

1 Q. **Reference: CA-NLH-081:** Please provide a table similar to Table 1 (CA-NLH-081)
2 comparing the capacity and energy balances on the Island Interconnected System in
3 2013 to 2022, but for the situation assuming the complete loss of the 830 MW LIL
4 (delete the column relating to LOLH). Please identify the assumed level of support
5 over the Maritime Link in 2022.
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8 A. As detailed in *Technical Note Labrador-Island HVdc Link and Island Interconnected*
9 *System Reliability* (Muskrat Falls Review proceeding, Exhibit 106), the maximum
10 expected outage duration for the Labrador-Island Link is two weeks. As such, the
11 temporary loss of the Labrador-Island Link will have no effect on the annual firm
12 capability. Given the capacity of the Labrador-Island Link, less the Emera block of
13 167.8 MW at Muskrat Falls (see Hydro's response to PUB-NLH-217), less losses, 675
14 MW of capacity is available to the island at Soldiers Pond from the Labrador-Island
15 Link (see Hydro's response to CA-NLH-028). As such, loss of the Labrador-Island Link
16 will result in a temporary reduction in net capacity of 675 MW. The assumed level
17 of support over the Maritime Link in 2022 is 300 MW (see Hydro's response to CA-
18 NLH-028). If a two-week outage were to occur, a maximum of approximately 90
19 GWh could be supplied by the Maritime Link.
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21 See the requested table below.

Island Interconnected System Supply Issues and Power Outages

Island Connected System
Load Forecast and Capacity and Energy Balances
With Proposed Additions

<u>Load Forecast</u>			<u>Existing and Proposed System</u>				
Year	Peak ¹ MW	Energy ¹ GWh	Temporary Gross ^{2,3,4,5} Capacity at Winter				
			Gross Capacity ^{2,3,4,5} at Winter Peak MW	Peak with Loss of Labrador-Island link ⁸ MW	Firm ^{2,6,7} Capability GWh	Energy ⁶ Balance GWh	Interruptible ⁹ Contracts MW
2013	1,651	7,996	1,858	1,858	8,940	944	60
2014	1,714	8,246	1,858	1,858	8,940	694	105.8
2015	1,721	8,745	1,978	1,978	8,940	195	75.8
2016	1,736	8,902	1,978	1,978	8,940	38	75.8
2017	1,755	8,921	1,978	1,978	8,940	19	75.8
2018	1,757	8,914	2,953	2,278	12,791	3,877	75.8
2019	1,760	8,949	2,953	2,278	13,024	4,075	N/A
2020	1,766	9,016	2,953	2,278	13,024	4,008	N/A
2021	1,781	9,113	2,953	2,278	10,028	915	N/A
2022	1,801	9,243	2,487	1,812	10,028	785	N/A

1. 2013 and 2014 data reflect actual values. 2015 through 2022 are forecast values.
2. Assumes Muskrat Falls, Labrador-Island Link and Maritime Island Link in-service in 2018.
Assumes that Holyrood shuts down in 2021.
3. Assumes capacity is available through market or other contractual means to enable full use of the available transmission capacity.
4. Assumes capacity at winter peak of 121 MW for NP and 113 MW for Deer Lake Power.
5. Assumes capacity at winter peak of 18 MW for Star Lake, 8 MW for Corner Brook Co-gen and 63 MW for Nalcor Grand Falls and Bishop's Falls, Rattle Brook, Nalcor Buchans, St. Lawrence Wind and Fermeuse Wind are assumed to have 0 MW capacity at winter peak.
6. Firm Energy Capability does not include energy capability of installed combustion turbines. It does include firm off-island energy sources, including Muskrat Falls and 1,000 GWh from the Recall Block surplus in Labrador.
7. Firm capability for the hydroelectric resources is the firm energy capability of those resources under the most adverse three-year sequence of reservoir inflows occurring within the historical record. Firm capability for the thermal resources (Holyrood Thermal Generating Station) is based on energy capability adjusted for maintenance and forced outages.
8. The maximum outage duration associated with loss of the Labrador-Island Link is two weeks
9. Note that an additional up to 30 MW of supplemental capacity is available for 2015 through 2018, should it be required.