

1 Q. **Employee Future Benefit actuarial gains and losses**

2 Please provide a copy the last actuarial valuation completed for Hydro.

3

4

5 A. Please refer to CA-NLH-132 Attachment 1.



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NFLD11

October 8, 2013

CONFIDENTIAL

Elizabeth Gray, CA
Assistant Corporate Controller
Nalcor Energy
Hydro Place, 500 Columbus Drive
St. John's, NL A1B 4K7

Dear Elizabeth:

RE: Fiscal 2012 Accounting Figures - Canadian GAAP

We are now writing to provide disclosure figures in accordance with CICA 3461 for the post-employment benefits other than pensions (OPEBs) provided by Newfoundland and Labrador Hydro (the "Company") for Fiscal 2012, including the 2012 expense (herein referred to as "OPEB Expense").

Introduction

The disclosure figures presented in this letter are based on the following OPEBs provided by the Company:

- > Extended health care benefits;
- > Dental benefits;
- > Life insurance benefits;
- > Retirement allowance; and
- > SERP benefits for one retiree

This year's disclosure is based on a new valuation of the OPEBs as at December 31, 2012.

CICA 3461 for Fiscal 2012

The fiscal 2012 benefit cost is based on our valuation as at December 31, 2009 with an extrapolation through to the end of 2012.

Ms. Elizabeth Gray
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The following table shows the OPEB expense for fiscal 2012 to be reported under CICA 3461:

Fiscal 2012 OPEB Expense (in \$000's)

	Hydro
CICA 3461	9,295.8

The key assumption in determining the OPEB Expense is the discount rate of 4.55% per year. The duration of the ABO as at December 31, 2011 was between 18 and 19 years.

Based on the methodology suggested for use in the Canadian Institute of Actuaries' Educational Note regarding the setting of discount rates for accounting purposes (issued in September 2011), the yield for 18 to 19 year duration AA Canadian corporate bonds as at December 31, 2011 was approximately 4.55% per year. As at December 31, 2012, this yield has reduced to 4.00% per year and is applied in determining the December 31, 2012 ABO and the estimated fiscal 2013 OPEB Expense.

The net impact of gains and losses of \$3,360,500 due to the recognition of the new valuation and changes in assumptions is recognized in the unamortized loss balance at the end of Fiscal 2012.

The following table shows the development of the Accrued Benefit Liability on the Company's balance sheet at the end of fiscal 2012.

Accrued Benefit Liability/(Asset) on Balance Sheet for Fiscal 2012 (in \$000's)

	Hydro
Accrued Benefit Liability/(Asset) at January 1, 2012	53,394.8
Fiscal 2012 OPEB Expense/(Income)	9,295.8
(Fiscal 2012 Company Contributions) ¹	(2,329.6)
Accrued Benefit Liability/(Asset) at December 31, 2012	60,361.0

1. The actual 2012 contributions were provided by the Company by email on January 3, 2013

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Estimated OPEB Expense for Fiscal 2013 (CICA 3461)

The following table shows the expected OPEB Expense under CICA 3461 for fiscal 2013:

Estimated Fiscal 2013 CICA 3461 OPEB Expense (in \$000's)

Hydro
CICA 3461

8,671.4

The decrease in the estimated 2013 OPEB Expense when compared to the fiscal 2012 OPEB Expense is due to the net impact of assumption changes and favorable OPEB experience recognized in the new valuation.

Please refer to Appendix D for results of the sensitivity analysis and refer to Appendix E for detailed accounting figures for Fiscal 2012.

Actuarial Assumptions and Methods

The actuarial method and assumptions used to determine the ABO and annual OPEB Expense in respect of the OPEB are summarized in Appendix A to this letter. The key assumption, the discount rate used to calculate both the ABO as at December 31, 2011 and the 2012 OPEB Expense, was 4.55% per year. The discount rate used to determine the ABO as at December 31, 2012 and the estimated fiscal 2013 OPEB Expense was 4.00% per year. These interest rates were determined with reference to the yield on AA Canadian corporate bonds as at December 31, 2011 and December 31, 2012 with the same duration as the ABO (approximately 19).

Claims and premiums information was provided to us by the Company. Please refer to Appendix A for a summary of the claims cost and premium amounts used in our valuation.

Data and Plan Provisions

The Company has confirmed that since the last valuation there have been no material changes to the membership or OPEB provisions.

The data used in our valuation was the active member and retiree data as at December 31, 2012, as provided to us by the Company. We have made basic data checks to ensure that age, service and salary are reasonable for the purposes of the valuation. Please refer to Appendix B for a summary of the data used in our valuation.

Please refer to Appendix C for a summary of the benefits valued. If there are any other benefits that we have not included in our calculations, please let us know and we will update the letter and our calculations accordingly.

Actuarial Opinion

We performed a formal valuation of the OPEBs as at December 31, 2012. We have confirmed with the Company that since the valuation date, there are neither

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modifications to the OPEB provisions nor any extraordinary changes to the membership that would materially affect the results of this actuarial valuation.

We hereby certify that, in our opinion, as at December 31, 2012:

- > The post-employment benefits other than pension for the Company are defined benefits as per CICA Handbook Section 3461 (CICA 3461).
- > The projected unit credit method prorated on service was used for the accounting valuation and the determination of the expense (income). It was applied in a manner consistent with CICA 3461. We have performed a new valuation as at December 31, 2012.
- > We are members in good standing of the Canadian Institute of Actuaries (CIA). Among the signatories of this opinion, at least one actuary holds the title of Fellow. We have all the necessary qualifications to carry out the work required to prepare the results contained in this document.
- > Our valuation and extrapolation were made in accordance with the standards of the CIA. The financial statement items resulting from our valuation and extrapolation thereof have been prepared in accordance with generally accepted accounting principles. We are aware that the Company's auditors intend to take into account our work. Our actuarial valuation and extrapolation thereof were performed using best-estimate assumptions developed by the Company as provided for in the accounting standard. Since the best-estimate assumptions were used, we understand that they do not include any provision for adverse deviation.
- > The discount rate selected by the Company was determined based on the guidance provided by the Educational Note published by the Canadian Institute of Actuaries in September 2011. We do not express any opinion on the assumptions. The main assumptions used are detailed in Appendix A.
- > We have confirmed with the Company that the OPEB provisions are up to date as at the date of our valuation report. We have compared the provisions with the previous actuarial valuation and have validated any amendment that occurred on the basis of the values produced on the membership data. We have not been informed of any event that has occurred thereafter and that would materially affect the results of the actuarial valuation, the extrapolation or the financial statements of the Company or the OPEBs.

Furthermore, we hereby declare that in our opinion:

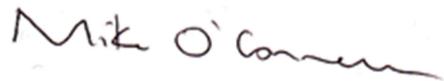
- > The membership data upon which this valuation is based are sufficient and reliable for the purposes of the valuation.
- > This report has been prepared, and our opinion given, in accordance with generally accepted actuarial practice in Canada.

Emerging experience that differs from the assumptions used will result in gains and losses that will be revealed in future valuations.

Ms. Elizabeth Gray
October 8, 2013

We trust that the above is satisfactory. Please do not hesitate to contact us if you require any further information.

Yours truly,



Mike O'Connell, F.C.I.A.
Partner

Encl.

This report and any enclosures have been peer reviewed by: 
Stephen Kelloway, F.C.I.A.

Appendix A – Actuarial Assumptions and Methods

Actuarial Cost Method

The projected unit credit method of funding has been used for the valuation. Under this method, the accrued benefit obligation is equal to the actuarial present value of all future benefits (net of retiree cost sharing), taking into account the assumptions described below, multiplied by the ratio of an employee's service at the valuation date to total service at the full eligibility date. The current service cost for a period is equal to the actuarial present value of benefits attributed to employees' services rendered in that period.

For each member who is at or past the full eligibility date and each pensioner, the accrued benefit obligation is determined as the actuarial present value of all future post-retirement benefits that will be paid on their behalf.

Calculation of Medical Cost

Medavie Blue Cross provided extended health care and dental claims for the retirees of the Company and other divisions of Nalcor Energy for the period between September 2009 and August 2012, as follows. Health claims were adjusted by a 7% increase in order to account for group travel claims which could not be provided.

	Sep 1, 2009 to Aug 31, 2010	Sep 1, 2010 to Aug 31, 2011	Sep 1, 2011 to Aug 31, 2012
Health	\$2,115,089	\$2,170,504	\$2,310,873
Dental	\$272,493	\$293,191	\$322,745

Exclude taxes and administrative charges.

We projected future cost levels by applying the cost increase assumptions to average costs based on the claims experience data. These rates were further adjusted for utilization at different ages. The following chart shows the estimated average annual true cost to the Company per covered retired individual with single coverage, at various ages:

	Age 55	Age 60	Age 65	Age 70	Age 75	Age 80
Extended Health Care	1,089	1,390	1,773	2,007	2,270	2,569
Dental	281	274	268	261	255	248

Note that the costs shown above represent the total estimated cost per covered individual at each age. Family coverage is assumed to be twice the amount shown. All retirees are responsible for paying 50% of the extended health care premiums and 25% of the dental premiums based on the following premium scale as at January 1, 2013:

(100% of premiums)	Single	Family
Health	\$1,779	\$3,619
Dental	\$259	\$540

Life Insurance

Individuals are responsible for paying 50% of the life insurance premium after retirement. We have based our calculations on the actual amount of coverage for the retirees and on the expected coverage at retirement (based on their current salary and on the salary increase assumption) for the active members. We understand that the life insurance coverage is one times annual earnings at retirement but decreases to \$5,000 upon attainment of age 65 for retirees before 1/1/2007, otherwise it decreases to \$10,000.

Actuarial Assumptions

The actuarial assumptions used for the valuation are summarized in the following table. All rates and percentages are annualized.

Actuarial Assumptions - Economic Factors (per year)

Valuation Date	December 31, 2012
Discount Rates	4.55% (ABO as at December 31, 2010 and 2012 OPEB Expense); 4.00% (ABO as at December 31, 2012 and estimated 2013 OPEB Expense)
Salary Increases	3.5%
General Inflation	2.5%
Dental Cost Increases	3.0%
Extended Health Care Cost Increases	6% effective 1/1/13; reducing at to an ultimate rate of 4.5% over 8 years
Dental Utilization Rates	0.5% Decrease every year
Extended Health Care Utilization Rates	3% increase for each year prior to age 45 5% increase for each year between ages 45 and 65 2.5% increase for each year after age 65
Extended Health Care and Dental Loading	5.75% ASO charge 4% premium tax
Travel Coverage Loading	7% on EHC Claims
Life Insurance Loading	14.95% administration, risk & profit, stop loss 4% premium tax

Actuarial Assumptions - Demographic Factors

Mortality	1994 Uninsured Pensioners Table with generational using Scale AA (UP94 generational); Unisex 80% male, 20% female
Retirement Age	One year after first age eligible to unreduced pension (earlier of age 55 with 30 years of service, age 60 with 5 years of service or age 65) Active members already older than one year after their first age eligible to an unreduced pension are assumed to retire at age 65
Termination	2.5% per year up to age 40, trending down to zero between 40 and 45
Age difference between member and spouse	Same age; 80% married at retirement
Members electing coverage at retirement	100%; 80% electing family coverage

Appendix B – Membership Data

For our valuation as at December 31, 2012, we used data that was provided to us by the Company and by Medavie Blue Cross as at December 31, 2012. We have reviewed the data for reasonableness, internal consistency, and we also checked individual member data against the previous valuation data as at December 31, 2009 and are satisfied that the data is sufficient and reliable for the purposes of this valuation.

Table B.1 – Active Members Data

Hydro	
Active Members as at December 31, 2012	
Number	856
Average age	45.0
Average service	14.7
Average salary	\$73,400
Females	156
Males	700
Active Members as at December 31, 2009	
Number	890
Average age	45.7
Average service	15.7
Average salary	\$61,500
Females	158
Males	732

Table B.2 – Retired Member Data

Hydro	
Retired Members as at December 31, 2012	
Number	683
Average age	68.7
Single coverage – Extended Health Care	161
Family Coverage – Extended Health Care	497
Single coverage – Dental	131
Family Coverage – Dental	478
Number with Life Insurance Coverage	590
Average Current Life Insurance Coverage	\$29,900
Retired Members as at December 31, 2009	
Number	604
Average age	67.9
Single coverage – Extended Health Care	141
Family Coverage – Extended Health Care	440
Single coverage – Dental	107
Family Coverage – Dental	417
Number with Life Insurance Coverage	517
Average Current Life Insurance Coverage	\$30,800

Appendix C – Summary of Plan Provisions

The following tables summarize the main provisions of the OPEB provided to the employees and retirees of the Company. The summary is based on information provided by the Company.

First Eligibility age	Age 55
Life Insurance	
Benefit	1 times the annual earnings at retirement, reducing to \$5,000 upon attainment of age 65 for retirees before 1/1/2007, otherwise it decreases to \$10,000
Cost Sharing	50% of premiums paid by the Company and 50% paid by the retirees
Dental	
Benefits	80% Basic – no maximum 70% Major, \$1,250 calendar year maximum Premium is 75% paid by the Company and 25% paid by the retirees
Extended Health Care	
Coinsurance	80%
Out of Province	Covered
Private duty nursing	\$25,000 maximum per calendar year
Drug coverage	Member pays dispensing fee
Vision	100% - one pair of spectacle lenses and frame per 24 month, to a maximum of \$200
Hearing Aids	\$500 maximum every 5 years
Paramedical practitioner	Different maximums for each covered practitioner
Hospital Coverage	100%, Semi-private
Cost sharing	50% of premiums paid by the Company and 50% paid by the retirees
Retirement Allowance	
Benefit	One week of salary per year of service at retirement, to a maximum of 26 weeks
SERP Benefits	
Benefit	2% of final salary times service in current position at retirement
Indexing	None
Form of payment	60% of pension payable to the spouse upon retiree's death

We understand that coverage may continue to a surviving spouse after the member's death and that the spouse is responsible for paying 100% of the premiums.

Appendix D – Sensitivity Results

The following two tables provide the sensitivity of the fiscal 2012 CICA 3461 disclosure figures to changes in the discount rate or the assumed health care cost trend rates.

Table D.1 Sensitivity to a 25 Basis Point Change in Discount Rate (in \$000's)

	Hydro
0.25% Increase in Discount Rate:	
Combined Change in Service Cost and Interest on ABO	(129.6)
Change in ABO at end of period	(4,047.8)
0.25% Decrease in Discount Rate:	
Combined Change in Service Cost and Interest on ABO	136.7
Change in ABO at end of period	4,343.3

Table D.2 Sensitivity to 1% Change in Assumed Health Care Cost Trend Rates (in \$000's)

	Hydro
1% Increase in Trend Rates:	
Combined Change in Service Cost and Interest on ABO	1,598.3
Change in ABO at end of period	16,985.3
1% Decrease in Trend Rates:	
Combined Change in Service Cost and Interest on ABO	(1,172.6)
Change in ABO at end of period	(12,963.5)

The figures shown above represent the change relative to the figure disclosed. For example, for a 0.25% decrease in the discount rate, the December 31, 2012 ABO would be \$94,871,400 (equal to the disclosed ABO as at December 31, 2012 of \$90,528,100 plus the increase of \$4,343,300 from table D.1 above).

Alternatively, as a second example, for a 1% decrease in the assumed health care inflation, the December 31, 2012 ABO would be \$77,564,600 (equal to the disclosed ABO as at December 31, 2012 of \$90,528,100 less the decrease of \$12,963,500 from table D.2 above).

Appendix E – Detailed Results

Newfoundland Hydro - Fiscal 2012 under Canadian GAAP

CICA 3461 Expense for fiscal year commencing January 1, 2012

Retroactive treatment of Transition Obligation - 10% corridor

EXPENSE

Fiscal year commencing January 1:

	Hydro 2012
CURRENT SERVICE COST	2,875,431
INTEREST ON ACCRUED BENEFITS	4,136,700
INTEREST ON ASSETS	0
STRAIGHT LINE AMORTIZATION OF:	
- Opening Deficit / (Asset)	0
- Experience Loss/(Gain)	2,263,500
- Past Service Costs	20,200
PENSION EXPENSE (INCOME)	9,295,831

ACCRUED BENEFIT LIABILITY

OPENING BALANCE	53,394,807
TRANSFER	0
EXPENSE (INCOME)	9,295,831
(COMPANY CONTRIBUTIONS) (Jan to Dec)	-2,329,600
CLOSING BALANCE	60,361,037

CICA 3461 Expense for fiscal year commencing January 1, 2012

Retroactive treatment of Transition Obligation - 10% corridor

WORKSHEETS

Fiscal year commencing January 1:

	Hydro 2012
1. FINANCIAL POSITION OF THE PLAN AT BEGINNING OF PERIOD	
Assets	0
Liabilities	89,206,092
Transfer	0
Surplus (Deficit)	-89,206,092
2. PLAN COSTS FOR BENEFITS ACCRUING DURING THE PERIOD	
Employee Contributions	0
Company Normal Cost	2,875,431
Total	2,875,431

Appendix E - Detailed Results

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Newfoundland Hydro - Fiscal 2012 under Canadian GAAP

CICA 3461 Expense for fiscal year commencing January 1, 2012

Retroactive treatment of Transition Obligation - 10% corridor

WORKSHEETS

Fiscal year commencing January 1:

Assumed Discount Rate:

3. PROJECTIONS TO END OF PERIOD

ASSETS

Opening Value
Company & Members Contributions
Transfers from Insurance Companies
Interest
Annuity payments by Royal Trust
Benefit Payouts
Settlement Payout
Projected Closing Value
Investment Gain/(Loss)
Actual Closing Value

Hydro
2012

4.65%

0
2,329,600
0
0
0
0
-2,329,600
0
0
0
0
0

89,206,092

2,875,431
4,136,700

-2,329,600

0
0
0
0

93,686,623
3,360,523

90,528,100

-90,528,100

SURPLUS

CICA 3461 Expense for fiscal year commencing January 1, 2012

Retroactive treatment of Transition Obligation - 10% corridor

AMORTIZATION SCHEDULE

Fiscal year commencing January 1:

AMORTIZATIONS ESTABLISHED AS AT January 1, 2011

Hydro
2012

TRANSITIONAL OBLIGATION / (ASSET)

Opening Balance
Annual Component
Closing Balance

0
0
0

AMORTIZATIONS

Remaining amortization period at beginning of year

9.0

PAST SERVICE COST / (ASSET)

Opening Balance
Annual Component
Closing Balance

181,300
20,200
161,100

Remaining amortization period at end of year

8.0

AMORTIZATIONS

AGGREGATE NET ACTUARIAL LOSS / (GAIN)

10% Corridor
Opening Balance to Amortize
Annual Component
Amount not amortized
Transferred

35,629,986
8,920,600
26,709,386
2,263,500
33,366,486
0

Actuarial loss (gain) at end of period on

- Asset Return

- Accrued Benefit Obligation

Total actuarial loss (gain) not amortized

0
-3,360,523
30,005,963

Average Remaining Service Period as at January 1, 2011

11.8

Total Closing Unamortized Losses (Gains)

30,167,063

Appendix E - Detailed Results

Newfoundland Hydro - Fiscal 2012 under Canadian GAAP

CICA 3481 Expense for fiscal year commencing January 1, 2012

Retroactive treatment of Transition Obligation - 10% corridor

EXPENSE - NEW DISCLOSURE

Fiscal year commencing January 1:

EXPENSE - NEW DISCLOSURE		Hydro 2012
Fiscal year commencing January 1:		
COSTS ARISING IN PERIOD		
CURRENT SERVICE COST		2,875,431
INTEREST ON ACCRUED BENEFITS		4,136,700
ACTUAL RETURN ON ASSETS		0
AMOUNTS ARISING FROM EVENTS IN THE PERIOD:		
- Actuarial Losses / (Gains) on ABO		-3,360,523
- Past Service Costs (Gains)		0
FUTURE BENEFIT COSTS BEFORE ADJUSTMENTS		3,651,608
ADJUSTMENTS TO RECOGNIZE LONG-TERM NATURE OF COSTS		
IMPACT OF DEFERRED RECOGNITION ON:		
- Opening Deficit / (Asset)		0
- Current Year Return on Plan Assets**		0
- Actuarial Loss (Gain) other than the current year return on assets*		5,624,023
- Past Service Costs*		20,200
BENEFIT COST (INCOME) RECOGNIZED FOR THE PERIOD		9,295,831

* Equal to (1) current year amortization of (gain)/loss subtract (2) (gain)/ loss incurred in the current year

**** Actual return on plan assets, less expected return on plan assets determined on a market related basis**