

- 1 Q. Section 2.3 of Appendix C states that the last boiler feed pump overhaul in 2013 used a  
2 refurbished volute impeller cartridge. The impeller cartridge that was removed at that time was  
3 refurbished and is now planned to be used in this current proposed overhaul. Section 4.1 of  
4 Appendix C further states that “the volute impeller cartridge which is removed from the pump  
5 [during the overhaul proposed within the Application] would then be refurbished and returned  
6 to inventory as a critical spare to support both of the Unit 3 boiler feed pumps prior to the next  
7 winter operating season.”
- 8 i. How confident is Hydro that the continued use of refurbished parts for this critical item is  
9 appropriate?
- 10 ii. Has Hydro completed an economic and/or reliability analysis that recommends the  
11 continued refurbishment of this critical piece of equipment as opposed to purchasing a new  
12 impeller cartridge? If so, please provide the analysis(es).
- 13 A. i. Newfoundland and Labrador Hydro (“Hydro”) is very confident that the continued use of a  
14 refurbished volute impeller cartridge is appropriate in the regular overhaul of the boiler  
15 feed pumps. This strategy has been followed for all six boiler feed pumps at the Holyrood  
16 Thermal Generating Station (“Holyrood TGS”) (two pumps per unit) for more than 25 years.  
17 The boiler feed pumps on all units have performed reliably as a result. The volute impeller  
18 cartridge is refurbished in the Original Equipment Manufacturer (“OEM”) facility, where it  
19 undergoes a detailed as-received inspection and technical assessment before it is  
20 completely restored to design specifications. Should there be problems with the condition  
21 of the volute impeller cartridge that warrant replacement then this would be identified  
22 during the as-received inspection and Hydro would work with the supplier to address these  
23 concerns, including project change orders as required. However, this is not expected to be  
24 required. This overhaul approach is recommended by the OEM and is standard industry  
25 practice. It is followed by other clients of the OEM.
- 26 ii. Hydro has not completed an economic or reliability analysis regarding the continued  
27 refurbishment versus replacement of the boiler feed pump volutes. As noted previously, this

- 1 method is recommended by the OEM and the refurbished parts have historically performed
- 2 reliably.