

1 **Q.** (Reference Application, Sandy Brook Penstock Replacement, page 7) It is stated  
 2 “*Significant environmental damage would also result from the fast flowing water*  
 3 *escaping from the failed penstock. The Plant is located on a tributary of the Exploits*  
 4 *River. The Exploits River is a sensitive ecological environment and has a significant*  
 5 *population of Atlantic salmon. Failure of the penstock would result in debris and*  
 6 *sedimentation entering the Exploits River potentially causing harm to the Atlantic*  
 7 *salmon population.*”  
 8

9 a) Is it possible that the proposed replacement penstock could fail, leading to  
 10 significant environmental damage and potential harm to the Atlantic salmon  
 11 population? What is the estimated reduction in risk of environmental damage  
 12 resulting from the proposed penstock replacement project?

13 b) What alternatives to penstock replacement were considered beyond the “do  
 14 nothing” alternative?

15 c) Was returning the site to an environmentally safe condition without power  
 16 production considered? Was a cost and risk comparison done between the  
 17 proposed penstock replacement and plant retirement that gives full consideration  
 18 to environmental risk reduction and public benefits relating to tourism and other  
 19 uses of the river system that might be enhanced by removal of the power plant,  
 20 wires, and substation infrastructure relative to dubious capacity and energy  
 21 benefits in a Muskrat Falls Project era with increased capacity and energy supply  
 22 and its significant impact on rates?

23 d) What is the probability that the Sandy Brook plant will become a stranded asset  
 24 in the future?  
 25

26 A. a) The replacement penstock will have a very low risk of failure. Replacement of the  
 27 woodstave penstock with a modern alternative such as steel or fiberglass will  
 28 significantly reduce the risk of failure and the resulting environmental damage.  
 29

30 b) No additional alternatives were considered beyond the replacement and do nothing  
 31 alternatives. The Sandy Brook Plant penstock has reached the end of its useful  
 32 service life. Deterioration was detected along the entire length of the penstock and  
 33 partial replacement is not a viable alternative. Maintenance efforts on the penstock  
 34 have been exhausted and, based on the condition assessment completed by  
 35 Kleinschmidt, penstock replacement is required.<sup>1</sup>  
 36

37 c) No, the economic analysis completed as part of the *2022 Capital Budget Application*  
 38 has proven that replacement of the penstock will allow the Sandy Brook Plant to  
 39 continue to provide low-cost energy to the Island Interconnected System. The project  
 40 will benefit customers by providing least-cost, reliable energy.<sup>2</sup>

<sup>1</sup> See the *2022 Capital Budget Application, Report 1.2 Sandy Brook Plant Penstock Replacement, Appendix B, Penstock Inspection Report.*

<sup>2</sup> See the *2022 Capital Budget Application, Report 1.2 Sandy Brook Plant Penstock Replacement, Appendix A, Sandy Brook Plant Economic Evaluation.*

- 1           d) There is a very low probability of the Sandy Brook Plant becoming a stranded asset.  
2           As shown in the economic analysis, the facility will continue to provide low-cost  
3           power to customers into the future.