

1 Q. **Reference: Hydro’s Revised Application for Approval of Construction of Hydro’s Long-Term**  
2 **Supply Plan for Southern Labrador, *Schedule 1 – Long-Term Supply for Southern Labrador –***  
3 ***Phase 1, Attachment 1 – Long-Term Supply Study for Charlottetown: Economic & Technical***  
4 ***Assessment, Page 42, Lines 1-4.***

5 *“The classification of the probability of occurrence for capital costs is based on*  
6 *the expected accuracy of a Class 5 estimate which ranges between -20% to -50%*  
7 *and +30% to +100% with a 50% level of confidence; therefore, any case where*  
8 *the percent change is within one of these ranges it is assumed to have a 50%*  
9 *probability of occurrence.”*

10 **Reference: Midgard Consulting *Southern Labrador Communities – Integrated Resource Plan,***  
11 ***March 28, 2023, Page 76, Lines 13-18.***

12 *“Capital costs used in the DCF Model are considered Class 5 according to the*  
13 *AACE Cost Estimate Classification System. Most capital costs are derived from*  
14 *cost estimates previously prepared by NLH and subsequently escalated to 2023*  
15 *costs.*

16 *An independent check of select costs were undertaken and previous NLH cost*  
17 *estimates were deemed appropriate and location specific. Class 5 estimates are*  
18 *considered to be a suitable level of accuracy for this planning study.”*

19 Considering the estimated capital cost of the project of \$86.4 million, the relatively wide range  
20 of costs associated with a Class 5 estimate and the relatively narrow net present cost (“NPC”)  
21 differences between alternatives, please explain why using a Class 5 estimate is appropriate for  
22 evaluating long-term supply alternatives in southern Labrador.

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25 A. *This response has been provided by Midgard Consulting Inc. (“Midgard”).*

26 For the purpose of an integrated resource plan, expenditure of money to advance the design  
27 engineering on all the individual works within each scenario to a level needed to achieve cost  
28 estimates beyond Class 5 is not considered prudent.

1 To support this, Midgard referenced the Association for the Advancement of Cost Engineering  
2 (“AACE”) Cost Estimate Classification System (17R-97) which provides a standardized  
3 assessment of levels of cost estimates including the range of expected accuracy, required  
4 project definition, and expected level of effort ascribed to the preparation of the estimate itself.  
5 AACE considers Class 5 estimates to be appropriate for strategic planning purposes (screening or  
6 feasibility), Class 4 estimates for concept or feasibility studies, and Class 3 estimates for budget  
7 authorization.<sup>1</sup>

8 In that classification, there are two costs associated with the preparation of a cost estimate: 1)  
9 the underlying engineering design needed to sufficiently define a work, and 2) the effort  
10 associated with the preparation of the estimate itself. AACE notes that a Class 5 estimate  
11 typically requires a level of project definition between 0% and 2%, while a Class 4 estimate  
12 requires a level of project definition between 1% and 15%. An increase in engineering and  
13 estimation costs by an order of this magnitude, applied to each component within each  
14 alternative is not supportable for a screening level study.

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<sup>1</sup> “AACE International Recommended Practice No. 17R-97 – Cost Estimate Classification System,” Association for the Advancement of Cost Engineering International, August 12, 1997. <[http://water.nv.gov/hearings/past/Spring%20-%20Cave%20-%20Dry%20Lake%20and%20Delamar%20Valleys%202011/Exhibits/SNWA%20Exhibits/SNWA\\_Exh\\_233\\_AACE%20Cost%20Estimate%20System%2017R-97.pdf](http://water.nv.gov/hearings/past/Spring%20-%20Cave%20-%20Dry%20Lake%20and%20Delamar%20Valleys%202011/Exhibits/SNWA%20Exhibits/SNWA_Exh_233_AACE%20Cost%20Estimate%20System%2017R-97.pdf)>