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September 4, 2013

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Via Electronic Mail and Courier

Newfoundland and Labrador Board
of Commissioners of Public Utilities
120 Torbay Road
P.O. Box 21040
St. John's, NL A1A 5B2

Attention: Ms. G. Cheryl Blundon, Director of Corporate Services and Board Secretary

Dear Ms. Blundon:

Re: 2014 Hydro Capital Budget

Please find enclosed the original and eight (8) copies of the Requests for Information IC-NLH-1 to IC-NLH-68 of the Island Industrial Customers in the above Application.

We trust you will find the enclosed to be in order.

Yours truly,

Stewart McKelvey

Paul L. Coxworthy

PLC/kmcd

Enclosure
c. Mr. Geoffrey P. Young, Senior Legal Counsel, Newfoundland and Labrador Hydro
Mr. Thomas J. Johnson, Consumer Advocate
Mr. Gerard Hayes, Newfoundland Power
Mr. Dean A. Porter, Poole Althouse
Mr. Thomas O'Reilly, Q.C., Vale Newfoundland and Labrador Limited

IN THE MATTER OF the *Public Utilities Act*, RSNL 1990, c. P-47, as amended (the "Act")

IN THE MATTER OF an Application by Newfoundland and Labrador Hydro for an Order approving: (1) its 2014 Capital Budget pursuant to Section 41(1) of the Act; (2) its 2014 capital purchases, and construction projects in excess of $50,000 pursuant to Section 41(3)(a) of the Act; (3) its leases in excess of $5,000 pursuant to Section 41(3)(b) of the Act; and (4) its estimated contributions in aid of construction for 2014 pursuant to Section 41(5) of the Act and for an Order pursuant to Section 78 of the Act fixing and determining its average base rate for 2012.

REQUESTS FOR INFORMATION OF THE ISLAND INDUSTRIAL CUSTOMERS

IC-NLH-1 to IC-NLH-68

Project C-11, Upgrade Shoreline Protection – Cat Arm

IC-NLH-1 At page 4 of the report filed at Volume I, Tab 3, Hydro states that:

> "Extreme environmental conditions in the area have damaged the shoreline protection barrier along an 80m section. These conditions and this type of damage were unforeseen during original construction."

Please provide any correspondence, engineering reports or other documentation generated or received, not already provided with Hydro's Application, relating to the shoreline protection barrier from when it was first designed and constructed to date, including without limiting the foregoing any such documentation which considered wind/wave action upon the intended barrier.

IC-NLH-2 At page 4 of the report filed at Volume I, Tab 4, Hydro notes that it submitted an Application for Permission to Occupy Crown Lands in 2012 and subsequently applied for a Crown Easement to the road lands, which application is pending approval. When was the application for easement submitted? When does Hydro expect this application to receive approval?

IC-NLH-3 Has Hydro considered the option of simply replacing the armour stone which has been washed out into the ocean at this time and postponing the two-year project involving engineering investigation and design to a later date?

IC-NLH-4 On page A6 of the report filed at Volume I, Tab 4, AMEC advised that a preliminary cost estimate to conduct the reconstruction was in the order of $366,000 in May, 2010. Why is Hydro's budget estimate ($763,000) more than double AMEC's original cost estimate? Please provide all facts and assumptions considered by Hydro to justify the increased budget estimate.

Project C-13, Upgrade North Cut-Off Dam Access Road – Bay d'Espoir

IC-NLH-5 At page 6 of the report filed at Volume I, Tab 5, Hydro states that "When attempting to conduct repairs on damaged components of the vehicle, employees are often placed in situations in which there is an increased risk for injury. The nature of the typical repair presents a risk of injury by way of heavy lifting, crushing, burns, and abrasions". Please provide a full account of any such injuries incurred or experienced by Hydro personnel in the last five (5) years, including date and nature of injury suffered.

IC-NLH-6 At page 7 of the report filed at Volume I, Tab 5, Hydro states that given the current condition of the road there are no viable alternatives outside of completing the proposed upgrades. The maintenance history table shows that $7,000 was spent on maintenance in 2012, up from $1,000 or less in the previous years.

- Please provide details of the maintenance performed in 2012 as well as a description of how the 2012 maintenance differs from the previous years.

- Is the increase in maintenance costs a result of new issues arising with the roadway or old issues being addressed?

- Has Hydro considered whether routine maintenance would be sufficient to keep the road open and passable with major upgrade work to be completed at a later date? If no, provide Hydro's explanation for same.

Project C-15, Automate Generator Deluge Systems – Bay d'Espoir

IC-NLH-7 On page 4 of the report filed at Volume I, Tab 6, Hydro states that the estimated response time of operations personnel from the time they receive the alarm to the time the unit deluge system is activated is approximately six to eight minutes. With the fully automated system, what is the expected time period between the

detection of the fire and the application of water (or other applicable fire suppressant) to the fire?

Project C-18, Overhaul Turbine/Generator Unit 2 - Holyrood

IC-NLH-8 On page 5 of the report filed at Volume I, Tab 7, Hydro explains that the work to be completed consists of three types, namely "Routine Standard Work", "Defined Work" and "Unforeseen Work".

- What factors are considered by Hydro in determining what work should be included as "Defined Work" (extra to the Standard Work)?
- When will the "Defined Work" be identified?
- Is the cost of the "Defined Work" included in the budget estimate?
- Is the cost of the "Unforeseen Work" associated with the overhaul of Unit 1 expected to be included in the $815,000.00 contingency for this Project?

IC-NLH-9 On page 13 of the report filed at Volume I, Tab 7, Hydro states that the total amount spent on the 2012 overhaul of Unit 1 was $4.0 million, but advises that the estimate for Unit 2 is greater than $5 million due to a 20 percent contingency and an increase in contract costs. Please provide all facts and assumptions considered by Hydro to justify the increased contingency and contract costs.

IC-NLH-10 On page 13 of the report filed at Volume I, Tab 7, Hydro states that replacement of the stator windings will be required to extend the generator life beyond that date (2015). Following the overhaul, what is the expected remaining life of the generator?

IC-NLH-11 On page 14 of the report filed at Volume I, Tab 7, Hydro states that there are no alternatives to this project other than to delay the major overhaul which is not acceptable. Has Hydro done any research to determine whether other public utilities in the industry follow a major overhaul frequency of greater than nine years?

Project C-20, Complete Condition Assessment Phase 2 – Holyrood

IC-NLH-12 On page 9 of the report filed at Volume II, Tab 8, Hydro advises that the focus of this project will be on Unit 3 high energy piping, Unit 3 boiler locations and the Unit 2 generator. Inspection and refurbishment of Units 1 and 3 generators are addressed under the regular overhaul schedule in Hydro's capital program; only the Unit 2 generator is included in the scope of the 2014 program. Explain

why the Unit 2 generator is not included in the regular overhaul schedule, particularly given that Project C-18 relates to the major overhaul of Unit 2 turbine and generator.

Project C-22, Upgrade Excitation Systems Units 1 and 2 – Holyrood

IC-NLH-13 What is the Life Cycle Management Plan for Unitrol 6080?

IC-NLH-14 Has Hydro considered delaying the purchase of the second control panel to 2015 when it plans to install the second panel, rather than purchasing both panels in 2014?

Project C-24, Upgrade Plant Elevators – Holyrood

IC-NLH-15 On page 6 of the report filed at Volume II, Tab 10, Hydro provides examples from February 2010, August 2009 and May 2006 when people were trapped in the elevators. Have there been any incidents recorded since 2010? Has Hydro implemented any measures to reduce the likelihood of such events?

IC-NLH-16 Will these elevators experience the same level/frequency of usage after Holyrood is converted to synchronous condenser mode? Explain why one elevator would not suffice to provide necessary access after Holyrood is converted to synchronous condenser mode.

Project C-28, Replace Economizer Inlet Valves – Holyrood

IC-NLH-17 On page 4 of the report filed at Volume II, Tab 12, Hydro advises that since 2010, staff have used an upstream shut off valve instead of the economizer inlet valve to isolate the boiler from the feed water supply.

- Have any incidents been encountered in using the upstream shut off valve since 2010?

- What has changed such that the bypass valve no longer provides an adequate seal for feed water isolation?

Project C-30, Install Cold-Reheat Condensate Drains and High Pressure Heater Trip Level Unit 3 – Holyrood

IC-NLH-18 Why was the "Contingency" budget for this project increased from 10% to 20%?

IC-NLH-19 Have there been any incidents of water damage to the steam turbine in Unit 3 thought to be a consequence of water in the cold reheat lines? If so, please provide details of any incidents.

Project C-33, Upgrade Gas Turbine Plant Life Extension – Stephenville

IC-NLH-20 On page 6 of the report filed at Volume II, Tab 14, Hydro states that the items to be completed in 2014, and referenced to Source 1, are justified by the Stantec report and then provides justification for the other items on pages 9-10. Has Hydro considered simply completing the Source 1 items at this time?

IC-NLH-21 Given the plant's role as a synchronous condensing system, has Hydro considered relying on a corrective maintenance regime?

IC-NLH-22 Will this plant be decommissioned when Muskrat Falls becomes operational?

IC-NLH-23 How has the plant upgrade for Hardwoods improved reliability?

Project C-35, Upgrade Circuit Breakers

IC-NLH-24 On page 5 of the report filed at Volume II, Tab 15, Hydro states that 13 air blast circuit breakers are to be replaced in conjunction with the Lower Churchill Project. Please explain. Is the cost of these replacements still included in the Capital Budget?

IC-NLH-25 How many oil circuit breakers does Hydro currently have in service?

IC-NLH-26 Provide a copy of the extension granted to Hydro in 2010 allowing Hydro until December 31, 2014 to remove all sealed equipment containing PCBs greater than 500mg/kg.

IC-NLH-27 What is the status of the application for regulatory amendment to allow the use of bushings and instrument transformers with PCB concentrations of 500mg/kg and greater until December 2025?

IC-NLH-28 Given that various circuit breakers are being replaced in 2014, why does Hydro plan to wait until 2015 to commence a partnership agreement to engage a contractor for the supply and installation of circuit breaker replacements?

Project C-38, Upgrade Power Transformers

IC-NLH-29 On page (i) of the report filed at Volume II, Tab 16, Hydro states that its methodology is aligned with procedures of other North American utilities with similar transformer assets. Provide specific examples of other North American utilities following this methodology.

Project C-40, Replace Disconnect Switches

IC-NLH-30 On page 11 of the report filed at Volume II, Tab 17, Hydro states that its approach to the disconnect replacement program is consistent with the utility industry practice. Please provide support for this statement.

IC-NLH-31 On page 11 of the report filed at Volume II, Tab 17, Hydro states that the vendor recommends replacement of a disconnect switch after 1,000 operations but advises that Hydro does not track the operating history of its disconnect switches. Provide an explanation as to why such tracking is not carried out.

Project C-44, Refurbish Anchors and Footings

IC-NLH-32 On page 7 of the report filed at Volume II, Tab 19, Hydro states that a detailed environmental assessment will be performed prior to completing the work. Please advise when such environmental assessment will be performed and the anticipated date that Hydro will be in receipt of a report in respect of that assessment.

IC-NLH-33 On page 9 of the report filed at Volume II, Tab 19, Hydro states that the proactive refurbishment and/or replacement of anchors and footings is common among utility companies. Provide support for this statement.

IC-NLH-34 On page 9 of the report filed at Volume II, Tab 19, Hydro states that a visual climbing inspection of each transmission line is performed every ten years to evaluate the condition of the line. The most recent climbing inspections of TL202 and TL205 were in 2010 and 2011. If the next climbing inspections are not scheduled until 2020 and 2021, is the risk of deteriorated anchors and footings lessened such that the work could be prolonged until closer to those dates?

IC-NLH-35 On page 13 of the report filed at Volume II, Tab 19, the project schedule shows that the refurbishment will take place from Bay d'Espoir to structure number 80 in 2014 and then from structure number 83 to Sunnyside in 2015. Provide a breakdown of how many anchors will be replaced in each year.

Project C-48, Upgrade Distribution Systems

IC-NLH-36 On page 5 of the report filed at Volume II, Tab 20, Hydro advises that the line components have been found to be in "B" (one to five years of remaining life) or "C" (less than one year of remaining life) condition. Has Hydro considered replacing only the line components in "C" condition at this time? If not, why not?

IC-NLH-37 On page 12 of the report filed at Volume II, Tab 20, Hydro advises that blackjack poles are environmentally unacceptable and references a Department of Environment and Conservation Policy entitled "Policy for Use of Creosote Treated Wood in and Near Fresh Water." Please provide a copy of this Policy.

Project C-52, Upgrade Distribution Systems

IC-NLH-38 Does any of the work in Project C-48 and the ten individual distribution upgrade projects described therein overlap with this project? Why or why not?

Project C-56, Replace Diesel Units

IC-NLH-39 On page 4 of the report filed at Volume II, Tab 21, Hydro states that the project is justified on the established criteria for reliability to replace gensets when they approach 100,000 operating hours. Provide details of the source for this information, as well as specifics about the risk increase after 100,000 hours (if known).

IC-NLH-40 On page 12 of the report filed at Volume II, Tab 21, Hydro states that the Port Hope Simpson system is generally more reliable than other systems in the Northern region, whereas the Mary's Harbour system is generally less reliable than other systems in that region. Has Hydro considered replacing the diesel unit at Mary's Harbour in the 2014-2015 timeframe and scheduling the Port Hope Simpson unit for a later period?

IC-NLH-41 If the 455kW unit in Port Hope Simpson is replaced with the 725kW unit as proposed, is it anticipated that the other two 455kW units will need to be replaced eventually as well, or, given the comment on page 21 of the report filed at Volume II, Tab 21 wherein Hydro states that the 725kW unit could support the entire demand of Port Hope Simpson for approximately 95% of the year, is it anticipated that this replacement will be sufficient to satisfy demand in that area?

IC-NLH-42 Provide more details regarding the input factors and calculations for the CPW values.

Project C-58, Install Fire Protection System

IC-NLH-43 On page 7 of the report filed at Volume II, Tab 22, Hydro advises that some of Canada's other major utilities such as Manitoba Hydro and Hydro One in Ontario make use of fire suppression systems in their diesel plants.

- Do these utilities have automatic fire suppression systems in all of their diesel plants or only a percentage?

- Is it considered the industry norm to install fire suppression systems in diesel plants?

Project C-60, Upgrade Diesel Plant Production Data

IC-NLH-44 Do other major utilities in Canada collect detailed demand information (including daily load profiles) from remote communities?

IC-NLH-45 Is it necessary to have daily load profiles for remote diesel plants to forecast load growth?

Project C-62, Overhaul Diesel Engines

IC-NLH-46 On page 2 of the report filed at Volume II, Tab 24, Hydro states that 20,000 hours is the criteria used for diesel engine overhauls and was the criteria recommended in 2003 following a comprehensive maintenance review. Provide details regarding that review and development of the overhaul criteria.

IC-NLH-47 Is 20,000 hours on par with industry practice for this type of project?

Project C-64, Additions to Accommodate Load Growth

IC-NLH-48 On page 4 of the report filed at Volume II, Tab 25, Hydro advises that if the load exceeds the equipment capacity, a power outage may result. On page 9 of the same report, Hydro sets out a table of five-year average outage statistics including average number of power outages and average length of time a customer is without power, including all causes and loss of supply. Does Hydro have further statistics regarding what portion of the loss of supply outages is attributable to load exceeding equipment capacity?

IC-NLH-49 On page 11 of the report filed at Volume II, Tab 24, Hydro states that construction of the new 1,200 square meter multi-purpose facility is expected to start by the spring of 2013. Has construction commenced for this facility? When is the facility expected to open?

IC-NLH-50 Provide details regarding the input factors and calculations for the CPW values.

Project C-66, Install Automated Meter Reading

IC-NLH-51 On page 1 of the report filed at Volume II, Tab 26, Hydro advises that it has implemented automated meter reading in 14 service areas and in Table 2 provides a list of projects since 2007. Provide details regarding the actual costs per service area, as well as an explanation for the variation in cost per unit.

IC-NLH-52 Provide details regarding the input factors and calculations for the CPW values.

Project C-68, Replace Light Duty Mobile Equipment

IC-NLH-53 Provide a complete copy of Hydro's mobile equipment replacement guidelines.

Project C-76, Replace Battery Banks and Chargers

IC-NLH-54 Hydro states that the flooded-cell battery has a typical service life of 18-20 years and the VRLA battery has a typical service life of 7-10 years. What is the source for this information?

IC-NLH-55 Provide a copy of IEE Standards 450 and 1188.

IC-NLH-56 What has been Hydro's operational experience for flooded-cell batteries with in excess of 20 years of service life and for VLRA batteries with in excess of 10 years of service life?

IC-NLH-57 With respect to Table 1 of the report filed at Volume II, Tab 28, provide the following information:

- Whether the batteries to be replaced at each location are flooded-cell or VLRA;
- The proposed capital expenditure for each location;
- The number of batteries at each location which have been tested and found to have a capacity of 80% or less of its rated capacity.

Project C-78, Replace Vehicles and Aerial Devices

IC-NLH-58 Provide a copy of the vehicle replacement guidelines.

IC-NLH-59 Provide details regarding average replacement criteria used by other Canadian utilities.

Project D-2, Upgrade Victoria Control Structure – Bay d'Espoir

IC-NLH-60 At page D-8, Hydro states that as hydraulic structures age the requirement for refurbishment is undertaken by most utilities, and also advises that Churchill Falls Labrador Corporation, whose structure is approximately 40 years old, is presently involved in a rehabilitation program.

- At what age of the hydraulic structure do "most utilities" in North America commence a major refurbishment of the structure?
- What utilities has Hydro researched for comparison purposes?

Project D-29, Overhaul Turbine/Generator Units – Bay d'Espoir and Hinds Lake

IC-NLH-61 On page D-29, Hydro states that these turbine/generator units are inspected on a six year frequency based on recommendations outlined in Hydro's Asset Maintenance Strategy (AMS) Management Program. On page D-30, Hydro states that the six year frequency is based on the experience and manufacturer recommendations as described in the Industry Experience section, while the Industry Experience section simply states that work performed during major inspections and overhauls is based on operational experience and manufacturer recommendations. Describe what factors and sources of information were considered in determining that a six year frequency is appropriate.

IC-NLH-62 The total maintenance costs in 2008 for each of Bay d'Espoir and Hinds Lake were relatively low, at $39,900 and $35,800 respectively. Based on a six year frequency, inspections and major overhauls should have been completed in 2008. Confirm inspections and overhauls were done in 2008 as well as the budget for same.

Project D-34, Upgrade Generator Bearings Unit 2 – Bay d'Espoir

IC-NLH-63 What is the difference between the modifications made to Units 1 - 6 in the years 1971-1975 which were only partially successful, and the modifications proposed in this project?

IC-NLH-64 Is it expected that the proposed modifications will completely eliminate the oil contamination issue?

IC-NLH-65 What is the status of the 2013 modification work to Unit 4? If complete, has it resolved the issue of oil emissions and leaks for this Unit?

Project D-56, Upgrade Public Safety Around Dams and Waterways – Bay d'Espoir

IC-NLH-66 The terms "Public Safety Risk Assessment" and "Public Safety Audit" are both used with respect to the Meelpaeg Reservoir. Clarify whether the Risk Assessment is the same as the Audit or whether there is a difference in these items.

Tab 18, Volume II – Wood Pole Line Management

IC-NLH-67 At pp. 3-4, Hydro refers to Order No. P.U. 4 (2013), and states that Hydro has taken steps to evaluate the correlation of several NDE techniques with full scale testing and will submit a report with its results as part of the 2015 capital budget submission.

- Please outline all the steps that have been taken since P.U. 4 (2013) was issued to evaluate the correlation of several NDE techniques with full scale testing, including the dates those steps were taken, specifically identifying the Hydro and non-Hydro personnel involved in these steps and the nature and extent of their involvement, and the total expenditure made in respect of these steps.

- Why was this report not made ready for submission as part of Hydro's 2014 capital budget submission?

Project assignment under cost of service

IC-NLH-68 Please indicate, in respect of all projects over $50,000, whether the proposed capital expenditure is in respect of a common asset or specifically assigned to Newfoundland Power or the Island Industrial Customers in Hydro's most recent cost of service study.

DATED at St. John's, in the Province of Newfoundland and Labrador, this 4th day of September, 2013.

POOLE ALTHOUSE

Per: _____
Dean A. Porter

STEWART MCKELVEY

Per: _____
Paul L. Coxworthy

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