MEPP
management employees pension plan

Management Employees Pension Plan (MEPP) Board (MEPB)
Summary of Key Highlights/Findings in the 2012 MEPP Actuarial Valuation

The Management Employees Pension Plan (MEPP) provides a pension that is based on a participant's average earnings and years of pensionable service. The pension is financed by contributions from plan participants and employers and also from plan investment earnings.

Every one to three years, an actuarial valuation is conducted for the MEPP. The purpose of the actuarial valuation is to assess the financial position of the pension plan and to determine the contributions to fully fund the pension plan benefits earned to the valuation date as well as pensions that are earned for future service.

The MEPP recently completed an actuarial valuation. The actuarial valuation was prepared as at December 31, 2012. The results of the actuarial valuation indicated that contributions would change as follows:

	Participants (Members)	Employers
2013	11.16% of pay	19.14% of pay
2014	12.80% of pay	21.85% of pay

The 2014 contribution rate change was approved by the President of Treasury Board and Minister of Finance.

The total cost for MEPP determined at the previous actuarial valuation, December 31, 2009, was 30.3% of pensionable earnings. From the results of the December 31, 2012 actuarial valuation, the total cost for the plan increased from 30.3% of pensionable earnings to 34.65% of pensionable earnings.

The financial position of the MEPP is assessed by comparing the Plan assets (what the Plan has in funds and investments) to the liabilities (what the Plan needs to pay out). The liabilities for the MEPP pensions earned to December 31, 2012 are greater than the assets as at December 31, 2012. The unfunded liability is $388,215,000, determined as the excess of the liabilities ($3,249,398,000) over the assets ($2,861,183,000). Liabilities supported by assets are 88%.

The unfunded liability increased from $343,657,000 on December 31, 2009 to $388,215,000 on December 31, 2012. A significant reason for the increase in the unfunded liability is that the investment earnings were less than expected. The investment earnings on the actuarial value of assets were expected to be 6.5% per annum while the actual investment earnings on the actuarial value of assets averaged 4.9% per annum over the three years 2010 to 2012.

A portion of the 34.65% total cost is required to pay for the unfunded liability. The December 31, 2012 actuarial valuation determined that 12.3% of pensionable earnings would be required to pay for the unfunded liability. The difference (21.65%) would be required to pay for pensions earned.

More detailed actuarial valuation results can be found in the December 31, 2012 actuarial valuation report, attached.

Approved: September 6, 2013

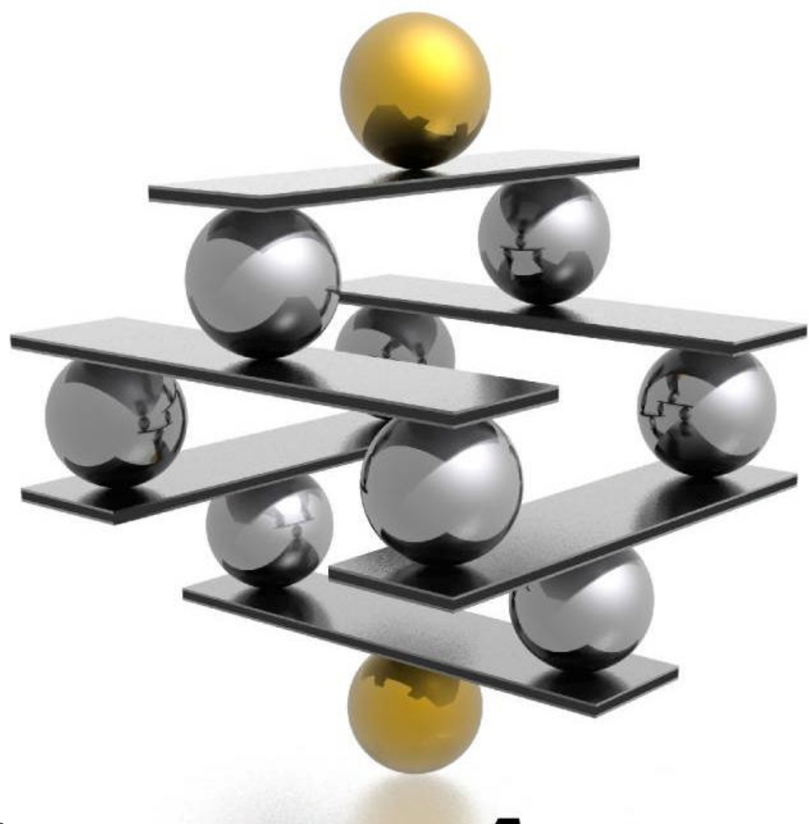
4010-V01

Aon Hewitt

Actuarial Valuation as at December 31, 2012

Management Employees Pension Plan

September 19, 2013



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Executive Summary

An actuarial valuation has been prepared for the Management Employees Pension Plan (the "Plan") as at December 31, 2012 for the primary purpose of establishing a funding recommendation 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, 2015.

Summary of Principal Results (000's)[1]

	December 31, 2012		December 31, 2009	
	Going Concern	Solvency	Going Concern	Solvency
Assets	$ 2,861,183	$ 2,976,350	$ 2,423,101	$ 2,297,715
Liabilities	3,249,398	5,156,716	2,766,758	3,655,024
Excess/(Deficit)	**$ (388,215)**	**$ (2,180,366)**	**$ (343,657)**	**$ (1,357,309)**
Funded Ratio	0.8805	0.5772	0.8758	0.6286

Contribution Requirements

Considering the funding status of the Plan, the contributions recommended in this report, as a percentage of pensionable earnings, are as follows:

	Participants	Employer	Total*
January 1, 2013 to December 31, 2013	11.16%	19.14%	30.30%
January 1, 2014 to December 31, 2014	12.80%	21.85%	34.65%
January 1, 2015 to December 31, 2015	To be determined	To be determined	33.21%
January 1, 2016 to December 31, 2016	To be determined	To be determined	33.89%
January 1, 2017 to December 31, 2017	To be determined	To be determined	29.09%
January 1, 2018 to December 31, 2024	To be determined	To be determined	28.69%
January 1, 2025 to December 31, 2027	To be determined	To be determined	26.59%
January 1, 2028 and after	To be determined	To be determined	23.69%

** Total contribution rates in the post-2014 period are based on a participant rate of 12.80% of pensionable earnings. The total contribution rate is subject to change if the participant contribution rate changes.*

[1] Net of all adjustments such as estimated wind up expenses, where applicable.

Basic Membership Information

As at December 31, 2012 the basic membership information is as follows:

	Active	Deferred	HODs	Retired and Survivors
Percentage of going concern liabilities	35%	5%	<1%	60%
Number	5,241	780	274	3,894
Average age	48.7 years	52.1 years	46.4 years	67.1 years
Average earnings/lifetime pension/account balance/lifetime pension	$115,587	$14,100	$18,812	$37,356

Key Assumptions

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

	December 31, 2012		December 31, 2009	
	Going Concern	Solvency	Going Concern	Solvency
Discount rate	6.25%	Annuity purchases: 1.4% Transfers: 1.6% for 10 years, 2.2% thereafter	6.5%	Annuity purchases: 2.7% Transfers: 2.8% for 10 years, 3.8% thereafter
Inflation rate	2.25%	n/a	2.25%	n/a
Salary Increase – Base	0.0% for 3 years, 3.0% thereafter	n/a	0.0% for 2 years, 3.5% thereafter	n/a
Salary Increase – Merit and Promotion	2.8% up to age 36, 1.3% thereafter	n/a	1.25%	n/a
Maximum Pension Increase	3.0%	n/a	3.5%	n/a
Mortality table	UP94 generational	UP94 generational	UP94 at 2023	UP94 at 2020
Retirement rates	2012 Experience Study Rates	100% immediate retirement if age 55 & with at least 5 years of continuous service; otherwise 100% at age 55	2006 Experience Study Rates	100% immediate retirement if age 55 & with at least 5 years of continuous service; otherwise 100% at age 55

Section 1: Introduction

Purpose and Terms of Engagement

We have been engaged by the Management Employees Pension Board and hereafter referred to as the “MEP Board”, to conduct an actuarial valuation of the Plan as at December 31, 2012 for the general purpose of determining the minimum and maximum funding contributions required by pension standards, based on the actuarial assumptions and methods summarized herein. More specifically, the purposes of the valuation are to:

- Determine the financial position of the Plan on a going concern basis as at December 31, 2012;
- Determine the financial position of the Plan as at December 31, 2012 on a solvency basis;
- Determine the funding requirements of the Plan as at December 31, 2012; and
- Provide the necessary actuarial certification required under *The Public Sector Pension Plans Act* (the "*Act*") and the *Income Tax Act* (the "*ITA*").

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

As per our engagement, we have summarized the results of this actuarial valuation along with the ensuing opinions and recommendations in this report to the MEP Board.

While we have been engaged by the MEP Board to conduct this actuarial valuation, this valuation report has been prepared on behalf of the Minister of Finance. In addition, we note that users of our work may well extend to parties external to the MEP Board and Alberta Treasury Board and Finance, notably the Canada Revenue Agency and the Plan participants. Out of respect for the confidentiality of the MEP Board and the Minister of Finance, we shall not undertake to communicate the terms of our engagement or results of our work with such other users unless so directed by either the MEP Board or Alberta Treasury Board and Finance.

Summary of Changes Since the Last Valuation

The last such actuarial valuation in respect of the Plan was performed as at December 31, 2009. Since the time of the last valuation, we note that the following events have occurred:

- Solvency assumptions have been revised based on the Canadian Institute of Actuaries standard of practice for determining pension plan commuted values. Also, changes in annuity purchase rate discount factors and general fluctuations in bond rates over the year have affected the solvency liability calculations. The changes affecting solvency liabilities are summarized as follows:
  - Net annuity purchase discount rate decreased to 1.4% per annum from 2.7% per annum.
  - Net transfer value discount rate decreased to 1.6% per annum for 10 years and 2.2% per annum thereafter from 2.8% per annum for 10 years and 3.8% thereafter.
  - Mortality table changed to the 1994 Uninsured Pensioner table with generational projection from the same table projected to 2020.
- Going concern actuarial assumptions have been revised. The changes are summarized as follows:
  - The discount rate assumption was changed to 6.25% per annum from 6.5% per annum.
  - The salary rate assumption was changed to 0.0% per annum for 3 years and 3.0% per annum thereafter from 3.5% per annum.
  - The salary increase for merit and promotion assumption was changed to 2.8% per annum up to age 36 and 1.3% per annum thereafter from 1.25% per annum.
  - The ITA maximum pension limit increase was changed to 3.0% per annum from 3.5% per annum.
  - The mortality table was changed to the 1994 Uninsured Pensioner table with generational projection from the same table projected to 2023.
  - The termination rates assumption has been changed based on the 2012 experience study from the termination rates based on the 2006 experience study.
  - The retirement rates assumption has been changed based on the 2012 experience study from the retirement rates based on the 2006 experience study.

MEP Board 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, 2009;
- Membership data compiled as at December 31, 2012 by Alberta Pension Services Corporation ("APS");
- Asset data taken from the Plan's audited financial statements; and
- A copy of the latest plan text and amendments up to and including December 31, 2012.

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

Subsequent Events

Subsequent to the date of the valuation, the President of Treasury Board and Minister of Finance recommended a change to the participant contribution rate starting in 2014 from 11.16% of pensionable earnings to 12.80% of pensionable earnings. The increased contribution rate will have no impact on accrued liabilities, but will result in larger normal costs due to the excess contributions test. The affect of this change has been included in the normal cost for 2014 and subsequent years.

On September 16, 2013, the President of Treasury Board and Minister of Finance provided the Government of Alberta's vision for the future of the Alberta Public Sector Pension Plan system. The results of this report do not include any allowance for the proposed plan changes announced on September 16, 2013.

As of the date of this report, we have not been made aware of any other 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, 2012 will result in gains or losses which will be reflected in the next actuarial valuation report; and
- 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: Going Concern Valuation Results

Going Concern Financial Position of the Plan

The going concern valuation provides an assessment of the Plan's financial position 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 MEP Board, 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 going concern financial position of the Plan as at December 31, 2012 is shown in the following table. The results as at December 31, 2009 are also shown for comparison purposes.

Going Concern Financial Position

	December 31, 2012	December 31, 2009
Actuarial Value of Assets	$2,861,183,000	$2,423,101,000
Going Concern Liabilities		
Active members	$1,151,633,000	$1,092,070,000
Deferred vested members	157,441,000	154,564,000
Amounts held on deposit	5,301,000	3,067,000
Retired members and beneficiaries	1,936,462,000	1,518,223,000
Payments due on buybacks	(1,439,000)	(1,166,000)
Total Liabilities	**$3,249,398,000**	**$2,766,758,000**
Excess Assets/(Unfunded Liability)	**$ (388,215,000)**	**$ (343,657,000)**
Funded Ratio	0.8805	0.8758

On the basis of the plan provisions, membership data, going concern assumptions and methods and asset information described in the Appendices, the going concern normal cost of the Plan as at December 31, 2012 is shown in the following table. The normal cost as at December 31, 2009 is also shown for comparison purposes.

Going Concern Normal Cost in the 12 Months Following the Valuation Date

	December 31, 2012	December 31, 2009
Normal Cost		
Actuarial present value of benefits	$ 113,336,000	$ 105,003,000
Provision for expenses	2,167,000	2,052,000
Total Normal Cost	**$ 115,503,000**	**$ 107,055,000**
Estimated pensionable earnings (in year following valuation date)	$ 541,784,000	$ 512,950,000
Total Normal Cost		
As a % of total pensionable earnings	21.30%	20.90%

Change in Financial Position

During the period from December 31, 2009 to December 31, 2012, the going concern financial position of the Plan changed from an unfunded liability of $343,657,000 to an unfunded liability of $388,215,000. The major components of this change are summarized in the following table.

Reconciliation of the Going Concern Financial Position
For the Period from December 31, 2009 to December 31, 2012

Excess Assets/(Unfunded Liability) as at December 31, 2009	**$ (343,657,000)**
Expected interest on excess assets/(unfunded liability)	(71,463,000)
Contributions made towards unfunded liability with interest	153,395,000
Expected Excess Assets/(Unfunded Liability) as at December 31, 2012	**$ (261,725,000)**
Change in liabilities due to experience gains/(losses)	
Gain/(loss) from investment earnings greater/(lower) than expected	(129,484,000)
Gain/(loss) due to expense experience	1,744,000
Gain/(loss) due to salary increases	7,845,000
Gain/(loss) due to retirement experience	(6,952,000)
Gain/(loss) due to termination experience	(7,781,000)
Gain/(loss) due to mortality experience	8,066,000
Gain/(loss) due to COLA increase lower/(greater) than expected	20,897,000
Gain/(loss) due to pension limit lower/(greater) than expected	7,008,000
Gain/(loss) due to change in valuation system	21,861,000
Gain/(loss) on miscellaneous items	(634,000)
Excess Assets/(Unfunded Liability) after experience gains/(losses) as at December 31, 2012	**$ (339,155,000)**
Change in liabilities due to change in economic assumptions	(49,282,000)
Change in liabilities due to change in demographic assumptions	222,000
Change in liabilities due to plan amendments	0
Excess Assets/(Unfunded Liability) as at December 31, 2012	**$ (388,215,000)**

Analysis of Experience During Intervaluation Period	Actual	Assumed
Average annual actuarial investment return	4.9%	6.5%
Average annual salary increase	3.3%	2.4%
Average annual COLA	0.9%	1.35%
Average *Income Tax Act* maximum pension limit increase	2.6%	3.5%
Average admin expenses	0.3%	0.4%
Membership experience:		
Terminations from active membership	592	468
Retirements from active membership	648	865
Deaths from active membership	24	25
Retirements from deferred membership	146	408
Deaths from retired membership	102	125

Discussion of Changes in Assumptions

Effective December 31, 2012, the following assumptions were changed:

Economic Assumption

- Base salary increase rate was changed to 0.0% per annum for 3 years and 3.0% per annum thereafter from 3.5% per annum.
- Salary increase due to merit and promotion was changed to 2.8% per annum to age 36 and 1.3% per annum thereafter from 1.25% per annum.
- ITA maximum pension limit was changed to 3.0% per annum from 3.5% per annum.
- Discount rate was changed to 6.25% per annum from 6.5% per annum.

In combination, these changes in assumptions increased the going concern liabilities by $49,282,000 and decreased the total normal cost by $1,484,000.

Demographic Assumptions

- Mortality table was changed to UP94 with generational projection from UP94 projected to 2023.
- The termination table was changed based on the 2012 experience study from the termination table based on the 2006 experience study, and is shown in Appendix D.
- The retirement table was changed based on the 2012 experience study from the retirement table based on the 2006 experience study, and is shown in Appendix D.

In combination, these changes in assumptions decreased the going concern liabilities by $222,000 and increased the total normal cost by $2,548,000.

Going Concern Valuation Sensitivity Results

In accordance with the Canadian Institute of Actuaries Standards of Practice specific to pension plans that became effective December 31, 2010, the table below presents the sensitivity of the going concern liabilities and the total normal cost of using a discount rate 1% lower than that used for the going concern valuation.

	Valuation Basis December 31, 2012	Based on Rate of 1% Lower	Effect $	Effect %
Going concern liabilities	$ 3,249,398,000	$ 3,680,535,000	$ 431,137,000	13%
Normal cost	$ 115,503,000	$ 137,637,000	$ 22,134,000	19%

The total going concern liabilities and the total normal cost are based on a nominal discount rate assumption of 6.25% per year. Combined with an assumed inflation rate of 2.25% per year, the real discount rate assumption is 4.0% per year. The table above presents the impact of reducing the nominal discount rate assumption by 1% per year to 5.25% per year, which means the real discount rate assumption is lowered from 4.0% per year to 3.0% per year.

Note that using a discount rate 1% higher than that assumed would result in a comparable reduction in the Plan's going concern liabilities and normal cost.

Section 3: Solvency Valuation Results

Solvency Financial Position of the Plan

The solvency valuation is a financial assessment of the Plan that is required by the *Act* and is performed in accordance with requirements prescribed by that legislation. It is intended to provide an assessment of the Plan's financial position at the valuation date on the premise that certain obligations as prescribed by the *Act* are settled on the valuation date for all members. The *Act* does not require funding based on the solvency valuation results.

On the basis of the plan provisions, membership data, solvency assumptions and methods and asset information described in the Appendices, as well as the requirements of the *Act*, the solvency financial position of the Plan as at December 31, 2012 is shown in the following table. The solvency financial position of the Plan as at December 31, 2009 is shown for comparison purposes.

Solvency Financial Position

	December 31, 2012	December 31, 2009
Assets		
Solvency assets	$ 2,986,350,000	$ 2,307,715,000
Estimated wind up expenses	(10,000,000)	(10,000,000)
Total Assets	**$ 2,976,350,000**	**$ 2,297,715,000**
Solvency Liabilities		
Active members	$ 2,047,993,000	$ 1,493,099,000
Deferred vested members	256,301,000	205,154,000
Amounts held on deposit	5,592,000	3,067,000
Retired members and beneficiaries	2,845,391,000	1,952,538,000
Payments due on buybacks	(1,439,000)	(1,166,000)
Total Liabilities	**$ 5,156,716,000**	**$ 3,655,024,000**
Solvency Excess/(Deficiency)	**$(2,180,366,000)**	**$(1,357,309,000)**
Funded Ratio	0.5772	0.6286

Solvency Valuation Sensitivity Results

In accordance with the Canadian Institute of Actuaries Standards of Practice specific to pension plans that became effective December 31, 2010, the table below presents the sensitivity of the solvency liabilities to using a discount rate of 1% lower than that used for the solvency valuation.

	Valuation Basis December 31, 2012	Based on Rate of 1% Lower	Effect	
			$	%
Solvency liabilities	$5,156,716,000	$6,013,660,000	$ 856,944,000	17%

Note that using a discount rate 1% higher than that assumed would result in a comparable reduction in the solvency wind up liabilities.

Incremental Cost on a Solvency Basis

The incremental cost on a solvency basis represents the present value at December 31, 2012 of the expected aggregate change in the solvency liabilities between December 31, 2012 and the next calculation date, that is December 31, 2015. Appendix E gives more details on the calculation methodology and on assumptions.

Based on this methodology and on these assumptions, the incremental cost on a solvency basis, for the period from December 31, 2012 to December 31, 2015, is $848,290,000.

	2013	2014	2015
Incremental cost on a solvency basis	$ 309,637,000	$ 272,155,000	$ 278,073,000

Section 4: Contribution Requirements

Contribution Requirements in Respect of the Normal Cost

The annual going concern cost of benefits in respect of service accruing after the valuation date is known as the normal cost. The following table sets out:

- The development of the rule to determine the normal cost until the next actuarial funding recommendation is certified; and
- An estimate of the normal cost for the years following the valuation date.

	2013	2014	2015	2016
Normal Cost				
Actuarial present value of benefits*	$ 113,336,000	$ 118,922,000	$ 122,490,000	$ 126,165,000
Provision for non-investment expenses	2,167,000	2,167,000	2,167,000	2,167,000
Total Normal Cost*	**$ 115,503,000**	**$ 121,089,000**	**$ 124,657,000**	**$ 128,332,000**

**Normal cost as shown is based on participant contributions of 11.16% of pensionable earnings in 2013 and 12.80% of pensionable earnings in 2014 and beyond. Normal cost could be different if the participant contribution rate changes.*

	2013	2014	2015	2016
Total pensionable earnings	$ 541,784,000	$ 541,784,000	$ 541,784,000	$ 541,784,000
Total Normal Cost				
As a % of pensionable earnings	21.30%	22.35%	23.01%	23.69%

In the event an updated funding recommendation is not certified before December 31, 2015, the rule for determining the total normal cost contributions disclosed in this section will continue to be appropriate for the plan year commencing on the next valuation date of December 31, 2015. Adjustment to the total contributions may be required once the next actuarial funding recommendations are certified.

Reconciliation of Normal Cost

The total normal cost as a percentage of pensionable earnings has increased from 20.9% at December 31, 2009 to 21.3% at December 31, 2012. A reconciliation of this change is shown in the table below:

Normal cost at December 31, 2009	20.9%
Plan data and experience different from expected since previous valuation	0.5%
Changes in actuarial assumptions	(0.1%)
Normal cost at December 31, 2012	**21.3%**

Development of Special Payments

The following table summarizes previously established amortization schedules of going concern special payments before adjustment to reflect any gains or losses due to the going concern results.

Effective Date*	End Date	Annual Special Payment as % of Pensionable Earnings	Present Value as of December 31, 2012 For Going Concern Valuation[1]
December 31, 2001	December 31, 2014	2.10%	$ 21,391,000
December 31, 2003	December 31, 2016	4.80%	92,995,000
December 31, 2004	December 31, 2017	0.40%	9,444,000
December 31, 2009	December 31, 2024	2.10%	106,850,000
		9.40%	$ 230,680,000

*Effective Date refers to the valuation date at which the special payment was determined. In all cases, the special payments commence one year after the Effective Date.

The following table summarizes the amortization schedules of going concern special payments after adjustment to reflect any gains or losses due to the going concern results.

Effective Date*	Revised End Date	Revised Annual Special Payment as % of Pensionable Earnings	Present Value as of December 31, 2012 For Going Concern Valuation[1]
December 31, 2001	December 31, 2014	2.10%	$ 21,391,000
December 31, 2003	December 31, 2016	4.80%	92,995,000
December 31, 2004	December 31, 2017	0.40%	9,444,000
December 31, 2009	December 31, 2024	2.10%	106,850,000
December 31, 2012	December 31, 2027	2.90%	157,535,000
		12.30%	$ 388,215,000

*Effective Date refers to the valuation date at which the special payment was determined. In all cases, the special payments commence one year after the Effective Date.

[1] The values in the table were developed using the going concern interest rate of 6.25% per year compounded annually in arrears.

Excess Surplus

The *Income Tax Act* requires that any excess surplus first be applied to reduce or eliminate the employer contribution requirements. Excess surplus is defined in Section 147.2(2)(d) of the *Income Tax Act*, as the portion of surplus (if any) that exceeds 25% of the going concern liabilities.

Since the Plan has an unfunded liability, there is no excess surplus and therefore it does not impact the development of the total contribution requirements.

Development of Minimum Required Total Contribution

The table below presents the development of the minimum required total contribution to be made for the plan years covered by this report, as well as future years. The minimum required contributions required to fund the normal cost are shown as a percentage of pensionable earnings. The future minimum required contributions may be adjusted once the next actuarial funding recommendations are certified.

Effective Period	Total Normal Cost	Special Payments Toward Amortizing Unfunded Liability	Minimum Required Total Contribution Rate
January 1, 2013 to December 31, 2013	20.90%	9.40%	30.30%
January 1, 2014 to December 31, 2014	22.35%	12.30%	34.65%
January 1, 2015 to December 31, 2015	23.01%	10.20%	33.21%
January 1, 2016 to December 31, 2016	23.69%	10.20%	33.89%
January 1, 2017 to December 31, 2017	23.69%	5.40%	29.09%
January 1, 2018 to December 31, 2024	23.69%	5.00%	28.69%
January 1, 2025 to December 31, 2027	23.69%	2.90%	26.59%
January 1, 2028 and after	23.69%	N/A	23.69%

The above schedule of total contribution rates will meet the Plan's normal cost requirements and eliminate the $388.215 million unfunded liability by December 31, 2027. For the period after December 31, 2014, the total normal cost and the minimum required total contribution rate are based on a participant contribution rate of 12.80% of pensionable earnings. The contribution rates are subject to change if the participant contribution rate changes.

Development of Maximum Deductible Total Contribution

Under applicable legislation, the maximum amount that an employer is allowed to contribute is equal to:

- The employer's share of the normal cost in respect of service accruing after the valuation date; plus
- The lump sum amount to eliminate any deficiencies that exist at the valuation date; less
- Any excess surplus as permitted.

The employer contributions recommended in this valuation report do not exceed the legislated maximum requirements.

If contributions are to be made in excess of the minimum required amounts shown on prior pages of this report, it is advisable to contact the Plan actuary before making such contributions to ensure that the contributions will be permissible and deductible and that any regulatory requirements are considered.

Section 5: Actuarial Certificate

Actuarial Opinion, Recommendations and Certification for the Management Employees Pension Plan

Opinion

This actuarial certification forms an integral part of the actuarial valuation report for the Plan as at December 31, 2012. We confirm that we have prepared an actuarial valuation of the Plan as at December 31, 2012 for the purposes outlined in the Introduction section to this report and consequently:

We hereby recommend that:

- Contributions in the amounts outlined in Section 4 of this report should be made to the Plan.
- The next actuarial valuation for the purpose of developing funding requirements should be performed no later than as at December 31, 2015.

We hereby certify that, in our opinion:

- With respect to the purposes of determining the Plan's financial position on a going concern basis as at December 31, 2012:
  - The Plan has a going concern unfunded liability of $388,215,000 as at December 31, 2012, based on going concern assets of $2,861,183,000 less going concern liabilities of $3,249,398,000.
  - There is no excess surplus as defined by Section 147.2(2) of the *Income Tax Act* in the Plan at December 31, 2012.
  - The pre-1990 maximum pension restrictions in Subsection 8504(6) of the Regulations to the *Income Tax Act* do not apply to any members of the Plan.
- With respect to the purpose of determining the Plan's financial position on a solvency basis:
  - The Plan has a solvency deficiency of $2,180,366,000 as at December 31, 2012, determined as solvency assets (less windup expense) of $2,976,350,000 less solvency liabilities of $5,156,716,000.
  - The Plan's liabilities would exceed the Plan's assets by $2,180,366,000 if the Plan was terminated and wound up as at December 31, 2012.

- With respect to determining the funding requirements of the Plan:
  - The rule for determining the total normal cost for the 12 months following the valuation date is 21.3% of pensionable earnings.

The estimated total normal cost for the 4 years following the valuation date are as follows:

	2013	2014	2015	2016
Normal Cost				
Actuarial present value of benefits*	$ 113,336,000	$ 118,922,000	$ 122,490,000	$ 126,165,000
Provision for non-investment expenses	2,167,000	2,167,000	2,167,000	2,167,000
Total Normal Cost*	**$ 115,503,000**	**$ 121,089,000**	**$ 124,657,000**	**$ 128,332,000**

**Normal cost as shown is based on participant contributions of 11.16% of pensionable earnings in 2013 and 12.80% of pensionable earnings in 2014 and beyond. Normal cost could be different if the participant contribution rate changes.*

	2013	2014	2015	2016
Total pensionable earnings	$ 541,784,000	$ 541,784,000	$ 541,784,000	$ 541,784,000
Total Normal Cost				
As a % of pensionable earnings	21.30%	22.35%	23.01%	23.69%

  - The special payments required to fund the going concern unfunded liability are as summarized in the following table:

Nature of Deficiency	Effective Date	End Date	Annual Special Payment as % of Pensionable Earnings
Going concern	December 31, 2001	December 31, 2014	2.10%
Going concern	December 31, 2003	December 31, 2016	4.80%
Going concern	December 31, 2004	December 31, 2017	0.40%
Going concern	December 31, 2009	December 31, 2024	2.10%
Going concern	December 31, 2012	December 31, 2027	2.90%
			12.30%

  - The contributions as recommended in this report are expected to be sufficient to satisfy the Plan's funding requirements.
  - The contributions recommended in this report are eligible contributions under Section 147.2(2) of the *Income Tax Act.*

- 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 our 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.

Original signed by	Original signed by
Robert J. Thiessen, FSA, FCIA	John Slipp, FSA, FCIA
Associate Partner	Associate Partner

September 19, 2013

Appendix A: Glossary of Terms

- The **actuarial value of assets** is the asset value used for going concern valuation purposes. Smoothing methods are sometimes used to smooth investment gains and losses over a certain period.

- The **estimated wind up expenses** is an estimate of the administrative and other expenses expected to be charged against the pension fund if the Plan were to terminate on the valuation date.

- The **going concern liabilities** are the actuarial present value of benefits earned in respect of service prior to the valuation date. The going concern liabilities are calculated using the going concern assumptions and methods summarized in Appendix D of this report.

- The **going concern financial position** is the difference between the actuarial value of assets and the going concern liabilities.

- The **maximum deductible employer contribution** refers to an eligible contribution pursuant to Section 147.2(2) of the *Income Tax Act*. Under Subsection 8502(b) of the Regulations to the *Income Tax Act*, each employer contribution made after 1991 in respect of a defined benefit provision of a registered pension plan must be such eligible contribution.

  In an employer's fiscal year, the following contributions are eligible under Section 147.2 of the *Income Tax Act*.

  – The employer normal cost, eligible under Section 147.2(2) subject to certification by the actuary and approval by the Canada Revenue Agency; plus
  – Special payments eligible under Section 147.2(2) up to the amount of the unfunded liability, subject to certification by the actuary and approval by the Canada Revenue Agency; less
  – Required application of excess surplus.

  The employer normal cost and special payments for this Plan will be deductible under Section 147.2(2) of the *Income Tax Act*, subject to the approval of the Canada Revenue Agency.

  Note that contributions to a Plan are still permissible and deductible if there is an excess surplus, providing there is simultaneously a solvency deficiency in the Plan or the contributions are required as minimum contributions under provincial legislation, pursuant to Subsections 8516(2) and (3) of the Regulations to the *Income Tax Act*.

  One restriction under the *Income Tax Act* is that if there is an excess surplus, and a solvency deficiency, the maximum deductible contribution is restricted to the full amount of the deficiency without allowance for interest or any other contributions such as employer normal cost and/or transfer deficiency payments.

  In order to be deductible in a given fiscal year, employer contributions must be made not later than 120 days after the end of the fiscal year.

- The **minimum required employer** contribution for each plan year is equal to:
  - The employer normal cost; plus
  - Special payments toward amortizing any unfunded liability over 15 years from the date on which the unfunded liability was established; plus
  - Required application of excess surplus; less
  - Permitted application of excess assets.
- **Solvency assets** are the market value of pension fund assets adjusted to reflect contributions, benefit payments, transfers and fees/expenses in-transit at the valuation date.
- The **solvency liabilities** are the actuarial present value of benefits earned in respect of service prior to the valuation date determined as if the Plan were wound up on the valuation date.

  The solvency liabilities are determined using benefit entitlements on the assumption that the Plan has neither excess assets nor a deficit. The solvency liabilities are calculated using the solvency valuation assumptions summarized in Appendix E of this report.
- The **solvency financial position** is the difference between the solvency assets (net of estimated wind up expenses) and the solvency liabilities.
- The **special payments** are contributions required to liquidate the unfunded liability:
  - The going concern special payments are payments required to liquidate the unfunded liability, with interest at the going concern valuation discount rate, by calculating the required percentage of pensionable earnings that must be contributed over a period of 15 years from the valuation date of the report in order to pay off the existing deficits. The special payments commence one year following the valuation date.
- The **excess assets/(unfunded liability)** is the difference between the actuarial value of assets and the going concern liabilities.
- The **total normal cost** is the actuarial present value of benefits expected to be earned in respect of service for each year starting on the valuation date plus provision for expenses. The total normal cost is calculated using the going concern valuation assumptions and methods summarized in Appendix D of this report.

Appendix B: Assets

Asset Data

The Plan assets are held in trust by the President of Treasury Board and Minister of Finance and invested by Alberta Investment Management Corporation. The asset information presented in this report is based on the audited financial statements of the pension fund for 2010, 2011, and 2012 prepared by Alberta Treasury Board and Finance.

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 with the asset data provided for the previous valuation.

Market Value of Assets

The following is a summary of the composition of the Plan's assets by asset type as reported by Alberta Treasury Board and Finance as at December 31, 2012. For comparison purposes, the composition at the previous valuation date of December 31, 2009 is also shown.

	December 31, 2012		**December 31, 2009**	
	$ (000's)	**%**	**$ (000's)**	**%**
Money market and fixed income	404,859	13.5%	733,994	31.7%
Equities	1,855,512	62.2%	1,322,365	57.0%
Inflation-sensitive securities	724,384	24.3%	260,039	11.3%
Total Invested Assets	**$ 2,984,755**	**100.0%**	**$ 2,316,398**	**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	Benchmark	Maximum
Money Market and Fixed Income	**10.0%**	**14.0%**	**40.0%**
Short term	0.0%		10.0%
Universe bonds	0.0%		20.0%
Real return bonds	0.0%		5.0%
Equity	**40.0%**	**59.0%**	**70.0%**
Canadian equities	5.0%		25.0%
Global equities	20.0%		45.0%
Private equity	2.0%		12.0%
Hedge funds	0.0%		5.0%
Inflation Sensitive	**15.0%**	**27.0%**	**40.0%**
Infrastructure	5.0%		15.0%
Real estate	5.0%		15.0%
Real return bonds	5.0%		20.0%
Total	**100.0%**	**100.0%**	**100.0%**

Reconciliation of Changes in Market Value of Assets

The table below reconciles changes in the market value of assets between December 31, 2009 and December 31, 2012.

(000's)	2010	2011	2012
Market Value of Assets, Beginning of Plan Year	**$ 2,307,715**	**$ 2,564,193**	**$ 2,635,856**
Contributions During Plan Year			
Member	$ 54,681	$ 58,105	$ 63,397
Employer	90,272	97,730	104,685
Total	**$ 144,953**	**$ 155,835**	**$ 168,082**
Benefit Payments During Plan Year			
Non-retired members[1]	$ (8,966)	$ (12,858)	$ (13,633)
Retired members	(119,386)	(129,294)	(140,145)
Total	**$ (128,352)**	**$ (142,152)**	**$ (153,778)**
Transfers During Plan Year			
Net reciprocal transfers	4,853	1,873	12,319
Total	**$ 4,853**	**$ 1,873**	**$ 12,319**
Fees/Expenses			
Investment fees/expenses	$ (7,224)	$ (8,150)	$ (14,032)
Non-investment fees/expenses	(1,770)	(1,592)	(2,180)
Total	**$ (8,994)**	**$ (9,742)**	**$ (16,212)**
Investment Income	**$ 244,018**	**$ 65,849**	**$ 340,083**
Market Value of Assets, End of Plan Year	**$ 2,564,193**	**$ 2,635,856**	**$ 2,986,350**
Rate of return, net of investment fees/expenses	**10.2%**	**2.2%**	**12.3%**

[1] Includes members who have terminated employment or died.

Development of Adjusted Market Value of Assets

The adjusted market value of assets is equal to the market value of assets adjusted to reflect any contributions, benefit payments, transfers and fees/expenses in-transit as of the valuation date. The development of the adjusted market value of assets is shown below.

	December 31, 2012 (000's)
Market value of assets (total invested assets)	$ 2,984,755
Accrued investment income and accounts receivable	1,350
Accounts payable	(585)
Contributions receivable	830
Adjusted market value of assets (net invested assets)	**$ 2,986,350**

Development of Actuarial Value of Assets

The actuarial value of assets is determined by modifying the adjusted market value of assets to recognize asset gains (losses) (i.e., the difference between actual investment return and expected investment return based on the valuation discount rate assumption) over a 5-year period.

The development of the actuarial value of assets as of December 31, 2012 is shown below:

Year Ending (000's)	Original Amount of (Gain) Loss	(Gain) Loss Admitted in Prior Years	(Gain) Loss Admitted in 2012	(Gain) Loss to be Admitted in Future Years
December 31, 2008	$ 577,430	$ 461,942	$ 115,488	$ 0
December 31, 2009	(166,163)	(99,702)	(33,233)	(33,228)
December 31, 2010	(86,153)	(34,465)	(17,231)	(34,457)
December 31, 2011	109,427	21,885	21,885	65,657
December 31, 2012	$ (153,926)	$ 0	(30,787)	(123,139)
			$ 56,122	**$ (125,167)**
Adjusted market value of assets, December 31, 2012				**2,986,350**
Actuarial value of assets, December 31, 2012				**$ 2,861,183**

The history of actuarial value of assets as at December 31 and the in-year rate of return on actuarial value of assets since the last valuation are as follows:

	2010	2011	2012
Rate of return	8.3%	2.3%	4.2%
Actuarial value of assets (000's)	$ 2,645,259	$ 2,720,737	$ 2,861,183

Appendix C: Membership Data

Source of Data

This funding valuation was based on member data provided by APS as of December 31, 2012. 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 3 years of credited service from December 31, 2009, notwithstanding increases due to service purchases during the inter-valuation period. This test also revealed any members who had any unexpected changes in service, such as having accrued less than 3 years of credited service or had no change in credited service
- A reconciliation of pensionable earnings against the corresponding amounts provided for the last valuation to identify any unusual increases (more than 15% per annum) 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 pensions for retired employees against the corresponding amounts provided for the last valuation to ensure consistency of data;
- 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 Pensionable 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 2007 to 2011, the most recent data was utilized and increased to 2012 using the salary increase assumptions from the previous valuation. Otherwise, the overall average of the group was utilized.
- Service: We assumed that service would start from the date of commencement of contributions into the Plan.
- Detail in Financial Information: Due to the nature of the financial information, it was not possible to trace the refunds individually for every terminating member. The potential effect of this data omission was immaterial to the overall results of the valuation; however, it could affect the gain/loss analysis.

- Pension Amounts for Pensioners: In some cases, the data fields used to calculate pre, post and bridge pensions were zero. In these cases, other fields were used which had the total pre and post pension. No bridge amounts were assumed.

- Advance or Unknown Pension Forms Pensioners: For members who are known to have retired but have not elected a form of pension at the time the valuation data was assembled, we assumed a form of pension of joint and survivor 2/3 (joint and survivor 75% for pre-1992 service) for participants with pension partners and single life, with a 10 year guarantee (life only for pre-1992 service) for participants without pension partners.

Payments Due

In this report, a negative liability is held for payments due on buybacks. These amounts represent contributions to be made by Plan participants after the valuation date to buy back certain periods of service. The valuation includes the effect of these buybacks in the liabilities. Per the valuation data received from APS, the amount of payments due for buyback service as at December 31, 2012 was $1,439,000. As at December 31, 2009, this amount was $1,166,000. For the purposes of the balance sheet presentation, these amounts appear as reductions to the total liabilities as the pension liabilities for participants purchasing such service have been determined assuming the full amount of service has been bought.

Administrator Certification

A copy of the administrator certification certifying the accuracy and completeness of the member data (and the plan provisions summarized in this report) is included in Appendix G of this report.

Membership Summary

The table below reconciles the number of members as of December 31, 2012 with the number of members as of December 31, 2009 and the changes due to experience in the period.

	Actives	Deferreds	HODs	Pensioners	Survivors	Total
Members, December 31, 2009	4,983	737	193	2,868	241	9,022
Changes due to:						
New entrants	1,482	0	0	0	0	1,482
Termination						
Non-vested	(135)	0	135	0	0	0
Deferred vested pension	(253)	261	(8)	0	0	0
Lump sum	(204)	(36)	(36)	0	0	(276)
Death						
Lump sum	(10)	(3)	(1)	(15)	(13)	(42)
Surviving beneficiary	(14)	(3)	0	(74)	0	(91)
New beneficiary	0	0	0	0	91	91
Retirement	(648)	(146)	(2)	796	0	0
Transfer	39	(31)	(8)	0	0	0
Data correction	1	1	1	0	0	3
Net change	258	43	81	707	78	1,167
Members, December 31, 2012	**5,241**	**780**	**274**	**3,575**	**319**	**10,189**

Membership Summary

Active Members

	December 31, 2012	December 31, 2009
Number	5,241	4,983
Average age	48.7	49.0
Average credited service	8.4	8.6
Average pensionable earnings	$ 115,587	$ 110,000
Proportion of female	48%	46%

Deferred Vested Members

	December 31, 2012	December 31, 2009
Number	780	737
Average age	52.1	52.3
Average annual pension	$ 14,100	$ 15,493
Proportion of female	49%	44%

Participants with Amounts Held-on-Deposit

	December 31, 2012	December 31, 2009
Number	274	193
Average age	46.4	46.1
Average contributions with interest	$ 18,812	$ 15,809
Proportion of female	52%	52%

Retired Members

	December 31, 2012	December 31, 2009
Number	3,575	2,868
Average age	67.0	65.8
Average annual pension	$ 38,082	$ 36,949
Proportion of female	23%	19%

Survivors

	December 31, 2012	December 31, 2009
Number	319	241
Average age	68.6	65.9
Average annual pension	$ 29,214	$ 28,447
Proportion of female	79%	81%

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. Average salary has not been limited to pensionable salary. The overall average salary limited to pensionable salary and excluding those members with 35 or more years of service (i.e. average contributory earnings) is $109,862.

Age		< 5	5–10	10–15	15–20	20–25	25–30	30–35	>=35	Total
< 30	Count	73								73
	Average Earnings	$ 83,295								$ 83,295
30–35	Count	352	46							398
	Average Earnings	$ 93,019	$105,019							$ 94,406
35–40	Count	368	184	17						569
	Average Earnings	$100,017	$116,855	$127,889						$106,295
40–45	Count	396	250	88	8	3				745
	Average Earnings	$103,675	$117,786	$135,982	$138,680	$132,349				$112,718
45–50	Count	360	313	160	65	12	2			912
	Average Earnings	$103,624	$117,801	$133,172	$148,212	$161,247	$139,934			$117,689
50–55	Count	309	340	222	91	41	28	29		1,060
	Average Earnings	$107,819	$115,454	$128,430	$137,173	$141,559	$148,734	$147,702		$120,582
55-60	Count	187	270	208	93	38	56	78	16	946
	Average Earnings	$108,811	$112,526	$123,468	$135,225	$134,997	$142,099	$137,650	$135,792	$121,547
60-65	Count	84	111	96	35	26	31	47	27	457
	Average Earnings	$114,315	$116,141	$124,347	$131,206	$139,328	$130,060	$147,915	$127,620	$124,892
>=65	Count	9	23	17	6	4	4	10	8	81
	Average Earnings	$139,639	$121,769	$124,554	$111,304	$126,519	$128,559	$153,268	$134,761	$129,306
Total	Count	2,138	1,537	808	298	124	121	164	51	**5,241**
	Average Earnings	$102,204	$115,797	$128,336	$137,792	$140,278	$140,067	$143,322	$131,304	**$115,587**

Retired/Deferred Vested Membership Distribution

The following table provides a detailed summary of the retired/deferred vested membership at the valuation date by age group.

Age		Retired Members and Beneficiaries	Deferred Vested Members	Total
< 50	Count	9	270	279
	Average lifetime pension	$ 18,718 per year	$ 8,886 per year	$ 9,204 per year
	Average bridge pension	$ 0 per year	n/a	$ 0 per year
50–55	Count	12	198	210
	Average lifetime pension	$ 21,950 per year	$ 13,786 per year	$ 14,252 per year
	Average bridge pension	$ 1,615 per year	n/a	$ 1,615 per year
55–60	Count	426	206	632
	Average lifetime pension	$ 35,144 per year	$ 16,224 per year	$ 28,977 per year
	Average bridge pension	$ 1,132 per year	n/a	$ 1,132 per year
60–65	Count	1,076	86	1,162
	Average lifetime pension	$ 37,849 per year	$ 23,478 per year	$ 36,785 per year
	Average bridge pension	$ 1,202 per year	n/a	$ 1,202 per year
65–70	Count	1,165	19	1,184
	Average lifetime pension	$ 38,868 per year	*	$ 38,673 per year
	Average bridge pension	n/a	n/a	n/a
70–75	Count	774	1	775
	Average lifetime pension	*	*	$ 37,703 per year
	Average bridge pension	n/a	n/a	n/a
75–80	Count	318		318
	Average lifetime pension	$ 35,180 per year		$ 35,180 per year
	Average bridge pension	n/a		n/a
80–85	Count	104		104
	Average lifetime pension	$ 32,831 per year		$ 32,831 per year
	Average bridge pension	n/a		n/a
>=85	Count	10		10
	Average lifetime pension	$ 22,970 per year		$ 22,970 per year
	Average bridge pension	n/a		n/a
Total	Count	**3,894**	**780**	4,674
	Average lifetime pension	**$ 37,355 per year**	**$ 14,100 per year**	$ 33,474 per year
	Average bridge pension	$ 1,186 per year	n/a	$ 1,186 per year

* *Not shown for confidentiality reasons to comply with privacy legislation.*

Appendix D: 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.

Assumptions and Methods

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

	December 31, 2012	December 31, 2009
Economic Assumptions		
Discount rate	6.25%	6.5%
Inflation rate	2.25%	Same
Increases in pensionable earnings – Base	0.0% for three years and 3.0% thereafter	0.0% for two years and 3.5% thereafter
Increases in pensionable earnings – Merit and Promotion	2.8% up to age 36 and 1.3% thereafter	1.25%
Increases in maximum pension limit	In accordance with *Income Tax Act*, then 3.0%	In accordance with *Income Tax Act*, then 3.5%
Interest on member contributions	Inflation rate plus 2.0%	Same
Investment expenses	0.5% of earnings (included in discount rate)	0.2% of earnings (included in discount rate)
Non-investment expenses	0.4% of earnings	Same
Margin for adverse deviation	0.86% (in discount rate)	0.65% (in discount rate)
Demographic Assumptions		
Mortality	1994 Uninsured Pensioner Generational Mortality Table with scale AA	1994 Uninsured Pensioner Mortality Table projected to 2023 with scale AA
Retirement	Rates following 2012 experience study (Table A following)	Rates following 2006 experience study
Termination of employment	Rates following 2012 experience study (Table B following)	Rates following 2006 experience study
Disability	None	Same
Proportion married		
Non-retired proportion with spouse	90%	Same
Non-retired spousal age differential	Males three years older	Same
Retired members	Actual marital status and ages are used	Same
Deferred pension take-up	100%	Same
Margin for adverse deviation	None	Same
Methods		
Actuarial cost method	Projected accrued benefit	Same
Asset valuation method	Market value smoothed over five years	Same

Table A— Retirement Rates

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

Age	Rate (%)
55	20.0
56 – 58	15.0
59 – 63	20.0
64	30.0
65	50.0
66 – 67	30.0
68	50.0
69	60.0
70	100.0

Table B—Termination Rates

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

Age	Rate (%)
Under 36	9.0
36 – 39	7.0
40 – 41	6.0
42 – 44	5.0
45 – 52	4.0
53 – 54	7.0

Justification of Actuarial Assumptions and Methods

Economic Assumptions

Discount Rate

We have used a discount rate of 6.25%.

The overall expected return ("best-estimate") is 7.26%, which is based on an inflation rate of 2.25%, yielding a real rate of return on the pension fund assets of 5.01%. This best-estimate rate of return was developed using best-estimate returns for each major asset class in which the pension fund is invested and then using a building block approach, based on the Plan's investment policy, to develop an overall best-estimate rate of return for the entire pension fund. Any additional gains from rebalancing and diversification have been included above.

In order to set the discount rate, we have incorporated the following adjustments to the overall expected rate of return:

Development of Discount Rate				
Overall expected return				7.26%
Investment expenses				
Passive	(1)	(0.15)%		
Actively managed	(2)	(0.35)%		
			(1)+(2)	(0.50)%
Additional returns due to active management				0.35%
Margin for adverse deviation				(0.86)%
Discount Rate				**6.25%**

Inflation Rate

The inflation rate is assumed to be 2.25% per annum. This reflects our best estimate of future inflation considering current economic and financial market conditions.

Increases in Pensionable Earnings

We have assumed future base rate salary increases will not increase for three years from the valuation date and then increase at the rate of inflation plus 0.75% per annum for productivity growth (or 0% for three years and 3.0% per annum thereafter). For the previous valuation, it was assumed that salaries would not increase for two years from the valuation date and then would increase at the rate of inflation plus 1.25% per annum for productivity (or 0% for two years and 3.5% per annum thereafter). The current and previous assumptions of no increases are used to reflect actual anticipated short-term salary experience. The current ultimate assumption was adopted to better reflect historic levels of real wage growth.

In addition to the base rate, we assume rates of increase as a result of individual employee merit and promotion of 2.8% per annum up to age 36 and 1.3% per annum thereafter. The merit and promotion scale is based on plan experience over the years 1998-2011 and MEP Board input. For the previous valuation, it was assumed that participants would receive a merit and promotional increase of 1.25% per annum for all years, based on the results of the 2006 experience study.

Increases in the Maximum Pension Limit

According to the terms of the Plan, pensionable earnings for service on and after January 1, 1992, are limited to the earnings upon which a maximum pension can be earned in each year. That is, maximum pensionable earnings are equal to the maximum annual pension payable for each year of service divided by 2%. Maximum pensionable earnings are in accordance with the *Income Tax Act.*

The maximum lifetime annual pension per year of pensionable service payable under the *Income Tax Act* is $2,696.67 in 2013. It is assumed that the maximum limit will increase at 3.0% per year commencing in 2014. This assumption is comprised of an annual increase of 2.25% on account of inflation, plus 0.75% on account of productivity, which is consistent with historical real economic growth. For the previous valuation, we assumed the rate of increase of the limit to be 3.5% per annum.

Interest on Member Contributions

Interest is credited on member contributions at the inflation rate plus 2.0% per annum. The assumption reflects the expected future interest credited on 5-year personal term deposits, and likely includes a margin for adverse deviation.

Expenses

Investment expenses expected to be paid from the Plan in the future are assumed to be 50 basis points (15 basis points for passive and 35 basis points for active management) and are taken into account in the discount rate assumption. The MEP Board believes that active management of the funds will recoup the active portion of the fees. We assumed 20 basis points at the previous valuation. Based on past plan experience, administrative expenses are assumed to be 0.4% of pensionable earnings and this amount is included in the normal cost rate.

Economic 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.

A margin for adverse deviations of 0.86% has been reflected in the discount rate assumption.

The actuary has discussed the Plan's experience with the MEP Board 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 MEP Board's desire to maintain safety cushions. The actuary has discussed with the MEP Board the implications of incorporating margins for adverse deviations and the MEP Board is fully cognizant and supports incorporating margins for adverse deviations.

Demographic Assumptions

Mortality

The membership of this Plan is not sufficiently large enough to develop its own plan-specific mortality table. The 1994 Uninsured Pensioner Mortality Table ("UP94") reflects the mortality experience as of 1994 for a large sample of North American pension plans. Applying projection scale AA on a generational basis provides allowance for improvements in mortality after 1994 and is generally considered reasonable for projecting mortality experience into the future. This table is commonly used for valuations where the mortality experience of the membership of a plan is insufficient to assess plan specific experience and where there is no reason to expect the mortality experience of the Plan to differ significantly from that of other pension plans. Based on the 2012 experience study, this mortality assumption is considered to be a best estimate assumption. For the previous valuation, assumed mortality rates were derived from the UP94 table, projected to 2023 using scale AA.

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 2012 experience study and are considered best-estimate rates of retirement based on the plan provisions. The rates used in the previous valuation were based on the 2006 experience study.

As in the previous valuation, all participants 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 participants.

Deferred participants are assumed to 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 2012 experience study and are considered to be best estimate. The rates used in the previous valuation were based on the 2006 experience study.

Option Elections on Termination

As the Plan's termination benefit in respect of pre-1992 service is different for participants electing a cash transfer, an assumption is required. We have assumed 100% of vested members will elect a deferred annuity on termination. The same assumption was used in the previous valuation.

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 Spouses and Spousal 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 spouse. The proportion of members who will have a spouse and the spousal age difference are based on broad population statistics.

For retired members, the actual marital status and spousal age are used.

As with the previous valuation, we assumed that 90% of participants would have a pension partner at the relevant time. All pension partners are assumed to be the opposite gender of the participant. Male partners were assumed to be three years older than their female partners based on an analysis of recent retirements. The remaining 10% of participants were assumed to have no pension partner. While the definition of pension partner includes same-sex relationships, this assumption adequately provides for all such contingencies.

Demographic Margins for Adverse Deviations

All demographic assumptions are considered best estimate so no margins for conservatism or provisions for adverse deviation have been built into the going concern demographic assumptions.

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.

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

With respect to service after the valuation date, the expected value of benefits for service in the year following the valuation date (i.e., the normal cost) net of any required employee contributions is expressed as a percentage of the expected value of participating payroll for that year. The employer normal cost contributions are determined each year by applying this percentage to the actual participating payroll for the year.

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.

The pattern of future contributions necessary to pre-fund future benefit accruals for any one particular individual will increase gradually as a percentage of their pensionable earnings as the individual approaches retirement. For a stable population (i.e., one where the demographics of the group remain constant from year to year), the normal cost will remain relatively level as a percentage of payroll. The projected accrued benefit actuarial cost method therefore allocates contributions among different periods in an orderly and rational manner for a stable population group.

In the event of future adverse experience, contributions in addition to the normal cost calculated under the projected accrued benefit actuarial cost method may be required to ensure that the Plan assets are adequate to provide the benefits. Conversely, favourable experience may generate excess assets which may serve to reduce future contribution requirements.

Asset Valuation Method

The actuarial value of assets (AVA) methodology described in Appendix B, was used to moderate fluctuations in contribution rates. The method used tracks market value, and would asymptotically approach market value if rates of return matched assumptions. The method chosen does not deviate materially from market value, and additionally, we have set a corridor for the method to produce actuarial values between 85% and 105% of market value should the method produce an AVA outside of this range. The method does not have undue influence on investment transactions, i.e., sale of an asset will not have an impact on the AVA. A 5-year period of averaging was chosen which is within the typical range of an economic cycle. There is a conservative bias, as we believe, given the applicable corridor, there is a greater probability that the AVA will be lower than the market value of assets.

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 C 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;
- Normal cost contributions are based on pensionable earnings below the maximum earnings limit described earlier in this report;
- The pensionable earnings for calculating normal cost percentage is nil for participants with 35 years of combined pensionable service;
- For deferred benefits on termination (post-1991 service), the pensions were deferred to 55 with the early reduction factor calculated from the earlier of age 60 and the attainment of 80 points. Deferred pensioners over age 55 at the valuation date were assumed to retire on July 1, 2013.

Appendix E: Solvency Assumptions and Methods

Valuation Assumptions

	December 31, 2012	December 31, 2009
Economic Assumptions		
Discount Rate		
Transfer value basis		
—*Without indexation*		
Active and deferred members not retirement-eligible	2.4% for 10 years; 3.6% thereafter	3.9% for 10 years; 5.4% thereafter
Annuity purchase basis		
—*Without indexation*		
Retirement-eligible active and deferred members and all retired members, survivors and beneficiaries	3.0%	4.5%
Transfer value basis		
—*With indexation*		
Active and deferred members not retirement-eligible	1.6% for 10 years; 2.2% thereafter	2.8% for 10 years; 3.8% thereafter
Annuity purchase basis		
—*With indexation*		
Retirement-eligible active and deferred members and all retired members, survivors and beneficiaries	1.4%	2.7%

	December 31, 2012	December 31, 2009
Demographic Assumptions		
Mortality rates	1994 Uninsured Pensioner Mortality Table with fully generational projection scale AA (sex-distinct rates)	1994 Uninsured Pensioner Mortality Table projected to 2020 with projection scale AA (sex-distinct rates)
Withdrawal rates	Not Applicable	Same
Retirement age		
Active and deferred vested members	100% immediate retirement if age 55 & with at least 5 years of continuous service; otherwise 100% at age 55	Same
Retired members and beneficiaries	Not applicable	Same
Termination of employment	Terminate with full vesting	Same
Marital status		
Non-retired spousal proportion	90%	Same
Non-retired spousal age differential	Males three years older	Same
Retired members	Actual marital status and ages are used	Same
Other		
Wind up expenses	$10,000,000	Same
Actuarial cost method	Unit credit	Same
Asset valuation method	Market value of assets adjusted to reflect contributions, benefit payments, transfers and fees/expenses in transit as of the valuation date	Same
Solvency Incremental Normal Cost		
Increases in pensionable earnings	3.0%	Not applicable
Increases in maximum pension limit	In accordance with *Income Tax Act*, then 3.0%	Not applicable
Inflation rate	2.25%	Not applicable
New entrants	Full replacement for decrementing members	Not applicable

Based on the Canadian Institute of Actuaries' Guidance and information such as pension legislation, Plan provisions and Plan experience, we have made the following assumptions regarding how the Plan's benefits would be settled on Plan wind up:

	Percent of Liability Assumed to be Settled By Purchase of Annuities	**Percent of Liability Assumed to be Settled By Lump-Sum Transfer**
Active members		
Not retirement-eligible	0%	100%
Retirement-eligible	100%	0%
Deferred vested members		
Not retirement-eligible	0%	100%
Retirement-eligible	100%	0%
Retired members and beneficiaries	100%	0%

Benefits Valued

	Solvency Valuation
Vesting	We have treated all accrued benefits as vested on Plan wind-up.
Post-valuation date benefit increases	Benefits are based on the average earnings and service at the valuation date.
Indexing	According to Plan provisions, the benefits to which a member would be entitled if the Plan was terminated on the valuation date would include pension indexing of 60% of Alberta CPI. This indexing rate has been accounted for in the With Indexation discount rates summarized earlier in this Section.

Justification for Valuation Assumptions

Solvency lump-sum discount rate for 10 years (Non-indexed)	= V122542[1] + 90 bps = 1.47 + 0.90 **= 2.37 (rounded to 2.40)**
Solvency lump-sum discount rate for 10 years (Fully indexed)	= V122542[1] x (V122553[1] / V122544[1]) + 90 bps = 1.47 x (0.34 / 2.31) + 0.90 **= 1.12 (rounded to 1.10)**
Solvency lump-sum discount rate thereafter (Non-indexed)	= V122544[1] + 0.5 x (V122544[1] – V122542[1]) + 90 bps = 2.31 + 0.5 x (2.31 – 1.47) + 0.90 **= 3.63 (rounded to 3.60)**
Solvency lump-sum discount rate thereafter (Fully indexed)	= V122553[1] + 0.5 x [V122553[1] – (V122542[1] x (V122553[1] / V122544[1]))] + 90 bps = 0.34 + 0.5 x [0.34 – (1.47 x (0.34 / 2.31))] + 0.90 **= 1.30 (rounded to 1.30)**
Solvency annuity purchase discount rate (Non-indexed)	**= 2.96 (rounded to 3.00)**
Solvency annuity purchase discount rate (Fully indexed)	**= 0.38 (rounded to 0.40)**

The indexed rates currently used in the valuation were derived by applying 60% of CPI to the fully indexed rates.

We have set the aforementioned assumptions based on guidance prepared by the Canadian Institute of Actuaries Committee on Pension Plan Financial Reporting (“PPFRC”) in the Educational Note Assumptions for Hypothetical Wind Up and Solvency Valuations with Effective Dates Between December 31, 2012 and December 30, 2013 (“CIA Guidance”) released on February 13, 2013.

For benefit entitlements that are expected to be settled by purchase of annuities, we based the assumptions on information compiled by the PPFRC from insurance companies active in the group annuity market.

For benefit entitlements that are expected to be settled by lump-sum transfer, we based the assumptions on the Canadian Institute of Actuaries Standards of Practice for Pension Commuted Values, effective April 1, 2009, using rates corresponding to a valuation date of December 31, 2012.

Pensionable Earnings

To estimate active and disabled members’ best average earnings, we have used actual historical member earnings.

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[1] CANSIM Series (annualized)

Pre-retirement Mortality

We have made no allowance for pre-retirement mortality. The impact of including such an assumption would not have a material impact on the valuation, since the value of the death benefit is approximately equal to the value of the accrued pension.

Termination Rates

All participants who are actively employed on the valuation date are assumed to terminate their employment on this date and subsequently retire from the Plan in accordance with the retirement age assumption summarized above.

Assumptions Not Needed

The following are not relevant to the solvency valuation:

- Increases in pensionable earnings;
- Increases in Year's Maximum Pensionable Earnings;
- Increases in *Income Tax Act* maximum pension limit (we used the 2013 limit of $2,696.67); and
- Disability rates.

Estimated Wind-Up Expenses

Plan wind-up expenses would normally include such items as fees related to preparation of the actuarial wind-up report, fees imposed by a pension supervisory authority, legal fees, administration, custodial and investment management expenses. We have assumed these fees would be $10,000,000.

Actuarial Cost Methods

Unit credit (accrued benefit) cost method as prescribed.

Asset Valuation Method Considerations

Assets for solvency purposes have been determined using market value with adjustments for:

- In-transit items at the valuation date; and
- Expenses for Plan termination as outlined above.

Incremental Cost on a Solvency Basis

The incremental cost on a solvency basis represents the present value, at the calculation date (time 0), of the expected aggregate change in the solvency liabilities between time 0 and the next calculation date (time t), adjusted upwards for expected benefit payments between time 0 and time t.

An educational note was published in December 2010 by the Canadian Institute of Actuaries' Committee on Pension Plan Financial Reporting to provide guidance for actuaries on the calculation of this new information.

The calculation methodology can be summarized as follows:

- The present value at time 0 of expected benefit payments between time 0 and time t, discounted to time 0,

  plus

- Projected solvency liabilities at time t, discounted to time 0, allowing for, if applicable to the pension plan being valued:
  - expected decrements and related changes in membership status between time 0 and time t,
  - accrual of service to time t,
  - expected changes in benefits to time t,
  - a projection of pensionable earnings to time t,

  minus

- The solvency liabilities at time 0.

The projection calculations take into account the following assumptions and additional considerations:

- The assumptions for the expected benefit payments and decrement probabilities, service accruals, and projected changes in benefits and/or pensionable earnings would be consistent with the assumptions used in the pension plan’s going concern valuation.
- The assumptions used to calculate the projected liability at time t are consistent with the assumptions for the solvency liabilities at time 0, assuming that interest rates remain at the levels applicable at time 0, that the select period is reset at time t for interest rate assumptions that are select and ultimate and that the Standards of Practice for the calculation of commuted values and the guidance for estimated annuity purchase costs in effect at time 0 remain in effect at time t.
  - Active and inactive plan members as of time 0 and assumed new entrants over the period between time 0 and time t are considered in calculating the incremental cost.
- ### New entrants
  - We have made an allowance for new entrants over the incremental cost period. Members who retire, terminate or die are immediately replaced by a new entrant matching a profile created based on actual historic Plan experience of new entrants.

Appendix F: Summary of Plan Provisions

This funding valuation was based on plan design information provided by the MEP Board as of December 31, 2012. The following is a summary of the main provisions of the Plan.

Effective Date	Prior to 1993, the *Management Employees Pension Plan Act* provided for the payment of pension and related ancillary benefits to eligible participants. In 1993, the *Public Sector Pension Plans Act* was passed, thereby covering the Management Employees Pension Plan.
Jurisdiction of Registration	Alberta.
Eligibility for Membership	Open to full- and part-time employees in designated management positions.
Normal Retirement	
Eligibility	Age 55 with at least 5 years of pensionable service.
Benefit	Annual pension payable in equal monthly instalments calculated as pensionable service multiplied by 2.0% of highest average earnings (the participant's average annual salary in the five consecutive years of pensionable service in which such average is the highest).
Early Retirement	
From active service	
Eligibility	Permitted for a participant who has attained the age of 55 and accrued five years of service.
Benefit	For service prior to January 1, 1992, there is no reduction in the participant's pension upon retirement. For service after December 31, 1991, a participant'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 would be reached, based on pensionable service to the date of termination. No reduction is applied if the participant has accrued 80 points (that is, age plus pensionable

service is greater than or equal to 80) or has attained age 60.

Postponed Retirement

Eligibility	Any time after normal retirement date and before December 31 of the year in which the participant attains age 71.
Benefit	Normal retirement benefit accrued to postponed retirement date. The benefit is actuarially increased from the normal retirement date to the postponed retirement date.

Termination of Employment

Pre-1992 service

Eligibility	Members are vested following completion of five years of pensionable service.
Benefit	Members receive a refund of participant contributions with interest. Alternatively, vested members may opt to receive a deferred pension.

Post-1991 service

Eligibility	Members are vested following completion of five years of pensionable service.
Benefit	Members receive a refund of participant contributions with interest and excess contributions, if any. In lieu of the deferred pension, the participant may elect to transfer the lump-sum value of the deferred pension plus excess contributions to an acceptable registered retirement vehicle. In that event, the member must also take a refund of the participant's pre-1992 contributions in lieu of the deferred pension earned for pre-1992 service.

Pre-retirement Death

Pre-1992 service

Eligibility	Members are vested following completion of five years of pensionable service.
Benefit	No pension partner or dependent children: Refund of participant contributions with interest. Dependent children but no pension partner: Refund of participant contributions with interest (two times this amount if vested at date of death or member died in active service). Pension partner: Refund of participant contributions with interest (two times this amount if member died in active service). If vested, the pension partner is eligible for an unreduced immediate pension determined as though the participant had retired on the day before death and elected a J&S 100% optional form pension.

Post-1991 service

Eligibility	Members are vested following completion of five years of pensionable service.
Benefit	Beneficiaries of non-vested members receive the participant'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 participant had retired on the day before death and elected a J&S 100% optional form pension, plus excess contributions. 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.

Benefit

Participation in the Plan continues, but no pension is payable concurrently with the LTD benefit. For the purpose of determining contributions and benefits, pensionable salary will be the pensionable salary immediately preceding disability, increased by subsequent general wage increases applicable for that participant's employment class.

Contributions

In accordance with the Plan, contribution rates for service after December 31, 1991, will be set at a level appropriate for the funding of the Plan, as recommended by the Plan's actuary:

Valuation date: December 31, 1999
Effective date: January 1, 2000
Participants: 7.75% of pensionable earnings
Employers: 10.75% of pensionable earnings

Valuation date: December 31, 2001
Effective date: April 1, 2003
Participants: 9.5% of pensionable earnings
Employers: 13.1% of pensionable earnings

Valuation date: December 31, 2003
Effective date: July 1, 2005
Participants: 10.5% of pensionable earnings
Employers: 18.0% of pensionable earnings

Valuation date: December 31, 2009
Effective date: January 1, 2011
Participants: 11.16% of pensionable earnings
Employers: 19.14% of pensionable earnings

Valuation date: December 31, 2012
Effective date: January 1, 2014
Participants: 12.80% of pensionable earnings
Employers: 21.85% of pensionable earnings

Maximum Benefit

Effective January 1, 1992, and only in respect of pensionable service after 1991, pensionable earnings for each calendar year are limited to 50 times the defined benefit annual maximum pension limit for the year under the *Income Tax Act*.

For years after 2006, the limit is as follows:

Year	Limit
2007	111,111
2008	116,667
2009	122,222
2010	124,722
2011	127,611
2012	132,334
2013	134,834
2014 +	Indexed to Average Industrial Wage

Normal Form of Payment

Member without pension partner at retirement

For pre-1992 service, the normal form of pension is payable for life.

For post-1991 service, the normal form of pension is a lifetime pension guaranteed for 120 months.

Member with pension partner at retirement

For pre-1992 service, the normal form of pension is a joint form with a 75% survivor pension payable to the pension partner.

For post-1991 service, 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 Alberta CPI apply to both deferred pensions and pensions-in-payment.

Definitions

Pensionable earnings

The participant's actual salary limited to the amount in any year after 1992 which results in the maximum defined benefit for that year under the *Income Tax Act Regulations*.

Credited interest	Prior to 1994, participants' contributions were accumulated at the rate of 4% per annum, compounded semi-annually. After 1993, the rate of interest credited to participants' contributions was changed to the average yield of 5-year personal fixed term chartered bank deposits (CANSIM series V122515) over the most recent 12-month period, calculated as of the first day of the calendar year.
Pensionable service	Combined pensionable service, as defined under the provisions of the Plan, cannot exceed 35 years. Combined pensionable service (service in the Plan plus pensionable service in the Public Service Pension Plan) is used to determine eligibility for benefits, vesting and determination of highest average salary.

A copy of a letter from the MEP Board certifying the accuracy and completeness of the plan provisions summarized in this report is included in Appendix G of this report.

Appendix G: Administrator Certification

With respect to the Management Employees Pension Plan, forming part of the actuarial report as at December 31, 2012, I hereby certify that, to the best of my knowledge and belief:

- The asset data contained in Appendix B of this report is complete and accurate; and
- The actuary has been notified of all relevant events subsequent to the valuation measurement date.

Ray Gilmour	Deputy Minister of Finance
Name (print) of Authorized Signatory Alberta Treasury Board and Finance	Title
Signature	Date

- The membership data summarized in Appendix C of this report form a complete and accurate description of all persons who are entitled to benefits under the terms of the plan in respect of service up to the date of the valuation;
- The summary of the Plan provisions contained in Appendix F is an accurate summary of the Plan provisions; and
- The actuary has been notified of all relevant events subsequent to the valuation measurement date.

Lesley Bowering	Vice-President, Policy & Research
Name (print) of Authorized Signatory Alberta Pensions Services Corporation	Title
Signature	Date