June 1, 2004

The Board of Commissioners of Public Utilities Prince Charles Building 120 Torbay Road P.O. Box 21040 St. John's, Newfoundland & Labrador A1A 5B2

#### Attention: Ms. Cheryl Blundon Director Corporate Services & Board Secretary

Dear Ms. Blundon:

#### <u>Re: Order No. P.U. 14 (2004)-</u> Range of Return on Rate Base

In Order No. P.U. 14 (2004) Hydro was directed to file, for the approval of the Board, a proposal for a range of return on rate base and a definition of an "excess earnings" account (para. 3, p. 164 of the Order).

Enclosed herewith is a proposal, as ordered, with respect to a recommended range of return on rate base and a definition of an "excess earnings" account.

Yours truly,

Maureen P. Greene, Q.C. Vice-President Legal MPG/mgw Encl.

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# PROPOSAL FOR RANGE OF RETURN ON RATE BASE AND EXCESS EARNINGS

Pursuant to Order No. P.U. 14 (2004)

Newfoundland and Labrador Hydro June 1, 2004

# TABLE OF CONTENTS

INTRODUCTION	.1
RANGE OF RETURN ON RATE BASE	.1
A. Magnitude of Potential Earnings Fluctuations	.3
B. Interest Rate Variations	.5
C. Debt to Capital Target	.5
D. Cost Management Incentive	.5
E. Absence of an Automatic Adjustment Formula	.6
F. Utility Comparison	.6
RANGE OF RETURN PROPOSAL	.8
EXCESS EARNINGS ACCOUNT	.9

# Introduction

In Order No. P.U. 14 (2004), Newfoundland and Labrador Hydro (Hydro) was ordered as follows:

"As part of its revised filing of rate base and rate of return on rate base NLH shall file for the approval of the Board:

- i. a proposal for a range of return on rate base including an analysis of several alternate ranges with impacts; and
- a definition of an "excess earnings" account to be included in the company's system of accounts to which earnings above the maximum of the allowed range of rate of return on rate base will be credited."

# Range of Return on Rate Base

Return on rate base is the amount of money that is required to finance the debt and equity capital of the company. For Hydro, it is calculated by multiplying the weighted average cost of capital (WACC) by the value of the rate base, except for those assets that have been allocated to service rural customers, for which only a weighted average cost of debt is included.

Variations in actual return on rate base from budget can be impacted by a multitude of factors, ranging from achieved efficiency at Holyrood, to the magnitude of required maintenance activity in a given year, to changes in diesel fuel costs. For purposes of the scenarios presented below, we have assumed that the change in return on rate base, will fall out to net income, with the net interest expense remaining constant. In actual fact, this might not be the case. Fluctuations in interest rates will impact margin while total return on rate base could remain the same.

The table below illustrates various financial impacts associated with ranges of return on rate base of 60, 48, 36 and 24 basis points.

# <u>Table 1</u> Range of Rate of Return - 2004 Test Year (\$000's)

1	Average Ratebase	\$	1,483,506	\$ ^	1,483,506	\$	1,483,506	\$	1,483,506	
2	Weighted Average Cost of Capital		7.57%		7.57%		7.57%		7.57%	
3	Rate of Return on Ratebase (RROR)		7.47%		7.47%		7.47%		7.47%	(line 4 / Line 1)
4	Return on Ratebase (ROR)	\$	110,768	\$	110,768	\$	110,768	\$	110,768	(line 1 * line 3)
5	Average Regulated Equity	\$	208,470	\$	208,470	\$	208,470	\$	208,470	
6	Return on Equity (ROE)		5.57%		5.57%		5.57%		5.57%	(line 7 / line 5)
7	Net Income	\$	11,612	\$	11,612	\$	11,612	\$	11,612	
8	Range of Return		0.0060		0.0048		0.0036		0.0024	
9	RROR + (1/2 of line 8)		7.77%		7.71%		7.65%		7.59%	
10	Return = half of basis points range	\$	4,451	\$	3,560	\$	2,670	\$	1,780	(line 1 * 1/2 of line 8)
11 12	Resultant Average Equity - High Resultant Average Equity - Low	\$ \$	210,139 206,801	\$ \$	209,805 207,135	\$ \$	209,471 207,469	\$ \$	209,138 207,802	(assumes 25% dividend payout) (assumes 25% dividend payout)
13 14	Resultant ROE Range - High Resultant ROE Range - Low		7.64% 3.46%		7.23% 3.89%		6.82% 4.31%		6.40% 4.73%	(line 7 + line 10) / line 11 (line 7 - line 10) / line 12

For a number of reasons, which are set out below, Hydro recommends a range of return on rate base of 48 basis points. Factors justifying this requested range are as follows:

# A. Magnitude of Potential Earnings Fluctuations

The size of Hydro's rate base and the nature of its operations as primarily a generator and transmitter of electricity are such that significant fluctuations in return can occur in the normal course of business. Some examples of these are:

- Variations can occur in Holyrood efficiency that are largely dependent on precipitation and reservoir inflows. If Hydro experiences a year like 1999 when the conversion factor was 577.1 kWh/bbl, there would be an additional cost to Hydro of \$3.96 million with fuel at \$29.58/bbl. If Hydro experiences a year like 2002 when the conversion factor was 648.5 kWh/bbl, there would be a savings of \$3.19 million with fuel at \$29.58/bbl.
- 2. A potential shutdown at one of Hydro's Industrial Customers could have a significant impact on demand revenue. Such variations are not covered under the Rate Stabilization Plan. For example, the Abitibi Consolidated Inc. strike of 1998, which lasted just over 5 months, resulted in a decrease in revenue and related net income of approximately \$3.5 million.
- 3. The demand-energy rate to be implemented for Newfoundland Power (NP) as of January 1, 2005 will increase the risk for Hydro.

4. A 10% variation in the cost of diesel fuel can lead to a \$700,000 variation in return. Historical changes in diesel fuel costs are noted in Table 2 below.

# <u>Table 2</u>

#### **Historical Movements in Diesel Fuel Prices**

Year	Avg Cents/Gal US\$	Annual Percent Change
1994	50.2	
1995	50.6	1%
1996	64.0	26%
1997	57.2	-11%
1998	41.1	-28%
1999	50.1	22%
2000	87.7	75%
2001	72.1	-18%
2002	69.1	-4%
2003	86.0	24%
2004	99.1	15%

Source: PIRA Energy Group, May 2004

5. Costs arising from unplanned breakdown or corrective maintenance, particularly on generating units such as those at Holyrood, can have an annual impact exceeding \$1,000,000. While efforts are made to adjust other maintenance activities, unplanned increases in the operating budget invariably occur. As can be seen from the above examples, significant fluctuations can occur in Hydro's net income and therefore return on rate base, that are outside Hydro's direct control. Any approved range of return on Hydro's earnings should be considered relative to the various risks to which those earnings are exposed. Practicality of implementation would dictate a range that allows for earnings fluctuations that are considered as part of the normal course of business.

# B. Interest Rate Variations

Hydro is exposed to interest rate risk. Based on short-term debt estimates for the 2004 test year, a 1% variance in short term interest rates could result in an approximate \$2.0 million variation in interest costs. While not necessarily impacting the overall return on rate base, this could have a significant impact on the relative proportion of the margin component of that return.

# C. Debt To Capital Target

The Board concurs with Hydro's objective to move toward an 80 percent debt to capital ratio. A reasonable range of return would afford Hydro an opportunity to accelerate movement toward this goal. Such progress further complements the Board's decision limiting the dividend payout to 25% of net operating income for rate setting purposes.

# D. Cost Management Incentive

The opportunity to earn a margin above the authorized return would act as a further incentive for managing costs. This would provide an opportunity to management to improve the rate of return currently approved for Hydro through effective cost management, consistent with an investor owned utility.

#### E. Absence of an Automatic Adjustment Formula

Hydro does not have an automatic adjustment formula to protect against increases in cost of capital due to changed market conditions. In an environment of rising interest rates, an increase in interest costs would result in a decrease in margin, while total return on rate base would remain the same, all other things being equal. In the absence of an automatic adjustment mechanism, the need to have a full hearing can lead to regulatory lag that would be detrimental to Hydro's financial position. Given Hydro's current return on equity, there is relatively little margin available to mitigate the financial impacts of such events.

#### F. Utility Comparison

Grant Thornton suggested that NP's range of rate of return may be an appropriate starting point for setting a range of return on rate base for Hydro, which could be adjusted to reflect other Board decisions. (Supplementary Evidence, Grant Thornton, Dec. 5, 2003, pg. 5, lines 26-30).

Relative to NP, Hydro has a rate base which is more than two times larger, but has a smaller total revenue requirement, a cost of debt which is approximately 40 basis points lower, and a return on rate base which is approximately 144 basis points lower <sup>1</sup>. As well, the two utilities have differing capital structures. Hydro's relatively smaller equity base means that small changes in return on rate base can translate into significant impacts on return on equity. At the same time, Hydro is exposed to external factors which can produce very large swings in net income, such as precipitation levels and the impact they can have on thermal plant unit loading and therefore fuel conversion factors. Some of these impacts cannot be mitigated

<sup>&</sup>lt;sup>1</sup> Per NP filing pursuant to Order No. P.U. 19 (2003), Newfoundland Power 2004 comparable rate base, including deferred charges is \$703,102,000; cost of debt is 8.39%; revenue requirement is \$381,993,000; rate of return on rate base 8.91%.

through future applications for revised rates, since those future applications will be based on future forecasts and assumptions of 'normal' or 'average' conditions. The magnitude of the potential impact of the risk factors that Hydro's earnings are exposed to should be the overriding factor when determining the appropriate range of return. The range should be sufficient to encompass the variations from 'average' that will occur in any given year, but which are expected to offset one another over time.

#### Range of Return Proposal

Hydro recommends that its range of return on rate base be set at 48 basis points, effective January 1, 2005. The allowed range of return on rate base for Hydro would therefore be 24 basis points higher or lower than the approved rate. This range would provide sufficient flexibility in absolute dollar terms to accommodate the variations in earnings that can occur over time due to circumstances outside Hydro's direct control, and which cannot be addressed through future applications for revised rates. Additionally, this range will provide further incentive for Hydro to contain costs and build the regulated equity portion of the capital structure.

The January 1, 2005 effective date is in recognition of the fact that approved rates resulting from Order No. P.U. 14 (2004) will not be in effect for all of 2004.

#### **Excess Earnings Account**

Hydro proposes that Excess Earnings would be defined by the following formula:

The greater of:

A - (B X C)

and 0.

Where:

А	=	Actual return on rate base, calculated as net interest expense,
		including debt guarantee fee, plus net income
В	=	Actual average rate base, December 31
С	=	Upper limit of return on rate base, defined as Test Year Return
		on Rate Base + 24 basis points

The resultant value if greater than zero, would be recorded in the excess earnings account as a liability, with the balance to be disposed of in a manner to be determined by the Board at the end of each year commencing January 1, 2005.