



Senwung Luk
sluk@oktlaw.com
416.981.9443
73205

December 21, 2015

EMAIL AND BY COURIER

Newfoundland and Labrador
Board of Commissioners of Public Utilities
120 Torbay Road
PO Box 21040
St. John's NL A1A 5B2

Attention: Ms G Cheryl Blundon and Board Secretary

Dear Ms Blundon:

Re: 2013 Amended General Rate Application of NL Hydro, final submissions of Innu Nation

Please find enclosed herewith the original plus twelve (12) copies of the following documents:

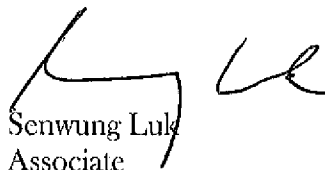
1. Innu Nation's final submissions for this Application
2. A corrected version of Table 2 of the Pre-filed evidence of Mr Philip Raphals. This is the same corrected version that was circulated at the hearing and is being included here for the convenient reference of the Board and the parties.

These documents are filed in accordance with the requirements of paragraph 5 of the Rules of Procedure as set out in Order No. PU 28 (2013).

Electronic copies of the above have been sent to all parties listed below.

I trust you will find the foregoing satisfactory, and I wish everyone a safe and happy holiday season and a good new year.

Yours truly,
Olthuis Kleer Townshend LLP


Senwung Luk
Associate

SL/tm

Enclosures (3)

cc:

Thomas J. O'Reilly, Cox & Palmer, Suite 1000, Scotia Centre 235 Water Street, St. John's, NL A1C 1B6

Geoffrey P. Young, Senior Legal Counsel Newfoundland & Labrador Hydro P.O. Box 12400 500 Columbus Drive St. John's, NL A1B 4K7

Gerard Hayes, Senior Legal Counsel Newfoundland Power Inc. P.O. Box 8910 55 Kenmount Road St. John's, NL A1B 3P6,

Paul Coxworthy Corner Brook Pulp & Paper Limited c/o Stewart McKelvey Cabot Place, 100 New Gower Street P.O. Box 5038 St. John's, NL A1C 5V8

Thomas Johnson O'Dea Earle 323 Duckworth Street P.O. Box 5955 St. John's, NL A1C 5X4

Genevieve M. Dawson Benson Buffett 9th Floor, Atlantic Place 215 Water Street P.O. Box 1588 St. John's, NL A1C 5N8

Dean A Porter Poole Althouse, 49-51 Park Street, Corner Brook, NL A2H 2X1

Dennis Browne QC, c/o Miller & Hearn, 450 Avalon Drive, P.O. BOX 129, Labrador City, NL, A2V 2K3

IN THE MATTER OF the *Public Utilities Act*, RSN 1990, Chapter P-46 (the “Act”);
and

IN THE MATTER OF a General Rate Application (the “Application”) by Newfoundland and Labrador Hydro (the “Applicant”) for approvals of, under Section 70 of the Act, changes in the rates to be charged for the supply of power and energy to Newfoundland Power, Rural Customers and Individual Customers; and under Section 71 of the Act, changes in the Rules and Regulations applicable to the supply of electricity to Rural Customers.

Final Submissions of Innu Nation
December 18, 2015

1 **OVERVIEW**

2 1. Innu Nation participated in the hearing on the Application on behalf of its two constituent
3 communities: Natuashish and Sheshatshiu.

4 2. In Natuashish, the most important issue that residents are facing with regard to their electrical
5 services is that Hydro is operating and maintaining the electrical assets, but without the
6 benefit of regulatory oversight by the Public Utilities Board ("PUB" or "Board"). On
7 September 4, the Board determined that issues relating to electrical services to Natuashish
8 should be addressed in a separate proceeding and that no evidence on these issues is to be
9 presented at this hearing. Innu Nation has therefore refrained from presenting evidence on
10 Natuashish related matters in this proceeding, and is eagerly awaiting the opportunity to
11 bring these issues before the Board in a separate proceeding.

12 3. Sheshatshiu, on the other hand, is a community in the Labrador Interconnected System. Its
13 concerns about the Application are as follows:

- 14 • Ensuring that Sheshatshiu residents pay into the rural deficit allocation in a way that
15 is fair and reasonable, and as consistent with rate-making principles as possible
- 16 • Ensuring that the implementation of the Labrador Industrial Transmission Rate does
17 not result in unforeseen or unfair results for existing ratepayers
- 18 • Ensuring that the rate impact of capital expenditures is allocated fairly among
19 ratepayers within the Labrador Interconnected System
- 20 • Ensuring that the Board considers requesting that Hydro enter an Integrated Resource
21 Planning process.

22 4. The following will detail Innu Nation's submissions on these issues in greater depth.

1 **RURAL DEFICIT ALLOCATION**

- 2 5. Innu Nation acknowledges that the proper way to allocate the rural deficit is a difficult
3 problem to solve. Government policy dictates that regulated rural customers¹ should pay the
4 same rates as non-rural customers even though such rates cannot cover their costs, and that
5 two groups of ratepayers: Newfoundland Power (“NP”) customers and customers on the
6 Labrador Interconnected System, should pay to cover the difference.² As Mr Brockman,
7 expert witness for NP acknowledged, there is no ideal way of allocating the costs of the rural
8 deficit, and no perfect way of doing so that everybody would agree on.³
- 9 6. The increase in the magnitude of the rural deficit is especially relevant at this Application,
10 because it will be the first time that NLH will be allowed to earn a return on equity on its
11 rural assets, as per the terms of OC2009-063.⁴
- 12 7. Throughout the hearing, one of the consistent themes in the evidence brought before the
13 Board is that there is no way to allocate the rural deficit so that the cost of the deficit is borne
14 by the users who cause the cost.⁵ Simply put, the rural deficit allocation, as a mechanism of
15 cross-subsidy between ratepayers in different systems, cannot conform perfectly to the
16 principle of allocation of costs by causation. Insofar as cost causation is a principle of
17 fairness, there is just no way for the allocation of the rural deficit to be “fair”.
- 18 8. However, there are other principles at play in ratemaking, and many of them impinge on
19 fairness in other ways. Among these principles are the following:

¹ The only non-regulated rural community in the province is Natuashish, and Natuashish customers receive no rural deficit subsidy. Issues relating to electrical services to Natuashish are to be dealt with at a separate proceeding, as per the direction of the Board given on September 4, 2015.

² OC2003-347, in CA-NLH-024 Rev 1, Att 1.

³ Cross-examination of Mr Brockman, September 29, 2015, p178. See also the cross-examination of Mr Raphals, September 29, 2015, p49; the cross-examination of Mr Doug Bowman, September 30, 2015, p41.

⁴ For OC2009-063, please see CA-NLH-024 Rev 1, Att 4. For the effects of this order, please see PUB-NLH-055 Rev 1 and PUB-NLH-056 Rev 1.

⁵ See, eg, Cross-Examination of Mr Greneman, September 28, 2015, pp 7-13; Cross-Examination of Mr Raphals, September 29, 2015, pp49-50.

- 1 • Fairness as between subsidizing customers of the rural deficit
- 2 • Transparency in allocating the costs of the rural deficit between subsidizing
- 3 customers
- 4 • Gradualism in the implementation of rate changes

5 9. The existing rates incorporate the Baker method of allocating the rural deficit, which the
6 Board ordered in its decision in 1993. Innu Nation submits that the Baker method is no
7 longer an appropriate allocation method to use. It submits that either the number of
8 customers allocation method, or the equal revenue to cost ratio allocation method, both of
9 which have been proposed by NLH, would be improvements upon the Baker method, and
10 should be adopted by the Board as part of the new rates to be approved for NLH.

11

12 **The Baker Method**

13 10. The Baker method was first proposed in the 1993 Generic Hearing on the cost of service
14 methodology of NLH.⁶ Mr George C. Baker was an expert witness engaged by the Board to
15 provide an opinion on Hydro's cost of service methodology.⁷ The Baker method of rural
16 deficit allocation can be summarized as follows:

- 17 • The costs of the contributing system are divided into demand, energy and customer
- 18 cost components.
- 19 • These values are prorated to divide the rural deficit among the same components.
- 20 • Total kW and kWh consumption and adjusted unweighted customer accounts for the
- 21 contributing systems are divided by the prorated share of the rural deficit, to produce
- 22 unit costs for each component.

⁶ IN-PUB-002, Att 1

⁷ IN-PUB-002, Att 1, p2.

- The unit costs are multiplied by the corresponding kW and kWh consumption and adjusted customer accounts for each for the Island and for Labrador, to determine the overall cost allocation for each system.⁸

11. The Baker method has what Mr Raphals, who analyzed the Application on behalf of Innu Nation, calls a “surprising feature, namely the use of ‘equivalent unweighted customer accounts’.”⁹ This is a manner for “adjusting” the balance between the number of NP accounts versus the number of Labrador Interconnected accounts.

12. Mr Raphals’ report compiled the available evidence and explained the concept of the “equivalent unweighted customer accounts” as follows. The figure, he explains,

divides the total of Island Rural Customer Costs by the number of Island Rural customers. In effect, this resulting figure represents Hydro’s average customer cost for Island rural customers. It then divides total NP Customer Costs by this average cost. The result can be thought of, in a sense, as the number of customers that NP would have to have, given its total Customer Costs, if they all had the same Customer Cost as Hydro’s rural customers. The result is only about one twenty-fifth of its actual number of customers.¹⁰

If the Baker method is applied to the rural deficit allocation based on costs for which NLH is applying in the present Application, the result would be to increase rates on Labrador Interconnected customers by 28.1%, while only increasing rates to Newfoundland Power customers by 2.1%.¹¹

13. The “equivalent unweighted customer accounts” approach was not one that any of the expert witnesses who gave evidence on the matter could easily explain or justify. Mr Raphals, for instance, found that its reduction of the number of NP customers by a factor of 25 before

⁸ Report of Mr Philip Raphals, p10. See also PUB-NLH-483 for an illustrative application of the Baker method.

⁹ Report of Mr Philip Raphals, p11.

¹⁰ Pre-filed evidence of Mr Philip Raphals, p11, citing LWHN-NLH-011; IN-NLH-306, PUB-NLH-483, and LWHN-NLH-013. Underlining in original.

¹¹ CA-NLH-166 Rev 3, p 7 of 8.

1 balancing the costs of the NP customers against those of the Labrador Interconnected
2 customers, was not a move whose fairness could be deduced from the Board's 1993 report.¹²

3 14. Mr Brockman, the expert witness retained by NP, and the only witness who testified in
4 favour of retaining the Baker method, provided perhaps the most enlightening explanation of
5 the Baker method. In cross-examination, he tried to explain the use of the "equivalent
6 unweighted customer accounts" as a way of compensating for the fact that although the
7 Labrador Interconnected customers were direct retail customers of NLH, and as such, there
8 were over 10,000 of them, NP was the distributor for NP customers, and since NP bought
9 power from NLH wholesale, NP was the one and only customer of NLH for the NP system.

10 Mr Brockman explained:

11 he was trying to come up with equal dollars per kilowatt, equal dollars per
12 customer, and equal dollars per kilowatt hour, that he could then allocate to both
13 systems in what he thought was a fair way, he had to come up with a different
14 number than one for Newfoundland Power. So what he did was he sort of backed
15 into a number that gave him the right answer to get 4 million dollars to you, and
16 4 million dollars to them. He had their number, but he didn't have yours because
17 yours is a hypothetical. That's the easiest way to explain it.¹³

18 15. As Mr Brockman further acknowledged with respect to the "equivalent unweighted customer
19 accounts":

20 It created a lot of confusion. I think it is the portion of the method that's the least
21 understandable. It's even difficult for me to understand. You're not alone[...]¹⁴

22 16. Mr Brockman later opined that this aspect of the Baker method was so problematic that "he
23 wouldn't be opposed to throwing it out."¹⁵ As Mr Brockman acknowledged, the Baker

¹² Pre-filed evidence of Mr Philip Raphals, p14; Cross-examination of Mr Raphals, September 29, 2015, p26.

¹³ Cross-examination of Mr Brockman, September 29, 2015, p104-105.

¹⁴ Cross-examination of Mr Brockman, September 29, 2015, p106.

¹⁵ Cross-examination of Mr Brockman, September 29, 2015, p187.

1 method was directed toward “trying to get to an equal number”¹⁶, and arriving at a final
2 result that seemed fair and reasonable, but “remove some of the arbitrariness [...] of the
3 methodologies.”¹⁷

4 17. As Dr Feehan described the Baker method,

5 it’s (sic) actual interpretation or meaning is very difficult to understand when you
6 go through all that complex imputations and assumptions, and the way you get
7 these numbers, you have a formula that’s not all that transparent. So we end up
8 with, yes, equal unit costs, you always get some number on line 14, but my
9 contention is those numbers are not at all easily interpretable and they’re not
10 really anyone’s particular unit costs.¹⁸

11 12 **Alternatives to the Baker Method**

13 18. Two main alternatives to the Baker method were analyzed by experts who addressed rural
14 deficit allocation issues: (1) the revenue requirement method, and (2) the number of
15 customers method. These were the two options proposed by NLH as alternatives to the Baker
16 method.¹⁹

17 19. The revenue requirement method, as Hydro explains, “effectively maintains the same
18 revenue to cost ratio for both the Labrador Interconnected System and Newfoundland
19 Power.”²⁰ Under this scenario, the average annual cost of the rural deficit on NP customers
20 would be \$236.46, while the average annual cost on Labrador Interconnected customers
21 would be \$207.60.²¹

22 20. The number of customers method, on the other hand, would take the total amount of the rural
23 deficit and apportion it based on the total number of customers in each subsidizing system. In

¹⁶ Cross-examination of Mr Brockman, September 29, 2015, p191.

¹⁷ Cross-examination of Mr Brockman, September 29, 2015, p192-193.

¹⁸ Cross-examination of Dr Feehan, October 5, 2015, p34. The reference to line 14 refers to the “deficit unit costs” as arrived at by the Baker method, in PUB-NLH-113, Att 1, p82 of 83.

¹⁹ CA-NLH-166 Rev 3.

²⁰ CA-NLH-166 Rev 3, p6 of 8.

²¹ CA-NLH-166 Rev 3, Table 5.

1 the 2015 Test Year, there are 260,771 customers in the NP system, and 11,600 customers in
2 the Labrador Interconnected System.²² The total rural deficit would be divided across the
3 sum of the number of customers in the two subsidizing classes, yielding a uniform
4 contribution of \$235.23 per customer from each system.²³

6 **Fairness as between subsidizing customers**

7 21. As summarized above, the three main candidates for rural deficit allocation methods, which
8 the parties have brought before the Board, are the Baker method, the number of customers
9 method, and the revenue requirement method. Innu Nation submits that either of the latter
10 methods would be more fair as between subsidizing classes than the Baker method.

11 22. NLH's initial application had applied the Baker method, but the Amended Application does
12 not. Hydro itself conceded that the current [i.e. Baker] method "does not provide a
13 reasonable sharing of the rural deficit between Labrador Interconnected Customers and
14 Newfoundland Power customers."²⁴

15 23. In terms of evaluating between the different available methods, there was consensus among
16 the experts who gave evidence on the matter that fairness was an important criterion.²⁵ As the
17 Board had decided in 1993, "[f]airness cannot be assessed as due to the method used but
18 instead we must assess fairness on the basis of the result, a shared burden among the classes
19 of customers that is fair to all and not discriminatory."²⁶ No party advocated a departure from

²² CA-NLH-166 Rev 3, Table 3.

²³ CA-NLH-166 Rev 3, Table 5.

²⁴ PUB-NLH-089.

²⁵ See, eg, Pre-filed evidence of Dr Feehan, p6; Cross examination of Mr Greneman, September 28, 2015, p90, p119; Cross examination of Mr Raphals, September 29, 2015, p49-50; Cross examination of Mr Brockman, September 29, 2015, p180; Cross examination of Mr Doug Bowman, September 30, 2015, p40.

²⁶ PUB-NLH-113, Att 1, p63 of 83.

1 this approach from fairness, and Innu Nation submits that this is the approach to fairness that
2 the Board should continue to employ in considering this Application.

3 24. The following chart compiles average annual cost per customer and revenue/cost ratios for
4 the three methods, disclosed across several different sources²⁷:

		Newfoundland Power customers	Labrador Interconnected System customers
Baker method	\$/Customer	\$216.64	\$653.15
	Revenue/cost ratio	1.12	1.42
Revenue Requirement method	\$/Customer	\$236.46	\$207.60
	Revenue/cost ratio	1.15	1.15
Number of customers method	\$/Customer	\$235.34	\$235.34
	Revenue/cost ratio	1.13	1.15

5
6 25. One of the ways of measuring the fairness of different rural deficit allocation methods that
7 was addressed by several witnesses was to compare the revenue/cost ratio of the two

²⁷ CA-NLH-166 Rev 3, Tables 4 and 5; CA-NLH-228 Att 1, p1 of 4.
Revenue to cost ratios for number of customers method arrived at as follows:
Customers in NP (260,771) + Labrador Interconnected (11,600) = 272,371 (CA-NLH-166 Rev 3, Table 3)
Total rural deficit (\$64.1M) / 272,371 = \$235.34 (CA-NLH-166 Rev 3, Table 3)
COS before deficit allocation for NP (\$463.7M) + Allocated deficit (\$235.34 x 260,771) = \$525.1M (Sched. 1.2, p2)
COS after allocation for NP (\$525.1M) / COS before allocation for NP (\$463.7M) = 1.13
COS before deficit allocation for LIS (\$18.1M) + Allocated deficit (\$235.34 x 11,600) = \$20.8M (Sched. 1.2, p6)
COS after allocation (\$20.8M) / COS before allocation (\$18.1M) = 1.15

1 different groups of subsidizing customers. When the costs of the rural deficit are accounted
2 for as part of the revenue requirement for Labrador Interconnected and NP customers, the
3 revenue to cost ratio for Labrador Interconnected is 1.42, while that for NP customers is
4 1.12.²⁸ This means that Labrador Interconnected customers pay a 42% premium over and
5 above their cost of service for their electricity, while NP customers pay a 12% premium.²⁹

6 26. Mr Brockman was the only witness who questioned the appropriateness of using revenue to
7 cost ratios as a measure of fairness as between the different rural deficit allocation methods,
8 in the way that NLH had done in the Application. He appeared to suggest that the
9 calculations of the revenue to cost ratio should have included the allocated rural deficit as a
10 cost for both NP and Labrador Interconnected customers.³⁰ As such, the revenue to cost ratio
11 for both sets of customers should be appropriately calculated as 1. Although there is some
12 appeal to Mr Brockman's argument, it should be noted that no other witness agreed with his
13 approach. To do so would impute the rural deficit allocation as a cost of service to NP and
14 Labrador Interconnected customers, when the allocation is clearly not a cost of serving them.
15 Notably, Mr Brockman did concede that the 1.42 ratio for Labrador Interconnected
16 customers "does tell me that the Labrador interconnected is paying 42 percent more than
17 their cost. It doesn't tell me whether it's unfair or not, it just says they're paying 42 percent
18 more than their cost."³¹

19 27. With respect to Mr Brockman, it would seem that insofar as cost causation is a principle of
20 fairness in rate making, that paying 42% more than cost of service is indeed relevant to
21 fairness. Moreover, the comparison of how much more than cost of service that Labrador
22 Interconnected customers are paying, as compared to how much more than cost of service

²⁸ Application, vol 1, Table 4.2 on p 4.9.

²⁹ Examination-in-chief of Mr Doug Bowman, September 30, 2015, p21.

³⁰ Cross examination of Mr Brockman, September 29, 2015, p126-132, p202-203

³¹ Cross examination of Mr Brockman, September 29, 2015, p203.

1 NP customers are paying, is central to the question of fairness as between those two sets of
2 customers. As Mr Fagan, the witness put forward by Hydro as responsible for Section 4 of
3 the Application, suggested in his testimony, “[e]ver since the rural deficit was proposed for
4 recovery from rate payers, the revenue to cost ratios have been presented in the same manner
5 to isolate the impact of the deficit on each customer group. So the manner in which it is
6 presented here is not a new approach in presenting the impact of the rural deficit to the
7 Board.”³²

8 28. Innu Nation therefore submits that the Board should rely on the comparison of revenue to
9 cost ratios between NP and Labrador Interconnected customers as a way of evaluating the
10 fairness of rural deficit allocation methods, and further submits that the way NLH has
11 construed the revenue to cost ratio in section 4.3.1 of its Application is reasonable.

12 29. If the comparison of revenue to cost ratios between NP and Labrador Interconnected
13 customers is an appropriate way to evaluate the fairness of rural deficit allocation methods,
14 then it would seem that the Baker method is evidently unfair. As discussed already, the Baker
15 method leaves NP customers with a revenue to cost ratio of 1.12, while imposing a 1.42 ratio
16 on Labrador Interconnected customers. Innu Nation submits that both the magnitude of the
17 revenue to cost ratio for Labrador Interconnected, meaning that almost 30% (0.42 / 1.42) of
18 the revenue requirement attributed to those customers are not caused by those customers,
19 should be of concern to the Board in setting fair and reasonable rates. Moreover, the Baker
20 method means that for NP customers, only about 10% (0.12 / 1.12) of the revenue
21 requirement attributed to them are not caused by them. Innu Nation submits that such a

³² Examination-in-chief of Mr Fagan, October 5, 2015, p93; see also cross examination of Mr Fagan, October 5, 2015, p179-181.

1 discrepancy between the revenue to cost ratios for these two customer groups cannot be
2 easily justified.

3 30. Newfoundland Power led evidence that suggested that the Board in adopting the Baker
4 method in 1993 had intended that Labrador Interconnected customers should pay, on
5 average, three times as much per customer to subsidize the rural deficit as NP customers.³³
6 There was some disagreement on this issue, especially between Mr Brockman, the witness
7 retained by NP, and Mr Raphals, the witness retained by Innu Nation.

8 31. Mr Raphals' view is best summarized by Table 2 of his report, which can be found on page 9
9 of his pre-filed evidence. A corrected version of this chart was distributed to the Board and
10 the parties at the hearing. The table shows the average cost per customer of the rural deficit,
11 broken down between one line showing the cost for Labrador Interconnected customers, and
12 another showing the cost for NP customers. The line for NP customers increases over time,
13 but incrementally, from about \$100 per customer in 1993, to about \$200 per customer in
14 2014. The line for Labrador Interconnected customers tracks the line for NP customers from
15 1993 to 2001, but spikes to about \$600 per customer in 2002. In 2014 it almost reached \$700
16 per customer. From this chart, it would seem that the Board may not have had the full impact
17 of the rural deficit in mind in 1993 when they made their decision, as the dramatic difference
18 in per customer burdens that is the result of the application of the Baker method does not
19 appear until nine years later, in 2002.

20 32. In his testimony, Mr Brockman disputed Mr Raphals' analysis. He cited the figures from
21 PUB-NP-005, Table 2, which shows the average annual subsidy in 1995 drawn from NP
22 customers as \$115, while the average annual subsidy drawn from Labrador Interconnected

³³ Examination-in-chief of Mr Brockman, September 29, 2015, p95-96.

1 customers was \$433, thus supporting the proposition that the Board in 1993 had intended
2 such a disparity of result between the two subsidizing groups of customers.³⁴

3 33. The data for PUB-NP-005, according to footnote 1 of that RFI response, was drawn from the
4 *Report of the Board of Commissioners of Public Utilities to the Honourable Minister of*
5 *Natural Resources Government of Newfoundland and Labrador on a Referral by the*
6 *Lieutenant-Governor in Council Concerning Rural Electrical Service*, October 10, 1995,
7 page 24. This source document was later revealed to be confidential.³⁵ It does not form part
8 of the record of the proceedings on this Application, and neither Innu Nation nor Mr Raphals
9 has had an opportunity to examine this confidential document, to account for any
10 discrepancies between those numbers and the data that Mr Raphals used for his analysis.

11 34. The data for Mr Raphals' Table 2 was drawn from responses to LWHN-NLH-055, Att 1,
12 LWHN-NLH-056, Att 1, and CA-NLH-099. All of this data is in the record of proceedings
13 for this Application, has been publicly available, and available to all parties, including
14 Newfoundland Power, for inspection. In the circumstances, Innu Nation submits that it would
15 not be appropriate for the Board to make a factual finding adverse to the publicly available
16 data on the basis of a confidential report relied on by NP, which has not been made available
17 to the parties, and is not part of the record of these proceedings.

18 35. Additionally, Hydro's witness, Mr Fagan, provided further evidence to support the reliability
19 of the data used in Mr Raphals' analysis. Mr Fagan testified that the rural deficit was not
20 allocated to Labrador Interconnected customer rates until 2002.³⁶ With respect to the
21 numbers cited by Mr Brockman, Mr Fagan explained that "this must have been a forecast
22 number and I anticipate it was probably using the generic methodology that wasn't in place

³⁴ Examination-in-chief of Mr Brockman, September 29, 2015, p95-97.

³⁵ Re-examination of Mr Raphals, September 30, 2015, p3-4.

³⁶ Cross examination of Mr Fagan, October 5, 2015, p117. See also the examination-in-chief of Dr Feehan, October 5, 2015, p7.

1 at the time.”³⁷ On the other hand, the numbers used by Mr Raphals for his Table 2 would
2 have been actual figures rather than forecasted figures.³⁸ Mr Fagan was also skeptical about
3 whether sufficient information was available to the Board at the time of their 1993 decision
4 to fully foresee what the rate impact of the Baker method would be. As he stated in cross
5 examination:

6 So it’s difficult to really assess what the Board was thinking at that time with
7 regard to a view on where we are now, because there’s a lot of new information
8 before the Board to consider. I really couldn’t read their mind. I know they were
9 struggling in reading all the documents about what’s the best approach because
10 it’s not an easy decision for the Board on trying to determine the methodology for
11 sharing the rural deficit. So I think with a lot of the changes that occurred, I don’t
12 know if they could have anticipated that the methodology they approved would
13 have resulted in the Labrador customers paying more than \$400 more than the
14 customers on Newfoundland Power’s system.³⁹

15 36. To summarize with respect to the question of whether the Board in 1993 intended for
16 dramatic differences between Labrador Interconnected and NP customers in the average
17 amount of rural deficit burden, it would appear that such an intention is by no means clear.
18 The sole piece of documentary evidence weighing in favour of such a conclusion is the
19 confidential report cited by NP in PUB-NP-005, which the parties have not had a chance to
20 fully examine, and which is not part of the record of proceedings. On the other hand, in terms
21 of actual impact of the Baker method, it seems from the actual data on the rural deficit
22 allocation that the impact was not felt on bills until at least after 2002. Moreover, as Mr
23 Fagan testified, based on the information that was before them in 1993, it is by no means
24 clear that they could have foreseen that the application of the Baker method would lead to
25 such dramatically unequal burdens as between Labrador Interconnected and NP customers.

³⁷ Cross examination of Mr Fagan, October 5, 2015, p118.

³⁸ LWHN-NLH-055 and LWHN-NLH-056, relied on by Mr Raphals, state that they are based on actual allocated costs.

³⁹ Cross examination of Mr Fagan, October 5, 2015, p119-120.

1 37. Evidence was also adduced at the hearing suggesting that in 1993, the Board had intended a
2 dramatically unequal allocation of the burden of the rural deficit because customers on the
3 Labrador Interconnected system were “lucky” to benefit from cheap electricity.⁴⁰ It is true
4 that Mr Baker, the Board’s expert, did indeed opine as follows:

5 It may be helpful to consider the circumstances which give rise to the revenue
6 deficiency. To the best of my knowledge, statutory and, for the present time at
7 least, public policy limitations exist on Rural and Isolated rate levels.
8 Newfoundland Light & Power rates provide a ceiling. One might draw the
9 inference that public policy at this time requires those who are fortunate enough
10 to enjoy cheap electric service to share their good fortune with those who are not
11 so lucky.⁴¹

12
13 38. However, in spite of Mr Baker having given evidence to the effect of the “luck” of
14 Labradorians in the 1993 proceeding, it is by no means clear that the Board relied on this
15 reasoning in its decision, and there is no evidence in the record which shows the Board
16 having considered this idea of “luck” in its 1993 decision. Moreover, it has also been widely
17 acknowledged that the Baker method imposes a higher rural deficit allocation burden on
18 Labrador Interconnected customers because energy consumption is higher in Labrador,
19 primarily because of a colder climate. It seems equally plausible to argue that NP customers
20 are “lucky” to benefit from a warmer climate and as a result need to consume less energy to
21 heat their homes. Indeed, to apply the same logic of “luck”, it may be that it is the NP
22 customers who should bear a higher average burden per customer of the rural deficit
23 allocation.

24 39. In any event, on the subject of the differences in rates between NP and Labrador
25 Interconnected customers, the evidence adduced at the hearing suggests that the difference is

⁴⁰ Cross examination of Mr Brockman, September 29, 2015, p114; examination-in-chief of Mr Raphals, September 29, 2015, p7.

⁴¹ IN-PUB-02, Att 1, p28.

1 not as great as is commonly believed. While it may be that the final customer rates are indeed
2 quite different as between the two customer groups, the final customer rates are not the rates
3 used in calculating the rural deficit allocation. In fact, when the deficit is allocated on the
4 basis of revenue requirement per customer, the revenue requirement is calculated differently
5 for NP customers versus Labrador Interconnected customers. That is because for NP
6 customers, NLH is only the generating utility, while NP is the distributing utility. On the
7 other hand, for Labrador Interconnected customers, NLH is both the generating and
8 distributing utility. Thus, the revenue requirement for NLH in the NP system excludes
9 distribution costs, while the revenue requirement for NLH in the Labrador Interconnected
10 system includes distribution costs.⁴² Indeed, when compared in this way, the costs for NP
11 customers is only about 13%-14% higher than for Labrador Interconnected customers.⁴³

12 40. For this reason, when applying the revenue requirement method, the average rural deficit
13 allocation per customer is \$234.96 for NP customers, and \$207.60 for Labrador
14 Interconnected customers, or about 13% higher.⁴⁴

15 41. Mr Fagan of Hydro summed up the point well in his testimony:

16 If you looked at the cost of serving the customers on Labrador interconnected
17 versus the customers on Newfoundland Power, average, they are not that much
18 different; we said 14 percent apart. But [the] methodology Mr. Baker came up
19 with proposing it tripling the recovery from the customers of Labrador
20 interconnected versus the customers of Newfoundland Power. So, a \$440.00
21 difference to me which is based on a public policy interpretation which, to me, is
22 not clear, that's based on any public policy direction.⁴⁵

23 42. To summarize the foregoing:

⁴² Cross examination of Mr Fagan, p123-128, p182-183.

⁴³ Cross examination of Mr Fagan, p127.

⁴⁴ Information #10, col. 5.

⁴⁵ Cross examination of Mr Fagan, October 5, 2015, p191-192.

- 1 • The revenue to cost ratio is an appropriate measure of fairness in evaluating rural
2 deficit allocation methods, and favours the revenue requirement method or the
3 number of customers method over the Baker method
- 4 • It is not at all clear that the Board in 1993 intended for an extremely large discrepancy
5 between the average customer burden of the rural deficit imposed on Labrador
6 Interconnected customers versus NP customers
- 7 • To the extent that the rural deficit burden is higher per customer on NP customers, it
8 is only to the tune of about 13% higher, and cannot justify a burden on Labrador
9 Interconnected customers that is more than three times higher than that imposed on
10 NP customers.

12 **Transparency in allocating costs between subsidizing customers**

13 43. All of the experts seemed to agree that transparency was an important consideration in
14 choosing a rural deficit allocation method.⁴⁶

15 44. As already discussed above in the section describing the Baker method, the Baker method is
16 not at all easy to understand. Mr Brockman, the only expert advocating the retention of the
17 Baker method, even conceded that the use of the “equivalent unweighted customer accounts”
18 factor to discount the number of NP customers “is the portion of the method that’s the least
19 understandable. It’s even difficult for me to understand”⁴⁷.

⁴⁶ Cross-Examination of Mr Greneman, September 28, 2015, p40, p119; Cross examination of Mr Raphals, September 29, 2015, p60; Examination-in-chief of Mr Brockman, September 29, 2015, p92; Cross examination of Mr Doug Bowman, September 30, 2015, p82.

⁴⁷ Cross-examination of Mr Brockman, September 29, 2015, p106.

1 45. Innu Nation submits that the Baker method is clearly less transparent than either the revenue
2 requirement method or the number of customers method. Thus, this ground of analysis
3 clearly favours the abandonment of the Baker method.

4 46. Related to the interest in the transparency of the mechanism for allocating costs of the rural
5 deficit between subsidizing customers is the importance of efficient price signals. An
6 efficient price signal depends on a price for a service which is reflective of the costs of
7 providing that service.⁴⁸ Because the allocation of the rural deficit to NP and Labrador
8 Interconnected customers necessarily means that costs are imposed upon those customers
9 even though they have not caused them, it nonetheless remains the case that where rates
10 diverge even more greatly from costs, that the price signal is further distorted. As Mr Doug
11 Bowman points out in his pre-filed evidence:

12 Recovery of the rural rate deficit forces distortion of the rates of the subsidizing
13 classes because their rates are based on full cost recovery, plus the rural deficit.
14 This means the principle of cost based rates cannot be met; however, the rural
15 deficit can be applied to the subsidizing classes in a manner that minimizes the
16 impact on the price signal.⁴⁹

17 47. The application of the Baker method to Hydro's rates would result in a revenue to cost ratio
18 for Labrador Interconnected customers of 1.42, while the revenue to cost ratio for NP
19 customers would be 1.12.⁵⁰ On the other hand, applying the revenue requirement method of
20 rural deficit allocation would result in a revenue to cost ratio of 1.15 for both customer
21 groups.⁵¹ Similarly, applying the number of customers method yields a revenue to cost ratio
22 of 1.13 for NP customers, and 1.15 for Labrador Interconnected customers.⁵²

⁴⁸ Cross examination of Mr Greneman, September 28, 2015, p90; Report of Mr Doug Bowman, p30.

⁴⁹ Pre-filed evidence of Mr Doug Bowman, p30.

⁵⁰ CA-NLH-166, p 5 of 8.

⁵¹ CA-NLH-228, Att I, p1 of 4.

⁵² Please see footnote 23 above.

1 48. Mr Brockman, who was the only expert in favour of retaining the Baker method, conceded
2 that a certain variance in revenue to cost ratio from 1 was acceptable, because some cross
3 subsidy is inevitable in any system.⁵³ Mr Brockman stated in cross-examination that revenue
4 to cost ratios of between 0.85 to 1.15 would not be a major concern.⁵⁴ From a price distortion
5 perspective, then, it would seem that the Baker method should be considered problematic for
6 its high revenue to cost ratio of 1.42 in the Labrador Interconnected area. On the other hand,
7 as is implied by Mr Brockman's evidence, using the revenue requirement method or the
8 number of customers method should not cause any extraordinary concerns in terms of price
9 signaling.

10 49. On the other hand, Dr Feehan opined that a fixed charge, such as \$20 per month, would
11 perhaps be the most understandable option.⁵⁵

12 50. All things considered, Innu Nation submits that transparency favours abandoning the Baker
13 method in favour of either the revenue requirement method or the number of customers
14 method of rural deficit allocation.

15

16 **Gradualism**

17 51. There was no disagreement between the experts agreed that gradualism and rate stability are
18 important considerations in allocating the burden of the rural deficit.⁵⁶

19 52. It was also not disputed that the application of the Baker method would result in a 28.1%
20 increase to Labrador Interconnected rates.⁵⁷ Mr Brockman, the only expert in favour of

⁵³ Cross examination of Mr Brockman, September 29, 2015, p126-127.

⁵⁴ Cross examination of Mr Brockman, September 29, 2015, p199-202.

⁵⁵ Cross examination of Dr Feehan, October 5, 2015, p68.

⁵⁶ Cross examination of Mr Greneman, September 28, 2015, p119; Cross-examination of Mr Brockman, September 29, 2015, p182.

⁵⁷ CA-NLH-166 Rev 3, Table 6 on p7.

1 maintaining the Baker method, suggested a slow phase in of the increase, perhaps beginning
2 with a 1% a year increase.⁵⁸ However, he did not favour a phase in period of 28 years to
3 implement the full rate increase.⁵⁹ He also suggested that the revenue shortfall that would be
4 caused by the slow phase in period be paid for by NP customers.⁶⁰ It is not clear how these
5 proposals could be realistically implemented.

6 53. Moreover, there is also the related issue of the impacts on Labrador Isolated rates to consider.

7 The Provincial Government, through the Northern Strategic Plan (“NSP”), subsidizes the
8 First Block of consumption for Labrador Isolated communities, bringing down their rates to
9 the Labrador Interconnected rates.⁶¹ An increase to the Labrador Interconnected rates would
10 also therefore flow through to affect Labrador Isolated rates. If the Baker method is
11 maintained, then Labrador Isolated customers would see an increase in their rates by about
12 24%.⁶² These rate increases would not flow through to decrease the revenue requirement of
13 the electrical system, but would instead flow back to government coffers, in the form of a
14 decreased NSP subsidy. Mr Brockman conceded that he had not considered the impact of the
15 Baker method on Labrador isolated customers before he endorsed its continued application.⁶³

16 54. While applying the Baker method would lead to dramatic rate increases for both Labrador
17 Isolated and Labrador Interconnected customers, it seems clear that applying either the
18 revenue requirement method or the number of customers method would not have dramatic

⁵⁸ Cross examination of Mr Brockman, September 29, 2015, p205.

⁵⁹ Cross examination of Mr Brockman, September 29, 2015, p206.

⁶⁰ Cross examination of Mr Brockman, September 29, 2015, p207.

⁶¹ IN-NLH-137.

⁶² Pre-filed evidence of Mr Raphals, p67.

⁶³ Cross examination of Mr Brockman, September 29, 2015, p218.

1 impacts on the rates of NP customers. Shifting away from the Baker method would only
2 increase the average customer rate for NP customers by about \$20 per year.⁶⁴

3 55. Innu Nation therefore submits that gradualism weighs heavily in favour of abandoning the
4 Baker method in favour of either the number of customers method or the revenue
5 requirement method.

6 **Conclusion on the allocation of the rural deficit**

7 56. To summarize with regard to the allocation of the rural deficit, all but one expert who gave
8 evidence on the subject recommended that the rural deficit allocation method be changed
9 from the Baker method, to the revenue requirement method, or to the number of customers
10 method. Mr Brockman was the only witness who opined that the Baker method should be
11 maintained.⁶⁵ Mr Greneman characterized the Baker method as unfair, and certainly less fair
12 than the revenue requirement method.⁶⁶ Mr Bowman characterized the application of the
13 Baker method as “totally arbitrary”.⁶⁷ Dr Feehan effectively summed up the prevailing
14 assessment of the Baker method when he said as follows:

15 The formula itself is quite a complex formula. The nuts and bolts in terms of the
16 arithmetic to be figured out with a bit of effort, but the underlying rationale for it
17 seems to me to be quite questionable. It's based on a mini cost of service
18 application, but in this case there is no cost or service for the people paying it. The
19 rural deficit, of course, is for people who are not on either one of these two
20 separate and quite different systems. The formula itself not only being complex
21 and certainly far from transparent, also makes a number of assumptions and
22 qualifications and imputations that really seem to defy an apparent logic.⁶⁸

23 57. If the Baker method is to be abandoned, then which of the alternatives: the revenue
24 requirement method, or the number of customers method, should replace it?

⁶⁴ Application, vol. 1, Table 4.3 on p4.10. See also cross examination of Mr Brockman, September 29, 2015, p209-213.

⁶⁵ Examination-in-chief of Mr Brockman, September 29, 2015, p90.

⁶⁶ Cross examination of Mr Greneman, September 28, 2015, p22, 26.

⁶⁷ Examination-in-chief of Mr Bowman, September 30, 2015, p20.

⁶⁸ Examination-in-chief of Dr Feehan, October 5, 2015, p8.

1 58. Mr Greneman supported the implementation of the revenue requirement method.⁶⁹ He
2 indicated that he preferred the revenue requirement method to the number of customers
3 method because the number of customers method would result in commercial customers,
4 including larger commercial customers, paying the same amount as residential customers,
5 which could be unfair.⁷⁰ However, he stated on re-examination that this concern could be
6 dealt with in rate design.⁷¹

7 59. Mr Raphals had initially supported the revenue requirement approach,⁷² but by the time that
8 he took the stand, he had a slight inclination toward the number of customers approach.⁷³ Mr
9 Raphals harkened back to the 1993 proceeding where NP had raised the “concern the paying
10 classes have for a level playing field where all parties are assessed on the same basis
11 regardless of the rate they are paying.”⁷⁴ On this basis, Mr Raphals recommended the number
12 of customers method as one which would satisfy this interest.

13 60. Mr Doug Bowman stated that both the revenue requirement option and the number of
14 customers method were good options, “insofar as there are good options in this debate.”⁷⁵

15 61. Dr Feehan endorsed what he called Alternative D, which began with a rural deficit allocation
16 on the basis of the number of customers approach. It then would employ a per-MWh
17 approach within each of the NP and Labrador Interconnected systems. Innu Nation has no
18 objection to the second part of this approach, and submits that deciding on the number of
19 customers approach to allocate the rural deficit between NP and Labrador Interconnected
20 customers is compatible with Dr Feehan’s recommendation.

⁶⁹ Cross examination of Mr Greneman, September 28, 2015, p120-126.

⁷⁰ Cross examination of Mr Greneman, September 28, 2015, p122, p125.

⁷¹ Re-examination of Mr Greneman, September 28, 2015, p137.

⁷² Pre-filed evidence of Mr Raphals, p15.

⁷³ Examination-in-chief of Mr Raphals, September 29, 2015, p11; cross examination of Mr Raphals, September 29, 2015,

⁷⁴ PUB-NLH-113, Att 1, p64 of 83, referenced in cross examination of Mr Raphals, September 29, 2015, p63.

⁷⁵ Cross examination of Mr Doug Bowman, September 30, 2015, p83.

1 62. As such, Innu Nation's primary submission is that the Baker method to rural deficit
2 allocation should be abandoned by the Board. Innu Nation submits that either the number of
3 customers approach or the revenue requirement approach would be good substitutes.
4 Between the two, Innu Nation submits that the number of customers approach is preferable,
5 for its simplicity, transparency, and apparent equality in how it treats customers.

6 63. Innu Nation also notes that Mr Doug Bowman suggested allocating some of the rural deficit
7 burden on to Hydro's return on equity.⁷⁶ Insofar as this would be within the Board's
8 jurisdiction, Innu Nation also supports this proposal.

9

10 **LABRADOR INDUSTRIAL TRANSMISSION RATE**

11 64. NLH is seeking the Board's approval in this Application for a Labrador Industrial
12 Transmission Rate ("LITR").⁷⁷ If the Board approves it, it will be the first time this rate is in
13 effect in the Province.

14 65. In his examination-in-chief, Mr Raphals opined that while the rate is unobjectionable if
15 applied only to existing users, he expressed concern that the establishment of new customers
16 for the LITR would result in disproportionate burdens on native load customers.⁷⁸

17 66. As an illustrative example, Mr Raphals considered the application of the LITR to the
18 Labrador West Transmission Project ("LWTP"). While the LWTP is suspended and its
19 impact on the revenue requirement in the Labrador Interconnected System is hypothetical, it
20 still remains a useful illustrative example of how the LITR would apply to any industrial
21 customer who is being charged the rate.

⁷⁶ Pre-filed evidence of Mr Doug Bowman, p33.

⁷⁷ Application vol 1, p 4.48.

⁷⁸ Examination-in-Chief of Mr Raphals, September 29, 2015, p15-21.

1 67. Mr Raphals, in Table 16, on page 47 of his pre-filed evidence, fully goes through what the
2 effects of the entrance of an industrial customer the size of the LWTP would be on the native
3 load. Based on his calculations, the new industrial customer would cause the transmission
4 component of the revenue requirement for existing industrial customers to increase by almost
5 six-fold, and that for non-industrial customers to increase by almost five-fold.

6 68. Although the LWTP is suspended, it is important to note that the LITR is available to any
7 new industrial customer. As such, the approval of the LITR, in its existing form, would lead
8 to a potent risk of increased costs to be borne by existing industrial and domestic customers
9 on the Labrador Interconnected System, when such costs would have been caused by the new
10 industrial customer, and not by existing customers. Moreover, final approval by the Board of
11 the LITR in its present form could signal to potential industrial customers that a transmission
12 rate that permits new entrants to offload network upgrade costs to existing customers would
13 be available to them should they locate in Labrador.

14 69. Mr Raphals' evidence showed that a transmission rate could be structured to protect existing
15 customers.⁷⁹ Innu Nation submits that if the Board were to approve of the LITR, it should
16 only do so provisionally, and should not give final approval to such a rate until it has
17 established a policy on the allocation of network upgrade costs in a way that protects existing
18 customers.

19
20 **FAIR ATTRIBUTION OF CAPITAL EXPENDITURES**

21 70. Within the Labrador Interconnected system, Hydro has made certain capital expenditures,
22 especially including the Labrador City Distribution Upgrade, that will only benefit electric

⁷⁹ Examination-in-Chief of Mr Raphals, September 29, 2015, p17-19; Pre-filed evidence of Mr Raphals, p51-54.

1 service in Labrador West (Labrador City and Wabush), and have no benefit for Labrador
2 East (Sheshatshiu, Goose Bay, and North West River).⁸⁰

3 71. There is no dispute that the attribution of the costs of capital expenditures should be based on
4 cost causation.

5 72. Between the 2007 Test Year and the 2015 Test Year, the total return on rate base for the
6 Labrador Interconnected System increased by \$2.8 million. Of this increase, \$1.8 million, or
7 about two-thirds of the increase, can be attributed to spending for the Labrador City
8 Distribution Upgrade Project.⁸¹

9 73. Mr Raphals, in his pre-filed evidence, showed how incomes and education levels are lower in
10 Labrador East than in Labrador West.⁸²

11 74. As Mr Raphals suggested in his cross-examination, the rate impact on Labrador East
12 customers needs particular attention in this Application because the application of the Baker
13 method of rural deficit allocation could lead to sizable rate increases for them.⁸³

14 75. As such, Innu Nation submits that the Board should consider, in the context of the overall
15 rate increase that Labrador East customers will be subjected to, devices to apportion the costs
16 of capital expenditures between Labrador West and Labrador East customers in a way that is
17 proportionate to their cost causation. One such device may be a rate rider, such as the one Mr
18 Raphals recommended in his pre-filed evidence.⁸⁴

⁸⁰ IN-NLH-054.

⁸¹ Undertaking U-42, filed October 1, 2015.

⁸² Pre-filed evidence of Mr Raphals, p28-31.

⁸³ Cross examination of Mr Raphals, September 29, 2015, p37-40.

⁸⁴ Pre-filed evidence of Mr Raphals, p35-37.

1 **INTEGRATED RESOURCE PLANNING**

2 76. In his pre-filed evidence, Mr Raphals outlined the reasons why the Board should request that
3 NLH initiate an integrated resource planning process.⁸⁵ Innu Nation submits that this is an
4 advisable course of action, and will benefit the efficiency and cost effectiveness of the
5 electricity system in the Province.

Confidential information regarding Innu Nation's costs related to this matter has been redacted.

⁸⁵ Pre-filed evidence of Mr Raphals, p68-69.

IN THE MATTER OF the *Public Utilities Act*, RSN 1990, Chapter P-47 (the "Act");
and

IN THE MATTER OF a General Rate Application (the Application) by Newfoundland and Labrador Hydro for approvals of, under Section 70 of the Act, changes in the rates to be charged for the supply of power and energy to Newfoundland Power, Rural Customers and Industrial Customers; and under Section 71 of the Act, changes in the Rules and Regulations applicable to the supply of electricity to Rural Customers.

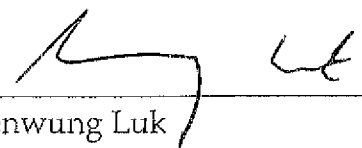
AFFIDAVIT

I, Senwung Luk, Barrister and Solicitor, of Toronto, in the Province of Ontario, make oath and say as follows:

1. I am an associate with the law firm of Olthuis Kleer Townshend LLP, and co-counsel for the Innu Nation.
2. I have read and understand the foregoing Application.
3. I have personal knowledge of the facts contained therein, except where otherwise indicated, and they are true to the best of my knowledge, information and belief.

SWORN before me at the City of Toronto, in the Province of Ontario, this 18th day of December, 2015.

A Barrister of the Supreme Court of Newfoundland and Labrador


Senwung Luk

Confidential information regarding Innu Nation's costs related to this matter has been redacted.

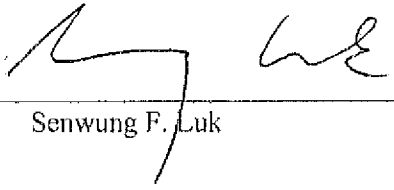
7

All of which is respectfully submitted on behalf of the Innu Nation

Dated at the City of Toronto, in the Province of Ontario, this 18th day of December, 2015

OLTHUIS KLEER TOWNSHEND LLP
Solicitors for Innu Nation

Per:



Senwung F. Luk

TO: The Board of Commissioners of Public Utilities
Suite E210, Prince Charles Building
120 Torbay Road
P.O. Box 20140
St John s, NL A1A 5B2

To: Newfoundland & Labrador Hydro
P.O. Box 12400
500 Columbus Drive
St. John's NL A1B 4K7
Attention: Geoffrey P. Young, Senior Legal Counsel

TO: Newfoundland Power Inc.
P.O. Box 8910
55 Kenmount Road
St. John's, NL A1B 3P6
Attention: Gerard Hayes, Senior Legal Counsel

TO: Vale Newfoundland and Labrador Limited
c/o Cox & Palmer
Suite 1000 Scotia Centre
235 Water Street
St. John's, NL A1C 1B6
Attention Thomas J. O'Reilly, QC

TO: Corner Brook Pulp & Per Limited
c/o Stewart McKelvey
Cabot Place, 100 New Gower Street
P.O. Box 5038
St John's NL A1C 5V3
Attention: Paul Coxworthy

TO: O'Dea Earle
323 Duckworth Street
P.O. Box 5955
St. John's NL A1C 5X4
Attention: Thomas Johnson

TO: Benson Buffett
9th Floor
Atlantic Place
215 Water Street
P.O. Box 1538
St. John's NL A1C 5N8
Attention: Genevieve M Dawson

TO: Poole Althouse
49-51 Park Street
Corner Brook, NL A2H 2X1
Attention: Dean A Porter

TO: Dennis Browne, QC
Browne Fitzgerald Morgan & Avis
Agents for Miller & Hearn
P. O. Box 23135
Terrace on the Square
St. John's, NL A1B 4J9

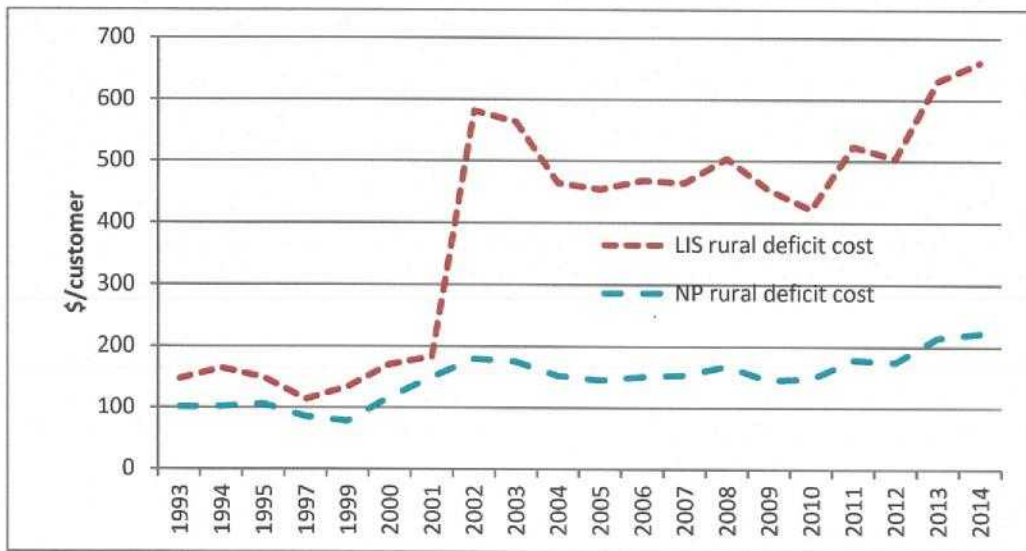


RESEARCH, ANALYSIS AND EXPERTISE IN ENERGY

NEWFOUNDLAND LABRADOR HYDRO - AMENDED GRA

PREFILED EVIDENCE OF PHILIP RAPHALS SUBMITTED ON JUNE 23, 2015

Corrected version of Figure 2, page 9



Source: 1993-1999: LWHN-NLH-055, Att. 1

2000-2014: LWHN-NLH-056, Att. 1; CA-NLH-099