

1 **Q: Reference: Liberty Consulting Report, August 19, 2016, Review of**
2 **Newfoundland and Labrador Hydro Power Supply Adequacy and Reliability**
3 **Prior to and Post Muskrat Falls Final Report**
4

5 *"New pre-Muskrat Falls supply would not necessarily take the form of new*
6 *investment in combustion turbines. Power can be imported on both the LIL and*
7 *ML when those lines are in-service. Hydro informs that it could import 110 MW of*
8 *firm recall power from Labrador and 300 MW from Nova Scotia" (p12).*
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10 **HVDC LCC type converters are typically restricted to a 10% minimum power**
11 **transfer when the converter is Deblocked (i.e., power electronics are switching),**
12 **this would be 45 MW for LIL monopole operation and 90 MW for LIL bipolar**
13 **operation. Did Liberty consider these LIL operating limits when considering the**
14 **110 MW recall power?**
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17 A. The power limit of 110MW, combined with the potential constraints of having to
18 operate at a power in excess of 10% of the rating of the converter, means that the
19 HVDC scheme may have to be operated at constant power. When operating in
20 bipolar mode, a monopolar trip could be compensated by increasing the power on the
21 remaining pole. A bipolar trip, when operating at 110MW, would result in the loss of
22 in excess of 100MW power injection to the IIS, which may result in UFLS, unless
23 sufficient spinning reserve or curtailable loads are available in the IIS to compensate
24 for this loss. A trip when in monopolar operation would result in the loss of all
25 import on the LIL.