

**Reference from the Lieutenant-governor in Council
On the Muskrat Falls Project
(the “Muskrat Falls Review”)
REQUESTS FOR INFORMATION**

1
2 CA/KPL-Nalcor-157 Consumer Question: NALCOR has offered that although there has been
3 reduction in the total population of Newfoundland from 1990 – 2005 there
4 has been an increase in domestic customers. This has been attributed
5 (Page 24 – main submission) to the number of people above 25 years
6 old, who are entering the housing market. From the provincial
7 government department of statistics there will be a leveling of this age
8 percentile in the 2016-2020 period. However, this does not seem to be
9 reflected in the predicted customer growth during the remainder of the
10 2010 – PLF. NALCOR is requested to provide commentary on this.

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12 CA/KPL-Nalcor-158 Consumer Question: Based on the current demand projections to 2067,
13 and the general assumption that there is limited industrial growth, what is
14 the final estimated numbers of domestic customers in 2067. What would
15 be the average persons per household based on domestic customers,
16 and total population.

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18 CA/KPL-Nalcor-159 Consumer Question: Considering the unique challenges faced in rural
19 Newfoundland does NALCOR track home abandonment in the demand
20 projections, or is it just purely housing starts which are included within the
21 econometric modeling.

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23 CA/KPL-Nalcor-160 Consumer Question: The Newfoundland Government Department of
24 Statistics provide an estimate of households on the NE Avalon, following
25 a HIGH, MEDIUM and LOW projection.
26 [Ref: [http://www.economics.gov.nl.ca/pdf2008/Population](http://www.economics.gov.nl.ca/pdf2008/Population%20and%20Household%20Projections_2008%20(web).pdf)
27 [%20and%20Household%20Projections_2008%20\(web\).pdf](http://www.economics.gov.nl.ca/pdf2008/Population%20and%20Household%20Projections_2008%20(web).pdf)] This has
28 estimated a HIGH estimate of 1000 new homes per year. Considering
29 the economic shift from RURAL to the NE Avalon the household

projections used by NALCOR appear to be on the upper bound.
NALCOR are asked to describe any differences from that published 3
years ago by the Department of Finance and that used by NALCOR in
their projections.

CA/KPL-Nalcor-161 Consumer Question: Within Exhibit 101 (Navigant Report) there is a
reference to a CPW of a "low demand profile". NALCOR are requested
to provide how this will impact the cost to the consumer on a kw-hr basis.

CA/KPL-Nalcor-162 Consumer Question: The EMERA term sheet references the "NS Block
of Power" which equates to 980 GWhr which is provided in exchange for
construction of the Maritime Link, the enabler of additional power sales.
However when considering the Muskrat Falls power purchase profile,
assumed in the interconnected island case, there is a potential deficiency
in total energy observed around 2035. NALCOR are requested to
confirm if the EMERA commitment will provide an energy shortfall in the
interconnected option?

CA/KPL-Nalcor-163 Consumer Question: With respect to the potential power exports in the
early stages of the project can it be confirmed that the revenue will be
directed to lower rate payer rates. Please provide a Yes or No answer.

(a) If Yes, what is the expected power sales, and how much will the rates
decrease because of the Emera partnership.

(b) If No, please explain to the NL rate payer as to why not.

CA/KPL-Nalcor-164 Consumer Question: Figure 6 of the main submission of November 10,
2011 provides the hourly demand profile used in the CPW analysis. Can
this be confirmed that this is a 2010 hourly demand profile?

CA/KPL-Nalcor-165 Consumer Question: Can NALCOR please confirm if this hourly/monthly
profile (exhibit 2) is used throughout the analysis. How is it increased on
a go forward basis? Is it just increased by a ratio similar to the

1 estimated growth in annual total energy?

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3 CA/KPL-Nalcor-166 Consumer Question: Can NALCOR provide commentary regarding how
4 the transition to a customer base increasingly dominated by home heating
5 requirements may affect this hourly demand profile.
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7 CA/KPL-Nalcor-167 Consumer Question: NALCOR has previously advised through the RFI
8 process that there has been no material negotiations with Hydro Quebec
9 concerning the purchase of power from the Upper Churchill facility. Has
10 NALCOR reviewed the Guaranteed Winter Availability Contract (signed in
11 1998) as a means to provide the provinces peak energy requirements
12 during the winter months.
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14 CA/KPL-Nalcor-168 Consumer Question: NALCOR is requested to provide a CPW analysis
15 for the interconnected island option with no Muskrat Falls, with Churchill
16 Falls power available at a rate consistent with a Class L customer within
17 Hydro-Quebec. This is roughly 2.97 cents per kwhr.
18

19 CA/KPL-Nalcor-169 Consumer Question: Considering the 80 MW recall power, the 26 MW
20 Portland Creek Facility and the additional system reliability provided by
21 the LIL when is the anticipated period of peak and total energy deficiency
22 in a delayed MF scenario?
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24 CA/KPL-Nalcor-170 Consumer Question: NALCOR appear to be utilizing an earned value
25 assessment of combining schedule and costs. Based on the level of
26 work currently completed what is the earned value assessment (Actual
27 Cost of Work Performed, Budgeted Costs of Work Performed, Efficiency
28 etc)
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30 CA/KPL-Nalcor-171 Consumer Question: How does the PME % compare to other
31 hydro-electric projects of similar size.
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33 CA/KPL-Nalcor-172 Consumer Question: Considering the EPCM contract has been awarded
34 how to the PME rates compared to those included within the original

1 estimates? What is the impact on the estimates used in the CPW
2 analysis,

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4 CA/KPL-Nalcor-173 Consumer Question: The EPCM procurement website has indicated that
5 there are a number of major packages which proposals have been
6 received, but award is not completed (presumably pending project
7 sanction). Has there been any noticeable cost growth in the total project
8 estimate since the CPW analysis completed in the November 10th
9 submission has been completed.

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11 CA/KPL-Nalcor-174 Consumer Question: NALCOR are requested to provide examples of
12 other subsea cable projects where HDD methods have been used on
13 both ends.

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15 CA/KPL-Nalcor-175 Consumer Question: Has a full analysis of EMERA power requirements
16 been completed in Strategist. What additional capacity requirements are
17 required for the interconnected scenario in the winter months? Has this
18 been completed on an hourly basis over the full period of 2017 – 2067.

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20 CA/KPL-Nalcor-176 Consumer Question: With the EMERA cable, and considering the current
21 planned generation, what is the LOLH for the following years 2017, 2024,
22 2030, 2035.

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24 CA/KPL-Nalcor-177 Consumer Question: NALCOR requested to provide a monthly profile for
25 MF generation, Island Consumption and potential export sales in the
26 interconnected island option. This shall be for 2035 when there is a
27 deficiency anticipated per the 980 GWhr commitment to emera.

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29 CA/KPL-Nalcor-178 Consumer Question: What would be a realistic price for surplus energy
30 considering that it is to be sold primarily in off peak times. The GWAC
31 contract has a very pronounced difference in peak and non-peak rates in
32 the winter (Peak = 22.8 \$/MW-hr versus Non-Peak = 6.7\$ \$/MW-hr). Is
33 this considered representative?

CA/KPL-Nalcor-179 Consumer Question: Based on market rates in the final selling point, what would be the kw-hr value to the NL rate payer considering the transmission, tariffs and other charges which must be taken off the top.

CA/KPL-Nalcor-180 Consumer Question: Does the predicted potential energy sales (largely in summer) have a higher CPW than the additional fuel and infrastructure costs required to meet the winter period demands required if the EMERA deal proceeds. Is there a clear commercial advantage to partnering with EMERA based on the current demand projections, or is it purely a form of risk mitigation if the demand profile does not materialize.

CA/KPL-Nalcor-181 Consumer Question: The total energy demands from 2029 – 2067 have been extrapolated from the 2010-PLF. In this period the Peak Demand (MW) appears to be a constant ratio to the total energy (GWhr). That is, the Peak Demand in MW is the total energy divided by 5.1. However a review of the historical statistics (1978-2010) show that this ratio is not consistent at 5.1 but varying with a ever decreasing trend. As the economics of both scenarios are dependent upon any additional generation capacity that may be required to service the domestic needs in winter, it is considered very important that this “ratio” be accurate. NALCOR is requested to clarify how the peak capacity (MW) was extrapolated in the period from 2029-2067.

CA/KPL-Nalcor-182 Consumer Question: Although the information is provided within a number of exhibits and references can NALCOR provide a clear listing of the following parameters in the CPW analysis

Return on Equity
Interest on Debt
IRR on regulated
IRR on unregulated
Discount Rate

This is requested to be clearly defined for both the interconnected and

1 isolated options.

2
3 CA/KPL-Nalcor-183 Consumer Question: The discount rate used in the CPW analysis is 8%
4 which is the WACC for the interconnected island. This has been used
5 for the isolated option as well. Is this valid, or should a separate discount
6 rate be used for the isolated alternative, which reflects the thermal
7 generation.

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9 CA/KPL-Nalcor-184 Consumer Question: What was the discount rate used in historical
10 economic analysis completed by Newfoundland Hydro for thermal plants.

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12 CA/KPL-Nalcor-185 Consumer Question: Considering the considerable risk associated with
13 the Interconnected option (lower than expected domestic sales) should a
14 hurdle approach, or risk premium approach, be adopted by NALCOR.
15 They have actually taken an opposite view in accepting a lower rate of
16 return for the interconnected island option. It should be noted that such
17 a penalty should not be adopted to isolated option, as in the event of
18 HIGH oil prices a future decision can be made to construct MF.

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21 Dated at St. John's in the Province of Newfoundland and Labrador, this 2nd day of February,
22 2012.

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