Q. ***Re: Page 4 of 85***
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.

Page 6 of 85
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 explain how the planned increase in production at La Manche Canal, and/or the other two projects planned for the period from 2014-2018, will benefit consumers of electricity on the island of Newfoundland from a reliability or other non-financial perspective.

A. ***Introductory***
The 2014 to 2018 Capital Plan identifies three hydro plant production increase projects over the period 2014 to 2018, including the 2014 project at La Manche Canal. The other 2 projects involve raising a dam in the Lookout Brook development and the replacement of the turbine runner at Cape Broyle plant.

These projects increase energy production and will benefit consumers of electricity beyond the period when the Muskrat Falls project is forecast to be complete.

Economic Benefits
The identified projects improve the efficiency and capacity of the Company's hydroelectric generating facilities. These types of projects can result in an extension of the period of time that the water elevation in a reservoir is at, or near, maximum levels. This increases the amount of time that the hydro plant can operate at a full load, and marginally increases the output of the generator due to the increase in hydraulic head.

The La Manche Canal project will add 5.54 GWh of energy annually to the Island Interconnected System at a levelized cost of energy of just 2.19 ¢ per kilowatt-hour. This additional energy will benefit the Company's customers. There is currently uncertainty associated with the ultimate energy cost to Newfoundland Power of production from the Muskrat Falls project. However, in Newfoundland Power's view, it would be unrealistic to assume that energy will be available from Muskrat Falls at less than 2.19¢/kWh.

The preliminary estimates for the levelized cost of energy for the future projects at Lookout Brook and Cape Broyle are in the range of 6.8¢ to 6.9¢/kWh.[1] Newfoundland Power believes it is reasonable to assume that Muskrat Falls production will be available at a cost not less than 6.9¢/kWh. However, these two projects will be evaluated based on cost information available at the time they are brought forward by the Company in future capital budget applications. The current uncertainty surrounding energy pricing may be addressed before that time.

System Benefits

Newfoundland Power's legacy generation assets provide system benefits in addition to supplying low cost energy production. Many of these generation assets are located on the Avalon Peninsula close to the large load centres in the St. John's area. This provides electrical system benefits during both normal operation and emergencies.

Under normal operating conditions the Company's hydro plants on the Avalon Peninsula are frequently called upon by Hydro to provide voltage support to the system. Increasing voltage at the eastern end of Hydro's transmission system improves the transfer capability of Hydro's 230 kV transmission lines from Bay D'Espoir and Central Newfoundland.

Under emergency operating conditions, following storms and equipment failures, local generation provided by the Company's hydro plants provides service to customers while the high voltage electricity system is being restored. For example, hydro plants in Heart's Content, New Chelsea and Pittman's Pond can operate isolated from the Island Interconnected System when the radial transmission system feeding the communities from Heart's Content to Old Perlican is unavailable.

Once the Muskrat Falls project is complete, the Holyrood Thermal Generating Station is expected to no longer supply energy to the Island grid. This will result in more of Hydro's generating facilities being farther away from the largest load on the island of Newfoundland than is currently the case. In these circumstances, the system reliability benefits of Newfoundland Power's generating facilities, particularly during emergencies, may potentially be increased.[2]

[1] The report *Potential Projects to Increase Energy Production* was filed with the Board as Attachment A of the response to Request for Information PUB-NP-009 in the 2010 Capital Budget Application. The estimates for the levelized cost of energy production can be found in Attachment A of this report.

[2] The number of times that Hydro has called upon the Company's generation is already increasing. In each of 2003 and 2004, Hydro called upon Newfoundland Power to operate its generating facilities 7 times. In 2012, Hydro made 53 such requests. In the first 6 months of 2013, 47 requests were made.

Conclusion

The La Manche Canal and similar projects increase energy production by more efficient use of water in the reservoirs associated with the Company's hydro plants.

The proposed improved efficiency in the operation of Newfoundland Power's existing hydroelectric plants is consistent with the least cost, reliable supply of electricity to the Company's customers.