

IN THE MATTER OF THE  
2014 CAPITAL BUDGET APPLICATION

FILED BY

NEWFOUNDLAND AND LABRADOR HYDRO

---

**DECISION AND ORDER  
OF THE BOARD**

**ORDER NO. P.U. 42(2013)**

---

**BEFORE:**

**Andy Wells  
Chair and Chief Executive Officer**

**Darlene Whalen, P.Eng.  
Vice-Chair**

**James Oxford  
Commissioner**

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

**AN ORDER OF THE BOARD**

**NO. P.U. 42(2013)**

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

**IN THE MATTER OF** an application by Newfoundland and Labrador Hydro for an order:

- (a) approving its 2014 capital budget;
- (b) approving its 2014 capital purchases and construction projects in excess of \$50,000;
- (c) approving the estimated contributions in aid of construction for 2014; and
- (d) fixing and determining its average rate base for 2012.

**BEFORE:**

Andy Wells  
Chair and Chief Executive Officer

Darlene Whalen, P. Eng.  
Vice-Chair

James Oxford  
Commissioner

## TABLE OF CONTENTS

<b>I</b>	<b>BACKGROUND</b>	<b>1</b>
	1. <b>Application</b>	<b>1</b>
	2. <b>Board Authority</b>	<b>1</b>
	3. <b>Application Process</b>	<b>1</b>
<b>II</b>	<b>2014 CAPITAL EXPENDITURES</b>	<b>3</b>
	1. <b>Overview</b>	<b>3</b>
	2. <b>Level of Capital Expenditures</b>	<b>3</b>
	3. <b>Holyrood Capital Spending</b>	<b>5</b>
	4. <b>Capital Projects over \$50,000</b>	<b>8</b>
	5. <b>Other Matters</b>	<b>24</b>
<b>III</b>	<b>2014 CAPITAL BUDGET</b>	<b>28</b>
<b>IV</b>	<b>2012 AVERAGE RATE BASE</b>	<b>29</b>
<b>V</b>	<b>CLAIM FOR COSTS</b>	<b>33</b>
<b>VI</b>	<b>ORDER</b>	<b>34</b>
	<b>SCHEDULE A</b>	
	<b>SCHEDULE B</b>	
	<b>SCHEDULE C</b>	

1     **I        BACKGROUND**

2  
3     **1.   Application**

4  
5     Newfoundland and Labrador Hydro (“Hydro”) filed its 2014 Capital Budget Application (the  
6     “Application”) with the Board of Commissioners of Public Utilities (the “Board”) on August 5,  
7     2013 requesting that the Board make an Order:

- 8  
9         (i)     approving its 2014 Capital Budget of \$98,668,500;  
10        (ii)    approving its 2014 capital purchases and construction projects in excess of \$50,000;  
11        (iii)   approving the estimated contributions in aid of construction for 2014 of approximately  
12                \$300,000; and  
13        (iv)    fixing and determining its average rate base for 2012 in the amount of \$1,526,051,000.

14  
15     In accordance with the legislation, regulations and the Board’s Capital Budget Guidelines the  
16     Application includes a detailed explanation of each proposed expenditure, setting out a  
17     description, justification, costing methodology and future commitments, if applicable. Additional  
18     studies and reports, including detailed engineering reports, are provided in relation to a number of  
19     projects.

20  
21  
22     **2.   Board Authority**

23  
24     Section 41 of the *Act* requires a public utility to submit an annual capital budget of proposed  
25     improvements or additions to its property for approval of the Board no later than December 15<sup>th</sup> in  
26     each year for the next calendar year. In addition, the utility is also required to include an estimate  
27     of contributions towards the cost of improvements or additions to its property which the utility  
28     intends to demand from its customers.

29  
30     Subsection 41(3) prohibits a utility from proceeding with the construction, purchase or lease of  
31     improvements or additions to its property without the prior approval of the Board where (a) the  
32     cost of the construction or purchase is in excess of \$50,000, or (b) the cost of the lease is in excess  
33     of \$5,000 in a year of the lease.

34  
35     Section 78 gives the Board the authority to fix and determine the rate base for the service provided  
36     or supplied to the public by the utility and also gives the Board the power to revise the rate base.  
37     Section 78 also addresses the components that may be included in the rate base.

38  
39  
40     **3.   Application Process**

41  
42     Notice of the Application was published beginning on August 10, 2013. The Application and  
43     related documentation was available for viewing on the Board’s website.

44  
45     Notices of intention to participate were filed by:

- 46         i.     the Consumer Advocate, Mr. Thomas Johnson (the “Consumer Advocate”);  
47         ii.    Newfoundland Power Inc. (“Newfoundland Power”);

- 1     iii.    a group of Hydro's Island Industrial Customers - Corner Brook Pulp and Paper Limited,  
2            North Atlantic Refining Limited, and Teck Resources Limited (the "Industrial Customer  
3            Group"); and  
4     iv.    Vale Newfoundland and Labrador Limited ("Vale").  
5

6   A total of 208 Requests for Information ("RFIs") were issued to Hydro by the Intervenors and the  
7   Board.  
8

9   Grant Thornton, the Board's financial consultants, were retained to review the calculations of the  
10  2012 average rate base and 2012 deferred charges. Grant Thornton filed a report dated September  
11  20, 2013 which was circulated to the parties.  
12

13  Written submissions were filed by the Intervenors on October 7, 2013.  
14

15  On October 8, 2013 the Board wrote the parties requesting comments relating specifically to the  
16  issue of rate base. Submissions on this matter were received on October 10, 2013 from the  
17  Consumer Advocate, the Industrial Customer Group and Vale. NP did not make any further  
18  submission on this issue.  
19

20  Hydro filed its written submission on October 15, 2013.

1 **II 2014 CAPITAL EXPENDITURES**

2  
3 **1. Overview**

4  
5 Hydro's proposed 2014 capital budget as filed is \$98,668,500.

2014 Proposed Capital Budget (\$000s)	
<b>2014 Single Year Projects</b>	
Generation	\$21,749.9
Transmission and Rural Operations	18,586.7
General Properties	2,473.2
<b>Allowance for Unforeseen Events</b>	1,000.0
<b>Total projects under \$50,000</b>	910.9
<b>Multi-year (2014 Expenditures)</b>	
Multi-year projects commencing in 2014	13,076.6
Multi-year projects commencing in 2013	39,602.3
Multi-year projects commencing prior to 2013	1,268.9
<b>Total 2014 Capital Budget</b>	<b>\$98,668.5</b>

6 Hydro's 2014 capital budget contains 96 projects which, according to Hydro, address both the  
7 need to sustain the existing asset base and to grow the asset base in response to growing customer  
8 demand. Hydro advises that it proposes no new leases for 2014 in excess of \$5,000 per year.

9  
10 **2. Level of Capital Expenditure**

11  
12 The Application (page H-1) sets out the actual expenditures from 2009-2012 and the forecast  
13 capital expenditures for 2013-2018, as below:

14  
15 **Actual Capital Expenditures (2009-2012)**

16 (\$000s)

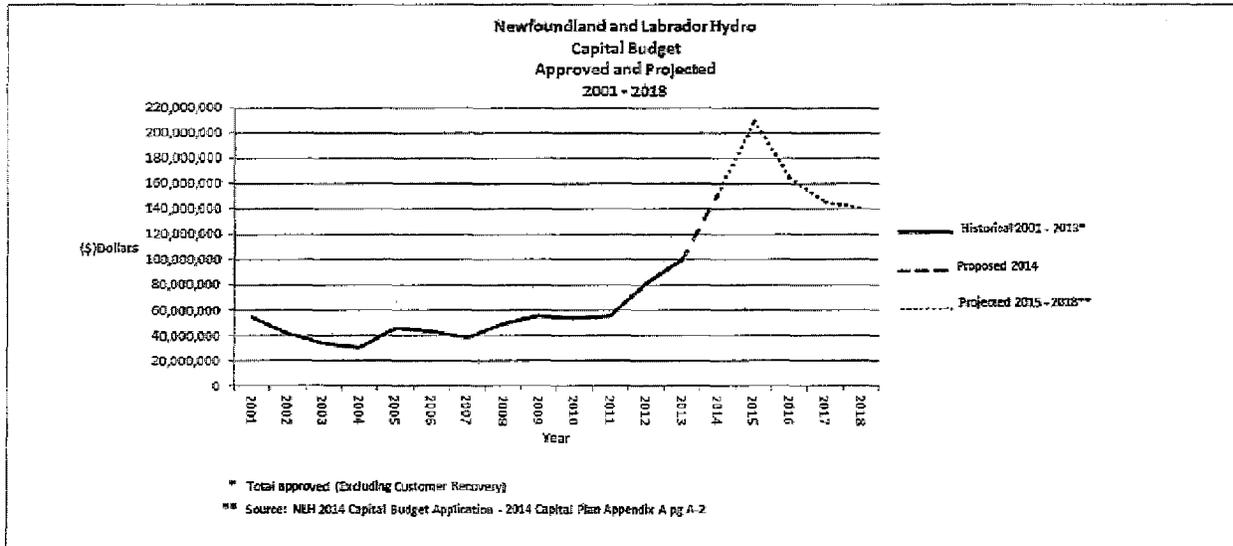
<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
54,152	55,553	63,116	77,252

17  
18  
19  
20 **Forecast Capital Expenditures (2013-2018)**

21 (\$000s)

<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
115,702	151,449	209,008	164,201	144,555	140,441

22  
23  
24  
25 Over the period 2009-2012 the average annual capital expenditure was approximately \$62 million  
26 while for the period 2013-2018 the average annual capital expenditure is expected to be in the  
27 range of \$154 million. Hydro states that the increase in overall capital expenditure reflects  
28 inflation, the requirement for specific projects related to replacement and upgrade of deteriorated  
29 facilities, ensuring compliance with legislation, and most particularly additions required to meet  
30 growth. The trend in approved (budget and supplemental) and forecast capital expenditures for the  
31 period 2001 to 2018 is shown below.



1 The Industrial Customer Group reiterates its position taken in past capital budget applications,  
2 stating they have *“taken great exception to the growing nature of Hydro’s capital expenditure*  
3 *demands.”* They note that the 2014 Capital Budget of \$98.7 million does not include the proposed  
4 2014 capital expenditures for the Bay d’Espoir to Western Avalon Transmission 230 kV line  
5 addition (\$6.37 million) and the new combustion turbine at Holyrood (\$46.4 million). The  
6 Industrial Customer Group submits:

7  
8 *“...in the context of this extraordinary escalation in capital expenditure, the “lowest*  
9 *possible cost” principle can only be given meaningful effect if Hydro’s justifications for its*  
10 *proposed capital expenditures are subjected to rigorous scrutiny, so that Hydro’s customers,*  
11 *including the Island Industrial Customers, can be assured that they are being provided*  
12 *power in accordance with section 3(b) of the EPCA.”* (Industrial Customer Group, Written  
13 Submission, page 3)  
14

15 Vale expresses concern that the 2014 capital budget continues the trend of escalating capital  
16 expenditures, and that forecast expenditures over the next five years signify that the annual levels  
17 of capital expenditure are to remain at this escalated level. Vale submits that this increase in capital  
18 expenditure has a real and sizable impact on Hydro’s rate base and ultimately provincial rate  
19 payers. They note Hydro’s response to PUB-NLH-34, which shows that, based on Hydro’s  
20 proposed annual forecast for capital expenditures, the increase in annual revenue requirement from  
21 2013 to 2018 is estimated at \$73,244,000, of which 80% will be paid by Island Interconnected  
22 customers. Vale notes that this is in addition to anticipated increases in generation costs.  
23

24 The Consumer Advocate and Newfoundland Power did not comment specifically on this issue.  
25

26 In past capital budget applications intervenors have expressed concern about the increasing levels  
27 of capital expenditures in recent years. The Board shares these concerns and has continued to  
28 exercise a comprehensive level of oversight with respect to the capital budgets for both utilities,  
29 both in terms of the approval and monitoring process. Each capital budget is comprehensively  
30 reviewed to ensure, as required by the *Act*, the provision of least cost, safe and reliable service.  
31 This standard is tested through an open and public process where all interested parties are provided  
32 the opportunity to request information and make submissions.

1 In the case of Hydro the Board recognizes that the anticipated level of capital expenditure over the  
 2 next number of years will reach unprecedented levels. Hydro plans to invest \$810 million in plant  
 3 and equipment over the 2014 to 2018 period, with average annual capital expenditures of \$162  
 4 million. Even when accounting for inflation and ongoing normal capital projects the forecast  
 5 increase in capital spending is significant. Customer rates can also be affected significantly since  
 6 costs of capital projects, once the assets are in service, directly impact the revenue requirement  
 7 which is recovered through customer rates. The Board continues to believe, as stated in Order No.  
 8 P.U. 2(2012), that the best way to assess proposed capital expenditures is to consider all of the  
 9 circumstances at the time in the context of legislative requirements. To that end Hydro will  
 10 continue to be held accountable to demonstrate that its capital plans are required for the provision  
 11 of safe and reliable service and are consistent with the provision of least cost service.  
 12  
 13

### 14 3. Holyrood Capital Spending

15  
 16 In Order No. P.U. 5(2012) the Board ordered Hydro to file, in conjunction with its 2013 Capital  
 17 Budget Application, an overview in relation to the proposed capital expenditures for the Holyrood  
 18 Thermal Generating Station (“Holyrood”). This overview was not provided as required. In Order  
 19 No. P.U. 4(2013) at page 18 the Board stated:

20  
 21 *“The Board finds that Hydro has not complied with Order No. P.U. 5(2012) with respect to*  
 22 *the requirement to file an overview in relation to proposed capital expenditures for*  
 23 *Holyrood. The information supplied by Hydro in PUB-NLH-6 is not what was contemplated*  
 24 *in the Board’s Order. The Board also acknowledges Hydro’s position that the role of the*  
 25 *Holyrood Thermal Generating Station has been uncertain and that, with the sanction*  
 26 *decision, it intends to provide the required information over the coming months. The Board*  
 27 *will require Hydro to file, no later than with its 2014 Capital Budget application, the*  
 28 *information required in Order No. P.U. 5(2012).”*  
 29

30 The report, *Holyrood Overview: Future Operations and Capital Expenditure Requirements*, dated  
 31 July 2013, was filed with the Application as required. This report provides an updated operational  
 32 outlook and schedule in light of the official sanction by the Government of Newfoundland and  
 33 Labrador of the Muskrat Falls development. This development and the Labrador Island Link (LIL)  
 34 are expected to be in-service in 2017. As a result, according to Hydro:

35  
 36 *“Holyrood will be required for prime power production throughout the interim period (i.e.,*  
 37 *to the in-service date of the LIL) and it is intended that the facility remain fully available for*  
 38 *generation in stand-by mode until the 2020-2021 timeframe. Unit 3 will operate primarily in*  
 39 *synchronous condenser mode beginning in 2017, with the option to return to full generating*  
 40 *mode. Post the 2020-2021 timeframe, Units 1 and 2 and the steam components of Unit 3 at*  
 41 *Holyrood will be decommissioned, and Unit 3 will continue to operate in synchronous*  
 42 *condenser mode only with no generation capability.”* (Application, *Holyrood Overview:*  
 43 *Future Operations and Capital Expenditures*, page 3)  
 44

45 Hydro confirms that, in the interim period until 2017, Holyrood remains critical to the reliable  
 46 supply of power to the Island Interconnected system as it will continue to serve the base load of the  
 47 system. Following full commissioning of the Muskrat Falls development and the LIL the plant will  
 48 function as a fully capable standby facility until the 2020-2021 timeframe. In this capacity Hydro  
 49 states the plant can be called upon to provide energy and capacity to the Island in the event of a loss

1 of supply from Labrador. Following the standby phase the thermal generating capacity of  
 2 Holyrood will be decommissioned and Unit 3 will continue to operate as a synchronous condenser.

3  
 4 Systems to be decommissioned at this time include:

- 5  
 6 • The fuel storage and delivery system, including the tank farm and day tank;  
 7 • The boilers, including air systems and emission monitoring systems;  
 8 • Feedwater and condensate systems, including the deaerator systems; and  
 9 • The marine terminal.

10  
 11 Systems required following the standby phase include:

- 12  
 13 • Unit 3 synchronous condenser specific equipment including the unit generator and exciter;  
 14 and  
 15 • Auxillary systems including electrical, controls, cooling water, fire protections, etc.

16  
 17 Hydro states that assets with operational requirements beyond 2020-2021 will continue to be  
 18 optimally maintained with re-investment reflecting that continued requirement.

19  
 20 The Holyrood Overview report also sets out a summary of the proposed 2014 capital expenditures  
 21 for Holyrood as well as a forecast of capital spending at Holyrood for 2015-2018, as below:

22  
 23 **Holyrood Forecast Capital Expenditures**  
 24 **(\$000s)**

25	26	27	28	29	30
	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
	\$12,157	\$7,352	\$15,163	\$5,497	\$3,500

31 Actual capital expenditures for Holyrood from 2007 to 2011 averaged \$7,492,000 annually. For  
 32 2012 actual expenditures were \$15,219,000 and for 2013 estimated expenditures are \$30,187,000.  
 33 Total planned capital expenditures for Holyrood for 2014-2018 are \$43.7 million.<sup>1</sup> On the matter  
 34 of the recovery of capital costs for Holyrood during the period 2013-2021 Hydro states in its  
 35 response to NP-NLH-7:

36 *“The recovery period for the forecast capital expenditures for Holyrood is dependent on*  
 37 *whether the assets will be used for synchronous condenser mode after the Labrador infeed.*  
 38 *Expenditures related to assets that will be used for synchronous condenser mode will have*  
 39 *the same recovery period as other similar assets throughout the Hydro system, in*  
 40 *accordance with Hydro’s approved average service lives. Otherwise, the recovery period*  
 41 *ends when the plant is no longer required to be available for generation in standby mode,*  
 42 *currently estimated to be 2020.”*

43 Hydro also describes the maintenance strategy for Holyrood to the end of life as a generating  
 44 station. Hydro states its intent to extend the life of the existing assets at least cost through  
 45 continued preventative maintenance, repair and rehabilitation where critical to providing safe and  
 46 reliable energy at the forecast levels. Hydro confirms that, in the short to medium term, this

1 This does not include the proposed project, not yet filed for approval, to install a new combustion turbine at Holyrood, with a total forecast capital expenditure of \$99,444,600 (Application – Volume I, page A2).

1 maintenance strategy is not expected to change given the expectation that the plant is generally  
2 expected to produce with high reliability through 2017 and must be fully available for emergency  
3 use until the 2020-2021 timeframe. Hydro states that non-critical assets will receive minimal  
4 attention and may be allowed to degrade where such action does not significantly increase risk to  
5 safe and reliable production. Assets with operational requirements beyond 2020-2021 will  
6 continue to be optimally maintained with re-investment reflecting that continued requirement.

7  
8 The Industrial Customer Group and Vale both raise concerns about the increasing level of capital  
9 expenditure at Holyrood, a facility that is scheduled for substantial shutdown in 2017.

10  
11 Vale submits that the ongoing and substantial capital investment in Holyrood must be assessed  
12 against the backdrop of the forecast future use of Holyrood within the Island Interconnected  
13 system. Vale notes that, based on Hydro's response to V-NLH-9, even with Hydro's submission  
14 that load increases will require operational reliability from Holyrood, the capacity factor for  
15 Holyrood does not exceed 50% over the next four years. Vale also takes issue with Hydro's  
16 suggestion that significant investment in Holyrood is required for the next several years because  
17 the Muskrat Falls supply will be unreliable in the first three years of operation from 2017-2020 and  
18 submits that Hydro has filed no evidence to support this proposition. Vale further submits:

19  
20 *"...in the Board's evaluation and scrutiny of specific projects related to the Holyrood*  
21 *generating facility consideration should be given to the reasonable likelihood that the*  
22 *facility will not be required for power generation between 2018 and 2020 beyond a standby*  
23 *mode and therefore very little weight should be given to the generating requirements for that*  
24 *three year period. Further, many of the specific projects related to Holyrood are two year*  
25 *projects commencing in 2014 which will not be completed until mid-2015 and therefore any*  
26 *benefit derived or risk reduced will be realized over an operating period of two years or*  
27 *less."* (Vale, Written Submission, page 12)

28  
29 Vale also suggests that Hydro's plan to accelerate the depreciation schedule means higher annual  
30 depreciation costs, in addition to increased interest and return on equity, which has a compounding  
31 negative impact on customers.

32  
33 The Industrial Customer Group states that planned capital expenditures will remain high over the  
34 next 4 years *"in many respects to extend the life of infrastructure which will be of redundant, or at*  
35 *least questionable, use to the production, transmission and distribution of electrical power in the*  
36 *"most efficient" manner at the "lowest possible cost", after Labrador In-feed."* (Industrial  
37 Customer Group, Written Submission, page 3)

38  
39 In its submission Hydro acknowledges that the future role of the Holyrood Generating Station  
40 continues to result in additional complexity in this Application, even though more information on  
41 its deployment is now known due to the sanctioning by the Province of the Muskrat Falls project.  
42 Hydro's position remains that the Holyrood Thermal Generating Station must be maintained and  
43 equipped to provide efficient and reliable base load service until power is available from the  
44 Labrador infeed. Hydro states that *"...it is prudent and in the best interest of Hydro's customers*  
45 *for Hydro to be able to operate the plant at full capacity at any time during the 2017-2020/21*  
46 *period and it is imperative that the assets and infrastructure be so planned."* (Hydro, Written  
47 Submission, page 4)

1 The Board agrees that the planned capital expenditures for Holyrood over the period 2014-2018  
2 are significant, especially given the fundamental change in the role of the facility in the next 4-8  
3 years. In considering the proposed capital projects for Holyrood the Board must be satisfied that  
4 each project and associated expenditure is necessary to ensure the safe and reliable operation of the  
5 plant and that all available alternatives have been examined. There may be capital projects that, in  
6 the normal course of operations, would be justified but may not be so in the context of a definite  
7 end-of-life date for the existing configuration and use of the plant. The burden of proof rests with  
8 Hydro to ensure that, over the next 4-8 years, all capital projects proposed for Holyrood have been  
9 subject to an enhanced level of scrutiny and review prior to inclusion in the capital program and to  
10 demonstrate that all alternatives, including the status quo, have been considered. The Board will  
11 also require Hydro to update and file the Holyrood Overview report with future capital budgets.  
12  
13

#### 14 **4. Capital Projects Over \$50,000**

15  
16 The Board's Capital Budget Guidelines set out the detailed requirements with respect to projects  
17 over \$50,000. Each of these projects must be classified and segmented by materiality. They must  
18 also be defined as clustered, pooled or other, and classified as mandatory, normal or justifiable. A  
19 project classified as mandatory is one which the utility is obliged to carry out as the result of  
20 legislation, Board Order, safety issues or environmental risk. A normal capital expenditure is one  
21 that is required based on identified need or historical patterns of repair and replacement. Justifiable  
22 expenditures are proposed based on the positive impact the project will have on the utility's  
23 operations. As set out in Section F of the Application approximately 93% of the projects in  
24 Hydro's 2014 Capital Budget are classified as normal.  
25

26 The following sections set out the Board's considerations and findings for Hydro's proposed  
27 capital projects to be completed in 2014 and also for Hydro's proposed multi-year projects to  
28 commence in 2014.  
29

##### 30 **i. Projects to be completed in 2014**

31  
32 The Board has reviewed the proposed 2014 capital projects in excess of \$50,000 to commence and  
33 be completed in 2014, the reports filed in support, the additional information filed by Hydro in  
34 response to RFIs, and the final submissions. The Board has completed its own independent  
35 examination and analysis of the projects proposed by Hydro and is satisfied that all the projects,  
36 with the exception of those addressed specifically below, are adequately justified and are  
37 appropriate and necessary in the circumstances.  
38

39 The projects identified and discussed below are those on which the intervenors or the Board raised  
40 questions and/or made submissions.  
41

##### 42 Upgrade North Cut-off Dam Access Road Bay d'Espoir (page C-13)

43  
44 Hydro proposes a project to upgrade the North Cut-off Dam access road at the Bay d'Espoir  
45 Generating Station. The work involves removing vegetation, cleaning and reshaping drainage  
46 ditches, installation of storm culverts and rip rap headwall/tailwall, and placement of subgrade and  
47 road topping material. The estimated 2014 capital expenditure for this project is \$631,700.

1 This project is justified by Hydro on the basis of the deteriorated condition of the road. According  
2 to Hydro the road was constructed in the mid 1960s and no major upgrades or work other than  
3 routine maintenance have been carried out on the road since then. Hydro states that the road has  
4 reached the end of its service life and requires an upgrade. Because of its deteriorated condition the  
5 existing road is difficult to drive over safely and promotes wear on vehicles and risk to Hydro  
6 personnel. As well, Hydro states that the deteriorated condition of the road's drainage systems  
7 results in frequent washouts and accelerated erosion damage, making the road impassable during  
8 rain events. According to Hydro repairs are needed to permit safe and reliable vehicular access on  
9 a year-round basis to critical hydraulic structures.

10  
11 The Industrial Customer Group refers to Hydro's response to CA-NLH-31 in which Hydro  
12 confirms that the roadway is not plowed during the winter and that scheduled inspections are  
13 carried out via snowmobile when the road is not passable by four-wheel drive trucks which are  
14 provided to employees in order to access the dam. They note Hydro's response in CA-NLH-32 that  
15 the roadway has been impassable to heavy equipment for approximately 15 years, and has been in  
16 its present state for 3 years. In addition the Industrial Customer Group points out that Hydro has  
17 confirmed that this road and other roads are kept up using standard maintenance techniques, an  
18 annual vegetation maintenance program and corrective repair. The Industrial Customer Group  
19 submits that Hydro has failed to provide sufficient justification as to why this project needs to be  
20 carried out at this juncture when the road has been able to be maintained in its current state with  
21 routine upkeep in the range of \$2,000 per year. They state:

22  
23 *"...it is somewhat disingenuous for Hydro to maintain, as justification for this project, that*  
24 *the roadway must be repaired to allow heavy equipment to pass in an emergency situation,*  
25 *when they have been, apparently, unable to do so for fifteen (15) years and Hydro does not*  
26 *plow the road when doing so would provide such access, inexpensively, during the winter*  
27 *season."* (Industrial Customer Group, Written Submission, page 5)  
28

29 The Consumer Advocate notes that the road has been in its present condition for the last three  
30 years despite maintenance work, that the road has been impassable for heavy equipment transport  
31 for the last 15 years, that the road is not maintained in the winter as no snow plowing occurs, and  
32 that there are no plans by Hydro to start plowing the road in the winter. He submits that the need to  
33 spend money now to make this road passable for heavy equipment is not pressing and that this  
34 project should not be approved. The Consumer Advocate suggests Hydro should focus on the  
35 immediate issues identified such as collapsed culverts and inadequate drainage ditches as opposed  
36 to a project with the scope and cost proposed.  
37

38 Newfoundland Power and Vale did not comment on this project.  
39

40 Hydro states that the suggestion of the Consumer Advocate to do the very least possible for the  
41 very immediate problem does not maintain the asset in useful working condition. If Hydro is  
42 unable to safely and reliably move its employees and equipment over the road to maintain its  
43 hydroelectric structures the integrity of the reservoir system is threatened. This approach to the  
44 management of its critical assets, according to Hydro, is *"improvident, unsustainable and*  
45 *irresponsible"*. Hydro submits that this project should be approved.  
46

47 The Board notes that this project is similar in scope and justification to previously approved access

1 road upgrades.<sup>2</sup> The evidence demonstrates that this road is utilized year-round and is essential for  
2 operations and maintenance of plant structures. Hydro explains in CA-NLH-33 that the primary  
3 justification for this project is that the road must be rehabilitated to allow for transportation of  
4 heavy equipment to facilitate emergency repairs to the structures. According to Hydro the road has  
5 been impassable for the transport of heavy equipment for the past 15 years which, in the Board's  
6 view, does not support an urgency argument for this project. The Board does agree, however, that  
7 the road has deteriorated over the past 50 years, even with routine maintenance. The evidence  
8 demonstrates that this road is in need of an upgrade to normal standards to prevent accelerated  
9 erosion and damage and to ensure safe access to Hydro structures. The Board is satisfied that the  
10 proposed upgrades are reasonable and expected under the circumstances and should be approved.

11  
12 Replace Light-Duty Mobile Equipment – Various Sites (page C-68)

13  
14 Hydro proposes the addition of eight pole trailers for remote communities and the replacement of  
15 11 all-terrain vehicles, 18 snowmobiles, six light-duty trailers, three heavy duty trailers, and one  
16 forklift. According to the Application the addition of eight pole trailers for remote communities  
17 will allow for safe transport of poles through communities during pole replacement and  
18 installation work. The remaining mobile equipment is being replaced because of age or condition,  
19 in accordance with Hydro's established replacement criteria. The proposed 2014 capital  
20 expenditure for this project is \$579,100. A report, *Replace Light Duty Mobile Equipment*, was  
21 filed as part of the Application.

22  
23 The Industrial Customer Group suggests the safety concerns outlined by Hydro in its response to  
24 PUB-NLH-24 to justify the addition of pole trailers are "*unsubstantiated with any specifics as to*  
25 *risks associated with current practice or statistics/recounts of incidents experienced through such*  
26 *practices to date.*" The Industrial Customer Group submits that the approval request to purchase  
27 eight pole trailers be denied.

28  
29 The Consumer Advocate, Newfoundland Power and Vale did not comment on this project.

30  
31 The Board notes that, aside from the addition of pole trailers, there were no concerns raised in  
32 relation to the project. According to Hydro's response to PUB-NLH-24 there is no appropriate  
33 current means of transporting poles in remote communities and line crews are dragging them with  
34 a chain behind a vehicle or using a backhoe to carry them. The Board accepts Hydro's submission  
35 that these are unsafe practices using equipment in a manner for which it was not designed and  
36 which could lead to injury of the public or employees. In the Board's view, even in the absence of  
37 specific incident data, this practice does not appear to be safe or in keeping with what would be  
38 considered best practice. The Board is satisfied that the pole trailers should be purchased and that  
39 this project should be approved.

40  
41 Inspect Fuel Storage Tanks (page D-114)

42  
43 Hydro proposes a project to complete detailed inspections of the above ground fuel storage tanks  
44 and associated fuel supply systems at various sites in order to identify corrective and preventative  
45 maintenance issues. The project scope includes only inspections and routine upgrades with  
46 additional identified capital work to be subject to separate budget approval requests. The estimated

---

2 Upper Salmon and Burnt Dam access roads - Order No. P.U. 35(2006); Star Lake access road - phase 1 in Order No. P.U. 2(2012)

1 2014 capital expenditure associated with this project is \$495,000.

2  
3 According to the Application Hydro has adopted *API Standard 653, Tank Inspection, Repair,*  
4 *Alteration, and Reconstruction, section 6* which sets out the recommended tank inspection  
5 procedures and standards outlined by The American Petroleum Institute (API). API recommends  
6 that above ground fuel storage tanks undergo an external inspection every five years and an  
7 internal inspection every ten years after their initial in-service date. API guidelines also require  
8 inspections to be carried out by an authorized inspector. Hydro advises that it has completed  
9 inspections in the past but these inspections were not carried out in a systematic fashion. Hydro  
10 states that the majority of its fuel storage tanks are due, or soon to be due, for inspection. Using the  
11 guidance of the API 653 standard Hydro has prepared a five-year inspection plan which, it states,  
12 balances financial and human resources and which prioritizes tanks which have not received an  
13 initial ten-year inspection. Hydro justifies this project on the basis of the need to maintain fuel  
14 storage tanks in a safe, reliable operating condition:

15  
16 *"Tank inspections serve to identify maintenance and repair items, enabling the work to be*  
17 *completed in a timely fashion. This proactive maintenance approach will enable the tanks to*  
18 *continue to perform as designed, ensuring that they are structurally sound, suitable for*  
19 *operation, and not at risk of releasing fuel into the environment."* (Application – Volume 1,  
20 page D-116)

21  
22 The Industrial Customer Group accepts that reasonable inspection regimes are an integral  
23 component of Hydro's operations, but submits that the project as proposed is not the least cost  
24 option to carry out the necessary inspections. The Industrial Customer Group further submits that  
25 Hydro has not provided any justification as to why Hydro personnel could not be trained to the API  
26 standard for inspections of the fuel tanks. As well the Industrial Customer Group questions why  
27 Hydro chooses to capitalize rather than expense external fuel tank inspections and submits that this  
28 project should not be approved until further information is submitted by Hydro on this issue.

29 The Consumer Advocate submits that Hydro should do a cost comparison of having its personnel  
30 trained to perform these inspections and suggests that, at a minimum, external inspections could be  
31 completed by appropriately certified Hydro personnel. The Consumer Advocate further submits  
32 that it is not clear that external inspections should be capitalized. Level 1 inspections, involving  
33 visual external inspections, were usually completed by Hydro personnel and expensed as operating  
34 costs but now that authorized inspectors are to be used Hydro plans to capitalize the expense. The  
35 Consumer Advocate maintains that this fact alone should not result in these inspections being  
36 capitalized and suggests that the inspections are becoming a routine component of Hydro's  
37 ongoing tank maintenance regime. The Consumer Advocate requests that Hydro provide a cost  
38 analysis of having trained and authorized inspectors on staff versus the current arrangement of  
39 hiring contractors to perform inspections prior to approval of this project.

40  
41 Newfoundland Power and Vale did not comment on this project.

42  
43 In its reply submission Hydro states that the work to be undertaken in this project is not merely  
44 visual inspection but also includes required remedial work arising from the inspection process.  
45 According to Hydro this is not routine work of the sort carried out by Hydro's employees but  
46 rather is capital work best done by a crew of specialists dedicated to the task. Routine monthly  
47 inspections will continue to be carried out by Hydro's employees as part of its operating budget.  
48 Hydro submits this project should be approved.

1 The Board agrees with Hydro's proposed plan for tank inspections and the adoption of a  
2 standardized approach using API procedures and standards. The Board notes that Hydro maintains  
3 a significant inventory of above ground fuel storage tanks to support its operations and it is critical  
4 these assets be maintained, both for system reliability and environmental protection. In the Board's  
5 view this is best accomplished through a proactive, systematic and well-documented tank  
6 inspection program undertaken in accordance with accepted industry standards and benchmarks.  
7 With respect to the position of some of the Intervenor that Hydro should explore having trained  
8 and authorized inspectors on staff to perform inspections the Board accepts Hydro's response that  
9 the required work is not the type of routine work normally done by its staff. This is supported by  
10 the project scope outlined in the Application (page D-114), which includes detailed inspections  
11 and tank surveys along with completion of routine upgrades identified during the inspection. The  
12 Board is satisfied that this project should be approved as proposed.

13  
14 Remove Safety Hazards (page D-204)

15  
16 This project is proposed by Hydro to ensure adequate capital funding is available to quickly  
17 address safety hazards as they are identified through Hydro's Safe Work Observation Program  
18 (SWOP). Hydro explains that the SWOP involves workers actively looking for safety hazards and  
19 problems that may otherwise go unnoticed, which could lead to serious health and/or safety issues  
20 for Hydro's customers, employees, contractors and the general public. The 2014 capital budget  
21 estimate for this project is \$257,800. Hydro justifies this project on the basis of its requirement to  
22 provide a safe work environment for its employees in compliance with Section 14 of the  
23 Occupational Health and Safety (OH&S) Regulations.

24  
25 The Industrial Customer Group suggests that Hydro has not provided justification for the budget  
26 and the forecasting methodology used in the budget preparation stage. They point to Hydro's  
27 evidence that actual expenditures for the removal of safety hazards have come in below the capital  
28 budget for the years from 2010 to 2012, by as much as \$107,700. They submit that consideration of  
29 this project should be deferred until Hydro can provide a more detailed forecast to justify the  
30 proposed budget.

31  
32 The Consumer Advocate states that the information provided by Hydro is incomplete and that  
33 seeking approval without a forecast or projects being approved to date provides no guidance to  
34 allow a meaningful review and analysis. He suggests there is no justification for an increase in  
35 2014 expenditures given that Hydro's total spending for this ongoing project in 2012 was  
36 \$141,400 of the \$249,100 approved. The Consumer Advocate submits that this project should be  
37 deferred.

38  
39 Newfoundland Power acknowledges in its submission that capital expenditures may be required in  
40 any year to ensure the safety of Hydro's workplace. However Newfoundland Power suggests that  
41 the basis for Hydro's budget estimate for the 2014 expenditures is not in accordance with the  
42 Capital Budget Guidelines. According to Newfoundland Power the Capital Budget Guidelines, in  
43 effect, require that "*...where the scope and nature of a project do not allow for detailed*  
44 *engineering estimates of expenditure requirements or estimates based on unit costs, forecasting*  
45 *based on historical spending patterns should be used.*" Newfoundland Power states that Hydro's  
46 historical spending pattern for the period 2010 to 2012 in relation to this project is on the record  
47 and that this information is a reasonable basis for an estimate of the expenditure requirement.

1 Vale did not comment on this project.

2  
3 In its submission Hydro notes that the Intervenors do not object to the merits of the project but  
4 rather that they request historical data be used to estimate the associated capital expenditure.  
5 Hydro suggests that the actual amount of money spent on this project compared to budget over the  
6 past three years may be a factor to be considered in establishing the budget. However Hydro  
7 submits that the nature of this project is such that the actual expenditures are less predictable and  
8 less patterned than some projects.

9  
10 The Board notes the comments of some Intervenors with respect to the basis for the capital amount  
11 to be included in the capital budget. The nature of this project is such that forecast costs are  
12 difficult to estimate in the absence of identified projects. As noted by Newfoundland Power the  
13 Capital Budget Guidelines provide for this circumstance by directing that forecasts should be  
14 based on historical spending patterns. This project was first approved by the Board in 2010 with a  
15 budget of \$252,400 of which \$207,800 or 82% was spent. In 2011 a similar budget was approved  
16 of which 95% was spent, and again in 2012 there was a similar budget and 57% was spent. For the  
17 2013 Capital Budget the Board approved \$257,800 but Hydro states that no projects have been  
18 approved to date and a forecast for 2013 is not available (NP-NLH-17). The Board accepts  
19 Hydro's submission that the nature of this project requires special consideration when determining  
20 the budget.

21  
22 The Board acknowledges that historical spending has varied for this project but is not persuaded  
23 that an adjustment to this project budget is required at this stage. The nature of the project is such  
24 that it is difficult to anticipate projects and budgets. The Board notes that the actual spending for  
25 this project will be reviewed as part of Hydro's annual capital expenditure report to ensure that  
26 only spending for projects to address identified safety hazards is included in the project category  
27 for 2014. The Board is satisfied that this project should be approved as proposed.

28  
29 Replace DC Distribution Panels and Breakers (page E-66)

30  
31 Hydro proposes to replace 129 V and 258 V DC distribution panels and breakers and to purchase  
32 critical spares for the Stage 1 (Units 1 and 2) DC electrical system at the Holyrood Thermal  
33 Generating Station. The estimated 2014 capital expenditure is \$174,200. This project is justified  
34 by Hydro on the basis of the age of the existing distribution panels (installed in 1969) and the fact  
35 that the Unit 1 129 V and 258 V DC panel breakers are no longer available. The project is planned  
36 to coincide with the scheduled Stage 1 outage.

37  
38 In its submission Vale notes that, while a significant portion of Hydro's justification for this  
39 project originates with the failure of Unit 1 in January 2013, this project was included in the 2013  
40 Capital Plan and was proposed prior to this failure. Vale also questions the timing of the  
41 replacement of panels, in particular the 258 V DC panel on Unit 2 which was installed in 1991 and  
42 has a 30-year anticipated service life. According to Vale there is no clear or complete evidence  
43 presented to explain why this panel is being changed now versus addressing whether replacement  
44 breakers are available for this panel. Vale submits that there is insufficient evidence to make an  
45 informed decision on approval of this project at this time and that Hydro should be directed to  
46 provide additional specific evidence on this project as outlined in its submission.

47  
48 The Consumer Advocate, Newfoundland Power and the Industrial Customer Group did not

1 comment on this project.  
2

3 In response Hydro submits that all but one of the distribution panels and breakers to be replaced  
4 were installed when the plant was first constructed (1969) and are well beyond their useful life.  
5 Hydro also cites the January 11, 2013 outage as evidence of the importance of a reliable DC  
6 system.  
7

8 The Board accepts Hydro's evidence that the DC distribution panels and breakers to be replaced  
9 are critical reliability components which have exceeded their useful service life. Failure of a  
10 distribution panel during regular operations could result in an extended unscheduled outage. The  
11 Board agrees that replacement of these breakers during the scheduled Stage 1 outage supports a  
12 proactive approach for replacement. The Board is satisfied that this project should be approved.  
13

#### 14 **ii. Multi-year Projects to commence in 2014**

15

16 Multi-year project approval allows a utility to proceed with large expenditures that span a number  
17 of years with the certainty that the whole project, including future year expenditures, has been  
18 reviewed and approved by the Board. This approval is important where the expenditure is so large  
19 it cannot be completed in one year, and can also be important for planning and efficiency purposes  
20 where discrete projects are proposed together because of similar justification and need or because  
21 doing the work together is more efficient.  
22

23 In the Application (page B-5) Hydro proposes 23 multi-year projects to commence in 2014. With  
24 the exception of one project all are scheduled to be completed in 2015. The capital expenditure  
25 associated with these multi-year projects totals \$13,076,600 in 2014, \$17,638,200 in 2015, and  
26 \$280,700 in 2016 for a total expenditure of \$30,995,500 over the three-year period.  
27

28 The Board has reviewed the documentation and evidence on the record and is satisfied that the  
29 proposed multi-year purchase and construction projects in excess of \$50,000 commencing in  
30 2014, except those specifically addressed below, are adequately justified and are appropriate and  
31 necessary in the circumstances.  
32

#### 33 Upgrade Shoreline Protection – Cat Arm (page C-11)

34

35 This project involves upgrading an 80 m section of the 25 km access road to the Cat Arm  
36 generating station. Hydro states that this section of the road is seriously deteriorated and requires  
37 upgrading. The proposed work includes upgrading of an armour stone wave barrier at the waterline  
38 edge for wave protection and the placement of rock fill material to reestablish a stable road  
39 embankment. This project is proposed to be carried out over two years with budgeted expenditures  
40 of \$55,300 in 2014 and \$708,100 in 2015, for a total project expenditure of \$763,400. A report,  
41 *Upgrade Shoreline Protection Cat Arm*, was filed as part of the Application.  
42

43 The Consumer Advocate notes that the 2014 expenditure is being sought for planning and design  
44 and, at this stage, Hydro has not identified the least cost alternative to address the shoreline  
45 protection issue. He submits:  
46

47 *“...approving additional funds for labour, contract work and other costs in 2015 prior to a*  
48 *least-cost proposal being submitted is premature. The actual design, construction and*  
49 *closeout for this project may be more or less than currently sought. Upon completion of the*

1           *engineering and design work, the parties will be able to evaluate the options presented by*  
2           *Hydro.*" (Consumer Advocate, Written Submission, page 8)

3  
4           The Consumer Advocate recommends that approval be given for the 2014 estimated expenditures  
5           only and that Hydro can apply for the construction aspect of this project with information  
6           necessary for a full evaluation.

7  
8           The Industrial Customer Group also submits that any approval granted by the Board for this  
9           project be limited to the proposed 2014 expenditures for investigation and design, and that no  
10          further expenditures should be approved until Hydro has filed a report based on the 2014  
11          investigation.

12  
13          Newfoundland Power and Vale did not comment on this project.

14  
15          Hydro submits that the level of engineering and design carried out to date for this project is  
16          consistent with that typically used in other projects. Hydro acknowledges that further refinements  
17          and least cost options might come to light in the final design stage but, according to Hydro, this  
18          does not mean the project is not sufficiently mature to seek approval. While the project is  
19          submitted for approval as a two-year project Hydro states that, in the unlikely event that the final  
20          design results in a change in cost or scope outside that proposed, it will apply for that change in the  
21          following capital year's budget prior to commencement of that work. Hydro submits that this  
22          project should be approved.

23  
24          The Board accepts the evidence that this project is required but notes that, according to Hydro, the  
25          engineering investigation and design to be carried out in 2014 will ensure that the least cost  
26          alternative is selected to upgrade the shoreline protection. Based on this evidence the Board is not  
27          satisfied that approval for the remaining work beyond 2014 is necessary at this stage. The Board  
28          also notes that the project requires other government approvals.

29  
30          The Board agrees with the submissions of both the Consumer Advocate and the Industrial  
31          Customer Group that only the 2014 capital expenditures for this project should be approved at this  
32          time. Hydro can apply for approval of the remaining scope of work in its 2015 Capital Budget  
33          Application by which time the information and investigation necessary to select the appropriate,  
34          least cost solution should be available. At that time the status of other required Government  
35          approvals will also be known. The Board will approve only the 2014 expenditures for this  
36          multi-year project.

37  
38          Upgrade Excitation Systems Units 1 and 2 (page C-22)

39  
40          Hydro proposes a project to replace the control section of the existing ABB Inc. Unitrol P exciters  
41          on Units 1 and 2 at Holyrood with the modern Unitrol 6080 controls and updated software. The  
42          existing exciter was installed on Unit 1 in 2000 and on Unit 2 in 1999. This is a two-year project  
43          with proposed expenditures of \$654,300 in 2014 and \$456,600 in 2015, for a total project  
44          expenditure of \$1,110,900. The report, *Upgrade Excitation Systems Units 1 and 2 Holyrood*, dated  
45          May 2013, was filed as part of the Application.

46  
47          According to Hydro the upgrade to the existing exciters is necessary since they will be entering the  
48          obsolete phase in 2015 where "*product support cannot be guaranteed and spare parts are either*

1 *limited to the existing stock or have been discontinued.*” The manufacturer recommends customers  
2 carry out the upgrade before control components enter the obsolete phase. In this case this will  
3 ensure that the excitation systems for Units 1 and 2 are not put at risk if a component system fails  
4 and spare parts or repair support are not available. Hydro states, *“It is necessary that Hydro have a*  
5 *solution in place to ensure that the exciters for Units 1 and 2 at Holyrood are supported by the*  
6 *manufacturer to the end of their required life in the year 2020/2021, when unit stand-by is no*  
7 *longer required.”* (Application – Volume 2, Tab 9)

8  
9 The Industrial Customer Group notes that Hydro currently has a supply of spare parts on hand  
10 which meets or exceeds the safety stock required for emergency use. The Industrial Customer  
11 Group also points out the alternative identified by Hydro of purchasing extra spare parts based on  
12 consumption to date. According to Hydro’s response to V-NLH-21 the cost to purchase a full  
13 complement of required spare parts would be \$97,028. The Industrial Customer Group suggests  
14 that, in light of Hydro’s relatively low priority ranking for this project and the availability of a  
15 relatively inexpensive alternative, Hydro has failed to establish that approval of this project is  
16 consistent with providing electrical power in the most efficient manner at the lowest possible cost.

17  
18 The Consumer Advocate submits that there is a viable option in the purchase of additional spare  
19 parts at this time. The Consumer Advocate notes that, according to the Application:

20  
21 *“...Hydro still has time to gather and stock additional spare parts for the current control*  
22 *system. Suitable substitutes can be provided where originals are no longer available, and it*  
23 *is only in 2015 that ABB will not support additional parts (Tab 9, Volume II, pg. 7). Thus,*  
24 *there is sufficient time to obtain a sufficient inventory of spare parts now at a fraction of the*  
25 *overall cost of this project.”* (Consumer Advocate, Written Submission, page 4)

26  
27 According to the Consumer Advocate this project should be rejected and instead Hydro should  
28 increase its inventory of spare parts for this system.

29  
30 Vale submits that this project is proposed by Hydro to remedy risks which are limited in time and  
31 which could be answered by a lower cost planning option. According to Vale the issue for Hydro is  
32 the assurance of adequate spare parts over the two-year period when Hydro cannot guarantee  
33 replacement part availability. Vale states that this is essentially a stocking and planning issue and  
34 should not mandate a \$1,000,000 system upgrade. Vale argues that an expenditure of \$200,000 to  
35 purchase additional supply parts for inventory will provide Hydro with the same number of each of  
36 these parts as has been used in the last 14 years and that this option carries a very minimal risk of  
37 problems. Vale submits that this project is not reasonably justified and should not be approved.

38  
39 Newfoundland Power did not comment on this project.

40  
41 In its response submission Hydro states that the existing exciters will enter the obsolete phase in  
42 2015. Failure of an exciter component could cause the unit to be unavailable until a replacement  
43 part is installed. Hydro notes that there have been 15 electronic card failures since 2008 and some  
44 of the components have failed on multiple occasions since installation. Hydro also notes:

45  
46 *“...the state of repair of aged or stored spare parts is a risk so having even a complete set of*  
47 *spare parts on hand from various sources is inherently risky, particularly where the system*  
48 *is not supported by the manufacturer (V-NLH-21). In the event a total replacement of the*  
49 *excitation system is needed due to a failure that occurred when spare parts could not be*

1           *found, the unit outage could extend beyond nine months.*" (Hydro, Written Submission, page  
2           5)  
3

4 Hydro submits that the acquisition of an even larger inventory of spare parts from various sources  
5 exposes the Holyrood operation to a level of risk that falls far below the level of certainty and  
6 confidence that is required of such an essential asset and that this project should be approved.  
7

8 The Board accepts that Units 1 and 2 are critical components of the Island Interconnected system.  
9 However, consideration of this project has to be undertaken in the context of the future of the  
10 Holyrood Thermal Generating Station and the fact that Units 1 and 2 are planned to be  
11 decommissioned after 2020/21. According to Table 1 of V-NLH-10 the number of operating hours  
12 for each of Units 1 and 2 will drop from approximately 6500 in 2017 to 72 in each of 2018, 2019  
13 and 2020. The Board is not persuaded that Hydro has demonstrated that this proposed expenditure  
14 is the least cost option available in the circumstances. In particular the Board is not persuaded,  
15 based on the evidence, that the option of increasing the spare parts inventory is not a reasonable or  
16 more cost-effective alternative.  
17

18 This project is justified by Hydro solely on the basis of a recommendation from the manufacturer  
19 and the fact that the manufacturer cannot guarantee parts and service support for the existing  
20 Unitrol P Exciters after 2015 when these components enter the obsolete phase of the Life Cycle  
21 Plan. Hydro confirms that reliability performance is not a basis for this proposal and that the  
22 existing exciters have performed well. The Board acknowledges Hydro's concerns about reliable  
23 operation of the Units once the control systems enter the obsolete phase, and the possibility of  
24 failure and an extended unit outage. However the Board would like to see additional evidence in  
25 the form of specific documentation or correspondence from the manufacturer that demonstrates  
26 that all options, including the option of increasing the spare parts inventory, have been fully  
27 explored with the manufacturer, taking into account the future limited operation and eventual  
28 decommissioning of Units 1 and 2. In the circumstances the Board cannot approve a significant  
29 expenditure as proposed in the absence of such assurance. Hydro may apply for approval of this  
30 project at a later date when these concerns have been addressed. The Board will not approve this  
31 project at this time.  
32

### 33 Install Cold-Reheat Condensate Drains and High Pressure Heater Trip Level Unit 3 (page C-30)

34

35 Hydro proposes to install a condensate collection system (drain pots) on the cold reheat piping near  
36 the steam turbine of Unit 3. The drain pots will have automatic drain valves controlled by water  
37 level switches and programmed high-water level switches that will alarm the control room  
38 operator when the water level in the drain pots is higher than normal. Hydro justifies this project on  
39 the basis of a recommendation from its insurer, FM Global, and also recommendations by the  
40 American Society of Mechanical Engineers (ASME) to reduce the risk of water induced steam  
41 turbine damage. The project also includes the installation of a new vent valve and drain pipe on the  
42 high pressure heater for Unit 3 to allow for quarterly in-situ testing of the condensate level  
43 switches. Similar condensate collection systems were installed on Unit 2 in 2009 and on Unit 1 in  
44 2010. The work is planned to occur during the annual Unit 3 outage. This is a two-year project with  
45 estimated capital expenditures of \$49,800 in 2014 and \$467,400 in 2015, for a total expenditure of  
46 \$517,200.  
47

48 Vale questions why this work was not completed on all three units when similar systems were  
49 installed in 2009 and 2010 if the risk was identified by its insurer and necessary for the provision of

1 reliable service. Vale further states that, given the forecast for operations at Holyrood over the next  
2 five years and the absence of any historical problems, operating Unit 3 for an extra two years  
3 without this expenditure is both a low risk option and a prudent decision. Vale submits that this  
4 project should be disallowed, stating: *“Hydro has provided no explanation as to why this*  
5 *significant capital expenditure is necessary for the last two years of operation at Holyrood when*  
6 *the absence of incidents involving Unit 3 to date would suggest otherwise.”* (Vale, Written  
7 Submission, page 20)

8  
9 The Consumer Advocate, Newfoundland Power and the Industrial Customer Group did not  
10 comment on this project.

11  
12 In its submission Hydro reiterates that this project proposal is being made upon the advice of its  
13 insurer which has advised that numerous occasions of water damage to steam turbines has  
14 occurred within the industry. Hydro also notes that the American Society of Mechanical Engineers  
15 (ASME) makes similar recommendations.

16  
17 The Board is satisfied that the evidence demonstrates this project is necessary. The risk has been  
18 identified by its insurer and similar work has already been completed on Units 1 and 2. The project  
19 will also provide the means for in-situ quarterly testing of condensate level switches, which will  
20 further mitigate risk. The Board will approve this project as proposed.

21  
22 Replace Diesel Units – Port Hope Simpson and Mary’s Harbour (page C-56)

23  
24 Hydro proposes to replace a diesel unit in Port Hope Simpson and a diesel unit in Mary’s Harbour  
25 on the basis that these units will have reached 100,000 operating hours by 2015. This is a two-year  
26 project with expenditures of \$208,900 in 2014 and \$2,377,700 in 2015, for a total proposed capital  
27 expenditure of \$2,586,600. Hydro justifies this project on the basis that these units will exceed  
28 100,000 operating hours in 2015, which is in accordance with Hydro’s current asset management  
29 strategy and planning criteria.

30  
31 No parties made submissions on this project.

32  
33 Hydro filed a supplementary Capital Budget application in July 2012 for approval of, among other  
34 things, an increase in generating capacity at Mary’s Harbour. A report, *Additions to Accommodate*  
35 *Load Growth Mary’s Harbour Generating Station*, dated July 2012, was also filed with the  
36 application. Hydro advised the Board at page 3 of the attached report:

37  
38 *“During 2011 a preliminary level interconnection study was completed which compared*  
39 *interconnection of the system to construction of new generating stations at Mary’s Harbour*  
40 *and Charlottetown. This study indicated that an interconnection was potentially*  
41 *economically favourable over continued isolated island operation. However more evidence*  
42 *is required to justify such work. Hydro had planned to submit a recommended solution with*  
43 *the 2013 Capital Budget Application. However there were insufficient resources available*  
44 *during 2011 for preparation of estimates of alternatives, and for performing condition*  
45 *assessments of the existing facilities. As of the writing of this report this work was still*  
46 *pending, and it is not possible to provide the completed long-term planning study in time for*  
47 *this capital budget application. Hydro anticipates the long-term supply study for Labrador*  
48 *South to be completed by December 2012. Once completed Hydro will submit a*  
49 *supplementary application to the 2013 Capital Budget to carry out the recommended*

1           *long-term supply alternative.*"

2  
3 In the Addendum to the report (page 18) Hydro stated: "*Hydro is continuing to make progress on*  
4 *the long term supply plans for the area, and will be filing the final report with the Board upon*  
5 *completion in the first quarter of 2013.*"

6  
7 At pages 9-10 of the 2013 Capital Plan (filed in August 2012 as part of the 2013 Capital Budget  
8 Application) Hydro advised the Board:

9  
10           "*Given the prospect of spending several million dollars on two new diesel plants located*  
11 *approximately 100 kilometers apart and given that Port Hope Simpson is approximately 50*  
12 *kilometers between Charlottetown and Mary's Harbour, the possibility of an*  
13 *interconnection among the three systems may yet be viable to optimize generation needs for*  
14 *the area. Hydro will continue with studies for a long term solution to the electrical supply*  
15 *needs of the area. Hydro plans to submit a recommended solution by the end of March*  
16 *2013.*"

17  
18 In response to PUB-NLH-20 in this Application requesting a copy of the completed report, Hydro  
19 advised:

20  
21           "*The requested report has not yet been finalized. As noted in Section 4 Long Term Supply*  
22 *Plans, pages 14-17 of the Addendum, Hydro was originally looking at diesel generation*  
23 *supply options for the area. Since that time, studies looking at alternative energy sources to*  
24 *diesel for that area have been carried out by Hydro under contract for the Government of*  
25 *Newfoundland and Labrador. These reports are being finalized and therefore are not yet*  
26 *released. Hydro is of the opinion that the long term plan for the area would not be complete*  
27 *without the inclusion of these studies in the assessment. At this time, Hydro does not have an*  
28 *anticipated submission date for the requested report however, it is expected that an update*  
29 *will be provided by the end of 2013.*"

30  
31 The Board does not take issue with Hydro's asset management strategy and planning criteria to  
32 replace gensets when they approach 100,000 operating hours and notes that similar projects have  
33 been approved in recent capital budgets for other diesel plants. In this case however the Board  
34 points to Hydro's own statements and preliminary findings which point to a potentially lower cost  
35 option, and further studies that are being conducted on alternative energy sources to diesel to meet  
36 the service needs of the Labrador south area. Hydro indicates that these reports are being finalized  
37 and are not yet released. Hydro has undertaken to provide an update on the status of the report for  
38 a long-term solution for the area at the end of 2013.

39  
40 The Board is concerned that, in the absence of the report on long-term supply plans for Labrador  
41 south, it is not in a position to evaluate and make a determination on whether the replacement of  
42 the diesel units at Port Hope Simpson and Mary's Harbour is in fact the least cost option. This  
43 proposed capital expenditure for diesel units at Port Hope Simpson and Mary's Harbour is  
44 significant and the Board is not persuaded that this project should be approved without full and  
45 complete information. The project is planned to be carried out over two years and Hydro has  
46 indicated that the work must start by June 2014. Given the project timing and the expected  
47 submission of the report the Board finds that it would be prudent to delay consideration and  
48 approval of this project until the long-term supply options and economics have been fully  
49 addressed. The Board will not approve this project at this time.

1 Upgrade Diesel Plant Production Data Collection Equipment (page C-60)

2  
3 Hydro proposes to upgrade the production data collection method from telephone communications  
4 to network communications at 21 remote diesel plants in coastal Newfoundland and Labrador and  
5 install network communications where there are no existing metering data communications. The  
6 data will be automatically collected and stored on the corporate data management system and an  
7 automated monthly report generated. Seven plants are scheduled to be done in each of 2014, 2015  
8 and 2016, with respective project expenditures of \$268,900, \$269,800 and \$280,700 for a total  
9 project cost of \$819,400. The report, *Upgrade Diesel Plant Production Data Collection*  
10 *Equipment Various Sites*, dated July 2013, was filed as part of the Application.

11  
12 According to Hydro this project is required to provide a reliable automation platform for data  
13 collection. Production data from diesel plants is currently captured on a server at Hydro Place but  
14 Hydro advises that the telephone communications required by this system have not been reliable.  
15 Meter data has to be manually collected and submitted, and data is currently retrieved on a monthly  
16 basis which does not provide daily plant profiles. Hydro states that this project is required “to  
17 *provide load data for each of Hydro’s diesel plants as input for planning future upgrades and*  
18 *engine sizing and to enable analysis to ensure that each plant is operating properly, in the most*  
19 *efficient manner and with minimal emissions.*” (Application – Volume 1, page C-61)

20  
21 The Consumer Advocate submits that this project is not directly economically justified and that  
22 there is no need for this project at this time. The Consumer Advocate submits that Hydro has not  
23 demonstrated that sub-hourly data is required, and that this level of detail does not appear to be  
24 industry standard. The Consumer Advocate argues that, according to Hydro’s response to  
25 CA-NLH-13, the data sought in this project is not required for future upgrades and engine sizing.  
26 The Consumer Advocate submits this project should be rejected.

27  
28 The Industrial Customer Group argues that Hydro has failed to establish, with any compelling  
29 evidence, that approval of this project is consistent with providing electrical power in the most  
30 efficient manner at the lowest possible price. The Industrial Customer Group points to Hydro’s  
31 responses to CA-NLH-13 and NP-NLH-30, which they submit demonstrates that the project is not  
32 required for future plant upgrades and engine sizing and also that the project is not economically  
33 justified. The Industrial Customer Group also points to the ranking of the project by Hydro (45<sup>th</sup>  
34 out of 46<sup>th</sup>).

35  
36 Newfoundland Power and Vale did not comment on this project.

37  
38 In response Hydro acknowledges that the data to be collected is not required for load forecasting  
39 *per se* but is required to better understand load shapes which is essential for proper planning of a  
40 diesel system’s unit sizing. Hydro points to its response to NP-NLH-30, which states that the use  
41 of coarser data requires more conservative choices in system changes, likely resulting in less  
42 economic timing of diesel plant configuration changes. Hydro submits that this project should be  
43 approved.

44  
45 The Board is satisfied that the need for data has been demonstrated and the current system of data  
46 collection and retrieval, where data is actually available, is inadequate. The benefits of having  
47 suitable, consistent and comparable data available for remote diesel plants to support future  
48 planning justify approval of this project as proposed. The Board will approve this project.

1 Replace Vehicles and Aerial Devices (page C-78)

2  
3 Hydro proposes to replace 32 light-duty vehicles and seven heavy-duty vehicles in accordance  
4 with the established replacement criteria for vehicle age and kilometers. This is a two-year project  
5 with estimated expenditures of \$1,809,100 in 2014 and \$1,091,000 in 2015, for a total project  
6 expenditure of \$2,900,100. According to the Application the light duty vehicles to be replaced are  
7 on average six years old with 172,000 km and the heavy duty vehicles are nine years old with  
8 225,000 km.

9  
10 The Industrial Customer Group notes that, according to IC-NLH-59, Hydro has little information  
11 on other Canadian utilities' replacement programs, and only provided replacement information for  
12 one other Atlantic utility. While not opposing approval of this project the Industrial Customer  
13 Group suggests that, in future capital budget requests to replace this equipment, Hydro should be  
14 required to acquire and supply available replacement criteria used by other utilities across Canada.

15  
16 The Consumer Advocate notes that there is not consistency between Hydro's practice and the  
17 other utility cited in its response to IC-NLH-59. He submits that, for its next capital budget  
18 application, Hydro should be required to provide a survey of the replacement practices for vehicles  
19 and aerial devices by at least the other Atlantic Canadian utilities. According to the Consumer  
20 Advocate this would allow for fuller and more complete analysis and consideration of this ongoing  
21 project.

22  
23 Newfoundland Power and Vale did not comment on this project.

24  
25 In its reply submission Hydro states that it believes it has justified the project and that its  
26 replacement decisions for these assets are based upon prudent and reasonable criteria applicable to  
27 Hydro's use and the environment in which these assets operate. Hydro agrees that the information  
28 requested by the Consumer Advocate and the Industrial Customer Group can be provided in future  
29 years if the Board considers it will be useful in considering this project at that time.

30  
31 The Board is satisfied that this project is justified based on the evidence. In its next capital budget  
32 application for similar replacements Hydro will be expected to provide, as supporting  
33 documentation, information on the replacement policies for similar utilities in Canada. The Board  
34 agrees this information may assist in its future consideration of this ongoing project. This project  
35 will be approved as proposed.

36  
37 Install Hand Held Pendant to Overhead Crane (page D-98)

38  
39 Hydro proposes a project to install a remote handheld pendant and base station to supplement the  
40 local operator's controls located in the cab of the overhead crane in Bay d'Espoir Powerhouse 1.  
41 The overhead crane was installed in 1966 and is used to move heavy equipment such as generator  
42 rotors. The proposed capital expenditures for this project are \$49,900 in 2014 and \$170,800 in  
43 2015, for a total expenditure of \$220,700.

44  
45 This project is justified by Hydro on the basis of safety and health, ergonomics and efficiency. A  
46 wireless remote system would, according to Hydro, allow experienced operators to manipulate the  
47 crane controls, including both auxiliary and main hoists, from a safe location on the floor so the  
48 operator would not need to access the cab. Fall arrest training and equipment would not be required

1 and the operator would not be subjected to long hours in uncomfortable conditions. The remote  
2 system will also provide unencumbered movement of the operator, and allow the operator to assess  
3 crane movements and load position during maneuvers without the need for a second person.  
4

5 The Consumer Advocate submits this project is of low priority and that the information provided  
6 by Hydro is incomplete to allow for full and complete analysis of the necessity of the project. He  
7 notes that the overhead crane is still well within its service life, with a remaining service life of 24  
8 years. He also notes that Hydro has not recorded the number of hours that the cab of the overhead  
9 crane has been occupied. The Consumer Advocate suggests that this data should be collected over  
10 the next year and that the project should be deferred until that time to allow Hydro to provide more  
11 complete information on this project.  
12

13 The Industrial Customer Group submits that Hydro has failed to establish, with any degree of  
14 certainty, that this project is justified. They note that Hydro could not provide any recorded data  
15 for the number of hours the existing cab was occupied in each year from 2008 to 2012. They  
16 suggest that this project be deferred until Hydro can provide statistics on the actual occupation of  
17 the cab.  
18

19 Newfoundland Power and Vale did not comment on this project.  
20

21 In its submission Hydro states that no evidence has been provided to dispute its estimates of the  
22 number of hours the existing cab has been occupied over the past four years. Hydro states that its  
23 estimate of an average of 450 hours per year is based on information derived from work  
24 procedures that are repeated frequently and regularly and that *"there is clear, well known, well*  
25 *described, and easily understandable connection between the work undertaken and the amount of*  
26 *use of the crane to carry out that work."*  
27

28 The Board notes that this project was identified by Hydro as part of its workplace safety  
29 commitment. The Board is satisfied that the project, when completed, will improve the safety and  
30 workplace environment for the operator. In terms of the data on the number of hours that the crane  
31 has been occupied, the Board is satisfied that Hydro has provided a reasonable estimate and that  
32 additional information is not required. The Board will approve this project as proposed.  
33

#### 34 Holyrood – Install Fire Protection Upgrades (page D-76) 35

36 Hydro proposes to install fire protection measures at the Holyrood Thermal Generating Station to  
37 reduce the likelihood that fuel originating from the No. 6 fuel system will feed an existing fire at  
38 the plant. The proposed work includes the installation of concrete curbing around Unit 1 and Unit  
39 3 fuel-pumping skids, the installation of an automatic fuel shut-off valve on the 16 inch diameter  
40 No. 6 fuel oil supply pipe from the tank farm, and the application of fireproofing on the pipe  
41 supports that carry the indoor section of the 16 inch diameter fuel supply pipe. This is a two-year  
42 project with estimated expenditures of \$56,600 in 2014 and \$312,500 in 2015, for a total capital  
43 expenditure of \$369,100.  
44

45 Hydro justifies this project based on recommendations from its insurer, FM Global, which noted  
46 its concern with risk associated with the No. 6 fuel oil systems at Holyrood in the report *FM*  
47 *Global Risk Report, Fire and Natural Hazards Special Risk Evaluation, Holyrood Thermal Plant,*  
48 *Aug 24, 2011.* A copy of this report was filed with the Application.

1 Vale notes that this project is not scheduled for completion until 2015, at which time there will  
2 only be two years remaining in the main generating life of the facility. After 2017, when Holyrood  
3 will be in standby mode, Vale submits that the quantity of fuel on site will be drastically reduced  
4 and the overall risk for fire protection significantly and dramatically declines. Vale also questions  
5 the timing of this proposed project, as the recommendations for the fire protection upgrades were  
6 originally made by the insurer on October 2008. Vale submits:

7  
8 *"...as seven years will have passed since the recommendation was first made to the*  
9 *proposed installation date, this project has obviously not been a priority for Hydro over the*  
10 *past five years since the date of the initial recommendation. As such, it cannot reasonably*  
11 *pass the test of a necessary capital expenditure for the continuation of reliable service."*  
12 (Vale, Written Submission, pages 16-17)  
13

14 The Consumer Advocate, Newfoundland Power and the Industrial Customer Group did not  
15 comment on this project.  
16

17 The Board notes Vale's comments with respect to the need for fire protection upgrades at this time,  
18 given that the recommendations were first made by Hydro's insurer in 2008. This is of concern to  
19 the Board as well since there is no evidence the fire risk has changed at the site since that time. In  
20 the FM Global report (page 7) it appears that in August 2011 Hydro contemplated this project, or at  
21 least components of it, to be completed by the end of 2012. The project was not included in the  
22 2012 or 2013 Capital Budget Applications. Notwithstanding this fact the Board is satisfied that the  
23 risk mitigation achieved by the installation of the fire protection measures proposed justify  
24 approval of this project. The Board has concerns, however, in relation to Hydro's delay in  
25 proceeding with its insurer's recommendations in this case. The Board believes that, to minimize  
26 the risk, this work should be done as soon as possible and questions whether the work can be  
27 completed in 2014. The Board will approve this project as proposed but will direct Hydro to report  
28 back to the Board on the timing for this project and on whether the schedule can be advanced.  
29

### 30 **iii. Summary of Board Findings – Capital Projects over \$50,000**

31  
32 The Board will approve the proposed expenditures in relation to the purchase and construction of  
33 improvements or additions to Hydro's property in excess of \$50,000 to be started and completed in  
34 2014.  
35

36 The Board will also approve the proposed multi-year expenditures in relation to the purchase and  
37 construction of improvements or additions to Hydro's property in excess of \$50,000 which are  
38 scheduled to begin in 2014, except:  
39

- 40 a. Replace Diesel Units – Port Hope Simpson and Mary's Harbour is not approved;
- 41 b. Upgrade Excitation Systems Units 1 and 2 – Holyrood is not approved; and
- 42 c. Upgrade Shoreline Protection – Cat Arm is approved for 2014 expenditures only and  
43 expenditures beyond 2014 are not approved at this time.

## 5. Other Matters

In addition to the issues raised in regards to the level of capital spending discussed previously and the project specific concerns, several other matters were raised by the Intervenor in submissions, including issues with the multi-year project approval process and supplemental applications. These matters are discussed below.

### i. Multi-year Project Process Issues

In its submission Newfoundland Power raised an issue with respect to the multi-year project proposed in Hydro's 2009 capital budget to construct two new 46/25 kV terminal stations in Labrador City, which was approved by the Board in Order No. P.U. 36(2008) with a forecast expenditure of approximately \$10 million and was scheduled to be completed in 2011. Newfoundland Power notes the budget variance for this project provided in the Application of \$3.1 million on a revised budget of approximately \$12.7 million and further notes Hydro's response to PUB-NLH-5 which states its current estimate of total expenditures on this project of approximately \$16.7 million as of June 30, 2013. Newfoundland Power refers to the Capital Budget Guidelines which state that, where a multi-year project has been approved, expenditures in subsequent years are subject to further review if there is a material change in the scope, nature or forecast cost of the expenditure. The Capital Budget Guidelines provide that, where the revised forecast expenditure exceeds the approved amount by 10% or more, such change will be considered material.

Newfoundland Power submits that the current estimated expenditure of \$16,729,000 represents a material change as defined in the Capital Budget Guidelines and that, based on the record, there has been no formal process of further review of the project, nor any specific reference to further approval of the project by the Board, since the initial approval. While acknowledging that its customers do not bear any of the cost of Hydro's capital expenditures on the Labrador Interconnected System, Newfoundland Power states that the procedural requirements relative to capital expenditures are equally applicable to both Hydro and Newfoundland Power. Newfoundland Power does not take issue with Hydro's stated view that the absence of specific comment by the Board indicates Board acceptance of the revised expenditure estimates for this project but suggests that the Board may wish to clarify the requirements of the Capital Budget Guidelines with respect to material changes in multi-year projects subsequent to their initial approval.

The Board shares Newfoundland Power's concern over the increased level of expenditure for this project when compared to the proposed multi-year expenditure initially filed by Hydro and approved by the Board. The Board is particularly concerned in light of the fact that these assets will be assigned to the Labrador Interconnected system's rate base assets with all costs to be ultimately recovered from those customers through rates.

In addition to the possible impact on customers the Board also shares Newfoundland Power's concerns about the procedural requirements for multi-year projects. The Capital Budget Guidelines (page 8 of 11) sets out the application requirements for multi-year projects:

*"Each year of a [sic] expenditure will be considered in the initial year of application. Where a utility shows in each subsequent year of a multi-year expenditure that the scope, nature and amount of the capital expenditures are consistent with the original approval, further*

1           *approval is not required.*

2  
3           *Expenditures in subsequent years will be subject to further review if there is a material*  
4           *change in the scope, nature or forecast cost of the expenditure. A change will be considered*  
5           *material if the nature or scope of the expenditure changes such that the original rationale*  
6           *provided is no longer applicable or where the revised forecast expenditure exceeds the*  
7           *approved amount by 10% or more."*

8  
9           In the case of this project the Board notes that Hydro did file, as part of its 2012 Capital Budget  
10          application at page A-12, a revised projected expenditure for 2012 of \$3,750,000 and a revised  
11          total budget for the project of \$12,650,000. Hydro also advised that this project was scheduled to  
12          be completed in 2012. In the absence of specific reference to the project or the revised budget in  
13          Order No. P.U. 2(2012) the Board acknowledges that approval of the total capital budget and the  
14          associated project expenditures constitute approval of the revised budget for the project. The  
15          Board notes, however, that no further information was provided in the 2013 Capital Budget  
16          documentation to suggest that additional expenditures were to be incurred over and above the  
17          approved budget. In fact the report on 2012 Capital Expenditures provided with the 2013 Capital  
18          Budget application at page J-6 shows expected total expenditures for 2012 of \$12,650,000 (on  
19          budget) and no indication of additional work or expenditures to be undertaken in 2013. The report  
20          on multi-year projects in the 2013 Capital Budget application (Section F: 2013 Capital Budgets:  
21          Multi-Year Projects) did not include any information or update on changes in scope or costs for  
22          this project, again presumably because the project was to be completed in 2012. In this  
23          Application, in Hydro's 2013 Capital Expenditure Explanations at page I-21, the Board is advised  
24          of an additional \$3,071,000 variance in this project expenditure for the year 2013. The following  
25          explanation for the variance is provided by Hydro:

26  
27                 *"An additional \$3.1 million was required to complete this project as a result of contract*  
28                 *pricing increases above estimated amounts for contracts, use of consultants for design*  
29                 *review, commissioning cost estimates which were low compared to the actual cost to*  
30                 *commission the specific type and size of stations involved, and the additional material costs.*  
31                 *Additional commissioning costs and interest also contributed to the variance. Both terminal*  
32                 *stations are now in service."*

33  
34          The Board implemented guidelines for approval of multi-year projects to provide a level of  
35          certainty to the utilities in capital budget planning and execution. The total project is reviewed in  
36          the initial year of application for necessity, reasonableness and whether it is the least cost option to  
37          address the need identified. If approval of the project is granted then the expenditure for the first  
38          year is approved. Future year expenditures for the project are included in subsequent annual capital  
39          budgets without requirement for further review and approval as long as there is no material change  
40          in scope, nature or costs. The Board went so far in the Capital Budget Guidelines to specify the  
41          threshold of materiality at 10% for forecast costs. In this context it is clear that the Capital Budget  
42          Guidelines contemplate further review and approval if there is a material change in scope, nature  
43          or forecast expenditure following initial approval by the Board. The onus is on the utility to bring  
44          forward for further review and approval any projects for which a material change exists.

45  
46          In the Board's view the manner in which Hydro has approached the multi-year project to construct  
47          new terminal stations in Labrador City is not in keeping with the Capital Budget Guidelines.  
48          Hydro did not apply for review and approval of the additional capital expenditures to be incurred  
49          in 2013 and these expenditures were not approved as part of the 2013 capital budget. The Board

1 will not allow recovery of any costs over and above the approved \$12,650,000 budget until further  
2 review and Order of the Board.

3  
4 The Board also agrees with Newfoundland Power that clarification of the Capital Budget  
5 Guidelines is required with respect to material changes in multi-year projects. In particular the  
6 issue of whether a specific request from the utility is required for further approval of a material  
7 variance in scope or forecast cost from that initially requested and approved must be clarified. As  
8 well there is the question of what process should be followed where there are material changes in  
9 the final year of the project, as in this case, and there is no opportunity for further review. These  
10 matters are currently on the Board's regulatory calendar and will be addressed as part of the review  
11 of the Capital Budget Guidelines being undertaken in consultation with the utilities, the Consumer  
12 Advocate and the Island Industrial Customers. The Board may provide further direction to Hydro  
13 (and Newfoundland Power if appropriate) with respect to filing requirements for the 2015 Capital  
14 Budget Application, and with respect to multi-year projects in particular.

15  
16 The Board notes that in this Application (page B-5) Hydro has proposed 23 multi-year projects to  
17 commence in 2014 for approval with \$13,076,600 capital expenditure estimated in 2014,  
18 \$17,638,200 in 2015 and \$280,700 in 2016, for a total of \$30,995,500. This is in addition to the 15  
19 projects which commenced in 2013 and will carry over into, and in some cases beyond, 2014 with  
20 a total 2014 expenditure of \$39,602,300, and three projects that commenced prior to 2013 and are  
21 ongoing with a total forecast 2014 expenditure of \$1,268,900. The Board also notes that Hydro has  
22 advised it plans to file supplemental applications for two other major projects (60 MW gas turbine  
23 at Holyrood and upgrade of the transmission line corridor between Bay d'Espoir and Western  
24 Avalon) which will be completed over several years at a total cost of \$367.4 million. Given the  
25 magnitude and number of multi-year projects expected to be ongoing over the next 4-5 years  
26 clarification of the Guidelines with respect to the requirements for multi-year projects is even more  
27 important.

## 28 29 **ii. Supplemental Applications**

30  
31 In its submission Vale states that Hydro's practice of filing supplementary applications for capital  
32 projects fuels concern over Hydro's overall approach to capital budgeting and the developing trend  
33 of larger amounts of capital expenditures held over for inclusion in supplemental applications.  
34 Vale notes that in this Application Hydro has indicated that a supplemental application is to be  
35 filed for a capital expenditure totaling \$52,800,000 or more than 50% of the proposed 2014 capital  
36 budget. Vale suggests that, given the significant amount of lead time in the proposed supplemental  
37 application, Hydro ought to have had sufficient lead time to allow its inclusion in this Application  
38 and be subjected to analysis as part of the overall application. Vale submits that "*...the Board  
39 should remain attentive to the impact of supplemental applications while assessing the  
40 reasonableness of the proposed level of capital expenditure each year, and as a trend over time  
41 and in forecasts.*" (Vale, Written Submission, page 9)

42  
43 In NP-NLH-1 Hydro responded to a question as to why these projects were not filed with the  
44 Application, stating:

45  
46 *"Given the magnitude of the capital expenditures for the Bay d'Espoir to Western Avalon  
47 230 kV transmission line addition and the new combustion turbine at Holyrood when  
48 compared to the total capital expenditure of the remaining 2014 capital budget projects,  
49 Hydro was of the opinion that these two projects should be considered separately from the*

1           *normal capital budget application. For this reason Hydro intends to submit these projects to*  
2           *the Board within the next several weeks."*  
3

4           The Consumer Advocate, Newfoundland Power and the Industrial Customer Group did not  
5           comment on this specific issue.  
6

7           The matter of supplementary capital budget applications has been raised by parties during previous  
8           capital budget proceedings where concern was expressed about the magnitude of such  
9           applications, both in terms of expenditure level and the number, and whether this was indicative of  
10          inadequate planning and budgeting in relation to capital matters. A report filed by Hydro on April  
11          15, 2010, in response to the Board's direction in Order No. P.U. 1(2010), set out new approaches  
12          and processes that have been adopted by Hydro. In particular, at page 15 of the report, Hydro  
13          references revisions to its asset management practices to "*provide more consistent strategic*  
14          *management*" of assets and that it is "*...preparing more asset plan and program type capital*  
15          *budget submissions, to provide more flexibility in dealing with changing priorities and*  
16          *circumstances.*" In Order No. P.U. 38(2010) the Board stated that its concerns in relation to  
17          supplementary capital budget applications have been alleviated in the short term but that this issue  
18          may continue to be of concern at times. The Board continues to monitor the level and magnitude of  
19          supplemental expenditures and agrees with Vale that supplementary capital expenditures must be  
20          included in assessing the level and trend of capital spending on a year over year basis.  
21

22          In this Application the concern raised by Vale is specifically directed at the magnitude of the  
23          proposed 2014 supplementary applications in relation to the capital budget approval requested of  
24          \$98,668,500. Hydro has indicated it will be applying for supplementary approval of \$52,800,000  
25          in additional capital expenditure for 2014. The Board has no information before it as to why these  
26          expenditures and projects were not included in this capital budget but notes Hydro's explanation in  
27          NP-NLH-1 that, in its opinion, these two projects should be considered separately from the normal  
28          capital budget process given the magnitude of the proposed expenditure. Given the scope and  
29          magnitude of the anticipated supplemental capital budget proposals the Board expects that a  
30          similar process to that undertaken for this Application, including public notice, will be followed to  
31          ensure a full and transparent consideration of the necessity and reasonableness of the proposals.

1 **III 2014 CAPITAL BUDGET**

2  
3 Hydro's 2014 Capital Budget for improvements and additions to its property will be approved in  
4 the amount of \$97,805,300, which includes expenditures for approved projects over \$50,000 to be  
5 completed in 2014, expenditures for approved multi-year projects to commence in 2014,  
6 expenditures for projects less than \$50,000, expenditures for approved multi-year projects  
7 commencing prior to 2014, and the Allowance for Unforeseen Items.

1 **IV 2012 AVERAGE RATE BASE**

2  
3 In the Application Hydro requests an Order of the Board fixing and determining its average rate  
4 base for 2012 in the amount of \$1,526,051,000 pursuant to section 78 of the *Act*. In calculating the  
5 2012 average rate base Hydro has assumed a 2011 average rate base of \$1,493,218,000.

6  
7 The Board's financial consultant, Grant Thornton, filed a report dated September 20, 2013 in  
8 relation to the average rate base and average deferred charges proposed by Hydro in the  
9 Application. Grant Thornton reports no discrepancies in the 2012 average deferred charges and  
10 concludes that the amount of \$65,670,000 in average deferred charges is accurate and in  
11 accordance with Board Orders and established regulatory practice. In relation to rate base Grant  
12 Thornton states at page 3:

13  
14 *“2012 Rate Base*

- 15 • *Included in the 2012 average rate base are 2012 capital asset purchases of \$234,000 relating to the*  
16 *upgrade of the Cat Arm access road which has not been approved by the Board.*
- 17 • *Included in the 2012 average rate base are expenditures of \$1,374,000 relating to the Black*  
18 *Tickle Diesel Fire Restoration Project which has not been approved by the Board.*

19  
20 *2011 Rate Base*

- 21 • *Included in the 2011 and 2012 average rate base are 2011 capital asset purchases of*  
22 *\$2,001,920 which has not been approved by the Board.”*

23  
24 In its submission Newfoundland Power states that section 78 of the *Act* and current regulatory  
25 practice require a utility to justify its capital expenditures prior to inclusion in rate base and that  
26 capital expenditures that are prudent and reasonably incurred in the fulfillment of the utilities  
27 obligation to serve its customers should be admitted to the utility's rate base.

28  
29 The Industrial Customer Group submits that the parties to the Application should be given a  
30 further opportunity to address the inclusion of these expenditures in rate base or, alternatively, that  
31 the approval of these amounts should be sought by Hydro in a separate application.

32  
33 The Consumer Advocate submits that the inclusion of the expenditures in relation to the upgrade  
34 of the Cat Arm access road must await the Board's confirmation that it would be consistent with  
35 generally accepted sound public utility practice. The Consumer Advocate also submits that it is  
36 premature to include in rate base the expenditures associated with the Black Tickle diesel  
37 restoration project until the Board has established a process for dealing with the issue. The  
38 Consumer Advocate further submits that the 2011 expenditures noted by Grant Thornton should  
39 not be included in rate base until such time that this matter can be determined with the input of  
40 Hydro and the parties. The Consumer Advocate notes that the rationale for the inclusion of these  
41 costs in rate base is not clear on the basis of the Application.

42  
43 Vale submits that it contravenes the language and intent of the *Act* to include in rate base the  
44 \$3,609,920 of capital expenditures identified by Grant Thornton. In its submission on rate base  
45 (page 4) Vale states:

46  
47 *“The legislation provides a framework whereby capital expenditures are approved by the*  
48 *Board through the application process and the rate base is fixed by the Board to include*  
49 *those expenditures which have been justified to the satisfaction of the Board. The inclusion*

1           of this \$3,609,920 is a significant issue for customers of the province as the base rate has a  
2           direct, negative impact on customers' rates."  
3

4 Vale submits that, in the absence of Board approval and based on the information before the  
5 Board, the expenditures should not be included in rate base.  
6

7 Hydro submits that subsection 64(1) of the *Act* requires the Board to include the prudent original  
8 costs of assets which are used and useful in providing service. Hydro states:  
9

10           *"Hydro submits that the full test as to whether a capital expenditure is to be permitted in rate*  
11 *base is found within section 64 of the Act, and once satisfied that an asset was a prudent*  
12 *addition and was used and useful to provide utility service, the Board is empowered to*  
13 *include it in rate base under section 78 of the Act. The Board cannot go further and impose*  
14 *or imply additional prerequisites or procedural requirements; there is simply no basis for*  
15 *doing so in its governing legislation."* (Hydro, Written Submission, page 15)  
16

17 Hydro submits that, while there was or remains a question as to whether the urgent aspects of the  
18 Black Tickle project could have been concluded and a follow-up planned project commenced, the  
19 Board is not empowered to refuse to include these legitimate capital expenditures in rate base due  
20 to procedural issues as to how the allowance was used. Hydro states:  
21

22           *"What has been contentious about the three projects that appear to be in dispute here is not*  
23 *whether they are used and useful in providing service, or whether Hydro has sufficient title*  
24 *to qualify them as assets; the contentious issue here is whether, in each case, the Allowance*  
25 *for Unforeseen Items was properly deployed. Hydro's observations are that in the case of*  
26 *Charlottetown, there was an issue as to whether the additional generating capacity was*  
27 *sufficiently urgent; in the case of Baie Verte the issue was whether the Allowance for*  
28 *Unforeseen had been depleted; and in the case of Black Tickle, it appears that there had*  
29 *been (or remains) a question as to whether the urgent aspect of the project could have been*  
30 *concluded and a follow-up planned project commenced. While Hydro recognizes that these*  
31 *are all legitimate issues to inquire into and resolve, it submits that the Board is not*  
32 *empowered to refuse to include these legitimate capital expenditures in rate base due to*  
33 *procedural issues as to how the allowance was used."* (Hydro, Written Submission, page 16)  
34

35 The Application seeks approval of Hydro's 2012 average rate base assuming a 2011 average rate  
36 base calculated by Hydro but not yet approved by the Board. In Order No. P.U. 4 (2013) the Board  
37 found that there were outstanding issues with respect to certain 2011 expenditures and denied  
38 Hydro's request to fix and determine its 2011 average rate base. In relation to the 2011 rate base  
39 Grant Thornton notes that Hydro proceeded with capital expenditures in the amount of \$2,001,920  
40 which are included in the 2011 rate base without the approval of the Board. These expenditures  
41 relate to the Charlottetown diesel plant and storm repairs in Baie Verte.  
42

43 In 2012 Hydro incurred capital expenditures in relation to the Cat Arm access road upgrade which  
44 the Board approved in Order No. P.U. 24(2012). However the Board stated in its Order that Hydro  
45 could not include these expenditures in rate base until it has been confirmed that to do so would be  
46 consistent with generally accepted sound public utility practice. The Board has not yet determined  
47 that these expenditures should be included in rate base.  
48

49 Hydro also incurred capital expenditures in 2012 in the amount of \$1,374,000 in relation to the  
50 Black Tickle diesel plant restoration. Hydro did not apply under section 41 for prior approval of

1 these expenditures and instead used the Allowance for Unforeseen Items of \$1,000,000 approved  
2 by the Board in Order No. P.U. 5(2012). Hydro wrote the Board on March 20, 2012 advising of a  
3 fire at the diesel generating plant in Black Tickle. Hydro advised that power had been restored and  
4 it was assessing the damage and further that it would advise the Board as to the scope of work and  
5 cost estimate upon completion of the assessment. On September 27, 2012 Hydro filed an  
6 application to increase the Allowance for Unforeseen Items from \$1,000,000 to \$3,655,700 to  
7 account for the capital expenditures in relation to the Black Tickle diesel plant restoration. Hydro  
8 filed a report with the application describing the events following the fire, the damage and  
9 customer impacts, and the subsequent work and associated costs. The Board issued information  
10 requests on October 3 and October 23, 2012 and responses were filed by Hydro on October 12 and  
11 November 6, 2012. On January 3, 2013 the Board wrote Hydro to advise that it was not satisfied  
12 with the information provided. Specifically the Board stated that:

13  
14 *“The Board has specific concern in relation to system planning for Black Tickle after the fire*  
15 *and after notice of the closure of the fish plant in May of 2012 which decreased the forecast*  
16 *load in the community from 520 kW to 250 kW. There is also limited information in relation*  
17 *to the availability and consideration of portable generation that could be used throughout*  
18 *the winter season and whether the alternatives to restoration to pre-fire condition were*  
19 *considered, how the costs of the alternatives compare, and whether installation of a fire*  
20 *suppression system was appropriate in the circumstances.”*  
21

22 The Board required Hydro to file a detailed report on or before April 1, 2013 to address these  
23 issues. On April 1, 2013 Hydro filed a further report. On July 16, 2013 Hydro withdrew its  
24 application to increase the 2012 Allowance for Unforeseen Items.

25  
26 On September 9, 2013 Hydro applied for approval of a supplementary amount to be added to the  
27 2013 Allowance for Unforeseen Items to account for unplanned 2013 expenditures including  
28 amounts related to the Black Tickle diesel plant restoration. In Order No. P.U. 31(2013) the Board  
29 denied the request to increase the Allowance for Unforeseen Items for 2013 capital expenditures in  
30 relation to the Black Tickle diesel plant restoration on the basis that a determination had not been  
31 made as to whether the use of the Allowance for Unforeseen Items was in accordance with the  
32 Capital Budget Guidelines.

33  
34 The Allowance for Unforeseen Items approved by the Board as a part of Hydro’s annual Capital  
35 Budget allows Hydro to proceed with capital expenditures which cannot wait for the approval  
36 required by section 41 of the *Act*. The Capital Budget Guidelines are intended to ensure that only  
37 urgent, reasonable and necessary capital expenditures proceed without a specific prior order of the  
38 Board. The guidelines were developed with the participation of the utilities, the Consumer  
39 Advocate and the Industrial Customers and have been in place since 2007.

40  
41 The Industrial Customer Group, the Consumer Advocate and Vale suggest that there should be  
42 further review and commentary before the capital expenditures highlighted by Grant Thornton are  
43 included in rate base. The Industrial Customer Group suggests that either they be given the  
44 opportunity to further address these expenditures or that the approval of these amounts be sought  
45 by Hydro in a separate application. The Consumer Advocate submits that it is premature to include  
46 in rate base the expenditures in relation to the Cat Arm access road and the Black Tickle diesel  
47 plant restoration. Further the Consumer Advocate states that the rationale for including the noted  
48 2011 expenditures is not clear on the record of this Application. Vale submits that rate base is a  
49 significant issue for customers as the rate base has a direct negative impact on rates and further

1 suggests that in the absence of Board approval and based on the information before the Board the  
2 expenditures should not be included in rate base. Newfoundland Power submits that capital  
3 expenditures that are shown to have been prudent and reasonably incurred should be included in  
4 rate base. Hydro says that the Board is not empowered to refuse to include these legitimate capital  
5 expenditures in rate base based on procedural issues.  
6

7 The Board agrees that the determination of Hydro's rate base is an important issue for customers  
8 and can significantly impact rates. The Board notes that in accordance with section 41 of the *Act*  
9 Hydro is required to seek the prior approval of the Board for capital expenditures in excess of  
10 \$50,000. The established process for approval of these expenditures is comprehensive, requiring  
11 that Hydro fully justify all such expenditures in advance of proceeding. It is notable that interested  
12 persons are given a full opportunity through public notice to participate in the approval process.  
13 Hydro did not apply for the prior approval of the noted expenditures and it is yet to be determined  
14 if the requirements of the Capital Budget Guidelines were followed in each case.  
15

16 Subsection 78(3) of the *Act* provides the Board with the discretion to exclude amounts from rate  
17 base which it considers fair and just to exclude. Pursuant to section 64, when determining the value  
18 of the property and assets of a utility the Board has the jurisdiction to make those rules and  
19 regulations that it may consider convenient and the rules and regulations are binding on all public  
20 utilities.  
21

22 The Board finds that in the circumstances the 2012 average rate base should not be approved until  
23 the noted expenditures have been fully reviewed and interested parties have had a full opportunity  
24 to comment on them. In addition the 2011 rate base must also be approved and the relevant  
25 evidence in relation to the 2011 average rate base is not a matter of record in this Application. As  
26 such, the Board will not approve the proposed 2012 average rate base at this time. The Board will  
27 address Hydro's 2012 average rate base and deferred charges as well as the 2011 average rate base  
28 and deferred charges in a separate process. This process will bring the two matters together and  
29 allow all of the relevant evidence to be reviewed by interested parties and the Board. Hydro's 2013  
30 capital spending in relation to the Black Tickle diesel plant restoration will also be addressed in  
31 this process. The parties will have an opportunity to provide further evidence and make  
32 submissions ensuring that these important matters are addressed in a full and comprehensive  
33 manner.

1    **V       CLAIM FOR COSTS**

2  
3    The Industrial Customer Group requests that the Board make an order for its costs of participation  
4    in the Application.

5  
6    Vale also requests the Board award costs on the Application on the same basis of any award of  
7    costs made in favour of the Consumer Advocate and/or the Industrial Customer Group. Vale  
8    submits that an award of costs in favour of Vale is justified based on the following:

- 9  
10    i)     When its processing plant in Long Harbour begins production Vale will be the single  
11          largest industrial customer of Hydro;  
12    ii)    Hydro's capital expenditures for 2014 and future years will impact revenue  
13          requirements and future rates beyond the date of first production at Long Harbour; and  
14    iii)   Vale's interests cannot be represented by the Consumer Advocate or the Industrial  
15          Customer Group due to differences of interest, perspective and position with regard to  
16          matters included in Hydro's various applications.

17  
18    Vale argues that its submissions on the Application were distinct from the submissions of the  
19    Industrial Customer Group and the Consumer Advocate, focusing commentary and scrutiny on  
20    several projects not addressed by those parties.

21  
22    Hydro, the Consumer Advocate and Newfoundland Power did not comment on the requests for  
23    cost awards.

24  
25    The Board has jurisdiction to award costs to a party under section 90 of the *Act*. Hydro did not  
26    make any argument with respect to the request for costs. The Board finds that the participation of  
27    the Industrial Customer Group and Vale contributed to its understanding of the issues in this  
28    Application and is satisfied that an award of costs, to be fixed by the Board, is appropriate. Unlike  
29    the Consumer Advocate's cost recovery, which is set out in section 117 of the *Act*, an award of  
30    costs to Vale and the Industrial Customer Group is made in accordance with section 90 of the *Act*.  
31    Vale and the Industrial Customer Group will be required to submit a bill of costs to the Board  
32    within 30 days of the date of this Order.

## 1 VI ORDER

2  
3 **IT IS THEREFORE ORDERED THAT:**  
4

- 5 1. Hydro's proposed construction and purchase of improvements or additions to its  
6 property in excess of \$50,000 to be completed in 2014, as set out in Schedule A to this  
7 Order, are approved.  
8
- 9 2. Hydro's proposed multi-year construction and purchase of improvements or additions  
10 to its property in excess of \$50,000 to begin in 2014, except:  
11 a. Replace diesel units – Port Hope Simpson and Mary's Harbour;  
12 b. Upgrade Excitation Systems Units 1 and 2 – Holyrood; and  
13 c. Upgrade Shoreline Protection – Cat Arm (expenditures beyond 2014),  
14 as set out in Schedule B to this Order, are approved.  
15
- 16 3. Hydro shall not recover any costs over and above the approved capital expenditure of  
17 \$12,650,000 associated with the project to construct two 25 kV Terminal Stations in  
18 Labrador City until further review and Order of the Board.  
19
- 20 4. Hydro's proposed contributions in aid of construction for 2014 are approved.  
21
- 22 5. Hydro's 2014 Capital Budget for improvements or additions to its property in the  
23 amount of \$97,805,300, as set out in Schedule C to this Order, is approved.  
24
- 25 6. Unless otherwise directed by the Board Hydro shall file, in conjunction with the 2015  
26 Capital Budget Application, an updated overview in relation to the proposed capital  
27 expenditures for the Holyrood Thermal Generating Station.  
28
- 29 7. Unless otherwise directed by the Board Hydro shall file an annual report with the Board  
30 in relation to its 2014 capital expenditures by March 1, 2015.  
31
- 32 8. Unless otherwise directed by the Board Hydro shall file, in conjunction with the 2015  
33 Capital Budget Application, a status report on the 2014 capital expenditures.  
34
- 35 9. Vale and the Industrial Customer Group are entitled to an award of costs in an amount  
36 to be fixed by the Board, with cost submissions to be filed by both parties within 30 days  
37 of this Order.  
38
- 39 10. Hydro shall pay all costs and expenses of the Board incurred in connection with this  
40 Application.

**DATED** at St. John's, Newfoundland and Labrador this 20<sup>th</sup> day of December, 2013.



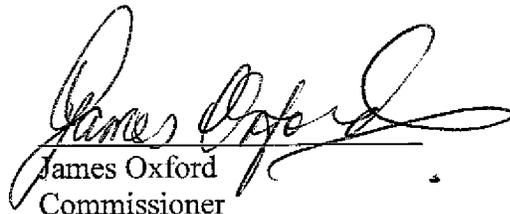
---

Andy Wells  
Chair & Chief Executive Officer



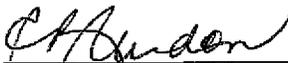
---

Darlene Whalen, P.Eng.  
Vice-Chair



---

James Oxford  
Commissioner



---

Cheryl Blundon  
Board Secretary

**Schedule A**

**ORDER No. P.U. 42(2013)**

**Single Year Projects over \$50,000**

**ISSUED: December 20, 2013**

NEWFOUNDLAND AND LABRADOR HYDRO  
 2014 CAPITAL BUDGET  
 SINGLE YEAR PROJECTS OVER \$50,000  
 (\$000)

PROJECT DESCRIPTION	2014
<b><u>GENERATION</u></b>	
<b><u>HYDRAULIC PLANT</u></b>	
Rewind Stator Unit 3 - Bay d'Espoir	4,343.9
Refurbish Surge Tank 3 - Bay d'Espoir	2,265.0
Upgrade North Cut-Off Dam Access Road - Bay d'Espoir	631.7
Automate Generator Deluge Systems Units 3 and 6 - Bay d'Espoir	612.0
Upgrade Victoria Control Structure - Bay d'Espoir	495.1
Overhaul Turbine/Generator Units - Bay d'Espoir and Hinds Lake	485.0
Upgrade Public Safety Around Dams and Waterways - Bay d'Espoir	352.8
Replace Automatic Greasing Systems Units 5 and 6 - Bay d'Espoir	233.4
Replace Generator Bearing Coolers Units 4 and 5 - Bay d'Espoir	199.0
Install Automated Fuel Monitoring System at West Salmon Spillway - Bay d'Espoir	193.2
Replace Fall Arrest on Surge Tank 1 - Bay d'Espoir	142.8
Replace Turbine/Generator Cooling Water Flow Meters - Upper Salmon	139.7
Raise Height of Earth Dam - Paradise River	98.7
Replace Engine on Emergency Lift System - West Salmon Spillway	67.1
<b>TOTAL HYDRAULIC PLANT</b>	<b><u>10,259.4</u></b>
<b><u>THERMAL PLANT</u></b>	
Overhaul Turbine/Generator Unit 2 - Holyrood	5,147.0
Complete Condition Assessment Phase 2 - Holyrood	1,476.8
Upgrade Plant Elevators - Holyrood	533.2
Upgrade Vibration Monitoring System - Holyrood	524.9
Overhaul Boiler Feed Pump East Unit 3 - Holyrood	194.9
Replace DC Distribution Panels and Breakers - Holyrood	174.2
Upgrade Waste Water Basin Building - Holyrood	136.7
Upgrade Underground Plant Drainage System - Holyrood	112.6
Overhaul Cooling Water Pump East Unit 1 - Holyrood	98.4
Overhaul Extraction Pump South Unit 1 - Holyrood	96.8
<b>TOTAL THERMAL PLANT</b>	<b><u>8,495.5</u></b>
<b><u>GAS TURBINES</u></b>	
Upgrade Gas Turbine Plant Life Extension - Stephenville	2,995.0
<b>TOTAL GAS TURBINES</b>	<b><u>2,995.0</u></b>
<b>TOTAL GENERATION</b>	<b><u>21,749.9</u></b>

**TRANSMISSION AND RURAL OPERATIONS**

**TERMINAL STATIONS**

Upgrade Power Transformers - Various Sites	1,904.4
Upgrade Terminal Station Foundations - Various Sites	197.9
Replace Surge Arresters -- Various Sites	181.9
<b>TOTAL TERMINAL STATIONS</b>	<b>2,284.2</b>

**TRANSMISSION**

Perform Wood Pole Line Management Program - Various Sites	2,564.2
<b>TOTAL TRANSMISSION</b>	<b>2,564.2</b>

**DISTRIBUTION**

Provide Service Extensions - All Service Areas	6,170.0
Upgrade Distribution Systems - All Service Areas	3,370.0
<b>TOTAL DISTRIBUTION</b>	<b>9,540.0</b>

**GENERATION**

Overhaul Diesel Engines - Various Sites	823.5
Additions to Accommodate Load Growth - Hopedale	641.2
Inspect Fuel Storage Tanks - Various Sites	495.0
Upgrade Ventilation System - Ramea	263.0
Replace Fuel Storage Tank - Ramea	234.2
Construct Storage Facility - Postville	183.8
<b>TOTAL GENERATION</b>	<b>2,640.7</b>

**PROPERTIES**

Install Additional Washrooms - Various Sites	251.0
Install Fall Protection Equipment - Various Sites	199.2
<b>TOTAL PROPERTIES</b>	<b>450.2</b>

**METERING**

Purchase Meters, Equipment and Metering Tanks - Various Sites	199.0
<b>TOTAL METERING</b>	<b>199.0</b>

**TOOLS AND EQUIPMENT**

Replace Light Duty Mobile Equipment - Various Sites	579.1
Purchase Track Mounted Backyard Radial Boom Derrick - Bishop Falls	158.7
Replace Excavator - St. Anthony	110.0
Purchase Portable Vibration Testing Equipment - Various Sites	60.6
<b>TOTAL TOOLS AND EQUIPMENT</b>	<b>908.4</b>

<b>TOTAL TRANSMISSION AND RURAL OPERATIONS</b>	<b>18,586.7</b>
--	-----------------

**GENERAL PROPERTIES**

**INFORMATION SYSTEMS**

**SOFTWARE APPLICATIONS**

**New infrastructure**

Perform Minor Application Enhancements - Hydro Place	138.6
Cost Recoveries	(51.3)

**Upgrade of Technology**

Upgrade Energy Management System - Hydro Place	187.9
--	-------

**TOTAL SOFTWARE APPLICATIONS** 275.2

**COMPUTER OPERATIONS**

**Infrastructure Replacement**

Replace Personal Computers - Various Sites	489.8
Upgrade Enterprise Storage Capacity - Hydro Place	517.8
Cost Recoveries	(191.6)
Replace Peripheral Infrastructure - Various Sites	200.7

**Upgrade of Technology**

Upgrade Server Technology Program - Hydro Place	328.0
Cost Recoveries	(42.0)

**TOTAL COMPUTER OPERATIONS** 1,302.7

**TOTAL INFORMATION SYSTEMS** 1,577.9

**TELECONTROL**

**NETWORK SERVICES**

**Infrastructure Replacement**

Replace Radomes - Various Sites	324.9
---------------------------------	-------

**Network Infrastructure**

Replace Network Communications Equipment - Various Sites	91.0
--	------

**Upgrade of Technology**

Replace Telephone System - Stephenville	139.9
Replace Wescom Scanner - Corner Brook	81.7
<b>TOTAL TELECONTROL</b>	<u>637.5</u>

**ADMINISTRATION**

Remove Safety Hazards - Various Sites	257.8
---------------------------------------	-------

**TOTAL ADMINISTRATION** 257.8

**TOTAL GENERAL PROPERTIES** 2,473.2

**TOTAL SINGLE YEAR PROJECTS OVER \$50,000** 42,809.8

**Schedule B**

**ORDER No. P.U. 42(2013)**

**Multi-Year Projects over \$50,000**

**ISSUED: December 20, 2013**

NEWFOUNDLAND AND LABRADOR HYDRO  
2014 CAPITAL BUDGET  
MULTI-YEAR YEAR PROJECTS OVER \$50,000  
(\$000)

Multi-year Projects Commencing in 2014

PROJECT DESCRIPTION	2014	2015	2016	2017
Upgrade Distribution Systems - Various Sites (2014-2015)	2,499.8	4,850.1		
Upgrade Circuit Breakers - Various Sites	3,695.4	1,642.5		
Replace Vehicles and Aerial Devices - Various Sites (2014-2015)	1,809.1	1,091.0		
Refurbish Anchors and Footings TL202 and TL206 - Bay d'Espoir to Sunnyside	1,191.7	988.2		
Upgrade Burnt Dam Spillway - Bay d'Espoir	110.2	1,201.9		
Replace Disconnect Switches - Various Sites	815.9	189.5		
Install Fire Protection System - Nain	107.1	892.2		
Upgrade Diesel Plant Production Data Collection Equipment - Various Sites	268.9	269.8	280.7	
Upgrade Shoreline Protection - Cat Arm*	55.3			
Install Automated Meter Reading - Various Sites (2014-2015)	356.9	340.2		
Replace Battery Banks and Chargers - Various Sites	267.0	398.0		
Replace Economizer Inlet Valves - Holyrood	192.0	329.1		
Install Cold-Reheat Condensate Drains and High Pressure Heater Trip Level Unit 3 - Holyrood	49.8	467.4		
Upgrade IP SCADA Network - Various Sites	254.2	238.7		
Upgrade Generator Bearings Unit 2 - Bay d'Espoir	18.9	396.0		
Install Fire Protection Upgrades - Holyrood	56.6	312.5		
Install Handheld Pendant to Overhead Crane - Bay d'Espoir	49.9	170.8		
Legal Survey of Primary Distribution Line Right of Ways - Various Sites (2014-2015)	156.8	40.3		
Replace Recloser Control Panels - Various Sites	111.3	84.4		
Replace Optinho Relays on TL203 - Western Avalon to Sunnyside	89.1	96.9		
Replace Spherical By Pass Valve Assemblies Units 1 and 2 - Bay d'Espoir	57.5	96.3		
<b>TOTAL MULTI-YEAR PROJECTS OVER \$50,000 COMMENCING 2014</b>	<b>12,213.4</b>	<b>14,095.8</b>	<b>280.7</b>	<b>0.0</b>

\*Only 2014 expenditures approved with this Order. Hydro will be required to apply for approval of future expenditures beyond 2014.

NEWFOUNDLAND AND LABRADOR HYDRO  
 2014 CAPITAL BUDGET  
 MULTI-YEAR YEAR PROJECTS OVER \$50,000  
 (\$000)

Multi-year Projects Commencing in 2013 (Previously Approved)

PROJECT DESCRIPTION	2014	2015	2016	2017	2018
Install New Transformer - Oxen Pond	15,310.4				
Additions for Load Isolated Generation Stations - Various Sites	9,357.9				
Upgrade Distribution Systems - Various Sites	3,995.5				
Replace Instrument Transformers - Various Sites	552.8	538.4	1,511.7	471.9	
Install Variable Frequency Drives on 6 Forced Draft Fans - Holyrood	2,659.7				
Replace Compressed Air Systems - Sunnyside and Stoney Brook	2,105.9				
Replace Vehicles and Aerial Devices - Various Sites	679.2				
Upgrade Terminal Station - Wiltendale	1,173.3				
Upgrade Microsoft Office Products - Various Sites	455.1	465.2			
Replace Off-Road Track Vehicles - Various Sites	1,054.1				
Replace MDR4000 Microwave Radio (West) - Various Sites	706.9				
Upgrade Gas Turbine Controls - Happy Valley	1,128.6				
Install Automated Meter Reading - Various Sites	258.8				
Replace Insulators - Various Sites	287.9				
Legal Survey of Primary Distribution Line Right of Way - Various Sites	40.0				
Cost Recoveries	(163.8)	(167.5)			
<b>TOTAL MULTI-YEAR PROJECTS OVER \$50,000 COMMENCING 2013</b>	<b>39,602.3</b>	<b>836.1</b>	<b>1,511.7</b>	<b>471.9</b>	<b>0.0</b>

NEWFOUNDLAND AND LABRADOR HYDRO  
 2014 CAPITAL BUDGET  
 MULTI-YEAR YEAR PROJECTS OVER \$50,000  
 (\$000)

Multi-year Projects Commencing Prior to 2013 (Previously Approved)

PROJECT DESCRIPTION	2014	Beyond 2014
Perform Grounding Upgrades - Various Sites	337.1	1,025.1
Replace Guy Wires Doyles to Grand Bay - TL215	530.0	
Perform Arc Flash Remediation - Various Sites	401.8	413.1
<b>TOTAL MULTI-YEAR PROJECTS OVER \$50,000 COMMENCING PRIOR TO 2013</b>	<b>1,268.9</b>	<b>1,438.2</b>

**Schedule C**

**ORDER No. P.U. 42(2013)**

**2014 Capital Budget**

**ISSUED: December 20, 2013**

**NEWFOUNDLAND AND LABRADOR HYDRO**  
**2014 CAPITAL BUDGET**  
**(\$000)**

Projects Over \$50,000 to be completed in 2014	\$ 42,809,800
Multi-Year Projects over \$50,000 commencing in 2014	12,213,400
Multi-Year Projects over \$50,000 commencing prior to 2014 (previously approved)	40,871,200
Projects under \$50,000 <sup>1</sup>	910,900
Allowance for Unforeseen Items	<u>1,000,000</u>
<b>Approved 2014 Capital Budget</b>	<b><u>\$ 97,805,300</u></b>

<sup>1</sup> Approval of projects under \$50,000 is not required but these expenditures are part of the total 2014 Capital Budget

---

*Newfoundland & Labrador*

**BOARD OF COMMISSIONERS OF PUBLIC UTILITIES**  
**120 TORBAY ROAD, ST. JOHN'S, NL**

Website: [www.pub.nl.ca](http://www.pub.nl.ca)  
E-mail: [ito@pub.nl.ca](mailto:ito@pub.nl.ca)

Telephone: 1-709-726-8600  
Toll free: 1-866-782-0006

---