

Q. Reference: 2025 Build Application

Based on the assumptions used to develop the Minimum Investment Plan (i.e., relating to LIL forced outage rate, load forecast, etc.) please complete the following table. The last two rows correspond to the LIL shortfall event criterion. In this case, the IIS-LIS transmission capacity would be zero and the generation shortfalls would reflect the need to maintain a 70 MW regulating reserve for a 50th percentile scenario. Please complete the table for the following scenarios: 1) No retirements and no new facilities, 2) Holyrood Unit 1 retired in 2026, no other retirements and no new facilities, 3) Holyrood Units 1 and 2 retired in 2026, no other retirements and no new facilities, 4) Holyrood Units 1 and 2 retired in 2026, no other retirements and Avalon CT in-service in 2031, 5) all three Holyrood units retired in 2031, the Avalon CT in-service in 2031, the Newfoundland Power gas turbines in service in 2031 (48 MW) and Bay d’Espoir Unit 8 in-service in 2034, 6) all three Holyrood units retired in 2031, the Avalon CT, Newfoundland Power gas turbines and Bay d’Espoir Unit 8 in-service in 2031.

[illegible]

1 A. Please refer to CA-NLH-013, Attachment 1 for populated tables.

2 The planning reserve margins are not available for all years across all scenarios. The planning
3 reserve margins established within the 2024 Resource Adequacy Plan were calculated
4 specifically for 2032, based on the assumption that all aging assets had retired by that time.¹
5 However, the assessment of system adequacy under the scenario details requested is provided
6 by the direct calculation of the Loss of Load Hours in each year, which provides a precise view of
7 system adequacy before and after the retirement of the Holyrood Thermal Generating Station
8 (“Holyrood TGS”).

9 To date, Newfoundland and Labrador Hydro (“Hydro”) has provided a range of Labrador-Island
10 Link (“LIL”) shortfall scenarios through the 2024 Resource Adequacy Plan filing, the 2025 Build
11 Application, and as part of additional information requests by Bates White Economic Consulting,
12 LLC (“Bates White”). All analysis provided demonstrates the challenge that the Island
13 Interconnected System faces in the event of a prolonged bipole outage of the LIL during the
14 winter period, once the Holyrood TGS is retired. In addition, Bates White stated, “In our view,
15 Hydro’s LIL Shortfall Analysis model runs support the proposed Avalon CT project for
16 development in time for a 2031 commercial operations date.”²

¹ For further information, please refer to “2024 Resource Adequacy Plan – An Update to the Reliability and Resource Adequacy Study,” Newfoundland and Labrador Hydro, rev. August 26, 2024 (originally filed July 9, 2024), app. B, sec. 5.1.7.

² “Expert Addendum Report of Vincent Musco and Colliin Cain,” Bates White Economic Consulting, LLC, June 5, 2026, sec. VI., p. 37, item 89.

Scenario 1: No Retirements and No New Facilities

S1

	2027	2028	2029	2030	2031	2032	2033	2034	2035
IIS Firm Capacity	2,131	2,131	2,131	2,119	2,091	2,091	2,091	2,083	2,083
IIS-LIS Transmission Capacity ¹	484	484	484	484	484	484	484	484	484
Total Island Capacity	2,616	2,616	2,616	2,604	2,576	2,576	2,576	2,568	2,568
Total Peak Load (before losses) ²	1,749	1,760	1,779	1,795	1,810	1,821	1,834	1,848	1,865
Estimated peak loss	49	49	49	49	49	49	49	49	49
Total Peak Load (with losses)	1,798	1,809	1,828	1,844	1,859	1,870	1,883	1,897	1,914
Reserve Margin (%)	45%	45%	43%	41%	39%	38%	37%	35%	34%
Target Reserve Margin (%) ³	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LOLH	0.2	0.2	0.2	0.3	0.6	0.6	0.6	0.7	0.7
Target LOLH	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Percent of hours that generation shortfall exceeds 100 MW ⁴	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Target percent of hours that generation shortfall exceeds 100 MW ⁵	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

¹ Assumes a LIL capacity of 700 MW and is measured at Soldier's Pond.

² 2025 Slow Electrification load forecast.

³ Target reserve margin is not available for this scenario as the planning reserve margin was calculated for the year 2032 assuming aging assets had retired.

⁴ Shortfall analysis not calculated for this scenario.

⁵ Shortfall analysis not calculated for this scenario.

Scenario 2: Holyrood Unit 1 Retired in 2026, No Other Retirements and No New Facilities

S2

	2027	2028	2029	2030	2031	2032	2033	2034	2035
IIS Firm Capacity	1,961	1,961	1,961	1,949	1,921	1,921	1,921	1,913	1,913
IIS-LIS Transmission Capacity ¹	484	484	484	484	484	484	484	484	484
Total Island Capacity	2,446	2,446	2,446	2,434	2,406	2,406	2,406	2,398	2,398
Total Peak Load (before losses) ²	1,749	1,760	1,779	1,795	1,810	1,821	1,834	1,848	1,865
Estimated peak loss	49	49	49	49	49	49	49	49	49
Total Peak Load (with losses)	1,798	1,809	1,828	1,844	1,859	1,870	1,883	1,897	1,914
Reserve Margin (%)	36%	35%	34%	32%	29%	29%	28%	26%	25%
Target Reserve Margin (%) ³	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LOLH	0.7	0.7	0.8	0.9	1.9	1.8	1.9	2.2	2.3
Target LOLH	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Percent of hours that generation shortfall exceeds 100 MW ⁴	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Target percent of hours that generation shortfall exceeds 100 MW ⁵	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

¹ Assumes a LIL capacity of 700 MW and is measured at Soldier's Pond.

² 2025 Slow Electrification load forecast.

³ Target reserve margin is not available for this scenario as the planning reserve margin was calculated for the year 2032 assuming aging assets had retired.

⁴ Shortfall analysis not calculated for this scenario.

⁵ Shortfall analysis not calculated for this scenario.

Scenario 3: Holyrood Units 1 and 2 Retired in 2026, No Other Retirements and No New Facilities

S3

	2027	2028	2029	2030	2031	2032	2033	2034	2035
IIS Firm Capacity	1,791	1,791	1,791	1,779	1,751	1,751	1,751	1,743	1,743
IIS-LIS Transmission Capacity ¹	484	484	484	484	484	484	484	484	484
Total Island Capacity	2,276	2,276	2,276	2,264	2,236	2,236	2,236	2,228	2,228
Total Peak Load (before losses) ²	1,749	1,760	1,779	1,795	1,810	1,821	1,834	1,848	1,865
Estimated peak loss	49	49	49	49	49	49	49	49	49
Total Peak Load (with losses)	1,798	1,809	1,828	1,844	1,859	1,870	1,883	1,897	1,914
Reserve Margin (%)	27%	26%	24%	23%	20%	20%	19%	17%	16%
Target Reserve Margin (%) ³	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LOLH	2.5	2.3	2.5	2.9	5.5	5.2	5.6	6.2	6.5
Target LOLH	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Percent of hours that generation shortfall exceeds 100 MW ⁴	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Target percent of hours that generation shortfall exceeds 100 MW ⁵	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

¹ Assumes a LIL capacity of 700 MW and is measured at Soldier's Pond.

² 2025 Slow Electrification load forecast.

³ Target reserve margin is not available for this scenario as the planning reserve margin was calculated for the year 2032 assuming aging assets had retired.

⁴ Shortfall analysis not calculated for this scenario.

⁵ Shortfall analysis not calculated for this scenario.

Scenario 4: Holyrood Units 1 and 2 Retired in 2026, No Other Retirements and Avalon CT in 2031

S4

	2027	2028	2029	2030	2031	2032	2033	2034	2035
IIS Firm Capacity	1,791	1,791	1,791	1,779	1,893	1,893	1,893	1,885	1,885
IIS-LIS Transmission Capacity ¹	484	484	484	484	484	484	484	484	484
Total Island Capacity	2,276	2,276	2,276	2,264	2,377	2,377	2,377	2,369	2,369
Total Peak Load (before losses) ²	1,749	1,760	1,779	1,795	1,810	1,821	1,834	1,848	1,865
Estimated peak loss	49	49	49	49	49	49	49	49	49
Total Peak Load (with losses)	1,798	1,809	1,828	1,844	1,859	1,870	1,883	1,897	1,914
Reserve Margin (%)	27%	26%	24%	23%	28%	27%	26%	25%	24%
Target Reserve Margin (%) ³	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LOLH	2.5	2.2	2.5	2.9	1.5	1.5	1.6	1.8	1.9
Target LOLH	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Percent of hours that generation shortfall exceeds 100 MW ⁴	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Target percent of hours that generation shortfall exceeds 100 MW ⁵	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

¹ Assumes a LIL capacity of 700 MW and is measured at Soldier's Pond.

² 2025 Slow Electrification load forecast.

³ Target reserve margin is not available for this scenario as the planning reserve margin was calculated for the year 2032 assuming aging assets had retired.

⁴ Shortfall analysis not calculated for this scenario.

⁵ Shortfall analysis not calculated for this scenario.

Scenario 5: Holyrood Units 1, 2 and 3 Retired in 2031, Avalon CT and Newfoundland Power CT Uprate in 2031, BDE Unit 8 in 2034

S5

	2027	2028	2029	2030	2031	2032	2033	2034	2035
IIS Firm Capacity	2,131	2,131	2,131	2,119	1,791	1,791	1,791	1,937	1,937
IIS-LIS Transmission Capacity ¹	484	484	484	484	484	484	484	484	484
Total Island Capacity	2,616	2,616	2,616	2,604	2,275	2,275	2,275	2,422	2,422
Total Peak Load (before losses) ²	1,749	1,760	1,779	1,795	1,810	1,821	1,834	1,848	1,865
Estimated peak loss	49	49	49	49	49	49	49	49	49
Total Peak Load (with losses)	1,798	1,809	1,828	1,844	1,859	1,870	1,883	1,897	1,914
Reserve Margin (%)	45%	45%	43%	41%	22%	22%	21%	28%	27%
Target Reserve Margin (%) ³	N/A	N/A	N/A	N/A	17.1%	17.1%	17.1%	17.1%	17.1%
Target LOLH	0.2	0.2	0.2	0.3	3.3	3.2	3.5	1.1	1.2
Target LOLH	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Percent of hours that generation shortfall exceeds 100 MW ⁴	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Target percent of hours that generation shortfall exceeds 100 MW ⁵	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

¹ Assumes a LIL capacity of 700 MW and is measured at Soldier's Pond.

² 2025 Slow Electrification load forecast.

³ Target reserve margin is not available for some years as the planning reserve margin was calculated for the year 2032 assuming aging assets had retired.

⁴ Shortfall analysis not calculated for this scenario.

⁵ Shortfall analysis not calculated for this scenario.

Scenario 6: Holyrood Units 1, 2 and 3 Retired in 2031, Avalon CT, Newfoundland Power CT Uprate and BDE Unit 8 in 2031

S6

	2027	2028	2029	2030	2031	2032	2033	2034	2035
IIS Firm Capacity	2,131	2,131	2,131	2,119	1,945	1,945	1,945	1,937	1,937
IIS-LIS Transmission Capacity ¹	484	484	484	484	484	484	484	484	484
Total Island Capacity	2,616	2,616	2,616	2,604	2,430	2,430	2,430	2,422	2,422
Total Peak Load (before losses) ²	1,749	1,760	1,779	1,795	1,810	1,821	1,834	1,848	1,865
Estimated peak loss	49	49	49	49	49	49	49	49	49
Total Peak Load (with losses)	1,798	1,809	1,828	1,844	1,859	1,870	1,883	1,897	1,914
Reserve Margin (%)	45%	45%	43%	41%	31%	30%	29%	28%	27%
Target Reserve Margin (%) ³	N/A	N/A	N/A	N/A	17.1%	17.1%	17.1%	17.1%	17.1%
LOLH	0.2	0.2	0.2	0.3	0.9	0.8	1.0	1.1	1.2
Target LOLH	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Percent of hours that generation shortfall exceeds 100 MW ⁴	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Target percent of hours that generation shortfall exceeds 100 MW ⁵	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

¹ Assumes a LIL capacity of 700 MW and is measured at Soldier's Pond.

² 2025 Slow Electrification load forecast.

³ Target reserve margin is not available for some years as the planning reserve margin was calculated for the year 2032 assuming aging assets had retired.

⁴ Shortfall analysis not calculated for this scenario.

⁵ Shortfall analysis not calculated for this scenario.