Q. **Reference Marginal Cost Study Update – 2018 – Summary Report, Nov. 15, 2018, page 4 (8 pdf), Table 1 and Note 7:**

Preamble:

Table 1 indicates a net capacity addition of 72 MW by 2021, taking into account 900 MW from the LIL, minus 80 MW losses and 158 MW for the Emera entitlement. Note 7 indicates that the 900 MW of the LIL consists of a "Combination of recapture energy from Churchill Falls and Muskrat Falls generation".

a) Please specify the amount of recapture energy from Churchill Falls which is considered by Hydro to constitute firm capacity for the IIS.

b) Please indicate the assumption regarding the amount of cryptocurrency mining loads in Labrador underlying this estimate of available recapture energy.

c) Please specify the amount of Muskrat Falls generation which is considered by Hydro to constitute firm capacity for the IIS.

d) Please break down your estimate of the amount of Muskrat Falls generation which is considered by Hydro to constitute firm capacity for the IIS into:

(i) The amount of generation that can be relied upon at system peak produced by the Muskrat Falls Generating Station, and

(ii) the amount of power from the Churchill Falls Generating Station, additional to recapture energy, which is considered by Hydro to contribute to firm capacity at the IIS system peak by virtue of the Water Management Agreement between Nalcor and CF(L)Co.

A. a) Newfoundland and Labrador Hydro's ("Hydro") recent planning studies propose planning for and dispatching the Newfoundland and Labrador Interconnected System ("NLIS") on a joint basis. As such, Hydro does not consider Recapture Energy to provide firm capacity to the Island Interconnected System explicitly, but rather considers Recapture Energy as one of the available sources to be dispatched to meet customer and system requirements in the NLIS. Recapture Energy remains primarily for the use of customers in Labrador, and is currently made available to the Island Interconnected System only when requirements in Labrador have been satisfied.

In instances where the Labrador-Island Link is sending 900 MW[1] to the Island Interconnected System, it is assumed that between 790 MW and 824 MW are being produced by the Muskrat Falls Generating Station, with Recapture Energy providing the balance of the 900 MW, that is 76 MW to 110 MW.

b) The referenced forecast included approximately 18 MW of requirements attributed to data center load at the forecast Labrador Interconnected System peak. The amount of energy requirements in Labrador explicitly forecast by Hydro and identified as being associated with data processing is approximately 147.9 GWh in 2021. The forecast distribution and transmission losses associated with the customer load requirements is approximately 17.6 GWh resulting in total system energy requirements of 165.5 GWh.

c) Please refer to Hydro's response to LAB-NLH-023.

d) i) Please refer to Hydro's response to LAB-NLH-023.

ii) The Water Management Agreement enables Muskrat Falls to produce energy for Churchill Falls and Churchill Falls to produce energy for Muskrat Falls, in accordance with the Water Management Agreement. The Agreement does not make additional

[1] As measured at the Muskrat Falls Generating Station

capacity available incremental to Hydro's existing arrangements.[2] As such, there is no additional capacity assumed to be available to contribute to firm capacity at the Island Interconnected System peak by virtue of the Water Management Agreement.

[2] Hydro's existing agreements include agreements for Recapture Energy, and the Twin Falls Power Corporation Block.