

**NEWFOUNDLAND AND LABRADOR  
BOARD OF COMMISSIONERS OF PUBLIC UTILITIES**

**AN ORDER OF THE BOARD**

**NO. P.U. 53(2014)**

1 **IN THE MATTER OF** the *Electrical Power*  
2 *Control Act, 1994*, SNL 1994, Chapter E-5.1  
3 (the “*EPCA*”) and the *Public Utilities Act*,  
4 RSNL 1990, Chapter P-47 (the “*Act*”), as  
5 amended, and regulations thereunder; and  
6

7 **IN THE MATTER OF** an application by  
8 Newfoundland and Labrador Hydro for approval  
9 to proceed with the construction of a 230kV  
10 transmission line between the Bay d’Espoir  
11 and Western Avalon terminal stations pursuant  
12 to section 41 of the *Act*.  
13  
14

15 **The Application**  
16

17 On April 30, 2014 Newfoundland and Labrador Hydro (“Hydro”) filed an application for  
18 approval to construct a 230 kV transmission line, approximately 188 km in length, between the  
19 Bay d’Espoir and Western Avalon terminal stations (the “Application”). The estimated capital  
20 cost of the project is \$291,658,000 with a planned in-service date of May 1, 2018.  
21

22 Notice of the Application was published on May 10, 2014 in papers across the province and  
23 was posted on the Board’s website. The following parties filed intervenor submissions:  
24

- 25 (i) Newfoundland Power Inc. (“Newfoundland Power”);  
26 (ii) the Consumer Advocate, Mr. Thomas Johnson;  
27 (iii) Corner Brook Pulp and Paper Limited, North Atlantic Refining Limited and  
28 Teck Resources Limited (the “Industrial Customer Group”);  
29 (iv) Vale Newfoundland and Labrador Limited (“Vale”);  
30 (v) Mr. Danny Dumaresque; and  
31 (vi) Anemos Energy Corporation (“Anemos”).  
32

33 On July 17, 2014 the Board, Newfoundland Power, the Consumer Advocate, the Industrial  
34 Customer Group and Mr. Danny Dumaresque submitted Requests for Information (RFIs) to  
35 Hydro. Responses to the RFIs were filed on August 22, 2014. Newfoundland Power filed

1 submissions on October 31, 2014 and the Consumer Advocate filed submissions on November  
 2 5, 2014. The Industrial Customers and Vale advised by letter they had no comments on the  
 3 Application. There was no filing from Mr. Dumaresque or Anemos. On November 10, 2014  
 4 Hydro filed submissions.

5  
 6 **Background**

7  
 8 Hydro included this project in its 2012 Capital Budget application filed in August 2011 but the  
 9 project was withdrawn on December 14, 2011.

10  
 11 On August 5, 2013 Hydro filed its 2014 Capital Budget Application. In Order No. P.U. 42(2013)  
 12 the Board approved Hydro's 2014 Capital Budget in the amount of \$97,805,300. In Order No.  
 13 P.U. 16(2014) the Board approved a proposal from Hydro to proceed with the purchase and  
 14 installation of 100 MW of combustion turbine generation at the Holyrood Thermal Generating  
 15 Station. The estimated cost of this project was \$119,000,000; however the Board ordered that the  
 16 issues of costs and cost recovery would be addressed in a future order of the Board.

17  
 18 The Board also approved supplemental 2014 capital expenditures in:

- 19  
 20 (i) Order No. P.U. 23(2014) in the amount of \$580,000 to be added to the Allowance  
 21 for Unforeseen Items related to expenditures for the Holyrood Unit 3 east forced  
 22 draft fan motor and the Sunnyside and Holyrood breaker overhauls;  
 23 (ii) Order No. P.U. 29(2014) in the amount of \$7,197,800 in 2014 and \$1,266,400 in  
 24 2015 for the purchase and replacement of the Sunnyside T1 transformer and  
 25 associated equipment, modification to the protection relay system and addition of  
 26 a 230 kV breaker at the Sunnyside Terminal Station; and  
 27 (iii) Order No. P.U. 32(2014) in the amount of \$1,452,500 to replace the tap changer  
 28 on the T5 transformer at the Western Avalon Terminal Station.  
 29

30 For these approvals the Board ordered that recovery of these expenditures would be addressed in  
 31 a subsequent order of the Board following a further application by Hydro.

32  
 33 The Board approved further supplemental 2014 capital expenditures in:

- 34  
 35 (i) Order No. P.U. 33(2014) in the amount of \$3,632,200 to replace insulators on  
 36 transmission lines TL-201 and TL-203;  
 37 (ii) Order No. P.U. 34(2014) in the amount of \$636,700 in 2014 and \$360,000 in 2015  
 38 for the replacement of the excitation transformers at the Bay d'Espoir generating  
 39 station;  
 40 (iii) Order No. P.U. 36(2014) in the amount of \$958,800 for the installation of  
 41 additional transformer capacity at the Wabush Substation;  
 42 (iv) Order No. P.U. 38(2014) in the amount of \$320,600 to replace an air compressor  
 43 at the Holyrood Thermal Generating Station;  
 44 (v) Order No. P.U. 45(2014) in the amount of \$608,900 for 2014 and \$1,238,200 for  
 45 2015 to complete the Labrador City Voltage Conversion; and

(vi) Order No. P.U. 46(2014) in the amount of \$491,753 to purchase critical spares for the Holyrood Thermal Generating Station.

On December 2, 2014 the Board issued Order No. P.U. 50(2014) approving Hydro's 2015 Capital Budget of \$76,832,900.

The Application requests approval to proceed with the construction of the new transmission line commencing in 2014 with expenditures each year from 2014 up to the commissioning of the line in 2018. In accordance with the Capital Budget Guidelines the project will be considered a multi-year project to start in 2014.

**Evidence and Submissions**

Hydro states that a new 230 kV transmission line between the Bay d'Espoir and Western Avalon terminal stations is required to reliably meet customer load growth on the Island Interconnected system. Hydro states that this requirement was identified in studies relating to the least cost long-term generation supply option for the Island Interconnected system. Hydro filed a report, *Upgrade Transmission Line Corridor Bay d'Espoir to Western Avalon*, dated April 28, 2014, with the Application which sets out in detail the required work, project schedule, and project justification. The proposed 230 kV transmission line was required in both the isolated and Muskrat Falls interconnection scenarios: to facilitate new generation off the Avalon Peninsula in the isolated system scenario; and for system stability upon interconnection with Labrador. In December 2012 the Government of Newfoundland and Labrador announced sanction of the Muskrat Falls project as the least cost alternative to meet the long-term power and energy requirements of the Province.

The system modifications associated with the Muskrat Falls project will result in significant changes in the overall system loading and dynamic performance on the Island Interconnected system. A system planning study was conducted by Hydro to identify system additions or upgrades required to ensure the compliance with transmission planning criteria on the Island Interconnected system and to determine the least-cost alternative. The resulting load flow and transient stability analysis showed that the addition of a new 230 kV transmission line between the Bay d'Espoir and Western Avalon terminal stations is required to meet the transmission planning criteria and to maintain a reliable power system capable of withstanding expected transient events. The projected budget estimate and cost breakdown is set out below:

**Projected Budget Estimate <sup>1</sup>**

<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>Total</b>
\$2,412,600	\$18,964,700	\$77,225,600	\$110,064,100	\$82,991,000	\$291,658,000

<sup>1</sup> Forecast expenditures for 2017 and 2018 were not set out in the Application but were provided upon request to Hydro.

Newfoundland Power submits the Board should approve the Application. Newfoundland Power states that evidence filed in support of the Application shows that Hydro has considered a

1 number of alternatives for addressing the identified capacity and transient stability issues and  
2 that the proposed 230 kV transmission line between Bay d'Espoir and Western Avalon appears  
3 to be the least cost alternative of those considered.

4  
5 The Consumer Advocate supports construction of the 230 kV transmission line. The Consumer  
6 Advocate submits that the need for the project to ensure system stability following system  
7 disturbances has been clearly established and the proposed 230 kV transmission line is the  
8 preferred alternative for meeting this system need.

9  
10 Hydro notes that the Application is supported by Newfoundland Power and the Consumer  
11 Advocate and submits that the Application should be approved.

### 12 **Discussion**

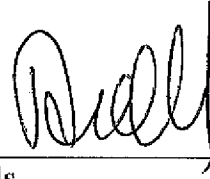
13  
14  
15 The Board has reviewed the evidence, Hydro's responses to the RFIs and the submissions and is  
16 satisfied that the proposed construction of a 230 kV transmission line between the Bay d'Espoir  
17 and Western Avalon terminal stations should proceed. Hydro has established the need for this  
18 project and has completed the necessary studies and analysis to select the least-cost alternative.  
19 The Board is satisfied that the proposed transmission line is necessary to ensure that Hydro can  
20 continue to provide service which is safe and adequate and just and reasonable.

21  
22 The total estimated expenditure for this project, at almost \$292 million, is significant and will be  
23 recovered from customers in future rates. The Board notes that just over \$193 million, or over  
24 65%, of the capital expenditure is budgeted for 2017 and 2018. Given the time frame over which  
25 this project is to be undertaken and the size of the estimated capital expenditures Hydro will be  
26 required to file a report in relation to this project with each annual capital budget application  
27 filed with the Board until the transmission line is commissioned. This report should set out the  
28 work progress, expenditure and budget status, and an explanation for any deviations from the  
29 project scope and budget. If there are any significant changes in project scope or budget, in  
30 accordance with the Capital Budget Guidelines, Hydro will be required to file a further  
31 application for approval of the changes.  
32

**IT IS THEREFORE ORDERED THAT:**

- 1  
2  
3 1. The capital expenditures of \$2,412,600 in 2014, \$18,964,700 in 2015, \$77,225,600 in  
4 2016, \$110,064,100 in 2017 and \$82,991,000 in 2018 for the construction of the 230 kV  
5 transmission line between the Bay d'Espoir and Western Avalon terminal stations are  
6 approved.  
7
- 8 2. Hydro will file, with each capital budget application until the completion of the project, a  
9 report on the construction of the 230 kV transmission line addressing the work progress,  
10 the expenditure and budget status, and an explanation for any deviations from the project  
11 scope and budget.  
12
- 13 3. Hydro shall pay all expenses of the Board arising from this Application.

**DATED** at St. John's, Newfoundland and Labrador, this 12<sup>th</sup> day of December 2014.



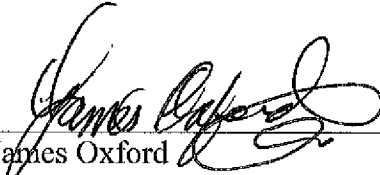
Andy Wells  
Chair



Darlene Whalen, P.Eng.  
Vice-Chair



Dwanda Newman, LLB  
Commissioner



James Oxford  
Commissioner



Cheryl Blundon  
Board Secretary