

**IN THE MATTER OF** the *Public Utilities Act* (the “Act”): and

**IN THE MATTER OF** an Application by Newfoundland and Labrador Hydro for an Order approving (1) its 2011 Capital Budget pursuant to s. 41(1) of the Act; (2) its 2011 capital purchases and construction projects in excess of \$50,000.00 pursuant to s. 41(3)(a) of the Act; (3) its leases in excess of \$5,000.00 pursuant to s. 41(3)(b) of the Act; and (4) its estimated contributions in aid of construction for 2011 pursuant to s. 41(5) of the Act and for an Order pursuant to s. 78 of the Act fixing and determining its average rate base for 2009

1 **REQUESTS FOR INFORMATION OF THE INDUSTRIAL CUSTOMERS**

2 **Re General**

3 **IC-NLH-1** For each of the projects under Tab C (\$500,000 and over) indicate  
4 what amount of each project will give rise to assets which, for Cost  
5 of Service Study purposes, will be specifically assigned to Rural  
6 Operations and what amount will be assigned to common.

7 **Re 2011 Capital Plan Section, pages 22-23, “Holyrood Projects in a No Infeed**  
8 **Scenario:**

9 At page 22 of the “2011 Capital Plan” section of its Application, Hydro refers to the  
10 indication in the Province’s Energy Plan that should the Lower Churchill Project not be  
11 sanctioned, the emissions issues at the Holyrood Generating Station would be improved  
12 by the installation of scrubbers and precipitators. Hydro goes on to state that should the  
13 Lower Churchill Project not be constructed, or be delayed, there is a significant amount  
14 of additional work required at Holyrood. Hydro has provided, by a table at pp. 22-23 of  
15 the “2011 Capital Plan” section, what it describes as a “very preliminary” estimate of the  
16 expenditures required to maintain the Holyrood facility in reliable and efficient operating  
17 condition. The Industrial Customers have the following requests for information in  
18 relation to these statements:

19 **IC-NLH-2** With reference to the section 10.0 Conclusion at page 30, Tab 38,  
20 Volume II of the Application, is the decision for the sanctioning of  
21 the Lower Churchill project still scheduled for 2010?

- 1 **IC-NLH-3** With reference to the section 7.1 High-Voltage Direct Current Link  
 2 Scenario at page 20, Tab 38, Volume II of the Application, is the  
 3 projected commissioning and operations for the Lower Churchill  
 4 project within a 2015-2016 timeframe dependent on decision for the  
 5 sanctioning of the Lower Churchill project still scheduled for 2010?  
 6 Will a 2015-2016 timeframe for commissioning and operations for  
 7 the Lower Churchill project be able to be met if the sanction date is  
 8 postponed to end of 2011?
- 9 **IC-NLH-4** With reference to the section 7.1 High-Voltage Direct Current Link  
 10 Scenario at page 20, Tab 38, Volume II of the Application, is the  
 11 projected commissioning and operations for the Lower Churchill  
 12 project within a 2015-2016 timeframe inclusive of the  
 13 commissioning and operation of the projected Infeed to the Island?
- 14 **IC-NLH-5** With reference to the section 9.3 Holyrood Thermal Generating  
 15 Station End-of-Life at page 29, Tab 38, Volume II of the Application,  
 16 what is the anticipated end of life timeframe, under both expansion  
 17 scenarios, for the HTGS?
- 18 **IC-NLH-6** Other than the indication in the Province's Energy Plan that should  
 19 the Lower Churchill Project not be sanctioned, the emissions issues  
 20 at the Holyrood Generating Station would be improved by the  
 21 installation of scrubbers and precipitators, has Hydro received any  
 22 direction from Government regarding Stack Emissions Cleanup  
 23 Equipment? If so, provide copies of all communications to and from  
 24 Hydro regarding such direction.
- 25 **IC-NLH-7** If the Infeed is achieved within a 2015-2016 time frame, is it  
 26 expected by Hydro that the Stack Emissions Cleanup Equipment  
 27 costs, estimated at \$570 million dollars, or any part of those costs,  
 28 will need to be incurred?
- 29 **IC-NLH-8** If the Infeed is delayed beyond a 2015-2016 time frame, by when is  
 30 it expected by Hydro that the Stack Emissions Cleanup Equipment  
 31 costs, estimated at \$570 million dollars, or any part of those costs,  
 32 will need to be incurred?
- 33 **IC-NLH-9** With reference to the table of estimated expenditures at pp. 22-23  
 34 of the "2011 Capital Plan" section and Appendix B to that section,  
 35 provide a breakdown of those expenditures which identifies, project  
 36 by project and year by year, the projects and dollar amounts  
 37 estimated to be incurred regardless of whether the Lower Churchill  
 38 project with Island Infeed is sanctioned?
- 39

- 1 **IC-NLH-10** With reference to the table of estimated expenditures at pp. 22-23  
 2 of the “2011 Capital Plan” section and Appendix B to that section,  
 3 provide a breakdown of those expenditures which identifies, project  
 4 by project and year by year, the projects and dollar amounts  
 5 estimated to be incurred if the Lower Churchill project with Island  
 6 Infeed is sanctioned with a commissioning and operations  
 7 timeframe of 2015/2016?
- 8 **IC-NLH-11** With reference to the table of estimated expenditures at pp. 22-23  
 9 of the “2011 Capital Plan” section and Appendix B to that section,  
 10 provide a breakdown of those expenditures which identifies, project  
 11 by project and year by year, the projects and dollar amounts  
 12 estimated to be incurred if the Lower Churchill project with Island  
 13 Infeed is maintained as a planning option but with a commissioning  
 14 and operations timeframe which is indefinitely postponed beyond  
 15 2015/2016?
- 16 **IC-NLH-12** With reference to the two projects referenced at p. 9 causing  
 17 significant peaks, what projects were removed from the Plan or  
 18 reduced in scope as a result of the two major projects being  
 19 added? How were these projects chosen for cancellation, deferral  
 20 or reduction and what were the consequences to the system?
- 21 **IC-NLH-13** With reference to the Stephenville Gas Turbine project and the  
 22 reference thereto at p. 11, explain what is meant by “reprioritization  
 23 of this work relative to other projects” and indicate what are the  
 24 “other projects” referred to in this phrase.
- 25 **IC-NLH-14** Given the potential for spending more than \$800,000,000.00 on  
 26 refurbishing Holyrood in a no infeed scenario, what investigation  
 27 has Hydro done with respect to potential replacement of the  
 28 Holyrood facility.
- 29 **IC\_NLH-15** Provide the latest cost estimates for each of the following projects  
 30 identified in the Generation Planning Issues document at Tab 38  
 31 Volume 2: Island Pond, Portland Creek, Round Pond, combined  
 32 cycle plant, HTGS Unit IV.
- 33 **Re 2011 Capital Plan – Individual Capital Projects:**
- 34 The Industrial Customers have the following requests for information in relation to  
 35 individual capital projects:
- 36 **IC-NLH-16** **Project B-5, Upgrade Stack Breaching Unit 1:** This project  
 37 expenditure is estimated at over \$3.5 million. The original stack  
 38 breaching was replaced in 1990, with 20-year life, at a cost of  
 39 \$656,777 (reference: Volume I, Tab 2, page 8, section 3.2). Explain  
 40 the factors resulting in this almost 6-fold cost inflation.

- 1 **IC-NLH-17** **Project B-5, Upgrade Stack Breaching Unit 1:** This project  
2 expenditure is being proposed based on the anticipated useful life  
3 of Unit 1 being forecasted to extend to 2020, absent an infeed from  
4 Lower Churchill schedule (reference: Volume I, Tab 2, page 8,  
5 section 3.3). If, as indicated by the Holyrood Condition Assessment  
6 and Life Extension Study (reference: Volume I, Tab 5, page 5)  
7 Holyrood will be placed in standby generation mode from 2016 until  
8 2020, are the assumptions and considerations for the operation of  
9 Unit 1 and the Cost Benefit Analysis between stack breaching  
10 replacement and refurbishment the same for the period 2010-2016  
11 as compared to the standby period of 2016-2020?
- 12 **IC-NLH-18** **Project B-5, Upgrade Stack Breaching Unit 1:** With reference to  
13 IC-NLH-13, provide a CBA and Cumulative Present Worth (CPW)  
14 for Alternatives 1 and Alternative 2 based on any changes in  
15 applicable assumptions and considerations arising from Holyrood  
16 being in standby mode for the period 2016-2020.
- 17 **IC-NLH-19** **Project B-5, Upgrade Stack Breaching Unit 1:** Appended at the  
18 end of the appendix at Volume I, Tab 2, is a 2010-07-02 Alstom  
19 letter, which offers clarifications and opinions in relation to the  
20 Alstom Engineering Report. At the third page of this letter, it is  
21 stated "It is far more difficult to predict the longevity of the repair  
22 option and certainly, it will depend on the amount of block removed  
23 for casing inspection and repair. If all of the block is removed (old  
24 Option A3) and extensive repairs are completed to essentially  
25 restore the ductwork to like new condition, then a life of 5 years or  
26 longer with relatively minor annual repair costs might be a  
27 reasonable assumption." Is "old Option A3" the same as Alternative  
28 2 identified in Volume I, Tab 2, pages 14-16, section 4.3)? If not,  
29 provide a CBA and Cumulative Present Worth (CPW) for Option A3  
30 based on a study period to 2020, taking into account Holyrood  
31 being in standby mode for the period 2016-2020.
- 32 **IC-NLH-20** **Project B-5, Upgrade Stack Breaching Unit 1:** Presumably, the  
33 substantial issues with the Stack Breaching in Unit 1 have been  
34 known to Hydro since the first version of the Alstom Engineering  
35 Report was issued on December 18, 2008. Presumably, Hydro has  
36 taken, over the last 20 months, and will continue to take until  
37 refurbishment or replacement is approved, the necessary interim  
38 monitoring and repair work necessary to prudently manage those  
39 issues. What has been the cost incurred by Hydro in the last 20  
40 months of managing those issues (less the cost of the Alstom  
41 reports) and what is the estimated cost to Hydro of continuing to  
42 manage those issues, in the same manner, to December 2011?

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- 1 **IC-NLH-21** **Project B-5, Upgrade Stack Breaching Unit 1:** Provide copies of  
2 all previous versions of the Alstom Engineering Report, the  
3 versions identified as that of December 18, 2008, Rev. 1 – March 4,  
4 2009, Rev. 2 – August 28, 2009, and Rev. 3 – March 25, 2010.
- 5 **IC-NLH-22** **Project B-5, Upgrade Stack Breaching Unit 1:** Provide the  
6 complete detail of the assumptions and calculations for the CBA  
7 and CPWs provided by Hydro at Volume I, Tab 2, pages 14-16,  
8 section 4.3, and to be provided by Hydro in response to the above  
9 requests for information.
- 10 **IC-NLH 23** **Project B-8, Refurbish Fuel Storage Facility:** Provide amounts of  
11 fuel stored in each of the four tanks on a monthly basis for the past  
12 two years, preferably using the same day in each month for the  
13 readings if that data is available.
- 14 **IC-NLH 24** **Project B-8, Refurbish Fuel Storage Facility:** Provide in detail  
15 any implications for deferring this project for 2 years.
- 16 **IC-NLH 25** **Project B-10, Upgrade Hydrogen System--Holyrood:** Provide  
17 details and all underlying assumptions with respect to the cost  
18 benefit analysis of this project, including particulars of what work  
19 would be done under the alternative upgrade without electrolyzer  
20 and bulk storage.
- 21 **IC-NLH 26** **Project B-15, Overhaul Gas Turbine-Holyrood:** Has Hydro  
22 investigated the costs of replacing the engine on this turbine and  
23 what is Hydro's current estimate of that cost?
- 24 **IC-NLH-27** **Project B-22, Upgrade Unit 1 Forced Draft Fan Ductwork:** With  
25 reference to IC-NLH-13 and to Volume I, Tab 9, pages 10-11,  
26 section 4.3, provide a CBA and Cumulative Present Worth (CPW)  
27 for Alternatives 1 and Alternative 2 based on any changes in  
28 applicable assumptions and considerations arising from Holyrood  
29 being in standby mode for the period 2016-2020.
- 30 **IC-NLH-28** Provide the complete detail of the assumptions and calculations for  
31 the CBA and CPWs provided by Hydro at Volume I, Tab 2, pages  
32 14-16, section 4.3 and at Volume I, Tab 9, pages 10-11, section  
33 4.3, and to be provided by Hydro in response to the above requests  
34 for information.
- 35 **IC-NLH 29** **Project B-28, Upgrade Generating Station Service Water**  
36 **System—Cat Arm:** What has been the operating experience with  
37 fouling of the stainless steel piping installed at Granite Canal?

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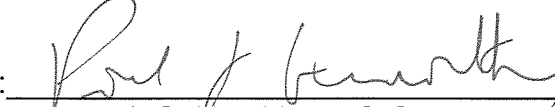
1	<b>IC-NLH 30</b>	<b>Project B-59, Upgrade Power Transformers—Various Sites:</b>
2		Explain in respect of each line item in Table 8 on p. 26 of the
3		Report at Tab 25 why these items constitute capital as opposed to
4		operating expenditures.
5	<b>IC-NLH 31</b>	<b>Project B-81, Replace MDR 6000 Microwave Radio (West)—</b>
6		<b>Various Sites:</b> Has Hydro developed a specification or identified
7		particular brands or models of equipment on which the proposed
8		budgeted amount for equipment is based?
9	<b>IC-NLH-32</b>	<b>Project B-83, Replace Network Communications Equipment—</b>
10		<b>Various Sites:</b> Provide the Newfoundland and Labrador Hydro
11		Infrastructure Review and Proposed Design report of Hewlett-
12		Packard Canada dated April 22, 2010 referred to in footnote 2 on p.
13		13 of the Report at Tab 37
14	<b>IC-NLH-33</b>	<b>Project C-2, Upgrade Burnt Dam Spillway Structure—Bay</b>
15		<b>d’Espoir:</b> On how many occasions in the life of this structure has it
16		been necessary to open both gates at the same time?
17	<b>IC-NLH-34</b>	<b>Project C-2, Upgrade Burnt Dam Spillway Structure—Bay</b>
18		<b>d’Espoir:</b> Explain the necessity to proceed with this project in 2011
19		in light of Hatch’s finding of a Health Index of 66 which implies that
20		the asset is in good condition with some deterioration or deficit
21		apparent but function not significantly affected. (Table 2-1 p. C 32)
22	<b>IC-NLH-35</b>	<b>Project C-44, Install Weatherhoods for Vent Fans—Holyrood:</b>
23		Provide the Maintenance History for the weatherhoods on Stage 2
24		of the HTGS.
25	<b>IC-NLH-36</b>	<b>Project C-44, Install Weatherhoods for Vent Fans—Holyrood:</b>
26		What is the justification for installing hoods on the vents on the
27		north side which show no backflow in the tests?
28	<b>IC-NLH-37</b>	<b>Project C-44, Install Weatherhoods for Vent Fans—Holyrood:</b>
29		What savings would be achieved by eliminating two north side
30		vents and four south side vents from the project?
31	<b>IC-NLH-38</b>	<b>Project C-44, Install Weatherhoods for Vent Fans—Holyrood:</b>
32		What quantitative evidence, if any, does Hydro have that air quality
33		inside the plant is being impaired by the backflow?
34	<b>IC-NLH-39</b>	<b>Project C-75, Purchase Excavators—Bishop’s Falls:</b> Provide
35		evidence that the minister has actually required, as he is given
36		power to do under s. 261(2), a rollover protection system on the
37		backhoes in question.

- 1 **IC-NLH-40** **Project C-75, Purchase Excavators—Bishop’s Falls:** Will any  
2 vehicle be retired as a result of the acquisitions contemplated in this  
3 project? If not, why not?
- 4 **IC-NLH-41** **Project C-89 Replace Mini Hydro Turbine—Roddickton:** What is  
5 the projected life of the Mini Hydro Plant?
- 6 **IC-NLH-42** **Project C-178 Replace iSeries Computer and Upgrade**  
7 **Operating System—Hydro Place:** Does Nalcor use this system  
8 and, if so, what costs are assigned to Nalcor in respect of it?
- 9 **IC-NLH-43** **Project C-204 Remove Safety Hazards—Various Sites:** How is  
10 the project cost calculated and how does it relate to the items  
11 identified on p. C-205 to be addressed in 2010?
- 12 **Re: 2011 Capital Plan: 2010 Capital Expenditures Explanations**
- 13 **IC-NLH-44** Provide a detailed breakdown of the cost overruns associated with  
14 the project to Replace Accommodations, Septic System and  
15 Upgrade Plant Communications System—Cat Arm, as referenced  
16 on p. H-18 item 6.
- 17 **IC-NLH-45** Confirm that, with the cost overrun on this project, the Net Present  
18 Value calculation included in the Report at Tab 7 of Volume 2 of the  
19 2009 Capital Budget would show an opposite result—i.e. the “stay  
20 off site” option would be preferred.
- 21 **Re 2011 Capital Plan – Generation Planning Issue 2010 July Update**
- 22 **IC-NLH-46** Describe the mechanism under which Hydro receives energy from  
23 the expropriated assets at Star Lake and on the Exploits River as  
24 referenced at p. 6 of the Report.
- 25 **IC-NLH-47** Have any of the expropriated assets referred to in the Report been  
26 acquired by Hydro or added to the rate base?
- 27 **IC-NLH-48** If the energy referred to in IC-NLH-33 is being purchased, provide  
28 the details of the purchase agreement, including pricing, and  
29 particulars of any approval by the Public Utilities Board of such  
30 purchase arrangements.
- 31 **IC-NLH-49** In light of the fact that the system is now capacity restrained as  
32 opposed to energy constrained, has Hydro revisited its marginal  
33 cost study and does it propose any changes in rate structure as a  
34 result?


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1 **DATED** at St. John's, this 9<sup>th</sup> day of September, 2010.

2 **POOLE ALTHOUSE**

3 Per:   
4 Joseph S. Hutchings, Q.C.

5 **STEWART MCKELVEY**

6 Per:   
7 Paul L. Coxworthy

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TO: Thomas Johnson, Consumer Advocate  
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