

1 Q. Navigant's report (Exhibit 101, p. 65 of 79) states:

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

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

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14 A. As part of its oil market analysis for its Scenario Planning Service, PIRA develops and
15 reports probabilities for its reference, high and low price forecasts. At the time the
16 DG-2 fuel price inputs were prepared, the probability assigned by PIRA to its high
17 price forecast for benchmark crude was five percent greater than the probability
18 PIRA assigned to its low price forecast¹.

¹ Confidential Exhibit CE-35 Rev. 1, page 4.

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

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7 A. The January 2010 Reference Forecast is the data that should be used as this was the
8 data used for Nalcor's DG2 decision. The May 2011 Reference Forecast was
9 provided to the Board for the purpose of a sensitivity analysis.

1 Q. In Nalcor's view, should the Board have regard to the findings in PIRA's March 2012
2 anticipated report, "Bottom of the Barrel: An Updated Outlook for Residual Fuel Oil
3 2012 Edition" for the purpose of answering the Reference Question.

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5 A. Updated oil market price forecasts will continue to be provided by PIRA to Nalcor
6 on a regular basis. The Government of Newfoundland and Labrador has indicated
7 the results of this Review, along with Nalcor's Decision Gate 3 analysis, will
8 ultimately become part of the body of material available to the Province to enable
9 it to decide whether to proceed through Project Sanction. Nalcor's analyses will be
10 updated with the latest oil price forecasts then available for input into that process.

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12 Any decision on the use of materials, information, submissions, findings, or other
13 evidence in the current proceeding is within the purview of the Board.

1 Q. Please report on PIRA's accuracy over the past 10 years in its oil price forecasts in
2 relation to the Rate Stabilization Plan's operation.

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5 A. NL Hydro has relied on PIRA's oil price forecasts for preparing residual fuel price
6 forecasts for the Rate Stabilization Plan's operation since 2004. The tables below
7 report the accuracy for the price forecasts used for Newfoundland Power since the
8 introduction of the fuel rider in 2004.

Monthly Price Forecast			
RSP Period	Residual Fuel Price Forecast (US\$/bbl)	Actual Fuel Price (US\$/bbl)	Difference (US\$/bbl)
Jul-04 to Dec-04	22.94	25.73	-2.79
Jul-05 to Dec-05	34.96	42.11	-7.15
Jul-06 to Dec-06	47.78	43.23	4.54
Jul-07 to Dec-07	46.01	62.48	-16.47
Jul-08 to Dec-08	75.83	70.23	5.60
Jul-09 to Dec-09	54.76	67.45	-12.70
Jul-10 to Dec-10	83.38	76.21	7.18
Jul-11 to Dec-11	111.75	104.99	6.76
Annual Price Forecast			
RSP Period	Residual Fuel Price Forecast (US\$/bbl)	Actual Fuel Price (US\$/bbl)	Difference (US\$/bbl)
Jan-05 to Jun-05	22.95	36.90	-13.95
Jan-06 to Jun-06	26.05	45.33	-19.28
Jan-07 to Jun-07	46.30	54.07	-7.77
Jan-08 to Jun-08	51.30	75.99	-24.69
Jan-09 to Jun-09	67.30	55.82	11.48
Jan-10 to Jun-10	65.80	74.38	-8.58
Jan-11 to Jun-11	81.00	103.31	-22.31

9 The impact on the CPW of variations in fuel price forecasts are analyzed as
10 sensitivities to the reference case and reported in Section 7.2 of Nalcor's
11 Submission.

1 Q. The Regional Reliability Organization criterion of one day in 10 years is more
2 stringent than NLH's LOLH of 2.8 hours per year which equates to about one day in
3 every five years. CA/KPL-Nalcor - 012 - Batch 49 RFI Responses of 22 November
4 2011 referred to Section 3.1 of the Nalcor submission where 2.8 LOLH criteria is
5 stated (on a "one day in five years basis") and compared to other more stringent
6 standards. How sensitive is the CPW of the two alternatives to the LOLH criteria?
7 Has Nalcor evaluated the respective changes in CPW as a result of the more
8 stringent and less stringent capacity criteria?

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11 A. Nalcor has not evaluated changes in CPW as a result of changes to these criteria,
12 but has used currently accepted and applied reliability criteria for the Island
13 Interconnected system in its analysis.

1 Q. Could capacity reserve margins (in the range of 15-20 percent) be used instead of a
2 LOLH Criteria?

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5 A. Nalcor's approach to evaluating capacity reserves is consistent with the approach
6 reviewed and accepted by the Board. In Nalcor's view, the LOLH approach currently
7 used by Nalcor is a more appropriate and accurate methodology than applying
8 reserve on a percentage basis because the current approach considers the effects
9 of the different forced outage rates of different units.

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11 Please refer to Section 3.1¹ of Nalcor's Submission to the Board for further details.

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13 While a different reserve planning approach could be used, Nalcor has no basis for
14 diverting from the existing LOLH criterion. Nalcor is of the view that a model using
15 unit reliability and forced outage rates is more appropriate than applying a reserve
16 margin on a percentage basis. The LOLH approach recognizes forced outage rates
17 for different units and technologies, and is therefore a more accurate approach for
18 modeling than simply applying a capacity reserve.

¹ Nalcor's Submission, page 30.

1 Q. The Load Forecast Cycle is presented in p. 20 of 158 of the Submission. Has any
2 independent review of the econometric modeling undertaken annually by the
3 planning group, including a review of the econometric equations and other
4 modeling parameters, taken place? If so, please reference.

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7 A. Nalcor's forecast methodology was evaluated by Navigant as part of their
8 independent review. Navigant concluded that "Nalcor's forecast methodology is
9 consistent with generally accepted utility practice and the base forecast for demand
10 and energy growth is reasonable."¹

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12 In conjunction with the Muskrat Falls Review, Nalcor also expects Manitoba Hydro
13 International to report on Nalcor's planning load forecast process including the load
14 forecasting models, econometric equations, and the models' data inputs.

¹ Exhibit 101, page 40

1 Q. With reference to PUB-Nalcor-45 and Exhibit 36, what are the key policy objectives
2 referred to?

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5 A. Please refer to Nalcor's response to PUB-Nalcor-132.

- 1 Q. With reference to PUB-Nalcor-92, if the present value of energy in 2057 and 2067 is
2 so small why extend the planning period to these dates?
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- 5 A. The 2010 to 2067 planning period was established based on the long service lives of
6 the assets under study.

- 1 Q. Please include a copy of the 1986 study undertaken for NLH by Shawmont
2 Newfoundland on the undeveloped small hydroelectric sites on the island.
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5 A. Please see Exhibit 116 – *An Inventory of Small Hydro Sites for Energy Supply to the*
6 *Island Grid, Volume 1 – Methodology and Findings, December 1986.*