

June 4, 2019

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

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

Dear Ms. Blundon:

Re: Network Additions Policy Review and Labrador Interconnected System Expansion Study - Hydro's Reply

Please find enclosed one original and eight copies of Newfoundland and Labrador Hydro's ("Hydro") reply to the Parties' comments with regard to the above-mentioned filings.

Background

In Order No. P.U. 9(2018), the Board of Commissioners of Public Utilities (the "Board") directed Hydro to provide an expansion study for the Labrador Interconnected System and a network addition policy setting out how new customers will be treated in regards to their impacts and how costs caused by new customers will be allocated. Hydro filed the "Network Additions Policy Review" on October 1, 2018. It then filed the "Labrador Interconnected System Transmission Expansion Study" (the "Transmission Expansion Study") on October 31, 2018, and filed a revised version of the Study on November 5, 2018. Hydro filed a further revised version of the Study on April 3, 2019. On December 14, 2018, Hydro filed the "Labrador Interconnected System Network Additions Policy Summary Report" (the "Labrador Network Additions Policy"). The Labrador Interconnected Group ("LIG"), Newfoundland Power, the Iron Ore Company of Canada and the Board issued Requests for Information ("RFIs") to Hydro concerning the Labrador Network Additions Policy and Transmission Expansion Study on February 21, 2019. Hydro provided its responses to the RFIs on March 15, 2019.

The LIG filed an expert report prepared by Mr. Philip Raphals on April 25, 2019 (the "Raphals Report") and an addendum to this report on May 6, 2019 (the "Raphals Report Addendum"). Hydro and the Board provided RFIs to the LIG with respect to the Raphals Report and Raphals Report Addendum on May 13, 2019 and the LIG responded to these RFIs on May 23, 2019.

On May 28, 2019 Hydro received submissions from the LIG. Newfoundland Power advised it would not be providing comments. No comments were forthcoming from the Island Industrial Customers, Consumer Advocate, or the Iron Ore Company of Canada.

Factual Inaccuracies with the Labrador Interconnected Group's Submission

In the LIG's correspondence as well as in their responses to the RFIs, there were a number of factual inaccuracies, specifically: the assertion that Hydro's policy proposal does not reflect the review of Labrador Network Additions Policy issues completed by Hydro's consultant, Christensen Associates

Energy Consulting, LLC (“Christensen”); the implication that Hydro’s policy proposal is not consistent with Christensen’s recommendation; and that the proposed use of Expected Unserved Energy (“EUE”) to reflect improvements in reliability—all are incorrect or based on misconceptions.

Included with Hydro’s Reply as Attachment 1, is a Memorandum prepared by Christensen detailing these inaccuracies and providing the correct information. Hydro felt it important that the Board have accurate information regarding Christensen’s thoughts on Hydro’s proposed policy and the proposed beneficiary pays approach upon which to base their decision.

Hydro’s Response

The LIG submissions indicate that the LIG agrees with the purpose of the Labrador Network Additions Policy and they support Board approval of the majority of the document for a certain segment of Hydro’s customers. The LIG contends that the Board should adopt Hydro’s Labrador Network Additions Policy conditional on Hydro’s continued work with stakeholders to address what the LIG perceives to be various weaknesses in the Transmission Expansion Study and the Labrador Network Additions Policy. The LIG submits that the Labrador Network Additions Policy should not apply to new rural load requests, but rather only to industrial and cryptocurrency customers.

The restrictions recommended by the LIG,¹ along with Hydro’s responses to them, are as follows.

a. Provisionally accept the Labrador Network Additions Policy as proposed by Hydro, provided that it only applies to industrial and cryptocurrency customers

In its submission the LIG requests that the Board accept the Labrador Network Additions Policy as proposed by Hydro, provided that it only applies to industrial and cryptocurrency customers. Hydro has stated on the record in other proceedings that in its opinion, the legislative framework in the Province, and in particular s3 of the *Electrical Power Control Act, 1994, Chapter E-5.1* (the “EPCA”) which the LIG has quoted in its comments, do not permit Hydro to discriminate between customers based solely on the end use for their purchased energy. In its reply the LIG reproduced the following excerpt from the EPCA:

3. It is declared to be the policy of the province that:
 - (a) the rates to be charged, either generally or under specific contracts, for the supply of power within the province
 - (i) should be reasonable and not unjustly discriminatory, [. . .]
 - (v) should promote the development of industrial activity in Labrador [. . .]
 - (b) all sources and facilities for the production, transmission and distribution of power in the province should be managed and operated in a manner
 - (i) that would result in the most efficient production, transmission and distribution of power,
 - (ii) that would result in consumers in the province having equitable access to an adequate supply of power,

¹ “Submissions of the Labrador Interconnected Group,” May 28, 2019, at pp. 25 f.

(iii) that would result in power being delivered to consumers in the province at the lowest possible cost consistent with reliable service

[. . .]

The LIG in its reply goes on to quote the end of s3(b) of the *EPCA* which states, "where necessary, 'all power, sources and facilities of the province are to be assessed and allocated and re-allocated in the manner that is necessary to give effect to this policy'."

Hydro submits that for the Board to approve the Labrador Network Additions Policy and provide that it applies only to industrial and cryptocurrency customers is directly contrary to s3(a)(i) of the *EPCA* which requires that power rates and the supply of power within the Province not be unjustly discriminatory, and also contrary to s3(b)(ii) of the *EPCA* which requires that all customers in the Province have an equitable access to an adequate supply of power. Hydro further submits that to approve the Labrador Network Additions Policy and provide that it applies only to industrial and cryptocurrency customers also runs contrary to the notion of fairness in ratemaking and regulatory principles as discussed by the Board in Order No. P.U. 8(2007). In that Order the Board stated: "Fairness of specific rates in the apportionment of total costs of service among the different ratepayers should be such so as to avoid arbitrariness, capriciousness, inequities or discrimination."²

b. Provisionally use the definition of cryptocurrency customer as set out in the Régie decision and described on page 7 of the Raphals Report Addendum

The LIG in its reply, goes further than seeking to restrict the application of the Labrador Network Additions Policy to industrial and cryptocurrency customers and requests that the Board provisionally use a definition of cryptocurrency customer as has been approved by the Régie de l'énergie (the "Régie") in the province of Quebec. In effect, the LIG has proposed the creation of a new class of customer which has been established by the Régie. What the LIG ignores in its submission is that the proceedings before the Régie that led to the establishment of this new class were in large part driven by direction from the Government of Quebec in an appropriate exercise of its power to enact energy policy. No such direction or intervention has been taken as of yet by the Government of Newfoundland and Labrador. Hydro submits that, absent direction on energy policy changes from the Government of Newfoundland and Labrador, neither Hydro nor the Board is empowered by the existing legislation to enact the change suggested by the LIG.

In the same vein, Hydro submits that to subject only industrial customers and cryptocurrency customers to the charges in the Labrador Network Additions Policy is discriminatory and not justified. Indeed Hydro, as stated in the Muskrat Falls to Happy Valley Interconnection project proceedings, confirmed that it has received a request from a the Department of National Defense, a large general service customer, regarding its intentions with respect to the possible conversion of its central heating plant from oil to electricity. This conversion will likely result in a network addition that, if the LIG's suggestions as to the applicability of the Labrador Network Additions Policy to only industrial and cryptocurrency customers is accepted, will not be captured by the Labrador Network Additions Policy further illustrating the discriminatory nature and failings of the LIG's proposal as it relates to the Power Policy of the Province as contained in the *EPCA* and the concept of regulatory fairness as discussed by the Board in Order No. P.U. 8(2007).

² Board Order No. P.U. 8(2007), April 12, 2007, App. A at p.7

c. Require that Hydro's Transmission Expansion Study be modified to meet the requirements for a Transmission Expansion Plan, outlined above; that it be updated annually; and that it, along with associated load forecasts be submitted to the Board for its approval

The LIG notes that Hydro proposes, in the Labrador Network Additions Policy, to charge an Expansion Cost based on its Transmission Expansion Plan; however, the LIG contends that Hydro has filed a Transmission Expansion Study, not a Transmission Expansion Plan. They allege that the Transmission Expansion Study lacks crucial information that is referenced in the Labrador Network Additions Policy as necessary to calculation of the Upstream Capacity Charge, specifically "various load growth scenarios" and the transmission upgrades and associated costs required to serve such load growth scenarios.

Hydro's response to LAB-NLH-099 clearly indicates that the Transmission Expansion Study is the document Hydro references as the "LIS Transmission Expansion Plan" in the Labrador Network Additions Policy.

In Hydro's response to LAB-NLH-090, the Transmission Expansion Study identifies future transmission upgrades to the Labrador Interconnected System based on Hydro's Baseline Demand Forecast. The Transmission Expansion Study also provides the capital projects available to serve peak demand increases in excess of the Baseline Demand Forecast. Hydro's response to LAB-NLH-101 confirms that the Transmission Expansion Study includes the set of all system upgrades, including the associated costs, to meet the increasing Baseline Load Forecast for the 25-year study period. If Hydro receives a customer request for 1500 kW or more, it will perform an analysis to determine if any incremental transmission system upgrades would be required during the study period. If so, they are deemed "accelerated" into the study period and cost allocations calculated based on the cumulative present value difference between the two versions of the Transmission Expansion Study.

The Transmission Expansion Study, as indicated above, does include the "various load growth scenarios" the LIG references. The Transmission Expansion Study does not develop or categorize the type of forecasts suggested by the LIG, but the scenarios included provide the basis Hydro intended for its analysis under the Labrador Network Additions Policy and will be updated and amended as necessary as developments occur regarding energy needs. Hydro has included all transmission capital projects not required to serve the Baseline Forecast, with one exception.

The LIG noted that Hydro had not used "Alternative 17," which is the approximately \$150 million capital project providing an interconnection between Labrador West and Quebec in deriving the Expansion Cost per kW. Hydro explained, in its response to LAB-NLH-090, that Alternative 17 was excluded as Hydro expected the project to only be required if a large load addition was requested which necessitated the project. If that were to occur, Hydro would calculate the contribution requirement on the difference between the cost of acceleration of the project and the value of the benefits to existing customers as a result, as per the Labrador Network Additions Policy. Therefore, Hydro believes the exclusion of Alternative 17 in the calculation of the Expansion Cost per kW is a reasonable approach in determining the required upstream capacity charge for customer requests that do not prompt a System Impact Study.

Hydro confirmed in its response to LAB-NLH-091(e) that the Transmission Expansion Study will be updated on an annual basis as part of Hydro's Annual Assessment Process. Hydro's response to LAB-NLH-091(e) referenced the Labrador Network Additions Policy³ where it stated "Hydro will update the Expansion Cost per kW within three months of filing a new Transmission Expansion Plan with the Board."

³ Appendix A at p. 3.

In the response to NLH-LAB-015, Mr. Raphals confirmed that his inability to locate a clear statement in the Transmission Expansion Study referencing “various load growth scenarios” or the estimated costs to implement the upgrades, along with the lack of a phrase confirming the Transmission Expansion Study will be updated annually, are the reasons for his conclusion that the Transmission Expansion Study is inadequate to support the Labrador Network Additions Policy. As both of these issues have been addressed in responses to RFIs filed with the Board, Hydro submits further modification of the Transmission Expansion Study is unnecessary.

d. Maintain the temporary load restrictions set out in P.U. 36(2018), and extended in P.U. 18(2019), until a Transmission Expansion Plan has been filed with and approved by the Board

On April 23, 2019, Hydro filed an application with the Board requesting an extension to Regulation 17 to allow the temporary restriction for load additions in Labrador East to remain in effect until further order of the Board. On May 23, 2019, the Board ordered an amendment to Regulation 17 to allow for the completion of the regulatory process related to the Network Additions Policy and the Labrador Expansion Plan. Hydro submits this Order is sufficient as it is written.⁴

e. Reject the Labrador Network Additions Policy’s reliability benefits calculation until further evidence has been presented to the Board on such valuation

The LIG argued that Hydro’s proposal for calculating reliability benefits should not be retained, including the proposal to allow the offset of up to 50% of the Upstream Capacity Charge and that Hydro should continue to work on a better way to take reliability benefits into account.

The LIG contends that the use of EUE to calculate reliability benefits to existing customers from transmission upgrades is problematic.⁵ Christensen, in their commentary on factual inaccuracies included as Attachment 1 to this reply, addresses some of the LIG’s comments in this regard. In particular, Christensen disputes the assertion that the lack of examples of other jurisdictions deducting benefit values from upfront contributions by those causing the innovation presents an issue to Hydro’s proposed use of EUE. Christensen notes that the United States’ Federal Energy Regulatory Commission’s (“FERC”) structural flexibility in developing cost assignment and experimentation in Canada with beneficiary pays methods challenges that contention. Christensen also notes that although Hydro did not discuss in detail the basis for use of a 50% cost cap on EUE based credits, Christensen had provided examples of this “rule of thumb” in U.S. beneficiary pays approaches in its report which was provided along with Hydro’s “Network Additions Policy Review filed October 1, 2018.

Hydro’s response to PUB-NLH-059 also addresses the use of EUE in determining value to customers. Hydro considered other methodologies, including the assessments of the economic value of transmission expansion. Hydro submits that economic value assessment would require review of public

⁴ Board Order No. P.U. 18(2019).

⁵ Although Mr. Raphals submits that Hydro proposes to value EUE on the average realized price for exports, as noted in his Report and in his response to PUB-LAB-002, the LIG’s submissions note that “. . . it appears that [Hydro] proposes to calculate EUE based on the approximate cost of backup generation based on the projected costs of gas turbine fuel.” The LIG’s submission is correct. Mr. Raphals based his conclusion on a misunderstanding of the contents of the spreadsheet provided as Attachment 1 to Hydro’s response to IOC-NLH-032 which does not use \$35 per MWh to calculate the value of EUE improvement benefit. The spreadsheet provides the calculation of the alternatives to determine the least-cost solution for Labrador East. The value of energy at \$35 per MWh is used to calculate the reduction of power losses for Alternative 1 and is represented within the spreadsheet in tab “Alt. 1” tabulated in Column H. This should not be confused with the calculation to monetize the EUE improvement benefits used in the calculation of the customer reliability benefit credit. The process to determine how much reliability benefit an evaluated solution provides is a separate calculation, as provided in Hydro’s response to NP-NLH-040, Table 1, which uses \$150 per MWh to quantify EUE benefits in determining customer reliability benefit credit.

policy aspects that Hydro believes to be beyond the scope of the Labrador Network Additions Policy. Hydro adopted the EUE methodology as a means to incorporate the beneficiary pays principles in the Labrador Network Additions Policy.

In its response to LAB-NLH-103(d) and (e), Hydro confirms that the proposed Labrador Network Additions Policy was created with mechanisms intended to ensure that an acceptable level of reliability is maintained for existing customers. As noted in the "Labrador Interconnected System Network Additions Policy Summary Report," filed along with the Labrador Network Additions Policy in December 2018, the purpose of the Labrador Network Additions Policy is to "limit the rate increases that can result from investment in new transmission assets to serve new load requests, and to provide a reasonable sharing of cost responsibility between the customer requesting service and the existing customers." The use of the EUE to value reliability to existing customers achieves this policy objective in fairly balancing cost sharing between existing and new customers.

- f. **Order Hydro to consider modifications to the expansion and advancement approaches it proposes in the Labrador Network Additions Policy, and to consider whether adopting a policy whereby new customers under the Labrador Network Additions Policy must take full responsibility for the network additions required to provide service, and must pay the costs of capital upgrades upfront, is preferable**

In Hydro's "Network Additions Policy Review," filed on October 1, 2018, Hydro provided a discussion paper from Christensen with findings regarding an industry scan of network additions cost allocation practices in North America, attached as Appendix A. The industry review revealed an emergence of the use of the beneficiary pays approach in assessing cost responsibility for network additions in Canada and the United States. The basis of the beneficiary pays concept is that users should share in the costs of a transmission network addition according to their share of the benefits arising from it. Hydro believes there is merit in applying the principles of the beneficiary pays approach in dealing with the Labrador Interconnected System network additions issues currently before the Board.

An example of the beneficiary pays approach currently approved by the Board is the use of betterment in the determination of customer contributions. A betterment credit is applied to reduce the amount charged to a customer for an asset upgrade if the new asset is providing benefit to both the customer requesting the system modification and the general customer population.

As noted previously, in Board Order P.U. 8(2007), the Board discusses the necessity of fairness of specific rates and the need to avoid arbitrariness, capriciousness, inequities or discrimination in the apportionment of total costs of service among the different ratepayers. Modification of the expansion and advancement approach would not be consistent with beneficiary pays. Hydro submits that having a new customer take full responsibility for an addition which provides tangible benefit to one or more other customers would also be inconsistent with the regulatory principle of fairness. Additionally, revising the approach as suggested by the LIG could quite conceivably have a deleterious impact on economic growth in Labrador by unduly burdening new customers with all costs related to their start up or expansion, even when a material portion of the benefits would clearly accrue to existing customers

Mr. Raphals contention, as outlined in his report and as detailed in the response to PUB-LAB-001, that the offset of compensation for reliability improvements against a customer's required contribution for network upgrades is not consistent with FERC's policy is based on a misconception on Mr. Raphals part. This is discussed further in the Hydro's "Network Additions Policy Review," and in the Christensen Memorandum. Specifically, Christensen notes FERC's flexibility in its treatment of transmission upgrade costs as a leading North American example of compensation offsets for reliability improvements against required contribution to the capital cost of network upgrades. Christensen notes that FERC is readily

accepting of new approaches and the evolving needs of markets and accommodates regional differences in transmission cost allocation.

- g. Order Hydro to revise the Labrador Network Additions Policy to make clear that Customer Contributions for load requests of less than 1500 kW must be paid in full prior to any upgrade work being commenced, and to make clear that no commitments from Hydro to provide service will be binding until payment of the Customer Contribution is made**

In Hydro's RFI NLH-LAB-003, Hydro referenced a similar recommendation included in Mr. Raphals report and asked whether there is a concern with customers making payments on an installment basis for Upstream Capacity Charges related to load requests that do not require immediate investment in transmission facilities, provided payment is made in full before substantial investment is made by Hydro. The response provided was that no, that scenario is not a concern and that the scenario above aligns with Mr. Raphals' recommendation. It is Hydro's submission that an order as suggested is not necessary; however, Hydro will provide an updated version of the Labrador Network Additions Policy to ensure clarity in this area subsequent to the Board's decision on this filing.

Conclusion

Hydro submits that the LIG does not provide adequate support for its assert that the Labrador Network Additions Policy should be adopted only on a provisional basis with application limited to only industrial and cryptocurrency customers. The LIG's concerns regarding the Labrador Network Additions Policy as well as the Transmission Expansion Study are either based on misconceptions or factual inaccuracies, and have been addressed above or in Christensen's attached memorandum. Hydro has demonstrated that the Labrador Network Additions Policy provides for a fair approach to recovery of future transmission investments required to interconnect new customers and serve increased customer load requirements. The approval of the proposed Labrador Network Additions Policy will also assist to limit the future rate increases to the customers on the Labrador Interconnected System that can result from investment in new transmission assets to serve new load requests.

Hydro respectfully submits that the Transmission Expansion Study be accepted in its existing form and that the Labrador Network Additions Policy be approved as submitted.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

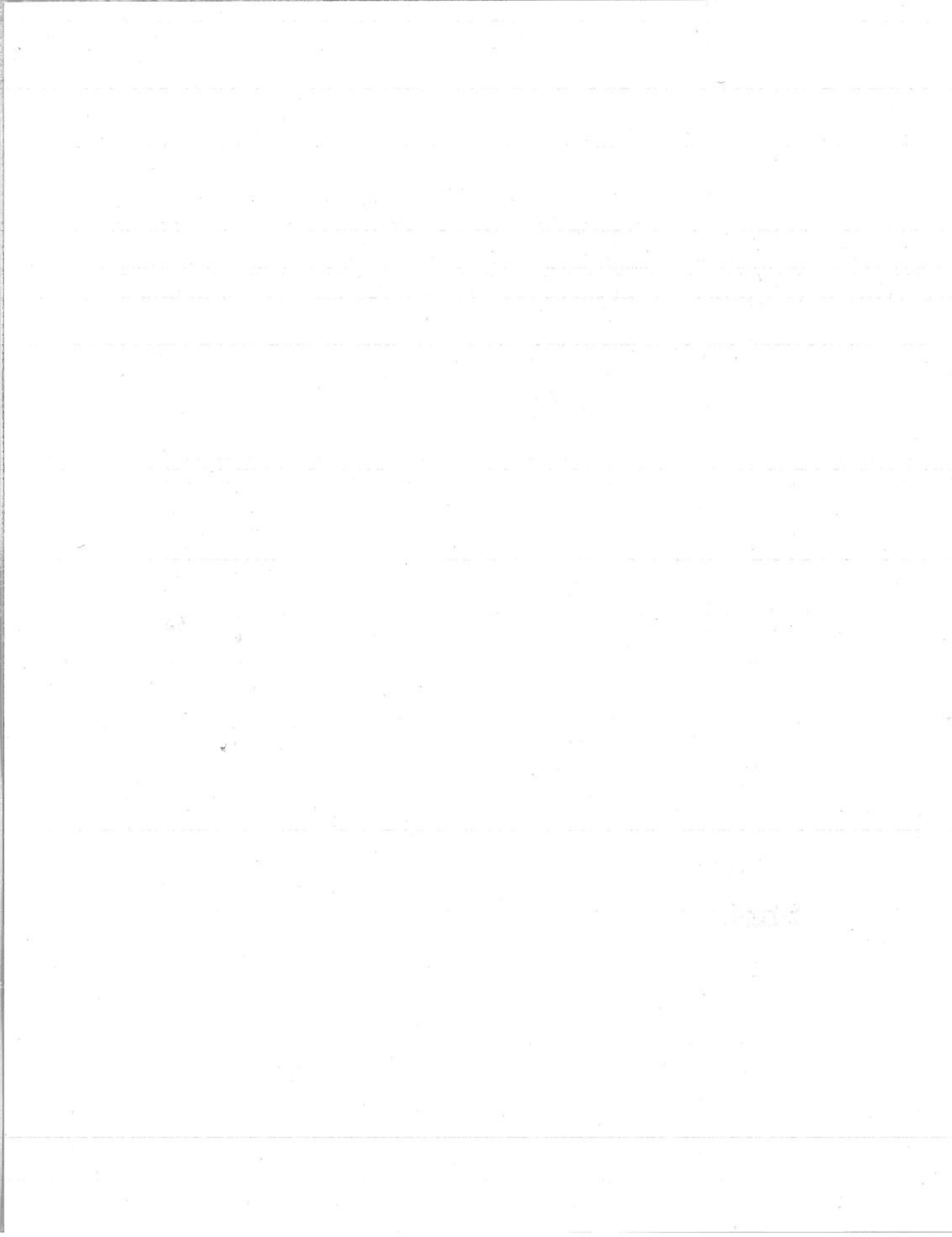


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Encl.

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MEMORANDUM

TO: Kevin Fagan

FROM: Bruce Chapman and Robert Camfield

DATE: May 31, 2019

SUBJECT: Review of Responses by Philip Raphals to Questions re Network Additions Policy

In response to your request, we have reviewed the responses by Mr. Philip Raphals of the Helios Centre with respect to certain Requests for Information of the Public Utility Board and Newfoundland and Labrador Hydro, in the Network Additions Policy Review docket of the Public Utility Board. We confine our response to issues of fact arising from these responses, seeking to correct what we perceive to be misstatements.

PUB-LAB-001, Mr. Raphals' response page 2

"Hydro has not identified, nor am I aware of, any other utility that offsets compensation for reliability improvements against their required contribution to the capital cost of network upgrades required to provide service to them."

Comment

We believe that such offsets do exist, although they may not always be perceived as offsets. The leading North American example might be seen in the flexibility of the United States Federal Energy Regulatory Commission (FERC) in its treatment of transmission upgrade costs. This implicit flexibility and ongoing accommodation of needed changes assumes two general dimensions. First, the FERC is readily accepting of viable new approaches and the evolving

needs of markets—thus, beneficiary pays-based cost allocation and analytics. Further to this point, the FERC adopted the anchor-shipper model in order to overcome certain funding issues associated with dedicated non-network transmission facilities associated with renewable resources.

Second, the FERC accommodates regional differences as far as transmission cost allocation is concerned. With respect to Order 890, FERC states “The Commission will allow regional differences in planning processes”. In the case of the FERC’s subsequent Order 1000 regarding transmission expansion planning and cost allocation, the FERC identifies cost allocation principles relevant to the PUB and interested stakeholders including Hydro:

- Costs should be allocated “roughly commensurate” with estimated benefits;
- Those who do not benefit from a transmission upgrade do not need to pay for it;
- Benefit-to-cost thresholds must not exclude projects with significant net benefits;
- Cost allocation methods and identification of beneficiaries must be transparent;
- Different allocation methods can apply to different types of transmission facilities.

PUB-LAB-001, Mr. Raphals’ response at page 3

“Christensen’s analysis makes no mention of Hydro’s Network Addition Policy proposal.”

Comment

This statement is potentially a source of confusion. It is worth noting that Christensen Associates Energy Consulting’s (CA Energy Consulting’s or, above, Christensen’s) report to Hydro predates Hydro’s network additions policy proposal, so there would be no reason for our report to provide such mention. The statement by Mr. Raphals, viewed expansively, might be interpreted to suggest that Hydro’s policy proposal is not consistent with our recommendations or that it does not reflect the information provided in that review.

In our view, this would be an erroneous interpretation. Most importantly, our report discusses at length the *beneficiary pays* approach now gaining currency in both the United States and Canada and points out the usefulness of the approach in the case of the potentially large new

loads in Labrador that would result in accelerated transmission investment. Hydro's proposal utilizes the *beneficiary pays* concept to propose a revision of its current policy in which costs either are assigned to a single new customer or shared in common, with no provision for a middle ground in which the reliability benefits of investment acceleration are recognized and used as the basis for sharing costs.

PUB-LAB-001, Mr. Raphals' response at page 3

Mr. Raphals continues from the previous quote as follows:

"...the passage above (quoting from the CA Energy Consulting report: "The beneficiaries of such investment are unlikely to be exclusively Hydro customers, suggesting that traditional methods will be inadequate.") suggests that Christensen assumed that Hydro was developing a policy to govern upgrades needed to serve out-of-province transmission customers...". (Underlining is by Mr. Raphals, for emphasis.)

Comment

The text appears to arise from a misunderstanding. The phrase "The beneficiaries of such investment are unlikely to be exclusively Hydro customers..." suggests that the upgrades are precipitated by within-service territory native loads. If the purpose of the report was to provide guidance to Hydro for the development of "...policy to govern upgrades needed to service out-of-province transmission customers...", the phrase would have read something akin to "The beneficiaries of such investment are unlikely to be exclusively wholesale out-of-province customers...".

In addition, the CA Energy Consulting report devotes considerable space to the recently introduced provisions by the Ontario Energy Board (OEB) to its code governing transmission and distribution services, referred to as *Proposed Amendments to the Transmission System Code and the Distribution System Code to Facilitate Regional Planning* (EB-2016-0003, September 2017). Indeed, the proposed amendment to Ontario's T&D codes is attached in its entirety as Appendix B. Here, the proposed amendments by the OEB reach well down into

distribution, with specific policy provisions focused on customers, host distributors, and embedded distributors. The OEB states:

“...the allocation of the costs should reflect the extent each distributor (and its customers) caused the need for and benefit from a connection facility investment.”

To summarize, the notion of *beneficiary pays*-based cost allocation generally improves upon the comparatively rough justice associated with load-ratio share or various notions of *the load that triggered the investment pays the full freight*-basis of cost allocation when applied in cases where benefits accrue broadly across many loads. Again, *beneficiary pays*-based cost allocation is fostered by the fundamentals of transmission: the physical properties of transmission make for public goods-like services, particularly with respect to system-wide reliability and the full dimensionality of electricity services. The challenge is discovering policy boundaries that apportion costs that conform to just and reasonable rates criteria while simultaneously obtaining improved and more efficient allocation of scarce resources.

PUB-LAB-002, Mr. Raphals’ response at pages 5-6.

Mr. Raphals discusses possible errors of computation or sourcing of information used to serve as basis for calculating expected unserved energy (EUE) and thus outage cost. He concludes his reply by stating that outage cost is properly determined with reference to the “*value to consumers of improved reliability*” and that to his knowledge, “*no such studies of “willingness to pay” have been undertaken in Labrador.*” Subsequently in his response to NLH-LAB-004, at page 6, Mr. Raphals appears to assert that “*... the results (of metastudies of outage cost) cannot be readily applied to Labrador, due to its great demographic, geographic and economic differences from the US.*”

Comment

We do not dispute Mr. Raphals’ interpretation of Hydro’s calculations but do wish to demur in his claim that, were outage cost or willingness to pay for reliability to be used by Hydro in costing, studies elsewhere could not be readily applied to Labrador. Outage cost has been

found to differ across and within customer classes but not systematically based on the physical differences that are mentioned in the quote. A conclusion that EUE for Hydro customers cannot be derived based on information elsewhere seems excessive.

PUB-LAB-003, Mr. Raphals’ response at page 7; and NLH-LAB-004 c), Mr. Raphals’ response at pages 7-8.

In these responses, Mr. Raphals provides clarifications to his previous report’s criticism of the approach by Hydro to developing an EUE credit reflecting improvements in reliability from accelerated transmission investment. He states that “*Hydro’s proposal with respect to EUE is problematic for a number of reasons:*”

- Poor support for the current valuation method (fuel cost).
- Lack of examples of other jurisdictions deducting benefit values from up-front contributions by those causing the innovation.
- A poorly motivated 50% of advancement cost cap on EUE-based credits.

Comment

We do not question the factual basis for the first problem but offer objections to the second and third. The second problem, as noted previously, is challenged by FERC’s habits of structural flexibility in developing cost assignment and Canadian experimentation with *beneficiary pays* methods. In particular, the recent Ontario reforms should not be overlooked as a source of examples.

The third problem may not have been discussed in detail by Hydro, but such apparently arbitrary “rules of thumb” are found in U.S. *beneficiary pays* approaches. Our report offers examples.

PUB-LAB-004, Mr. Raphals’ response at page 8.

In his response to this RFI, which is about the possibility of rewarding a customer for upgrading system reliability to a level above system standards, Mr. Raphals stated that he knew of no jurisdiction where such payments to customers occurred.

Comment

We do not question Mr. Raphals' response as a matter of factual error, but instead wish to note that the possibility raised may not be meaningful. If transmission upgrades are essentially "lumpy" in nature, it may be that upgrades will generate a greater than necessary improvement in reliability. Valuing a more than necessary reduction in EUE does not seem infeasible or inappropriate, and it probably doesn't matter that past regulatory filings have not yet considered this question.