

April 15, 2016

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

**Attention: G. Cheryl Blundon, Director of Corporate Services and Board Secretary**

Ladies and Gentlemen:

**Re: A Revised Application by Newfoundland and Labrador Hydro for Approval of the Procurement of 12MW of Diesel Generation at Holyrood**

In an Application submitted to the Board on February 22, 2016 Hydro is proposing to purchase six of the eight mobile diesel generators that are currently being leased for black start purposes at the Holyrood generating station. Hydro is also proposing that *"it be permitted to defer and amortize over a period of five years a portion of its lease payments which can be applied towards the purchase price"* (cover letter accompanying Application). The purchase price for the six diesel units is estimated at \$6.3 million. Hydro proposes the deferral and amortization of \$1.3 million over five years and the incremental purchase and associated costs of \$5.0 million (Application para. 12). Hydro originally submitted an Application to purchase the six diesel units on November 22, 2015, but submitted this revised application *"due to changes in circumstances leading to changes in the justification of this project"* (cover letter accompanying Application). Hydro requests that the previous Application dated November 22, 2015 be withdrawn and that the Board consider in its place this revised Application submitted February 22, 2016 (cover letter accompanying Application).

The *"changes in the justification of this project"* that Hydro refers to appear to be the following:

- *"On March 4, 2015 Hydro experienced a voltage collapse event on the Avalon Peninsula. Following the event of March 4, 2015, Hydro completed an analysis to consider system conditions on the Avalon Peninsula. The results of the analysis indicate that the Holyrood diesel generators are required to supply a P90 peak loading condition in the event of a single worst-case contingency." (Application para. 5)*
- *"Since August of 2015, Hydro has been experiencing extremely low inflows in its reservoirs. Hydro needs to replace this hydraulic energy by using its thermal generating resources but it has become apparent that Hydro cannot generate sufficient thermal energy for this purpose by running just its Holyrood Thermal Generating Station. Therefore, since early*

January of 2016, Hydro has been running these diesel units, along with all of its sources of standby generation, to provide energy to the Island Interconnected system.” (Application para. 6)

Hydro estimates that purchasing the six diesel units will provide operating and capital cost savings such that there will be a cumulative present worth preference of \$542,000 to Hydro and its customers if the Application is approved (Application para. 10).

### **Consumer Advocate's Review of the Application**

Hydro states that its analysis indicates that the diesel units are “required to supply a P90 peak loading condition in the event of a single worst-case contingency” (Application para. 5). However, in DG-CA-NLH-1, Hydro states that the diesel units are not needed to meet its new generation planning criteria (page 1 of 3, lines 22 to 25, and page 2 of 3, lines 1 to 2), and although there is a risk of a capacity shortfall on the Avalon Peninsula for a single contingency under a P90 load scenario, the diesel units are not needed to meet its transmission planning criteria (page 2 of 3, lines 13 to 15). As pointed out in DG-CA-NLH-2, the overloading without the diesel units is 102.1% under a single contingency and a P90 load scenario, but this is not a violation of Hydro’s planning criteria (page 1 of 1, lines 10 to 13). Further, although Hydro has been running the diesel units and other sources of standby generation since January 2016 to provide energy owing to low hydro conditions on the system (Application para. 6), it does not appear that the diesel units are “required” to meet Hydro’s planning criteria. As stated in DG-NP-NLH-2, “the use of the diesels for system support in response to low hydrology is a benefit of purchasing the diesels, but alone is not proposed as justification for the purchase (page 1 of 2, lines 23 to 27). Finally, the diesel units are not required to provide black start for the Holyrood plant as the new combustion turbine (CT) can meet his requirement. The diesel units would avoid the need to construct a secondary connection to the CT at a savings of \$480,000 (see Appendix D to Application). This savings is accounted for in Hydro’s economic evaluation.

The Consumer Advocate therefore concludes that although the system has been under stress compounded by the low water conditions on the Island Interconnected System, the Application does not appear to be based on a requirement to meet system reliability standards. Although the diesel units might provide reliability benefits, they are **not** required for Hydro to meet its generation and transmission planning criteria. Therefore, the Application should be evaluated from the perspective of economics.

As noted earlier, Hydro estimates that purchasing the six diesel units will provide operating and capital cost savings such that there will be a cumulative present worth preference of \$542,000 to Hydro and its customers (Application para. 10). However, the report attached to the Application states that there is a cumulative present worth preference of only \$254,000 (page C-2, lines 5 to 7). In DG-PUB-NLH-3, Hydro states “The \$542,000 listed for the Cumulative Present Worth (CPW) on Page 3, Paragraph 10 of the Application, is a typo. The number given in the report is \$254,000” (page 1 of 1, lines 5 to 6). In the same response (page 1 of 1, lines 11 to 14), Hydro goes on to say that subsequent to the submittal of its report, it discovered an error in the calculation of fuel savings, and the revised cumulative present worth is reduced by \$680,000, meaning that there is no longer a “preference” for the project, but rather a “cost” of \$426,000 on a cumulative present



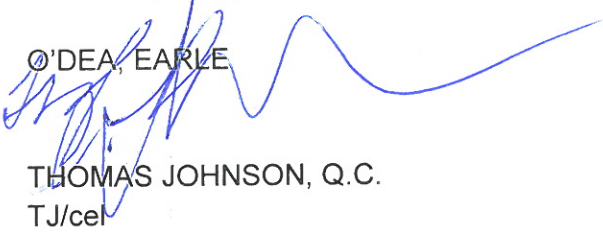
worth basis. Further, with one exception,<sup>1</sup> the project remains a cost under all sensitivity scenarios considered, so the project cannot be considered a least-cost alternative (DG-PUB-NLH-4). The robustness of the economic analysis indicates the project would almost certainly be a cost rather than a benefit to Hydro and its customers.

***Consumer Advocate's Recommendation***

The Application is not justified on the basis of system need for reliability and quality of supply. Hydro has not made the case that the project is needed to meet its generation and transmission planning criteria. Neither is the project justified on the basis of economics as a least cost alternative. The Consumer Advocate therefore recommends that the Board reject the Application.

Please contact the undersigned if you have any questions.

Yours very truly,

  
O'DEA, EARLE  
THOMAS JOHNSON, Q.C.  
TJ/cel

cc: Newfoundland Power  
Attention: Mr. Gerard Hayes

Newfoundland and Labrador Hydro  
Attention: Mr. Geoffrey Young

Stewart McKelvey  
Attention: Mr. Paul Coxworthy

Cox & Palmer  
Attention: Thomas O'Reilly, Q.C.

Praxair Canada Inc.  
Attention: Ms. Sheryl Nisenbaum

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<sup>1</sup> The lone exception is a 20% increase in the resale value of the diesel units in which case there would be a benefit of \$162,000 (DG-PUB-NLH-4).