1 Q. **Reference: Teshmont Report: pg (i):**

2 *"A comparison was made between Pre-HVDC and Post-HVDC systems in terms*

3 *of expected unserved energy to loads due to transmission and generation outages*

4 *using PSS®E software. System security, i.e. the ability of the system to transition*

5 *between each pre- and post-contingency operating condition and remain stable,*

6 *was not assessed in this study. That is to say, the analysis does not include*

7 *transient outages, but focuses on sustained outages only."*

8 Please provide the date when the studies will be completed to demonstrate the

9 stability of the system when transitioning from pre- to post- contingency. Please

10 provide the outline of the cases that will be modeled and simulated in the stability

11 study.

12

13

14 A. As per Hydro's response to CA-NLH-150, studies to demonstrate the stability of the

15 system when transitioning from pre- to post-contingency were completed by SNC

16 Lavalin and Hydro in 2012 and 2014, respectively. These analyses included modeling

17 and simulation to ensure that transient system performance is in compliance with

18 System Planning Criteria.

19

20 The studies involved the simulation of ac transmission line contingencies, dc

21 transmission line contingencies, filter contingencies, generator contingencies, and

22 synchronous condenser contingencies. The contingencies were studied under

23 various loading and dispatch conditions. Considerations included variations in

24 system load (peak load to light load), Labrador Island Link import (max import to

25 min import), Labrador Island Link operating mode (bipole, monopole, or offline),

26 Maritime Link export (max export to min export), and system generation (max

27 generation to min generation). The 2012 SNC Lavalin study involved a review of 19

1   base case conditions. Hydro's 2014 assessment of the Bay d'Espoir to Western

2   Avalon Corridor involved 11 base case conditions.

3

4   Hydro will also be performing studies in 2016 and 2017 to further assess transient

5   system performance in its work to establish system operating limits and

6   instructions.