



NEWFOUNDLAND AND LABRADOR
BOARD OF COMMISSIONERS OF PUBLIC UTILITIES
120 Torbay Road, P.O. Box 21040, St. John's, Newfoundland and Labrador, Canada, A1A 5B2

E-mail: greg.connors@mcinnescooper.com

2019-02-07

Gregory J. Connors
Counsel for Nalcor
McInnes Cooper
5th Floor, 10 Fort William Building
P.O. Box 5939
St. John's, NL A1C 5X4

Dear Mr. Connors:

Re: Rate Mitigation Options and Impacts Reference - Information Requests

As previously discussed, attached are Information Requests PUB-Nalcor-001 to PUB-Nalcor-074 issued by the Board in relation to the above subject matter. Responses to these requests must be filed by 3:00 p.m. on Monday, February 25, 2019.

If you have any questions or require any clarification, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in cursive script that reads "Sara Kean".

Sara Kean
Assistant Board Secretary

SK/bt

Enclosure

cc Peter Hickman, Nalcor Energy, E-mail: phickman@nalcorenergy.com
Rob Hull, Nalcor Energy, E-mail: robhull@nalcorenergy.com
Geoff Young, Newfoundland and Labrador Hydro, E-mail: gyoung@nlh.nl.ca
Dennis Browne, Q.C., Consumer Advocate, E-mail: dbrowne@bfma-law.com

- 1 **PUB-Nalcor-009** Please describe the activities undertaken by the Power Supply
2 Division of Nalcor, including the assets that the Division is
3 responsible for operating and maintaining and the number of full
4 time equivalent employees in each department or section of the
5 Division.
6
- 7 **PUB-Nalcor-010** Please explain in detail any constraints or restrictions that may exist
8 that would limit or have implications for the consolidation of any
9 activities currently carried out by Nalcor Energy into Newfoundland
10 Hydro.
11
- 12 **PUB-Nalcor-011** Please describe Newfoundland Hydro's distribution system,
13 including the generation facilities, distribution lines, number of
14 customers and number of full time equivalent employees involved
15 in the operation of the system.
16
- 17 **PUB-Nalcor-012** Please provide Newfoundland and Labrador Hydro's annual
18 operating and capital budgets associated with operating the
19 distribution system for the period 2016 to 2018 and forecast for 2019
20 to 2021, inclusive.
21
- 22 **PUB-Nalcor-013** Please explain if and how Newfoundland Hydro and Newfoundland
23 Power cooperate or coordinate in the activities associated with the
24 generation, transmission and distribution of electricity to customers.
25
- 26 **PUB-Nalcor-014** Please provide copies of any agreement between Newfoundland
27 Hydro and Newfoundland Power on the sharing of any services or
28 assets associated with serving customers.
29
- 30 **PUB-Nalcor-015** Please provide the average salary paid by each of Nalcor Energy and
31 Newfoundland Hydro, including all indirect costs such as employee
32 benefits, training, travel etc. and provide the details of the
33 calculation of each average.
34
- 35 **PUB-Nalcor-016** Please provide copies of all agreements relating to the Muskrat Falls
36 Project, including:
37
- 38 (i) Power Purchase Agreement between Newfoundland Hydro
39 and the Muskrat Falls Corporation;
 - 40 (ii) Generator Interconnection Agreement;
 - 41 (iii) Transmission Funding Agreement;
 - 42 (iv) Labrador Island Link Assets Agreement;
 - 43 (v) Labrador Island Link Lease Agreement;
 - 44 (vi) Labrador Island Link Remedies Agreement;
 - 45 (vii) Muskrat Falls Water Rights Agreement; and
 - 46 (viii) Sanction Agreement.

- 1 **PUB-Nalcor-017** Please provide copies of all agreements between Nalcor and Emera
 2 relating to the Muskrat Falls Project and the Maritime Link,
 3 including:
 4
- 5 (i) Maritime Link – Joint Development Agreement;
 - 6 (ii) Energy Access Agreement;
 - 7 (iii) Energy and Capacity Agreement;
 - 8 (iv) Maritime Link (Emera) Transmission Service Agreement;
 - 9 (v) Maritime Link (Nalcor) Transmission Service Agreement;
 - 10 (vi) Nova Scotia Transmission Utilization Agreement;
 - 11 (vii) Joint Operations Agreement;
 - 12 (viii) Newfoundland and Labrador Development Agreement;
 - 13 (ix) Labrador Island Link Partnership Agreement;
 - 14 (x) New Brunswick Transmission Utilization Agreement;
 - 15 (xi) MEPCO Transmission Rights Agreement;
 - 16 (xii) Interconnection Operators Agreement;
 - 17 (xiii) Supplemental Agreement; and
 - 18 (xiv) Inter-Provincial Agreement
- 19
- 20 **PUB-Nalcor-018** Please provide copies of all financing agreements relating to the
 21 Muskrat Falls Project, including:
 22
- 23 (i) Intergovernmental Agreement;
 - 24 (ii) Muskrat Falls Equity Agreement;
 - 25 (iii) Labrador Island Link Equity Agreement;
 - 26 (iv) Labrador Transmission Assets Equity Agreement;
 - 27 (v) Terms and Conditions of the Federal Loan Guarantee 1;
 - 28 (vi) Terms and Conditions of the Federal Loan Guarantee 2;
 - 29 (vii) Muskrat Falls Funding Trust Final Offering Circular.
- 30
- 31 **PUB-Nalcor-019** Please provide copies of all financing agreements relating to the
 32 Muskrat Falls Project, including:
 33
- 34 (i) Labrador Island Link Project Finance Agreement –
 - 35 November 29, 2013;
 - 36 (ii) Labrador Island Link Masters Definition Agreement –
 - 37 November 29, 2013;
 - 38 (iii) Muskrat Falls/Labrador Transmission Assets Project
 - 39 Finance Agreement – November 29, 2013;
 - 40 (iv) Muskrat Falls/Labrador Transmission Assets Masters
 - 41 Definition Agreement – November 29, 2013;
 - 42 (v) Master Trust Indenture – Labrador Island Link Funding
 - 43 Trust–November 29, 2013;
 - 44 (vi) Labrador Island Link Project Finance Agreement – Second
 - 45 Amended–May 10, 2017;

- 1 (vii) Labrador Island Link Masters Definition Agreement –
 2 Second Amended–May 10, 2017;
 3 (viii) Muskrat Falls/Labrador Transmission Assets Project
 4 Finance Agreement – Second Amended – May 10, 2017;
 5 (ix) Muskrat Falls/Labrador Transmission Assets Masters
 6 Definition Agreement – Second Amended – May 10, 2017;
 7 (x) Labrador Island Link Federal Loan Guarantee – November
 8 29, 2013;
 9 (xi) Labrador Island Link Federal Loan Guarantee – May 16,
 10 2017;
 11 (xii) Muskrat Falls/Labrador Transmission Assets Federal Loan
 12 Guarantee – November 29, 2013;
 13 (xiii) Muskrat Falls/Labrador Transmission Assets Federal Loan
 14 Guarantee – May 16, 2017;
 15 (xiv) Muskrat Falls Guarantee for Equity Support Agreement –
 16 November 29, 2013;
 17 (xv) Labrador Island Link Guarantee for Equity Support
 18 Agreement – November 29, 2013; and
 19 (xvi) Labrador Transmission Assets Guarantee for Equity Support
 20 Agreement – November 29, 2013.
 21
- 22 **PUB-Nalcor-020** Has Nalcor determined what it believes is an appropriate rate
 23 mitigation target in cents per kWh for the rate to be charged
 24 domestic customers commencing in 2021 (the first year forecast for
 25 full in-service of the Muskrat Falls Project)? If yes, how was such a
 26 target developed?
 27
- 28 **PUB-Nalcor-021** Has the Government of Newfoundland and Labrador advised or
 29 directed Nalcor Energy or Newfoundland Hydro on any electricity
 30 rate mitigation policy or target to be used for domestic electricity
 31 rates?
 32
- 33 **PUB-Nalcor-022** Nalcor, in its response dated January 9, 2019 to the reports from
 34 Liberty and Synapse stated that it has been “an active participant in
 35 the Rate Mitigation Committee, sponsored by the Department of
 36 Natural Resources.” Please provide the terms of reference or
 37 mandate for this committee.
 38
- 39 **PUB-Nalcor-023** Further to PUB-Nalcor-022, please list the participants on the Rates
 40 Mitigation Committee.
 41
- 42 **PUB-Nalcor-024** Further to PUB-Nalcor-022, please provide copies of the minutes of
 43 all meetings of the Rates Mitigation Committee.

- 1 **PUB-Nalcor-025** Further to PUB-Nalcor-022, please provide all analyses, reports and
2 studies considered by the Rates Mitigation Committee and /or
3 prepared by Nalcor for the Committee.
4
- 5 **PUB-Nalcor-026** Please provide the June 23, 2017 Muskrat Falls Project Update
6 referred to in the September 5, 2018 Reference Questions from the
7 Government of Newfoundland and Labrador. Also provide any
8 update or revision to this Project update, if any. If there has been no
9 revision to date, state when the next update is expected.
10
- 11 **PUB-Nalcor-027** Please provide a table or chart that shows the current (February,
12 2019) electricity rate (excluding HST) in cents per kWh paid by a
13 domestic customer on the Island Interconnected system and in each
14 Atlantic Province and the rates forecast for each for 2021. In the
15 response include the assumptions used in the calculations.
16
- 17 **PUB-Nalcor-028** Please provide a table or chart that shows the current rate paid by a
18 domestic customers in cents per kWh in each Province.
19
- 20 **PUB-Nalcor-029** Please provide Nalcor's current forecast of domestic electricity rates
21 for the period 2019 to 2039, including recovery of all costs
22 associated with the Muskrat Falls Project assuming no rate
23 mitigation policies are implemented.
24
- 25 **PUB-Nalcor-030** Please provide a forecast of all equity returns the Nalcor Group of
26 Companies forecasts will be paid to each of Nalcor and the Province
27 of Newfoundland and Labrador each year under the current
28 contractual agreements related to the Muskrat Falls Project. In the
29 response explain the rationale or basis for the forecast and the
30 assumptions used for the forecast.
31
- 32 **PUB-Nalcor-031** Further to PUB-Nalcor-030, please provide the impact each year on
33 the forecast domestic electricity rate provided in PUB-Nalcor-029 if
34 the returns forecast for each year are applied to the forecast
35 unmitigated domestic electricity rates.
36
- 37 **PUB-Nalcor-032** Please provide a forecast of dividends Nalcor forecasts it will
38 receive each year from 2019 to 2039, inclusive from all sources and
39 provide the assumptions used in determining the forecast.
40
- 41 **PUB-Nalcor-033** Further to PUB-Nalcor-032, please provide the impact each year on
42 the forecast domestic electricity rates provided in the response to
43 PUB-Nalcor-029 if the Nalcor dividends forecast for that year are
44 applied to reduce the forecast domestic electricity rates.

- 1 **PUB-Nalcor-034** Please provide a forecast of net export revenues Nalcor forecasts to
2 receive each year for the period 2019 to 2039, inclusive and provide
3 the assumptions used in determining the forecast.
4
- 5 **PUB-Nalcor-035** Further to PUB-Nalcor-034, please provide the impact each year on
6 the forecast domestic electricity rates provided in the response to
7 PUB-Nalcor-029 if the net export revenues forecast for that year are
8 applied to reduce the forecast electricity rates.
9
- 10 **PUB-Nalcor-036** Please provide a forecast of any annual guarantee fee payments
11 required by the terms of the agreements relating to the loan
12 guarantees provided by the Government of Canada related to the
13 Muskrat Falls Project and describe the terms that require payment
14 of such fees.
15
- 16 **PUB-Nalcor-037** Further to PUB-Nalcor-036, please provide the impact each year on
17 the forecast domestic electricity rates provided in the response to
18 PUB-Nalcor-029 if the guarantee fees are eliminated.
19
- 20 **PUB-Nalcor-038** Please provide a forecast of any sinking fund payments required by
21 the terms of the financing agreements related to the Muskrat Falls
22 Project. In the response also explain the terms of the agreements that
23 require such payments.
24
- 25 **PUB-Nalcor-039** Further to PUB-Nalcor-038, please provide the impact each year on
26 the forecast domestic electricity rates provided in the response to
27 PUB-Nalcor-029 if sinking fund payments under the financing
28 agreements are eliminated.
29
- 30 **PUB-Nalcor-040** Further to PUB-Nalcor-038, please provide the impact each year on
31 the forecast domestic electricity rates provided in the response to
32 PUB-Nalcor-029 if sinking fund payments are deferred for payment
33 from the period 2021-2030 to 2030-2040. In the response provide
34 the assumptions used in calculating the response.
35
- 36 **PUB-Nalcor-041** Provide a forecast of any interest payments required by the terms of
37 the financing agreements for the Muskrat Falls Project to be paid
38 each year. In the response also explain the terms of the agreement
39 requiring such payments.
40
- 41 **PUB-Nalcor-042** Further to PUB-Nalcor-041, please provide the impact each year on
42 the forecast domestic electricity rates provided in the response to
43 PUB-Nalcor-029 if the interest payments are eliminated.
44
- 45 **PUB-Nalcor-043** Has Nalcor considered the implications for the unmitigated revenue
46 requirement required to recover the costs of the Muskrat Falls

- 1 Project of extending the amortization period for the Muskrat Falls
2 Project assets? If yes, please provide copies of any reports or studies
3 completed.
4
- 5 **PUB-Nalcor-044** Please provide the schedule of power purchases by Newfoundland
6 Hydro from Muskrat Falls over the term of the agreement and the
7 assumptions used in the forecast.
8
- 9 **PUB-Nalcor-045** Please provide the current debt and equity components of the
10 Muskrat Falls Project and the amount of additional debt that can be
11 incurred to maximize the debt/equity ratios for the Project. What
12 implications would the issuance of additional debt have for rate
13 mitigation?
14
- 15 **PUB-Nalcor-046** Please provide a detailed schedule of the forecast revenue
16 requirement for the Muskrat Falls Project from 2020 to 2039,
17 including the assumptions used to prepare the forecast.
- 18 **PUB-Nalcor-047** Please provide copies of agreements relating to the Muskrat Falls
19 Project that relate to the sharing of staff, funds and resources among
20 the companies in the Nalcor Group.
21
- 22 **PUB-Nalcor-048** Please provide copies of agreements between Nalcor Energy and
23 any related or associated company, including Churchill Falls
24 (Labrador) Company which provides for services related to the
25 Muskrat Falls Project.
26
- 27 **PUB-Nalcor-049** Please provide the forecast revenue requirements for the total Island
28 Interconnected system for the period 2019 to 2039, inclusive and
29 include the assumptions used in the preparation of the forecast.
30
- 31 **PUB-Nalcor-050** Please provide a detailed breakdown of the forecast operating and
32 maintenance costs (O&M) for the Muskrat Falls Project which were
33 forecast in the June 23, 2017 Muskrat Falls Project Update to have
34 increased from \$34 million to \$107 million and provide the most
35 recent forecast of the O&M costs, explaining the variances from the
36 June 23, 2017 forecast to the current forecast.
37
- 38 **PUB-Nalcor-051** Further to the response to PUB-Nalcor-050, please explain in detail
39 the reasons for the increase in O&M for the Muskrat Falls Project
40 from \$34 million to \$107 million.
41
- 42 **PUB-Nalcor-052** Please provide a table showing the amount of revenue requirement
43 for rate mitigation required for each year from 2021 to 2030 to
44 smooth out rates over this period using separate scenarios for 14

- 1 cents to 18 cents per kWh escalating each year until the forecast
2 “unmitigated” rate is achieved in 2030.
3
- 4 **PUB-Nalcor-053** Please provide a table showing the amount of revenue requirement
5 for rate mitigation required for each year from 2021 to 2030 using
6 separate scenarios for current domestic rates, and domestic rates at
7 16 cents to 18 cents per kWh in 2021 escalating at 2.25% per year
8 until 2030. Include any underlying assumptions used.
9
- 10 **PUB-Nalcor-054** Please provide a table that shows for each year 2019 to 2030
11 Nalcor’s forecast of the unmitigated revenue requirement, the
12 revenue requirement with Nalcor dividends applied, the revenue
13 requirement if the domestic electricity rate is set at 17 cents per kWh
14 and the impact on the unmitigated revenue requirement of each of
15 the elimination of the guarantee fee, the sinking fund payments and
16 interest payments.
17
- 18 **PUB-Nalcor-055** Please provide a table that shows for each year 2019 to 2030, the
19 forecast domestic electricity rate, the rate with Nalcor dividends
20 applied to offset the rate, and the rate with both the Nalcor dividends
21 applied and sinking fund payments eliminated.
22
- 23 **PUB-Nalcor-056** During Newfoundland Hydro’s 2017 General Rate Application it
24 was noted that approximately \$60 to \$70 million would reduce
25 domestic electricity rates by one cent per kWh. Please confirm if
26 this is an appropriate guideline to consider in the discussions and
27 analysis for rate mitigation.
28
- 29 **PUB-Nalcor-057** Please provide Newfoundland Hydro’s monthly load (GWh) and
30 peak demand (MW) for both the Island Interconnected System
31 (“IIS”) and the Labrador Interconnected System (“LIS”) broken
32 down by rate class for the period 2008 to 2018 and forecast for 2019
33 to 2030, inclusive. For each of the two systems (IIS and LIS) provide
34 a breakdown between Hydro sales and Hydro system losses for
35 GWh load and MW peak demand by month.
36
- 37 **PUB-Nalcor-058** Please provide a copy of the Five Year Conservation Plan for 2016
38 to 2020 that has been filed with the Board.
39
- 40 **PUB-Nalcor-059** Further to PUB-Nalcor-058, please provide copies of any reports
41 filed with the Board in relation to this Plan, including any progress
42 reports, evaluation studies and cost recovery related filings for the
43 programs.

1 **PUB-Nalcor-060** Please provide the following information regarding historical
 2 energy efficiency and conservation programs broken out by program
 3 and by year, where applicable, for the period 2009 to 2018:

- 4 (i) Budgets and expenditures;
 5 (ii) Savings (peak demand, first year and lifetime savings for
 6 electricity; first year and lifetime savings for other fuels);
 7 (iii) Average measure life (years);
 8 (iv) Number of customers eligible for the program;
 9 (v) Number of customers participating in the program;
 10 (vi) Cost effectiveness results, assumptions, and methodology,
 11 including avoided cost information; and
 12 (vii) A description of the cost recovery mechanism in these
 13 programs, and what costs are recovered.
 14

15 **PUB-Nalcor-061** Please provide the following information regarding current and
 16 future energy efficiency and conservation programs broken out by
 17 program and by year, where applicable, for the period 2019 to 2030:
 18

- 19 (i) Budgets;
 20 (ii) Savings (peak demand, first year, and lifetime savings for
 21 electricity; first year and lifetime savings for other fuels);
 22 (iii) Average measure life (years);
 23 (iv) Number of customers eligible for the program;
 24 (v) Number of customers participating in the program;
 25 (vi) Cost effectiveness results, assumptions, and methodology,
 26 including avoided cost information;
 27 (vii) A description of the cost recovery mechanism in these
 28 programs, and what costs are recovered.
 29

30 **PUB-Nalcor-062** In a tabular format, please provide the forecast market prices by
 31 month and on/off peak periods for potential export of Muskrat Falls
 32 Project power, post commissioning to 2039, including the
 33 following; all forecast market price points, (e.g. Massachusetts
 34 HUB, New Brunswick, Nova Scotia, Quebec, New York) as
 35 applicable; information on losses and tariff cost assumptions
 36 contained in the forecast; and description of product (e.g. non-firm
 37 energy, firm energy, capacity and other).
 38

39 **PUB-Nalcor-063** Please provide the following in a spreadsheet format for all sources
 40 of export power for the period 2020 to 2039, including the
 41 following:
 42

- 43 (i) The quantity in GWh of excess energy exports, by location,
 44 by month, and for on-peak and off-peak periods;

- 1 (ii) The quantity of losses in GWh associated with the export
2 quantity;
3 (iii) The monthly quantity (MW) associated with exports for each
4 month and each on-peak and off-peak period for each year;
5 (iv) The prices, by location, by month, and by on-peak and off-
6 peak period; and
7 (v) The forecast operating and administrative costs, and any
8 other computations that are required to provide the end result
9 of the net export revenue reported by Nalcor and
10 Newfoundland Hydro.
11

PUB-Nalcor-064

12 Please provide any reports that were prepared by or for Nalcor in the
13 past two years describing the outlook for the marketing of surplus
14 Muskrat Falls Project power.
15

PUB-Nalcor-065

16 Please provide the historical export and import price and quantities
17 to/from Nova Scotia, by on/off peak, by month since the
18 commissioning of the Maritime Link. Note and explain any other
19 additional charges or terms that would affect the overall valuation
20 of exported or imported energy.
21

PUB-Nalcor-066

22 Please provide the forecast export and import price and quantities
23 to/from Nova Scotia via the Maritime Link, by on/off peak, by
24 month through 2039 (or available). Note and explain any other
25 additional charges or terms that would affect the overall valuation
26 of exported or imported energy.
27

PUB-Nalcor-067

28 Please provide the historical export and import quantities, including
29 the overall losses incurred, to/from Labrador via the Labrador Island
30 Link ("LIL") by on/off peak, by month since the completion of the
31 LIL. If prices or costs are associated with these flows, please provide
32 and explain the sources for such prices or costs.
33

PUB-Nalcor-068

34 Please provide the forecast export and import prices and quantities
35 to/from Labrador via the LIL and from Muskrat Falls to Churchill
36 Falls via the Labrador Transmission Assets ("LTA"), by on/off
37 peak, by month through 2039 (or available).
38

PUB-Nalcor-069

39 Please provide the historical export and import quantities to/from
40 Quebec (or other destinations via Quebec) from/to Labrador, by
41 on/off peak period, by month through the end of 2018.
42

PUB-Nalcor-070

43 Please provide the forecast export and import quantities to/from
44 Quebec (or other destinations via Quebec) from/to Labrador, by
45 on/off peak period, by month from 2019 through 2039 (or available).

- 1 **PUB-Nalcor-071** Please provide any recent reports or analyses conducted by
2 Newfoundland Hydro assessing electrification possibilities for the
3 Province. Please provide any further documentation Newfoundland
4 Hydro may have on the prospects for, or implications of, increased
5 electrification of end uses (transport, buildings, industry).
6
- 7 **PUB-Nalcor-072** Please provide any summary data Newfoundland Hydro has on the
8 percentage of residences and commercial businesses that use electric
9 heat as the primary heating system and on the proportion of electric
10 heating systems that use heat pumps in addition to or in lieu of
11 electric resistance heating.
12
- 13 **PUB-Nalcor-073** Please provide Newfoundland Hydro's system hourly load profile
14 (8760) for a recent year, and as available provide hourly profiles for
15 the residential, commercial, and industrial sector aggregate loads.
16
- 17 **PUB-Nalcor-074** Please provide any Newfoundland Hydro load forecast estimates
18 reflecting changes in load due to different future retail price
19 projections (i.e., estimation of underlying elasticity effects) and any
20 explanations for the underlying rationale for such projections.

DATED at St. John's, Newfoundland this 7th day of February, 2019.

BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

Per 
Sara Kean
Assistant Board Secretary