

April 3, 2017

The Board of Commissioners of Public Utilities  
Prince Charles Building  
120 Torbay Road, P.O. Box 21040  
St. John's, NL A1A 5B2

**Attention: Ms. Cheryl Blundon**  
**Director Corporate Services & Board Secretary**

Dear Ms. Blundon:

**Re: An Application by Newfoundland and Labrador Hydro (Hydro) for the approval of the  
of the Refurbishment of Bay d'Espoir Penstock 2 and Bay d'Espoir Unit 3 Turbine  
Major Overhaul - Hydro's Reply**

Following is Hydro's reply with respect to the above noted Application.

### **1.0 Application Background**

On March 3, 2017, Hydro filed an Application for approval to inspect and refurbish Bay d'Espoir Penstock 2 at an estimated cost of \$9.1 million, and to advance the Bay d'Espoir Unit 3 turbine major overhaul such that it coincides with the Penstock 2 Refurbishment project, at an estimated cost of \$2,361,500.

### **2.0 Board Schedule and Process**

On March 9, 2017, the Board sent correspondence to the Parties, setting the schedule for Hydro's Application, as follows:

Requests for Information (RFIs) Tuesday - March 14, 2017

Responses to RFIs Friday - March 24, 2017

Comments from Parties - Wednesday, March 29, 2017

Hydro's Reply - Monday, April 3, 2017.

Newfoundland Power Inc. (Newfoundland Power) asked nine RFIs, which Hydro responded to on March 23, 2017.

### **3.0 Comments of the Intervenors**

In its correspondence of March 29, 2017, Newfoundland Power submits that while it is reasonable for Hydro to undertake the necessary work to perform the detailed inspection and assessment of the condition of the Penstock 2 welds, Hydro's request for approval to refurbish Penstock 2 is premature and that the evidence submitted in support of the Application does not meet the requirements of the Capital Budget Application Guidelines (the Guidelines).

Newfoundland Power submits that the Board should establish a process to permit expedited approval of such capital expenditures as are proven to be necessary for refurbishment of the penstock welds upon submission by Hydro of appropriate supporting evidence and references the process used in Newfoundland Power's supplemental application to replace the Bell Island Submarine Cable in 2013.

Newfoundland Power takes no issue with the proposed overhaul of Bay d'Espoir Unit 3.

No other Parties commented on Hydro's Application.

#### **4.0 Hydro's Reply**

##### *Compliance with the Capital Budget Application Guidelines*

The Capital Budget Application Guidelines permit a utility to make an application for a supplemental capital expenditure where it determines that such an expenditure, which was not anticipated and included in the annual capital budget, is necessary in the year and should not be delayed until the following year.<sup>1</sup> This application must be supported with appropriate evidence and analysis similar to that required of expenditures included in the annual capital budget. This includes evidence showing that the expenditure is prudent, or necessary to provide reasonably safe, adequate, just and reasonable service.<sup>2</sup> The Guidelines state that a utility is expected to provide the following information where appropriate and when available:

- Age of equipment or system
- Major work/upgrades completed since installation/implementation
- Anticipated useful life
- Summary of maintenance records
- Summary of outage statistics
- Relevant industry experience
- What maintenance/support arrangements available (internal and external)
- Vendor recommendations
- Availability of replacement parts
- Safety performance (if relevant)
- Environmental performance (if relevant)
- Operating regime (continuous, cyclic, standby, etc.)
- Net Present Value NPV calculation
- Levelized cost of energy
- Cost benefit analysis
- Other legislative or regulatory compliance requirements
- Historical average and/or unit cost information
- Forecast customer growth estimate
- Energy efficiency benefits
- Losses incurred during construction
- Anticipated consequences of maintaining the status quo

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<sup>1</sup> Capital Budget Application Guidelines, at page 9.

<sup>2</sup> Ibid., at page 7.

- Any other alternatives considered
- Description of proposed solution
- Budget estimate
- Project schedule
- Detailed report/analysis of condition (if available).

With respect to expenditures over \$500,000, the Guidelines go on to state:

Expenditures of this amount are considered significant expenditures which must be supported with more comprehensive and detailed documentation than other expenditures. It is expected that all the items in the checklist will be addressed with either the information provided or an explanation of why it is not appropriate in the circumstances. Where appropriate, a utility is expected to provide a report/analysis by a qualified engineer or other appropriate expert in support of the expenditure.<sup>3</sup> (emphasis added)

As indicated in Hydro's response to NP-NLH-006, Hydro recognizes that asking for approval to proceed with a significant capital expenditure of this nature prior to the submission of the inspection and assessment report is not the normal approach; however, the Guidelines do permit the justification of a project without such information where "an explanation of why it is not appropriate in the circumstances" is provided. Hydro submits that, in compliance with the Guidelines, it has provided the required information where it is appropriate and where such information is available. In instances where the required information is not available, Hydro submits that it has provided the required explanation. Penstock 1 and 2 were designed, fabricated, and installed by the same contractor. Based on the condition of the welds in Penstock 1, it is anticipated that the welds in Penstock 2 are in a similar deteriorated state and in need of refurbishment. A weld failure in Penstock 2 would result in a loss of 153 MW of generation capacity from the Bay d'Espoir plant, which will result in an unacceptable impact to the generation capacity plan for the Island Interconnected System. For this reason, Hydro is seeking approval to perform the detailed inspection and assessment of the condition of the Penstock 2 welds, and if necessary, to immediately commence the work to refurbishment the penstock.

The Guidelines also state that where appropriate, a utility is expected to provide a report or analysis by a qualified engineer or other appropriate expert in support of the expenditure. The inspection of the penstock is scheduled to occur in May, and Hydro expects to know the condition within 3 days of the start of the inspection. At that point in time, Hydro will know whether or not the work must proceed. As stated in Hydro's response to NP-NLH-006, Hydro will communicate to the Board and the Parties, the results of the inspection.<sup>4</sup> If the refurbishment is not needed, Hydro will not proceed with that aspect of the project. However,

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<sup>3</sup> Capital Budget Guidelines, pages 6-7.

<sup>4</sup> Hydro will submit to the Board and intervenors on the day following the third day of inspection, an analysis by a qualified engineer or other appropriate expert in support of the refurbishment aspect of the project. This short report will contain the field findings on the weld condition and also a statement indicating that whether or not the work must proceed.

if refurbishment is required as is expected, Hydro must be able to immediately proceed with the project to ensure the reliability of the Island Interconnected System rather than wait for additional review process.

Hydro disagrees with Newfoundland Power's assertion that the approval to refurbish Penstock 2 is premature and that the evidence submitted in support of the Application does not meet the requirements of the Capital Budget Application Guidelines. As required by the Guidelines, Hydro has provided as much information as it currently has at this time and has also provided an explanation as to why it cannot provide the normal comprehensive and detailed documentation justifying the project and is committed to providing such information when it becomes available. Hydro is also committing to submit a report to the Board following completion of the project, similar to reports submitted through the Allowance of Unforeseen process. As has also been previously explained by Hydro, Hydro is only proposing this approach to ensure the expedient return to service of the penstock, allowing for the other system required work to proceed without the additional schedule risk another process review would introduce.<sup>5</sup>

#### *Bifurcated and Expedited Process*

Newfoundland Power also submits that the Board bifurcate the penstock project and establish a process to permit expedited approval of the refurbishment of the penstock welds upon submission by Hydro of appropriate supporting evidence after the inspection has been completed. The example given for an expedited process was the process that occurred for Newfoundland Power's Bell Island Cable replacement, in which the timeframe from submittal of the application to Board Order, with no RFIs or comments from any intervenor, was 11 days. Should requests for information be asked in this contemplated process for the penstock, with the parties also having comments on the inspection report, the process would certainly be longer than 11 days.

The time slot for the penstock to be out of service is until June 30, 2017, and is already a very aggressive timeframe to execute the required potential scope. Hydro submits that, in this instance, the bifurcation of Hydro's application to separate the inspection of the penstock from the refurbishment of the penstock to allow for additional review process introduces delay risk with respect to the execution aspect of the project and will also have a domino effect on the other generation and transmission outages required in this construction season.

Should Hydro wait for approval to proceed after an additional expedited process in mid-May, as proposed by Newfoundland Power, additional delays could materialize in the mobilization of the contractor. In the proposed current execution plan, Hydro proposes to have a portion of the contractor resources mobilized to immediately commence the refurbishment process if the welds are found to need refurbishment. The remaining resources would be them mobilized. If Hydro is required to wait for an additional process before mobilizing the contractor, Hydro

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<sup>5</sup> Hydro submits that this proposed approach bears resemblance to the Allowance for Unforeseen process. However, the difference is Hydro is providing as much information up front as is possible. Due to the resemblance, Hydro is also proposing to submit a report to the Board following completion of the project, in the same format as a report that is required following the use of Allowance for Unforeseen Items Account.

submits that at minimum, an additional week over and above the minimum 11 day review process delay, would be lost in the execution, putting further strain on the whole system outage plan and adding to execution and completion risk for other required system outages.

The pending construction season has a number of generation and transmission outages incorporated into Hydro's Annual Work Plan for the Island Interconnected System, all of such outages facilitate a significant amount of work in this year that is critical for reliability on the system. This work stems from Newfoundland Hydro's 2017 Capital Budget, the Maritime Island Link construction, the Labrador Island Link construction, as well as TL267 construction, which are critical for reliability this coming winter. Extensive planning and scheduling has occurred to incorporate all the work noted above and each outage is placed in the calendar for the duration necessary when the impact of such outages is known to not put the system in an unstable condition. The injection of additional time for review of the weld refurbishment project would introduce additional execution risk for other outages across the system.

Hydro submits this introduces unnecessary risk for winter readiness and customer reliability heading into winter 2017/18.

Hydro fully understands, and therefore clearly indicated, that this approach is not the usual approach taken with respect to capital expenditures. However, the Guidelines do permit it; Hydro is only proposing this approach to ensure expedient return to service of the penstock, allowing for the other system required work to proceed without the additional schedule risk another process review would introduce as has provided as much information up front as is possible.

## **5.0 Conclusion**

As required by the Capital Budget Application Guidelines, Hydro has provided as much information as is currently available along with a detailed explanation as to why certain information is currently not available. Hydro has also committed to provide the Board with the initial analysis of the penstock inspection along with a report once the project is complete. Hydro submits that the provision of a report immediately following the 3 days of inspection indicating if the project must proceed, plus the conclusion report, will provide for the appropriate information necessary for the Board and intervenors to gain confidence the work is necessary and justified for execution. For those reasons, and as more fully explained above, Hydro submits that it is fully compliant with the requirements of the Capital Budget Guidelines.

Hydro also submits that bifurcating this project and inserting an additional layer of process, no matter how expedited, is not appropriate in this instance as it will add unnecessary risk to reliability of the island interconnected system. The additional process suggested by Newfoundland Power will likely cause several weeks of delay, at minimum, for this project in an already aggressive schedule. Delaying the schedule will have a domino effect on the successful execution of other critical projects that are scheduled on the Island Interconnected System, including the critical TL267, all of which is required for reliability in advance of winter 2017/18.

Hydro also submits that the process it has proposed is consistent with project efficiency to ensure the project is completed in a least cost efficient manner. Hydro's approach will also permit regulatory efficiencies.

Therefore, Hydro submits that the capital works for which Hydro has sought approval in the present Application are necessary to ensure that Hydro can continue to provide service which is safe and adequate and just and reasonable as required by Section 37 of the *Public Utilities Act*. Hydro respectfully requests that the Board approve Hydro's Application, as submitted.

Should you have any questions, please contact the undersigned.

Yours truly,

**NEWFOUNDLAND AND LABRADOR HYDRO**



Tracey L. Pennell  
Senior Counsel, Regulatory

TLP/bds

cc: Gerard Hayes – Newfoundland Power  
Paul Coxworthy – Stewart McKelvey Stirling Scales  
Sheryl Nisenbaum – Praxair Canada Inc.  
ecc: Larry Bartlett – Teck Resources Limited

Dennis Browne, Q.C. – Consumer Advocate  
Thomas J. O'Reilly, Q.C. – Cox & Palmer