

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

1 CA/KPL-Nalcor-125 Consumer Question: Nalcor has used a power purchase
2 agreement with pricing based on the Bruce Power model (to create lower
3 rates in the early years than there would be if a traditional utility cost of
4 service pricing (COS) model had been used) for the Muskrat Falls
5 generating site (using 100 %equity financing). Nalcor has used a
6 traditional utility cost of service (COS) pricing for the TL from
7 Labrador (with 75% debt/25% equity). Based on this Nalcor
8 preferred pricing model Muskrat Falls power is delivered to Soldiers Pond
9 at a cost of 14.3 cents per kWh (or if not 14.3 cents per kWh please
10 provide correct rate in cents per kWh). Please confirm.

11
12 CA/KPL-Nalcor-126 Consumer Question: In the reply to PUB-Nalcor 46 regarding a cost of
13 service (COS) price for Muskrat Falls power in year 1, Nalcor states that
14 an internal rate of return (IRR) of 8.4% was used "On this basis the cost
15 of service in year 1 would be \$214/ MWh".

16
17 (a) Is the cost of the TL from Labrador included in the \$214 /MWh?

18
19 (b) If so, provide a breakdown of the \$214 /MWh cost between the
20 Muskrat Falls site and the TL.

21
22 (c) Provide the in service capital costs (separately for the Muskrat Falls
23 site and for the TL) used to calculate the COS \$214 MWh year 1
24 price.

25
26 (d) Please provide a breakdown on debt/equity ratios/interest rates/return
27 on equity used for the \$214 MWh cost (separately for Muskrat Falls
28 site and TL).

29
30 (e) Instead of using the 8.4% IRR, can Nalcor provide the COS Muskrat

Falls power price in year 1 (for the Muskrat Falls site plus TL) using the same assumptions as used for TL COS pricing regarding debt/equity ratios same interest rate for debt and the same return on equity)?

CA/KPL-Nalcor-127 Consumer Question: On a COS basis Nalcor will sell Muskrat Falls power to Hydro at \$214 MWh in year 1. Based on the \$214 /MWh COS price what is the price in \$ per MWh that Hydro will sell Muskrat Falls power to Newfoundland Power in year 1?

CA/KPL-Nalcor-128 Consumer Question: Nalcor has provided a \$214/ MWh cost for Muskrat Falls in year 1 on a COS basis. Can Nalcor provide the cost in \$ per MWh in year 1 using their preferred pricing model? (Power Purchase Agreement for Muskrat Falls site and COS for the TL)?

CA/KPL-Nalcor-129 Consumer Question: In PUB/Nalcor-46 in the reply, " Nalcor has prepared an annual cost of service model".

(a) Can Nalcor provide a copy of the annual cost of service model?

(b) Can Nalcor provide the detailed sections of the model used for the \$214 MWh COS price calculation (or the detailed working papers)?

CA/KPL-Nalcor-130 Consumer Question: Nalcor is the developer of the \$6.2 Billion Muskrat Falls project. Nalcor sells Muskrat Falls power to Hydro. Hydro sells Muskrat Falls power to Newfoundland Power (NP). NP sells Muskrat Falls power to the consumer. Based on the projected consumer retail rate of 16.4 cents per kWh in 2017, please provide a breakdown in cents per kWh of each of the 3 profits included in the 16.4 cents per kWh retail consumer power rate.

(a) On the Nalcor sale of Muskrat Falls to Hydro provide in cents per kWh the Nalcor profit included in the 16.4 cents consumer retail rate.

1 (b) On the Hydro sale of Muskrat Falls power to NP provide in cents per
2 kWh the Hydro profit included in the 16.4 cents consumer retail rate.

3
4 (c) On the NP sale of Muskrat Falls power to the consumer provide in
5 cents per kWh the NP profit included in the 16.4 cents per kWh
6 consumer retail rate.

7
8 CA/KPL-Nalcor-131 Consumer Question: Nalcor has been used to develop Muskrat Falls,
9 rather than developing Muskrat Falls directly through Hydro (a regulated
10 utility). Using Nalcor as the developer of Muskrat Falls produces a CPW
11 preference of \$2.2 Billion for the Muskrat Falls option. The CPW
12 analysis looks at projects costs only. Nalcor sells power to Hydro under a
13 power purchase agreement (PPA) based on the Bruce Power model
14 (designed to have low power prices in the earlier years). This PPA cost
15 from Nalcor is used as a cost for Hydro in the CPW analysis. At MHI
16 -Nalcor-18, Nalcor states, "The supply of MF energy is through a power
17 purchase agreement and not on a cost of service basis. Exhibit 15
18 shows the development of the power purchase agreement price to Hydro
19 (which is reflected in the CPW analysis), and the inputs used in exhibit 15
20 are those for the developer of MF, not Hydro ." This CPW preference of
21 \$2.2 Billion would change If Hydro developed Muskrat Falls directly,
22 what is the CPW if Hydro as a regulated utility developed Muskrat Falls
23 directly?
24

25 CA/KPL-Nalcor-132 Consumer Question: In its April 1, 2011 letter to the Joint Panel Nalcor
26 make the following statements (on page 4):

27
28 "The 7.7 cents per kWh figure is a levelized unit energy cost (LUEC) for
29 Muskrat Falls generation only calculated the traditional way – the present
30 value of costs divided by the present value of output. A critical feature of
31 this type of analysis is that the output is total plant capability, in the case
32 of Muskrat Falls, this is 4.9 TWh annually.

33
34 The 14.3 cents per kWh figure is the equivalent escalating price for the

1 Island market, assuming that the entire cost of the Muskrat Falls
2 generating station and the Labrador-Island Transmission Link is
3 recovered based on projected demand in the Island market. The price
4 per kWh is expressed in real terms and escalates according to CPI.
5

6 Please cite a definition of the LUEC from electrical industry sources.
7

8 CA/KPL-Nalcor-133 Consumer Question: With reference to CA/KPL-Nalcor-132, the LUEC,
9 as Nalcor defines it, is based on the present value of costs divided by the
10 present value of output. Which costs are included, capital only or all
11 costs, including fuel and maintenance?
12

13 CA/KPL-Nalcor-134 Consumer Question: With reference to CA/KPL-Nalcor-132, how is the
14 "present value of output" priced. Value implies price. How is the price
15 calculated?
16

17 CA/KPL-Nalcor-135 Consumer Question: With reference to CA/KPL-Nalcor-132, does the
18 7.7 cents per kWh include transmission cost? If so, what is the
19 transmission component? If not, how much has to be added for
20 transmission?
21

22 CA/KPL-Nalcor-136 Consumer Question: With reference to CA/KPL-Nalcor-135, if the 7.7
23 cents per kWh is based on total plant capability, namely 4.9 TWh, then, if
24 the Island is going to use only 2.0 TWh initially, will the cost be
25 proportionately higher on the basis of energy actually used?
26

27 CA/KPL-Nalcor-137 Consumer Question: If Emera is taking 1.0 TWh throughout the next 35
28 years, with no energy charge, then will this factor alone increase the cost
29 to consumers on the Island, who will be paying for 4.9 TWh and will have
30 access to only 3.9 TWh and initially will use only 2.0 TWh?
31

32 CA/KPL-Nalcor-138 Consumer Question: With reference to CA/KPL-Nalcor-132, is the 7.7
33 cents comparable with the 14.3 cents per kWh, given the use of the term
34 "equivalent" in paragraph 2 of the quote?

1
2 CA/KPL-Nalcor-139 Consumer Question: What capital structure is assumed to underlie
3 these numbers? How much equity and how much debt and what is the
4 cost assumed for each of cost and equity.
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6 CA/KPL-Nalcor-140 Consumer Question: What is the delivered cost per kWh of energy
7 delivered to the Island in 2017 and what will be the price to the
8 consumer?
9
10 CA/KPL-Nalcor-141 Consumer Question: If energy sales are made to other consumers at a
11 lower price than paid by Island consumers, will this increase the price to
12 other consumers?
13
14 CA/KPL-Nalcor-142 Consumer Question: On page 5 of the April 1, 2011 letter to the Joint
15 Panel Nalcor states that the capital structure for Muskrat Falls generation
16 is 59/41 debt/equity. At [http://www.nalcorenergy.com/assets/infocentre](http://www.nalcorenergy.com/assets/infocentre_infosheets_capitalinvestmentprofilefinal.pdf)
17 [_infosheets_capitalinvestmentprofilefinal.pdf](http://www.nalcorenergy.com/assets/infocentre_infosheets_capitalinvestmentprofilefinal.pdf) Nalcor states that "The cost
18 to build the generating facility and transmission link to Churchill Falls will
19 be paid through an equity investment from the Government of
20 Newfoundland and Labrador". In CA/KPR-Nalcor 20 Nalcor states that the
21 capital structure is 100% equity. Please clarify your capital structure
22 assumptions along with assumptions on the cost of equity and debt
23 underlying the 7.7 and 14.3 cent numbers.
24
25 CA/KPL-Nalcor-143 Consumer Question: Further to CA/KPL-Nalcor-142, the costs cited
26 above are wholesale costs. Please add retail costs and allow for inflation
27 in costs on the part of the retail distributor, whether it is Newfoundland
28 Power or Hydro.
29
30 CA/KPL-Nalcor-144 Consumer Question: PUB-Nalcor 46 answers the question: "If 'cost of
31 service' ('COS') pricing were applied in determining the power purchase
32 price, what would be the power purchase price paid by Hydro to Nalcor
33 for Muskrat Falls power and energy in the first year of supply." The
34 answer given is \$214 per MWh. Is this a blended cost or is it the cost of

1		Muskrat Falls power on its own?
2		
3	CA/KPL-Nalcor-145	Consumer Question: If the \$214 is a blended rate what would be the
4		rate for Muskrat Falls power on its own?
5		
6	CA/KPL-Nalcor-146	Consumer Question: What would be the rate, blended and unblended, if
7		the return on equity were 12%?
8		
9	CA/KPL-Nalcor-147	Consumer Question: Nalcor has decided to build Muskrat Falls
10		(generation) through a power purchase agreement between Nalcor
11		Energy, a non-regulated company and Newfoundland and Labrador
12		Hydro, a regulated public utility. Muskrat Falls will not become part of the
13		regulated rate base of Hydro. How does the PUB perform its due
14		diligence to ensure that power purchase agreements represent least cost
15		of power when their operations remain outside of a cost of service
16		framework?
17		
18	CA/KPL-Nalcor-148	Consumer Question: Does the PUB treat all PPAs equally or do larger
19		blocks receive greater prudential scrutiny, in light of the fact that the
20		assets do not enter into the regulatory rate base?
21		
22	CA/KPL-Nalcor-149	Consumer Question: Should a power purchase agreement for Muskrat
23		Falls be accorded a higher level of regulatory oversight, in light of its
24		magnitude, than would be accorded to smaller generation facilities?
25		
26	CA/KPL-Nalcor-150	Consumer Question: In Exhibit 36 Nalcor cites the Bruce Power lease
27		arrangement as a regulatory precedent to reduce prices in the early years
28		of the Muskrat Falls project and to shift dividend payments to the back
29		end of the time horizon. Has this precedent been deemed to be
30		consistent with generally accepted accounting principles for public
31		utilities?
32		
33	CA/KPL-Nalcor-151	Consumer Question: Has the National Association of Regulatory Utility
34		Commissioners (NARUC), or other public utility associations, established

principles to be followed when utilities depart from traditional cost of service regulation?

CA/KPL-Nalcor-152 Consumer Question: Will there be a separate corporate entity (or entities) to facilitate the agreement between Emera and Nalcor?

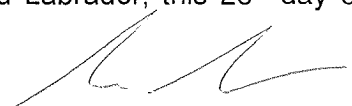
CA/KPL-Nalcor-153 Consumer Question: Will this separate entity own the transmission lines and subsea crossing between Muskrat Falls and Granite Canal? If yes, will the corporate entity be regulated by the PUB?

CA/KPL-Nalcor-154 Consumer Question: Is there any precedent for a non-regulated transmission company to operate on the basis of a power transmission agreement (analogous to power purchase agreements, or PPAs)? If not, will Emera become an equity participant in Newfoundland and Labrador Hydro?

CA/KPL-Nalcor-155 Consumer Question: Will the Maritime Transmission Link, to be owned 100% by Emera, begin at Granite Canal or Bottom Brook?

CA/KPL-Nalcor-156 Consumer Question: Will Emera fully own transmission lines located on the Island of Newfoundland? If so, will they be subject to the regulatory authority of the PUB?

Dated at St. John's in the Province of Newfoundland and Labrador, this 26th day of January, 2012.



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