actual experience deviating from expected after December 31, 2023 will result in gains or losses which will be reflected in the next actuarial valuation report.
- To the best of our knowledge, the results contained in this report are based on the regulatory and legal environment in effect at the date of this report and do not take into consideration any potential changes that may be currently under review. To the extent that actual changes in the regulatory and legal environment transpire, any financial impact on the Plan as a result of such changes will be reflected in future valuations.



Section 2: Results

Financial Position of the Plan

The financial position of the Plan on the going concern basis is measured by comparing the actuarial value of assets to the actuarial value of liabilities at the valuation date on the premise that the Plan continues on into the future indefinitely.

The selection of the applicable actuarial assumptions and methods reflect the Plan's funding objectives, as communicated by the Committee, actuarial standards of practice, and pension standards.

On the basis of the Plan provisions, membership data, going concern assumptions and methods, and asset information described in the Appendices, the financial position of the Plan on a going concern basis as at December 31, 2023 is shown in the following table. The results as at December 31, 2021 are also shown for comparison purposes.

Financial Position

	December 31, 2023	December 31, 2021
Assets		
Retirement Compensation Arrangement	\$ 3,414,000	\$ 11,017,000
Refundable Tax Account	27,701,000	33,186,000
Reserve Fund	<u>199,556,000</u>	<u>186,694,000</u>
Actuarial Value of Assets	\$ 230,671,000	\$ 230,897,000
Going Concern Liabilities		
Active and potential members	\$ 80,954,000	\$ 56,294,000
Hold on deposit members	406,000	715,000
Deferred vested members	16,033,000	14,622,000
Pending members	426,000	1,911,000
Retirees and beneficiaries	<u>164,505,000</u>	<u>156,256,000</u>
Total Liabilities	\$ 262,324,000	\$ 229,798,000
Excess Assets/(Unfunded Liability)	\$ (31,653,000)	\$ 1,099,000



Contribution Requirements

On the basis of the Plan provisions, membership data, going concern assumptions and methods and asset information described in the Appendices, the contribution requirements of the Plan as at December 31, 2023 are shown in the following table as percentage of excess earnings. The contribution requirements as at December 31, 2021 are also shown for comparison purposes.

	December 31, 2023	December 31, 2021
Member contribution rate to RCA Fund / RTA	12.00%	12.00%*
Matching employer contribution rate to RCA Fund / RTA	12.00%	12.00%*
Employer contribution rate to Reserve Fund	19.70%	19.70%**

* Effective April 1, 2023

** Effective April 1, 2022



Change in Financial Position

The major components of the change in the Excess Assets/(Unfunded Liability) for the period from December 31, 2021 to December 31, 2023 are summarized in the following table.

Excess Assets/(Unfunded Liability) as at December 31, 2021	\$ 1,099,000
Expected interest on excess assets/(unfunded liability)	105,000
Excess Assets/(Unfunded Liability) as at December 31, 2023	\$ 1,204,000
Change in Financial Position due to Experience Gains/(Losses)	
Loss from investment earnings less than expected	\$ (14,425,000)
Loss due to salary and ITA maximum increases different than expected	(33,396,000)
Loss due to retirement experience	(723,000)
Gain due to termination experience	61,000
Gain due to mortality experience	70,000
Loss due to indexation experience	(6,081,000)
Gain due to contributions different than benefits accrued	4,195,000
Net gain/(loss) due to other experience and miscellaneous items	230,000
Excess Assets/(Unfunded Liability) After Experience Gains/(Losses) as at December 31, 2023	\$ (48,865,000)
Change due to discount rate to 5.10%	\$ 17,212,000
Excess Assets/(Unfunded Liability) as at December 31, 2023	\$ (31,653,000)

Discussion of Changes in Economic Assumptions

Effective December 31, 2023, the discount rate was changed to 5.10% per year from 4.65% per year. This decreased the going concern liabilities by \$17,212,000 and the total normal cost by \$623,000.

Going Concern Valuation Sensitivity Results

In accordance with the CIA Standards of Practice specific to pension plans, the table below presents the sensitivity of the going concern liabilities and the total normal cost of using a discount rate 1% lower and 1% higher than that used for the going concern valuation.

December 31, 2023		Effect	
		\$	%
Going concern liabilities	\$ 262,324,000		
Going concern liabilities (discount rate - 1%)	\$ 303,057,000	40,733,000	15.5%
Going concern liabilities (discount rate + 1%)	\$ 229,689,000	(32,635,000)	-12.4%
Normal cost	\$ 5,739,000		
Normal cost (discount rate - 1%)	\$ 7,124,000	1,385,000	24.1%
Normal cost (discount rate + 1%)	\$ 4,689,000	(1,050,000)	-18.3%

Plausible Adverse Scenarios

In accordance with the Canadian Institute of Actuaries Standards of Practice specific to pension plans, below is summarized scenarios of adverse but plausible assumptions, relative to the best estimate assumptions otherwise selected for the valuation.

Interest Rate Sensitivity

The table below presents the sensitivity of the going concern position of using interest rates 1% lower than the current level. Equity risk premiums are assumed to remain unchanged, so the future return on all asset classes and the going concern discount rate both decrease by 1%. In order to calculate the impact on the Actuarial Value of Assets, the decrease in interest rates only impacts fixed income, inflation sensitive and alternative assets (assumed to be 35.7% of total assets) and a duration of 7.0 (based on relevant benchmarks) was considered.

	Base Scenario	Adverse Scenario	Impact (\$)
Actuarial value of assets	\$ 230,671,000	\$ 236,472,000	\$ 5,801,000
Going concern liabilities	262,324,000	303,057,000	40,733,000
Excess Assets/(Unfunded Liability)	\$ (31,653,000)	\$ (66,585,000)	\$ (34,932,000)

Total Normal Cost			
Jan 1, 2024 to Dec 31, 2024	\$ 5,739,000	\$ 7,124,000	\$ 1,385,000



On the basis of the Plan provisions, membership data, going concern assumptions and methods and asset information described in the Appendices, the table below presents the sensitivity of the contribution requirements of the Plan as at December 31, 2023 of using interest rates 1% lower than the current level.

	Base Scenario	Adverse Scenario
Member contribution rate to RCA Fund / RTA	12.00%	12.00%
Matching employer contribution rate to RCA Fund / RTA	12.00%	12.00%
Employer contribution rate to Reserve Fund	19.70%	29.9%*

* Assumes effective April 1, 2025

Deterioration in Asset Value

In assessing the risk related to the deterioration in asset value we have chosen an adverse scenario equal to a 15% reduction in the non-fixed income asset values and assume no change in future return expectations.

The table below presents the sensitivity of the going concern position of using the assets with a 15% reduction in non-fixed income asset values.

	Base Scenario	Adverse Scenario	Impact (\$)
Actuarial value of assets	\$ 230,671,000	\$ 212,566,000	\$ (18,105,000)
Going concern liabilities	262,324,000	262,324,000	-
Excess Assets/(Unfunded Liability)	\$ (31,653,000)	\$ (49,758,000)	\$ (18,105,000)

Total Normal Cost			
Jan 1, 2024 to Dec 31, 2024	\$ 5,739,000	\$ 5,739,000	\$ -

On the basis of the Plan provisions, membership data, going concern assumptions and methods and asset information described in the Appendices, the table below presents the sensitivity of the contribution requirements of the Plan as at December 31, 2023 of using the assets with a 15% reduction in non-fixed income asset values.

	Base Scenario	Adverse Scenario
Member contribution rate to RCA Fund / RTA	12.00%	12.00%
Matching employer contribution rate to RCA Fund / RTA	12.00%	12.00%
Employer contribution rate to Reserve Fund	19.70%	23.6%*

* Assumes effective April 1, 2025



Mortality Sensitivity

The table below presents the sensitivity of the going concern position of the Plan to using a mortality assumption with a 10% improvement to the base mortality rates. For the purposes of this analysis, we have used 90% of the rates of the base table used in the going concern valuation.

	Base Scenario	Adverse Scenario	Impact (\$)
Actuarial value of assets	\$ 230,671,000	\$ 230,671,000	\$ -
Going concern liabilities	262,324,000	266,846,000	4,522,000
Excess Assets/(Unfunded Liability)	\$ (31,653,000)	\$ (36,175,000)	\$ (4,522,000)
Total Normal Cost			
Jan 1, 2024 to Dec 31, 2024	\$ 5,739,000	\$ 5,819,000	\$ 80,000

On the basis of the Plan provisions, membership data, going concern assumptions and methods and asset information described in the Appendices, the table below presents the sensitivity of the contribution requirements of the Plan as at December 31, 2023 of using a mortality assumption with a 10% improvement to the base mortality rates.

	Base Scenario	Adverse Scenario
Member contribution rate to RCA Fund / RTA	12.00%	12.00%
Matching employer contribution rate to RCA Fund / RTA	12.00%	12.00%
Employer contribution rate to Reserve Fund	19.70%	21.2% *

* Assumes effective April 1, 2025

Section 3: Contribution Requirements

Contribution Requirements in Respect of the Normal Cost

The assets of the Plan are held in three separate vehicles, the Retirement Compensation Account Fund, the Refundable Tax Account and the Reserve Fund. The following tables outline the projections of each of these accounts based on the actuarial assumptions and methods described in the Appendices. The years 2007 through 2023 represent actual results.

In order to determine the employer contributions required to be made to the Reserve Fund, a forecast actuarial cost method has been employed. Under this method, projections of the expected future cash flows, expected future earnings of both existing and potential members and expected future investment income for the RCA Fund and the Reserve Fund are determined. An open group model is used through the next 50 years. The employer contribution rate is then determined as the constant percentage of excess earnings which will exhaust all the assets at the time the last benefit is expected to be paid.

The methodology used to determine the contribution rate to the Reserve Fund is described in Appendix C.



RCA Fund

Year	RCA Assets Beginning of Year (\$)	Net Contributions (\$)	Total Benefit Payments (\$)	Expenses (\$)	Investment Income (\$)	Transfer To/From RTA (\$)	Transfer To/From Reserve (\$)	RCA Assets End of Year (\$)
2007	7,070,000	2,218,000	610,000	238,000	122,000	532,000	-	9,094,000
2008	9,094,000	3,067,000	846,000	304,000	(191,000)	385,000	-	11,205,000
2009	11,205,000	3,264,000	1,307,000	414,000	979,000	615,000	-	14,342,000
2010	14,342,000	2,957,000	1,700,000	525,000	1,318,000	35,000	-	16,427,000
2011	16,427,000	3,127,000	2,458,000	484,000	1,585,000	(40,000)	-	18,157,000
2012	18,157,000	3,168,000	3,118,000	521,000	1,078,000	436,000	-	19,200,000
2013	19,200,000	3,335,000	3,636,000	549,000	(330,000)	1,020,000	-	19,040,000
2014	19,040,000	3,981,000	4,267,000	592,000	1,921,000	1,985,000	(1,450,000)	20,618,000
2015	20,618,000	5,282,000	4,823,000	622,000	811,000	1,147,000	(400,000)	22,013,000
2016	22,013,000	3,893,000	5,434,000	703,000	651,000	1,999,000	-	22,419,000
2017	22,419,000	3,626,000	8,297,000	756,000	663,000	2,415,000	-	20,070,000
2018	20,070,000	3,307,000	6,473,000	747,000	350,000	3,372,000	-	19,879,000
2019	19,879,000	2,637,000	7,999,000	822,000	1,415,000	3,508,000	-	18,618,000
2020	18,618,000	2,320,000	8,807,000	711,000	1,549,000	3,282,000	-	16,251,000
2021	16,251,000	1,677,000	9,502,000	592,000	(442,000)	3,625,000	-	11,017,000
2022	11,017,000	2,044,000	10,455,000	621,000	(1,105,000)	-	-	880,000
2023	880,000	2,570,000	10,746,000	595,000	543,000	10,762,000	-	3,414,000
2024	3,414,000	2,453,525	11,102,219	602,140	56,331	5,824,014	5,836,834	5,880,345
2025	5,880,345	2,430,818	11,713,096	609,366	97,026	6,112,718	4,011,299	6,209,744
2026	6,209,744	2,490,701	12,305,604	616,678	102,461	6,409,911	4,221,837	6,512,372
2027	6,512,372	2,545,649	12,941,970	624,078	107,454	6,729,297	4,508,028	6,836,751
2028	6,836,751	2,602,655	13,613,280	631,567	112,806	7,066,021	4,805,441	7,178,827
2029	7,178,827	2,659,219	14,444,722	639,146	118,451	7,482,709	5,245,823	7,601,160
2030	7,601,160	2,717,119	15,197,107	646,816	125,419	7,859,252	5,525,645	7,984,671
2031	7,984,671	2,765,692	16,076,072	654,578	131,747	8,299,452	5,980,287	8,431,199
2032	8,431,199	2,805,014	16,994,006	662,433	139,115	8,758,662	6,420,227	8,897,777



Year	RCA Assets Beginning of Year (\$)	Net Contributions (\$)	Total Benefit Payments (\$)	Expenses (\$)	Investment Income (\$)	Transfer To/From RTA (\$)	Transfer To/From Reserve (\$)	RCA Assets End of Year (\$)
2033	8,897,777	2,843,454	17,880,230	670,382	146,813	9,201,900	6,809,381	9,348,713
2034	9,348,713	2,881,766	18,746,393	678,427	154,254	9,635,283	7,194,342	9,789,537
2035	9,789,537	2,916,479	19,721,429	686,568	161,527	10,123,235	7,701,981	10,284,762
2036	10,284,762	2,956,426	20,621,966	694,807	169,699	10,573,537	8,075,585	10,743,236
2037	10,743,236	2,998,899	21,471,850	703,145	177,263	10,998,866	8,432,860	11,176,129
2038	11,176,129	3,046,682	22,325,884	711,583	184,406	11,426,531	8,814,656	11,610,937
2039	11,610,937	3,094,056	23,154,990	720,122	191,580	11,841,766	9,170,120	12,033,346
2040	12,033,346	3,141,559	23,946,695	728,763	198,550	12,238,454	9,500,553	12,437,004
2041	12,437,004	3,192,513	24,678,926	737,508	205,211	12,605,612	9,786,917	12,810,823
2042	12,810,823	3,253,051	25,371,828	758,215	211,379	12,959,332	10,066,170	13,170,711
2043	13,170,711	3,317,688	26,061,285	778,819	217,317	13,311,394	10,351,705	13,528,711
2044	13,528,711	3,393,932	26,644,534	796,249	223,224	13,608,780	10,518,141	13,832,004
2045	13,832,004	3,474,601	27,182,885	812,337	228,228	13,883,497	10,688,618	14,111,725
2046	14,111,725	3,556,255	27,674,465	827,027	232,843	14,134,325	10,833,512	14,367,168
2047	14,367,168	3,643,004	28,082,694	839,227	237,058	14,342,432	10,911,750	14,579,490
2048	14,579,490	3,735,023	28,433,139	849,700	240,562	14,521,139	10,968,327	14,761,701
2049	14,761,701	3,829,667	28,726,412	858,464	243,568	14,670,654	10,993,509	14,914,222
2050	14,914,222	3,928,945	28,990,079	866,343	246,085	14,805,169	11,013,255	15,051,254
2051	15,051,254	4,031,908	29,226,177	873,399	248,346	14,925,615	11,016,415	15,173,961
2052	15,173,961	4,139,028	29,441,546	879,835	250,370	15,035,506	11,008,392	15,285,876
2053	15,285,876	4,249,558	29,639,047	885,737	252,217	15,136,284	10,989,351	15,388,501
2054	15,388,501	4,365,569	29,826,082	891,326	253,910	15,231,749	10,963,339	15,485,659
2055	15,485,659	4,485,160	30,004,467	896,657	255,513	15,322,806	10,930,305	15,578,319
2056	15,578,319	4,608,488	30,182,616	901,981	257,042	15,413,778	10,897,791	15,670,820
2057	15,670,820	4,735,070	30,363,719	907,393	258,569	15,506,272	10,865,223	15,764,841
2058	15,764,841	4,865,488	30,549,525	912,946	260,120	15,601,176	10,832,143	15,861,296
2059	15,861,296	4,999,409	30,743,827	918,753	261,711	15,700,435	10,801,876	15,962,146



Year	RCA Assets Beginning of Year (\$)	Net Contributions (\$)	Total Benefit Payments (\$)	Expenses (\$)	Investment Income (\$)	Transfer To/From RTA (\$)	Transfer To/From Reserve (\$)	RCA Assets End of Year (\$)
2060	15,962,146	5,136,846	30,949,606	924,902	263,375	15,805,567	10,775,517	16,068,942
2061	16,068,942	5,278,143	31,169,480	931,473	265,138	15,917,908	10,753,869	16,183,046
2062	16,183,046	5,423,313	31,405,485	938,526	267,020	16,038,496	10,737,653	16,305,516
2063	16,305,516	5,572,526	31,658,834	946,097	269,041	16,167,945	10,726,890	16,436,986
2064	16,436,986	5,725,897	31,929,883	954,197	271,210	16,306,435	10,721,197	16,577,645
2065	16,577,645	5,883,428	32,218,926	962,835	273,531	16,454,115	10,720,688	16,727,646
2066	16,727,646	6,045,372	32,525,527	971,998	276,006	16,610,760	10,724,507	16,886,766
2067	16,886,766	6,211,753	32,849,483	981,679	278,632	16,776,265	10,732,644	17,054,897
2068	17,054,897	6,382,687	33,190,333	991,865	281,406	16,950,396	10,744,614	17,231,802
2069	17,231,802	6,558,361	33,547,278	1,002,532	284,325	17,132,743	10,759,647	17,417,068
2070	17,417,068	6,738,851	33,920,040	1,013,672	287,382	17,323,165	10,777,794	17,610,547
2071	17,610,547	6,924,282	34,308,974	1,025,295	290,574	17,521,848	10,799,440	17,812,422
2072	17,812,422	7,114,825	34,715,619	1,037,447	293,905	17,729,581	10,825,820	18,023,486
2073	18,023,486	7,310,603	35,143,399	1,050,231	297,388	17,948,121	10,859,542	18,245,509
2074	18,245,509	7,511,757	35,597,159	1,063,791	301,051	18,179,950	10,903,684	18,481,001
2075	18,481,001	5,117,642	39,330,125	1,175,348	304,937	20,100,268	16,906,830	20,405,205
2076	20,405,205	4,807,803	39,913,018	1,192,767	336,686	20,384,549	15,892,777	20,721,235
2077	20,721,235	4,486,800	40,537,201	1,211,420	341,900	20,703,360	16,540,585	21,045,260
2078	21,045,260	4,161,104	41,208,570	1,231,483	347,247	21,046,403	17,233,688	21,393,650
2079	21,393,650	3,819,468	41,885,172	1,251,703	352,995	21,391,940	17,923,758	21,744,935
2080	21,744,935	3,481,433	42,507,906	1,270,313	358,791	21,709,714	18,551,850	22,068,505
2081	22,068,505	3,149,272	43,067,846	1,287,046	364,130	21,995,381	19,137,116	22,359,511
2082	22,359,511	2,825,239	43,557,682	1,301,684	368,932	22,245,217	19,674,616	22,614,149
2083	22,614,149	2,503,926	43,960,472	1,313,721	373,133	22,450,530	20,156,118	22,823,663
2084	22,823,663	2,181,003	44,265,793	1,322,845	376,590	22,606,024	20,583,972	22,982,614
2085	22,982,614	1,866,344	44,422,734	1,327,535	379,213	22,685,528	20,901,311	23,064,741
2086	23,064,741	1,583,764	44,458,086	1,328,591	380,568	22,703,055	21,138,172	23,083,623



Year	RCA Assets Beginning of Year (\$)	Net Contributions (\$)	Total Benefit Payments (\$)	Expenses (\$)	Investment Income (\$)	Transfer To/From RTA (\$)	Transfer To/From Reserve (\$)	RCA Assets End of Year (\$)
2087	23,083,623	1,337,450	44,387,535	1,326,483	380,880	22,666,569	21,292,945	23,047,449
2088	23,047,449	1,121,838	44,194,093	1,320,702	380,283	22,567,256	21,345,509	22,947,539
2089	22,947,539	923,895	43,898,259	1,311,861	378,634	22,415,743	21,338,686	22,794,377
2090	22,794,377	743,496	43,488,345	1,299,611	376,107	22,205,925	21,250,083	22,582,032
2091	22,582,032	584,492	42,955,874	1,283,699	372,604	21,933,484	21,073,050	22,306,088
2092	22,306,088	453,124	42,348,727	1,265,555	368,050	21,623,116	20,855,070	21,991,166
2093	21,991,166	345,067	41,666,786	1,245,176	362,854	21,274,554	20,575,729	21,637,408
2094	21,637,408	265,114	40,913,651	1,222,669	357,017	20,889,652	20,233,798	21,246,669
2095	21,246,669	200,031	40,099,274	1,198,332	350,570	20,473,518	19,850,907	20,824,088
2096	20,824,088	150,765	39,207,496	1,171,682	343,597	20,017,791	19,404,325	20,361,388
2097	20,361,388	110,433	38,270,993	1,143,695	335,963	19,539,362	18,942,867	19,875,325
2098	19,875,325	83,940	37,287,740	1,114,311	327,943	19,037,054	18,442,785	19,364,997
2099	19,364,997	63,108	36,253,201	1,083,395	319,522	18,508,537	17,908,491	18,828,059
2100	18,828,059	46,241	35,175,464	1,051,188	310,663	17,957,994	17,352,352	18,268,657
2101	18,268,657	33,471	34,053,887	1,017,671	301,433	17,385,063	16,769,430	17,686,496
2102	17,686,496	23,135	32,888,155	982,834	291,827	16,789,581	16,161,359	17,081,408
2103	17,081,408	15,535	31,678,236	946,677	281,843	16,171,535	15,527,970	16,453,378
2104	16,453,378	9,578	30,424,350	909,206	26,116	-	-	-



Refundable Tax Account

Year	RTA Assets Beginning of Year (\$)	Contributions to RTA (\$)	Transfer To/From RCA (\$)	Transfer From Reserve (\$)	RTA Assets End of Year (\$)
2007	9,404,000	2,212,000	(527,000)	-	11,089,000
2008	11,089,000	3,070,000	(381,000)	-	13,778,000
2009	13,778,000	3,185,000	(615,000)	-	16,348,000
2010	16,348,000	3,014,000	(35,000)	-	19,327,000
2011	19,327,000	3,130,000	40,000	-	22,497,000
2012	22,497,000	3,180,000	(436,000)	-	25,241,000
2013	25,241,000	3,334,000	(1,020,000)	-	27,555,000
2014	27,555,000	3,951,000	(1,985,000)	-	29,521,000
2015	29,521,000	5,024,000	(1,147,000)	-	33,398,000
2016	33,398,000	3,972,000	(1,999,000)	-	35,371,000
2017	35,371,000	3,641,000	(2,415,000)	-	36,597,000
2018	36,597,000	3,316,000	(3,372,000)	-	36,541,000
2019	36,541,000	2,839,000	(3,508,000)	-	35,872,000
2020	35,872,000	2,527,000	(3,282,000)	-	35,117,000
2021	35,117,000	1,694,000	(3,625,000)	-	33,186,000
2022	33,186,000	2,053,000	-	-	35,239,000
2023	35,239,000	3,224,000	(10,762,000)	-	27,701,000
2024	27,701,000	2,453,525	(5,824,014)	5,836,834	30,167,345
2025	30,167,345	2,430,818	(6,112,718)	4,011,299	30,496,744
2026	30,496,744	2,490,701	(6,409,911)	4,221,837	30,799,372
2027	30,799,372	2,545,649	(6,729,297)	4,508,028	31,123,751
2028	31,123,751	2,602,655	(7,066,021)	4,805,441	31,465,827
2029	31,465,827	2,659,219	(7,482,709)	5,245,823	31,888,160
2030	31,888,160	2,717,119	(7,859,252)	5,525,645	32,271,671
2031	32,271,671	2,765,692	(8,299,452)	5,980,287	32,718,199
2032	32,718,199	2,805,014	(8,758,662)	6,420,227	33,184,777



Year	RTA Assets Beginning of Year (\$)	Contributions to RTA (\$)	Transfer To/From RCA (\$)	Transfer From Reserve (\$)	RTA Assets End of Year (\$)
2033	33,184,777	2,843,454	(9,201,900)	6,809,381	33,635,713
2034	33,635,713	2,881,766	(9,635,283)	7,194,342	34,076,537
2035	34,076,537	2,916,479	(10,123,235)	7,701,981	34,571,762
2036	34,571,762	2,956,426	(10,573,537)	8,075,585	35,030,236
2037	35,030,236	2,998,899	(10,998,866)	8,432,860	35,463,129
2038	35,463,129	3,046,682	(11,426,531)	8,814,656	35,897,937
2039	35,897,937	3,094,056	(11,841,766)	9,170,120	36,320,346
2040	36,320,346	3,141,559	(12,238,454)	9,500,553	36,724,004
2041	36,724,004	3,192,513	(12,605,612)	9,786,917	37,097,823
2042	37,097,823	3,253,051	(12,959,332)	10,066,170	37,457,711
2043	37,457,711	3,317,688	(13,311,394)	10,351,705	37,815,711
2044	37,815,711	3,393,932	(13,608,780)	10,518,141	38,119,004
2045	38,119,004	3,474,601	(13,883,497)	10,688,618	38,398,725
2046	38,398,725	3,556,255	(14,134,325)	10,833,512	38,654,168
2047	38,654,168	3,643,004	(14,342,432)	10,911,750	38,866,490
2048	38,866,490	3,735,023	(14,521,139)	10,968,327	39,048,701
2049	39,048,701	3,829,667	(14,670,654)	10,993,509	39,201,222
2050	39,201,222	3,928,945	(14,805,169)	11,013,255	39,338,254
2051	39,338,254	4,031,908	(14,925,615)	11,016,415	39,460,961
2052	39,460,961	4,139,028	(15,035,506)	11,008,392	39,572,876
2053	39,572,876	4,249,558	(15,136,284)	10,989,351	39,675,501
2054	39,675,501	4,365,569	(15,231,749)	10,963,339	39,772,659
2055	39,772,659	4,485,160	(15,322,806)	10,930,305	39,865,319
2056	39,865,319	4,608,488	(15,413,778)	10,897,791	39,957,820
2057	39,957,820	4,735,070	(15,506,272)	10,865,223	40,051,841
2058	40,051,841	4,865,488	(15,601,176)	10,832,143	40,148,296
2059	40,148,296	4,999,409	(15,700,435)	10,801,876	40,249,146



Year	RTA Assets Beginning of Year (\$)	Contributions to RTA (\$)	Transfer To/From RCA (\$)	Transfer From Reserve (\$)	RTA Assets End of Year (\$)
2060	40,249,146	5,136,846	(15,805,567)	10,775,517	40,355,942
2061	40,355,942	5,278,143	(15,917,908)	10,753,869	40,470,046
2062	40,470,046	5,423,313	(16,038,496)	10,737,653	40,592,516
2063	40,592,516	5,572,526	(16,167,945)	10,726,890	40,723,986
2064	40,723,986	5,725,897	(16,306,435)	10,721,197	40,864,645
2065	40,864,645	5,883,428	(16,454,115)	10,720,688	41,014,646
2066	41,014,646	6,045,372	(16,610,760)	10,724,507	41,173,766
2067	41,173,766	6,211,753	(16,776,265)	10,732,644	41,341,897
2068	41,341,897	6,382,687	(16,950,396)	10,744,614	41,518,802
2069	41,518,802	6,558,361	(17,132,743)	10,759,647	41,704,068
2070	41,704,068	6,738,851	(17,323,165)	10,777,794	41,897,547
2071	41,897,547	6,924,282	(17,521,848)	10,799,440	42,099,422
2072	42,099,422	7,114,825	(17,729,581)	10,825,820	42,310,486
2073	42,310,486	7,310,603	(17,948,121)	10,859,542	42,532,509
2074	42,532,509	7,511,757	(18,179,950)	10,903,684	42,768,001
2075	42,768,001	5,117,642	(20,100,268)	16,906,830	44,692,205
2076	44,692,205	4,807,803	(20,384,549)	15,892,777	45,008,235
2077	45,008,235	4,486,800	(20,703,360)	16,540,585	45,332,260
2078	45,332,260	4,161,104	(21,046,403)	17,233,688	45,680,650
2079	45,680,650	3,819,468	(21,391,940)	17,923,758	46,031,935
2080	46,031,935	3,481,433	(21,709,714)	18,551,850	46,355,505
2081	46,355,505	3,149,272	(21,995,381)	19,137,116	46,646,511
2082	46,646,511	2,825,239	(22,245,217)	19,674,616	46,901,149
2083	46,901,149	2,503,926	(22,450,530)	20,156,118	47,110,663
2084	47,110,663	2,181,003	(22,606,024)	20,583,972	47,269,614
2085	47,269,614	1,866,344	(22,685,528)	20,901,311	47,351,741
2086	47,351,741	1,583,764	(22,703,055)	21,138,172	47,370,623



Year	RTA Assets Beginning of Year (\$)	Contributions to RTA (\$)	Transfer To/From RCA (\$)	Transfer From Reserve (\$)	RTA Assets End of Year (\$)
2087	47,370,623	1,337,450	(22,666,569)	21,292,945	47,334,449
2088	47,334,449	1,121,838	(22,567,256)	21,345,509	47,234,539
2089	47,234,539	923,895	(22,415,743)	21,338,686	47,081,377
2090	47,081,377	743,496	(22,205,925)	21,250,083	46,869,032
2091	46,869,032	584,492	(21,933,484)	21,073,050	46,593,088
2092	46,593,088	453,124	(21,623,116)	20,855,070	46,278,166
2093	46,278,166	345,067	(21,274,554)	20,575,729	45,924,408
2094	45,924,408	265,114	(20,889,652)	20,233,798	45,533,669
2095	45,533,669	200,031	(20,473,518)	19,850,907	45,111,088
2096	45,111,088	150,765	(20,017,791)	19,404,325	44,648,388
2097	44,648,388	110,433	(19,539,362)	18,942,867	44,162,325
2098	44,162,325	83,940	(19,037,054)	18,442,785	43,651,997
2099	43,651,997	63,108	(18,508,537)	17,908,491	43,115,059
2100	43,115,059	46,241	(17,957,994)	17,352,352	42,555,657
2101	42,555,657	33,471	(17,385,063)	16,769,430	41,973,496
2102	41,973,496	23,135	(16,789,581)	16,161,359	41,368,408
2103	41,368,408	15,535	(16,171,535)	15,527,970	40,740,378
2104	40,740,378	9,578	(40,740,378)	-	-



Reserve Fund

Year	Reserve Fund at Beginning of Year (\$)	Total Contributions (\$)	Transfer from RCA/RTA (\$)	Total Benefit Payments (\$)	Expenses (\$)	Investment Income (\$)	Reserve Fund at End of Year (\$)
2007	27,370,000	2,167,000	0	0	0	252,000	29,789,000
2008	29,789,000	3,364,000	0	0	0	(6,571,000)	26,582,000
2009	26,582,000	3,358,000	0	0	0	4,332,000	34,272,000
2010	34,272,000	3,317,000	0	0	0	3,525,000	41,114,000
2011	41,114,000	4,647,000	0	0	0	241,000	46,002,000
2012	46,002,000	6,552,000	0	0	0	6,328,000	58,882,000
2013	58,882,000	6,827,000	0	0	0	12,256,000	77,965,000
2014	77,965,000	2,187,000	1,450,000	0	0	8,824,000	90,426,000
2015	90,426,000	3,075,000	400,000	0	0	9,508,000	103,409,000
2016	103,409,000	3,206,000	0	0	0	7,877,000	114,492,000
2017	114,492,000	2,549,000	0	0	0	12,530,000	129,571,000
2018	129,571,000	2,636,000	0	0	0	950,000	133,157,000
2019	133,157,000	2,078,000	0	0	0	18,372,000	153,607,000
2020	153,607,000	1,779,000	0	0	0	3,882,000	159,268,000
2021	159,268,000	1,419,000	0	0	0	26,007,000	186,694,000
2022	186,694,000	2,430,000	0	0	0	-10,753,000	178,371,000
2023	178,371,000	3,365,000	0	0	0	17,820,000	199,556,000
2024	199,556,000	3,961,839	(11,673,669)	0	0	11,285,161	203,129,332
2025	203,129,332	3,994,887	(8,022,598)	0	0	11,486,176	210,587,796
2026	210,587,796	4,094,767	(8,443,674)	0	0	11,906,613	218,145,502
2027	218,145,502	4,185,103	(9,016,055)	0	0	12,332,340	225,646,890
2028	225,646,890	4,278,822	(9,610,882)	0	0	12,755,008	233,069,838
2029	233,069,838	4,371,814	(10,491,645)	0	0	13,173,263	240,123,271
2030	240,123,271	4,467,003	(11,051,289)	0	0	13,570,889	247,109,874
2031	247,109,874	4,546,858	(11,960,574)	0	0	13,964,343	253,660,501
2032	253,660,501	4,611,505	(12,840,453)	0	0	14,332,958	259,764,511



Year	Reserve Fund at Beginning of Year (\$)	Total Contributions (\$)	Transfer from RCA/RTA (\$)	Total Benefit Payments (\$)	Expenses (\$)	Investment Income (\$)	Reserve Fund at End of Year (\$)
2033	259,764,511	4,674,701	(13,618,762)	0	0	14,676,525	265,496,975
2034	265,496,975	4,737,687	(14,388,683)	0	0	14,999,280	270,845,258
2035	270,845,258	4,794,756	(15,403,962)	0	0	15,300,358	275,536,410
2036	275,536,410	4,860,429	(16,151,170)	0	0	15,564,880	279,810,549
2037	279,810,549	4,930,256	(16,865,720)	0	0	15,806,168	283,681,253
2038	283,681,253	5,008,812	(17,629,312)	0	0	16,025,109	287,085,862
2039	287,085,862	5,086,696	(18,340,239)	0	0	16,217,932	290,050,251
2040	290,050,251	5,164,792	(19,001,106)	0	0	16,386,111	292,600,048
2041	292,600,048	5,248,561	(19,573,834)	0	0	16,531,234	294,806,009
2042	294,806,009	5,348,087	(20,132,339)	0	0	16,657,544	296,679,302
2043	296,679,302	5,454,352	(20,703,410)	0	0	16,765,415	298,195,659
2044	298,195,659	5,579,699	(21,036,281)	0	0	16,853,834	299,592,910
2045	299,592,910	5,712,320	(21,377,235)	0	0	16,935,787	300,863,783
2046	300,863,783	5,846,561	(21,667,024)	0	0	17,010,709	302,054,029
2047	302,054,029	5,989,179	(21,823,499)	0	0	17,081,350	303,301,059
2048	303,301,059	6,140,460	(21,936,653)	0	0	17,155,413	304,660,278
2049	304,660,278	6,296,057	(21,987,017)	0	0	17,235,880	306,205,198
2050	306,205,198	6,459,272	(22,026,510)	0	0	17,326,958	307,964,918
2051	307,964,918	6,628,545	(22,032,829)	0	0	17,430,234	309,990,868
2052	309,990,868	6,804,653	(22,016,784)	0	0	17,548,609	312,327,346
2053	312,327,346	6,986,367	(21,978,701)	0	0	17,684,528	315,019,540
2054	315,019,540	7,177,091	(21,926,677)	0	0	17,840,619	318,110,573
2055	318,110,573	7,373,702	(21,860,610)	0	0	18,019,208	321,642,872
2056	321,642,872	7,576,455	(21,795,581)	0	0	18,222,677	325,646,424
2057	325,646,424	7,784,559	(21,730,445)	0	0	18,452,684	330,153,222
2058	330,153,222	7,998,969	(21,664,285)	0	0	18,711,048	335,198,954
2059	335,198,954	8,219,138	(21,603,751)	0	0	18,999,750	340,814,091



Year	Reserve Fund at Beginning of Year (\$)	Total Contributions (\$)	Transfer from RCA/RTA (\$)	Total Benefit Payments (\$)	Expenses (\$)	Investment Income (\$)	Reserve Fund at End of Year (\$)
2060	340,814,091	8,445,088	(21,551,033)	0	0	19,320,499	347,028,645
2061	347,028,645	8,677,383	(21,507,737)	0	0	19,674,990	353,873,281
2062	353,873,281	8,916,046	(21,475,305)	0	0	20,064,940	361,378,961
2063	361,378,961	9,161,355	(21,453,779)	0	0	20,492,093	369,578,630
2064	369,578,630	9,413,500	(21,442,394)	0	0	20,958,297	378,508,034
2065	378,508,034	9,672,485	(21,441,376)	0	0	21,465,554	388,204,697
2066	388,204,697	9,938,724	(21,449,014)	0	0	22,015,978	398,710,385
2067	398,710,385	10,212,258	(21,465,287)	0	0	22,611,908	410,069,264
2068	410,069,264	10,493,278	(21,489,228)	0	0	23,255,822	422,329,136
2069	422,329,136	10,782,089	(21,519,294)	0	0	23,950,405	435,542,336
2070	435,542,336	11,078,819	(21,555,587)	0	0	24,698,593	449,764,161
2071	449,764,161	11,383,672	(21,598,880)	0	0	25,503,486	465,052,439
2072	465,052,439	11,696,929	(21,651,639)	0	0	26,368,331	481,466,059
2073	481,466,059	12,018,792	(21,719,083)	0	0	27,296,432	499,062,200
2074	499,062,200	12,349,493	(21,807,368)	0	0	28,290,995	517,895,321
2075	517,895,321	8,413,516	(33,813,661)	0	0	29,235,367	521,730,543
2076	521,730,543	7,904,133	(31,785,554)	0	0	29,435,861	527,284,984
2077	527,284,984	7,376,398	(33,081,170)	0	0	29,732,109	531,312,321
2078	531,312,321	6,840,946	(34,467,377)	0	0	29,942,630	533,628,521
2079	533,628,521	6,279,289	(35,847,515)	0	0	30,056,602	534,116,897
2080	534,116,897	5,723,552	(37,103,701)	0	0	30,068,389	532,805,137
2081	532,805,137	5,177,472	(38,274,231)	0	0	29,979,648	529,688,026
2082	529,688,026	4,644,754	(39,349,233)	0	0	29,790,189	524,773,737
2083	524,773,737	4,116,509	(40,312,237)	0	0	29,500,221	518,078,230
2084	518,078,230	3,585,617	(41,167,944)	0	0	29,110,439	509,606,342
2085	509,606,342	3,068,311	(41,802,621)	0	0	28,621,568	499,493,600
2086	499,493,600	2,603,742	(42,276,344)	0	0	28,042,293	487,863,291



Year	Reserve Fund at Beginning of Year (\$)	Total Contributions (\$)	Transfer from RCA/RTA (\$)	Total Benefit Payments (\$)	Expenses (\$)	Investment Income (\$)	Reserve Fund at End of Year (\$)
2087	487,863,291	2,198,797	(42,585,890)	0	0	27,379,710	474,855,908
2088	474,855,908	1,844,326	(42,691,017)	0	0	26,641,431	460,650,648
2089	460,650,648	1,518,903	(42,677,372)	0	0	25,836,889	445,329,068
2090	445,329,068	1,222,324	(42,500,166)	0	0	24,970,646	429,021,873
2091	429,021,873	960,917	(42,146,099)	0	0	24,050,198	411,886,889
2092	411,886,889	744,946	(41,710,140)	0	0	23,084,669	394,006,363
2093	394,006,363	567,298	(41,151,458)	0	0	22,078,466	375,500,669
2094	375,500,669	435,854	(40,467,595)	0	0	21,038,551	356,507,479
2095	356,507,479	328,855	(39,701,815)	0	0	19,972,022	337,106,541
2096	337,106,541	247,862	(38,808,649)	0	0	18,883,389	317,429,142
2097	317,429,142	181,554	(37,885,735)	0	0	17,779,687	297,504,648
2098	297,504,648	138,000	(36,885,570)	0	0	16,662,785	277,419,863
2099	277,419,863	103,751	(35,816,983)	0	0	15,537,169	257,243,800
2100	257,243,800	76,021	(34,704,704)	0	0	14,406,624	237,021,740
2101	237,021,740	55,026	(33,538,860)	0	0	13,273,691	216,811,598
2102	216,811,598	38,034	(32,322,718)	0	0	12,141,539	196,668,453
2103	196,668,453	25,540	(31,055,940)	0	0	11,013,263	176,651,316
2104	176,651,316	15,747	40,740,378	0	0	9,892,120	227,299,561
2105	227,299,561	0	0	29,127,398	870,448	11,887,880	209,189,594
2106	209,189,594	0	0	27,788,426	830,434	10,912,412	191,483,146
2107	191,483,146	0	0	26,408,882	789,207	9,960,709	174,245,766
2108	174,245,766	0	0	24,990,727	746,827	9,036,385	157,544,597
2109	157,544,597	0	0	23,536,518	703,369	8,143,126	141,447,836
2110	141,447,836	0	0	22,049,490	658,930	7,284,658	126,024,074
2111	126,024,074	0	0	20,533,999	613,641	6,464,695	111,341,129
2112	111,341,129	0	0	18,995,678	567,670	5,686,872	97,464,653
2113	97,464,653	0	0	17,441,412	521,222	4,954,669	84,456,688



Year	Reserve Fund at Beginning of Year (\$)	Total Contributions (\$)	Transfer from RCA/RTA (\$)	Total Benefit Payments (\$)	Expenses (\$)	Investment Income (\$)	Reserve Fund at End of Year (\$)
2114	84,456,688	0	0	15,879,645	474,550	4,271,314	72,373,808
2115	72,373,808	0	0	14,320,286	427,950	3,639,690	61,265,262
2116	61,265,262	0	0	12,775,801	381,794	3,062,196	51,169,863
2117	51,169,863	0	0	11,261,033	336,526	2,540,576	42,112,879
2118	42,112,879	0	0	9,792,292	292,634	2,075,777	34,103,731
2119	34,103,731	0	0	8,387,084	250,641	1,667,819	27,133,824
2120	27,133,824	0	0	7,063,037	211,073	1,315,713	21,175,427
2121	21,175,427	0	0	5,836,716	174,425	1,017,430	16,181,716
2122	16,181,716	0	0	4,722,932	141,141	769,920	12,087,563
2123	12,087,563	0	0	3,733,898	111,585	569,184	8,811,264
2124	8,811,264	0	0	2,877,788	86,001	410,412	6,257,888
2125	6,257,888	0	0	2,158,138	64,495	288,185	4,323,439
2126	4,323,439	0	0	1,571,722	46,970	196,773	2,901,521
2127	2,901,521	0	0	1,109,324	33,152	130,485	1,889,529
2128	1,889,529	0	0	757,794	22,647	83,955	1,193,043
2129	1,193,043	0	0	500,426	14,955	52,376	730,038
2130	730,038	0	0	319,343	9,543	31,671	432,824
2131	432,824	0	0	196,880	5,883	18,559	248,620
2132	248,620	0	0	117,195	3,502	10,542	138,464
2133	138,464	0	0	67,454	2,016	5,808	74,803
2134	74,803	0	0	37,563	1,123	3,106	39,223
2135	39,223	0	0	20,242	605	1,613	19,989
2136	19,989	0	0	10,560	316	815	9,928
2137	9,928	0	0	5,320	159	403	4,852
2138	4,852	0	0	2,576	77	197	2,397
2139	2,397	0	0	1,185	35	100	1,276
2140	1,276	0	0	518	15	57	800



Year	Reserve Fund at Beginning of Year (\$)	Total Contributions (\$)	Transfer from RCA/RTA (\$)	Total Benefit Payments (\$)	Expenses (\$)	Investment Income (\$)	Reserve Fund at End of Year (\$)
2141	800	0	0	212	6	0	582
2142	582	0	0	77	2	0	503
2143	503	0	0	25	1	0	477
2144	477	0	0	7	0	0	470
2145	470	0	0	1	0	0	469



Required Contributions

Members are required to contribute 12.00% of their excess earnings for each year of service under the Income Tax Act. Employers make matching contributions. Half of these contributions are deposited in the RCA Fund. The other half are forwarded to Canada Revenue Agency and held in the Refundable Tax Account.

Employers are required to make additional contributions of 19.7% of the excess earnings to the Reserve Fund. The Reserve Fund was established to meet the liability of the Plan not covered by assets in the RCA Fund and the RTA.

The established employer contribution rate for the Reserve Fund of 19.7% of earnings is sufficient to meet the obligations of the current Plan members and those expected to become members over the next 50 years. Without actuarial experience gains, the fund is expected to be depleted of funds by 2145, when the last benefit payments expected to come due.

The recommended employer contribution rate for the Reserve Fund based on this valuation is to remain as 19.70% of excess earnings. This assumes the member contribution rate and the matching employer contribution rate to the RCA Fund/RTA will remain at 12.00% of excess earnings indefinitely.

Section 4: Actuarial Certificate

Actuarial Opinion, Advice and Certification for the Supplementary Retirement Plan for Public Service Managers

Opinion

This actuarial certification forms an integral part of the actuarial valuation report for the Plan as at December 31, 2023. I confirm that I have prepared an actuarial valuation of the Plan as at December 31, 2023 for the purposes outlined in the Introduction section to this report and consequently:


My advice on funding is the following:

- Contributions in the amounts as outlined in Section 3 of this report are recommended in order to fund the Plan in accordance with the assumptions and methods set out in this report.
- The next actuarial valuation for the purpose of developing funding requirements should be performed no later than as at December 31, 2026.

I hereby certify that, in my opinion:

- The contribution range as outlined in this report is expected to be sufficient to satisfy the Plan's funding requirements.
- For the purposes of the valuation:
 - The data on which this valuation is based are sufficient and reliable;
 - The assumptions used are appropriate; and
 - The actuarial cost methods and the asset valuation methods used are appropriate.

- This report and its associated work have been prepared, and my opinion given, in accordance with accepted actuarial practice in Canada and in compliance with the requirements outlined in subparagraphs 147.2(2)(a)(iii) and (iv) of the *Income Tax Act*.
- Notwithstanding the above certifications, emerging experience differing from the assumptions will result in gains or losses that will be revealed in subsequent valuations.



John Slipp, FCIA, FSA
Partner

Aon
Suite 1800, 600 – 3rd Avenue SW
Calgary, Alberta T2P 0G5

January 11, 2025

Appendix A: Assets

Asset Data

The Plan's assets are held and invested by Alberta Investment Management Corporation (AIMCo). The asset information presented in this report is based on the financial statements of the pension fund prepared by Alberta Treasury Board and Finance.

Employee contributions and matching employer contributions to the Plan are deposited into the Retirement Compensation Arrangement (RCA) trust fund. Half of these contributions are forwarded to the Canada Revenue Agency (CRA) to be held in a Refundable Tax Account (RTA). Employers also make additional contributions which are held in the government's Reserve Fund.

The assets in the RCA are invested. However, 50% of the realized investment income each year must be remitted to the RTA. This is offset by 50% of any benefits paid by the RCA. The amounts held in the RTA receive no investment income. The assets in the Reserve Fund are invested and no tax is paid on the investment income.

The assets in the RCA and the Reserve Fund are invested in a diversified portfolio in accordance with the Plan's Statement of Investment Policies and Procedures.

Tests of the sufficiency and reliability of the asset data were performed and the results were satisfactory. The tests included:

- A reconciliation of actual cash flow with expected cash flow from the previous actuarial report; and
- A reconciliation of any anticipated benefit payments (for retirees, terminated, or deceased members) against the financial statements of the pension fund for confirmation of payments.

Current Asset Mix

The composition of the assets as at December 31, 2023 is as follows:

	December 31, 2023
Fixed income and money market	33.5%
Canadian equities	14.0%
Foreign equities	32.4%
Private equities	0.7%
Inflation sensitive and alternative	19.4%
Total	100.0%



Target Asset Mix

The target asset mix of the Plan is contained in the Plan's Statement of Investment Policies and Procedures and is as follows:

	Minimum	Target	Maximum
Money Market and Fixed Income	25.0%	32.0%	45.0%
Cash and money market	0.0%	0.5%	5.0%
Fixed income (bonds and mortgages)	25.0%	31.5%	40.0%
Equity	35.0%	48.0%	60.0%
Canadian equities	10.0%	14.0%	20.0%
Global equities	25.0%	34.0%	40.0%
Private equity	0.0%	0.0%	5.0%
Hedge funds	0.0%	0.0%	5.0%
Inflation Sensitive and Alternative	12.5%	20.0%	30.0%
Real estate	7.5%	10.5%	15.0%
Infrastructure	5.0%	7.5%	15.0%
Real return bonds	0.0%	0.0%	5.0%
Private debt	0.0%	0.0%	5.0%
Timberlands	0.0%	<u>2.0%</u>	5.0%
		100.0%	

The long-term target asset mix applies to the assets held in the RCA Fund and the Reserve Fund. The assets held in the RTA are not covered in the Plan's Statement of Investment Policies and Procedures. The assets invested in the RCA Fund are different from the assets invested in the Reserve Fund. The RCA Fund is invested primarily in fixed income with a small amount invested in cash/money market. The Reserve Fund has a greater portion of investments in equities, with the remainder of assets invested in fixed income and inflation sensitive and alternative investments.



Reconciliation of Changes in Market Value of Assets

The table below reconciles changes in the adjusted market value of assets between December 31, 2021 and December 31, 2023.

RCA Fund

	2022	2023
Market Value of Assets, Beginning of Plan Year	\$ 11,017,000	\$ 880,000
Contributions During Plan Year	\$ 2,044,000	\$ 2,570,000
Benefit Payments During Plan Year		
Non-retired members	\$ (987,000)	\$ (544,000)
Retired members	(9,468,000)	(10,202,000)
Total	\$ (10,455,000)	\$ (10,746,000)
Transfers During Plan Year		
Transfer from RTA	\$ -	\$ 10,762,000
Transfer to Reserve Fund	-	-
Total	\$ -	\$ 10,762,000
Fees/Expenses		
Investment fees/expenses	\$ (38,000)	\$ (33,000)
Non-investment fees/expenses	(621,000)	(595,000)
Total	\$ (659,000)	\$ (628,000)
Investment Income	\$ (1,067,000)	\$ 576,000
Market Value of Assets, End of Plan Year	\$ 880,000	\$ 3,414,000



RTA Fund

	2022	2023
Market Value of Assets, Beginning of Plan Year	\$ 33,186,000	\$ 35,239,000
Contributions During Plan Year	\$ 2,053,000	\$ 3,224,000
Transfers During Plan Year		
Transfer to RCA	\$ -	\$ (10,762,000)
Transfer from Reserve Fund	-	-
Total	\$ -	\$ (10,762,000)
Market Value of Assets, End of Plan Year	\$ 35,239,000	\$ 27,701,000

Reserve Fund

	2022	2023
Market Value of Assets, Beginning of Plan Year	\$ 186,694,000	\$ 178,371,000
Contributions During Plan Year		
Employer	\$ 2,430,000	\$ 3,365,000
Total	\$ 2,430,000	\$ 3,365,000
Transfers During Plan Year		
Transfer to RTA	\$ -	\$ -
Total	\$ -	\$ -
Investment Income	\$ (10,753,000)	\$ 17,820,000
Market Value of Assets, End of Plan Year	\$ 178,371,000	\$ 199,556,000
Rate of Return, Net of Investment Fees/Expenses	-5.7%	9.9%



Total Market Value of Assets

	December 31, 2023	December 31, 2021
RCA Fund	\$ 3,414,000	\$ 11,017,000
RTA Fund	27,701,000	33,186,000
Reserve Fund	<u>199,556,000</u>	<u>186,694,000</u>
Total	\$ 230,671,000	\$ 230,897,000

Appendix B: Membership Data

Source of Data

This valuation was based on member data provided by APS as of December 31, 2023. Tests of the sufficiency and reliability of the member data were performed and the results were satisfactory. The tests included:

- A reconciliation of membership status against the membership status at the last valuation. This test was performed to ensure that all members were accounted for. A summary of this reconciliation follows on the next page;
- A reconciliation of birth, hire, and participation dates against the corresponding dates provided for the last valuation to ensure consistency of data;
- A reconciliation of credited service against the corresponding amount provided for the last valuation to ensure that no member accrued more than 2 years of credited service from December 31, 2021. This test also revealed any members who accrued less than two years of credited service;
- A reconciliation of earnings against the corresponding amounts provided for the last valuation to identify any unusual increases or decreases;
- A reconciliation of accrued benefits against the corresponding amounts provided for the last valuation to identify any unusual benefit accruals;
- A reconciliation of any stated benefit payments since December 31, 2021 (for retired, terminated, or deceased members) against the financial statements of the pension fund for confirmation of the payments; and
- A reconciliation of inactive member benefit amounts against the corresponding amounts provided for the last valuation to ensure consistency of data.

The following information was missing, and assumptions were made as follows with respect to such missing data:

- Annualization of Earnings: Since the data provided by APS did not include annualized earnings for some members, earnings were annualized using actual earnings and in-year service where required.
- Earnings: If earnings were available for 2018 to 2022, the most recent data was utilized and increased to 2023 using the salary increase assumptions from the previous valuation. Otherwise, the overall average of the group was utilized.

A copy of the administrator certification certifying the accuracy and completeness of the member data is included in Appendix E of this report.



Membership Summary

The table below reconciles the number of members as of December 31, 2023 with the number of members as of December 31, 2021 and the changes due to experience in the period.

	Potential				Retired &		Total
	Actives*	Active*	Pending	Deferred	HOD	Beneficiaries	
Members,							
December 31, 2021	431	403	33	161	103	1,378	2,509
Changes due to:							
New entrants	53	22	-	-	-	-	75
Return to active	152	(143)	-	(7)	(2)	-	-
Termination							
Non-vested	(5)	(5)		-	10	-	-
Deferred vested	(21)	(8)	(1)	30	-	-	-
Lump sum	(13)	(13)	(6)	(8)	(18)	-	(58)
Death							
No further benefits	-	-	-	-	-	(8)	(8)
Lump sum	-	(1)	-	-	-	-	(1)
Surviving beneficiary	(2)	(1)	-	(1)	-	4	-
Retirement	(50)	(23)	(2)	(20)	(4)	99	-
Termination							
From Unexpected	53	44	-	7	2	19	125
To Ineligible	(2)	(11)	(2)	-	(1)	-	(16)
To Pending	(3)	-	3	-	-	-	-
To Potential	(20)	20	-	-	-	-	-
To Unexpected	(10)	(88)	-	(3)	(3)	-	(104)
Data correction	-	-	-	33	(33)	-	-
Net change	132	(207)	(8)	31	(49)	114	13
Members,							
December 31, 2023	563	196	25	192	54	1,492	2,522

* An active member is one who is expected to have earnings in excess of the maximum earnings limit under the MEPP in 2024. A potential active member is one who is a member of the Management Employees Pension Plan and is not currently an active member of the Plan, but is expected to become an active member some time in the future.



Active Members¹

	December 31, 2023	December 31, 2021
Number	563	431
Average age	51.4	53.4
Average service	12.2	12.7
Average earnings	\$ 218,110	\$ 197,998
Proportion female	48.1%	48.3%

Potential Active Members

	December 31, 2023	December 31, 2021
Number	196	403
Average age	47.2	48.1
Average earnings	\$ 172,437	\$ 159,831
Proportion female	62.2%	53.6%

Pending Members²³

	December 31, 2023	December 31, 2021
Number	25	33
Average age	52.1	52.5
Average service	4.7	4.7
Average earnings	\$ 178,469	\$ 170,393
Proportion female	44.0%	45.5%

Deferred Vested Members

	December 31, 2023	December 31, 2021
Number	192	161
Average age	53.4	52.6
Average annual pension	\$ 5,691	\$ 5,857
Proportion female	50.5%	46.6%

¹ Includes 6 Suspended members, who are members that transferred to the PSPP but are still accruing combined pensionable service.

² Includes 1 Suspended member, who is a members that transferred to the PSPP but is still accruing combined pensionable service.

³ Members with frozen SRP service, but their employer is no longer a participating employer in the Plan.



Hold on Deposit Members

	December 31, 2023	December 31, 2021
Number	54	103
Average age	56.7	53.6
Average amount owing	\$ 7,519	\$ 6,937
Proportion female	35.2%	40.8%

Retired Members and Beneficiaries

	December 31, 2023	December 31, 2021
Number	1,492	1,378
Average age	70.3	69.0
Average annual pension	\$ 7,044	\$ 6,689
Proportion female	34.4%	32.9%



Active Membership Distribution

The following table provides a detailed summary of the active membership at the valuation date by years of credited service and by age group. For privacy reasons, average earnings are not shown for groups with one member.

Age	<5	5-10	10-15	15-20	20-25	Total
< 40	17 *	27 \$202,261	1 *			45 \$202,741
40-45	23 \$197,380	31 \$212,456	22 \$216,261	3 \$267,126		79 \$211,202
45-50	19 \$222,773	20 \$215,536	38 \$211,412	41 \$225,356	4 \$239,550	122 \$219,466
50-55	17 \$225,853	15 \$217,786	34 \$218,613	41 \$226,797	19 \$209,835	126 \$220,831
55-60	14 \$220,864	14 \$224,444	23 \$212,644	40 \$220,751	32 \$221,635	123 \$219,898
60-65	4 \$218,097	7 \$208,617	13 \$216,233	10 \$240,328	16 \$226,354	50 \$223,374
>=65	2 *	2 \$286,942	2 *	6 \$223,958	6 \$204,548	18 \$231,785
Total Count	96	116	133	141	77	563
Average Earnings	\$213,879	\$213,803	\$215,486	\$226,360	\$219,303	\$218,110



Deferred Vested/Retired Membership Distribution

The following table provides a detailed summary of the deferred vested/retired membership at the valuation date by age group. For privacy reasons, average pensions are not shown for groups with one member.

Age	Retired Members and	
	Beneficiaries	Deferred Vested Members
< 50	3	49
	\$3,133	\$2,806
50-55	3	76
	\$2,085	\$6,437
55-60	100	47
	\$10,334	\$7,101
60-65	234	13
	\$9,404	\$3,602
65-70	352	6
	\$8,397	*
70-75	413	1
	\$6,719	*
75-80	298	
	\$4,032	
≥80	89	
	\$3,685	
Total Count	1,492	192
Average Lifetime Pension	\$7,044	\$5,691

Appendix C: Going Concern Assumptions and Methods

Assumptions and Methods

A member's entitlements under a pension plan are generally funded during the period over which service is accrued by the member. The cost of each member's benefits is allocated in some fashion over the member's service. An actuarial valuation provides an assessment of the extent to which allocations relating to periods prior to a valuation date (often referred to as the actuarial liabilities) are covered by the plan's assets.

The going concern valuation provides an assessment of a pension plan on the premise that the plan continues on into the future indefinitely based on assumptions in respect of future events upon which a plan's benefits are contingent and methods that effectively determine the way in which a plan's costs will be allocated over the members' service. The true cost of a plan, however, will emerge only as experience develops, investment earnings are received, and benefit payments are made.

This appendix summarizes the going concern assumptions and methods that have been used for the going concern valuation of the Plan at the valuation date. The going concern assumptions and methods have been chosen to reflect our understanding of the Plan's funding objectives with due respect to accepted actuarial practice and regulatory constraints. For purposes of this valuation, the going concern methods and assumptions were reviewed and changes as indicated were made.



The actuarial assumptions and methods used in the current and previous valuations are summarized below and described on the following pages.

	December 31, 2023	December 31, 2021
Economic Assumptions		
Asset rate of return	RCA Fund: 3.30% Reservice Fund: 5.60%	RCA Fund: 1.50% Reservice Fund: 4.99%
Discount rate	5.10% per year	4.65% per year
Inflation rate	2.00% per year	Same
Productivity increases	0.75% per year	Same
Merit increases	0.5% per year	Same
Increases in earnings	2.75% per year	Same
Increases in maximum pension limit	\$3,610.00 in 2024; then 2.75% per year	\$3,420.00 in 2022; then 2.75% per year
Interest on member contributions	Inflation rate plus 2.0% per year	Same
Investment expenses	0.40%/0.20% per year in Reserve/RCA	Same
Non-investment expenses	Increase at 60% of Alberta CPI until 2041, proportion to benefits paid thereafter	Same
Margin for adverse deviation	0.37%/0.50% in Reserve/RCA (implicit in asset rate of return)	0.67%/0.50% in Reserve/RCA (implicit in asset rate of return)

	December 31, 2023	December 31, 2021
Demographic Assumptions		
Mortality table	95% of 2014 Canadian Public Pensioner Mortality Table with generational improvements using Scale MI-2017 (sex-distinct rates)	Same
Retirement rates	Rates following 2021 experience study for MEPP (Table A following)	Same
Termination rates	Rates following 2021 experience study for MEPP (Table B following)	Same
Disability rates	None	Same
Proportion in a relationship		
Non-retired proportion with pension partner	80%	Same
Non-retired pension partner age differential	Males two years older	Same
Retired members	Actual relationship status and ages are used	Same
Termination option election		
Deferred pension	100%	Same
Margin for adverse deviation	Included above	Same
Open group assumptions	Based on new entrant data between 2016-2023. Replaces decrementing actives such that active population remains relatively constant. (Table C following)	Based on new entrant data between 2016-2021. Replaces decrementing actives such that active population remains relatively constant.

	December 31, 2023	December 31, 2021
Methods		
Actuarial cost method – Liability	Projected accrued benefit	Same
Actuarial cost method – Contribution	Forecast with open group	Same
Asset valuation method	Market value of assets	Same

Table A—Retirement Rates

Age-based retirement rates are in accordance with the following table:

Age	Rate (%)	
	Not Eligible for an Unreduced Pension	Eligible for an Unreduced Pension
55	15.0	25.0
56	12.0	20.0
57 – 59	15.0	20.0
60 – 63		20.0
64		25.0
65		40.0
66 – 68		30.0
69		20.0
70		50.0
71		100.0

Table B—Termination Rates

Age-based termination rates are in accordance with the following table:

Age	Rate (%)
Under 35	10.0
35 – 39	7.5
40 – 44	6.0
45 – 54	5.0



Table C—New Entrant Profile

The new entrant profile based on new entrant data between 2016-2023 is in accordance with the following table:

Group	Age at Enrollment Date	Proportion Male	Weight	Total Credited Service (years)	Valuation Salary
1	52	50%	2%	1.02	\$337,000
2	55	50%	8%	1.08	\$279,000
3	50	50%	50%	1.84	\$207,000
4	47	50%	40%	1.33	\$184,000



Justification of Actuarial Assumptions and Methods

Margins for Adverse Deviations

Margins for conservatism or provisions for adverse deviation have been built into the going concern assumptions where appropriate.

The margins have been chosen so as to balance the need for financial security for existing Plan members against overly conservative contribution requirements that potentially result in intergenerational inequity among members and unnecessary financial strain on the Plan sponsor.

The actuary has discussed the Plan's experience with the Committee and compared it to the expected experience. This review indicates that there is a need for use of margins for adverse deviations. The margins for adverse deviations incorporated in the assumptions reflect this review and the Committee's desire to maintain safety cushions. The actuary has discussed with the Committee the implications of incorporating margins for adverse deviations and the Company is fully cognizant and supports incorporating margins for adverse deviations.

The going concern assumptions do not include margins for adverse deviations, except as noted below.

Economic Assumptions

Asset Rate of Return

We have used an asset rate of return of 3.30% per year for the RCA fund and 5.60% per year for the Reserve Fund.

The overall expected return ("best-estimate") for the RCA Fund is 3.90% per year and for the Reserve Fund is 6.01% per year. These best estimate returns are based on an inflation rate of 2.0% per year. The overall expected return was developed using best-estimate returns for each major asset class in which the pension fund is invested. A Monte Carlo simulation is performed over 30 years where the portfolio returns are projected assuming annual rebalancing. The results are used to develop an overall best-estimate rate of return for the entire pension fund. Gains from rebalancing and diversification are implicit to this return.

The overall expected return has been established based on the Committee's investment policy and its funding policy (whether formal or informal) and objectives. There may be some barriers to achieving this return such as inflation higher than expected, asset returns lower than expected, and assets and liabilities that are mismatched.



The following tables lays out the adjustments that have been made to the overall expected rate of return for each fund:

Development of Asset Rate of Return for Reserve Fund				
Overall expected return				6.07%
Non-investment expenses				0.00%
Investment expenses				
Passive	(1)	(0.10)%		
Actively managed	(2)	<u>(0.30)%</u>		
			(1)+(2)	(0.40)%
Additional returns due to active management				0.30%
Margin for adverse deviations				(0.37)%
Asset Rate of Return				5.60%

Development of Asset Rate of Return for RCA Fund				
Overall expected return				3.90%
Non-investment expenses				0.00%
Investment expenses				
Passive	(1)	(0.10)%		
Actively managed	(2)	<u>(0.10)%</u>		
			(1)+(2)	(0.20)%
Additional returns due to active management				0.10%
Margin for adverse deviations				(0.50)%
Asset Rate of Return				3.30%

Discount Rate

The discount rate used to determine the actuarial liability is assumed to be 5.10% per year. The rate was derived from the total fund (RCA, RTA and Reserve Fund) net asset rate of return. The discount rate does not include a margin for adverse deviation. The discount rate reflects the taxation implications of the RCA.

Inflation Rate

The inflation rate assumption reflects our best estimate of future inflation considering current economic and financial market conditions.

Productivity Increases

The productivity increase assumption reflects our best estimate of future increases considering current economic and financial market conditions, and is consistent with historical real economic growth.



Merit Increases

We assume rates of increase as a result of individual employee merit and promotion of 0.5% per year. The merit and promotion scale is based on the 2021 experience study for MEPP over the years 2011 to 2020 and Committee input.

Increases in Earnings

The assumption for increases in earnings reflects the assumed rate of inflation plus allowances for the effect of productivity growth.

Increases in the Maximum Pension Limit

Pensions are limited to the maximum limits under the *Income Tax Act*. The *Income Tax Act* specifies both a dollar limit, and in addition pensions cannot exceed 2% of indexed highest average compensation per year of credited service. The assumed increase in the dollar limit reflects the assumed rate of inflation plus the productivity increase assumption.

Increases in the Member Contributions

Interest is credited on member contributions with the rate credited by chartered banks on five-year personal fixed term deposits. The assumption for interest on member contributions reflects our expected increase in these rates, and is consistent with historical rates.

Expenses

Since the discount rate has been established net of investment expenses, no explicit assumption is required for investment expenses.

Administrative expenses are assessed to the Plan as a charge on a per member basis. It was assumed that expenses will increase each year in absolute dollar terms at 60% of the assumed rate of increase in the Consumer Price Index for Alberta until 2041. Each year thereafter, expenses are assumed to be proportional to benefits paid.

Demographic Assumptions

Mortality

At the current valuation, we are using the 2014 Canadian Public Pensioner Mortality Table, with pension size adjustments factor and with mortality improvements in accordance with MI-2017.

The 2021 experience study for MEPP developed a size adjustment to the mortality table of 95%. This is considered a best-estimate of the rates of mortality.

Future improvements to mortality are reflected in the mortality rates assumption using the 2014 Canadian Pensioner's Mortality Table combined with mortality improvement Scale MI-2017.

Retirement

Retirement rates are typically developed taking into account the past experience of the Plan. Accordingly, the rates of retirement have been developed based on the 2021 experience study for MEPP and are considered best-estimate rates of retirement based on the Plan provisions.

As in the previous valuation, all members in receipt of disability benefits from an employer's approved long-term disability plan are assumed to continue to be disabled until termination or retirement. As such, they are included as active members.

Deferred members are assumed to retire at age 60 or their current age if older. The previous valuation assumed deferred members would retire at age 55 or their current age if older.

Termination of Employment

A member's benefit entitlement under the Plan is affected by whether the member terminates employment prior to retirement for reasons other than death. In order to account for this in the calculation of the actuarial liability, an assumption regarding the probability that a member will terminate employment for reasons other than death has been made.

The termination rates were developed based on the 2021 experience study for MEPP and are considered to be best estimate.

Option Elections on Termination

We have assumed all members will elect a deferred annuity on termination. Given the commuted value payable on termination is based on the going concern assumptions, we do not expect this to result in material gains or losses.

Disability

If an active Plan member becomes disabled, contributory service continues to accrue until unreduced pension commencement age, but employee contributions are waived. Since this benefit is substantially the same as the benefit that accrues to an active member, no disability assumption was used. Use of an actual disability assumption in this case would reduce liabilities slightly, so a nil disability incidence assumption represents a small element of conservatism. The disability assumption has very little impact on the valuation results.



Proportion of Members with Pension Partners and Pension Partner Age Differential

These assumptions are relevant to the valuation of benefits since there is a subsidized joint and survivor benefit available for members with a pension partner. The proportion of members who will have a pension partner and the pension partner age difference assumptions are based on the 2021 experience study for MEPP.

The pension partner age difference assumption has very little impact on the valuation results.

New Entrant Profile

The new entrant profile was developed by taking the average profile observed with new entrants coming into the plan in 2018 through 2023, and adjusting base earnings to 2024.



Other

Actuarial Cost Method

An actuarial cost method is a technique used to allocate in a systematic and consistent manner the expected cost of a pension plan over the years of service during which Plan members earn benefits under the Plan. By funding the cost of a pension plan in an orderly and rational manner, the security of benefits provided under the terms of the Plan in respect of service that has already been rendered is significantly enhanced.

In order to determine the employer contributions required to be made to the Reserve Fund, a forecast actuarial cost method has been employed. Under this method, projections of the expected future cash flows, expected future earnings of both existing and potential members and expected future investment income for the RCA Fund and the Reserve Fund are determined. An open group model is used. That is, those entitled to a benefit will be replaced on termination, retirement or death. The new entrants were based on new members entering the Plan between 2018 to 2023. The employer contribution rate is then determined as the constant percentage of excess earnings which will exhaust all the assets at the time the last benefit is expected to be paid.

The RCA Fund receives all required employee contributions and pays all Plan expenses and benefits. At the end of each year, a transfer is made to the RTA in an amount equal to 50% of the difference between net investment income and benefits paid. Administrative expenses cannot be included in this calculation. If this difference is negative, a transfer from the RTA to the RCA Fund is made. The RCA Fund will receive contributions as long as the projections indicate that there are active members. In this projection, the last active member retires in 2104. It is assumed that the RCA Fund will pay all expenses and benefits for as long as it has sufficient funds to do so. In the year in which the RCA Fund can no longer pay all expected expenses and benefits, the shortfall will require annual transfers from the Reserve Fund to the RCA and refundable tax account.

It is assumed that the RCA Fund will be wound-up when the last remaining active member retires. At that time, any remaining assets in the RCA and the entire balance of the RTA is transferred to the Reserve Fund. This occurs at the end of 2104 in this projection. The Reserve Fund is then responsible for the payment of all remaining benefits and expenses. As there are no active members, no further contributions occur.

With respect to the accrued benefit liability, the projected accrued benefit method prorated on service has been used. Under the projected accrued benefit actuarial cost method, the actuarial present value of benefits in respect of service prior to the valuation date, but based on earnings projected to retirement, is compared with the actuarial asset value, revealing either an actuarial excess or an unfunded actuarial liability.

When calculating the actuarial present value of benefits at the valuation date, the present value of all retirement, withdrawal and pre-retirement death benefits are included. For each member, the retirement, withdrawal and pre-retirement death benefits for a particular period of service are first projected each year into the future taking into account future vesting, early retirement entitlements and minimum pension/value entitlements. These projected benefits for each future year are then capitalized, multiplied by the probability of the member leaving the Plan in that year and discounted with interest and survivorship to the valuation date. The actuarial present value of benefits for the particular period of service is then determined by summing the present values of these projected benefits.



Asset Valuation Method

The actuarial value of assets (AVA) consists of the value of the assets contained in the RCA and the Reserve Fund, determined at market value plus the amount held by the federal government in the RTA. The same methodology was used in the previous valuation.

Other Methodologies

We have prepared a list of additional assumptions and methods used in the valuation of the Plan. This list is intended to assist users of this report in understanding the specific benefits valued. Small differences in methods and assumptions in a plan of this size can sometimes have effects in the millions of dollars. Appendix B of the report deals with data omissions so they will not be repeated here.

- It is administrative practice for the Plan that indexation of deferred and immediate pensions commences January 1 of the year following termination or retirement;
- Contributions are based on earnings in excess of the maximum earnings limit described earlier in this report;
- The excess earnings for calculating the contribution percentage is nil for members with 35 years of combined pensionable service; and
- For deferred benefits on termination, the pensions were deferred to the first unreduced age. Deferred pensioners over age 60 at the valuation date were assumed to retire on July 1, 2024.

Appendix D: Summary of Plan Provisions

This funding valuation was based on Plan design information provided by the Committee as of December 31, 2023. The following is a summary of the main provisions of the Plan.

Eligibility for Membership	
	Plan members include active MEPP members who are employed by an employer who participates in the Plan. Active MEPP members who have not yet accrued 35 years of combined pensionable service commence participating in the Plan on the later of July 1, 1999, the date their employer becomes a participating employer, and the date on which their earnings first exceed their pensionable earnings.
Normal Retirement	
Eligibility	Age 60 with at least 5 years of combined pensionable service under MEPP.
Benefit	<p>The annual pension payable at retirement is determined as:</p> <ul style="list-style-type: none"> a. 2.0% of highest average earnings, less b. 2.0% of highest average pensionable earnings; multiplied by c. years of pensionable service. <p>The member's highest average pensionable earnings is the average of the member's annual earnings in the five consecutive years of combined pensionable service in which such average is the highest. Pensionable earnings are limited by an annual salary cap which is the earnings amount based on which the MEPP benefit earned for the year in question would equal the defined benefit limit under the <i>Income Tax Act</i>.</p> <p>The member's highest average earnings is the average of the member's annual earnings in the five consecutive years of combined pensionable service in which such average is the highest. These earnings are not limited by an annual salary cap.</p>



Early Retirement

Eligibility	Permitted for a member who has attained the age of 55 and accrued five years of combined pensionable service under MEPP.
Benefit	<p>A member's pension is reduced by 3% for each year that the early retirement age precedes the earlier of age 60 and the age at which 80 points under MEPP would be reached, based on combined pensionable service to the date of termination.</p> <p>No reduction is applied if the member has accrued 80 points under MEPP (that is, age plus combined pensionable service is greater than or equal to 80) or has attained age 60.</p>

Postponed Retirement

Eligibility	Any time after a vested member's normal retirement date but not later than December 31 of the year in which the member attains age 71. Members are vested with at least five years of combined pensionable service.
Benefit	Normal retirement benefit accrued to postponed retirement date. The benefit is actuarially increased from the later of the member's termination date and age 65 up to the postponed retirement date.

Termination of Participation Prior to Pension Eligibility

Eligibility	Members are vested following completion of five years of combined pensionable service.
Benefit	<p>Non vested members receive a refund of their contributions with interest.</p> <p>Vested members are eligible to receive a deferred pension, payable upon commencement of the MEPP pension. In lieu of electing to receive a deferred pension, a vested member may elect to be paid the commuted value of the pension, plus excess contributions. The</p>



member's benefit election under the Plan will be the same as the benefit election made in respect of their benefit from the MEPP, except that the commuted value of the Plan benefit cannot be transferred to a registered retirement savings vehicle.

Preretirement Death

Eligibility

Members are vested following completion of five years of combined pensionable service.

Benefit

The pension partner, and if no pension partner, the beneficiaries of a non-vested member receive the member's contributions with interest.

If the member was vested at date of death, the surviving pension partner will receive either 100% of commuted value or an immediate unreduced pension for life determined as though the member had, immediately before death, terminated and retired with a total disability pension having elected a J&S 100% Guaranteed at Least 10 Years optional form pension, plus excess contributions. The pension partner also has the option to select an actuarially equivalent alternative form of pension. If there is no surviving pension partner, the beneficiary will receive 100% of commuted value plus excess contributions.

Disability

Eligibility

Qualification for benefits under employer-sponsored long-term disability plan or where the member is receiving temporary total or temporary partial disability benefits under the *Workers' Compensation Act*.

Benefit

Participation in the Plan continues, but no pension is payable concurrently with the LTD or WCB benefit. For the purpose of determining contributions and benefits, earnings will be the earnings immediately preceding disability,

increased by subsequent general wage increases applicable for that member's employment class.

Contributions

Members must contribute on their regular earnings in excess of the maximum earnings level as determined from the maximum defined benefit pension limit for each year of service under the Income Tax Act, based upon the employee contribution rate to the MEPP. These contributions are remitted to the RCA Fund. Participating employers will make matching contributions to the Plan, which will be remitted to the RCA Fund. Half of the member and employer contributions to the RCA Fund are remitted to Canada Revenue Agency and held in the RTA.

In addition, participating employers will make contributions to the Reserve Fund, with the contribution rate established by actuarial valuations at least once every three years.

Contribution Rate History

Valuation date: December 31, 2002
Members and employers: 7.75% of excess earnings up to March 31, 2003
Employers: 6.8% of excess earnings effective July 1, 2003 to Reserve Fund

Valuation date: December 31, 2002
Members and employers: 9.5% of excess earnings effective April 1, 2003
Employers: 5.8% of excess earnings effective July 1, 2005 to Reserve Fund

Valuation date: December 31, 2004
Members and employers: 10.5% of excess earnings effective July 1, 2005
Employers: 11.4% of excess earnings effective April 1, 2007 to Reserve Fund

Valuation date: December 31, 2009
 Members and employers: 11.16% of excess earnings effective January 1, 2011
 Employers: 22.6% of excess earnings effective April 1, 2011 to Reserve Fund

Valuation date: December 31, 2012
 Members and employers: 12.80% of excess earnings effective January 1, 2014
 Employers: 2.4% of excess earnings effective April 1, 2014 to March 31, 2015 to Reserve Fund, 9.9% of excess earnings effective April 1, 2015 to Reserve Fund

Valuation date: December 31, 2015
 No change

Valuation date: December 31, 2018
 No change

Valuation date: December 31, 2021
 Members and employers: 12.00% of excess earnings effective April 1, 2023
 Employers: 19.7% of excess earnings effective April 1, 2022 to Reserve Fund

Normal Form of Payment

Member without pension partner at retirement	The normal form of pension is a lifetime pension guaranteed for 120 months. If the member dies before 120 monthly payments are made, the balance of the 120 payments are payable to the member's beneficiary or estate.
Member with pension partner at retirement	The normal form of pension is a joint form with a 2/3 survivor pension payable to the pension partner.

Cost-of-Living Increases

Cost-of-living increases based on 60% of the increase in the Alberta CPI apply to both deferred pensions and pensions-in-payment.

Definitions

Earnings	The participant's actual earnings.
Pensionable earnings	The member's earnings limited each year to the amount as determined from the maximum defined benefit pension limit under the <i>Income Tax Act</i> .
Excess earnings	The difference between the member's earnings not limited by the maximum defined benefit pension limit under the Income Tax Act, and pensionable earnings.
Pensionable service	<p>Pensionable service in the Plan equals the sum of periods of current service where contributions were made directly to MEPP, and subject to certain conditions purchased periods of leave without salary, which occurred on and after the later of the date the employer commenced participation in the Plan and the date the member commenced participation in MEPP.</p> <p>Eligible periods of leave without salary are limited to periods of purchased leave without salary under MEPP where the cost was shared between the member and employer. For periods of leave without salary that occurred prior to the member commencing participation in the Plan, the contributions need not have been made while the leave occurred. For periods of leave without salary that occurred while the member was participating in the Plan, contributions must have been made while the leave occurred.</p> <p>Combined pensionable service, as defined under MEPP, cannot exceed 35 years. Combined pensionable service (pensionable service in MEPP plus pensionable service in the Public Service Pension Plan) is used to determine</p>



eligibility for benefits, vesting and determination
of highest average salary.

A copy of the administrator certification certifying the accuracy and completeness of the Plan provisions summarized in this report is included in Appendix E of this report.



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