

- 1 **Q. Please provide the Newfoundland Power costs of capital, including equity and debt**
 2 **capital and the related capital structure, allowed rate of return, taxes, and other**
 3 **components for financing its distribution and transmission rate bases.**
 4
 5 A. Table 1 provides Newfoundland Power’s 2020 Test Year approved cost of capital and
 6 capital structure.¹ The Company’s allowed rate of return on common equity is 8.5%.
 7 The statutory corporate income tax rate is 30.0%.

**Table 1:
 Newfoundland Power
 Embedded Cost of Capital and Capital Structure
 2020 Test Year**

	Average Capital (\$000s)	Capital Structure (%)	Cost of Capital (%)	Weighted Average Cost of Capital (%)
Debt	640,370	54.28	5.84	3.17
Preferred Equity	8,917	0.76	6.19	0.05
Common Equity	<u>530,327</u>	<u>44.96</u>	8.50	<u>3.82</u>
Total	1,179,614	100.00		7.04

8 Any consolidation of operations involving a transfer of asset ownership to Newfoundland
 9 Power would require the Company to finance additional investments in the electrical
 10 system to continue providing safe and reliable service to customers.

11
 12 If Newfoundland Power were to acquire assets today, these assets would be financed in
 13 current market conditions. Therefore, the use of Newfoundland Power’s *marginal* cost of
 14 capital in assessing consolidation options provides a more accurate basis on which to
 15 assess potential costs and savings to customers in the context of rate mitigation.

16
 17 Newfoundland Power has completed an analysis to determine its marginal cost of capital
 18 to assist in evaluating consolidation options. For the purpose of its analysis,
 19 Newfoundland Power considered a High Scenario and a Low Scenario to determine a
 20 reasonable range of its marginal cost of capital based on current market conditions.²
 21

¹ Newfoundland Power’s 2019/2020 General Rate Application was approved by the Board in Order No. P.U. 2 (2019).

² The High Scenario assumes any required debt issue would be comparable to Newfoundland Power’s typical first mortgage bond issues. The Low Scenario assumes any required debt issue would materially exceed the amount of Newfoundland Power’s historical debt issues. In both cases, the cost of debt is based on current estimates of indicative interest rates from BMO Capital Markets. For more information on the scenarios used in the analysis, see Attachment A, page 7 *et seq.*

1 Table 2 shows Newfoundland Power’s marginal cost of capital based on the High
 2 Scenario and Low Scenario as outlined in the analysis.³

Table 2: Newfoundland Power Marginal Cost of Capital (%)			
Component	Capital Structure	Cost of Capital	Weighted Average Cost of Capital
HIGH SCENARIO			
Debt	55.00	3.36 ⁴	1.85
Common Equity	45.00	8.50	3.83
Total	100.00		5.68
LOW SCENARIO			
Debt	55.00	2.76 ⁵	1.52
Common Equity	45.00	8.50	3.83
Total	100.00		5.35

3 Newfoundland Power’s analysis shows that, on a *marginal* basis, its cost of capital to
 4 finance additional investments in the electrical system would be in the range of 5.35% to
 5 5.68%. This is 19% to 24% *less* than Newfoundland Power’s embedded cost of capital.
 6

7 Newfoundland Power’s analysis also provides a contextual comparison of its marginal
 8 cost of capital to Newfoundland and Labrador Hydro’s (“Hydro”) cost of capital
 9 proposed to be embedded in customer rates.
 10

³ See Attachment A, page 9, Table 3.

⁴ The estimated cost of debt for the High Scenario assumes debt would be issued under the existing terms of Newfoundland Power’s sinking fund payment provisions. As with previous debt issues by Newfoundland Power, the assumed maturity term is 30 years. See Attachment A, page 7, line 16 *et seq.*

⁵ See Attachment A, page 8, Table 2.

1 As Newfoundland Power and Hydro use different methodologies to determine cost of
 2 capital, Table 3 restates Newfoundland Power’s marginal cost of capital to be comparable
 3 to Hydro.⁶

**Table 3:
 Comparison of Newfoundland Power and Hydro Cost of Capital
 (Zero Cost of Capital Method)
 (%)**

Component	Hydro Embedded Cost of Capital ⁷	Newfoundland Power <i>Pro Forma</i> Marginal Cost of Capital	
		Low Scenario	High Scenario
Debt	3.77	1.43	1.74
Common Equity	1.66	3.61	3.61
Other Cash Inflows	0.00	0.00	0.00
Total	5.43	5.04	5.35

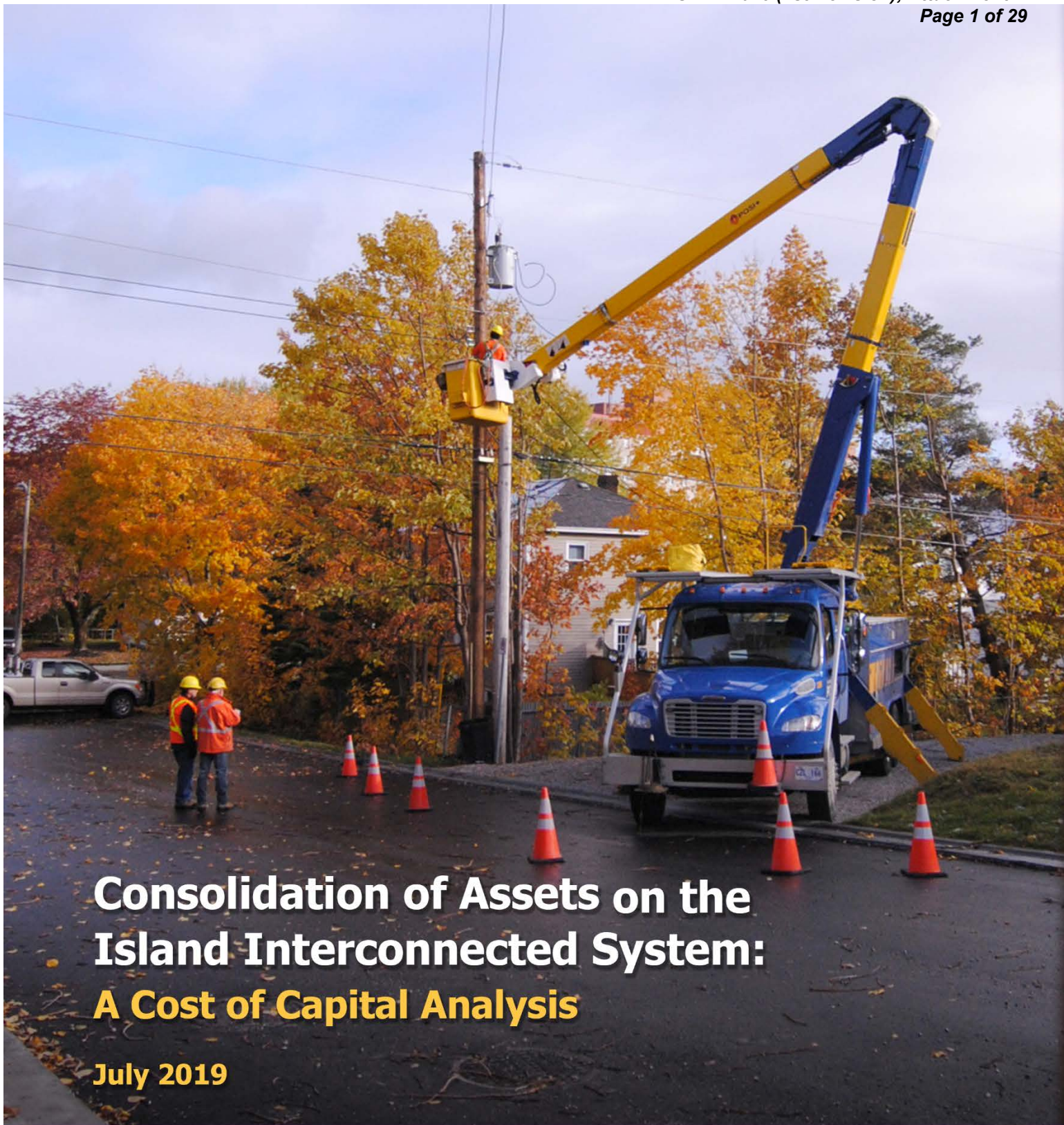
4 Newfoundland Power observes that its marginal cost of capital is *lower* than Hydro’s
 5 embedded cost of capital in both the high and low scenarios.

6
 7 For the detailed results of Newfoundland Power’s analysis, see Attachment A to this
 8 response.

⁶ Newfoundland Power utilizes the Asset Rate Base Method to determine its cost of capital. Hydro uses the Zero Cost of Capital Method for certain items to determine its cost of capital. The primary difference between these methodologies relates to the treatment of cash inflows resulting from costs that are recovered through customer rates in advance of the required payment of those costs by the utilities. For more information, see Attachment A, page 10 *et seq.*

⁷ Table 3 reflects Hydro’s 2019 Revised Test Year cost of capital. Refer to Exhibit 4, Appendix C, page C-4 to Hydro’s 2017 *GRA Compliance Application* filed with the Board on July 11, 2019. The compliance application is currently under review by the Board for customer rates effective October 1, 2019.

**Consolidation of Assets on the Island Interconnected System:
A Cost of Capital Analysis
July 2019**



Consolidation of Assets on the Island Interconnected System: A Cost of Capital Analysis

July 2019

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1.0 Executive Summary

The integrated electrical system on the Island of Newfoundland (the “Island Interconnected System”) serves approximately 291,000 customers. Both Newfoundland Power Inc. (“Newfoundland Power” or the “Company”) and Newfoundland and Labrador Hydro (“Hydro”) own and operate transmission, distribution and small hydro assets to serve these customers. Rates paid by these customers represent the aggregate cost of service from both utilities.

As part of the *Reference on Rate Mitigation Options and Impacts*, the Newfoundland and Labrador Board of Commissioners of Public Utilities (the “Board”) is examining whether transferring certain responsibilities from Hydro to Newfoundland Power may assist in mitigating the potential customer rate impacts associated with Nalcor Energy’s Muskrat Falls Project.

In June 2019, Newfoundland Power provided *pro forma* resource assessments to permit the Board to evaluate potential cost savings that would result from consolidating certain customer service, distribution, transmission and small hydro operations under Newfoundland Power.

This report provides a *pro forma* cost of capital analysis to further assist in the evaluation of potential consolidation options. Cost of capital essentially refers to the cost of financing investments in the electrical system to ensure the continued delivery of safe and reliable service to customers. These costs are included in the cost of service borne by customers through electricity rates.

Newfoundland Power’s analysis shows that, on a *marginal* basis, its cost of capital to finance additional investments in the electrical system would be in the range of 5.35% to 5.68%. This is 19% to 24% *less* than the Company’s embedded cost of capital. Newfoundland Power also observes that its marginal cost of capital is *lower* than Hydro’s cost of capital proposed to be embedded in customer rates.

2.0 Overview

a. Context

In September 2018, the Provincial Government issued a reference to the Board to examine options for mitigating the impact of Nalcor Energy’s Muskrat Falls Project on customer rates. This followed significant cost overruns on the project and heightened customer concerns regarding the future price of electricity.¹

Newfoundland Power has participated in the *Reference on Rate Mitigation Options and Impacts* (the “Reference”) to assist in assessing potential options to mitigate the impact of Nalcor Energy’s Muskrat Falls Project on its customers’ rates.²

Rates paid by customers served by the Island Interconnected System represent the aggregate cost of service from both Newfoundland Power and Hydro. Both utilities own and operate assets that provide customer service, distribution, transmission and small hydro generation functions on the Island Interconnected System. This duplication suggests that consolidation may provide tangible benefits to customers by way of reduced costs.

In its Interim Report, the Board indicated it will examine whether there are rate mitigation opportunities associated with transferring certain responsibilities from Hydro to Newfoundland Power.³ The Board’s consultant, The Liberty Consulting Group, is evaluating various options relating to the consolidation of operations under Newfoundland Power, including: (i) the consolidation of distribution and customer service operations; (ii) the consolidation of transmission operations; and (iii) the consolidation of small hydro generation operations.⁴

¹ By June 2017, the estimated cost of the Muskrat Falls Project had increased from a sanctioned cost of \$7.4 billion in December 2012 to an estimated cost of \$12.7 billion. See Nalcor Energy’s *Muskrat Falls Project Update, June 23, 2017* presentation, slide 10.

² On March 8, 2019, Newfoundland Power filed a *Request for Standing* to participate in the Reference. The *Request for Standing* was approved by the Board on March 13, 2019.

³ The Board stated its focus as part of the Reference will include “whether there are rate mitigation opportunities associated with expanding Newfoundland Power’s role into what are currently Hydro responsibilities.” See the Board’s *Interim Report on Rate Mitigation Options and Impacts*, February 15, 2019, page 24.

⁴ See Information Requests PUB-NP-084 through PUB-NP-095 issued as part of the Reference.

1 The consolidation of operations under Newfoundland Power would require the Company to
2 increase its current level of resources. In June 2019, Newfoundland Power provided *pro forma*
3 resource assessments to assist in evaluating potential cost savings to customers related to
4 identified consolidation options.⁵

5
6 Any consolidation of operations involving a transfer of asset ownership to Newfoundland Power
7 would require the Company to finance additional investments in the electrical system to
8 continue providing safe and reliable service to customers. This report provides a *pro forma* cost
9 of capital analysis to further assist in evaluating consolidation options.

10

11 **b. Methodology**

12 Newfoundland Power is required to invest in its electrical system to ensure the continued
13 delivery of safe and reliable service to customers.⁶ The source of this capital investment is a
14 combination of common equity and debt financing.⁷ This is commonly referred to as *cost of*
15 *capital* and is calculated based on: (i) the amount of common equity and debt used to finance
16 capital investments (i.e. the capital structure); (ii) the allowed rate of return on common equity;
17 and (iii) the interest rates on outstanding debt.

⁵ See the response to Information Request PUB-NP-084 for Newfoundland Power's resource assessment for customer service, distribution and transmission operations on the Island Interconnected System. See the response to Information Request PUB-NP-094 for Newfoundland Power's resource assessment for small hydro operations on the Island Interconnected System.

⁶ Newfoundland Power files annual capital budgets for review and approval by the Board. The Company's 2019 *Capital Budget* was approved by the Board in Order No. P.U. 35 (2018).

⁷ Newfoundland Power's existing capital structure also consists of a small amount of preference equity. However, any additional investments required by the Company would continue to be completed through a combination of debt and common equity financing.

1 Newfoundland Power’s capital structure and return on equity for ratemaking purposes are
2 regularly reviewed and determined by the Board through general rate applications.⁸ Interest
3 rates on the Company’s debt are determined by financial markets at the date of issue.⁹

4
5 Newfoundland Power’s cost of capital analysis is based on the *marginal* cost of capital that
6 would be required to finance additional investments in the electrical system resulting from any
7 transfer of asset ownership. This differs from Newfoundland Power’s *embedded* cost of capital.
8 *Embedded* cost of capital reflects historical financing conditions; *marginal* cost of capital reflects
9 current financing conditions.

10

11 If Newfoundland Power were to acquire assets today, these assets would be financed in current
12 market conditions. Therefore, the use of Newfoundland Power’s *marginal* cost of capital in
13 assessing consolidation options provides a more accurate basis on which to assess potential
14 costs and savings to customers in the context of rate mitigation.

15

16 To estimate its marginal cost of capital, Newfoundland Power used: (i) its existing capital
17 structure and return on equity approved by the Board; and (ii) current estimates of indicative
18 interest rates from BMO Capital Markets, which are provided as Appendix A to this report.¹⁰

19

20 **c. Limitations**

21 The estimates provided in this report are based on indicative interest rates on debt as of July
22 2019 and would not necessarily reflect actual interest rates at the time of any transaction.
23 Actual interest rates would be determined by financial markets at the date of issue and could
24 change from the estimates provided due to changing market conditions and other factors.

⁸ Newfoundland Power’s current capital structure and return on equity were approved by the Board in Order No. P.U. 2 (2019) following the Company’s 2019/2020 General Rate Application.

⁹ Any debt issues are pre-approved by the Board. Section 91(1) of the *Public Utilities Act* requires that a public utility obtain approval from the Board to issue shares, including preferred shares, stocks, bonds, debentures or evidence of indebtedness payable in more than 1 year from the date of issue.

¹⁰ BMO Capital Markets (“BMO”) is a leading, full-service financial services provider. BMO facilitated Newfoundland Power’s most recent debt issue of \$75 million in June 2017 and is 1 of 4 banks included in Newfoundland Power’s syndicate for its \$100 million committed credit facility.

1 Interest rates on debt vary depending on the term to maturity. When financing investments in
2 *new* assets, Newfoundland Power typically uses longer-term maturities, such as 30 years. This
3 reflects the fact that electrical systems are comprised of long-life assets.¹¹ Any transfer of asset
4 ownership would involve financing investments in *existing* assets that may vary materially in
5 their average remaining service lives.¹² To reflect this variability, Newfoundland Power has
6 assumed terms to maturity of 10 and 30 years in its analysis. The actual terms to maturity may
7 differ depending on the remaining useful service lives of any assets transferred to Newfoundland
8 Power, among other considerations.

9
10 Determining net benefits to customers as a result of any consolidation would require a detailed
11 analysis of the cost of service of both Newfoundland Power and Hydro. For customers to benefit
12 from consolidation in the form of lower costs, the additional costs of Newfoundland Power
13 would have to be more than offset by reductions in costs at Hydro.¹³ While detailed information
14 is not currently available to complete such an analysis, this report provides a comparison of
15 Newfoundland Power's marginal cost of capital to Hydro's cost of capital proposed to be
16 embedded in customer rates.

¹¹ The overall expected useful service life of Newfoundland Power's assets, as determined through the *2014 Depreciation Study* by Gannett Fleming, averages approximately 30 years.

¹² For example, the majority of Hydro's transmission lines were constructed between the 1960s and the 1980s. However, a number of transmission lines, such as the 186 km transmission line TL267, have been in service for less than 3 years. The remaining useful service lives of these assets would be expected to differ materially.

¹³ In response to Information Request PUB-NP-052, Newfoundland Power noted: "*Transferring operations from Hydro to Newfoundland Power would result in added costs to Newfoundland Power's operations. Avoiding an increase in customer rates would require equal or greater cost savings to be achieved from within Hydro's operations. Any arrangement where added costs are not offset by sufficient cost savings would result in an increase in customer rates. This, in Newfoundland Power's view, may preclude or hinder consolidation.*"

3.0 Cost of Capital Analysis

a. Embedded vs. Marginal Cost of Capital

The difference between Newfoundland Power’s *embedded* and *marginal* cost of capital relates to interest rates for debt financing. The Company’s capital structure and return on equity remain the same until otherwise directed by the Board.

Table 1 provides a summary of Newfoundland Power’s cost of capital embedded in current electricity rates.¹⁴

Component	Capital Structure	Cost of Capital	Weighted Average Cost of Capital
Debt	54.28	5.84	3.17
Preference Equity	0.76	6.19	0.05
Common Equity	44.96	8.50	3.82
Total	100.00		7.04

Newfoundland Power’s embedded cost of capital of 7.04% reflects historical debt financing sources and interest rates. Interest rates are principally affected by financial market conditions. Historical interest rates reflected in Newfoundland Power’s embedded cost of capital are higher than current interest rates.¹⁵ Historical interest rates also reflect a combination of: (i) Newfoundland Power’s investment grade credit rating,¹⁶ which reduces costs to customers; and

¹⁴ Based on a 2020 Test Year as part of the Company’s 2019/2020 General Rate Application. This was approved by the Board in Order No. P.U. 2 (2019).

¹⁵ Historical interest rates are materially higher than interest rates today. For example, the Company has outstanding first mortgage bonds with interest rates as high as 10.125%. As detailed in Appendix A, page 2, current interest rates on 30 year debt are estimated to be 3.36%.

¹⁶ Newfoundland Power maintains an investment grade credit rating from 2 independent rating agencies: DBRS Limited and Moody’s Investor Services.

1 (ii) the limited market for the Company's small debt issuances¹⁷ and requirement for sinking
2 fund payments on its first mortgage bonds, which increase the cost of debt.¹⁸

3

4 Debt issued in the current financial market would benefit from a low interest rate environment.

5 Additionally, a material increase in the size of debt issued by Newfoundland Power, as a result of
6 a transfer of asset ownership, could further reduce interest rates on debt and the marginal cost
7 of capital for these additional investments.

8

9 **b. Marginal Cost of Capital**

10 Consolidation options being examined by the Board include a range of electrical system assets
11 that vary materially in value. The marginal cost of capital to finance additional investments in
12 the electrical system could differ depending on the value of assets being transferred. For the
13 purpose of this assessment, Newfoundland Power considered two scenarios to determine a
14 reasonable range of the marginal cost of capital.

15

16 The High Scenario for marginal cost of capital assumes any required debt issue would be
17 comparable to Newfoundland Power's typical first mortgage bond issues. Such a scenario would
18 apply if Newfoundland Power were required to issue debt less than \$100 million. A debt issue of
19 that magnitude would not meet the threshold to be included in widely traded bond indices and,
20 as a result, would attract a limited number of investors. The estimated cost of debt for the High
21 Scenario is 3.36%.¹⁹

¹⁷ In the last 20 years, Newfoundland Power issued 7 different series of first mortgage sinking fund bonds ranging from \$60 million to \$75 million per series. Since the debt issues were less than \$100 million and included less than 10 investors, they were not eligible for inclusion in widely traded bond indices. See response to Request for Information CA-NP-094 filed as part of Newfoundland Power's 2019/2020 General Rate Application.

¹⁸ As detailed in Appendix A, page 4, it is estimated that interest rates on Newfoundland Power's debt include a 15-20 basis point illiquidity premium as a result of the Company's small size and a 10-15 basis point premium associated with the 1% sinking fund payment provision of Newfoundland Power's first mortgage bonds.

¹⁹ The estimated cost of debt for the High Scenario assumes debt would be issued under the existing terms of Newfoundland Power's sinking fund payment provisions. As with previous debt issues by Newfoundland Power, the assumed maturity term is 30 years. See Appendix A, page 2, for more information.

1 The Low Scenario for marginal cost of capital assumes any required debt issue would materially
 2 exceed the amount of Newfoundland Power’s historical debt issues. Such a scenario would
 3 apply if Newfoundland Power were required to issue debt materially exceeding \$100 million.²⁰
 4 Such a debt issue would reach the threshold for inclusion in widely traded bond indices and
 5 attract a higher number of investors, yielding more competitive interest rates.²¹
 6
 7 Table 2 shows the *pro forma* cost of debt calculation for the Low Scenario based on the
 8 indicative pricing shown in Appendix A.²²

Table 2: <i>Pro Forma</i> Cost of Debt Low Scenario ²³ (%)			
Term	Minimum	Maximum	Midpoint
10 Year	2.40	2.50	2.45
30 Year	3.01	3.11	3.06
Average	2.71	2.81	2.76

9 Based on the midpoint of current indicative pricing, this analysis estimates that the cost of debt
 10 for the Low Scenario is 2.76%.

²⁰ For example, \$500 million in new debt would be required to finance assets of approximately \$900 million (\$500 million / 55% debt financing = \$909 million assets acquired). This is approximately 40% of Hydro’s 2019 Test Year average rate base of \$2.3 billion (see Exhibit 4, Appendix C, page C-2 to Hydro’s 2017 *GRA Compliance Application* filed with the Board on July 11, 2019).

²¹ A debt issue of \$500 million is significant in comparison to the Company’s total debt of approximately \$615 million outstanding at December 31, 2018. Given the size of this potential financing, Newfoundland Power would undertake a review of the sinking fund payment provision of its first mortgage bonds. As detailed in Appendix A, elimination of the sinking fund payment is estimated to reduce interest rates by a further 10-15 basis points. On a total debt issuance of approximately \$500 million, this would reduce annual interest costs by \$500,000 to \$750,000.

²² See Appendix A, page 4, for the rate information used to calculate the *pro forma* cost of debt for the Low Scenario.

²³ Depending on the remaining useful lives of any assets transferred to Newfoundland Power, actual debt terms could be as low as 5 years. Issuing 5 year debt would further reduce the *pro forma* cost of debt from that assumed in this analysis.

- 1 Table 3 provides a summary of Newfoundland Power’s marginal cost of capital based on the High
- 2 Scenario and Low Scenario, as outlined in this assessment.

Table 3: Marginal Cost of Capital (%)			
Component	Capital Structure	Cost of Capital	Weighted Average Cost of Capital
HIGH SCENARIO			
Debt	55.00	3.36 ²⁴	1.85
Common Equity	45.00	8.50	3.83
Total	100.00		5.68
LOW SCENARIO			
Debt	55.00	2.76 ²⁵	1.52
Common Equity	45.00	8.50	3.83
Total	100.00		5.35

- 3 Newfoundland Power estimates that, on a marginal basis, its cost of capital would be in the
- 4 range of 5.35% to 5.68%.
- 5
- 6 This is 19% to 24% *less* than the Company’s cost of capital of 7.04% that is embedded in current
- 7 electricity rates.²⁶

²⁴ The estimated cost of debt for the High Scenario assumes debt would be issued under the existing terms of Newfoundland Power’s sinking fund payment provisions. As with previous debt issues by Newfoundland Power, the assumed maturity term is 30 years. See Appendix A, page 2, for more information.

²⁵ See Table 2 of this report.

²⁶ For the Low Scenario, the calculation is $(5.35\% - 7.04\%) / 7.04\% = -0.24$, or a decrease of 24%. For the High Scenario, the calculation is $(5.68\% - 7.04\%) / 7.04\% = -0.19$, or a decrease of 19%.

4.0 Contextual Comparison of Cost of Capital

a. General

Any transfer of asset ownership resulting from consolidation would practically affect the cost of financing those assets.

If assets were transferred from Hydro to Newfoundland Power, Newfoundland Power would finance the additional investment using its *marginal* cost of capital. This differs from Hydro's cost to finance those same assets that is proposed to be reflected in customer rates (i.e. Hydro's embedded cost of capital).

To understand potential impacts on customer rates resulting from a transfer of asset ownership, Newfoundland Power has compared its marginal cost of capital to Hydro's cost of capital proposed to be embedded in customer rates.

b. Methodological Differences

Newfoundland Power and Hydro use different methodologies to determine cost of capital. The primary methodological difference relates to the treatment of cash inflows resulting from costs that are recovered through customer rates in advance of the required payment of those costs by the utilities.

The methodologies employed by Newfoundland Power and Hydro both recognize that the recovery of costs from customers in advance of the required payment produces cash inflows that effectively reduce what the utilities are required to finance.

1 Newfoundland Power utilizes the Asset Rate Base Method.²⁷ Under this methodology, the cash
2 inflows are treated as a deduction from Newfoundland Power’s rate base. Hydro utilizes the
3 Zero Cost of Capital Method for certain items.²⁸ Under this methodology, the cash inflows are
4 assigned a “zero” value in the determination of Hydro’s cost of capital.²⁹

5
6 This methodological difference is a matter of presentation and does not change the costs borne
7 by customers through electricity rates.³⁰

8

9 **c. Comparison**

10 In order to complete a comparison of the cost of capital between Newfoundland Power and
11 Hydro, the same methodology should be used.

²⁷ The Asset Rate Base Method was approved by the Board in Order No. P.U. 32 (2007).

²⁸ See Exhibit 4, Appendix C, page C-4 to Hydro’s *2017 GRA Compliance Application* filed with the Board on July 11, 2019. The Appendix shows employee future benefit costs and asset retirement obligations included in Hydro’s calculation of its weighted average cost of capital at zero cost.

²⁹ For example, both Newfoundland Power and Hydro recover in customer rates expenses related to employee benefits that will not be paid until the future. Newfoundland Power treats the cash inflow as a deduction to rate base. Hydro treats the cash inflow as a zero cost component in its capital structure.

³⁰ Refer to Appendix B for a detailed calculation of Newfoundland Power’s embedded cost of capital under both methodologies.

- 1 For comparative purposes, Table 4 shows a *pro forma* calculation of Newfoundland Power’s
- 2 marginal cost of capital using the Zero Cost of Capital Method currently used by Hydro for
- 3 certain items.³¹

Table 4: <i>Pro Forma</i> Marginal Cost of Capital (Zero Cost of Capital Method) (%)			
Component	Capital Structure	Cost of Capital ³²	Weighted Average Cost of Capital
HIGH SCENARIO			
Debt	51.87	3.36	1.74
Common Equity	42.44	8.50	3.61
Other Cash Inflows	5.69	0.00	0.00
Total	100.00		5.35
LOW SCENARIO			
Debt	51.87	2.76	1.43
Common Equity	42.44	8.50	3.61
Other Cash Inflows	5.69	0.00	0.00
Total	100.00		5.04

- 4 Using the Zero Cost of Capital Method, Newfoundland Power’s *pro forma* marginal cost of capital
- 5 is in the range of 5.04% to 5.35%.

³¹ The capital structure in Table 4 includes Other Cash Inflows of 5.69% related to other post-employment benefits and deferred income taxes at zero cost. See Appendix B, page B-2, line 6, et. seq, for the calculation of the *pro forma* amount and details for why both balances are relevant in an industry consolidation assessment. The allowed common equity component of 45% and debt component of 55% have been prorated over the remaining 94.31% of the capital structure. Common equity is $94.31\% \times 45\% = 42.44\%$ and debt is $94.31\% \times 55\% = 51.87\%$.

³² See Table 3 of this report.

1 Table 5 provides a comparison of Newfoundland Power and Hydro’s cost of capital.

Table 5: Comparison of Newfoundland Power and Hydro Cost of Capital (Zero Cost of Capital Method) (%)			
Component	Hydro Embedded Cost of Capital ³³	Newfoundland Power <i>Pro Forma</i> Marginal Cost of Capital ³⁴	
		Low Scenario	High Scenario
Debt	3.77	1.43	1.74
Common Equity	1.66	3.61	3.61
Other Cash Inflows	0.00	0.00	0.00
Total	5.43	5.04	5.35

2 Newfoundland Power observes that its *pro forma* marginal cost of capital is *lower* than Hydro’s
3 embedded cost of capital in both the high and low scenarios.

4

5 5.0 Income Tax Considerations

6 Cost of capital is just one component of Newfoundland Power’s annual revenue requirement.
7 The Company’s annual revenue requirement also includes income tax payable to the provincial
8 and federal governments.³⁵

³³ Hydro’s 2019 Revised Test Year cost of capital. Refer to Exhibit 4, Appendix C, page C-4 to Hydro’s 2017 GRA Compliance Application filed with the Board on July 11, 2019. The compliance application is currently under review by the Board for customer rates effective October 1, 2019.

³⁴ See Table 4 of this report.

³⁵ Newfoundland Power is subject to income tax under the *Income Tax Act* (Canada). In Order No. P.U. 15 (1967), the Board ordered Newfoundland Power to use corporate income taxes payable as an operating expense in computing its net earnings and rate of return. Income tax is determined, in effect, by multiplying the return on equity, before income taxes, by the Company’s average tax rate.

1 Newfoundland Power’s 2019 average tax rate approximates the current combined statutory tax
 2 rate of 30%.³⁶ On a hypothetical asset transfer of \$100 million, income taxes included in
 3 revenue requirement are estimated to be \$1.5 million, or 1.5%.³⁷

4
 5 In a transfer of assets, income tax paid by the Company would be split equally between both the
 6 federal and provincial governments.³⁸ The income tax payable to the Provincial Government
 7 would be a new source of revenue that *could* be used to mitigate customer electricity rates.
 8 Conceptually, the same is possible with the income tax revenue received by the Federal
 9 Government.³⁹

10
 11 As with other sources of government revenue, such as Nalcor Energy and Hydro dividends, the
 12 application of additional tax revenue for rate mitigation purposes would require public policy
 13 decisions.⁴⁰

³⁶ See the *Company’s 2019/2020 General Rate Application*, Section 3: Finance, page 3-11, Table 3-9: Income taxes.

³⁷ The income tax figure is estimated as follows:

	<u>(\$M)</u>	
Rate base	100.0	A
Return on equity, after taxes (A x 42.44% x 8.5%)	3.6	B
Return on equity, before taxes (B / (1 – 30%))	5.1	C
Income taxes (C x 30%)	1.5	D

This calculation reflects the capital structure shown in Table 4.

³⁸ Of the current combined statutory Part I tax rate of 30%, 15% is federal tax and 15% is provincial tax.

³⁹ For example, under the former *Public Utilities Income Tax Transfer Act* (Canada) (“PUITTA”), the Minister of Finance was permitted to pay a province 95% of the income tax paid by a corporation under Part I of the *Income Tax Act* (Canada) that was attributable to the distribution and sale or generation and sale to the public in the province of electrical energy, steam or gas. PUITTA was repealed on March 31, 1999.

⁴⁰ If all of Hydro’s earnings were available to the Provincial Government for dividend purposes, this would be approximately 1.7% of rate base (19.48% common equity x 8.50% allowed return = 1.7%). Refer to Exhibit 4, Appendix C, page C-4 to Hydro’s *2017 GRA Compliance Application* filed with the Board on July 11, 2019.

Appendix A: BMO Indicative New Issue Pricing,
July 24, 2019



BMO Indicative New Issue Pricing

July 24, 2019



Overview of BMO Assumptions

- The following materials provide BMO's indicative pricing views on Newfoundland Power under three financing scenarios:
 1. **Current Scenario: Non-index Eligible Bond**
 - Non-index eligible bond (under C\$100 million deal size, less than 10 investors)
 - “Club-style” transaction with select investors
 2. **Scenario 2: Index Eligible Bond (No illiquidity premium)**
 - Benchmark-size (~C\$500 million total deal size) bond broadly marketed to all Canadian investors
 - Pricing reduction through elimination of illiquidity premium: 15-20bps
 3. **Scenario 3: Index Eligible Bullet Maturity Bond (No illiquidity premium + No sinking fund premium)**
 - Benchmark-size (~C\$500 million total deal size) bond broadly marketed to all Canadian investors
 - Elimination of sinking fund – bullet maturity bond
 - Pricing reduction through elimination of illiquidity premium: 15-20bps
 - Pricing reduction through elimination of sinking fund premium: 10-15bps
- Scenario 2 and 3 pricing includes the additional assumptions:
 - National bond marketing is performed prior to any bond transaction
 - Bond security structure remains first mortgage
 - Bond credit ratings remain A2 (stable) by Moody's and A (stable) by DBRS

Current Scenario: New Issue Pricing Considerations

C\$ INDICATIVE PRICING

Term	5 year	7 year	10 year	30 year
Current New Issue Spread	95 bps	110 bps	130 bps	165 bps
CAD Benchmark Bond	Can 2.50% 06/24	Can 1.50% 06/26	Can 2.25% 06/29	Can 2.75% 12/48
CAD Benchmark Yield	1.38%	1.41%	1.45%	1.71%
Curve Adjustment	0.00%	0.00%	0.00%	0.00%
CAD Coupon	2.33%	2.51%	2.75%	3.36%

Scenario Two: New Issue Pricing Considerations

Excluding Illiquidity Premium – Benchmark Size Transaction

C\$ INDICATIVE PRICING

Term	5 year	7 year	10 year	30 year
Current New Issue Spread	95 bps	110 bps	130 bps	165 bps
Less: Illiquidity Premium	15bps - 20bps	15bps - 20bps	15bps - 20bps	15bps - 20bps
Pro Forma New Issue Spread	75bps - 80bps	90bps - 95bps	110bps - 115bps	145bps - 150bps
CAD Benchmark Bond	Can 2.50% 06/24	Can 1.50% 06/26	Can 2.25% 06/29	Can 2.75% 12/48
CAD Benchmark Yield	1.38%	1.41%	1.45%	1.71%
Curve Adjustment	0.00%	0.00%	0.00%	0.00%
CAD Coupon	2.13% - 2.18%	2.31% - 2.36%	2.55% - 2.60%	3.16% - 3.21%

Scenario Three: New Issue Pricing Considerations

Excluding Illiquidity Premium (Benchmark Size Transaction) and Sinking Fund Premium (Bullet Maturity)

C\$ INDICATIVE PRICING

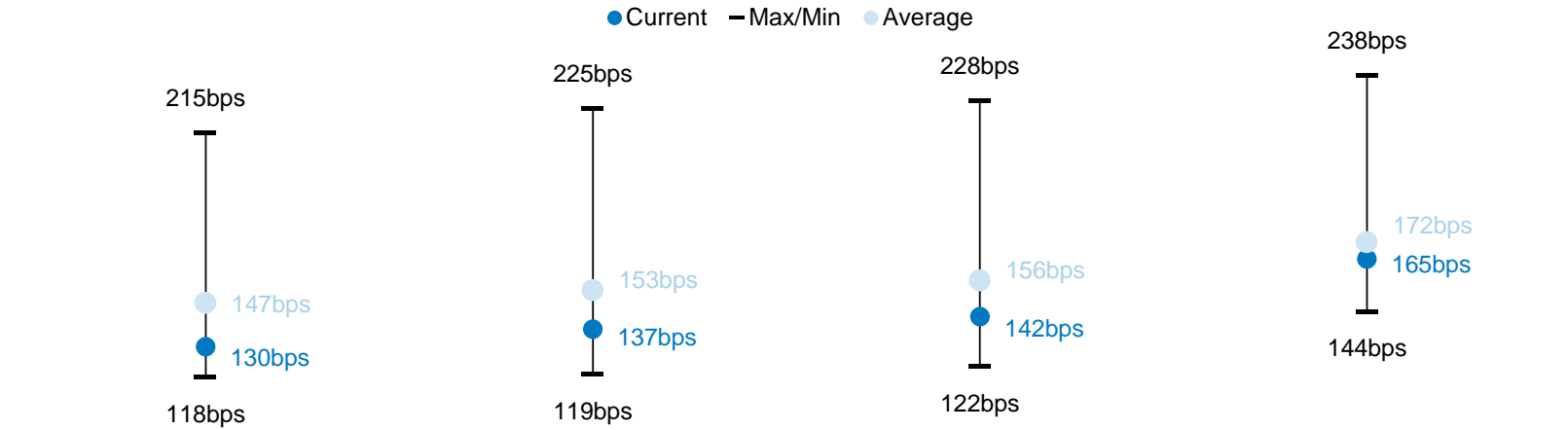
Term	5 year	7 year	10 year	30 year
Current New Issue Spread	95 bps	110 bps	130 bps	165 bps
Less: Illiquidity Premium	15bps - 20bps	15bps - 20bps	15bps - 20bps	15bps - 20bps
Less: Sinking Fund Premium	10bps - 15bps	10bps - 15bps	10bps - 15bps	10bps - 15bps
Pro Forma New Issue Spread	60bps - 70bps	75bps - 85bps	95bps - 105bps	130bps - 140bps
CAD Benchmark Bond	Can 2.50% 06/24	Can 1.50% 06/26	Can 2.25% 06/29	Can 2.75% 12/48
CAD Benchmark Yield	1.38%	1.41%	1.45%	1.71%
Curve Adjustment	0.00%	0.00%	0.00%	0.00%
CAD Coupon	1.98% - 2.08%	2.16% - 2.26%	2.40% - 2.50%	3.01% - 3.11%

Appendix A: Supporting Analysis

Appendix |

Fortis OpCo New Issue Spread Comparison (30-Year)

2014-2019YTD HISTORICAL RELATIVE PRICING



Current Rating (m/s/d)

2010-2019YTD

of Tranches Issued
 Total Issuance Volume
 Average Tranche Size

Previous Transaction

Date
 Tenor
 Coupon
 Size
 Spread
 # of Buyers
 Issuance Format

A3 / - / A

8
 C\$1,175mm
 ~C\$147mm

04-Dec-18
 30yrs
 3.850%
 C\$200mm
 +154 bps
 29
 Public

Senior Unsecured

Baa1 / A- / AL

10
 C\$1,450mm
 ~C\$145mm

13-Sep-18
 30yrs
 3.734%
 C\$150mm
 +139 bps
 36
 Public

Senior Unsecured

Baa1 / - / AL

3
 C\$375mm
 ~C\$125mm

30-Nov-17⁽¹⁾
 32yrs
 3.620%
 C\$75mm
 +138 bps
 Private Placement
 Private Placement

Senior Unsecured

A2 / - / A





3
 C\$220mm
 ~C\$73mm

30-May-17
 40yrs
 3.815%
 C\$75mm
 +175 bps
 4
 Private Placement

First Mortgage (Sinkable)

Pricing Views on Fortis Family

Views developed from dialogue with investors, BMO Corporate Debt Research, and BMO Trading Desk

				
Credit Premium	<ul style="list-style-type: none"> • Full “A” rating profile • Widely considered one of the highest quality issuers among all Canadian utility peers • Strongest business risk profile among Fortis entities • Insurance companies typically have increased investment capacity for A-rated securities given capital cost implications versus lower rated securities 	<ul style="list-style-type: none"> • Currently in “A” rating index bucket, but at risk of falling to “BBB” index if S&P downgrades Fortis Inc. to BBB+ (currently on negative outlook) • Credit rating profile and concern over downgrade drives pricing differential vs. FortisBC Energy 	<ul style="list-style-type: none"> • Currently falls within “BBB” rating index bucket but credit profile consistent with FortisAlberta • Limited (if any) pricing premium versus FortisAlberta attributed to credit quality 	<ul style="list-style-type: none"> • Strongest credit ratings profile among Fortis entities <ul style="list-style-type: none"> ■ Credit profile relatively consistent with FortisAlberta and FortisBC (Baa1) and slightly weaker than FortisBC Energy (A3) ■ Credit rating uplift due to FMB structure (A2) ranks it above FortisBC Energy (A3) • Given strong “A” rating, pricing premium versus FortisBC Energy is not attributed to credit quality
Illiquidity Premium / Index Exclusion	<ul style="list-style-type: none"> • Superior liquidity among Fortis entities <ul style="list-style-type: none"> ■ Very active issuer in the Canadian market with many liquid lines that are index-eligible ■ There is always a bid for FortisBC Energy product across a broad range of participants • Minimum deal size should be around \$150MM to ensure adequate liquidity (no liquidity premium); \$200MM+ provides optimal liquidity 	<ul style="list-style-type: none"> • Superior liquidity among Fortis entities <ul style="list-style-type: none"> ■ Similarly active as FortisBC Energy resulting in many liquid lines that are index-eligible and broadly distributed among investors despite smaller sizes of individual issues ■ Trades flat to similar rated CU Inc. which is one of most active bond issuers in utility sector • Minimum deal size should be around \$150MM to ensure adequate liquidity (no liquidity premium); \$200MM+ provides optimal liquidity 	<ul style="list-style-type: none"> • Less liquid bond issuer among Fortis entities <ul style="list-style-type: none"> ■ Irregular issuer but most issuances have been index eligible, with the exception of the most recent (2017) \$75mm long bond ■ That said, all issues are ~\$100MM (minimum for index eligibility) and tightly held with the exception of \$200MM 2044 bond ■ Typically trades more on an “agency” basis • ~5-10bps liquidity premium for broadly marketed index-eligible bonds that are \$100-125MM in size 	<ul style="list-style-type: none"> • Least liquid bond issuer among Fortis entities <ul style="list-style-type: none"> ■ No index inclusion (<\$100MM and <10 investors) limits potential investor base to “buy-and-hold” investors ■ As a result, issues are typically structured as “club-style” deals with only ~4 participants in recent transaction ■ No market liquidity and greater investor leverage during negotiations • Investors typically ascribe liquidity premium of ~10-20bps for narrowly placed, non-index eligible bonds
Sinking Fund	<ul style="list-style-type: none"> • N.A. 	<ul style="list-style-type: none"> • N.A. 	<ul style="list-style-type: none"> • N.A. 	<ul style="list-style-type: none"> • Despite sinking fund structure being easy to understand, narrower buyer base with certain investors’ internal systems unable to handle this feature well • Sinking fund premium viewed to be similar to an amortizing premium which is generally ~10-15bps

← Lowest to Highest Spread →

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All values in this document are in C\$ unless otherwise specified

Appendix B: Cost of Capital Methodologies

a. Current Method

Newfoundland Power’s cost of capital included in its revenue requirement is calculated using the Asset Rate Base Method.⁴¹ This is calculated by applying the Company’s weighted average cost of capital (“WACC”) to what it must finance, commonly referred to as *rate base*.

Under the Asset Rate Base Method, rate base is reduced by amounts that have been recovered through customer rates in advance of the required payment of those costs (i.e. cash inflows).⁴²

Table B-1 details Newfoundland Power’s embedded cost of capital, calculated in accordance with the Asset Rate Base Method approved by the Board.⁴³

Component	Average Capitalization (\$M)	Capital Structure (%)	Cost of Capital (%)	WACC (%)
Debt	640	54.28	5.84	3.17
Preference Equity	9	0.76	6.19	0.05
Common Equity	530	44.96	8.50	3.82
Total	1,179	100.00		7.04

Using Newfoundland Power’s current methodology, the Company’s WACC is 7.04% and rate base is \$1,179 million. This results in a total cost of capital in revenue requirement of \$83 million.⁴⁵

⁴¹ Newfoundland Power’s use of the Asset Rate Base Method was approved by the Board in Order No. P.U. 32 (2007).

⁴² The two largest rate base deductions for Newfoundland Power are other post-employment benefits (“OPEBs”) and accumulated deferred income taxes.

⁴³ Based on a 2020 Test Year as part of the Company’s 2019/2020 General Rate Application. This was approved by the Board in Order No. P.U. 2 (2019). The calculation was reviewed and verified by the Board’s financial consultant, Grant Thornton LLP.

⁴⁴ See the Company’s 2019/2020 General Rate Application, Volume 1: Application, Company Evidence and Exhibits, Exhibit 8 (1st Revision), page 2 of 2.

⁴⁵ 7.04% x \$1,179 million = \$83 million.

1 b. Alternative Method

2 An alternative method to treating cash inflows as a rate base deduction is to treat the cash
3 inflows as a source of financing and include the amounts as zero cost in the determination of
4 WACC.⁴⁶ This is commonly referred to as the Zero Cost of Capital Method.

5
6 Table B-2 provides a *pro forma* calculation of the Company’s embedded cost of capital using the
7 Zero Cost of Capital Method for OPEBs⁴⁷ and accumulated deferred income taxes.⁴⁸

Table B-2: <i>Pro Forma</i> Embedded Cost of Capital ⁴⁹ (Zero Cost of Capital Method)				
Component	Average Capitalization (\$M)	Capital Structure (%)	Cost of Capital (%)	WACC (%)
Debt	640	51.20	5.84	2.99
Preference Equity	9	0.71	6.19	0.04
Common Equity	530	42.40	8.50	3.61
Other Cash Inflows	71 ⁵⁰	5.69	0.00	0.00
Total	1,250	100.00		6.64

⁴⁶ See JTBrowne Consulting Report, *Changes to Regulatory Accounting Policies*, September 28, 2005, page 22 filed with the Board as part of Newfoundland Power’s 2006 Accounting Policy Application.

⁴⁷ The consolidation of assets under Newfoundland Power would require the Company to increase its current level of resources. This could result in higher OPEB expense that is included in revenue requirement as the benefits are earned by additional employees during their service time with the Company. However, the payment of the benefits does not occur until employee retirement. This difference results in a cash inflow, which reduces financing requirements.

⁴⁸ Any consolidation of operations involving a transfer of asset ownership to Newfoundland Power would require the Company to finance additional investments in the electrical system. For income tax purposes, plant is expensed via a capital cost allowance, which is higher than depreciation expense for regulatory purposes. This difference results in a lower income tax payment than income tax expense that is included in revenue requirement, resulting in a cash inflow. This cash inflow reduces what Newfoundland Power must finance.

⁴⁹ See Table B-1, with the exception of other cash inflows.

⁵⁰ \$71 million is the rounded total of \$61.4 million for OPEBs and \$9.8 million for accumulated deferred income taxes. See the Company’s 2019/2020 General Rate Application, Volume 1: Application, Company Evidence and Exhibits, Exhibit 6 (1st Revision), page 1 of 1.

1 Using the Zero Cost of Capital Method, Newfoundland Power’s WACC is 6.64% and its adjusted
 2 rate base is \$1,250 million.⁵¹ This results in a total cost of capital in revenue requirement of
 3 \$83 million.⁵²

4
 5 **c. Conclusion**

6 Table B-3 summarizes Newfoundland Power’s embedded cost of capital included in its revenue
 7 requirement using the Asset Rate Base Method and the Zero Cost of Capital Method.

Table B-3: <i>Pro Forma</i> Embedded Cost of Capital Asset Rate Base Method vs. Zero Cost of Capital Method			
Method	Rate Base (\$M)	WACC (%)	Cost of Capital (\$M)
Asset Rate Base Method	1,179	7.04	83
Zero Cost of Capital Method	1,250	6.64	83
Difference			-

8 The cost of capital included in revenue requirement is \$83 million under both the Asset Rate
 9 Base Method and the Zero Cost of Capital Method. There is no difference in customer rates as a
 10 result of the methodology applied.

⁵¹ The adjusted rate base of \$1,250 million is calculated as: (i) the Company’s rate base as shown in Table B-1 of \$1,179 million plus; (ii) the \$71 million total balance for OPEBs and accumulated deferred income taxes treated as zero cost of capital rather than as rate base deductions in the *pro forma* calculation.

⁵² 6.64% x \$1,250 million = \$83 million.