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July 17, 2014

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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: Newfoundland and Labrador Hydro Supplemental Capital Budget Application for the construction of a new 230 kV transmission line between the Bay d'Espoir and Western Avalon Terminal Stations**

Please find enclosed the original and twelve (12) copies of the Requests for Information IC-NLH-1 to IC-NLH-14 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

Enclosures
c. Geoffrey P. Young, Senior Legal Counsel, Newfoundland and Labrador Hydro
Thomas J. Johnson, Consumer Advocate
Gerard Hayes, Newfoundland Power
Dean A. Porter, Poole Althouse
Thomas O'Reilly, Q.C., Vale Newfoundland and Labrador Limited
Danny Dumaresque
Scott Parsons, Vice President, Anemos Energy Corporation
Mark Sheppard, Vale Newfoundland and Labrador Limited

**IN THE MATTER OF** the *Electrical Power Control Act*, R.S.N.L. 1994, Chapter E-5.1 (the "EPCA") and the *Public Utilities Act*, R.S.N.L. 1990, Chapter P-47 (the "Act"), and regulations thereunder;

**AND IN THE MATTER OF** an Application by Newfoundland and Labrador Hydro (Hydro) pursuant to Subsection 41(3) of the Act, for approval of the Upgrade of the Transmission Line Corridor from Bay d'Espoir to Western Avalon.

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**ISLAND INDUSTRIAL CUSTOMERS**
**REQUESTS FOR INFORMATION**
**IC-NLH-1 to IC-NLH-14**

**Issued: July 17, 2014**

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**IN THE MATTER OF** the *Electrical Power Control Act*, R.S.N.L. 1994, Chapter E-5.1 (the "EPCA") and the *Public Utilities Act*, R.S.N.L. 1990, Chapter P-47 (the "Act"), and regulations thereunder;

**AND IN THE MATTER OF** an Application by Newfoundland and Labrador Hydro (Hydro) pursuant to Subsection 41(3) of the Act, for approval of the Upgrade of the Transmission Line Corridor from Bay d'Espoir to Western Avalon.

## REQUESTS FOR INFORMATION OF THE ISLAND INDUSTRIAL CUSTOMERS
## IC-NLH-1 to IC-NLH-14

**IC-NLH-01** Hydro, in its Application filed April 30, 2014, estimates a capital cost of $291.7 million dollars, with an in service date of May 1, 2018, for this project. As at the date of Hydro's response to this request for information, do the foregoing still reflect Hydro's best information with respect to the estimated capital cost and in service date for this project?

**IC-NLH-02** At page vi of the Hydro report "Upgrade Transmission Line Corridor" dated April 28, 2014, Hydro states that the new transmission line will provide *"...the required reinforcement to maintain the stability of the system to ride through contingencies planned for within the planning criteria."* Has Hydro commissioned any independent review of the appropriateness of its planning criteria, in relation to this project? If so, please provide a copy of the review report.

**IC-NLH-03** At page viii of the Hydro report "Upgrade Transmission Line Corridor" dated April 28, 2014, Hydro states that it examined possible alternatives to resolve the stability issue and narrowed down the options warranting more detailed analysis to the four solutions examined in the report. Please provide a description of all the other possible alternatives to resolve the stability issue examined by Hydro, and copies of all reports and analysis completed by or for Hydro in relation to those other possible alternatives.

**IC-NLH-04** At page ix of Hydro's report "Upgrade Transmission Line Corridor" dated April 28, 2014, Hydro states that assumptions regarding the electrical characteristics of the proposed combustion turbine for Holyrood were made in its analysis of the transmission line project. Please describe in detail those assumptions and compare those assumptions to the electrical characteristics of the combustion turbine in respect of which Hydro has made Application to the Board.

**IC-NLH-05** At page ix of Hydro's report "Upgrade Transmission Line Corridor" dated April 28, 2014, Hydro states that following conclusion of the CT proposal and clarification of its characteristics the requirements for further reactive support in the Avalon Peninsula area will be determined. Does Hydro expect there to be any further clarification of the characteristics of the combustion turbine to be installed at Holyrood? If yes, what are those additional characteristics which still require clarification and when are they expected to be clarified? If no, then has Hydro identified the requirements for further reactive support in the Avalon Peninsula area, and will these requirements alter any of the characteristics (including costs) of the elements included in Hydro's proposed transmission line project?

**IC-NLH-06** At page 12 of Hydro's report "Upgrade Transmission Line Corridor" dated April 28, 2014, Hydro states that *"As the current power system is also unable to remain stable with a similar three phase fault at Holyrood, it was decided to not try to prevent this condition when completing the present analysis as the system is still susceptible to only one location where a three phase fault is of concern. Due to the generally concentrated physical location of the major generation source (BDE) within the electrical grid, this has been accepted as the cost to mitigate would be a major capital expense."*

Please explain if the foregoing unmitigated circumstance will continue to exist following completion of the proposed transmission line project.

**IC-NLH-07** With reference to the previous RFI IC-NLH-06 what is the estimated major capital expenditure cost of mitigating the identified concern?

**IC-NLH-08** With reference to the previous RFI IC-NLH-06 and IC-NLH-07, please explain why the risk presented by opting not to mitigate the identified concern is acceptable under Hydro's planning criteria, as compared to the risks sought to be mitigated by the proposed transmission line project.

**IC-NLH-09** With reference to the SNC Lavalin report at Appendix C9, in the introduction and in other sections of that report, SNC Lavalin identifies scenarios where it may be necessary to reduce the export of power to Nova Scotia on the Maritime Link. Is the reduction of the export of power to Nova Scotia on the Maritime Link, after a permanent pole outage or other outage scenario examined by SNC Lavalin in its Appendix C9 report, a contemplated measure within Hydro's planning criteria to mitigate a permanent pole outage or other outage scenario examined by SNC Lavalin in its Appendix C9 report?

**IC-NLH-10** At page 10 of the Appendix C9 SNC Lavalin report, in section 3, SNC Lavalin states *"Following the Client's recommendation, the import from Labrador and the export to Nova Scotia has been adjusted to eliminate all overloads."* Please provide the rationale for this recommendation.

**IC-NLH-11** At page 39 of the Appendix C9 SNC Lavalin report, SNC Lavalin states that *"In summary, during most of the year, the loss of the largest generator on the system (usually Bay d'Espoir #7) will require a reduction in the export on the Maritime link."* Will this remain the case if the proposed transmission line project is completed? If no, explain how such reductions will be mitigated by the new transmission line.

**IC-NLH-12** At page 39 of the Appendix C9 SNC Lavalin report, SNC Lavalin states that *"If no reductions are made in the export to Nova Scotia as outlined above, the line overloads that will result in the 230 kV system are summarized in Table 5-1."* Could the capability to make reductions in exports to Nova Scotia eliminate or mitigate the need for the proposed transmission line project in any of the base cases analyzed by Hydro for this project?

**IC-NLH-13** With reference to IC-NLH-06, Hydro recognizes that not all risks can, on a cost benefit analysis, be justified to be mitigated where to do so would involve a major capital expense. Hydro, in its cost benefit analysis for this project, has only provided the total estimated costs for the proposed transmission line. Please provide Hydro's estimated cost (at whatever level of estimate is available to Hydro) for the other three island upgrade alternatives identified in Table 6.5: Summary of Transient Stability Analysis.

**IC-NLH-14** At page 61 of Hydro's report "Upgrade Transmission Line Corridor" dated April 28, 2014, Hydro states that

> *"Given the incremental capital cost to build the line for the 1192.5 kcmil conductor is approximately $31M, there is no merit in Hydro considering a larger conductor over the current standard of 795 kcmil ACSR. If in the design stage a stronger conductor is required on sections of the line, then the electrically equivalent 804 kcmil AACSR/TW would likely be used, but this is a detail to be considered in the final design."*

At page 59 of the same report, Hydro identifies the following:

> *"From a meteorological loading condition perspective, a balance between strength and outside diameter will be required to withstand the prospective icing conditions, particularly on the Avalon Peninsula section of the route. Past practice with upgrades/repairs on the Avalon Peninsula would suggest that the 804 kcmil or 1192.5 kcmil conductors would be appropriate."*

Has Hydro included in its $291.7 million dollar estimate of the cost of this project the cost of using 804 kcmil conductors, instead of 795 kcmil conductors, on the Avalon Peninsula section of the route? If not, what would be the increase in the estimated cost of the project if 804 kcmil conductors are determined to be required on the Avalon Peninsula section of the route?

**DATED** at St. John's, in the Province of Newfoundland and Labrador, this 17th day of July, 2014.

**POOLE ALTHOUSE**

Per: _____
Dean A. Porter

**STEWART MCKELVEY**

Per: _____
Paul L. Coxworthy

TO: The Board of Commissioners of Public Utilities
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120 Torbay Road
P.O. Box 21040
St. John's, NL A1A 5B2

Attention: Board Secretary

TO: Newfoundland & Labrador Hydro
P.O. Box 12400
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Attention: Geoffrey P. Young,
Senior Legal Counsel

TO: Thomas Johnson, Consumer Advocate
O'Dea, Earle Law Offices
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TO: Newfoundland Power Inc.
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Attention: Gerard Hayes,
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TO: Cox & Palmer
Scotia Centre, Suite 1000
235 Water Street
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Attention: Thomas J. O'Reilly Q.C.

TO: Danny Dumaresque
213 Portugal Cove Road
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TO: Anemos Energy Corporation
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Attention: Scott Parsons
Vice President