



**Grant Thornton**

An instinct for growth™

# Board of Commissioners of Public Utilities Newfoundland and Labrador Hydro

Change in Depreciation Methodology  
Financial Consultants Report

February 29, 2012

# Contents

Introduction and Scope	1
Background	1
Observations and Findings	3

## Introduction and Scope

On December 22, 2011, Newfoundland and Labrador Hydro (“the Company”) (“Hydro”) submitted an Application to the Board of Commissioners of Public Utilities (“the Board”) requesting approval to change its depreciation methodology from its current sinking fund and straight line methodologies, with fixed service lives for specific classes of assets, to group accounting methods using the average service life procedure and applied on a remaining service life basis.

The Board has requested that we undertake a review of the information filed, and report to the Board on the following:

- review the report prepared by Gannett Fleming;
- comment on the appropriateness of Hydro adopting the change in depreciation methodology as it relates to International Financial Reporting Standards (“IFRS”);
- review the calculations in the Gannett Fleming report and ensure the results are consistent with those noted in the Company’s Application;
- review the impact on rates noted in the Company’s Application; and,
- prepare a report on our findings.

The procedures undertaken in the course of our financial review do not constitute an audit of Hydro’s financial information, and consequently we have not expressed an audit opinion on the financial information provided by Hydro.

## Background

In accordance with P.U. 7 (2002-2003), the Company filed a depreciation study in December 2005. This study resulted in recommendations that included the discontinuation of the sinking fund method currently in place as the study concluded that this method was not providing appropriate matching of expenses and consumption and was resulting in losses on asset retirement. It was recommended that Hydro switch to a straight line method of depreciation for these assets and that a transitional approach be developed.

In the Company’s 2006 General Rate Application (“GRA”) to the Board, Hydro requested approval in principle for changes to its depreciation methodology as set out in this 2005 Gannett Fleming Depreciation Study. Per P.U. 28 (2006) the request for approval, in principle, of the straight line and equal life group depreciation methodology was set aside until after the conclusion of the application. An updated depreciation study dated 2007 by Gannett Fleming also recommended that Hydro adopt straight-line depreciation for its hydraulic and transmission assets.

Due to the implementation of IFRS, and the uncertainties surrounding this, in January 2009 the Company requested a deferral in addressing issues related to depreciation. The Company engaged Gannett Fleming to update the 2007 study based on plant in service as of December 31, 2009. This revised depreciation study was filed with the Board as part of its Application on December 22, 2011.

The depreciation study filed by Gannett Fleming recommended the following:

- Hydro replace the sinking fund method currently used to depreciate hydraulic, transmission and terminal station assets, with the straight line method. Gannett Fleming has concluded that the sinking fund method does not provide an appropriate matching of depreciation expense to consumption of service value; and
- Hydro adopt a group depreciation method, average service life procedure, rather than depreciating its 41,000 assets individually.

The move to the sinking fund method has the impact of increasing depreciation expense, however this is offset by a decrease in depreciation expense due to the extension in estimated service lives. The forecast net impact of these changes over the next 5 years is as follows (Source: ‘Table 3: Five-Year Depreciation Impact’ found on page 9 of ‘Depreciation Methodology Application – Evidence’):

**Five-year Depreciation Impacts**  
 (\$ millions)

Year	Current	Proposed	Increase (Decrease)
2011	43.3	42.3	(1.0)
2012	46.4	46.7	0.3
2013	51.1	52.0	0.9
2014	55.3	55.2	(0.1)
2015	57.6	57.3	(0.3)

As noted above the forecast impact in 2011 is a net decrease in depreciation expense of \$1.0 million. However, this impact does differ by system and as such the impact on rates will differ by customer. Hydro has noted that the rate impact by customer is as follows:

<b>Depreciation Methodology and Service Lives Changes</b>				
<b>Estimated Rate Impacts</b>				
<b>(\$ millions)</b>				
Customer	Current Methodology	New Methodology and service Lives	Increase (Decrease) * \$	Increase (Decrease) * %
Newfoundland Power	307.1	308.7	1.6	0.5%
Island Industrial	14.8	15.2	0.3	2.2%
Rural Labrador Interconnected	16.1	14.2	(2.0)	(12.1%)

\*above balances are in millions of dollars. Increase (decrease) \$ and % are calculated based on balances prior to rounding.

Based on the evidence provided in the Application Hydro is requesting the following:

1. The Board accept the depreciation method, service lives and rates outlined in the Gannett Fleming study submitted with Hydro's Application; and
2. That the Board approve that the financial effects of the Gannett Fleming recommendations be included in revised customers' rates resulting from Hydro's next General Rate Application.

### Observations and Findings

The Canadian Accounting Standards Board ("AcSB") requires publicly accountable enterprises to adopt IFRS for external financial reporting purposes. These financial reporting standards are required to be adopted by most publicly accountable enterprises in the interim and annual financial statements for fiscal years beginning on or after January 1, 2011. Certain rate-regulated entities, if they meet specified criteria, could defer the adoption of IFRS by one year to January 1, 2012. Hydro met these criteria and as such is adopting IFRS as of January 1, 2012.

On August 3, 2011 the Company submitted an application to the Board requesting approval for the 2012 Capital Budget. As part of this application, the Company requested approval to incorporate the requirements of IFRS in its capital expenditure methodology. This specific proposal was approved pursuant to P.U. 2 (2012).

On December 23, 2011 the Company submitted an application to the Board requesting approval of the adoption of IFRS for regulatory reporting effective January 1, 2012. The application is currently under review by the Board.

### **Replacement of sinking fund methodology with straight-line methodology**

Hydro currently uses the sinking fund method to amortize a portion of its assets. This method depreciates assets at a lower rate early in an asset's life and increases the rate of depreciation as an asset ages. The intent of this method is to essentially smooth the total depreciation and debt costs associated with an asset over time (ie: debt costs are typically higher up front and lower as an asset ages).

This method of depreciating assets is not consistent with the requirements of IFRS. The IFRS standard dealing with capital assets and depreciation of those assets is IAS 16 'Property, Plant and Equipment'. Paragraph 60 of IAS 16 states that 'the depreciation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity'. Paragraph 62 notes that "a variety of depreciation methods can be used to allocate the depreciable amount of an asset on a systematic basis over its useful life. These methods include the straight-line method, the diminishing balance method and the units of production method." The sinking fund method typically does not reflect the pattern in which an asset's future benefits are consumed. The straight line method results in a constant charge over the useful life of the asset. The diminishing balance method results in a decreasing charge over the useful life, while the units of production method results in a charge based on the expected use or output. Based on IAS 16, an entity should use the method "that most closely reflects the expected pattern of consumption of the future

economic benefits embodied in the asset”. In the case of Hydro, the Company’s assets will generate an equal benefit over the asset lives and as such the straight line method is appropriate.

**Based on our review of the applicable IFRS standard, the change in methodology in calculating depreciation of capital assets from the sinking fund method to the straight-line method is in accordance with IFRS.**

### **Average Service Life Procedure**

Hydro is proposing calculating the straight-line depreciation using the Average Service Life (“ASL”) procedure applied on a Remaining Life basis. Gannett Fleming notes that this is widely used by regulated utilities throughout North America. Under the ASL procedure, Gannett Fleming notes that “the rate of annual depreciation is based on the average life or average service life of the group, and this rate is applied to the surviving balances of the group’s cost”. Gannett Fleming notes that an alternative to the ASL is the equal life group procedure in which “the property group is subdivided according to service life” and “the calculated depreciation for the property group is the summation of the calculated depreciation based on the service life of each equal life group”.

During our review we noted that in previous depreciation studies submitted by Hydro that Gannett Fleming recommended the use of the equal life group method (“ELG”). In addition we noted that in Newfoundland Power’s (“NP”) 2003 GRA, Hydro had an RFI dealing with depreciation (NLH-233). In the response to the question, NP noted that “the equal life group procedure provides for a better match of depreciation expense and loss in service value than the alternative average life procedure”. In evidence filed as part of NPs 2008 GRA, Gannett Fleming also noted that the equal life group procedure provides for a better match of depreciation expense and loss in service value than the average service life procedure.

Based on the above comments we asked Hydro the following questions on February 27, 2012:

1. What has caused the change in recommendation from the equal life group procedure to the average service life procedure?
2. Does Hydro believe that the average service life procedure provides a better matching of depreciation than the equal life method?
3. Did Gannett Fleming quantify annual depreciation under each method and if so what is the difference?

Following is the response provided by Hydro:

*“When more than a single item of property is under consideration, a group procedure for depreciation is appropriate because normally all of the items within a group do not have identical service lives, but have lives that are dispersed over a range of time. There are two primary group procedures, namely, average service life and equal life group.*

*In the average service life procedure, the rate of annual depreciation is based on the average life or average service life of the group, and this rate is applied to the surviving balances of the group's cost. A characteristic of this procedure is that the cost of plant retired prior to average life is not fully recouped at the time of retirement, whereas the cost of plant retired subsequent to average life is more than fully recouped. Over the entire life cycle, the portion of cost not recouped prior to average life is balanced by the cost recouped subsequent to average life. In this procedure, the accrued*

*depreciation is based on the average service life of the group and the average remaining life of each vintage within the group derived from the area under the survivor curve between the attained age of the vintage and the maximum age.*

*In the equal life group procedure, the property group is subdivided according to service life. That is, each equal life group includes that portion of the property which experiences the life of that specific group. The relative size of each equal life group is determined from the property's life dispersion curve. The calculated depreciation for the property group is the summation of the calculated depreciation based on the service life of each equal life group.*

*Gannett Fleming indicated that the ELG procedure provides a match of the consumption of service values of the assets in service to the depreciation expense. However, the ASL procedure is widely used throughout North America and has been used historically by a number of electric utilities in Canada (eg. Manitoba Hydro per CEA survey done by Hydro). As such Gannett Fleming has also indicated that the ASL procedure is an acceptable procedure.*

*The 2005 depreciation study prepared by Gannett Fleming anticipated that Newfoundland and Labrador Hydro would be seeking approval to transition away from a Sinking Fund method of depreciation to completely incorporate all aspects of commonly accepted regulatory group accounting, including a transition to recognize gains and losses on retirement to the Accumulated Depreciation account rather than the historic practice of booking gains and losses to the income statement. Additionally, the 2005 depreciation study did not review the account structure, but rather used the historic account groupings that were in place for a number of years. As such, in the view of Gannett Fleming, the matching of the consumption of service value to the depreciation expense resulting from the use of the ELG procedure provided a benefit due to the anticipated reduction in the amount of gains and losses that would be anticipated.*

*In preparation of the current depreciation study, two factors were noted by Gannett Fleming. Firstly, in anticipation of the implementation of the International Financial Reporting Standards ("IFRS") Hydro completed a detailed review of the account structure of its depreciable account groupings and of the investment included in each of the revised accounts. The Hydro account structure is very highly componentized (to a much greater level than most regulated Canadian electric utilities), and in the view of Gannett Fleming, now includes assets that will have a more similar life characteristic. Secondly, the IFRS requirements dictated that the recognition of gains and losses on retirement should continue to be booked to the income statement, rather than to the accumulated depreciation account as was anticipated in the 2005 study. Given, these two factors, Gannett Fleming did not view that the matching of the depreciation expense to the consumption of the service value of assets inherent in the ELG calculations was as necessary in the current study. Also given the wide spread acceptance of the ASL procedure, Gannett Fleming agreed with Hydro that ASL is an appropriate procedure.*

*Gannett Fleming did provide Hydro with a one year scenario in which depreciation rates incorporating the use of the ELG procedure were used. Gannett Fleming advised that based on the plant balances as at December 31, 2009, the use of the ELG procedure would have resulted in a large increase in annual depreciation expense".*

**We note that both the ASL and ELG methods are used by regulated utilities. The move to the ASL method does have a limited impact on the change in depreciation expense over the five year period noted in the Company's Application. The total forecast impact from 2011 to 2015 is a net decrease in depreciation expense of \$0.2 million. Excluding the decrease of \$1.0 million for 2011, the net impact on depreciation for the years 2012 to 2015 is an increase of \$0.8 million.**

### **Other IFRS Consideration**

Gannett Fleming has noted that “continued surveillance and periodic revisions are normally required to maintain continued use of appropriate annual depreciation accrual rates”. This is consistent with the requirements of IAS 16. IAS 16 paragraph 51 notes that “the residual value and the useful life of an asset shall be reviewed at least at each financial year-end ...”. In accordance with the requirements of IAS 8, any changes resulting from this review would be accounted for on a prospective basis. The Company has noted in its Application that it “anticipates filing applications with the Board periodically, seeking approval of technical updates, in order to keep financial and regulatory reporting continuously aligned.” The Company also noted that “technical studies are more focused than a full depreciation study and this will not be as time consuming or costly”.

**We recommend the Board ask Hydro what the estimated incremental cost will be of complying with the requirements of IAS 16 paragraph 51 regarding the annual review of residual values and useful life.**

### **Holyrood Thermal Generation Plant**

The Company has noted in its Application that only the ‘synchronous condenser assets’ at the Holyrood thermal plant were included in the depreciation study. Hydro generation assets, with a net book value of \$28 million, have been excluded. The Company has noted that only the synchronous condenser assets will have service lives beyond 2020 due to the Labrador interconnection.

**We note that a final decision regarding the future of the Holyrood Thermal Plant has not been made at this time. If a decision is made not to proceed with the Labrador interconnection the depreciation estimates would have to be recalculated.**

### **Transitional Approach**

In the Company’s Application they have proposed that “the financial effects of these changes be included in customers’ rates resulting from Hydro’s next General Rate Application”. In the Company’s evidence presented it noted “Hydro agrees with the recommendations of the study and plans to incorporate the recommended depreciation rates into its General Rate Application to be filed prior to December 31, 2011”. As of February 29, 2012 no General Rate Application has been filed.

**We recommend the Board require Hydro to outline how differences between 2011 and 2012 current and proposed depreciation impacts will be incorporated into the Company’s next General Rate Application.**



### **Impact on Rates**

We have completed the following procedures with respect to determining the reasonableness and accuracy of the information filed in the Application:

- Traced depreciation expense under the current and proposed methodology to the Cost of Service.
- Agreed the Cost of Service using both the current and proposed depreciation methodologies to the 'Estimated Rate Impact' table contained on Page 13 of the 'Depreciation Methodology Application Evidence' for each Customer type.
- Obtained detailed depreciation listing by 'Unit of Property' under both the current and proposed depreciation methods. These schedules were reconciled to Appendix C of the 'Depreciation Methodology Application Evidence'. Appendix C details depreciation by Class and by System.
- Reconciled Appendix C of the 'Depreciation Methodology Application Evidence' to 'Table 2: 2011 Depreciation Changes by System' contained on Page 9 of the 'Depreciation Methodology Application Evidence'.
- Traced a sample of 'Detailed Depreciation Calculation' included in Part V of the Gannett Fleming report to the 'Unit of Property' depreciation listing.

**Based upon the completion of these procedures we report that no discrepancies were noted and that rate impacts noted in the Company's Application are consistent with the supporting documents provided by the Company.**