

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

CA/KPL-MHI-01 Consumer Question: Re: Fuel Price Forecasts: The MHI study explains (vol. II, p. 204-205) that PIRA provides four forecast scenarios (reference price, low price, high price and expected price), where the expected price represents a weighted average of the other three scenarios. MHI states that “PIRA also estimates the discrete probability of occurrence for each of the ... scenarios. The relative probabilities assigned to each scenario can vary sharply from one forecast to the next.” Note 244 refers to Exhibit 4, the NLH Thermal Fuel Oil Reference Forecast. Has MHI obtained PIRA’s low, high and expected price forecasts as well? Where can this information be found?

CA/KPL-MHI-02 Consumer Question: Re: Fuel Price Forecasts: MHI points out that, under the low price scenario, the CPW gap (i.e. the benefit of the Infeed scenario) almost disappears. In section 1.6.3 of vol. II, MHI assesses the accuracy of Nalcor’s past load forecasts. Has MHI carried out a similar analysis of the accuracy of PIRA’s past fuel price forecasts? If so, please provide the results.

CA/KPL-MHI-03 Consumer Question: Re: Conservation and Demand Management: In vol. I, p. 31, MHI explains that, in the generation planning process, “Demand side management is treated as if it were generation, as it represents a reduction from the base load forecast. The economics of DSM programs should be evaluated to ensure that they make a positive contribution to the overall financial well-being of the province.” However, the approach used by Nalcor appears to be very different. Section 1.8 of vol. II begins: “It should be noted that the domestic forecast does not include any specific, exogenous adjustment for specific Conservation Demand Management (CDM) programs. The NLH method of capturing and estimating CDM effects is through the technological change variable

1 contained in the regression equations.” MHI then explains that this
2 variable has a coefficient of -35.37, meaning that average domestic use is
3 forecast to decline by 35.37 kWh per year over 20 years. In your
4 opinion, is it appropriate to presume that this change will occur at the
5 same steady pace implied by the use of a fixed technological change
6 coefficient, regardless of the level of effort and investment in CDM?
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8 CA/KPL-MHI-04 Consumer Question: Re: Conservation and Demand Management: In
9 table 1.9, MHI compares Nalcor with three other Canadian utilities, but
10 the comparison does not include the methodology for capturing and
11 estimating CDM effects.
12 (a) Which of the Canadian utilities you surveyed use Nalcor’s method?
13 (b) Why did MHI not analyze or comment on Nalcor’s use of this
14 methodology?
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16 CA/KPL-MHI-05 Consumer Question: Re: Conservation and Demand Management:
17 In your conclusions and key findings on load forecasting (V. 2, s. 1.11, p.
18 39), you note that best utility practices would incorporate end-use
19 modelling into the forecasting process, which Nalcor does not do. Is it
20 possible to adequately model the expected results of specific CDM
21 programs without end-use modelling?
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23 CA/KPL-MHI-06 Consumer Question: Re: Conservation and Demand Management:
24 In your conclusions and key findings on load forecasting (V. 2, s. 1.11, p.
25 39), you note that the amount of variability due to potential load could
26 materially impact the results of the CPW analysis. In your analysis, have
27 you tried to identify the impacts on the CPW analysis of a successful
28 CDM program more aggressive than the one implicit in the load forecast?
29 If not, why not? If so, what were your results?
30

31 CA/KPL-MHI-07 Consumer Question: Re: Conservation and Demand Management:
32 Did MHI seek to understand what level of CDM effort and investment are
33 implicit in the two “predefined” (V2, p. 189) scenarios of the Reference
34 Question? If so, what did it learn? If not, why not?

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2 CA/KPL-MHI-08 Consumer Question: Re: Conservation and Demand Management:
3 (a) Is it MHI's opinion that varying levels of CDM effort and investment
4 can have no significant effect on load, and thus can have no
5 significant impact on the CPW analysis?
6 (b) If, on the other hand, MHI is of the view that varying levels of CDM
7 effort and investment could have a significant effect on load, would
8 they not also have a significant effect on the CPW analysis?
9 (c) Why was this impact not addressed in the MHI report?
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11 CA/KPL-MHI-09 Consumer Question: Re: Wind Farms: In section 11.3 of Vol. 2 (p.
12 183), MHI describes Nalcor's 2004 assessment of the limitations for
13 non-dispatchable generation (exhibit 61), which recommends an upper
14 limit of 80 MW. MHI provides no analysis or commentary concerning this
15 study.
16 (a) Why did MHI not comment on or analyze this study?
17 (b) Does it fully endorse the study's methods and conclusions?
18

19 CA/KPL-MHI-10 Consumer Question: Re: Wind Farms: Is MHI convinced that it is
20 impossible that a scenario with more than 80 MW of on-island wind
21 generation could result in a lower CPW than the Isolated Island Scenario?
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23 CA/KPL-MHI-11 Consumer Question: Re: Wind Farms: MHI aware that the
24 Department of Natural Resources of the Government of Newfoundland
25 and Labrador recently issued a Request for Proposals on Onshore
26 Wind/Transmission in Harsh Environments in Phase 2 of its Energy
27 Innovation Roadmap process?
28

29 CA/KPL-MHI-12 Consumer Question: Re: Wind Farms: The RFP states (page 6-7):
30 For Onshore Wind, four areas were identified in Phase 1 which require
31 innovation specific to Newfoundland and Labrador, particularly as it
32 relates the operation of turbines in harsh environments." One of the areas
33 to be included in the Roadmap is identified as Grid Inflexibility/Integration.
34 One of the work products requested is to "assess the flexibility of the

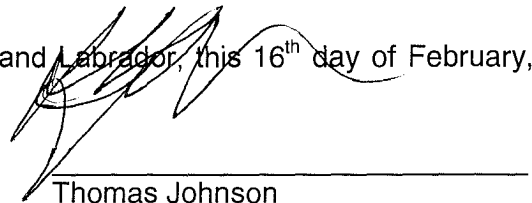
existing generating capacity in Newfoundland and Labrador, particularly with respect to the integration of a significant amount of variable generation (e.g. wind power)". In your professional opinion, is it conceivable that the work resulting from the current RFP could lead to the economic integration of higher penetration wind power?

CA/KPL-MHI-13 Consumer Question: Re: Wind Farms: In your professional opinion, does the 2004 study mentioned earlier conclusively demonstrate that it is impossible to effectively integrate more than 80 MW of on-island wind power?

CA/KPL-MHI-14 Consumer Question: Re: Wind Farms: Does your study definitively demonstrate that the Isolated Island Scenario includes the economically optimal level of on-island wind generation?

CA/KPL-MHI-15 Consumer Question: Nalcor has used a CPW approach which uses costs only to compare the 2 options over a 50 year period. The costs of the MF site have been kept artificially low in the early years by Nalcor by use of the PPA method for MF sales to Hydro (which is then used in the CPW). At p.185, vol. 2, MHI states, "Other types of analysis that are commonly used include Net Present Value (NPV) and internal rate of return (IRR)". The NPV & the IRR method use both revenue & costs. Has MHI used the NPV &IRR method to compare to the CPW result of \$2.2B?

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