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**Hydro Plant Production Increase (Other) - \$1,665,000**  
**Combined normal annual production of both plants is approximately 39.0 gWh or approximately 9% of the total hydroelectric production of Newfoundland Power Inc. Increasing the capacity of La Manche Canal in the Tors Cove/Rocky Pond hydroelectric development (two plants, Tors Cove and Rocky Pond) will increase production by 5.54 gWh at a cost of 2.19¢ per kWh.**

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**Heart's Content Plant Refurbishment (Pooled, Multi-year) - \$5,735,000**  
**Normal annual production at Heart's Content is 8.3 gWh or 1.9% of the total hydroelectric production of Newfoundland Power Inc. Levelized cost of energy from the Heart's Content plant over the next 50 years, including projected capital and operating expenditures, is estimated to be 6.27¢ per kWh.**

**In view of the Muskrat Falls Hydroelectric Project please calculate the cost of energy if the recovery period is five years, to 2018, and eight years, to 2021.**

**A. Requested Calculation**

Table 1 shows the levelized cost of energy production for the LaManche Canal and Hearts Content Rehabilitation projects if the cost is recovered over five years, to 2018; eight years, to 2021; and fifty years, to 2064.

**Table 1**  
**Cost of Energy Production**  
**at Various Recovery Periods**  
**(¢/kWh)**

	<b>5 years</b>	<b>8 years</b>	<b>50 years</b>
La Manche Canal	6.95	4.81	2.19
Hearts Content Rehabilitation <sup>1</sup>	17.42	12.25	6.27

The avoided cost of fuel at the Holyrood Thermal Generating Station is currently estimated at 16.8¢ per kWh.<sup>2</sup> Based on the requested calculations, the only scenario which results in the cost of production being higher than the avoided cost of fuel at

<sup>1</sup> Cost of Energy based on recovering the capital expenditures forecast for the Hearts Content Plant during the next five and eight years respectively. The forecast of future capital expenditures is provided in Tab 1.2, *Heart's Content Hydro Plant Refurbishment* Appendix B, Table 1.

<sup>2</sup> This is based upon a 630 kWh/barrel conversion efficiency and oil price forecast of \$105.80 per barrel for 2013 as per Hydro's April 12<sup>th</sup>, 2013, letter to the Board regarding Rate Stabilization Plan – Fuel Price Projection. Hydro recently estimated this avoided cost to be 17.8¢ per kWh, based upon a 612 kWh/barrel conversion efficiency and oil price forecast of \$108.74, per page 4.3 of Hydro's evidence filed in its 2013 General Rate Application.

Holyrood is the scenario where the cost of the Heart's Content Refurbishment is recovered over five years.

### ***Evaluation Criteria***

Evaluating these projects over 5 and 8 year timeframes is not appropriate. These assets are expected to remain in service for more than 50 years and benefits will accrue to the electricity system and Newfoundland Power's customers throughout this period. Accordingly, use of very short cost recovery periods for economic evaluation does not appropriately match costs and benefits.

The feasibility analysis provided in the Application includes all forecast operating and capital costs for these projects for their *expected service lives*. The matching of utility costs with the associated benefits to consumers is a cornerstone of cost of service regulation. Because of this, the levelized costs provided in the Application are appropriate evaluation criteria for these projects.

In Order No. P.U. 35 (2003) the Board stated that it would be appropriate for Newfoundland Power and Newfoundland Hydro to enter into discussions regarding any planned replacement, refurbishment or construction of generating plant so as to avoid needless expenditures. The two utilities have discussed the LaManche Canal and Hearts Content rehabilitation projects in routine planning meetings prior to filing of the Application. Based on the forecast levelized costs of energy production, these were considered worthwhile projects.

Newfoundland Power observes that the values for energy production requested in Request for Information PUB-NP-001 could only be relevant to the justification of these projects if the economic value of the production from existing hydroelectric plants on the island was assumed to be zero once the Muskrat Falls project (and its associated transmission interconnection) is complete. There is no basis whatsoever to assume there will be no value associated with existing production facilities once Muskrat Falls is complete.<sup>3</sup> Commercial arrangements for the sale of energy from the Muskrat Falls project are currently uncertain. However, in Newfoundland Power's view, it is not reasonable to assume the cost to the Company will be less than 6.27¢/kWh.

### ***Projects Consistent with Least Cost Supply***

The levelized cost associated with the increased capacity of LaManche Canal is less than the cost of energy from Holyrood in all requested scenarios. The refurbishment of Hearts Content plant, including replacement of the woodstave penstock, is necessary for the continued long-term operation of this plant. The continued efficient operation of Newfoundland Power's existing hydroelectric plants is consistent with the least cost, reliable supply of electricity to the Company's customers.

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<sup>3</sup> Please refer to Response to Request for Information PUB-NP-002 for further information on benefits, including system benefits, associated with Newfoundland Power's hydroelectric generation facilities following completion of the Muskrat Falls project.