

1 Q. Re: RRAS, 2019 Update, Vol. III, page 27 (143 pdf)

2 Citation:

3 6.3 Considered Potential Labrador Load Scenarios

4 The Labrador Interconnected System load includes the power and energy requirements of the
5 iron ore industry in western Labrador and Hydro's rural customers. The communities include
6 Happy Valley-Goose Bay (including North West River, Sheshatshiu, and Mud Lake), Wabush,
7 Labrador City, and Churchill Falls town site customers.

Table 6 presents the base forecast with a sensitivity case for the total Labrador Interconnected System over the study period. The base forecast reflects Hydro's Rural Load Forecast Spring 2019, which includes existing data centre requirements as well as the loads associated with Wabush mine reactivation by Tacora Resources. A sensitivity case was developed to include additional load requirements for the Department of National Defence ("DND") at 5 Wing Goose Bay. (underlining added)

Table 6: Labrador Utility Electricity Load Growth Summary – 2019 Planning Load Forecast^{38,39,40}

		2018–2024 ^{41,42}	2018–2030
Case I: Expected Case	MW	7.4%	8.5%
	GWh	29.1%	30.1%
Case II: Increased Requirements at DND	MW	10.8%	11.9%
	GWh	31.9%	32.9%

8 a) Please confirm that the sensitivity case does not include:

9 i. Additional mining loads;

10 ii. Additional cryptocurrency mining loads; or

11 iii. Any other increased loads, other than increased requirements at DND.

12 b) Please explain why these additional loads, which were recognized as plausible in the 2018
13 RRAS, were not included in this assessment.

14

- 1 c) Please provide a table using the following format that includes the following cases:
- 2 i. Expected case (updated to take current economic conditions into account);
- 3 ii. Increased requirements at DND;
- 4 iii. Additional mining and cryptocurrency (data centre) loads (medium);
- 5 iv. Additional mining and cryptocurrency (data centre) loads (high).
- 6 d) For each one of these cases, please indicate as of what date existing resources (Recall Power
- 7 and the Twinco Block) are no longer sufficient to meet i) capacity and ii) energy
- 8 requirements, as well as the amount of the shortfall:

		Date when Recall and Twinco are exceeded	Shortfall by 2029
Expected case	MW		
	GWh		
Increased requirements at DND	MW		
	GWh		
Additional mining and cryptocurrency loads (medium)	MW		
	GWh		
Additional mining and cryptocurrency loads (high)	MW		
	GWh		

- 9
- 10
- 11 A. a) i. Newfoundland and Labrador Hydro (“Hydro”) confirms additional mining loads are not
- 12 included in the sensitivity case noted. While the 2018 Reliability and Resource Adequacy
- 13 study included a sensitivity case which contemplated incremental mining load, the case
- 14 considered the reactivation of the Scully Mines by Tacora Resources Inc., which now forms
- 15 part of Hydro’s base forecast for the Labrador Interconnected System. Hydro notes that any
- 16 incremental mining load in Labrador West would require incremental transmission to the
- 17 region and would be subject to the outcomes of the ongoing Network Addition Policy
- 18 regulatory proceeding.

1 ii. Hydro confirms additional cryptocurrency mining loads are not included in the sensitivity
2 case noted.

3 iii. Hydro confirms the sensitivity case noted only includes increased requirements at DND.

4 b) As stated in Hydro’s response to part a, the sensitivity case included in Hydro’s 2018
5 Reliability and Resource Adequacy Study which contemplated incremental mining load
6 considered the reactivation of the Scully Mines by Tacora Resources Inc., which formed part
7 of Hydro’s base forecast for the Labrador Island System in its 2019 Update to the Reliability
8 and Resource Adequacy Study. With the recently announced (April 2020) news concerning
9 Alderon Iron Ore Corp’s financial situation as well as the implications for global economic
10 growth in the near-term associated with the COVID-19 pandemic, Hydro considers the
11 likelihood of significant load growth occurring in the next decade stemming from expansion
12 within the Labrador iron ore industry to be very low.

13 As of April 2020, Hydro has requests for service for more than 300 MW of customer load
14 associated with computer data servers at various locations on the Labrador Island System.
15 While these requests for service represent the most significant and potential load increase
16 for the Labrador Island System over the next ten years, current system constraints and load
17 restrictions must first be removed before these service requests can be considered for
18 connection.

19 c) i.–ii. LAB-NLH-011, Attachment 1 provides the forecasted energy and demand requirements,
20 and capacity and energy balance, for the base and increased requirements at DND scenarios
21 modelled in Hydro’s 2019 Update to the Reliability and Resource Adequacy study.¹ Updated
22 long-term forecasts inclusive of current economic conditions and projections will be
23 prepared in the fall and will for the basis of Hydro’s 2020 Update to the Reliability and
24 Resource Adequacy Study.

¹ Note: This forecast assumed that the total capacity of the Labrador West system is increased for the entire period, as per Hydro’s Lab West Expansion plan. In the absence of this increase in capacity, transmission in the region remains constrained and this forecast could not be served.

1 iii.–iv. Hydro notes that it has received applications associated with several commercial data
2 centres which are not included in the forecasts provided in response to part a and would
3 increase retail energy requirements should applications for such services be approved
4 within the forecast period. Hydro notes that incremental load in Labrador West would
5 require incremental transmission to the region and would be subject to the outcomes of the
6 ongoing Network Addition Policy regulatory proceeding.

7 d) Please refer to Hydro's response to part c).

2019 Reliability and Resource Adequacy - Labrador Load Forecast - Expected Forecast

Energy							Capacity									
Year	Lab West		Lab West	Losses	Total	Energy	Year	Lab West		Lab West	Muskrat Falls	Losses	Losses	Losses	Total	Capacity
	Utility	Industrial	Lab East			Balance		Utility	Industrial	Lab East						Construction
	GWh	GWh	GWh	GWh	GWh	GWh		MW	MW	MW	MW	MW	MW	MW	MW	MW
2020	430.5	2074.3	356	207	3067	1269	2020	77.0	317	83.6	0.0	24.8	1.4	26.2	475.5	49.5
2021	431.6	2074.3	346	168	3020	1316	2021	77.0	317	79.1	0.0	24.8	1.2	26.0	471.4	53.6
2022	378.3	2074.3	348	162	2962	1374	2022	77.2	317	79.4	0.0	24.8	1.2	26.0	471.8	53.2
2023	378.7	2074.3	349	161	2963	1373	2023	77.3	317	79.7	0.0	24.8	1.2	26.0	472.2	52.8
2024	380.7	2074.3	350	162	2967	1369	2024	77.4	317	80.0	0.0	24.8	1.3	26.1	472.6	52.4
2025	381.2	2074.3	352	162	2970	1366	2025	77.9	317	80.4	0.0	24.8	1.3	26.1	473.5	51.5
2026	381.7	2074.3	356	162	2974	1362	2026	78.0	317	80.9	0.0	24.9	1.3	26.1	474.1	50.9
2027	382.2	2074.3	358	162	2977	1359	2027	78.2	317	81.8	0.0	24.9	1.3	26.2	475.1	49.9
2028	382.7	2074.3	361	162	2980	1356	2028	78.4	317	82.5	0.0	24.9	1.3	26.2	476.0	49.0
2029	383.2	2074.3	363	162	2983	1353	2029	78.6	317	83.2	0.0	24.9	1.4	26.3	476.8	48.2

Note: This forecast assumed that the total capacity of the Labrador West system is increased for the entire period, as per Hydro's Lab West Expansion plan. In the absence of this increase in capacity, transmission in the region remains constrained and this forecast could not be served.

2019 Reliability and Resource Adequacy - Labrador Load Forecast - Labrador Industrial Growth

Energy							Capacity									
Year	Lab West		Lab West	Losses	Total	Energy	Year	Lab West		Lab West	Muskrat Falls	Losses	Losses	Losses	Total	Capacity
	Utility	Industrial	Lab East			Balance		Utility	Industrial	Lab East						Construction
	GWh	GWh	GWh	GWh	GWh	GWh		MW	MW	MW	MW	MW	MW	MW	MW	MW
2020	430.5	2074.3	374	207	3085	1251	2020	77.0	317	83.6	0.0	24.8	1.4	26.2	475.5	49.5
2021	431.6	2074.3	408	168	3081	1255	2021	77.0	317	94.1	0.0	24.8	1.8	26.6	485.3	39.7
2022	378.3	2074.3	409	162	3023	1313	2022	77.2	317	94.4	0.0	24.8	1.8	26.6	485.8	39.2
2023	378.7	2074.3	410	161	3025	1311	2023	77.3	317	94.7	0.0	24.8	1.8	26.6	486.1	38.9
2024	380.7	2074.3	412	162	3029	1307	2024	77.4	317	95.0	0.0	24.8	1.8	26.6	486.5	38.5
2025	381.2	2074.3	414	162	3032	1304	2025	77.9	317	95.4	0.0	24.8	1.8	26.7	487.4	37.6
2026	381.7	2074.3	417	162	3035	1301	2026	78.0	317	95.9	0.0	24.9	1.9	26.7	488.0	37.0
2027	382.2	2074.3	420	162	3038	1298	2027	78.2	317	96.8	0.0	24.9	1.9	26.8	489.0	36.0
2028	382.7	2074.3	423	162	3042	1294	2028	78.4	317	97.5	0.0	24.9	1.9	26.8	489.9	35.1
2029	383.2	2074.3	425	162	3045	1291	2029	78.6	317	98.2	0.0	24.9	2.0	26.9	490.8	34.2

Note: This forecast assumed that the total capacity of the Labrador West system is increased for the entire period, as per Hydro's Lab West Expansion plan. In the absence of this increase in capacity, transmission in the region remains constrained and this forecast could not be served.