

1 Q. Consumer Question: Nalcor has deferred taking its 10% return on equity (ROE) in
2 the early years to create lower power rates in the early years. Nalcor then uses a
3 power purchase agreement for power generation costs to create lower rates than
4 there would be under a traditional cost of service agreement. What would the
5 present power cost of 14.3 cents per KWh be if Nalcor used a traditional cost of
6 service approach to pricing?

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9 A. Please refer to Nalcor's response to CA/KPL-Nalcor-27.

1 Q. Consumer Question: Please prepare a graph showing power rates using a cost of
2 service approach as compared to the power purchase agreement approach to
3 2067?
4

5 A. The requested analysis does not assist consideration of the Reference Question.
6 Consistent with the Terms of Reference and the Reference Question, Nalcor's
7 analyses for this proceeding have considered the Cumulative Present Worth (CPW)
8 of the Interconnected Island alternative and the Interconnected Island alternative.
9

10 As indicated in Nalcor's response to PUB-Nalcor-177, the CPW of the
11 Interconnected Island alternative will be the same whether a cost of service or
12 escalating PPA pricing model is used.
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14 Exhibit 36 provides an explanation of why an escalating price model will be used for
15 the Muskrat Falls PPA rather than a cost of service pricing approach.

1 Q. Consumer Question: Upper Churchill power is available in 2041. High oil price
2 projections out to 2067 make the thermal option look bad. In Nalcor's Submission
3 to the PUB p.124 Table 28 the isolated island option CPW is a total of \$8.8 billion
4 (\$6.0 billion -of this cost is fuel expense to 2067). 68% of the CPW cost of the
5 thermal isolated island option is fuel costs out to 2067. (a large quantity of high
6 priced fuel is used out to 2067). We only need to get to 2041. Has Nalcor looked at
7 options to get to 2041?

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10 A. Nalcor has considered the availability of Churchill Falls energy in 2041. Regardless of
11 the availability of Churchill Falls energy in 2041, the costs associated with
12 maintaining the isolated system until that time, followed by construction of a
13 transmission interconnection with Labrador, are greater than those of the
14 Interconnected Island Alternative.

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16 For further details, please refer to Nalcor's responses to information requests MHI-
17 Nalcor-2, MHI-Nalcor-3, PUB-Nalcor-55, as well as CA/KPR-Nalcor-44.

1 Q. Consumer Question: Nalcor's Submission to PUB p128 of 158. The in service 2041
2 price for Churchill Power was the projected New York market price. Please use a
3 projected cost of Churchill Falls power in 2041 as a basis for the CPW calculation?
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6 A. Nalcor has described the generation expansion plan with continued use of Holyrood
7 until 2041 and imported power from Churchill Falls after 2041 on page 128 of its
8 Submission. The pricing assumption used for Churchill Falls energy was the
9 projected New York market price. The CPW of this scenario is \$7,935 million
10 (2010\$)¹, which is \$1,283 million greater than the Interconnected Island reference
11 case of \$6,652 million.
12

13 Assuming a projected cost of Churchill Falls power in 2041 and beyond of \$2/MWh,
14 the CPW for this 2041 Labrador Interconnection case declines to \$7,148 million
15 (\$2010), which is \$496 million greater than the Interconnected Island reference
16 case of \$6,652 million. As indicated in Nalcor's response to PUB-Nalcor-55, "Since
17 this scenario assumes that the Province will forgo export revenue from Churchill
18 Falls, the same assumption should be applied to the Interconnected Island
19 alternative."
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21 Applying this assumption for all energy supply from Labrador to the Interconnected
22 Island expansion plan, the CPW declines to \$5,898 million (\$2010). With this
23 assumption consistently applied to both alternatives, the CPW preference for the
24 reference interconnection case over the 2041 interconnection case is \$1,250 million
25 (\$2010).

¹ Nalcor's Submission, Table 29, page 126

1 Q. Consumer Question: Please provide responses to the following questions:

2

3 At table 32 (page 143) of Nalcor's Submission to the PUB, NLH provides initial
4 estimates of the comparative wholesale and retail rates through to year 2040.

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6 a) What would the Interconnected Island Alternative rates be if the MF cost
7 exceeded the current cost estimate of \$5 billion by: 20%, 40%, 60% and 80%?

8

9 b) Do the rates for the Interconnected Island Alternative include the costs of the
10 50 MW CT and Holyrood retirement?

11

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13 A. a) Nalcor has provided sensitivity analyses in its Submission similar to those
14 requested that demonstrate the impact on the CPW preference for the
15 Interconnected Island alternative over the Isolated Island alternative. Please
16 refer to Table 29 Revision 1 in Nalcor's Submission. As the Reference Question
17 requires consideration of whether the Interconnected Island alternative is a
18 lower cost alternative than the Isolated Island alternative, the CPW analyses are
19 an appropriate measurement.

20

21 b) The analyses completed by Nalcor for the Interconnected Island alternative,
22 including CPW analyses and rate projections, include the cost of the 50 MW CT¹
23 to be installed in 2014 and funds for equipment removal at Holyrood² after
24 thermal generation ceases at that site.

¹ Exhibit 99, pages 49, 55, 61, 67, heading 50 MW CT

² Exhibit 99, pages 50, 56, 62, 68, heading HRD DCL1 and HRD DCL2

1 Q. Has Nalcor relied solely on PIRA to provide it with thermal fuel oil price forecasts for
2 the purposes of:

3

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

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

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9 A. NL Hydro has used PIRA since 1999 for its fuel price forecasts for No. 6 fuel oil and
10 diesel fuel. These forecasts are used to develop reference thermal fuel price
11 forecasts for delivered fuel to the Avalon Peninsula. The thermal fuel price forecasts
12 based on PIRA's inputs have been used for setting fuel price riders, setting base
13 electricity rates and for longer term system planning purposes for the Island
14 system. For its CPW analysis of the Isolated Island and Interconnected alternatives
15 and its decision to proceed through DG-2, Nalcor has continued to rely on PIRA for
16 providing the fuel price inputs for preparing its reference thermal fuel price
17 forecasts.

1 Q. Does Nalcor intend to rely solely upon PIRA's thermal fuel oil price forecasts for the
2 purposes of DG-3?

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5 A. NL Hydro has used PIRA since 1999 for its fuel price forecasts for No. 6 fuel oil and
6 diesel fuel. These forecasts are used to develop reference thermal fuel price
7 forecasts for delivered fuel to the Avalon Peninsula. The thermal fuel price forecasts
8 based on PIRA's inputs have been used for setting fuel price riders, setting base
9 electricity rates and for longer term system planning purposes for the Island
10 system.

11

12 For the purposes of Nalcor's DG-3 analysis, Nalcor expects to continue to rely on
13 PIRA's energy market analysis and related price forecasts.

1 Q. When will Nalcor request that PIRA provide an updated oil price forecast for the
2 purposes of DG-3 analysis?

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5 A. Based on its ongoing energy market analysis, PIRA regularly prepares updates of its
6 short and long term reference crude oil and product price forecasts as part of its
7 retainer services for clients such as Nalcor.

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9 Nalcor's DG-3 analysis will be based upon the then-current PIRA price forecasts
10 when the analysis is undertaken. Nalcor expects this to be done in the first half of
11 2012.

12

13 In addition to a long term reference thermal fuel price forecast, Nalcor plans to
14 prepare a high and a low thermal fuel price projection for sensitivity analysis based
15 on the PIRA price forecast used for DG-3 analysis.

1 Q. In its key findings section, Navigant states (Exhibit 101, p. 12 of 79) that the fuel
2 cost forecast used by Nalcor in its analysis of the generation expansion alternatives
3 was reasonable? How was this determination made?
4

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6 A. It is Nalcor's understanding that Navigant compared Nalcor's fuel price projections
7 with the long term oil price forecast in "Outlook 2011" published by the United
8 States Federal Energy Information Administration ("EIA"). The price levels and price
9 escalation in Nalcor's and EIA's oil price forecasts were judged by Navigant as
10 sufficiently comparable to be considered reasonable.

1 Q. On PIRA's website (see <http://www.pira.com/clientservices/Resid Fuel Study.htm>)
2 PIRA has posted a piece called, "Bottom of the Barrel: An Updated Outlook for
3 Residual Fuel Oil 2012 Edition" which explains that PIRA will be releasing an
4 updated and expanded outlook for residual fuel oil in March, 2012.

5

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

9

- 10 • Electrical utilities and other end-users constantly consider how changing fuel
11 oil price dynamics will influence service choices and future capacity
12 decisions. The study will make end users better equipped to adapt to supply
13 and price shifts and help new project developers make more effective
14 evaluations of fuel supply options and project viability.

15

- 16 a) Will Nalcor be obtaining this study?
17 b) Will Nalcor make the results of the study available to the Board and the
18 parties to the review for the purposes of this review?

19

20 A. a) Nalcor has not decided whether to purchase this study. Please note that PIRA's
21 market analysis and price forecasts contained in this multi-client study would be
22 incorporated into the oil market price forecasts provided by PIRA under NL
23 Hydro's retainer as a matter of course.

24

25 b) Nalcor has provided the Board with PIRA information and reports through this
26 proceeding, but Nalcor is prohibited from releasing PIRA's proprietary materials
27 into the public domain by its license agreement with PIRA.