O'DEA OE EARLE

August 5, 2014

Ms. G. Cheryl Blundon
Board of Commissioners of Public Utilities
120 Torbay Road, P.O. Box 12040
St. John's, NL A1A 5B2

Dear Ms. Blundon:

Re: Newfoundland Power 2015 Capital Budget Application

Please find enclosed the original and twelve (12) copies of the Consumer Advocate's Submissions in relation to the above noted Capital Budget Application.

A copy of the letter, together with enclosures, has been forwarded directly to the parties listed below.

If you have any questions regarding the filing, please contact the undersigned at your convenience.

Yours very truly,

O'DEA, EARLE

THOMAS JOHNSON

TJ/cel
Encl.

cc: Newfoundland & Labrador Hydro
Attention: Geoffrey P. Young, Senior Legal Counsel

Newfoundland Power
Attention: Gerard Hayes, Senior Legal Counsel/Liam P. O'Brien

Mr. Danny Dumaresque

323 Duckworth Street | P.O. Box 5955 | St. John's, NL | A1C 5X4
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IN THE MATTER OF the
Public Utilities Act, RSNL 1990,
Chapter P-47 (the *Act*) as amended; and

IN THE MATTER OF Capital Expenditures
and Rate Base of Newfoundland Power Inc.; and

IN THE MATTER OF an Application by
Newfoundland Power Inc. for an Order pursuant
to Sections 41 and 78 of the Act:

(a) approving a 2015 Capital Budget of $94,211,000;
(b) approving certain capital expenditures related to multi-year projects commending in 2015; and
(c) fixing and determining a 2013 rate base of $915,820,000.

To Board of Commissioners of Public Utilities
Suite E210, Prince Charles Building
120 Torbay Road
P.O. Box 12040
St. John's, NL AIA 5B2
Attention: Ms. G. Cheryl Blundon
Direct of Corporate Services & Board Secretary

SUBMISSION OF THE CONSUMER ADVOCATE
NEWFOUNDLAND POWER'S 2015 CAPITAL BUDGET
APPLICATION

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Table of Contents

Introduction

Section 41 of the Public Utilities Act, RSNL, c. P-47 (the" Act") requires a public utility to submit an annual capital budget of proposed improvements or additions to its property for approval by the Board.

Section 78 of the Act vests authority in the Board to fix and determine the rate base for the service provided or supplied to the public by the utility and also gives the Board the power to revise the rate base.

Similarly, section 3(b) of the Electrical Power Control Act, 1994 SNL1994 c. E-5.1 requires that utilities manage and operate its facilities in a manner that results in power being delivered to consumers in the province at the "lowest possible cost consistent with reliable service". The onus rests upon the utility to establish before the Board that the expenditures proposed are necessary in the year in which they are proposed and represent the lowest cost alternative for the provision of electricity service in the province.

The Consumer Advocate has previously expressed concern over escalating amounts sought by utilities for capital projects, as the amounts spent on the same by each of the utilities need to be financed as either debt or equity. It is the consumer who ultimately will pay the interest on the debt and the return on equity as well as the costs of depreciation on the acquired assets. In Board Order No. P.U. 26 (2011), the Board stated that it shared the Consumer Advocate's concern about the increasing levels of planned capital for both utilities in the province.

Newfoundland Power Inc. (Newfoundland Power) filed its 2015 Capital Budget Application on June 26, 2014. As set out at page 2 in its Application, Newfoundland Power is seeking approval for $94,211,000.00 in 2015 for purchases and construction of improvements and additions to its property. In addition, the Application seeks approval for purchases and constructions of improvements and additions to Newfoundland Power's property of $19,609,000.00 for 2016, and $195,000.00 in 2017.

In its 2012 Capital Budget Application, dated July 8, 2011, $77,293,000 was sought by Newfoundland Power for 2012, while an additional $7,745,000 was sought for 2013, and $150,000 in 2014.

In its 2013 Capital Budget dated June 28, 2012, Newfoundland Power sought $80,788,000 for 2013, and an additional $3,853,000 was sought for 2014.

In its 2014 Capital Budget Application dated June 28, 2013, Newfoundland Power sought approval for purchase and construction of the improvements and additions to its property in the amount of $84,462,000.

Obviously, the increase year over year is of concern, and reinforces the imperative that approval should only be given to those projects or improvements demonstrated to be necessary for Newfoundland Power to provide service at the lowest possible cost while still providing reliable service.

Further, with interconnection on the imminent horizon, all projects and expenditures sought by the utilities should consider the impact Muskrat Falls will have. Particularly, consideration should be made as to whether the project or construction will be required at its current level of use after interconnection. In addition, there is the possibility that significant material expenditures will be required with Muskrat Falls coming online. Future supplemental projects may be required, though these are not reflected in the current Capital Plan filed by Newfoundland Power (CA-NP-05).

In light of these observations, the Consumer Advocate wishes to make submissions upon the following projects.

A: 2015 Capital Plan (pg. 18) Transportation;

B: Tab 6.1 2015 Application Enhancements-Property Records Management System Improvements/Inventory Management;

C: Tab 1.2 Pierre's Brook Hydro Plant – Appendix B – Feasibility Analysis

A: 2015 Capital Plan (pg. 18) Transportation

The costs of transportation are expected to increase to an average of $2.4 million annually from 2015 to 2019, an increase of approximately $500,000.00 annually from the 4 years previous. Newfoundland Power does not have any current information on the criteria used by other Canadian utilities for vehicle replacements (CA-NP-08), however, it does use its own criteria as set out in CA-NP-07.

Newfoundland Power indicates that while its criteria may initiate an evaluation for replacement, simply meeting the kilometers or age does not mandate that a vehicle will be replaced. Each vehicle is evaluated on its own. Newfoundland Power uses its own set of criteria in determining whether a vehicle will in fact be replaced.

The Consumer Advocate submits that the vehicle replacement practices of other utilities should be considered when reviewing vehicle replacements. This is an ongoing cost for which there is no reference to standards employed by the electric utility industry across Canada, or even Atlantic Canada, to determine if the approach taken by Newfoundland Power is reasonable. Newfoundland Power states that it will review Hydro's vehicle survey when filed (CA-NP-09), however, Newfoundland Power does not have any information presently.

As outlined in CA-NP-06, the Board has determined that this information is relevant and may help in providing full particulars for a complete review as set out in Order No. P.U. 42(2013) made in Newfoundland and Labrador Hydro's 2014 Capital Budget Application, (page 21):

"The Consumer Advocate notes that there is not consistency between Hydro's practice and the other utility cited in its response to IC-NLH-59. He submits that, for its next capital budget application, Hydro should be required to provide a survey of the replacement practices for vehicles and aerial devices by at least the other Atlantic Canadian utilities. According to the Consumer Advocate this would allow for fuller and more complete analysis and consideration of this ongoing project.

...

...Hydro agrees that the information requested by the Consumer Advocate and the Industrial Customer Group can be provided in future years if the Board considers it will be useful in considering this project at that time.

The Board is satisfied that this project is justified based on the evidence. In its next capital budget application for similar replacements Hydro will be expected to provide, as supporting documentation, information on the replacement policies for similar utilities in Canada. The Board agrees this information may assist in its future consideration of this ongoing project. This project will be approved as proposed."

The Consumer Advocate submits that knowledge of the vehicle replacement criteria of other Canadian utilities would be useful in ensuring that the criteria utilized by Newfoundland Power is in keeping with industry practice. If, for example, it is accepted practice among other Canadian utilities to use a longer time frame for replacement of passenger vehicles (6 years vs 5) or kilometers (175,000 vs 150,000) this could result in significant savings per year. The Consumer Advocate submits that Newfoundland Power, similar to Hydro, should be expected to provide replacement policy information for other utilities in Canada as supporting documentation on a go forward basis. This information will assist future consideration of what will continue to be an ongoing project.

B: <u>Tab 6.1 2015 Application Enhancements-Property Records Management System Improvements/Inventory Management</u>

Newfoundland Power is requesting $151,000.00 for Property Records System Improvements, but has no information as to how frequently their vault, where the physical documents are kept, is actually accessed during a day or week. While Newfoundland Power estimates 7 to 8 hours a week will be saved (CA-NP-27) no basis is provided for this estimation. The Consumer Advocate submits that more evidence justifying the need for this project is required prior to approval.

In a similar vein, there is very little to justify the $394,000.00 sought for Inventory Management Improvements. Actual incidents of required materials and/or tools not being available when required are not recorded (CA-NP-28), so it is difficult to determine how often this is an issue with the current system. Further, it is not clear how the new system will alleviate the concern raised by Newfoundland Power, namely that some

materials and/or tools may be utilized overnight which may be required the next morning. The proposed system would still require verification and replacement if something is taken overnight from a vehicle, and there is nothing to stop Newfoundland Power employees from manually doing that now prior to departure.

As such, the Consumer Advocate submits that these projects should be rejected.

C: Tab 1.2 Pierre's Brook Hydro Plant – Appendix B – Feasibility Analysis

The June 2014 report included with the Newfoundland Power's 2015 Capital Budget Application (Section 1.2) titled Pierre's Brook Hydro Plant Penstock Replacement and Surge Tank Refurbishment indicates (page 1) that the Pierre's Brook hydro plant was placed in service in 1931 and contains one generating unit with a nameplate capacity of 3.4 MW and a rated net head of 80 m. The normal production from the plant is 24.4 GWh annually which represents 5.7% of Newfoundland Power's total hydroelectric production. The plant has been in service for 83 years.

Newfoundland Power proposes (page 7) replacement of the woodstave section of the penstock and refurbishment of both the steel section of the penstock and the surge tank in 2016. The estimated cost of this work (page 9) is $14.28 million, most of which would be spent in 2016. This does not include the cost of future work at the plant site in 2016 (page 8) which would include switchgear upgrades, protection and control upgrades and refurbishment of the Gull Pond Forebay Dam. This additional work will be the subject of a separate application. Newfoundland Power considers the Pierre's Brook project a "life extension" project (page 9).

At $14.28 million, this can be categorized as a major project that requires a full assessment of the alternatives. In the Consumer Advocate's opinion, Newfoundland Power's justification and supporting analyses fall far short of what is needed for the Board to make an informed decision on the merits of the project. The Consumer Advocate's concerns/comments are highlighted below.

At $14.28 million and a capacity of 3.4 MW, the project cost is $4200/kW. This compares to Hydro's 100 MW (113 MW nominal) combustion turbine project at $1052/kW. While the combustion turbine project is said to represent the lowest cost capacity available to

the system, the cost for the Pierre's Brook extension still appears high, leading one to ask *"What would a complete re-build of the plant cost and how would its benefits compare to the proposed life extension project"?* Unfortunately, Newfoundland Power has not considered or evaluated such an alternative. Newfoundland Power states that the proposed life extension project will maximize the benefits of this renewable resource for its customers (page 10), but it is not clear how when no alternatives to the proposed project have been evaluated. Although Newfoundland Power believes the plant provides a number of benefits, it fails to evaluate alternatives that would increase plant output and efficiency in an effort to improve on these benefits; i.e., installation of new, more efficient, turbine runners.

The Pierre's Brook life extension project might be superior to plant retirement; however, we are unable to tell because Newfoundland Power has not evaluated the retirement alternative (see NLH-NP-6). Again, in the absence of such an evaluation, it is not clear how the proposed life extension project will maximize the benefits of this renewable resource for Newfoundland Power customers.

Newfoundland Power indicates (page 10) that the levelized cost of energy from the Pierre's Brook plant over the next 50 years is 4.87 cents/kWh. The plant is now 83 years old, and will be 133 years old at the end of the assumed 50 year life extension period. One would expect there would be significant additional capital requirements for a plant of this age, but the capital requirements beyond 2018 assumed by Newfoundland Power in its levelized cost analysis are only $563,000 (Attachment A). As stated by Hydro Quebec: *"Hydroelectric facilities are generally designed to last 50 to 60 years. Regular maintenance can prolong the service life of a dam or power plant. But after a while, maintenance is not enough: the facility needs to be restored. Sometimes, it's more cost-effective to modernize a plant than to build a new one, as is the case with Beauharnois hydroelectric generating station. In other cases, it is preferable to start from scratch, as with the new facility (Rocher-de-Grand-Mère generating station) that was built next to Grand-Mère generating station."* (Page attached herewith or can be viewed at http://www.hydroquebec.com/learning/hydroelectricite/construction-refection.html).

Again, the Consumer Advocate believes a more extensive evaluation of the alternatives for the Pierre's Brook plant is needed.

Newfoundland Power indicates (page 10) that energy from Pierre's Brook can be produced at a significantly lower price than energy from Holyrood. This is no doubt true, but Holyrood will be producing energy in significant quantities only until 2017, about a year after the Pierre's Brook life extension work is completed. Therefore, Holyrood production costs are not an appropriate measure of the economics of the Pierre's Brook life extension project. It is understood that updated marginal cost estimates are not available (see Note 6, NLH-NP-7), but in the Consumer Advocate's opinion, the appropriate measure of the economics of this project in light of the imminent commissioning of Muskrat Falls is the value of capacity and energy sold into Nova Scotia and beyond to the United States (net of the cost to transport the power and energy to market). As stated in NLH-NP-7 (page 2 of 5, lines 16 to 21), "Recently, the Power Purchase Agreement between Hydro and Muskrat Falls Corporation, a Nalcor affiliate (the "Muskrat PPA"), became available. However, the Muskrat PPA does not provide a significant additional degree of certainty to the forecast cost of service implications to customers associated with the Muskrat Falls Project". While uncertain, the Muskrat PPA is the key component of marginal costs upon which projects such as the Pierre's Brook life extension should be evaluated. The PPA has only recently become available, but Newfoundland Power should fully assess the implications of this agreement on marginal costs to ensure that customers receive the benefit of an evaluation based on the most relevant information available.

Newfoundland Power claims that the life extension work cannot reasonably be delayed (NLH-NP-4). However, the AMEC report (Appendix C of the Pierre's Brook Hydro plant life extension report) states (points 5 and 6, page 13) that the penstock should be replaced, but until it is replaced, interim maintenance measures should continue and include such things as routine repairs of leakage, ensuring bands are tight and well-positioned on the shoes, monitoring cradles, and applying preservative treatment to the penstock. This calls into question the "imminent" nature of the life extension work.

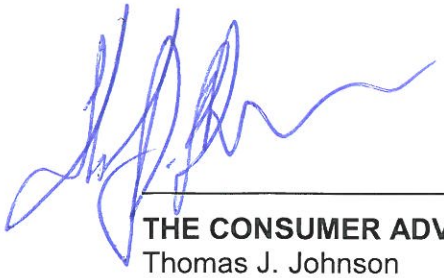
If the life extension project were delayed until after Muskrat Falls is commissioned, it would avoid downtime at the Pierre's Brook plant while Holyrood is still producing

significant amounts of high-cost energy. Newfoundland Power estimates the amount of spill at 9.5 GWh with a value of $836,475 (page B-2, Section 4.0). It should be noted that the Newfoundland Power valuation of the spill is based on purchased power costs of $88.05/MWh (see note 1, page B-2). If it were based on the cost of power from Holyrood, the value of the spill would be $1.59 million ($167/MWh * 9.5 GWh = $1.59 million, see note 2, page B-2). Delaying the project until after Muskrat Falls commissioning could potentially save as much as $1 million (assuming the spill would be replaced at a cost of 6 cents/kWh following Muskrat Falls commissioning).

In summary, it is respectfully submitted that Newfoundland Power has not presented an adequate evaluation of the alternatives for the Pierre's Brook hydro plant in light of the upcoming commissioning of Muskrat Falls. A project of this type, nature and size should consider the full range of alternatives, including retirement, life extension and other rehabilitation alternatives including a complete re-build of the plant given the plant's advanced age of 83 years. Further, the alternatives should be evaluated on the basis of the most relevant marginal cost information available, meaning it should incorporate an assessment of the recently released Muskrat PPA. The Consumer Advocate therefore recommends that the Board reject this project and order Newfoundland Power to submit a complete assessment of the alternatives to this project along with sensitivity cases and an appropriate basis for evaluating the capacity and energy produced by the plant under the different alternatives. It is the Consumer Advocate's respectful submission that delaying the project until this study is completed is the prudent and reasonable approach during this period of significantly increasing customer electricity rates.

Further, given that there may be a number of these types of hydro rehabilitation projects on the horizon for both Newfoundland Power and Hydro, the Consumer Advocate recommends that an evaluation framework and methodology be developed by Hydro and Newfoundland Power in an effort to standardize and expedite the evaluation process for such projects in the future. The Pierre's Brook plant should be the first to be evaluated under this framework and methodology.

RESPECTFULLY SUBMITTED AND DATED at St. John's, in the Province of Newfoundland and Labrador, this 5th day of August, 2014.



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Generating Station Construction and Refurbishment

Generating station construction

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- Construction of the generating station: powerhouse, headrace and tailrace.
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Generating station refurbishment

Hydroelectric facilities are generally designed to last 50 to 60 years. Regular maintenance can prolong the service life of a dam or power plant. But after a while, maintenance is not enough: the facility needs to be restored. Sometimes, it's more cost-effective to modernize a plant than to build a new one, as is the case with Beauharnois hydroelectric generating station. In other cases, it is preferable to start from scratch, as with the new facility (Rocher-de-Grand-Mère generating station) that was built next to Grand-Mère generating station.

Refurbishment of the spillway at Outardes-2 generating station

Refurbishment of the turbine at La Tuque generating station

Refurbishment of a generating unit's air-gap at Hull-2 generating station