

1 Q. The Maritime HVDC Link was recently awarded, July 9, 2014, using voltage source
2 converters in a bipolar configuration. The converters will be connected to an HVDC
3 overhead line, an HVDC underground cable and an HVDC submarine cable, a very
4 similar configuration planned for the Labrador Island Link. Would the use of voltage
5 source converters for the LIL have an impact on the study results and possibly the
6 justification of the new 230kV transmission line?

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9 A. Preliminary investigations have been performed to investigate the application of
10 Voltage Source Converter (VSC) technology for the Labrador - Island Link (LIL) as
11 discussed in Hydro's response to PUB-NLH-056. The studies included a review of
12 system performance with respect to ac and dc contingencies. However, it has been
13 determined that the application of VSC technology is not technically feasible for the
14 LIL due to the current limitations of the insulated gate bipolar transistors (IGBTs).
15 The current limitations are such that the required overload rating of 2571 A per
16 pole would not be possible. Without this overload rating, the capacity of the bipole
17 would be limited due to instability following disturbances involving the loss of a
18 pole.

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20 Based on the above, a line-commutated converter technology has been chosen for
21 the LIL.