

**NLH - Application for the Purchase and Installation of Bay d'Espoir Unit 8 and Avalon
Combustion Turbine (Avalon Combustion Turbine)**

- 1 **Q.** (Reference Bates White Phase 2 Expert Report of Vincent Musco and Collin Cain dated
2 February 3, 2026) It is stated (page 1) *"The evidence supports the need for the Avalon
3 CT to address generation capacity needs on the Avalon Peninsula when Holyrood is no
4 longer in service, including easing potential overload conditions on transmission during
5 a LIL bipole outage."* Further, it is stated (page 2) *"The IIS does not need both the Avalon
6 CT and BDE Unit 8 by 2031, as long as Hydro's existing thermal assets remain
7 operational."* In CA-NLH-067 pertaining to the Reliability and Resource Adequacy Study
8 Review Hydro states *"The shortfall analysis conducted for the Minimum Investment
9 Required Expansion Plan indicates that advancing a second capacity resource to 2031 is
10 required to meet the LIL Shortfall Assessment Criterion."*
- 11 a) Does Bates White consider the LIL Shortfall Event criterion to be the critical
12 criterion in the determination of need for firm capacity on the IIS, more critical
13 than Hydro's LOLH criterion?
- 14 b) What expansion/retirement plan is Bates White recommending with respect to
15 the dates for new additions including the Avalon CT, Bay d'Espoir Unit 8 and wind
16 generation, and the dates for retirement of Holyrood TGS Units 1, 2 and 3, the
17 Hardwoods gas turbine and the Stephenville gas turbine?
- 18 c) Is Bates White recommending the piecemeal retirement of Holyrood TGS, for
19 example, retirement of Unit 1 in 2031 followed by the retirement of Units 2 and 3
20 at a later date that has yet to be determined?
- 21 d) How does the cost of the Bates White recommended plan compare to the cost of
22 Hydro's minimum Investment Plan?
- 23 e) Would a plan that includes continued operation of Holyrood TGS through 2035
24 with no new facilities meet Hydro's reliability criterion through 2035 and be least
25 cost?
- 26 f) Is there evidence on the record that Holyrood TGS cannot, or is unable to, operate
27 through 2035?
- 28
- 29 **A.** (a) As we explained in our June 26, 2025 Phase One Report, Hydro considered
30 transitioning from a reliability planning criteria based on a 0.2 loss of load
31 expectation ("LOLE") to a more stringent standard of 0.1 LOLE, which would have
32 allowed Hydro to voluntarily comply with North American Electric Reliability
33 Standards.¹ Hydro ultimately chose to remain with its existing standard of 0.2 LOLE
34 (or, equivalently, a loss of load hours ("LOLH") of 2.8), due to the 0.1 LOLE standard
35 carrying a cost that was \$2.3 billion more expensive on a net present value basis.²
36 We have also explained that in addition to the 2.8 LOLH standard, Hydro included
37 two other reliability standards in its modeling: (1) a firm energy criterion to ensure
38 that the Island Interconnected System has sufficient generating capability to supply

¹ Bates White Phase One Report, June 26, 2025, paragraph 37.

² Bates White Phase One Report, June 26, 2025, paragraph 40.

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all of its firm energy requirements with firm system capability;³ and (2) a LIL shortfall criterion which sought to ensure that the Island Interconnection System had sufficient generating capacity to limit the loss of load to a manageable level in the case of a LIL shortfall event.⁴

Regarding the LIL shortfall criterion, we noted that Hydro's consultant (Daymark Energy Advisors) recommended Hydro further study the LIL as its single largest contingency for the purposes of determining the amount of operating reserves it must hold at all times to maintain operational reliability. We echoed this point in our reports, and noted the incremental cost estimated by Hydro was \$5.4 billion on a net present value.⁵ We concluded that the LIL shortfall criterion is sensible and necessary, noting that "[t]raditional probabilistic metrics of resource adequacy, including Hydro's selected probabilistic criteria of 2.8 LOLH, may not capture the full risk of the loss of an asset like the LIL for an extended period," and given the "potential impact of such an extended outage, an additional, probabilistic assessment of an extended LIL outage is merited."⁶

- (b) Bates White has not put forth a recommended portfolio or plan, inclusive of recommended retirement dates for existing Hydro assets.
- (c) See response to Part (b) above.
- (d) See response to Part (b) above.
- (e) Holyrood TGS is required under federal Clean Electricity Regulations to retire by 2035.⁷ Hydro's Build Application assumed in all cases that Holyrood TGS (plus other thermal assets, including Hardwoods Gas Turbine and Stephenville Gas Turbine), would be maintained through a "Bridging Period" ending in 2030, at which point they would be retired.⁸ In our Phase One Report, we noted that the three conditions Hydro has specified for retiring any of its thermal generators are subject to risk that could delay retirement of those assets beyond 2030.⁹ We therefore recommended Hydro conduct an additional LIL Shortfall Analysis run that assumed addition of the Avalon CT only and that Holyrood TGS, Hardwoods, Stephenville are retired in 2035,

³ Bates White Phase One Report, June 26, 2025, paragraph 41.

⁴ Bates White Phase One Report, June 26, 2025, paragraph 48.

⁵ Bates White Phase One Report, June 26, 2025, paragraph 52.

⁶ Bates White Phase One Report, June 26, 2025, paragraph 53.

⁷ Bates White Phase One Addendum Report, November 6, 2025, paragraph 71.

⁸ Bates White Phase One Addendum Report, November 6, 2025, paragraph 67.

⁹ Bates White Phase One Report, June 26, 2025, paragraphs 61 to 65.

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1 rather than 2030.¹⁰ Hydro conducted that run and provided the results in September
2 2025. Hydro demonstrated that this portfolio resulted in zero hours of generation
3 shortfall in the "Average Case," and in the severe case, just 19 hours of generation
4 shortfall, 0.4 GWh of energy shortfall, and a peak shortfall of just 120 MW (with the
5 percentage of hours with a shortfall greater than 100 MW of less than 0.1%).¹¹
6 Importantly, Bates White was not recommending that Holyrood TGS (or any other
7 thermal resource slated for retirement) be operated beyond 2030, nor were we
8 advocating for any particular retirement date for these resources. We were only
9 ensuring a more robust evidentiary record, noting the credible possibility of delayed
10 retirement of some or all of the thermal resources being modeled for retirement in
11 2030. We also noted Hydro's caveat that "given the age (and associated high forced
12 outage rates) of the thermal assets, the severe case, which models higher forced
13 outage rates of the thermal resources, is a more appropriate case to consider for
14 this sensitivity."¹² We observed no evidence suggesting that the Holyrood TGS were
15 necessarily precluded from operating until 2035, but we noted Hydro's estimate of
16 \$138.4 million per year to maintain and operate Holyrood TGS from 2030 to 2035.¹³

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18 (f) See response to Part (e) above.

¹⁰ Bates White Phase One Report, June 26, 2025, paragraph 188.

¹¹ Bates White Phase One Addendum Report, November 6, 2025, paragraph 69.

¹² Bates White Phase One Addendum Report, November 6, 2025, paragraph 69.

¹³ Bates White Phase One Addendum Report, November 6, 2025, paragraph 71.