1   **Undertaking Request (U-9)**

2   **Monday, April 23, 2018**

3   **Transcript Reference: Pg. 145, line 9 11-22.**

4   Undertake to provide the total expected kWh to be delivered to Soldiers Pond from the

5   Labrador Island transmission link, excluding transmission losses.

6

7

8   **Undertaking Response**

9   It is expected that 819,900 kW would be delivered at Soldiers Pond based on 900,000 kW

10   being transmitted at the rectifier in Muskrat Falls. This is based on preliminary assumed

11   values for losses and station service as defined in U-JH-009 Attachment 1. Actual loss

12   values will be confirmed during commissioning.

TP-TN-036

Labrador Island-Link - Assumed Power Losses & Station Service Loads

The following is a table summarizing the assumed power losses and station service loads associated with the Labrador Island-Link (LIL) when operating at a full capacity of 900 MW:

Type of Loss	Losses (MW)
DC Line Losses[1]	68.6
Corona Losses	2.4
Transformers Losses (Synchronous Condensers)	0.3
Synchronous Condenser Losses[2]	0.8
Total Losses	**72.1**
SOP Station Service (Synchronous Condensers)	2.0
SOP Station Service[3]	3.0
MFA Station Service[3]	3.0
Total Station Service Load	**8.0**
Total Losses/Station Service Loads	*80.1*
[1] Based on load flow analysis. Includes converter transformer losses at MFA and SOP	
[2] Assumes two synchronous condensers in-service	
[3] Includes station services loads for converter and terminal station heater	

The assumed losses and station service loads provided in the table above are preliminary and will be confirmed during the commissioning.

Document Summary

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Revision History

Revision	Prepared by	Reason for change	Effective Date
1	M.Carter	Initial Release	4/24/2018

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