

IN THE MATTER OF the Commission
of Inquiry respecting the Muskrat Falls
Project

WRITTEN SUBMISSIONS ON BEHALF OF
NEWFOUNDLAND POWER INC.

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A. Background

1. The Commission of Inquiry respecting the Muskrat Falls Project (“the Commission”) was established by the Government of Newfoundland and Labrador by Order O.C. 2017-39 on November 20, 2017.
2. In March 2018, Newfoundland Power Inc. (“Newfoundland Power” or “the Company”) requested standing before the Commission. The Company’s primary focus for participation was in respect to the future operation of the Province’s electricity system, potential impacts upon Newfoundland Power’s customers and its operations, including customer rate impacts and rate mitigation measures, and the regulatory processes and procedures under the *Public Utilities Act* (the “PUA”) and the *Electrical Power Control Act, 1994* (the “EPCA”).
3. On April 16, 2018, the Commission granted Newfoundland Power special standing for Phases One and Two and full standing for Phase Three of the Inquiry. In its decision, the Commission recognized Newfoundland Power’s experience with the Province’s regulatory system, including with the Board of Commissioners of Public Utilities (the “Board”), and its knowledge and experience in the electrical utility industry.
4. In this context, Newfoundland Power’s submission addresses the following matters:
 - i. the Provincial electrical power policy framework, regulatory processes and parties involved;
 - ii. the Muskrat Falls project’s exclusion from full regulatory oversight;
 - iii. potential future impacts of the Muskrat Falls project on electricity consumers, in terms of reliability and costs; and
 - iv. potential future implications for regulatory policy and practice in the province.

B. Power Policy and Implementation

i. Legislative Framework

5. The EPCA articulates the electrical power policy of the Province of Newfoundland and Labrador. Section 3 states, in part:

"It is declared to be the policy of the province that...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, (iii) that would result in power being delivered to consumers in the province at the lowest possible cost consistent with reliable service..."

Reference: CIMFP Exhibit P-00087, *Electrical Power Control Act*, 1994, s. 3(b), pgs. 7-8

6. The Board is an independent, quasi-judicial tribunal constituted under the PUA for the regulation of public utilities in the Province of Newfoundland and Labrador. Section 16 of the PUA establishes the Board's jurisdiction over electric utilities in the province.

ii. Role of the Board

7. The primary role of the Board is implementation of the power policy of the Province, as indicated in Section 4 of the EPCA:

"In carrying out its duties and exercising its powers under this Act or under the Public Utilities Act, the public utilities board shall implement the power policy declared in section 3, and in doing so shall apply tests which are consistent with generally accepted sound public utility practice."

Reference: CIMFP Exhibit P-00087, *Electrical Power Control Act*, 1994, s. 4, pg. 8

8. In general terms, the Board is to ensure that rates required to be paid by customers should be reasonable, not unjustly discriminatory, and based on the utilities' cost to provide service. The Board also ensures that the service provided is safe and reliable, and specifically approves public utilities' capital expenditures. The Board determines the level of return allowed for investors, and approves utilities' issuance of long-term capital and asset depreciation. In exercising its role, the Board has broad powers to engage experts, compel evidence and attendance of witnesses, and to impose fines or other penalties.

Reference: CIMFP Exhibit P-00087, pg. 6, *Electrical Power Control Act*, 1994, s. 3(a); *Public Utilities Act*, s. 16, s. 41(1); s.91(1); s. 68(4); s. 63; s. 111(1)(b), s. 80

iii. *Typical Proceedings and Tools*

9. The Board actively monitors the operations of public utilities in its jurisdiction. Utilities are required to submit a variety of reports and routine compliance filings, including annual and quarterly summaries of financial and operational performance.
10. Proceedings conducted by the Board enable in-depth consideration of certain issues. The Board reviews utilities' capital investment plans annually and has established clearly defined requirements for filing and review of Capital Budget Applications. Customer rates and utility costs to provide service are typically reviewed by the Board every three years through a General Rate Application process. This process may be initiated by a utility or directed by the Board.

11. The Board also initiates consideration of other matters as required, such as the review of service reliability that commenced following the January 2014 power outage events. Additionally, the Provincial Government may make references to the Board under terms specified in the EPCA. The Board would then be expected to exercise special expertise by reason of its regulatory mandate to review and report back to government. The Government would then accept or reject any of the recommendations, decisions, etc. contained in the Board's report. For example, in the 1990's, the Government referred to the Board an issue of subsidization of rural rates in the Province.

Reference: Peter Alteen, Hearing Transcript, December 17, 2019, pgs. 2-4; Maureen Greene, Hearing Transcript, October 24, 2018, pg. 30 and pgs. 122-124

12. The Board has a defined process for dealing with utility regulatory matters. This process is evidentiary based and allows for full participation by multiple parties with standing. The process is also transparent to the public who are granted full access and the ability to contribute.
13. In a typical proceeding, a utility submits an application and evidence to the Board. Upon receipt of the application, the Board issues a notice to the public for interested parties and interveners to provide notice of their intent to participate. The Board then assesses these requests for standing.
14. Next, the Board would typically hold a pre-hearing conference with all involved parties to establish a schedule and process details. A hearing might possibly be required at this point to establish the scope of issues to be heard on a non-routine matter, such as the ongoing reliability review. Subject experts may be engaged by the Board or the parties, and would then file evidence.

15. Written requests for information are then issued by the Board and/or the parties and answered in one or more iterations, to enable all parties a fuller understanding of the evidence and issues. For complex matters, there may also be a technical conference involving all parties, Board staff and possibly Commissioners. This would lead to a hearing before the Board, including the cross-examination of witnesses. Finally, the Board considers the evidence in the matter and renders a decision.

Reference: Peter Alteen, Hearing Transcript, December 17, 2019, pgs. 2-4; Maureen Greene, Hearing Transcript, October 24, 2018, pgs. 122-124

iv. Parties in the Electricity Sector

16. Both Newfoundland Power and Newfoundland and Labrador Hydro ("Hydro") are regulated by the Board and are subject to the EPCA.
17. Newfoundland Power's primary business is electricity distribution. It distributes electricity to over 268,000 customers, approximately 90% of all electricity consumers in the province. Newfoundland Power has an installed generating capacity of 139 megawatts ("MW"), of which approximately 97 MW is hydroelectric generation. It generates approximately 7% of its customers' electricity needs and purchases the remainder from Hydro. In the event that Hydro was unable to supply the Company with wholesale energy deliveries, Newfoundland Power would be unable to meet its customers' requirements.

Reference: CIMFP Exhibit P-01639, 2013 Management Discussion and Analysis & Annual Audited Financial Statement, pg. 3 and pg. 30; Peter Alteen, Hearing Transcript, July 16, 2019, pg. 10

18. Hydro is the principal generation and transmission operating company for Newfoundland and Labrador. Hydro has an installed generating capacity of approximately 1,700 MW which includes nine hydroelectric generating stations, one oil-fired plant, four gas turbines, and 25 diesel plants. Hydro directly serves a small number of industrial electricity customers, and operates distribution assets which serve over 36,000 customers, primarily in rural areas of the province. Newfoundland Power is its largest customer. Hydro is subject to the provisions of the EPCA, with some exemptions as discussed in the following section.

Reference: CIMFP Exhibit P-00048, *Manitoba Hydro International: Report on Two Generation Expansion Alternatives for the Island Interconnected Electrical System, Volume 1: Summary of Reviews*, pg. 28; CIMFP Exhibit P-00087, *Electrical Power Control Act, 1994*, s. 14(1)

19. Nalcor Energy ("Nalcor") is a provincial Crown Corporation, established by the *Energy Corporation Act, 2007* ("ECA"). It is charged with managing, serving, utilizing, and commercializing the oil, gas, and electricity energy assets of the province of Newfoundland and Labrador. This includes development of lower Churchill River hydroelectric generation facilities and related transmission assets.

Reference: CIMFP Exhibit P-00048, *Manitoba Hydro International: Report on Two Generation Expansion Alternatives for the Island Interconnected Electrical System, Volume 1: Summary of Reviews*, pg. 27

C. Muskrat Falls Project Exclusion from Regulation

i. Orders in Council and Legislative Amendments

20. Hydroelectric development of the Lower Churchill River was initially exempted from the Board's regulatory oversight in December, 2000. The Provincial Government issued Orders in Council O.C. 2000-206 and O.C. 2000-207, which

made Hydro exempt from the provisions of the ECPA and the PUA for all aspects of its activities with respect to generation and related facilities at Muskrat Falls.

Reference: **CIMFP Exhibit P-00023**, *Labrador Hydro Project Exemption Order* under the *Electrical Power Control Act*, 1994 and the *Public Utilities Act*, December 14, 2000

21. As the Muskrat Falls project preparations continued in 2012 and 2013, the Provincial Government made amendments to legislation and issued Orders in Council to support financing arrangements. Non-recourse borrowing and a "Take or Pay" power purchase agreement were put in place. The "Take or Pay" agreement provided revenue certainty that Nalcor's lenders required. This agreement protects lenders, but leaves ratepayers at risk of cost overruns or lower demand.

Reference: **CIMFP Exhibit P-00943**, *Legislative Changes to Enable Muskrat Falls Project Financing*, December 14, 2012, pgs. 9-13; **CIMFP Exhibit P-01296**, Email from Jerome Kennedy to Jerome Kennedy re *Questions from Ball*, November 16, 2012

22. In 2012, amendments were made to the EPCA, which provided Hydro with the exclusive right to supply and sell electricity to retailers and industrial customers on the Island Interconnected System and required that those customers purchase electricity exclusively from Hydro. These amendments helped ensure the full recovery of costs by providing Hydro with exclusivity to Island ratepayers and formed the basis of Hydro's legislative monopoly.

Reference: **CIMFP Exhibit P-00110**, *Review of the Newfoundland and Labrador Electricity System*, pgs. 15-16; **CIMFP Exhibit P-00087**, *Electrical Power Control Act*, 1994, s.14.1

23. In 2013, additional amendments to the EPCA were authorized through Orders in Council to facilitate the federal loan guarantee. These amendments restricted the

Board's ability to exercise its power over the Muskrat Falls Project in terms of rate regulation and cost recovery and required that electricity consumers would bear the costs of the Muskrat Falls Project.

24. Order in Council OC2013-342, the *Muskrat Falls Project Exemption Order*, exempted the Board from exerting authority over Hydro in respect of any activity and any expenditures, payments or compensation, *inter alia*, related to the construction and operation of the Muskrat Falls Project and transmission facilities.
25. Order in Council OC2013-343 directed the Board to adopt a policy such that any costs, payments or compensation paid by Hydro under any agreement within the scope of the *Muskrat Fall Project Exemption Order* would be included as expenses to be recovered through rates charged to island interconnected customers without disallowance, reduction or alteration.

Reference: CIMFP Exhibit P-00454, Grant Thornton Report for the Commission of Inquiry Respecting the Muskrat Falls Project re *Review of the Federal Loan Guarantees and the Power Purchase Agreement*, September 7, 2018, pgs. 27-31

ii. 2011 Reference to the Board

26. Despite the *Labrador Hydro Project Exemption Order*, on May 17th, 2011, then-Premier Kathy Dunderdale publically committed to a limited form of Board review of the Muskrat Falls project.

Reference: CIMFP Exhibit P-00533, House of Assembly Proceedings, May 17, 2011, pgs. 12-13 ; CIMFP Exhibit P-01605, The Telegram news article, re *No full PUB review for Muskrat Falls* May 18, 2011

27. In June 2011, the Provincial Government issued a limited reference question to the Board to determine whether Muskrat Falls represented the least-cost option for the supply of power to the Island Interconnected customers over the period of 2011-2067 as compared to the Isolated Island Option. The Muskrat Falls development included the Muskrat Falls generation facility and the Labrador-Island Link ("LIL") transmission line. The Isolated Island Option consisted of the Holyrood thermal generation station and small hydroelectric, wind resource, and combined cycle combustion turbine additions. The scope of the reference question precluded the Board from examining other potential generation and supply sources.

Reference: CIMFP Exhibit P-00537, Terms of Reference and Reference Question, June 2011

28. In preparation to analyze the reference question, the Board retained an independent expert consultant, Manitoba Hydro International ("MHI") and an engineering technical advisor. The Board initially intended to follow its usual full regulatory process with respect to the reference question. It established a schedule of critical dates and milestones for the report. The intended preliminary hearing process included the following activities:

- Issuance of public notice;
- Issuance of notices of intention to participate;
- Filing of technical reports;
- Written requests for information;
- Technical conference;
- Public consultations; and
- Full participation by all parties including utilities, industrial customers, the Consumer Advocate and the public.

Reference: CIMFP Exhibit P-00539, Board of Commissioners of Public Utilities, *Notes of Meeting between Nalcor Officials and Board Staff*, June 17, 2011; CIMFP Exhibit P-00566, Letter from Cheryl Blundon to Geoffrey Young re *Reference from the Lieutenant-Governor in Council on the Muskrat Falls Project*, September 14, 2011; CIMFP Exhibit P-01214, Email from Charles Bown to Charles Bown, *Meeting with PUB*, December 1, 2011

29. The reference required the Board's report to be submitted by December 30, 2011. There were a series of delays by Nalcor in providing requested information to the Board and its submission was not made until November 10, 2011. Consequently, the Board's schedule of critical dates and milestones was disrupted and the amount of time the Board had allocated to complete its analysis was reduced. In order to wholly fulfill the government's request, the Board requested a deadline extension. Their request for an extension to June 30, 2012 was denied, but the government permitted an extension to March 31, 2012.

Reference: CIMFP Exhibit P-00052 – Public Utilities Board, Final Report dated March 30, 2012, pgs. 18-21; CIMFP Exhibit P-00576, Letter from Gilbert Bennett to Cheryl Blundon re *Reference from the Lieutenant Governor in Council on the Muskrat Falls Project*, November 7, 2011; CIMFP Exhibit P-00046, Letter from Andy Wells to Jerome Kennedy Re: *Muskrat Falls Review, Requesting Further Extension*, December 16, 2011; Maureen Greene, Hearing Transcript, October 24, 2018, pg. 45

30. One consequence of the time constraint imposed by the March 31, 2012 deadline was that the Board had to substantially curtail its hearing process. A number of key activities were removed from the review schedule.

"Specifically time may not allow for information requests in relation to the MHI report, the filing of technical evidence by other parties, or for the contemplated technical conference. I should also note that the March 31, 2012 date allows limited time for public hearings so compromises will have to be made in this regard to ensure that interested parties are accommodated in the most efficient way possible." – Andy Wells

Reference: CIMFP Exhibit P-00590, Letter from Andy Wells to Honourable Jerome P. Kennedy re *Muskrat Falls Review, Receipt of Board's Report*, January 6, 2012

31. In February 2012, the Board released a revised schedule for the completion of its

analysis and report on the reference question. The *Muskrat Falls Review Notice* comprised the following:

- Presentations by Nalcor and MHI;
- Other presentations;
- Filing of comments and additional information; and
- Final Submissions of Nalcor and the Consumer Advocate

Reference: CIMFP Exhibit P-00609, Board of Commissioners of Public Utilities Newfoundland and Labrador, Notice, *Muskrat Falls Review*, February 1, 2012

32. The revised hearing process issued by the Board limited the participation of all parties involved. The Consumer Advocate's role was reduced when new, specific guidelines were issued to govern its duties relative to the review process. It was no longer permitted to file an independent technical report, denied access to confidential information and exhibits, and prohibited from holding public sessions around the Province to collect input from electricity ratepayers as part of its own consultation process.

Reference: CIMFP Exhibit P-00583, Letter from Jerome P. Kennedy to Thomas Johnson re Muskrat Falls Review, December 23, 2011

33. The revised process eliminated a multi-party hearing. Only the Board, Nalcor, and the Consumer Advocate were permitted to question witnesses. Newfoundland Power and the Industrial Customers did not have independent standing.

"Both Nalcor and MHI will make presentations to the Board. Following each presentation the Consumer Advocate will have an opportunity to ask questions. Interested persons wishing to place a relevant question on the record may do so through the Consumer Advocate."

Reference: CIMFP Exhibit P-00609, Board of Commissioners of Public Utilities Newfoundland and Labrador, Notice, *Muskrat Falls Review*, February 1, 2012, pg. 1

34. The stipulation of asking questions through the Consumer Advocate in lieu of written requests for information, participating in a technical conference and cross-examining witnesses impeded Newfoundland Power's ability to participate fully in the process. Consequently, the Company was unable to evaluate submissions, challenge evidence, or make an informed contribution to the hearing process.
35. The hearing process adopted by the Board did not provide the Company with the opportunity for meaningful participation in the hearing.

"We realized that we would never get much insight into either Nalcor's submission, because we had no ability to ask questions about that, or into MHI's review of that submission in this type of process." – Peter Alteen

Reference: Peter Alteen, Hearing Transcript, December 17, 2018, pg. 9

36. While undertaking its review, Nalcor provided the Board with capital cost estimates that were dated and different from the updated project information available. With imprecise cost estimates and a constrained timeframe, the Board was unable to make an explicit, reasoned recommendation to the government about which of the Island Interconnected or the Isolated Island options represented the least-cost.
37. In March 2012, the Board completed its review of the two generation expansion options for the least-cost supply of power to Island Interconnected customers for the period 2011-2067 and reported back to Government. The Board's decision was inconclusive.

"The Board concludes that the information provided by Nalcor in the review is not detailed, complete or current enough to determine whether the Interconnected Option represents the least-cost option for the supply of power to Island Interconnected customers over the period of 2011-2067, as compared to the Isolated Island Option."

Reference: CIMFP Exhibit P-00600, NL Board of Commissioners of Public Utilities, Reference to the Board, Review of Two Generation Expansion Options for the Least-Cost Supply of Power to Island Interconnected Customers for the period 2011–2067, Report to Government, March 30, 2012, pg. 6

D. Customer Impacts – Reliability and Costs

i. Reliability

38. One of the benefits of interconnecting Newfoundland to the North American grid is greater access to resources in the Maritime Provinces, Labrador, and possibly Quebec. However, even with greater resources, power must still be successfully transmitted across the LIL. Greater access to other generating resources alone does not account for nor improve reliability risks such as mechanical risks or the risks posed by extreme weather events. Newfoundland Power is very concerned with transmission risks.
39. The original design of the LIL was developed in October 2011 by Hydro System Planning. The LIL was designed to have a return period of 1 in 50 years based on principles outlined in the 2006 CSA standard, operational experience of Hydro, and operational risks identified by Hydro.
40. In January 2012, MHI released Volume 2 of its report to the Board on the *Two Generation Expansion Alternatives for the Island Interconnected Electrical System*. With respect to the reliability and operation of the LIL, MHI found that Nalcor's proposed design criteria was inadequate and did not comply with industry standards and practices. MHI's key finding in regard to the reliability of Nalcor's transmission line design criteria is as follows:

"Nalcor has selected a 1:50-year reliability return period for the HVdc transmission line, which is inconsistent with the recommended 1:500-year reliability return period outlined in the International Standard CEI/IEC 60826:2003 with Canadian deviations in CSA Standard CAN/CSA-C22.3 No. 60826:06, for this class of transmission line without an alternate supply. In the case where an alternate supply is available, the 1:150-year reliability return period is acceptable. In this latter scenario, Nalcor should also give consideration to an even higher reliability return period in the remote alpine regions. MHI considers this a major issue and strongly recommends that Nalcor adhere to these criteria for the HVdc transmission line design."

Reference: **CIMFP Exhibit P-00052**, Public Utilities Board Final Report, March 30, 2012, pg. 91; **CIMFP Exhibit P-00049**, MHI – *Report on Two Generation Expansion Alternatives for the Island Interconnected Electrical System (Volume 2: Studies)*, January 2012, pg. 123

41. In 2012, Nalcor made the decision to enhance the LIL's design in order to increase reliability to a 1 in 150 or 1 in 500 year return period. These design changes to increase reliability continued throughout 2014 as a result of widespread power outages.

Reference: Jason Kean, Hearing Transcript, May 6, 2019, pg. 63

42. In November 2018, Hydro released their *Reliability and Resource Adequacy Study, Volume III* where they formally pronounced that all segments of LIL had been fully designed in accordance to the CSA standards CAN/CSA C22.3 No. 1 and CAN/CSA C22.3 No. 60826 to meet either a 1 in 150 or a 1 in 500-year return period, depending on the particular design zone.

Reference: **CIMFP Exhibit P-03658**, Letter from Shirley Walsh to Cheryl Blundon re *Newfoundland and Labrador Hydro, the Board's Investigation and Hearing into Supply Issues and Power Outages on the Island Interconnected System, Reliability and Resource Adequacy Study*, November 16, 2018, pg. 298

43. Nalcor's assertion that the LIL is designed to a 1 in 150/500 year return period (depending upon the particular design zone) is misleading. The reference to a 1 in a 150/500 year return period is to the **base** CSA standard. The CSA standard itself expressly provides that actual known data should be used where available. Data does exist for some zones. That data demonstrates that the line is actually designed to a lower standard. On the Avalon Peninsula, including the isthmus of Avalon, the actual return period is likely closer to 1 in 50 years.
44. In addition, the return period applies to a line segment in a particular climatic zone. The LIL crosses at least 11 different design zones. There is no precise information on the number of independent climatic zones. However, there are significant differences in weather patterns among the following areas: Southern Labrador, Northern Peninsula, Western Newfoundland, Central Newfoundland and the Avalon Peninsula. As a result, the cumulative return period for the entire line would be lower than for one specific climatic zone. In simple terms, the longer the line, the higher the cumulative risk of failure.

Reference: CIMFP Exhibit P-03188, Nalcor Response to Grant Thornton Question 6.2, May 23, 2018, pg. 12

45. Instead of debating the actual return period for the LIL or for any segment of it, it is more instructive to look at the actual design parameters. By way of example, historical data shows that the Avalon Peninsula, including the isthmus, has had icing events of up to 75 mms (3 inches) of ice and winds of up to 130 km/h. On the Avalon, the LIL is designed to sustain **either** 75 mms of ice **or** 130 km/h of wind. However, in combination, the LIL is only designed to sustain 45 mms of ice (60% of possible loading) in winds of 60 km/h. (approximately 45% of maximum winds). The problem is that icing and wind events can and do occur simultaneously, or sequentially (ice formation followed by extreme winds while the ice remains on the

lines). The LIL is not designed to sustain combined maximum ice and maximum wind events. A similar analysis can be done for the other line segments.

Reference: CIMFP Exhibit P-03188, Nalcor Response to Grant Thornton Question 6.2, May 23, 2018, pgs. 11-12; Gilbert Bennett, Hearing Transcript, June 26, 2019, pgs. 89-90

46. That is not to say that the LIL is under-designed. In fact, it is a relatively robust transmission line in comparison to other transmission lines in the Province. The point is simply that no transmission line is designed to sustain the worst case events that can and do occur. That would be practically impossible and economically unfeasible. Rather, transmission lines are designed to fail in a controlled manner when their design loads are exceeded. The LIL is designed with anti-cascading towers at every 20th tower to limit the extent of the damage to one 20 tower section in the event of line or tower collapse. Other 20 tower segments may be separately impacted.

Reference: Gilbert Bennett, Hearing Transcript, June 26, 2019, pg. 89

47. Nalcor/Hydro determined that a reasonable mean restoration time of 14 days would be required to restore the LIL in the event of a line or tower collapse.

Reference: CIMFP Exhibit P-01669, *Technical Note Labrador-Island HVdc Link and Island Interconnected System Reliability*, pg. 33

48. The purpose of Muskrat Falls and the LIL is ultimately to provide a replacement for Holyrood, which has a maximum capacity of 490 MW. While there are remaining significant short term risks to system reliability, this submission focuses on the longer term, after decommissioning of Holyrood.

49. Different consequences may occur depending upon the location of the icing and wind events and the resulting system failure. For example, the loss of the LIL in the Long Range Mountains due to wind and icing events may take several weeks to repair. Assuming all other transmission lines and generation facilities remain intact, there is the potential that there will be inadequate power to service the island load on cold winter days, resulting in rotating blackouts.
50. The possibility of losing transmission capabilities across the LIL has been discussed during Phase 2 of the Inquiry. Nalcor representatives have suggested that the Maritime Link could be utilized as a potential backup source of power. To date there has been no contractual arrangement put in place by Nalcor that would permit Nova Scotia to provide Newfoundland and Labrador with the required 300 MW of emergency support. Additionally, the issue of transmission constraints is currently under investigation by the Board.

"But even if you get it – the 300 megawatts of support... If you lose the Labrador Link and you don't have Holyrood in operations any more, then the ability to transfer the necessary power across those four lines...maintaining voltage, is very hard in winter peak conditions... That's called the transmission constraint.

That limitation has existed on our system – the Avalon Peninsula has had a transmission constraint that's been well known to Hydro, it's well-known to Nalcor planners, it's well known to us, it's well known to the Public Utilities Board for some time." - Peter Alteen

Reference: Peter Alteen, Hearing Transcript, December 17, 2018, pgs. 31-32

51. The risk is somewhat different on the Avalon where over 50% of Newfoundland Power's customers reside. After the decommissioning of Holyrood, the Avalon Peninsula will be heavily dependent upon the transmission lines crossing the isthmus of Avalon. Four lines (3 AC lines and the LIL) all must pass through a very

narrow corridor. That corridor has historically been subject to extreme wind and icing events.

52. Currently, the Avalon Peninsula has two basic sources of supply; (i) Holyrood and other Avalon Peninsula generation and (ii) transmission lines crossing the isthmus. After the decommissioning of Holyrood, the Avalon Peninsula will be much more dependent upon the transmission lines across the isthmus. The issue is not the design or operation of the LIL itself; rather it is the increased dependence on the transmission lines crossing the isthmus.
53. There is currently in excess of 700 MW of capacity on the Avalon Peninsula. After the decommissioning of Holyrood, there will only be somewhat in excess of 200 MW of capacity on the Avalon. That amount of power would be seriously deficient in the event of an extreme event which impacted the transmission lines across the isthmus. The three AC lines are built to a lower standard than the LIL and are therefore most vulnerable. The converter station at Soldiers Pond and the operation of the LIL are dependent upon the availability of AC power. The loss of the transmission capacity across the isthmus would result in a power shortage on the Avalon which could potentially be more serious than the widespread power outages that occurred in 2013 and 2014.

Reference: CIMFP Exhibit P-01669, *Technical Note Labrador-Island HVdc Link and Island Interconnected System Reliability*, pg. 31; Gilbert Bennett, Hearing Transcript, June 26, 2019, pg. 91

54. The issue of reliability post Holyrood decommissioning was raised with government prior to sanctioning of the Muskrat Falls project. On January 3, 2012, Jerome Kennedy, the Minister of Natural Resources, met with the Consumer Advocate. The Consumer Advocate expressly flagged the reliability concerns in CIMFP Exhibit P-01669 with the Minister at that time. The issue was also discussed by the Board in its Final Report to government in March, 2012.

Reference: CIMFP Exhibit P-01215, Handwritten Notes of Jerome Kennedy re: Meeting with Tom Johnson, January 3, 2012, pg. 3; Jerome Kennedy, Hearing Transcript, December 5, 2018, pg. 43; CIMFP Exhibit P-00052, Public Utilities Board Final Report dated March 30, 2012, pgs. 90-109

55. Mr. Peter Alteen, the President of Newfoundland Power, has testified that there will be a need for some combination of additional back up generation and transmission line upgrades. Mr. Gilbert Bennett confirmed those two possibilities, though neither Nalcor nor Hydro had yet made a decision with respect to the potential reliability upgrades.

Reference: Peter Alteen, Hearing Transcript, December 17, 2018, pg. 19; Gilbert Bennett, Hearing Transcript, June 26, 2019, pg. 92

56. The issue of reliability post-Muskrat Falls and Holyrood decommissioning has been under investigation by the Board since 2014. There has been a large record of expert evidence filed. Newfoundland Power has been an active participant in that proceeding. Newfoundland Power is confident that the Board will make the most appropriate decision to address the reliability of the LIL to the Island Interconnected System and its effect on customers. There is potential for further costs, however these cannot be defined or estimated at this time.

Reference: Peter Alteen, Hearing Transcript, December 17, 2018, pg. 13

ii. *Costs and Customer Rate Impacts*

57. The costs of the Muskrat Falls project may have significant impacts on electricity rates for consumers on the island of Newfoundland, over 90% of whom are customers of Newfoundland Power. Current legislation, Orders in Council and contractual arrangements effectively require that all costs related to the

development and operation of the Muskrat Falls project are to be recovered from the electricity rate payers on the island portion of the province. This includes Nalcor's forecast construction and financing costs of \$12.7 billion and operating costs estimated to range up to \$109 million annually. Nalcor's forecast indicates that electricity rates could increase to 22.89 cents / kWh in 2021, following commissioning of Muskrat Falls.

Reference: CIMFP Exhibit P-00110, Power Advisory Report – Review of the Newfoundland and Labrador Electricity System dated October 26, 2015, pg. 15-16; CIMFP Exhibit P-00127, Nalcor Energy – Muskrat Falls Project Update Presentation dated June 23, 2017, pg. 11 – 15 & 20; CIMFP Exhibit P-04449, *GNL Report - Protecting You From the Cost Impacts of Muskrat Falls* dated April 2019, pg. 9

58. Newfoundland Power's customers are very concerned about future electricity affordability. The Company shares those concerns. Following Nalcor's June 2017 announcement regarding forecast construction costs increasing to \$12.7 billion, Newfoundland Power's customer surveying indicated 84% of its customers were very concerned about future electricity rates. Customers have indicated that they want to know what future rates will look like and what the timing of any increases might be.
59. Currently, electricity costs for approximately 61,000 residential customers exceed \$3,000 annually, and costs for approximately 2,500 commercial and institutional customers exceed \$10,000 annually. Without mitigation, the potential to effectively double electricity rates would have a significant impact on these customers' direct costs of electricity, as well as possible indirect increases in costs of other goods and services. Increasing electricity prices result in decreasing usage, reflecting price elasticity particularly for heating. This effect, together with a provincial economic slowdown, has contributed to declining electricity consumption since 2015.

Reference: CIMFP Exhibit P-00241, CBC news article dated June 28, 2017, pg. 5; CIMFP Exhibit P-04446, Commission of Inquiry Respecting the Muskrat Falls Project presentation by Peter Alteen dated July 16, 2019, pg. 3-6; Peter Alteen, Hearing Transcript, July 16, 2019, pgs. 10-11

60. Newfoundland Power submits that setting electricity rates to attempt recovery of *all* Muskrat Falls project costs from customers on the island of Newfoundland is unreasonable and is inconsistent with the power policy of the Province.

E. Regulatory Oversight

i. Current Process

61. The Board is a specialized tribunal responsible for the regulation of public utilities in the Province. It is a competent and capable regulator that has provided sound and responsible regulation of Newfoundland Power and Hydro, with an appropriate balance between the interests of the utilities and their customers.
62. The Board's role is to ensure consistent implementation of the power policy of the Province. All costs to be recovered through electricity rates should be subject to full regulatory review and approval by the Board.

Reference: CIMFP Exhibit P-04457, *London Economics - Regulatory and policy issues of interest to the Muskrat Falls Inquiry* dated July 11, 2019, pg. 26; CIMFP Exhibit P-00110, *Power Advisory Report - Review of the Newfoundland and Labrador Electricity System* dated October 26, 2015, pg. 20

63. Expert evidence before the Commission indicates that the regulatory framework and the Board's structure and operation are broadly consistent with best practice. Rates have historically been relatively stable and below the national average.

64. London Economics recommended that any expenditure funded through electricity rates must be subject to full regulatory review. Professor Guy Holburn also recommended an upfront regulatory evaluation of proposed projects, as well as a final review of expenditures. His report asserts that the prospect of regulatory scrutiny, and potential disallowance of cost recovery, can “exert a powerful discipline on project management to control costs”. Professor Holburn specifically found that the removal of regulatory oversight of the Muskrat Falls project dulled incentives for cost management and created risk of higher costs.

Reference: *CIMFP Exhibit P-04457, London Economics - Regulatory and policy issues of interest to the Muskrat Falls Inquiry dated July 11, 2019, pg. 26; CIMFP Exhibit P-00528, The Impact of Exempting the Muskrat Falls Project from Oversight by the Newfoundland and Labrador Board of Commissioners of Public Utilities – Report for the Commission of Inquiry Respecting the Muskrat Falls Project dated October 15, 2018 by Professor Guy Holburn. pg. 24-25*

65. To fully address sales to ratepayers, London Economics recommended that the Board should be further empowered, particularly regarding large capital projects.

Reference: *CIMFP Exhibit P-04457, London Economics-Regulatory and policy issues of interest to the Muskrat Falls Inquiry dated July 11, 2019, pg. 29*

66. Newfoundland Power submits that the province’s existing regulatory framework adequately covers sales to ratepayers. Issues arise due to the recovery from ratepayers of costs which have been excluded from regulatory oversight. Of particular concern is the recovery of Muskrat Falls project cost overruns in excess of \$5 billion compared to forecasts at time of project sanction, when the government assessed the project to be least cost.
67. Newfoundland Power supports recommendations to empower the Board regarding review of large capital projects, and require regulatory oversight of all costs to be recovered through electricity rates.

ii. *Export Sales*

68. Evidence before the Commission recommends regulatory oversight of export sales when there is potential for adverse impact on ratepayers, and to ensure appropriate cost allocation and recovery between exports and domestic ratepayers. Newfoundland Power supports these recommendations.

Reference: CIMFP Exhibit P-04457 *London Economics - Regulatory and policy issues of interest to the Muskrat Falls Inquiry dated July 11, 2019, pg. 29*

69. Newfoundland Power observes that there is no experience with oversight of sales to others within the province's existing regulatory framework. Neither the Upper Churchill nor Muskrat Falls developments are subject to Board oversight. As a consequence, it is uncertain whether there is appropriate cost allocation between exports and domestic ratepayers, and a possibility that ratepayers may pay more as a result.

iii. *Environmental Considerations*

70. Evidence before the Commission recommends a coordinated approach to government energy and environmental policy development and implementation. Newfoundland Power supports these recommendations.

Reference: CIMFP Exhibit P-04457, *London Economics - Regulatory and policy issues of interest to the Muskrat Falls Inquiry dated July 11, 2019, p.39*

71. Newfoundland Power observes that the provincial power policy objective of least cost reliable service is compatible with environmental policy. The costs required for utility compliance with all applicable environmental regulations are routinely

assessed and permitted by the Board in determining appropriate costs to be recovered from ratepayers.

iv. Effectiveness of Electricity Pricing Models

72. The Board currently uses a cost of service methodology to match customer electricity rate to utility costs to provide service. Regulatory mechanisms, such as the Rate Stabilization Plan and the Excess Earnings Account, contribute to regulatory efficiency, customer protection, and utility performance incentives. Expert evidence before the Commission considers alternative pricing models, and assesses potential appropriateness based on principles which are broadly consistent with North American regulatory practice.
73. London Economics suggests that the current pricing model in the province can be enhanced. Specific consideration of a performance-based ratemaking method is recommended, based on improving productivity incentives and capital expenditure planning, and linking performance standards to consequences. The report indicates “a transition to PBR will yield only incremental change, orders of magnitude will be small, and PBR cannot make pre-existing costs disappear”.

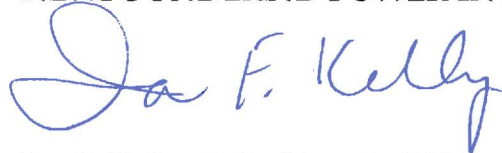
Reference: CIMFP Exhibit P-04457, *London Economics - Regulatory and policy issues of interest to the Muskrat Falls Inquiry dated July 11, 2019*, pgs. 40-41, 47-48

74. Newfoundland Power agrees that enhancements to the cost of service model to incent and ultimately improve efficiency may be possible. Assessment of the appropriateness of changes to provincial power policy and the regulatory framework should be considered based on local circumstances and take a long-term perspective. The Board is well positioned to undertake such an assessment.

Ultimately, the evolution of regulations and mechanisms should be left to the Board's discretion, within the broad direction established by government policy.

ALL OF WHICH IS RESPECTFULLY SUBMITTED this 9th day of August, 2019.

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