

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

**Fuel Price Forecasting**

1 CA/KPR-Nalcor-46 Has Nalcor relied solely on PIRA to provide it with thermal fuel oil price  
2 forecasts for the purposes of:

3 a) its CPW Analysis of the Isolated Island and Interconnected  
4 alternatives;

5 b) its decision to proceed through DG-2.

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7 CA/KPR-Nalcor-47 Does Nalcor intend to rely solely upon PIRA's thermal fuel oil price  
8 forecasts for the purposes of DG-3?

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10 CA/KPR-Nalcor-48 When will Nalcor request that PIRA provide an updated oil price forecast  
11 for the purposes of DG-3 analysis?

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13 CA/KPR-Nalcor-49 In its key findings section, Navigant states (Exhibit 101, p. 12 of 79) that  
14 the fuel cost forecast used by Nalcor in its analysis of the generation  
15 expansion alternatives was reasonable? How was this determination  
16 made?

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18 CA/KPR-Nalcor-50 On PIRA's website (see [http://www.pira.com/clientservices/Resid Fuel](http://www.pira.com/clientservices/Resid_Fuel)  
19 [Study.htm](http://www.pira.com/clientservices/Resid_Fuel)) PIRA has posted a piece called, “Bottom of the Barrel: An  
20 Updated Outlook for Residual Fuel Oil 2012 Edition” which explains that  
21 PIRA will be releasing an updated and expanded outlook for residual fuel  
22 oil in March, 2012.

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The piece states, “The stakes are high when it comes to making decisions regarding future residual fuel oil/other heavy project supply, demand and pricing.” The piece also states under the heading, “Who Benefits from the Study”, as follows:

- Electrical utilities and other end-users constantly consider how changing fuel oil price dynamics will influence service choices and future capacity decisions. The study will make end users better equipped to adapt to supply and price shifts and help new project developers make more effective evaluations of fuel supply options and project viability.
- a) Will Nalcor be obtaining this study?
- b) Will Nalcor make the results of the study available to the Board and the parties to the review for the purposes of this review?

CA/KPR-Nalcor-51 In the Nalcor Submission at Table 23: Isolated Island Alternative: Generation Expansion CPW (2010 \$, millions), \$6.04 billion of the total \$8.810 billion CPW (68.7%) is comprised of fossil fuels. Has Nalcor sought advice from Risk Management expertise or other expertise as to the reasonableness of relying on a single firm's thermal fuel oil price forecast? If so, please provide a copy of the advice received. If not, why not?

CA/KPR-Nalcor-52 On 22 November, 2011, the National Energy Board of Canada (NEB) published a report entitled, “Canada’s Energy Future: Energy Supply and Demand Projections to 2035.” For the record, please file a copy of the report and its appendices on the record.

CA/KPR-Nalcor-53 With regard to the NEB report referred to in the previous question, the

NEB's report at Chapter Two states that its reference case for West Texas Intermediate (WTI) is assumed to average US \$90/bbl in 2011 and notes, "The real price increases slowly over the projection period, reaching US \$115/bbl by 2035 (in U.S 2010 dollars). In the low case, the WTI crude oil price is assumed to be US \$30/bbl below the reference case price, reaching just over US \$85/bbl in 2035. In the high case, it is assumed to be \$40 higher than the reference case price, growing to US \$155/bbl by 2035.

a) What is PIRA's forecast for the price of WTI over this period as compared to the NEB's?

b) What is the price relationship between WTI and the types of No. 6 fuel oil presented in Exhibit 4?

CA/KPR-Nalcor-54 In April, 2011 the US Energy Information Administration (EIA) provided Annual Energy Outlook 2011 with Projections to 2035. For the record, please file a copy of the report and its appendices on the record. ([www.eia.gov/forecasts/aeo/](http://www.eia.gov/forecasts/aeo/))

CA/KPR-Nalcor-55 Please compare PIRA's price forecasts, including low and high cases, filed in this review with other publicly available comparable price forecasts.

CA/KPR-Nalcor-56 In the Nalcor Submission, page 126 of 158 Revision 1, Nalcor provides Table 1: Summary of CPW Sensitivity Analysis with Respect to Reference Case and Preference (Present Value 2010 \$, millions). In Table 1, it refers to a "PIRA High World Oil Forecast" and a "PIRA Low world Oil Forecast."

(a) Please provide a copy of each of these forecasts and provide the date when each was made.

1 (b) Please also show the calculations as to how each of the forecasts  
2 yields the amount shown in the 'Preference for Interconnected Island'  
3 Column.

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5 CA/KPR-Nalcor-57 Nalcor has filed PIRA's Thermal Fuel Price forecast as of May, 2011 in  
6 reply to MHI-126. Please also provide PIRA's "low" and "high" forecasts  
7 as of that date.

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9 CA/KPR-Nalcor-58 Please state what the Preference for Interconnected Island would be  
10 using PIRA's May 2011 "low" and "high" forecasts respectively.

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12 CA/KPR-Nalcor-59 What qualifications on opinion, if any, has PIRA provided to Nalcor or  
13 Hydro in connection with the Thermal Fuel Price forecasts filed in this  
14 review.

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16 CA/KPR-Nalcor-60 Why does PIRA provide a "low" and "high" forecast to clients?

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18 CA/KPR-Nalcor-61 Navigant's report (Exhibit 101, p. 65 of 79) states:

19 "PIRA High and Low forecasts both have a similar probability of occurring.  
20 While it is possible that fuel prices could be sufficiently low to render a  
21 CPW preference of only \$120 million for the Interconnected Island  
22 alternative under the PIRA load forecast, it is equally probable that fuel  
23 prices could be sufficiently high for the Interconnected Island alternative  
24 to have a \$5,474 million CPW preference over the Isolated Island  
25 alternative under the PIRA High forecast."

26 Does PIRA agree that both its High and Low forecasts both have a similar  
27 probability of occurring?

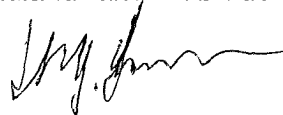
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2 CA/KPR-Nalcor-62 Nalcor has presented two fuel price forecasts in the Review: PIRA's  
3 Reference Forecast at January 2010 and PIRA's Reference Forecast at  
4 May 2011. Which forecast does Nalcor submit that the Board should  
5 treat as the operative forecast for the purpose of answering the  
6 Reference Question? Why?

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8 CA/KPR-Nalcor-63 In Nalcor's view, should the Board have regard to the findings in PIRA's  
9 March 2012 anticipated report, "Bottom of the Barrel: An Updated  
10 Outlook for Residual Fuel Oil 2012 Edition" for the purpose of answering  
11 the Reference Question.

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13 CA/KPR-Nalcor-64 Please report on PIRA's accuracy over the past 10 years in its oil price  
14 forecasts in relation to the Rate Stabilization Plan's operation.

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21 DATED at St. John's, in the Province of Newfoundland and Labrador, this 14<sup>th</sup> day of  
22 December, 2011.

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