IN THE MATTER OF the *Electrical Power Control Act*, *1994* (the "EPCA") and the *Public Utilities Act,* R.S.N. 1990, Chapter P-47 (the "Act") and their subordinate regulations; and

IN THE MATTER OF an Application by Newfoundland and Labrador Hydro ("Hydro") for approvals of: (1) Under Section 70 of the Act, changes in the rates to be charged for the Supply of power and energy to its Retail Customer, Newfoundland Power, its Rural Customers and its Industrial Customers; (2) Under Section 71 of the Act, its Rules and Regulations applicable to the supply of electricity to its Rural Customers; (3) Under Section 71 of the Act, the contracts setting out the terms and conditions applicable to the supply of electricity to its Industrial Customers; and (4) Under Section 41 of the Act, its 2002 Capital Budget.

SUPPLEMENTAL WRITTEN EVIDENCE

OF

MICHAEL J. VILBERT

FOR

ABITIBI CONSOLIDATED INC. (GRAND FALLS)
ABITIBI CONSOLIDATED INC. (STEPHENVILLE)
CORNER BROOK PULP AND PAPER LIMITED
NORTH ATLANTIC PETROLEUM LIMITED

The Brattle Group
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SUPPLEMENTAL WRITTEN EVIDENCE OF
MICHAEL J. VILBERT

1 **I. INTRODUCTION AND SUMMARY**

2

3 **Q1. Please state your name and address for the record.**

4 A1. My name is Michael J. Vilbert. My business address is The Brattle Group, 44 Brattle Street,
5 Cambridge, MA 02138, USA.

6

7 **Q2. Did you submit written evidence in this proceeding?**

8 A2. Yes. I submitted written evidence in August, 2001.

9

10 **Q3. What is the purpose of this supplemental evidence?**

11 A3. During the cross examination of Ms. Katherine McShane, it became clear that my understanding
12 of her recommendation for the cost of capital for Newfoundland and Labrador Hydro ("Hydro"
13 or "the Company") was inaccurate. Specifically, I now understand Mr. McShane's
14 recommendation to be that the return on equity be 11.25 percent at the target capital structure of
15 40 percent equity as well as at the 2002 forecast of 15.27 percent equity capital structure.[1] In
16 addition, Ms. McShane seems to also be saying that she believes that the revenue requirement of
17 Hydro is independent of the capital structure. Although to my knowledge she did not state this
18 as a principle, the concept is inherent in her example, KM-1, presented in the hearing. In addition
19 to this supplemental evidence, I submit a revision to Exhibit No. MJV-1, and Supplemental

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[1] P.U.B. Hearing Oct. 29, 2001 at 34, 13-21 and P.U.B. Hearing Oct. 30, 2001 at 6, 40-57. At the Oct.29 Hearing at 34, lines 46-55, Ms. McShane argues that it does matter what the equity percentage is.

1 Exhibits No. MJV-7 through MJV-11, of which Supplemental Exhibits No. MJV-8 through
2 MJV-11 are versions of Exhibit No. MJV-2 through MJV-5, given my current understanding of
3 Ms. McShane's recommendation. Supplemental Exhibit No. 7 shows the effect of Ms.
4 McShane's recommendation on the implied debt guarantee.
5
6 **II. FINANCIAL RISK MUST NOT BE IGNORED**
7
8 **Q4. Why does her recommending an 11.25 percent return on equity at both capital structures**
9 **require you to submit supplemental testimony?**
10 A4. In my written evidence I criticized Ms. McShane for failing to adjust adequately for the change
11 in financial risk resulting from the use of different amounts of debt in the Company's capital
12 structure. It is now clear that she makes no adjustment at all for financial risk as capital structure
13 changes. This is contrary to standard financial theory and is a fundamental error.
14
15 **Q5. Why is important?**
16 A5. There are several reasons for concern. First, failing to understand the effect of financial risk on
17 the required return on equity is a common mistake in many regulatory settings, and is at the heart
18 of many (unnecessary) disputes about the capital structures in regulatory proceedings for investor
19 owned utilities ("IOUs"). In the case of Hydro, it is of fundamental concern, because the revenue
20 requirement of Hydro, unlike an IOU, is dependent on capital structure. Second, the after-tax

1 weighted-average cost of capital ("ATWACC") of her recommendation is 7.08 percent as shown
2 in Exhibit No. MJV-1 Revised (or 7.43 percent if the debt guarantee fee is not eliminated). This
3 is a value that is greater than Dr. Kolbe and I recommended for TransAlta as an integrated electric
4 utility in 1998 or as an unbundled transmission utility in a restructured industry in 2000, when the
5 electric industry in Alberta was in the process of being deregulated creating investor uncertainty,
6 and interest rates were higher than they are today.[2] A recommended ATWACC of this level
7 implies that Hydro is substantially more risky than the average IOU in Canada. Third, failing to
8 adjust for financial leverage severs the tie between her sample companies and the recommended
9 return for Hydro. The measured return on equity resulting from the application of the standard
10 estimation techniques is a function of both the business risk and the financial risk of the enterprise.
11 In other words, the measured return on equity of her sample companies would be different if the
12 companies had different capital structures, because the equity holders and debt holders would
13 divide the risk of the business differently. Failing to consider the differences in the capital
14 structures of her sample companies and Hydro means that she is making an invalid comparison.
15
16 **Q6. Does Ms. McShane justify her recommendation of a constant return on equity even**
17 **though the capital structure changes?**
18 A6. Yes. In an example labeled KM-1 presented at the hearing, Ms. McShane argues that the
19 before-tax weighted average cost of capital ("BTWACC") stays constant with changes in capital

[2] See Vilbert response to NLH-18.

1 structure so that the revenue requirement is unaffected by capital structure.[3] Her example shows
2 that both the cost of debt and the cost of equity are constant, but that the "justified" debt
3 guarantee fee changes with capital structure. Supplemental Exhibit No. MJV-7, Column [6]
4 shows the effect on the debt guarantee fee from changes in capital structure using this assumption.
5 Column [1] of the exhibit calculates the ATWACC inherent in maintaining a constant BTWACC
6 for Hydro while changing the capital structure. Note that at the 2002 forecast capital structure,
7 the ATWACC inherent in her recommendation is at the 5.97 percent, which is slightly higher than
8 the 5.89 percent calculated in Exhibit No. MJV-1 because the calculated debt guarantee fee is
9 116 basis points instead of the 100 currently being charged.
10
11 **Q7. Do you agree with the example in KM-1?**
12 A7. No, although there are some aspects of her example with which I do agree. First, I do agree that
13 the size (percent) of the debt guarantee fee is likely to change with capital structure although
14 probably not in the way she imposes in the example. In my opinion, the required debt guarantee
15 fee could be estimated by the fee that a third party would charge to guarantee the debt of Hydro,
16 or it could be estimated by the difference in the required yield on Hydro's debt with and without
17 the guarantee. I believe that the fee estimated by these methods would be equal to the value
18 calculated by Ms. McShane's method only by accident. Second, I agree that the BTWACC for
19 an IOU is constant and independent of capital structure in the broad middle range of capital

[3] P.U.B. Hearing October 30, 2001 at 5.

1 structures, but this is not true for Hydro because it does not pay income taxes.[4] Third, financial
2 risk is more than default risk and the costs of financial distress. It is also the additional variability
3 of returns imposed upon equity by variations in revenues that are not shared by debt. Because
4 debt holders receive a fixed payment, any variation in net income is imposed upon the equity
5 holders.[5] The debt guarantee fee covers default risk, but provides no compensation for the
6 variation in equity return from the use of debt. This means that the return on equity must be
7 adjusted to compensate for the change in financial risk resulting from changes in the capital
8 structure whether or not there is a debt guarantee. Supplemental Exhibit No. MJV-8 shows the
9 increase in the required return on equity as capital structure changes from 40 percent to 15.27
10 percent equity. Finally, the revenue requirement for Hydro is not constant with changes in capital
11 structure as noted in my written evidence at page 34, line 2 through 35, line 13. Supplemental
12 Exhibit No. MJV-10 shows how the revenue requirement would change with capital structure if
13 financial risk is properly reflected in the return on equity. Although the revenue requirement for
14 an IOU is constant, Hydro's revenue requirement can not be constant with changes in capital
15 structure, because Hydro receives no tax savings from interest expense that would offset the
16 increase in the required return for equity due to the increased use of debt.[6] Only by ignoring
17 financial risk and adjusting the debt guarantee fee is Ms. McShane able to maintain a constant
18 BTWACC for Hydro.

[4] See Vilbert Written Evidence at 31, line 14 through 32, line 7.

[5] See Vilbert Written Evidence, Appendix B, Section II.

[6] See Vilbert Written Evidence at 31, line 14 through 33, line 8.

1

2 **III. CONCLUSIONS**

3

4 **Q8. Please summarize your conclusions.**

5 A8. This supplemental evidence makes the following points:

6 • Ms. McShane's recommendation of 11.25 percent return on equity on a capital structure
7 with 40 percent equity implies an ATWACC of 7.08 percent. This level of recommended
8 return implies that Hydro is more risky than the average IOU in Canada.

9 • Financial risk is more than default risk, and the debt guarantee only removes default risk
10 and reduces the costs of financial distress. Therefore, the required return on equity must
11 reflect changes in financial risk resulting from changes in capital structure. Financial risk
12 cannot be ignored as Ms. McShane does. If financial risk is ignored, the compensation
13 to equity may be either too high or too low and would be correct only by chance.

14 • Hydro's revenue requirement is not independent of capital structure, even though the
15 revenue requirement for an IOU is independent of capital structure. An increase in the
16 use of debt in the capital structure leads to an increase in the revenue requirement for
17 Hydro.

18

19 **Q9. Does this conclude your supplemental evidence?**

20 A9. Yes, it does.