

1 Q. The response to MHI-Nalcor-9 states that in the Isolated Island Option no analysis
2 has been done related to the operation of the Holyrood Thermal Plant and the
3 response to MHI-Nalcor-3 states that there are risks associated with life extension
4 measures for the Plant. If no analysis has been completed on the life extension
5 measures and costs associated with the Plant what is the support for the statement
6 that there are risks associated with life extension?

7

8

9 A. Nalcor's Isolated Island expansion plan contemplates replacement of Holyrood's
10 two oldest units with combined cycle combustion turbines in the 2033 timeframe
11 and replacement of unit 3 in 2036.

12

13 The scenario presented in MHI-Nalcor-3 contemplates the Holyrood facility
14 continuing operation to 2041. While the facility could be rebuilt to achieve this
15 extended service life, Nalcor's Island Interconnected plan for Holyrood only sees a
16 small portion of the plant continuing in service – the generators and electrical
17 systems supporting synchronous condenser operation. No analysis to support the
18 continued use of Holyrood's fuel handling, boilers, turbines, and auxiliary systems
19 to 2041 has been completed and this assumption therefore carries a level of risk
20 with it.

21

22 In considering emissions, the Government of Canada has also published its
23 proposed greenhouse gas (GHG) regulations for coal fired generating facilities, and
24 has proposed a 45 year design life for coal fired facilities. These have been filed as
25 Exhibit 107.

26

1 Since the GHG intensity of heavy fuel oil is 77% that of coal and 2.2 times that of
2 natural gas, Nalcor expects the Government of Canada to impose limitations on
3 heavy fuel oil fired generating facilities that are similar to those proposed for coal
4 fired generation.

5
6 Under the proposed regulations, existing facilities (commissioned prior to July 1,
7 2015) that have reached the end of their 45 year design life may receive an
8 exemption to continue operation until 2025, provided they incorporate carbon
9 capture and storage (CCS) technology to reduce their emissions intensity to that of
10 a natural gas fired generating facility. New facilities (commissioned on or after July
11 1, 2015) that incorporate CCS technology can apply for a deferral of application of
12 the standard to 2025.

13
14 Nalcor has not completed any studies to consider the implementation of CCS at
15 Holyrood, but notes that SaskPower has initiated a \$1.2 billion project to refurbish
16 and implement CCS on Unit 3 of SaskPower's Boundary Dam thermal facility. After
17 the project is completed, the unit will have an output of 110 MW. Further
18 information on this project is provided in Exhibit 110.

19
20 Based on these considerations Nalcor believes there is a risk that Holyrood will not
21 be permitted to operate in its current manner for the next 30 years until 2041.