

1 Q. In Order No. P.U. 22(2016) the Board stated:

2

3 *WHEREAS the Board notes that the long-term strategy for Hardwoods and*  
4 *Stephenville will be addressed as a part of the ongoing Phase II review process and*  
5 *the Board is satisfied that Hydro should, following the completion of the proposed*  
6 *refurbishment at Hardwoods and Stephenville, file a report addressing the cause of*  
7 *the failures and how the causes and any other relevant findings may impact unit*  
8 *reliability in the short term as well longer term considerations.*

9

10 Reference: Gas Turbine Failure Analysis - Final Report, January 11, 2017, page 18.

11 Hydro states that *“As a result of the implementation of the actions identified thus*  
12 *far, along with improved operational controls, increased maintenance and*  
13 *inspection, staffing of plants during operation to allow for increased attention while*  
14 *operating, and aggressive investigation of issues, Hydro expects the short term and*  
15 *long term reliability of these units to improve.”* Please explain how the  
16 implementations provided in this report will improve reliability in both the short  
17 and long term as required by the Board in Order P.U. 22(2016).

18

19

20 A. In the short term, the proposed changes in vibration monitoring, alarms, and trips  
21 will allow earlier intervention and also help to prevent secondary damage in the  
22 event of a component failure. Further, improvements in lube oil handling, sampling,  
23 analysis and filtration will help to ensure the health of the bearings and ensure the  
24 longest life possible.

25

26 In the longer term, a review of the entire operation, maintenance, and control of  
27 the units will ensure that all required protection is in place for the units and that the

1 settings are in accordance with current industry standards, not just original  
2 equipment manufacturer (OEM) recommendations. Performance Improvements  
3 Ltd. have been engaged to review all aspects of operation and control and will  
4 provide recommendations that will further improve the monitoring, control and  
5 reliability of these units going forward. Hydro is currently consulting with the major  
6 component OEMs and OEM authorized representatives for the equipment in both  
7 Hardwoods and Stephenville to determine the required maintenance, overhaul  
8 scope and interval to ensure the long term reliability of these plants.