Q. (Reference Application Schedule B, page 2 (sic) of 98) It is stated that an economic analysis found that the levelized cost of production at the Topsail plant assuming the 2021 capital project proceeds is 6.69 cents/kWh.

a) What is the time frame used in the analysis?

b) Did the analysis include any future capital improvements to the plant?

c) What capital improvements are expected through 2030?

d) What is the probability that this plant will become stranded?

e) What is the estimated cost of retiring the Topsail plant?

A. a) The analysis, referenced at Schedule B, page 5 of 98 of Newfoundland Power's *2021 Capital Budget Application*, was based on a study period of 50 years.

b) Yes, an estimate of capital expenditures through 2043 was provided in the report *1.4 Topsail Hydro Plant Penstock Replacement* which was filed as part of Newfoundland Power's *2020 Capital Budget Application*. The estimate was updated to include the 2021 proposed expenditures for the intake gate and the turbine runner, which are included in the report *1.2 Topsail Hydro Plant Refurbishment* filed as part of the Company's *2021 Capital Budget Application*.

c) Table 1 provides the capital expenditures expected through 2030.

Table 1
Topsail Hydroelectric Plant
Capital Expenditures
($000s)

Year	Expenditure
2020	485
2021	9,374
2026	30

d) The economic analysis completed for the continued operation of the Topsail plant indicates a levelized cost of production of 6.69 ¢/kwh. This compares to the forecast levelized value of production on the Island Interconnected System of between

11.11 ¢/kwh and 12.20 ¢/kwh.[1] On a levelized cost basis, the forecast value of production on the Island Interconnected System exceeds the forecast cost of production from the Topsail plant by between 4.42 ¢/kwh and 5.51 ¢/kwh. This indicates that continued operation of the plant is economical over the long term. Newfoundland Power is not aware of any information that would suggest that the Topsail plant will become stranded.

e) Newfoundland Power does not have an estimate of the cost of retiring the Topsail Plant. The total system cost to retire a hydroelectric plant would include costs (i) of removing existing assets, (ii) of restoring the site and environment and (iii) of replacement energy and capacity. The creation of a reliable estimate of the cost of retiring a hydroelectric generating plant would require a detailed site-specific analysis.[2] This is a comprehensive process involving consultation with a variety of stakeholders that would only be undertaken where an economic analysis indicates it may not be economically justifiable to invest further in the life extension of the facility.

[1] See the response to Request for Information CA-NP-105 for revised estimates of the levelized value of production.

[2] Newfoundland Power prepares decommissioning studies for all of its hydro generating plants as part of its routine depreciation studies. However, these decommissioning studies assume, in effect, that hydroelectric developments are perpetual assets and retirement costs reflect ongoing replacement of components of the development. No allowance or estimate is made of the costs necessary to return the development to the natural state that existed prior to construction of the facility. The decommissioning of a hydroelectric development would necessarily require an environmental assessment, and would include significant costs associated with restoring the site and the environment to a standard that is acceptable from an environmental perspective. In addition to environmental and other regulatory requirements, Newfoundland Power would expect that the interests of other stakeholders, such as the owners of properties adjacent to the hydro development, would have to be addressed as part of the decommissioning process.