

- 1 **Q. (Reference Application, 4.2 Mobile Hydro Plant Surge Tank Refurbishment)**  
 2 **a) What is the payback period for this project?**  
 3 **b) What is the probability of the plant becoming stranded?**  
 4 **c) What are the results of the economic analysis if the plant is assumed to**  
 5 **become obsolete in 2035?**  
 6 **d) Was Kleinschmidt asked to quantify the risk of project deferral? If not, why**  
 7 **not?**  
 8 **e) How much did the Kleinschmidt assessment cost?**  
 9 **f) Please describe the procurement process followed that resulted in the**  
 10 **selection of Kleinschmidt.**

- 11  
 12 **A. a)** When preparing financial analyses for capital investments, Newfoundland Power  
 13 follows the Provisional Guidelines. The Provisional Guidelines specify lifecycle cost  
 14 evaluations with calculations completed on a net present value basis for projects  
 15 with investment classifications of Renewal.<sup>1</sup> Newfoundland Power does not compute  
 16 payback periods to evaluate projects for inclusion in its capital budget applications.  
 17 See the response to Request for Information CA-NP-106 for the unsuitability of  
 18 payback periods in the context of project selection.

19  
 20 The lifecycle cost analysis of the Mobile Hydro Plant completed as part of the *2024*  
 21 *Capital Budget Application* shows that the benefits of the Plant's production exceed  
 22 the cost of production. The analysis shows a net benefit of Plant production  
 23 between 4.52 ¢/kWh and 6.05 ¢/kWh.<sup>2</sup> Considering the normal production of Mobile  
 24 is 40.32 GWh, this equates to annual benefits between approximately \$1.8 million  
 25 and \$2.4 million.<sup>3</sup>

- 26  
 27 **b)** Newfoundland Power considers the risk of stranding of the Mobile Hydro Plant to be  
 28 very low. This is demonstrated by the results of the lifecycle cost analysis and  
 29 various sensitivity analyses included in the *2024 Capital Budget Application*.<sup>4</sup>

30  
 31 See the response to Request for Information CA-NP-106 part b) for additional  
 32 context regarding the improbability of Newfoundland Power's hydro plants becoming  
 33 stranded.

<sup>1</sup> See the Provisional Guidelines, page 16 of 18.

<sup>2</sup> See Newfoundland Power's *2024 Capital Budget Application*, report *4.2 Mobile Hydro Plant Surge Tank Refurbishment*, Appendix A: *Updated Lifecycle Cost Analysis of the Mobile Plant*, page 3, Table A-2.

<sup>3</sup> 4.52 ¢/kWh x 40.32 GWh = \$1,822,464. 6.05 ¢/kWh x 40.32 GWh = \$2,439,360.

<sup>4</sup> See Newfoundland Power's *2024 Capital Budget Application*, report *4.2 Mobile Hydro Plant Surge Tank Refurbishment*, Appendix A: *Updated Lifecycle Cost Analysis of the Mobile Plant*, Section 4.0 *Lifecycle Analysis Results*.

- 1 c) Table 1 provides the economic evaluation results for the scenario requested where  
2 plant production ceases after 2035.

<b>Table 1</b>		
<b>Lifecycle Analysis Results</b>		
	<b>11 Year Levelized Value</b>	<b>Net Benefit</b>
Lifecycle Cost of the Plant	<b>3.74 ¢/kWh</b>	
Cost of Replacement Production (Run-of-River)		
Energy Costs	3.48 ¢/kWh	
Capacity Costs	3.88 ¢/kWh	
<b>Total</b>	<b>7.36 ¢/kWh</b>	<b>3.62 ¢/kWh</b>
Cost of Replacement Production (Fully Dispatchable)		
Energy Cost	3.48 ¢/kWh	
Capacity Cost	5.18 ¢/kWh	
<b>Total</b>	<b>8.66 ¢/kWh</b>	<b>4.92 ¢/kWh</b>

3 Table 1 shows the benefits of the Mobile Hydro Plant's production under the scenario  
4 where production ceases after the end of 2035 will exceed its cost of production by  
5 between 3.62¢/kWh and 4.92 ¢/kWh. The large differences between costs and  
6 benefits suggest any reasonable variance in the estimates of the costs and benefits  
7 will support the continued operation of the Plant.  
8

- 9 d) Kleinschmidt was engaged to assess the condition of the steel surge tank for  
10 continued safe operation and identify any remediation required to ensure continued  
11 safe operation or to extend the life of the structure. Kleinschmidt was not  
12 specifically asked to quantify the risk of deferral.  
13

14 In its assessment, Kleinschmidt observed that the coating system was in poor  
15 condition and that replacement was required to extend the life of the surge tank.  
16 Kleinschmidt also observed that the coating system was nearing the end of its typical  
17 lifespan.<sup>5</sup> Kleinschmidt did not recommend that replacement of the coating system  
18 could or should be deferred.

<sup>5</sup> See Newfoundland Power's 2024 Capital Budget Application, report 4.2 Mobile Hydro Plant Surge Tank Refurbishment, Appendix B: Surge Tank Inspection Report – Mobile Development, page 14 of 61.

- 1 e) The cost to commission Kleinschmidt to complete a condition assessment of the  
2 Mobile surge tank was approximately \$43,000. This includes approximately \$16,000  
3 for access to rigging and rescue services provided by a third-party service provider.  
4
- 5 f) Kleinschmidt is one of a number of engineering consultants that Newfoundland  
6 Power has under contract to provide specialized engineering and consulting services.  
7 Kleinschmidt was chosen from this list of consultants due to their extensive  
8 knowledge, experience and expertise in inspecting surge tanks for Newfoundland  
9 Power and many other clients in North America. For more information about  
10 Kleinschmidt's expertise, please refer to their corporate website at  
11 [www.kleinschmidtgroup.com](http://www.kleinschmidtgroup.com).