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March 15, 2018

The Board of Commissioners of Public Utilities
Ms. G. Cheryl Blundon, Board Secretary
Prince Charles Building
210 - 120 Torbay Road
St. John's, NL, A1A 2G8

Re: NLH Capital Application (2018) – Labrador Interconnected Group Submissions

Dear Ms Blundon,

Please accept the enclosed submissions in the above-noted application, served on behalf of the Labrador Interconnected Group.

Should you have any questions, please be sure to contact me.

Respectfully,
Olthuis, Kleer, Townshend LLP
PER:

A handwritten signature in black ink, appearing to read 'Senwung Luk'.

SENWUNG LUK
PARTNER

SL/tw

IN THE MATTER OF the *Electrical Power Control Act, 1994*, SNL 1994, Chapter E-5.1 (the “EPCA”), *Public Utilities Act*, RSNL 1990, Chapter P-47 (the “Act”): and

IN THE MATTER OF an application by Newfoundland and Labrador Hydro (“Hydro”) for an Order approving, pursuant to Section 41 of the *Act*, based on revised information pursuant to Board Order PU 43 (2017).

SUBMISSIONS OF THE LABRADOR INTERCONNECTED GROUP

THE SUBMISSIONS OF THE LABRADOR INTERCONNECTED GROUP STATE:

Introduction

1. The Labrador Interconnected Group (the “LIG”) represents the communities of Sheshatshiu, Happy Valley-Goose Bay, Wabush, and Labrador City. These communities are all part of the Labrador Interconnected System, to which Hydro proposes to add the Muskrat Falls to Happy Valley Interconnection (the “Project”).
2. In the Labrador Interconnected Group’s submission, the Board should defer approval of the Project until next year’s capital application process. By that time, the Board will have had the chance to consider the implementation of policies designed to protect existing consumers from costs caused by large new loads. It will also have the benefit of the transmission system planning study for Labrador that Hydro intends to complete by the end of 2018. Those two processes will provide a much better basis for reasoned decision-making on the Project.

Procedural History

3. Hydro proposed to construct the Project in its 2018 Capital Application pursuant to s.41 of the *Public Utilities Act*.¹ The Board, in Order PU 43 (2017) of December 22, 2017, declined to approve the project, finding that further information was required on the Project, and deferred consideration of it. Hydro filed revised information on January 29, 2018.
4. The LIG applied for intervener status on February 16, 2018. Although this application was opposed by Hydro, the Board granted the LIG intervener status on March 2, 2018.
5. The Board and the LIG posed certain questions to Hydro, which were answered and discussed at a meeting on March 6, 2018. Further Requests for Information were answered on March 13, 2018.

Background

6. Electricity is an economic lifeline in Labrador. A severe climate and widespread electric heating results in high electric bills despite low rates. Low electricity rates are also essential to economic development, and electric capacity (both generation and transmission) is a crucial component of attracting investment to the region. While at certain junctures in the life of an electrical system, infrastructure investments are necessary, those investments should take place in the context of a well thought-out plan for the needs of the system. Furthermore, the communities of Labrador must be kept informed about and consulted on Hydro's planning efforts, so that their economic development efforts can be done with adequate information about the state of the electrical system and plans for its future.
7. There are evidently some major developments taking place within the Labrador system. Data centre loads, which were non-existent not so many years ago, now take up more than 10% of

¹ RSNL 1990, c P-47.

the peak load in Labrador East.² These developments place the Labrador Interconnected System at a major decision point, but also form an opportunity for the Board to give much needed direction to the future of the Labrador Interconnected System.

8. The LIG states that its communities are interested in being meaningfully consulted about the future planning of the Labrador electrical system. We are encouraged by Hydro's plan to complete a transmission system planning study for the end of 2018,³ and look forward to engaging with Hydro in that process to reflect the economic development priorities of the communities in the Labrador Interconnected System.

Powers of the Board

9. The powers of the Board in this matter are set out in the *Public Utilities Act*⁴ and the *Electrical Power Control Act*.⁵
10. Section 41 of the *PUA*, the provision under which this Application is proceeding, sets out that Hydro must seek this Board's approval prior to "the construction, purchase or lease of improvements or additions to its property where", as here, the cost of the construction is in excess of \$50,000.
11. Section 6 of the *EPCA* is also relevant here. It states:
 6. (1) The public utilities board has the authority and the responsibility to ensure that adequate planning occurs for the future production, transmission and distribution of power in the province.
 - (2) The public utilities board may direct a producer or retailer to perform such activities and provide such information as it considers necessary for such planning to the public utilities board or to any other producer or retailer on such terms and conditions as it may prescribe.

² Data centre loads make up 8.6 MW (LAB-NLH-001), which is 10.8% of the 2017/18 forecast peak of 66.9 MW ("Attachment 1 – Responses to PUB Questions" p2 of 8).

³ LAB-NLH-005.

⁴ *Public Utilities Act*, RSNL 1990, c P-47 ("*PUA*").

⁵ *Electrical Power Control Act*, 1994, SNL 1994, c E-5.1 ("*EPCA*").

(3) For the purpose of this section, the public utilities board may adopt those rules and procedures that it considers necessary or advisable to give effect to the subsection.

12. It is notable that s.4 of the *EPCA* directs the Board, in its exercise of authority under the *EPCA* and the *PUA*, to implement the declared power policy of the Province. This policy is declared in s.3 of the *EPCA*, part of which states that:

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 [...]

13. At the end of s.3 of the *EPCA*, the statute states that “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”.

Load growth or reliability?

14. In Hydro’s Revised Application of January 25, 2018, the justification for the project is presented as being based on load growth. As the Application states:

Analysis of the present 138 kV transmission system configuration serving the Upper Lake Melville area indicates that the system is capable of delivering 77 MW to the Happy Valley 25 kV bus when the system is no longer providing construction power to the Muskrat Falls Project. For load levels beyond 77 MW, system voltages will deteriorate ultimately resulting in system voltage collapse and customer outages. The projected peak load for the area is expected to increase from 79.9 MW in 2017 to 104 MW in 2042. To support load levels beyond 77 MW in the Upper Lake Melville area, the capacity of the transmission system supplying the area must be increased.⁶

⁶ Section 3.0, p7.

15. Recently, however, Hydro has begun to frame the justification of the project as one based on reliability.⁷ In particular, Hydro has focused on the consequences of the failure of different components of the existing transmission system to Labrador East.

16. These submissions will therefore deal with each issue in turn.

Load growth in Labrador

17. Hydro has stated that at loads of over 77 MW, the system will suffer voltage collapse.⁸ In practice, however, one would expect Hydro to impose some sort of curtailments (rolling brown-out or black-out), such as it did during the DarkNL episode, to prevent system collapse. As discussed below, targeted curtailments at consumption by a small number of large consumers could accomplish the same goal.

18. Hydro projects significant load growth in Labrador East. It forecasts a 7.6 MW increase in coincident peak demand, of which 7.2 MW arises from three new data centre customers.⁹ This leads to a 2018 peak load forecast of 80.6 MW.¹⁰

19. It is important to note, however, that the sudden and dramatic growth in load takes place in the context of longer term stability in the Labrador East load. From 2000/2001 to the present, the winter peak demand in Labrador East has only exceeded 65 MW in six years, and only exceeded 70 MW in four years.¹¹

20. The potential to exceed the 77 MW load limit is therefore attributable directly to the new data centre loads. As Hydro states, the 2017/2018 peak of 66.9 MW “is less than the forecast

⁷ “Attachment 1 – Responses to PUB Questions” p5 of 8 to p6 of 8; PUB-NLH-049.

⁸ “Attachment 2 – Responses to LAB Questions” p3 of 4 to p 4 of 4.

⁹ LAB-NLH-001, p2 of 2.

¹⁰ Application (January 25, 2018 revision), Appendix A, p15 of 89.

¹¹ “Attachment 1 – Responses to PUB Questions” p2 of 8.

requirement of 79.9 MW primarily because the connected data centre customer loads have not ramped up to operational load requirements.”¹²

21. Even with these new loads added, the actual duration of peak events is very brief. Indeed, peak load did not exceed 70 MW in 2013 or 2016; and only for 2.75 hours in 2014, 10.75 hours in 2015, and for only 15 minutes in 2017.¹³

22. The quarter-hourly load data provided in LAB-NLH-008 Att. 1 sheds further light on the Labrador East load shape. Figure 1 shows the quarter-hourly loads reported from Feb. 1, 2017 through Feb. 1, 2018. (It should be noted that these data exclude loads served by North Plant diesel generation.) (Certain missing data have been omitted, but no other correction has been made for anomalous data. Pending clarification from Hydro, we assume that the zero values represent system outages, and the spikes that follow them result from sudden return of service.)

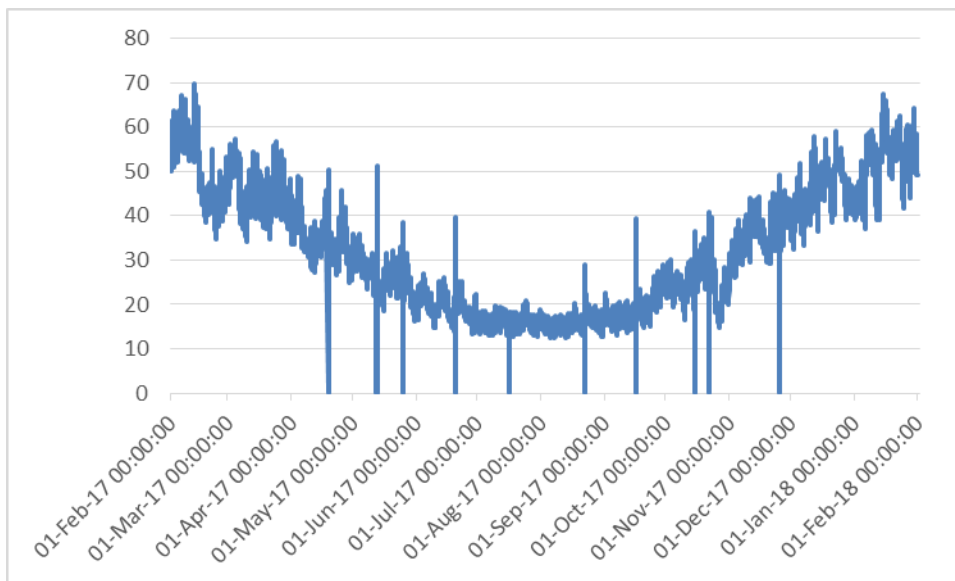


Figure 1

¹² “Attachment 1 – Responses to PUB Questions” p2 of 8.

¹³ LAB-NLH-008, p 6 of 6.

23. Figure 2 shows the same data, augmented by 7.2 MW for each hour, in order to simulate forecast load growth mentioned in paragraph 13, above.

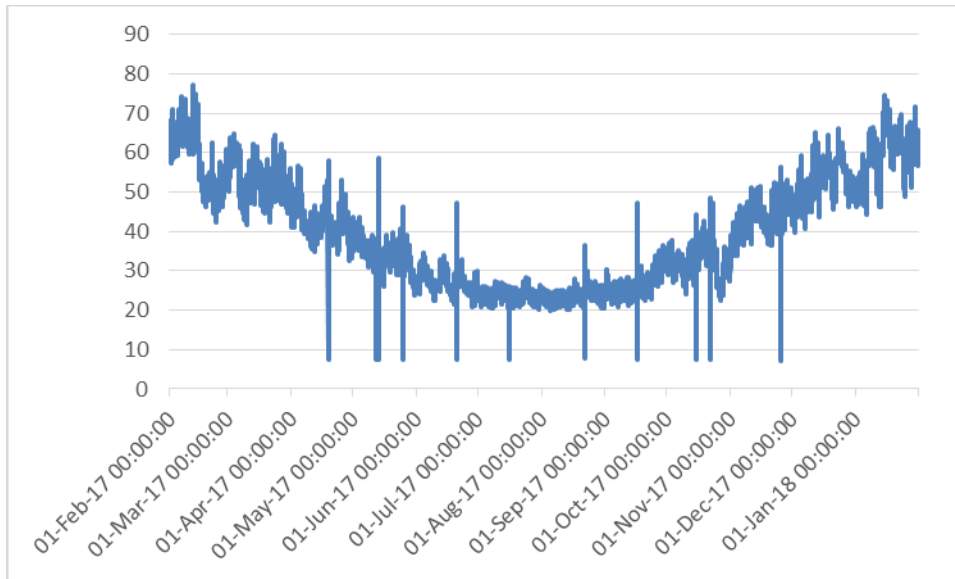


Figure 2

24. The data portrayed in Figure 2, which include the additional 7.2 MW of additional loads forecast for the coming winter, include only one quarter-hour (Feb. 12, 2018 at 12:30pm, shown in yellow in Table 1 below) in which loads exceed 77 MW, with an exceedence of just 260 kW. This data point may be anomalous, in that data are missing for the four quarter-hours prior to the one mentioned, during which time load grew by 13.6 MW. Furthermore, as seen in Table 1, all other peak events take place in the early morning.

25. To test the robustness of this analysis, we explored the exceedences in the event that loads were 5 MW higher than forecast. (It is assumed that loads served in the past by the North Side Diesel plant would continue to be so served.) Even with an additional 5 MW of load, the 77 MW limit would only have been exceeded for 8.5 hours during the year. Aside from the possibly anomalous occasion on February 12, mentioned in the previous paragraph, these

occurrences took place on just four occasions, with a maximum exceedence of 2.9 MW, as shown in the following table.

date	beginning	end	duration	max (MW)
2017-02-06	7:30	9:00	1:30	2.3
2017-02-08	7:30	10:45	3:15	1.5
2017-02-12	12:30	13:00	0:30	5.3
2017-02-13	6:45	9:00	2:15	2.9
2017-02-17	7:45	8:45	1:00	0.2

Table 1

26. These results suggest that transient peaks could easily be reduced through judicious load management, possibly including partial curtailment (voluntary or not) of the new bitcoin loads, as discussed in the following section.
27. On page 2 of LAB-NLH-008, Hydro writes that “planning requirements necessitate planning for the forecasted peak load, regardless of the duration of the load”. In our view, failure to take load durations into account in the planning process will inevitably lead to overbuilding the system, with important cost consequences that would be borne by our citizens. This important question should be addressed in the Board’s review of Hydro’s long-term plans, foreseen in s. 6 of the *EPCA*, discussed above.

Dealing with capacity constraints through demand management

28. Because the challenges to capacity arise specifically from a small number of data centre customers, it is comparatively easier to introduce demand management programs that can resolve the capacity constraint. A voluntary load constraint could be sought from any of these customers, or from another large customer like CFB Goose Bay.
29. Demand-side efforts to reduce peak demand, generally referred to as “demand response”, have become a key tool for utilities across North America. Hydro would be well advised to

explore the potential of demand response to reduce or defer the need for expensive infrastructure solutions, even in a low-cost jurisdiction like Labrador.

30. Best practices in this regard were recently summarized in a report prepared by Synapse Energy Economics for a regulatory proceeding in Quebec (another low-cost jurisdiction).¹⁴

31. Alternatively, the Board could require Hydro to add mandatory curtailment provisions to new service agreements with blockchain miners. It is apparent on the face of the evidence that the new data centre loads are causing problems of adequacy of supply in Labrador, which will have effects on the availability of loads for industrial customers, as well as on the reasonableness of rates charged to existing customers. These interests are protected by s.3 of the *EPCA*, which declares it to be the power policy of the Province that rates should be “reasonable”, and “should promote the development of industrial activity in Labrador”.¹⁵ Section 3 of the *EPCA* states that “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”. In the submission of the LIG, the Board has the authority to order Hydro to pursue curtailment policies during peak events with customers with large blockchain loads (for example, over 0.5 MW) so as to protect the adequacy of supply and to promote the stated power policy of the Province.

32. It is notable that the data centre customers, as well as CFB Goose Bay, are accustomed to some amount of interruptions of service. Indeed, the new data centre customers have located in Labrador East in spite of the frequency of interruptions of service.

¹⁴ The report can be found at http://publicsde.regie-energie.qc.ca/projets/389/DocPrj/R-3986-2016-C-RNCREQ-0021-Preuve-RappExp-2017_04_05.pdf.

¹⁵ *EPCA*, s.3(a)(i), s.3(a)(v).

33. It is known that on average, between 2013 and 2017, a customer in Happy Valley experienced about 8.40 interruptions of service every year, with a total duration of 1239.40 minutes (or 20.66 hours).¹⁶
34. If a customer were asked or required to curtail their load during system peak. As disclosed by Hydro, the Labrador East load only exceeded 70 MW – 7 MW less than the current transfer limit – for 2.75 hours in 2014, 10.75 hours in 2015, and for only 15 minutes in 2017.¹⁷ The amount of time they would be asked to curtail their consumption would likely be lower than the duration of the interruptions they currently experience.
35. Hydro has disclosed that no data centre customer has ever complained about interruptions of service.¹⁸ The inference would be that some brief interruption due to curtailment would also likely to be acceptable to them. Hydro has not yet approached the data centre customers to determine whether they would be amenable to such curtailment.¹⁹

Reliability in Labrador East

36. Hydro has recently adduced evidence showing that the Project has reliability benefits, because of the risk of transformer failure at one end or the other of the existing 138 kV line to Churchill Falls.²⁰ Such a risk does not arise from load growth but has been a feature of the system for decades.
37. Hydro has suggested that there may be grave consequences that would flow from a transformer failure on either end of the 138 kV line linking Happy Valley to Churchill Falls. However, PUB-NLH-049 demonstrates that, while significant load reduction might be

¹⁶ “Attachment 1 – Responses to PUB Questions” p7 of 8.

¹⁷ LAB-NLH-008, p6 of 6.

¹⁸ LAB-NLH-017.

¹⁹ “Attachment 2 – Responses to LAB Questions” p3 of 4.

²⁰ PUB-NLH-049.

necessary in the face of a transformer outage, it would not cut off power supply to Labrador East. The passage on page 4 of 10 of the response, quoting page 11 of the Report, indicates that, in the event of loss of the 125 MVA unit at Churchill Falls, Hydro could, with backup equipment, provide 67 MW to Happy Valley (taking into account the 5 MW North Side Diesel Plant) – just 10 MW less than the current transfer capacity.

38. The following citation on the same page demonstrates that, with loss of the largest transformer at Happy Valley, transfer capacity would be 81 MW (taking into account the 25 MW gas turbine) – *more* than the current transfer capacity.

39. Thus, the worst-case consequences of deferring the reliability improvements by one year, while serious, could no doubt be managed through aggressive load management efforts, likely including curtailment of the blockchain customers. According to the data provided in LAB-NLH-008, Attachment 1, Happy Valley loads only exceeded 67 MW on six occasions in 2017-2018. The largest exceedence was just 2.7 MW –precisely at the moment of the possibly anomalous data point on February 12, 2017, mentioned above in paragraph 19.

40. It is undeniable that the Project will bring some reliability improvements. However, as Hydro as noted, there is a balance to be struck between reliability and the impact on rates.²¹

In Hydro’s words:

The issue of level of “local back up” for loss of a radial transmission line is one of a balance between reliability (i.e. unavailability and expected unserved energy) and the impact on rates (i.e. how much are the customers willing to pay to improve reliability).²²

41. In this particular case, the balance must also account for the role of system planning and of policies that protect the integrity of the electrical system.

²¹ LAB-NLH-034.

²² Ibid.

Lack of framework for dealing with load growth

42. There is currently no formal mechanism within Hydro's rates and rules and regulations for dealing with a situation such as the one that the Labrador Interconnected System is now confronted with, where a non-industrial load is taking up a significant share of transmission (and generation) capacity, and where the number of such new loads may be rapidly increasing. Hydro has stated that it has received inquiries for 200 MW of service in Labrador East.²³ Hydro refused to disclose similar information about Labrador West,²⁴ but it is reasonable to infer that the inquiries at Labrador West may have been of a similar magnitude. Such loads threaten to consume the entirety of the Churchill Falls power available to the Labrador Interconnected communities.
43. The Project the Board is considering in this application is the proverbial tip of the iceberg. If anything, as neighbouring jurisdictions, such as Quebec,²⁵ become less friendly to cryptocurrency mining loads, it may be expected that even greater loads will be interested in establishing themselves in Labrador.
44. Hydro has taken the position that it has an obligation to serve every new customer that comes its way. According to Hydro, the only powers it has for setting conditions on new users is found at sections 3 and 4 of its Rules and Regulations.²⁶ Section 3 allows Hydro to refuse to serve an Applicant for a number of grounds related to the reliability of the Applicant, but it does not address any effects that the Applicant may have on the rest of the electrical system. Section 4 of the Rules gives Hydro the discretion to "require special

²³ "Attachment 2 – Responses to LAB Questions" p1 of 4.

²⁴ LAB-NLH-025.

²⁵ See <http://business.financialpost.com/technology/blockchain/quebec-throws-cold-water-on-bitcoin-miners-seeking-cheap-power>.

²⁶ LAB-NLH-023; <https://www.nlhydro.com/wp-content/uploads/2018/02/Schedule-of-Rates-Rules-and-Regulations-January-1-2018.pdf>

guarantees from an Applicant or Customer whose location or load characteristics would require abnormal investment in facilities”.

45. Notably, it does not appear that Hydro has sought any guarantee from data centre customers, or any long term commitment contracts,²⁷ though it is apparent that data centres are relatively mobile businesses whose capital investments can be easily transported to other jurisdictions.

46. In any event, it seems clear that Hydro will need additional policies to deal with the kind of potential load growth that the Labrador Interconnected System is faced with, and may need new direction from the Board on these matters as well. As it stands, Hydro does not believe it has the discretion to decline to serve a customer even when doing so would be catastrophic for the system, nor any way to require a general service customer to contribute to system upgrades that it makes necessary.

47. Thus, it appears that Hydro does not have adequate tools to manage demand from new customers, even if that demand exceeds the capacity of the system to serve. In this particular case, it appears that Hydro has entered into service contracts with data centre customers that exceed the capacity of the existing Labrador East transmission system.

48. In LAB-NLH-021, Hydro confirmed that it has 32 MW of service requests in Labrador East in addition to the 8.6 MW already committed.

49. However, in LAB-NLH-028, when asked whether, in Hydro’s view, it would need either a legislative change and/or authorization from the Board “in order to deny service to a potential general service customer, if doing so would create unacceptable consequences for system reliability with existing infrastructure?”, Hydro responded :

²⁷ “Attachment 1 – Responses to PUB Questions” p1 of 8.

Hydro currently requires approval from the Board pursuant to section 54(4) of the *Public Utilities Act* to deny service to a potential general service customer under any circumstances.

50. To the best of our knowledge, Hydro has not requested approval from the Board pursuant to section 54(4) of the *Public Utilities Act* to justify not accepting the 32 MW of service requests mentioned above. Indeed, it is unclear why it accepted the 6 MW service request dated Aug. 6, 2015 (updated Sept. 7, 2016) if it could not serve that load without constructing the Project, for which it had not yet obtained Board approval.
51. The LIG is convinced that new policies are necessary to address the challenges posed by blockchain data centre customers. It is clear to the LIG that modifications are required to the Rules and Regulations in order to clarify Hydro's ability to manage new service requests in a way that protects system reliability and the interests of existing customers. LIG intends to pursue this issue in the context of the current NL Hydro General Rate Application.
52. The LIG is supportive of economic development, but believes that new businesses should pay their fair share of the infrastructure costs that must be incurred to serve them. This principle is widely accepted when it comes to distribution infrastructure, when the Contribution in Aid of Construction (CIAC) process ensures that new customers pay for the distribution upgrades that are necessitated by their joining the system.²⁸ Industrial users also are generally liable for the upgrade costs to both the transmission and distribution system that they cause.
53. We are aware that this Application is not the appropriate forum for determining what new policies are needed to deal with load growth in Labrador. We recognize that Hydro's upcoming General Rate Application would be an ideal forum for dealing with these issues. It is also the LIG's view that, should the General Rate Application be further delayed, it may

²⁸ "Attachment 2 – Responses to LAB Questions" p2 of 4.

be necessary for the Board to hear these issues in a separate proceeding with the objective of setting policies that can deal with the new realities facing the power system in Labrador.

Importance of timing of any approval

54. LIG expects that policies for dealing with new customers, including both the Rules and Regulations modifications described above and a network addition policy applicable to large general service customers, will be dealt with in Hydro's current General Rate Application. However, the sooner that Hydro submits a network addition policy for the Board's consideration, the more time that the Board and interested parties will have to contribute to its formulation.

55. Hydro is also expected to complete a transmission planning study for the Labrador Interconnected System in late fall 2018.²⁹ Given that these issues are likely to be addressed in the General Rate Application, the delivery of the planning study at an earlier date would be of tremendous assistance to the Board in fully considering these issues, and the Board should consider directing Hydro to complete this study sooner.

56. It would be reasonable to expect this study to identify the least-cost solutions to expected load growth and, insofar as these solutions require infrastructure upgrades, to estimate the costs associated with them. Such information would enable the Board and the LIG communities to better understand where the price of electricity in the Labrador Interconnected System can be expected to go, which will give a better understanding of the kinds of economic development that can be attracted to the region. It will also give a better understanding of how long Labrador can be expected to remain attractive to data centre

²⁹ LAB-NLH-005.

customers, a subject on which Hydro at present does not appear to have precise information.³⁰

57. On the other hand, we know that there are sufficient service requests from data centre customers to take up the entire transmission capacity yielded by the Project on the day that it goes into service.³¹ On this eventuality, should the Project be approved at this time, we can expect to see applications as soon as next year for further network upgrades, probably starting with Phase 2 of the present Project, to serve the waitlist of data centres that have inquired at Hydro for service.
58. By deferring approval of the Project until after the establishment of a network addition policy or a policy dealing with data centres, the Board will be able to attribute an appropriate portion of the costs of the new infrastructure to the new customers who are actually necessitating the new construction.
59. Such a deferral would also enable the Project to be reviewed with the benefit of the transmission system planning study for Labrador that Hydro is currently preparing.
60. Under s.6(1) of the *EPCA*, the Board, in its decision in this matter, is required to “ensure that adequate planning occurs for the future production, transmission and distribution of power in the province”³². Deferring the project until adequate planning can take place would be an entirely appropriate course of action for the Board to take. The Board, under s.6(2) of the *EPCA*, is also empowered to “direct a producer or retailer to perform such activities and provide such information as it considers necessary for such planning to the public utilities

³⁰ “Attachment 1 – Responses to PUB Questions” p1 of 8.

³¹ “Attachment 2 – Responses to LAB Questions” p2 of 4.

³² *EPCA*, s.6(1).

board or to any other producer or retailer on such terms and conditions as it may prescribe.”³³

61. It should also be noted that it is the declared power policy of the Province that rates to be charged for the supply of power should be reasonable, and “should promote the development of industrial activity in Labrador”³⁴. Although this Application is not a rate-setting proceeding, it would also be entirely within the Board’s jurisdiction to consider rate impacts of a capital purchase decision such as this one. The Board is required to implement the declared power policy of the Province in the exercise of its powers under the *PUA* and the *EPCA*.
62. The evidence shows that if this Project is approved, and if there is no change in Hydro’s policy as it relates to data centres, much of the transmission capacity, and even generation capacity of Labrador will be taken up by data centre loads. Not only that, but existing customers, including industrial customers, will be compelled to pay for infrastructure upgrades to serve an overwhelming load of new data centre customers. Without intervention, such developments will have dramatic impacts on customer rates. The Board is required by s.4 of the *EPCA* to take into account these impacts in its decision on this matter.
63. It appears that the statutory framework does not explicitly empower the Board to dictate the question of with whom Hydro may enter a contract for the provision of power. However, the evidence shows that Hydro has entered some such contracts with data centres even when it did not have the sufficient transmission capacity to provide service to them, nor any approved capital project that would have enabled them to do so. Such new customers can be expected to have significant impacts on the adequacy of supply in Labrador, and on the rates

³³ *EPCA*, s.6(2).

³⁴ *EPCA*, s.3(a)(i), s.3(a)(v).

required to recover the cost of new infrastructure to supply them. Given the difficulty of terminating such contracts once entered, it is important that such contracts not be entered without adequate planning as to how to supply these customers. In the view of the LIG, it is within the Board's jurisdiction to order Hydro to refrain from entering any power contracts for which it does not have sufficient transmission capacity to honour.

Conclusion

64. In summary, the LIG submits that the Board should do the following:

- a. defer approval of the Project until Hydro's next Capital Application;
- b. order Hydro to pursue any necessary demand-side measures, including curtailment measures (voluntary or involuntary) for all data centre customers exceeding 0.5 MW capacity;
- c. order Hydro to refrain from entering any power contracts for which it does not have sufficient transmission capacity to honour;
- d. require that Hydro file its Labrador transmission planning study as soon as practicable, earlier than Fall 2018;
- e. require that Hydro submit a network addition policy for the Board's approval prior to its next Capital Budget Application.

ALL OF WHICH IS RESPECTFULLY SUBMITTED.

DATED at Toronto, Ontario, this 15th day of March, 2018.

OLTHUIS KLEER TOWNSHEND LLP



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