

December 17, 2014

The Board of Commissioners of Public Utilities
Prince Charles Building
120 Torbay Road, P.O. Box 21040
St. John's, Newfoundland & Labrador
A1A 5B2

Attention: Ms. Cheryl Blundon
Director Corporate Services & Board Secretary

Dear Ms. Blundon:

**Re: Newfoundland and Labrador Hydro - the Board's Investigation and Hearing into
Supply Issues and Power Outages on the Island Interconnected System: Supplementary
Response in Relation to PUB-NLH-457 and PUB-NLH-458**

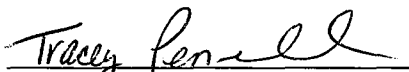
In its responses to the Board's RFIs PUB-NLH-457 and PUB-NLH-458, Hydro indicated that additional documentation would be supplied to the Board when the related work was completed. In this regard, please find enclosed the original and 12 copies of the following:

- a) Hydro's analysis of the impact of transmission line contingencies on system losses related to alternate generation dispatches (re: PUB-NLH-457); and,
- b) Two reports by Trans Grid Solutions Inc. related to the simulation of the Sunnyside T1 failure and an investigation of the Western Avalon T5 transformer failure concerning whether or not harmonics or system resonance were contributing factors to the system events of January, 2014 (re: PUB-NLH-458).

We trust the foregoing is satisfactory. If you have any questions or comments, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO



Tracey L. Pennell
Legal Counsel

TLP/jc

cc: Gerard Hayes – Newfoundland Power
Paul Coxworthy – Stewart McKelvey Stirling Scales
ecc: Roberta Frampton Benefiel – Grand Riverkeeper Labrador

Thomas Johnson – Consumer Advocate
Danny Dumaresque

Incremental System Losses, Transmission Line Contingencies - 2014/15

November, 2014

Gross Island 60 Hz Generation MW	Base Case Losses MW	Loss of One HRD Unit Incremental MW	Loss of Two HRD Units Incremental MW	Loss of Three HRD Units Incremental MW	Loss of TL202 or TL206 Incremental MW	Loss of TL207 Incremental MW	Loss of TL237 Incremental MW	Loss of TL234 Incremental MW
1675-1735	60.0	25.0	35.0	See Note 1	-15.0	-10.0	-15.0	
1565-1620	50.0	15.0	25.0		-10.0		-10.0	
1455-1510	40.0		20.0	60.0				
1350-1400	30.0	10.0	15.0	40.0	-5.0			
1245-1295	25.0			35.0				
1140-1195	30.0	15.0	20.0					
1090	25.0							
985-1040	35.0	20.0		See Note 2	-10.0		-10.0	10.0
880-930	30.0							
780-835	40.0				-15.0			
675-730	35.0				-10.0			

Notes:

- The system does not have sufficient capacity to supply the load
- No more Holyrood units left to trip
- Number of Holyrood units online in Base Case : 1245 MW to 1735 MW - 3 units
1090 MW to 1195 MW - 2 units
880 MW to 1040 MW - 1 unit
< 880 MW - No units online
- Corrective Actions - See Sheet "Corrective Actions": These corrective actions would produce worst case impact on losses
- Other transmission line Contingencies such as: TL218, TL235, TL243, TL247, TL258, TL263, TL280, and the Loss of Hardwoods Synchronous Condenser were examined but showed no significant increase in Losses