

1 Q. Please provide the PSS/E versus PSCAD/EMTDC or similar benchmark results for the
2 Labrador Island Link configuration, including the test cases for at least the following
3 faults: close three phase faults at Muskrat Falls and at Soldiers Pond and monopole
4 and bipole HVdc line faults.

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7 A. Benchmarking of the PSS®E versus PSCAD™/EMTDC™ for the Labrador – Island
8 HVdc Link in its existing configuration has not been completed to date. A
9 benchmarking exercise was completed for the multi-terminal HVdc configuration
10 (Gull Island, Soldiers Pond, Salisbury, NB) as part of earlier project work. The results
11 showed good correlation between the PSS®E and PSCAD™ models. The change in
12 concept from the multi-terminal to the two-terminal (Muskrat Falls to Soldiers
13 Pond) utilized the experience of the multi-terminal case, pertinent model data and
14 HVdc consultant expertise to develop a two-terminal PSS®E model for proof of
15 concept. The resultant two-terminal PSS®E model permits development of a
16 function specification for the HVdc components and identification of ac system
17 modifications to successfully integrate the HVdc scheme.

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19 The HVdc vendor for the Labrador – Island Link is required to develop and
20 benchmark a user written, HVdc system specific PSS®E model against the
21 PSCAD™/EMTDC™ model for future use as part of the design process. With
22 benchmarking exercise completed, Hydro will be able to complete all necessary
23 operational studies in the 2015 – 2016 timeframe to develop and refine operating
24 procedures.