

1 Q. **NLH Evidence, Section 5.9.1, p.5.35**

2 Citation:

3 Labrador West transmission is nearing its capacity limitations. The cost of providing
4 new transmission to meet load growth on the Labrador Transmission System is high
5 and can materially impact future customer rates.

6

7 Please:

8 a) confirm that the transmission lines that are nearing their capacity limitations
9 are the lines between Churchill Falls and Labrador City indicated in red in the
10 inset to Exhibit 1, Schedule 1;

11 b) Explain the significance, if any, of the fact that there are no numbers
12 indicated to identify these lines on Exhibit 1, Schedule 1;

13 c) confirm that the allusion to the high cost of meeting load growth on the
14 Labrador Transmission System is a reference to the Labrador West
15 Transmission Project, referred to in Note 51;

16 d) describe in detail the status of this project, which was discussed at length in
17 the hearing on the 2013 Revised GRA;

18 e) indicate how much load growth would be required in Labrador West before
19 this project would be necessary; and

20 g) Confirm whether power purchases from Hydro-Quebec system has been
21 considered for meeting the Lab West load growth, and disclose any reports
22 in which the costs of this option have been considered.

- 1 A. a) Yes, the two 230 kV transmission lines connecting Churchill Falls and Labrador City
2 (Wabush Terminal Station) are shown in red in the insert to Exhibit 1, Schedule 1.
3
- 4 b) The fact that there are no numbers indicating the identity of these lines in
5 Exhibit 1, Schedule 1 is an omission. The two lines are identified as L2303
6 and L2304.
7
- 8 c) The statement "*The cost of providing new transmission to meet load growth*
9 *on the Labrador Transmission System is high*" as indicated on lines 1 through
10 3 of page 5.35 is a reference to the Labrador West Transmission Project,
11 referred to in Note 51.
12
- 13 d) This project was placed on hold pending a restart decision by Alderon.
14
- 15 e) The existing transmission system supplying western Labrador has a transfer
16 capacity of 345 MW (delivered to the 46 kV bus). Schedule 3-II indicates an
17 IOC load forecast of 245 MW in 2018 and 2019. Of the 162.4 MW required
18 for Hydro Rural Interconnected in 2018, 89 MW is forecast for supply to
19 western Labrador. Combined, the 2018 peak load for western Labrador
20 equals 334 MW, excluding transmission system losses. Load growth of 11
21 MW would therefore require an expansion of the transmission system.
22
- 23 It must be noted that the existing transmission system only allows for the
24 supply of 345 MW on a non-firm basis and that load must be curtailed for
25 contingencies including the loss of a 230 kV transmission line or a
26 synchronous condenser or other infrastructure at the Wabush Terminal
27 Station.

1 A transmission planning study is underway to review the reliability of the
 2 transmission system in Labrador and to investigate the application of
 3 Transmission Planning Criteria. The study will include an assessment of the
 4 cost implications of system reinforcements that would be required to serve
 5 load on a firm basis and to ensure that terminal stations are configured in
 6 accordance with Hydro standards.

7
 8 f) Please refer to the following Table 1 that provides the disaggregated
 9 Labrador West load growth between domestic and Industrial Customers for
 10 the 2017 Forecast, 2018 Test Year, and 2019 Test Year.

Table 1 Forecast Electricity Sales for Labrador West

| | 2017 Forecast | | 2018 Test Year | | 2019 Test Year | |
|---|---------------|--------|----------------|--------|----------------|--------|
| | MW | GWh | MW | GWh | MW | GWh |
| Hydro Rural Interconnected | | | | | | |
| Domestic | | 175.2 | | 175.0 | | 174.9 |
| General Service | | 156.3 | | 163.8 | | 172.4 |
| Other | | 18.9 | | 19.3 | | 19.8 |
| Total Hydro Rural Interconnected | 79.5 | 350.4 | 80.6 | 358.3 | 81.7 | 367.0 |
| Industrial Customers | 245.4 | 1735.5 | 245.3 | 1734.3 | 245.0 | 1733.1 |
| Total Deliveries | 324.9 | 2085.9 | 325.9 | 2092.6 | 326.7 | 2100.1 |

Notes:

1. Other includes area lights, distribution losses and Hydro company use.
2. Demands by retail class are not separately forecasted. Demands for Total Deliveries are the sum of the non-coincident peaks.
3. Table includes rounding errors.
4. On October 11, 2017, Hydro received a request from IOC to increase their power on order for 2018. The requested increase is 5MW relative to the 2018 Test Year customer requirement.

11 g) Hydro is presently studying the power supply options for Labrador West
 12 including supply from Hydro-Quebec.