O'DEA OE EARLE

September 15, 2015

Ms. G. Cheryl Blundon
Board of Commissioners of Public Utilities
120 Torbay Road, P.O. Box 12040
St. John's, NL A1A 5B2

Dear Ms. Blundon:

Re: Investigation and Hearing into Supply Issues and Power Outages on the Island
Consumer Advocate's Requests for Information CA-NLH-132 to CA-NLH-141

In relation to the above noted application please find enclosed the original and twelve (12) copies of the Consumer Advocate's Requests for Information numbered CA-NLH-132 to CA-NLH-141.

A copy of the letter, together with enclosures, has been forwarded directly to the parties listed below.

If you have any questions regarding the filing, please contact the undersigned at your convenience.

Yours very truly,

O'DEA, EARLE

THOMAS JOHNSON, Q.C.

TJ/cel
Encl.

cc: Newfoundland and Labrador Hydro
Attention: Geoffrey P. Young

Newfoundland Power Inc.
Attention: Gerard Hayes

Stewart McKelvey Stirling Scales
Attention: Mr. Paul Coxworthy

323 Duckworth Street | P.O. Box 5955 | St. John's, NL | A1C 5X4
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Grand Riverkeeper Labrador Inc.
Attention: Ms. Roberta Frampton Benefiel

Mr. Danny Dumaresque

IN THE MATTER OF
the *Electrical Power Control Act, 1994*, SNL 1994, Chapter E-5.1 (the "EPCA") and the *Public Utilities Act*, RSNL 1990, Chapter P-47 (the "Act"), as amended;

AND

IN THE MATTER OF
the Board's Investigation and Hearing into Supply Issues and Power Outages on the Island Interconnected System.

CONSUMER ADVOCATE
REQUESTS FOR INFORMATION
CA-NLH-132 to CA-NLH-141
Issued: September 15, 2015

CA-NLH-132: In reference to NP-NLH-027, the following is stated:

"After the release of the Manitoba Hydro International report, and during detailed engineering, Aluminum Conductor Steel Reinforced (ACSR) conductors were specified by the Lower Churchill Project for the pole and electrode conductors for the Labrador–Island Transmission Link."

According to NP-NLH-018 (Revision 1, June 3-15), Attachment 2, pages 1 to 15, the tower loads for the Labrador-Island Transmission Link were developed for non-standard 3633 KCMIL 1841_A1/S1A-110/7 ACSR for the Pole Conductor. In addition, there were several different ACSR conductors for the Electrode.

Please provide copies of the reports regarding the above, including all detailed mechanical and electric conductor properties.

CA-NLH-133: For the overhead sections of the Labrador-Island Transmission Link, please provide the results of the full scale testing for the different structure types. Please also provide the conductor optimization study used to identify the optimum conductor type and size for the project.

CA-NLH-134: Reference: http://www.powerinourhands.ca/pdf/MHi.pdf Manitoba Hydro International: Review of the Muskrat Falls and Labrador Island HVdc Link and the Isolated Island Options, October 2012.

At page 44, Figure 8 diagrams HVdc Segment 1 (with electrode) and HVdc Segment 2 (without electrode) and states:

"Typical HVdc Transmission Guyed Tangent Structures which comprise approximately 85% of the towers in the Labrador-Island HVdc transmission line"

Please provide the structure selection report used by Hydro. Please detail how the selection of the guyed vee structure type was made.

CA-NLH-135: For the overhead sections of the Labrador-Island Transmission Link, the foundation and anchor quantities have been calculated based upon an assumed distribution of soil conditions (normal% / rock% / bog%). Please provide an explanation of the methodology used by Hydro and if the final design for the foundations will be for the maximum capacity of the structures.

CA-NLH-136: With reference to PUB-NLH-268, 269 and 270, please provide a scalable plan view drawing showing where the ac and dc lines are located in close proximity to one another within the corridor.

CA-NLH-137: Referencing NP-NLH-038, page 2, paragraph (g):

"Clearances under maximum ice and after load – The line is designed for 8.3 m ground clearance for maximum sag condition with maximum ice after load condition or maximum temperature after load condition (85 deg C)."

Please explain how the 8.3 ground clearance was determined. Please provide clearances and separation values for all other line structures with their related load cases.

CA-NLH-138: According NP-NLH-061, 062, 064 and other supporting documents, the structure locations have been determined in such a way that the maximum structure utilization for different load cases will be less than the manufacturers design and testing. Please explain, from a reliability point of view, the effect of this on the transmission system for identifying the critical elements.

CA-NLH-139: In reference to NP-NLH-038, page 2, paragraph (f), please provide the additional load cases for the design of the anti-cascade towers relative to the suspension tower types A and B load cases. Please provide the layout drawing of the anti-cascade towers.

CA-NLH-140: Reference: http://www.powerinourhands.ca/pdf/MHi.pdf Manitoba Hydro International: Review of the Muskrat Falls and Labrador Island HVdc Link and the Isolated Island Options, October 2012.

At page 46, an assessment of transmission line reliability in is provided in point form. The second bullet on page 46 states:

"Provision of special anti-cascade towers every 10 to 20 structures to contain and isolate failures and prevent them from impacting large sections of line"

NP-NLH-038, page 2, paragraph (f) states:

"Anti-cascade requirements dictated that a maximum of 20 suspension structures would be permitted between full-tension deadends."

Please explain the rationale for when the spacing between the anti-cascade towers will be lowered to 10 structures instead of 20 structures.

CA-NLH-141: In reference to NP-NLH-004, please confirm that the conductors and hardware have been designed to a 1:150 year reliability return period. If this is not the case, what reliability return period was used to design these components?

Dated at St. John's in the Province of Newfoundland and Labrador, this 15th day of September, 2015.

Thomas Johnson, Q.C.
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