

- 1 Q. Regarding the information provided in 'Exhibit 15 PWC S245 Subsheet Summary
2 2010PLF PUB Review', please provide the original Excel workbook printed out as
3 Exhibit 15, plus the following information:
4
- 5 a. Derivation of the chosen discount rate of 7.30% for Muskrat Falls.
6
- 7 b. Understanding that the PWC analysis assumes 100% equity, why does the
8 total equity invested in the Muskrat Falls Project (\$2,852.91MM) not match
9 the stated "Direct capex (escalated nominal \$MM)" of \$2,869?
10
- 11 c. Footnote 1 indicated that \$2,869 MM "Includes interest during construction,
12 financing fees, and debt service reserve". Why would these be included for
13 an analysis based on 100% equity? If they are not actually zero, please
14 provide the amounts associated with these three cost elements.
15
- 16 d. Please breakout the 'Nominal Equity Return (Post-Innu)' line on pp. 4-8, into
17 all revenue and cost components, including PPA revenues, Innu payments,
18 etc. demonstrating that they add to the 'Nominal Equity Return' line in the
19 Exhibit.
20
- 21 e. How are Innu payments determined?
22
- 23 f. Please confirm that the PPA tariff charged to NL Hydro in the CPW analysis is
24 \$75.82/MWh at MF busbar (2010 CAD), escalated annually 2%. Within the
25 PPA itself, what is the date within the year that the escalation formula will
26 be applied, or will the escalation be applied monthly commencing on a

specific date in 2010? If this has not yet been confirmed in a PPA document, please explain how this escalation has been modelled.

g. Please provide the annual energy delivered to the busbar (in GWh) underlying the 'Nominal Equity Return' line on pp. 4-8; what classes of energy were used in the total (e.g. firm, average, etc.); their proportions; and the source documents or specific calculations used in determining the volumes of each class of energy'. How were the proportions used for each class of energy in the total determined?

h. Please describe the underlying basis, approach, assumed energy volumes, and financial objectives used in selecting a PPA tariff strategy to reflect Muskrat Falls' costs to Newfoundland Hydro, and determining the appropriate PPA tariff that was incorporated in the CPW summary.

i. Regarding the document provided, identified as 'CE 27 Summary of Studies on Firm and Average Energy Projection', please explain any difference in assumed energy volumes between those used per 1).h. above and those indicated in 'CE 27'.

j. Please provide the annual energy delivered to Soldier's Pond station from Muskrat Falls.

k. Besides the PPA energy tariff determined by the PWC analysis, what other revenues or costs accrue to the Province, as the ultimate equity owner, resulting from the operations of Muskrat Falls (e.g. water rentals, etc.), and are they part of the 'Nominal Equity Return' figures?

- 1 A. Please see attached MHI-Nalcor-58 Exhibit 15 Excel workbook. Subcomponent
2 answers follow below.
3
4 a. This rate was chosen by Nalcor as an estimate of the borrowing cost for the
5 Muskrat Falls project, should Muskrat Falls secure debt financing on a non-
6 recourse (to Nalcor or the Province) basis. This rate is used by Nalcor for
7 analytical purposes with respect to the Muskrat Falls project, and is not
8 intended to supplant the 8% rate used for CPW calculation purposes.
9
10 b. Reconciliation of capital expenditure (\$2,869) to equity investment (\$2,852.91)
11 in millions of dollars is provided in the attached detailed Excel workbook re
12 MHI-Nalcor-58(d) and has been summarized below:
13

Capital expenditures	\$2,869.22
Equity investment	(\$2,852.91)
Innu payments	\$32.14
Revenues pre full power	(\$111.33)
Water power royalty	\$3.66
Cash carried forward to ops phase	\$56.38
Working capital	\$2.83
Balance proof	\$0.00

- 14
15
16 c. In a 100% equity case, these financing amounts equal zero. The footnote is a
17 generic note embedded into the financial reporting summary table.
18

- 1 d. See attached Excel workbook, “Annual Figures (Net Cash Flow Analysis PWC
2 245), (filed as Confidential Exhibit CE-53).
3
- 4 e. Payments to Innu Nation on behalf of the Labrador Innu are based on the terms
5 of the Tshash Petapen (New Dawn) Agreement (filed as Exhibit 56) which
6 provides for implementation payments during construction, and a royalty of 5%
7 of defined net cashflow.
8
- 9 f. The PPA tariff charged to NL Hydro in the CPW analysis is \$75.82/MWh at MF
10 busbar (2010 CAD), escalated annually 2%. These calculations are illustrated in
11 the Excel file MHI-Nalcor-49.2 OperatingandPPACosts. The supply price is
12 assumed to escalate each January 1 in accordance with the anticipated terms of
13 the PPA which is not finalized at this date.
14
- 15 g. Please refer to the Excel file MHI-Nalcor-49.2 OperatingandPPACosts for annual
16 energy values. The energy flows to the Island from Muskrat Falls have been
17 evaluated on an annual basis without a specific consideration of firm and
18 average proportions until the annual firm energy for Muskrat Falls is utilized by
19 the 2050 timeframe. Thereafter, it has been assumed that average annual
20 production increment, up to a ceiling of 4.9 TWh in total plant production,
21 would be available for delivery to the Island.
22
- 23 h. Muskrat PPA tariff strategy:
- 24 (1) An escalating supply price approach was selected for reasons set out
25 in Nalcor’s response to Question #4 in the Board’s letter of 2011 07
26 12.
27

- 1 (2) The \$75.82 was originally derived as the supply price which would
2 recover all costs of Muskrat Falls over a 50-year operational horizon,
3 based on selling its full firm output (4.5 TWh) with a 11% Internal
4 Rate of Return, this being a rate used by Nalcor for analytical
5 screening purposes.
- 6 (3) Nalcor conducted an analysis whereby this escalating supply price
7 was then used to calculate the revenues, cash flows, and shareholder
8 returns assuming that the only market for Muskrat Falls' output is
9 the Island market. The result was an 8.4% Internal Rate of Return.
- 10 (4) Nalcor deemed this Internal Rate of Return to be acceptable for a
11 case in which only island sales are available to Muskrat Falls, and
12 adopted this escalating supply price for the present analysis. While
13 this return on equity is below the long-run projected average for
14 Newfoundland and Labrador electrical utilities, Nalcor deemed this
15 acceptable because Muskrat Falls may have opportunities for
16 additional revenues over and above those from the Island market,
17 for the first part of the operational period before Island demand fully
18 subscribes Muskrat Falls' output. The risk associated with these
19 potential additional revenues is to Nalcor's account.
- 20 (5) This supply price assumes no benefit of financial leverage. Should
21 such financial leverage be achievable for Muskrat Falls, the benefit
22 would be reflected in the supply price.

- 23
- 24 i. Refer to response MHI-Nalcor-58 h(2). The firm energy was used and this is
25 consistent with CE 27. On an annual basis, until the island energy
26 requirements grow, the deliveries across the Labrador Island Link will be

1 considerably less than firm or average production in the early years of
2 operations.

3

4 j. Please refer to the Excel file MHI-Nalcor-49.2 OperatingandPPACosts for
5 annual energy values.

6

7 k. The Province will receive a water power royalty pursuant to its water lease
8 to Nalcor (see also MHI-Nalcor 33). These project expenses are included in
9 the cash flow reconciliation, “Annual Figures (Net Cash Flow Analysis PWC
10 245, (filed as Confidential Exhibit CE-53) for Nominal Equity return figures.

11

12 i. See attached Excel workbook, “Annual Figures (Net Cash Flow Analysis PWC
13 245), (filed as Confidential Exhibit CE-53).