

Q. RATE BASE

PUB 37.0 (RE: Report on the Amortization of the Unfunded Pension Liability – Volume I)

PUB 37.5

Provide full details, including financial rationales over various funding scenarios, which support the company's position that liquidating the unfunded pension liability over a longer period then five (5) years:

"...would have the effect of increasing the Company's current revenue requirement and at least marginally jeopardizing the benefits in pension fund stability which full funding provides to the Company, its employees, and its customers." (p. 4)

A. Calculating Revenue Requirement Impacts

The effect of increasing the Company's current revenue requirements is described at Pages 3 to 4 of the *Report on the Amortization of the Unfunded Pension Liability* (the "Report").

In the 2004 test year, Newfoundland Power's income taxes were reduced by approximately \$2.2 million as a result of the special funding of \$6,384,000 associated with the unfunded pension liability. An increase of \$3.4 million in Newfoundland Power's current revenue requirement would be required to recover a \$2.2 million increase in income tax on a 2004 test year basis. This reflects the fact that the revenue required to recover the increased income tax is taxable.

Benefits of Pension Fund Stability

A primary benefit of pension fund stability is the enhanced long-term stability in the cost of pensions. This benefits both Newfoundland Power's customers and its employees.

A fully funded pension plan should *tend* to be self-sustaining over the long-term insofar as it relates to benefits already accrued by employees. It is practically impossible to *guarantee* stability of costs as capital market conditions will vary over the long-term. Nevertheless, the continued existence of significant unfunded liabilities does raise the risk of significant variability in pension costs and funding.

Pension plan valuations are performed on 2 bases. One is the going concern valuation and is found at page 1 of the Mercer Human Resource Consulting Letter provided as Appendix A to the Report. This type of valuation reviews the plan on the basis of its ability to meet obligations to employees as they become due in the future. As is indicated in the Report, *Pensions Benefits Act Regulations* require unfunded liabilities existing on a going concern valuation to be funded within 15 years.

1 The second basis of pension plan valuation is the solvency valuation. This type of
2 valuation reviews the plan on the basis of its ability to meet obligations to employees in
3 the event of the plan's termination. *Pension Benefits Act Regulations* require solvency
4 deficiencies to be funded within 5 years. Mercer Human Resource Consulting has
5 indicated that Newfoundland Power's pension plan had a solvency excess of \$17.2
6 million as at December 31, 2003. Newfoundland Power has not experienced a solvency
7 deficiency since the solvency definition was introduced to the provincial pension
8 legislation in 1997.

9
10 A pension plan with significant ongoing unfunded liability carries a greater risk of
11 incurring a solvency deficiency than one which is sufficiently funded. Put simply, a
12 significant unfunded liability combined with a market downturn could trigger a solvency
13 deficiency. Since a solvency deficiency must be addressed within 5 years, it can cause
14 significant variability in pension costs and funding. Accordingly, it is beneficial and
15 prudent for both customers and employees for Newfoundland Power to take reasonable
16 steps to avoid such a development.

17
18 A shorter liquidation period for Newfoundland Power's unfunded pension liability
19 reduces the risk of pension cost and funding instability associated with possible solvency
20 deficiencies.

21 22 **Results of Funding Scenario Analyses**

23 Attachment A to this Response is a *Detailed Analysis of Customer Rate Impacts of*
24 *Alternative Funding of the Unfunded Pension Liability* (the "Detailed Analysis"). It
25 indicates that, from a customer rate perspective, it is marginally more expensive, on a net
26 present value basis, to liquidate the unfunded pension liability over a longer period than
27 currently planned.

28
29 Newfoundland Power observes that these results are not surprising from the perspective
30 of financial analysis. The current unfunded pension liability of \$24.1 million represents
31 the results of an actuarial assessment performed as of December 31, 2003. Any pension
32 stream chosen to liquidate the unfunded liability must equal the \$24.1 million on a net
33 present value basis as of December 31, 2003.

34
35 The analysis essentially demonstrates that the unfunded liability must effectively be
36 financed by one of two means; either through increased pension expense, or through
37 return on the deferred pension asset. Liquidating the unfunded liability over a longer
38 time horizon results in more finance costs being recognized in pension expense.
39 Liquidating the unfunded liability over a shorter time horizon results in more finance
40 costs recognized in the return on deferred assets. Under either scenario, the costs borne
41 by customers will tend to be more or less the same on a net present value basis.

Conclusion

The Detailed Analysis indicates that liquidating the unfunded pension liability over the longer period would increase Newfoundland Power's *pro forma* 2005 revenue requirements by approximately 0.53% or \$2,163,000. It would result in some jeopardizing of the benefits to both employees and customers of pension fund stability that are associated with full funding. In addition, it would be more expensive to customers, on a net present value basis, than the currently authorized funding schedule.

**Detailed Analysis of Customer Rate
Impacts of Alternative Funding of
the Unfunded Pension Liability**

Introduction

To assess the comparative *pro forma* impact upon customer rates of liquidating the current unfunded pension liability over (i) the current authorized funding schedule and (ii) a longer payment stream, Newfoundland Power analysed the comparative net present values of the alternative impacts on its revenue requirements. A comparison of revenue requirements on a net present value basis provides a reasonable basis for assessing relative impacts upon customers of the alternatives over the long-term.

As pension funding requirements are subject to mandatory 3 year valuations and actual market conditions, the actual impacts upon customers of future funding requirements cannot be definitively forecast. However, *pro forma* analysis will indicate *relative* future impacts of alternatives based upon current assumptions and valuations.

Conceptual Background

To assess the continued appropriateness of Newfoundland Power's currently authorized funding of its unfunded pension liability of \$24.1 million, Newfoundland Power compared the impacts upon revenue requirements of the currently authorized funding stream with those of a longer payment stream. Both alternative pension funding streams were provided to Newfoundland Power by Mercer Human Resource Consulting.¹

In performing its assessment, Newfoundland Power considered the cumulative impact of the three primary cost elements which change as a result of a change in pension funding.

The first cost element is the impact of pension funding on income tax expense. This represents the tax savings associated with the cash outlays to fund the unfunded liability.

The second cost element is annual pension expense which is determined, in part, by the overall level of pension funding. Annual pension expense explicitly recognizes the expected return on the actual assets invested in the pension fund each year. This return reduced what would otherwise be recorded as pension expense.

The third cost element is the financing costs associated with changes in the deferred asset which arise from the alternative funding streams.

Each cost element is tax effected to capture the annual impacts under each funding alternative. The after tax impacts were totalled on an annual basis and the total annual after tax impacts were translated into an annual impact of revenue requirements by dividing the total annual after tax impacts by 0.65 (or, 1-tax rate of 35%).

¹ The maximum funding stream permissible under the *Pension Benefits Act, 1997* as set out in Appendix B indicates funding to 2015, or 12 years. This is less than 15 years because the 15 year period must run from the date of the prior valuation, or December 31, 2000.

Finally, the annual revenue requirement impacts were discounted at Newfoundland Power's after tax incremental weighted average cost of capital to arrive at a net present value of those annual revenue requirements.

Results of Analysis

The results of the revenue requirement impact analysis of continuing the current authorized funding of the unfunded pension liability is found in Appendix A. The analysis indicates the present value of the revenue requirements from 2004 through 2018 associated with this alternative to be a negative \$13.051 million. Put another way, the net present value of Newfoundland Power's revenue requirements will be \$13.051 million *lower* from 2004 through 2018 as a result of this funding pattern as compared to no funding at all during the period.

The results of the revenue requirements impact analysis of extending the funding of the unfunded pension liability over a longer period is found in Appendix B. The analysis indicates the net present value of the revenue requirements from 2004 through 2018 associated with this alternative to be a negative \$12.634 million. Put another way, the net present value of Newfoundland Power's revenue requirements will be \$12.634 million *lower* from 2004 through 2018 as a result of this funding pattern as compared to no funding at all during the period.

Extension of the funding period for Newfoundland Power's unfunded pension liability over a longer period will, on a *pro forma* basis, marginally increase the net present value of Newfoundland Power's revenue requirements in the period 2004 through 2018 by approximately \$400,000.

***Pro Forma* Rate Impacts**

The results of the analysis of the revenue requirements can be used to consider the *pro forma* rate impacts of the two alternatives on a *relative* basis.

Under the current scenario set out in Appendix A, it appears that in the period 2008 to 2009, Newfoundland Power's revenue requirements would tend to increase by approximately \$3 million (2008 Annual Change in Revenue Requirement (Column L) of \$1,499,000 plus 2009 Annual Change in Revenue Requirement of \$1,493,000 = \$2,992,000). This primarily reflects the revenue requirement impacts of the loss of income tax deductions associated with the funding levels in the current scenario. The \$2,992,000 represents approximately 0.74% of Newfoundland Power's current 2004 revenue requirement of \$402,926,000.

Under the alternative scenario set out in Appendix B, it appears that in 2005, Newfoundland Power's revenue requirements would tend to increase by just over \$2 million (2005 Annual Change in Revenue Requirement (Column L) \$2,163,000). This also primarily reflects the revenue requirement impacts of lower income tax deductions

associated with the *reduced* pension funding. The \$2,163,000 represents approximately 0.53% of Newfoundland Power's current 2004 revenue requirement of \$402,926,000. In addition, under the alternative scenario set out in Appendix B, there would be an additional revenue requirement impact of \$1,250,000 in 2016. \$1,250,000 represents approximately 0.31% of Newfoundland Power's current 2004 revenue requirement.

Newfoundland Power Inc.

**Revenue Requirement
Unfunded Liability Amortized in Accordance with Board Authorizations
2004-2018
(\$000s)**

	<u>Income Tax</u>		<u>Pension Expense</u>			<u>Deferred Pension Asset</u>				<u>Revenue Requirement Impacts</u>		
	<u>Pension Funding</u>	<u>After Tax Savings</u>	<u>Pension Asset</u>	<u>Pension Expense</u>	<u>After Tax Savings</u>	<u>Pension Asset</u>	<u>Financing Costs</u>	<u>Tax Impact</u>	<u>After Tax Cost</u>	<u>Total After Tax Impact</u>	<u>Revenue Requirements Impact</u>	<u>Annual Change In Revenue Requirement</u>
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>	<u>I</u>	<u>J</u>	<u>K</u>	<u>L</u>
2004	6,384	(2,234)	6,623	(239)	(239)	6,623	282	(48)	234	(2,240)	(3,446)	-
2005	6,384	(2,234)	13,744	(736)	(736)	13,744	868	(147)	721	(2,250)	(3,461)	(15)
2006	6,244	(2,185)	21,252	(1,265)	(1,265)	21,252	1,491	(253)	1,238	(2,212)	(3,404)	57
2007	5,601	(1,960)	28,657	(1,804)	(1,804)	28,657	2,126	(361)	1,765	(1,999)	(3,076)	328
2008	2,791	(977)	33,702	(2,254)	(2,254)	33,702	2,657	(451)	2,206	(1,025)	(1,577)	1,499
2009	-	-	36,230	(2,528)	(2,528)	36,230	2,979	(506)	2,473	(55)	(84)	1,493
2010	-	-	38,947	(2,717)	(2,717)	38,947	3,203	(544)	2,659	(58)	(90)	(6)
2011	-	-	41,868	(2,921)	(2,921)	41,868	3,443	(585)	2,858	(63)	(97)	(7)
2012	-	-	45,009	(3,140)	(3,140)	45,009	3,701	(629)	3,072	(68)	(105)	(8)
2013	-	-	48,384	(3,376)	(3,376)	48,384	3,979	(676)	3,303	(73)	(112)	(7)
2014	-	-	52,013	(3,629)	(3,629)	52,013	4,277	(726)	3,551	(78)	(120)	(8)
2015	-	-	55,914	(3,901)	(3,901)	55,914	4,598	(781)	3,817	(84)	(129)	(9)
2016	-	-	60,108	(4,194)	(4,194)	60,108	4,943	(839)	4,104	(90)	(138)	(9)
2017	-	-	64,616	(4,508)	(4,508)	64,616	5,313	(902)	4,411	(97)	(149)	(12)
2018	-	-	69,462	(4,846)	(4,846)	69,462	5,712	(970)	4,742	(104)	(160)	(11)
	27,404											

Net Present Value of Revenue Requirement (based on after-tax discount rate of 7.03%)

Brackets represent reduced revenue requirement

(13,051)

Notes:

B = Tax savings related to pension funding. Uses a tax rate of 35%.

C = Cumulative increase in deferred pension asset as a result of pension funding (A) and pension expense reduction (D).

D = Change in pension expense due to funding calculated at a 7.5% return on pension assets (C). Assumes a return on 50% of current year funding.

E = Pension Expense is not deductible for tax purposes, thus E = D.

F = Cumulative increase in deferred pension asset as a result of pension funding (A) and the reduction in pension expense (D).

G = Cost of financing the deferred pension asset (F) using an incremental weighted average cost of capital of 8.52%.

H = Tax savings associated with the debt portion (48.52%) of the financing cost (G) for the deferred pension asset. Reflects fact that interest on debt is tax deductible.

I = After-tax cost of financing the deferred pension asset (G + H).

J = Total after-tax impact of funding calculated as the income tax savings from funding (B) plus the after-tax reduction in pension expense (E) plus the after-tax financing cost of the deferred pension asset (I).

K = Reduction in revenue requirements resulting from pension funding calculated as the total after tax impact (J) divided by 0.65 (1-tax rate of 35%).

L = Year-over-year change in revenue requirements in column K.

Newfoundland Power Inc.

**Revenue Requirement
Unfunded Liability Amortized Over Maximum Period
2004-2018
(\$000s)**

	Income Tax		Pension Expense			Deferred Pension Asset				Revenue Requirement Impacts		
	Pension Funding	After Tax Savings	Pension Asset	Pension Expense	After Tax Savings	Pension Asset	Financing Costs	Tax Impact	After Tax Cost	Total After Tax Impact	Revenue Requirement Impact	Annual Change In Revenue Requirement
	A	B	C	D	E	F	G	H	I	J	K	L
2004	6,384	(2,234)	6,623	(239)	(239)	6,623	282	(48)	234	(2,240)	(3,446)	-
2005	2,346	(821)	9,554	(585)	(585)	9,554	689	(117)	572	(834)	(1,283)	2,163
2006	2,346	(821)	12,705	(805)	(805)	12,705	948	(161)	787	(838)	(1,290)	(7)
2007	2,346	(821)	16,091	(1,041)	(1,041)	16,091	1,227	(208)	1,019	(843)	(1,297)	(7)
2008	2,346	(821)	19,732	(1,295)	(1,295)	19,732	1,526	(259)	1,267	(849)	(1,306)	(9)
2009	2,346	(821)	23,646	(1,568)	(1,568)	23,646	1,848	(314)	1,534	(855)	(1,315)	(10)
2010	2,346	(821)	27,854	(1,861)	(1,861)	27,854	2,194	(373)	1,821	(862)	(1,326)	(10)
2011	2,346	(821)	32,377	(2,177)	(2,177)	32,377	2,566	(436)	2,130	(868)	(1,336)	(10)
2012	2,346	(821)	37,239	(2,516)	(2,516)	37,239	2,966	(504)	2,462	(876)	(1,347)	(11)
2013	2,346	(821)	42,466	(2,881)	(2,881)	42,466	3,395	(577)	2,818	(884)	(1,359)	(12)
2014	2,346	(821)	48,085	(3,273)	(3,273)	48,085	3,857	(655)	3,202	(892)	(1,372)	(12)
2015	2,346	(821)	54,125	(3,694)	(3,694)	54,125	4,354	(739)	3,615	(900)	(1,385)	(13)
2016	2	(1)	58,186	(4,059)	(4,059)	58,186	4,784	(812)	3,972	(88)	(135)	1,250
2017	-	-	62,550	(4,364)	(4,364)	62,550	5,143	(873)	4,270	(94)	(144)	(9)
2018	-	-	67,242	(4,691)	(4,691)	67,242	5,529	(939)	4,590	(101)	(156)	(12)
	32,192											

Net Present Value of Revenue Requirement (based on after-tax discount rate of 7.03%)

Brackets represent reduced revenue requirement

(12,634)

Notes:

B = Tax savings related to pension funding. Uses a tax rate of 35%.

C = Cumulative increase in deferred pension asset as a result of pension funding (A) and pension expense reduction (D).

D = Change in pension expense due to funding calculated at a 7.5% return on pension assets (C). Assumes a return on 50% of current year funding.

E = Pension Expense is not deductible for tax purposes, thus E = D.

F = Cumulative increase in deferred pension asset as a result of pension funding (A) and the reduction in pension expense (D).

G = Cost of financing the deferred pension asset (F) using an incremental weighted average cost of capital of 8.52%.

H = Tax savings associated with the debt portion (48.52%) of the financing cost (G) for the deferred pension asset. Reflects fact that interest on debt is tax deductible.

I = After-tax cost of financing the deferred pension asset (G + H).

J = Total after-tax impact of funding calculated as the income tax savings from funding (B) plus the after-tax reduction in pension expense (E) plus the after-tax financing cost of the deferred pension asset (I).

K = Reduction in revenue requirements resulting from pension funding calculated as the total after tax impact (J) divided by 0.65 (1-tax rate of 35%).

L = Year-over-year change in revenue requirements in column K.