

- 1 Q. (Reference Bates White Phase 2 Expert Report of Vincent Musco and Collin Cain dated
2 February 3, 2026) The report indicates (pages 6 and 7) that in the absence of a RAS, or
3 additional transmission investment, a LIL bipole outage would likely require pre-
4 emptive shedding of load in order to protect the system against the impact of an
5 additional contingency – i.e., transmission outage. This implies that with a RAS some
6 pre-contingency load shed would still be required during a LIL outage.
- 7 a) Is the LIL Shortfall Event equivalent to operating the IIS with an effective load
8 meeting capacity of the Muskrat Falls assets of 0 MW during the 6-week outage?
- 9 b) Does a LIL Shortfall Event assume an outage of both poles of the LIL simultaneously
10 (an n-2 event) with the outage located on the most remote section of the LIL
11 requiring 6 weeks to repair, and occurring at the most critical time of the year, the
12 winter period, and a loss of additional generation determined by Hydro's
13 probabilistic loss of load simulations during the 6 week outage period? Please
14 quantify the "elevated probability" of such an event.
- 15 c) Does protecting the system from an additional contingency (a transmission
16 outage) during a LIL Shortfall Event equate to an n-3 (or more) criterion for
17 transmission planning (assuming a LIL bipole outage is an n-2 criterion)?
- 18 d) In Bates White's experience, does any jurisdiction plan its transmission system to
19 an n-2 criterion? If so, please cite examples.
- 20 e) Is it generally agreed in the industry that customers are not willing to pay for a
21 transmission system designed to an n-2 criterion?
- 22 f) If Holyrood TGS remains in service through 2035, would this transmission
23 investment be necessary, or would it only be necessary for expansion plans that
24 include the retirement of Holyrood TGS?
- 25 g) Is it common practice in North America to commit large expenditures for new
26 resources to satisfy deterministic criterion such as a LIL Shortfall Event, or do most
27 jurisdictions put in place a plan to address such events, but avoid committing large
28 expenditures to specifically address such events?
- 29 h) Is there any other deterministic criterion that Bates White recommends Hydro
30 consider such as the loss of the transmission corridor over the Isthmus of the
31 Avalon?
- 32 i) How has Bates White addressed the trade-off between reliability and cost in its
33 reviews of the Reliability and Resource Adequacy Plan and the Build Application?
- 34
- 35 A. (a) In LIL Shortfall cases, it is assumed no power is delivered over the LIL for a six week
36 period.
- 37
- 38 (b) See response to (a). It is not clear whether "elevated probability" is quoted from
39 evidence in this case. In any event, we address the context of LIL reliability in the
40 June 26, 2025 Bates White Phase One Report:

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1 The original expected equivalent forced outage rate of the LIL
2 (0.0114%) is not a realistic assumption going forward, given the
3 equivalent forced outage rates observed on the LIL to date (4% in 2023
4 and 3.37% in 2024).¹

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6 In the November 6, 2025 Bates White Phase One Addendum Report, we noted:

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8 A cornerstone of Hydro's Build Application was the LIL Shortfall
9 Analysis, which modeled a six week forced outage of the LIL during the
10 "coldest period of the year (i.e., January and February)." Hydro had
11 previously noted that the possibility of an extended bipole outage on
12 the LIL (i.e., six weeks), which was originally thought in 2018 to have a
13 "very low probability," is likely to have a probability that is "much
14 greater than originally thought." The threat of an extended outage is
15 present, according to Hydro, "[e]ven if the LIL consistently has a LIL
16 bipole [equivalent forced outage rate] towards the bottom end of the
17 analyzed range (1%)" because there still exists the risk of line icing or
18 "other failure modes." Hydro made it clear that an extended outage on
19 the LIL would be a "high consequence event impacting the Island
20 Interconnected System."²

- 21
22 (c) We do not have an opinion as to whether the LIL Shortfall modeling equates to any
23 particular category of reliability assessment. As we state in the June 26, 2025 Bates
24 White Phase One Report:

25
26 The LIL Shortfall Analysis remains a sensible and necessary assessment,
27 primarily due to the unique resource adequacy profile of Hydro and its
28 reliance on the LIL. Traditional probabilistic metrics of resource
29 adequacy, including Hydro's selected probabilistic criteria of 2.8 LOLH,
30 may not capture the full risk of the loss of an asset like the LIL for an
31 extended period. Given the potential impact of such an extended
32 outage, an additional, probabilistic assessment of an extended LIL
33 outage is merited.³

- 34
35 (d) Bates White has not assessed whether there are jurisdictions that plan transmission
36 to an n-2 criterion.

¹ Bates White Phase One Report, June 26, 2025, page 10.

² Bates White Phase One Addendum Report, page 19 paragraph 41.

³ Bates White Phase One Report, June 26, 2025, page 29 paragraph 53.

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1 (e) We advance no opinion on this in this matter.
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3 (f) The referenced "RAS, or additional transmission investment" refers to transmission
4 enhancements being explored by Hydro that would ensure the deliverability of the
5 full incremental capacity of BDE Unit 8 to the Avalon Peninsula during a LIL bipole
6 outage. Hydro's assessment of the need for BDE Unit 8 is based on the assumed
7 retirement of Holyrood TGS as of 2031.
8

9 (g) We have made no survey of whether other jurisdictions face circumstances
10 analogous to a LIL Shortfall Event.
11

12 (h) Recommendations we have made are encompassed in our reports. We have not
13 identified any other deterministic criterion for application in Hydro's system
14 planning.
15

16 (i) See response to CA-PUB-001 (a).