

1 **Q. (Reference CA-NP-078) It is stated "The replacement penstock will have a very low risk**  
2 **of failure." Please confirm that while the risk of failure is low, it is greater than zero,**  
3 **and the only way to reduce the risk to zero would be to remove the penstock and**  
4 **associated power production component of the plant.**  
5

6 A. Newfoundland Power can confirm that, while the risk of failure of the replacement  
7 penstock is very low, it is greater than zero.  
8

9 Newfoundland Power operates its hydro generation facilities in a manner that ensures that  
10 the risk of component failure is maintained at an acceptable level, including the risk of  
11 environmental damage as discussed in response to Request for Information CA-NP-078.  
12 This is achieved by: (i) designing and constructing components to the appropriate  
13 engineering standards, including obtaining the appropriate environmental permitting; (ii)  
14 inspecting and maintaining the facilities based on utility best practices; and (iii) replacing  
15 components that have reached the end of their useful lives.  
16

17 Newfoundland Power can confirm that removing the penstock and associated power  
18 production component of the plant would reduce the risk of failure of those components  
19 to zero.  
20

21 However, as shown in the *Sandy Brook Plant Penstock Replacement* report, the benefits  
22 of production from Sandy Brook Plant exceed its cost of production by between 7.04 and  
23 10.21 cents per kWh.<sup>1</sup> The report shows that the replacement of the wood stave penstock  
24 with a modern alternative, such as steel or fibreglass, significantly reduces the risk of  
25 failure and environmental damage, while ensuring the continued availability of low-cost  
26 energy to the Island Interconnected System. This is consistent with Newfoundland  
27 Power's obligation to provide least-cost, reliable service to customers.

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<sup>1</sup> See the 2022 Capital Budget Application, Report 1.2 Sandy Brook Plant Penstock Replacement, page A-5.