

IN THE MATTER OF THE  
**2012 CAPITAL BUDGET APPLICATION  
PHASE I**

FILED BY

**NEWFOUNDLAND AND LABRADOR HYDRO**

---

**DECISION AND ORDER  
OF THE BOARD**

**ORDER No. P. U. 2(2012)**

---

**BEFORE:**

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

**Dwanda Newman, LL.B.  
Commissioner**

**James Oxford  
Commissioner**

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

**AN ORDER OF THE BOARD**

**NO. P. U. 2(2012)**

**IN THE MATTER OF** the *Electrical Power Control Act, 1994* SNL 1994, Chapter E-5.1 and the *Public Utilities Act, RSNL 1990*, Chapter P-47;

and

**IN THE MATTER OF** an application by Newfoundland and Labrador Hydro (“Hydro”) for an order:

- (a) approving changes to its capital expenditure methodology;
- (b) approving its 2012 capital budget;
- (c) approving its 2012 capital purchases and construction projects in excess of \$50,000;
- (d) approving the estimated contributions in aid of construction for 2012; and
- (e) fixing and determining its average rate base for 2010.

**BEFORE:**

Darlene Whalen, P. Eng.  
Vice-Chair

Dwanda Newman, LL.B.  
Commissioner

James Oxford  
Commissioner

## TABLE OF CONTENTS

<b>I</b>	<b>BACKGROUND</b>	<b>1</b>
	1. The Application	1
	2. Board Authority	1
	3. Application Process	1
<b>II</b>	<b>INTERNATIONAL FINANCIAL REPORTING STANDARDS</b>	<b>3</b>
<b>III</b>	<b>2012 CAPITAL BUDGET</b>	<b>5</b>
<b>IV</b>	<b>PHASE I CAPITAL EXPENDITURES</b>	<b>13</b>
	1. Overview	13
	2. Phase I Capital Expenditures Over \$50,000	13
	i. Projects to be completed in 2012	14
	ii. Multi-Year Projects	22
<b>V</b>	<b>2010 AVERAGE RATE BASE</b>	<b>29</b>
<b>VI</b>	<b>CLAIM FOR COSTS</b>	<b>30</b>
<b>VII</b>	<b>ORDER</b>	<b>31</b>
	<b>SCHEDULE A</b>	
	<b>SCHEDULE B</b>	

1 **I BACKGROUND**

2  
3 **1. The Application**

4  
5 Newfoundland and Labrador Hydro (“Hydro”) filed its 2012 Capital Budget Application (the  
6 “Application”) with the Board of Commissioners of Public Utilities (the “Board”) on August 4,  
7 2011 requesting that the Board make an Order:

- 8  
9 (i) approving Hydro’s proposed changes to its capital expenditure methodology to  
10 incorporate the requirements of International Financial Reporting Standards;  
11 (ii) approving Hydro’s 2012 Capital Budget in the amount of \$87,862,000;  
12 (iii) approving 2012 capital purchases and construction projects in excess of \$50,000;  
13 (iv) approving estimated contributions in aid of construction for 2012 of  
14 approximately \$400,000; and  
15 (v) fixing and determining Hydro’s average rate base for 2010 in the amount of  
16 \$1,484,659,000.

17  
18 In accordance with the legislation, regulations and Board guidelines the Application includes an  
19 explanation of each proposed expenditure, setting out a description, justification, costing  
20 methodology and future commitments, if applicable. Additional studies and reports, including  
21 detailed engineering reports, are provided in relation to a number of projects.

22  
23 **2. Board Authority**

24  
25 Section 41 of the *Public Utilities Act*, RSNL 1990, Chapter P-47 (the “Act”) requires a public  
26 utility to submit to the Board an annual capital budget of proposed improvements or additions to  
27 its property for approval no later than December 15<sup>th</sup> in each year for the next calendar year. The  
28 utility is required to include an estimate of contributions toward the cost of improvements or  
29 additions to its property which the utility intends to demand from its customers.

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

35  
36 Section 78 gives the Board the authority to fix and determine the rate base for the service  
37 provided or supplied to the public by the utility and also gives the Board the power to revise the  
38 rate base. Section 78 also provides the Board with guidance on the elements that may be  
39 included in the rate base.

40  
41 **3. Application Process**

42  
43 Notice of the Application was published beginning on August 13, 2011. The Application and  
44 related documentation was available for viewing on the Board’s website.

1 Notices of intention to participate were filed by Hydro's Island Industrial Customers (Corner  
2 Brook Pulp and Paper Limited, North Atlantic Refining Limited, Teck Resources Limited, and  
3 Vale Newfoundland and Labrador Limited) (the "Industrial Customers"), Newfoundland Power  
4 Inc. ("Newfoundland Power"), and the Consumer Advocate, Mr. Thomas Johnson (the  
5 "Consumer Advocate").  
6

7 On August 25, 2011 the Board advised the parties that Hydro's 2012 Capital Budget would be  
8 addressed in two phases. Phase II would be established to address certain projects that relate to  
9 the Holyrood Thermal Generating Station and Phase I would address all other projects. On  
10 September 26, 2011 the Board further advised the parties that Phase III would be established to  
11 address the proposed project *Upgrade Transmission Line Corridor-Bay d'Espoir to Western*  
12 *Avalon*. This Order will address Phase I of Hydro's 2012 Capital Budget. Phase II will be  
13 addressed in a subsequent Order of the Board. On December 7, 2011 Hydro filed correspondence  
14 asking that Phase III be put in abeyance until further notice from Hydro. On December 14, 2011  
15 the Board advised the parties that Phase III of the 2012 Capital Budget Application would not  
16 proceed and Hydro should file its proposed project *Upgrade Transmission Line Corridor-Bay*  
17 *d'Espoir to Western Avalon* as a stand-alone application.  
18

19 There was no request for a public hearing in relation to Phase I. A total of 212 requests for  
20 information ("RFIs") were answered by Hydro. Grant Thornton, the Board's financial  
21 consultants, reviewed the calculations of the 2010 average rate base and filed a report on  
22 September 30, 2011. Grant Thornton also reviewed Hydro's proposed changes to its capital  
23 expenditure recording methodology to incorporate the requirements of International Financial  
24 Reporting Standards. Grant Thornton filed a report on September 14, 2011, noting that there was  
25 outstanding information from Hydro. Hydro subsequently provided the outstanding information  
26 in response to RFIs and Grant Thornton provided an updated report on November 30, 2011.  
27 Both of these reports were circulated to the parties.  
28

29 The Consumer Advocate and the Industrial Customers filed written submissions on Phase I  
30 projects on October 7, 2011. Newfoundland Power did not file a written submission. Hydro  
31 filed its written submission on October 12, 2011.

## 1 II INTERNATIONAL FINANCIAL REPORTING STANDARDS

2  
3 According to the Application Hydro is required to adopt International Financial Reporting  
4 Standards (“IFRS”) for interim and annual financial statements for fiscal years beginning on or  
5 after January 1, 2012. Hydro states that the IFRS assumptions are imbedded in each capital  
6 proposal and is therefore requesting approval of its IFRS related changes in capital expenditure  
7 recording methodology. Hydro explains that the primary rationale to use the relevant IFRS  
8 requirements in its capital expenditures relates to transparency and the administrative burden  
9 required to maintain duplicate asset records. Hydro states that calculating separate capital costs  
10 and the resulting depreciation variances and reconciling the two sets of records for the  
11 foreseeable future would require additional investment in both personnel and systems.

12  
13 Hydro explains further in its 2012 Capital Projects Overview that the five areas of the 2012  
14 Capital Budget Application that are affected by the move to IFRS are:

- 15
- 16 i. Major Overhauls and Inspections - Hydro believes that it is appropriate to capitalize these  
17 costs in certain conditions as they represent benefits that will last over periods greater  
18 than one year and including these costs in a year could result in volatility in operating  
19 costs. Hydro sets out the policies and guidelines that it has adopted in this regard.
  - 20 ii. Training Costs – IFRS no longer allows the capitalization of training costs and Hydro  
21 proposes that such costs be included in operating rather than civil expenditures. Hydro  
22 submits that the exclusion of training costs in projects does not represent a material  
23 change.
  - 24 iii. Capital Labour Overheads – Hydro, in accordance with IFRS, no longer includes an  
25 allocation for Engineering Managers and Supervisors in the cost of property, plant and  
26 equipment. Hydro reports that it is now able to more accurately capture the hours of all  
27 engineers that work on capital as a result of the re-alignment of the Project Execution and  
28 Technical Services group, and proposes that hours directly charged to a capital project be  
29 included in the project’s capital costs.
  - 30 iv. Corporate Overhead Allocation – Hydro, in accordance with IFRS, no longer includes an  
31 allocation for time for support business units.
  - 32 v. AFUDC vs. IDC – According to Hydro using Interest During Construction (“IDC”)  
33 rather than Allowance for Funds Used During Construction (“AFUDC”) as required by  
34 IFRS does not result in a material change.
- 35

36 Hydro states that it has assessed each area impacted by IFRS to determine if it was prudent to  
37 align regulatory and external financial reporting and that this assessment will be ongoing as  
38 changes are made to IFRS.

39  
40 The Industrial Customers submit that the treatment of IFRS related issues in the 2012 Capital  
41 Budget Application should be deferred until Hydro has presented the comprehensive overview of  
42 the overall impact of the transition to IFRS which Hydro states in PUB-NLH-4 will be provided  
43 before the end of 2011. The Industrial Customers question why this overview wasn’t presented  
44 at the time of the Application and note that Hydro did not, as requested in IC-NLH-7, disclose

1 the reports and other documentary resources relied upon by Hydro in developing the proposed  
2 policies and guidelines in relation to IFRS and capital expenditures. The Industrial Customers  
3 argue that the “*material adjustments*” made by Hydro in PUB-NLH-140 and PUB-NLH-141 do  
4 not provide a high level of assurance regarding Hydro’s proposed implementation of IFRS  
5 impacts on the 2012 Hydro Capital Budget.

6  
7 The Consumer Advocate did not comment on Hydro’s proposals in relation to IFRS.

8  
9 Hydro reiterates in its submission that maintaining regulatory reporting differences would  
10 require Hydro to keep two sets of asset records. Hydro states that additional investment in both  
11 personnel and information systems would be required and further capital expenditures may be  
12 required for the information system infrastructure. Hydro argues that IFRS impacts on capital  
13 expenditures have been reviewed by Grant Thornton and can be assessed by the Board without  
14 deferral pending an IFRS overview as requested by the Industrial Customers.

15  
16 Grant Thornton reviewed the information included in the Application relating to Hydro’s  
17 proposed changes to its capital expenditure methodology as a result of incorporating the  
18 requirements of IFRS. Grant Thornton, in its November 30, 2011 report, concludes after  
19 reviewing the additional information filed by Hydro that Hydro has correctly applied the IFRS  
20 standards in the preparation of its 2012 Capital Budget Application.

21  
22 The Board accepts Hydro’s evidence in relation to the administrative burden and costs associated  
23 with maintaining regulatory reporting differences. The Board also agrees that moving to IFRS  
24 will enhance transparency. Hydro’s proposed changes have been fully reviewed by Grant  
25 Thornton. The Board will approve Hydro’s proposed IFRS related changes to its capital  
26 expenditure methodology.

### 1    **III    2012 CAPITAL BUDGET**

2  
3    This Order relates to the Phase I proposals of Hydro's 2012 Capital Budget which exclude  
4    certain expenditures related to the Holyrood Thermal Generating Station. Phase II will be  
5    addressed in a subsequent Order of the Board and Hydro's 2012 Capital Budget will not be  
6    approved pursuant to ss. 41(1) of the *Act* until the conclusion of Phase II. Nevertheless, the level  
7    of Hydro's proposed 2012 Capital Budget and its 2012 Capital Plan was raised as an issue during  
8    Phase I. Both the Industrial Customers and the Consumer Advocate expressed concerns in  
9    relation to the forecast increases in Hydro's capital spending in 2012 and future years.

10  
11    On August 4, 2011 Hydro filed its 2012 Capital Budget in the amount of \$87,862,000. On  
12    December 19, 2011 Hydro filed schedules setting out a revised total 2012 Capital Budget  
13    expenditures in the amount of \$93,028,600. In addition expenditures in future years associated  
14    with multi-year projects to be approved with the 2012 Capital Budget are approximately \$38.5  
15    million. This does not include the project *Upgrade Transmission Line Corridor-Bay d'Espoir to*  
16    *Western Avalon* which Hydro now intends to bring forward later in 2012. This project involves  
17    multi-year expenditures of over \$200 million. Hydro's forecast total capital expenditures from  
18    2013-2016 are as follows:

	<b>Proposed Capital Expenditures 2013-2016 (\$000s)</b>			
	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Generation</b>	33,490	30,931	30,971	26,005
<b>Transmission and Rural Operations</b>	73,392	95,990	109,101	97,870
<b>General Properties</b>	11,606	17,035	13,118	15,734
<b>Major Overhauls and Inspections</b>	1,882	6,731	1,047	6,365
<b>Contingency Fund</b>	1,000	1,000	1,000	1,000
<b>Total Capital Budget</b>	<b>121,370</b>	<b>151,687</b>	<b>155,237</b>	<b>146,974</b>

19  
20    Source: Application, 2012 Capital Plan

21  
22    Hydro states in the Application that the proposed capital expenditures for 2012 are required to  
23    allow Hydro to continue to provide to its customers service and facilities which are reasonably  
24    safe, adequate and reliable as required by s. 37 of the *Act*. In its 2012 Capital Projects Overview,  
25    Hydro states that its long-term planning initiatives are framed in the context of the following key  
26    drivers: the current review of the Lower Churchill project, the shift in load centres, such as the  
27    closure of a paper mill, the expected start up of a nickel processing facility, and continued load  
28    growth on the Avalon Peninsula. Hydro advises that in 2007 it began an internal review of its  
29    major assets to develop a long-term asset refurbishment and replacement plan, and that it has  
30    continued to strategically adjust the five-year plan based on the updated inputs of condition  
31    assessments and system load requirements. Hydro sets out a list of considerations in the  
32    development of a capital proposal, which include system performance and reliability criteria,  
33    long-term asset management strategy, load growth and system planning criteria, maintenance



1 history, condition assessment, performance assessment, legislative requirements, cost  
2 efficiencies, operating experience, changing operating conditions, discussions between  
3 Regulated Operations and Technical Services, familiarity with equipment, operating and  
4 maintenance cost, and professional judgement.

5  
6 In the 2012 Capital Plan Hydro says that its five-year plan is under substantive review beyond  
7 the 2012 submittal. Hydro says that a key finding of developing and refining the five-year and  
8 twenty-year plans during 2011 is the general increase in required sustaining capital to continue to  
9 provide safe, reliable, least cost power as well as the required additional capacity. Hydro  
10 anticipates that its 2012-2016 sustaining capital expenditures to maintain the existing systems  
11 will rise. Hydro sets out the following strategic spending priorities:

- 12  
13 i. mandatory issues (such as ensuring safety, managing environmental risks, and  
14 compliance with legislative and regulatory requirements);  
15 ii. meeting projected load growth and customer requests;  
16 iii. achieving cost efficiencies; and  
17 iv. the asset management philosophy.

18  
19 According to the 2012 Capital Plan a detailed review of Hydro's asset management strategy is  
20 well advanced and will be completed in 2011. Hydro reports that a series of reorganizations  
21 were made in 2010 and 2011 to assist with enhancing its asset management philosophy as well as  
22 the manner in which capital and operating projects are planned and executed. Hydro states that  
23 extra rigor has been applied in the area of resource planning as it relates to the 2012 Capital  
24 Budget Application. Hydro reports that there is significant work being done to update the five-  
25 year and twenty-year capital plans and information provided in the plans for years beyond 2012  
26 remains tentative but is indicative of the upward pressure on total capital expenditures into the  
27 future. The key drivers of the upward pressure on capital expenditures are age and condition of  
28 current infrastructure/assets, shift in location of load, continued load growth on the Avalon  
29 Peninsula, and domestic price escalation.

30  
31 In its written submission for Phase I the Industrial Customers argue that the Board must re-  
32 examine the need for scrutiny of Hydro's overall proposed levels of capital expenditure for 2012  
33 and capital spending projected by Hydro for the coming years. According to the Industrial  
34 Customers the implementation of power policy must be consistent with reliable service, but the  
35 manner of that implementation must also be balanced with the "*most efficient*" production,  
36 transmission and distribution of power, at the "*lowest possible cost*". The Industrial Customers  
37 conclude that this balancing requires the making of difficult choices. The Industrial Customers  
38 submit that under the *Electrical Power Control Act*, 1994 SNL 1994, Chapter E-5.1 (the  
39 "*EPCA*") the impact on ratepayers is the primary consideration and that this impact is to be  
40 measured not only by reliability of service but also by efficient production and transmission of  
41 power, all at the lowest possible cost. They submit that Hydro states in PUB-NLH-146 that the  
42 impact on rates of its proposed capital expenditures is the "*second consideration*".

43  
44 The Industrial Customers reiterate longstanding concerns in relation to the unchecked growth of  
45 Hydro's capital expenditure demands stating:

1           *“The question that cannot be avoided by the Intervenors and, it is respectfully submitted, by the*  
2 *Board, even though it has not been addressed by Hydro, is how the rate payers are to be expected*  
3 *to bear the burden of Hydro’s concurrently ill-timed, “in with the old and in with the new”*  
4 *capital expenditure programs. Hydro presents this dilemma as an inescapable result of “aging*  
5 *infrastructure.” An alternative explanation should be considered – that the planning and risk*  
6 *management practices of Hydro take insufficient account of the impact of its overall proposed*  
7 *capital expenditures on rates and the rate payers.”* (Industrial Customers, Submission Phase I,  
8 pgs. 8-9)  
9

10 The Industrial Customers note that Hydro assigns a ranking of “1” to fourteen projects in Phase  
11 I. The Industrial Customers suggest that all projects that are assigned a ranking of less than “1”  
12 be considered for denial or deferral on the basis of: i) in some cases, insufficient justification; ii)  
13 deferral assuming and expecting reasonable risk management practices; and, iii) the fact that the  
14 overall proposed and projected capital expenditure through to 2017 is unsustainable by the  
15 ratepayers and fails to meet the *EPCA* power policy principles. The Industrial Customers request  
16 a further Board directive on the development of guidelines on prioritization of capital projects.  
17 The Industrial Customers suggest that Hydro’s analysis is missing any reasonable weighing or  
18 balancing of the probability of a risk manifesting itself as against the cost of eliminating that risk  
19 as well as a willingness to reasonably manage risk by better operational practices and increased  
20 operational expenditure. The Industrial Customers argue that Hydro has presented no evidence  
21 that any decrease in reliability of service has occurred in recent years due to aging infrastructure.  
22 (Industrial Customers, Submission Phase I, pgs. 10-12)  
23

24 The Industrial Customers argue that it is impossible to prove or disprove a claim that reliable  
25 service will be put at risk if all of the capital expenditures are not approved. The Industrial  
26 Customers submit that Hydro’s ratepayers cannot afford to simply accept this proposition.  
27 Instead the Industrial Customers propose that the increase in Hydro’s capital budget should be  
28 brought in line with the average annual increase in capital budgets over the last five years. The  
29 Industrial Customers propose that this should be done by reducing the \$20 million sought for  
30 projects ranked lower than “1”, in addition to the denial and deferral of specific projects in the  
31 budget. The Industrial Customers state that this would serve the purpose of planning  
32 predictability for Hydro’s customers and of imposing greater planning discipline on Hydro, as it  
33 would bring the 2012 expenditures closer in line to the \$70 million which Hydro forecast for  
34 2012 as recently as in the 2011 Capital Budget. (Industrial Customers, Submission Phase I, pg.  
35 29)  
36

37 The Consumer Advocate states that he is very concerned about the impact on customers of the  
38 large capital spending forecasts of both Newfoundland Power and Hydro in the next five years.  
39 (Consumer Advocate, Submission Phase I, pg. 3) The Consumer Advocate argues that the  
40 capital budget forecasts of both utilities are at unprecedented levels and undertaking a project-  
41 by-project review of the proposals, while useful, does not provide insight into the utilities’  
42 assessment of the criticality of their proposals. The Consumer Advocate renews his call for the  
43 Board to provide direction to the utilities as regards the ranking of proposed capital projects,  
44 referencing arguments he made in relation to Newfoundland Power’s 2012 Capital Budget

1 Application regarding the absence of financial incentives for rate base regulated utilities to strive  
2 for capital efficiency. (Consumer Advocate, Submission Phase I, pg. 6)

3  
4 Hydro responds to the Industrial Customers' and Consumer Advocate's submissions by stating  
5 that, in assessing the projects being proposed, Hydro has ensured that it is complying with the  
6 power policy provision of the *EPCA*. Hydro states that choosing capital projects always requires  
7 an appreciation of the appropriate balance between reliability and cost. Hydro reiterates that  
8 there are upward cost pressures arising from its aging plant and its need to meet projected  
9 customer load growth in the coming years. The project prioritization methodology is used to  
10 determine which capital proposals from all areas of the organization are prudent and essential to  
11 the provision of reliable service in a manner that is least cost. Hydro submits that the  
12 prioritization information provides greater transparency to Hydro's project selection process and  
13 permits the Board and the Intervenor to gain a better understanding of the relative importance of  
14 the projects. According to Hydro projects are not submitted to the Board for approval if they fail  
15 to meet the test of being prudent and essential to the provision of reliable service in a manner that  
16 is least cost. Each capital proposal is assessed in light of the risk to its customers and running an  
17 asset to failure is not a permissible option for a public utility providing an essential service.  
18 Hydro states that the prioritization of projects provides one documented internal screening  
19 process where proponents of capital proposals use the considerations in the methodology to  
20 determine whether the proposed projects meet those tests. (Hydro, Submission Phase I, pgs. 5-6;  
21 8-9)

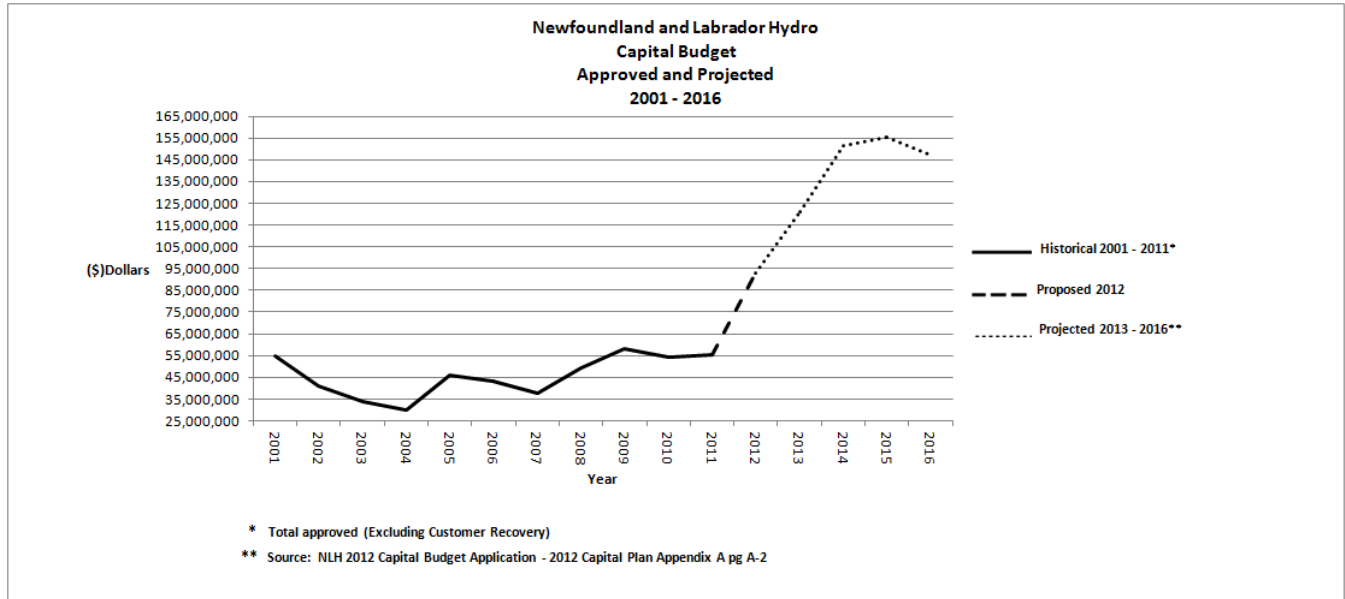
22  
23 The Board shares the concerns of both the Industrial Customers and the Consumer Advocate in  
24 relation to the level of Hydro's 2012 Capital Budget and Hydro's projected capital spending in  
25 the next few years. Hydro's recent capital expenditure history is set out in the following table:

Newfoundland and Labrador Hydro Capital Budget Proposed and Approved 2001 - 2011							
	Proposed Capital Budget	Supplementary Requested	Customer Recovery	Total Requested *	Total Requested % Change From Prior Year	Total Approved *	Total Approved % Change From Prior Year
<b>2011</b>	60,245,000	865,400	0	61,110,400	9.40%	55,179,700	1.60%
<b>2010</b>	52,775,000	17,886,400	14,800,000	55,861,400	-4.35%	54,311,400	-6.81%
<b>2009</b>	47,856,000	10,639,300	93,000	58,402,300	7.25%	58,282,800	18.31%
<b>2008</b>	45,061,000	17,539,871	8,144,571	54,456,300	30.74%	49,262,800	29.93%
<b>2007</b>	41,421,000	1,503,000	1,272,000	41,652,000	-3.12%	37,915,100	-11.81%
<b>2006</b>	42,636,000	357,800	0	42,993,800	-6.10%	42,993,800	-6.10%
<b>2005</b>	42,431,000	9,179,700	5,825,500	45,785,200	24.12%	45,785,200	52.77%
<b>2004</b>	34,234,000	2,654,700	0	36,888,700	8.49%	29,970,700	-11.85%
<b>2003</b>	33,070,000	1,028,620	98,000	34,000,620	-17.68%	34,000,620	-17.68%
<b>2002</b>	36,765,000	4,538,240	0	41,303,240	-24.47%	41,303,240	-24.47%
<b>2001</b>	54,681,000	0	0	54,681,000	44.84%	54,681,000	44.84%

\* Excluding Customer Recovery

26  
27 This table demonstrates that Hydro's total approved capital expenditures have been variable from  
28 year to year. It also shows a general increase over the years but does not demonstrate sharp

1 sustained increases. In fact the trend over the period does not appear to be out of line with what  
 2 one would generally expect as the result of inflationary and other pressures such as aging  
 3 infrastructure and changes in load. However, when this historical information is plotted  
 4 alongside proposed and projected spending for the next five years a very different picture  
 5 emerges:  
 6



7 Hydro's proposed 2012 Capital Budget is approximately \$38,000,000 higher than its approved  
 8 2011 Capital Budget and the projected 2013 Capital Budget is about \$28,000,000 higher again.  
 9 As noted by the Industrial Customers, even without considering the significant expenditures  
 10 associated with the project *Upgrade Transmission Line Corridor – Bay d'Espoir to Western*  
 11 *Avalon*, the increases in Hydro's capital budget are significant and sustained. The following table  
 12 shows the projected capital budgets for the period 2012-2016 with and without the expenditures  
 13 related to this transmission project.  
 14

<b>Newfoundland and Labrador Hydro Projected Capital Budget 2012 - 2016</b>					
	<b>Projected Capital Budget *</b>	<b>% Change From Prior Year</b>	<b>Projected Expenditure Transmission **</b>	<b>Projected Budget Excluding Transmission</b>	<b>% Change From Prior Year</b>
<b>2012</b>	93,028,600 ***	52.23%	2,631,900	90,396,700	47.92%
<b>2013</b>	121,369,000	30.46%	30,195,400	91,173,600	0.86%
<b>2014</b>	151,686,000	24.98%	46,525,000	105,161,000	15.34%
<b>2015</b>	155,237,000	2.34%	63,198,900	92,038,100	-12.48%
<b>2016</b>	146,973,000	-5.32%	66,825,100	80,147,900	-12.92%

\*NLH 2012 Capital Budget Application - 2012 Capital Plan Appendix A pg A-2  
 \*\* NLH 2012 Capital Budget Application - Phase III: Upgrade Transmission Line Corridor - Bay d'Espoir to Western Avalon  
 \*\*\* Schedules provided by Hydro on December 19, 2011

1 The Board is concerned about the impacts of the proposed and forecast level of Hydro's capital  
 2 spending on customers. The Board agrees with the Industrial Customers that this level of  
 3 spending raises concerns as to whether this approach is sustainable given the significant impact  
 4 on revenue requirement. Hydro sets out the percentage change in pro forma revenue requirement  
 5 as a result of the five-year projected capital spending.  
 6

<b>Pro Forma Change in Revenue Requirement 2012-2017</b>		
<b>2012</b>	\$5,732,000	1.3%
<b>2013</b>	\$17,486,000	4.0%
<b>2014</b>	\$30,119,000	7.0%
<b>2015</b>	\$42,073,000	9.7%
<b>2016</b>	\$62,730,000	14.5%
<b>2017</b>	\$78,044,000	18.1%

7 Source: PUB-NLH-148  
 8

9 Hydro states that stabilization of capital costs is addressed through depreciation but, as set out  
 10 above, even with the dampening effects of depreciation, the impacts of the projected capital  
 11 spending are significant. (PUB-NLH-23) The Board notes that these increases do not reflect  
 12 increases in operational costs which may be expected in the normal course.  
 13

14 The Board is concerned that the significant increases in proposed and projected capital  
 15 expenditures in 2012 and subsequent years were not forecasted by Hydro as recently as one year  
 16 ago. Hydro's 2011 five-year capital plan forecast a 2012 Capital Budget of \$70,159,000. Given  
 17 the large unforecasted increase in capital spending the Board would expect a full and  
 18 comprehensive explanation, setting out details in relation to the efforts that were made to ensure  
 19 stable predictable capital spending. Hydro explains in PUB-NLH-23 that, like other North  
 20 American utilities, Hydro has an aging infrastructure that will require ongoing incremental  
 21 investment to sustain existing operating levels. The Board understands that aging infrastructure  
 22 and changing loads and load centres may result in upward pressure on rates. The Board would  
 23 expect however that, in the circumstances, these issues would cause a general increasing trend  
 24 and increases which are forecasted and somewhat predictable.  
 25

26 Hydro explains that it began an internal review of its major assets in 2007, that it completed a  
 27 series of reorganizations in 2010 and 2011 to assist with enhancing its asset management  
 28 philosophy, and further that there is significant work being done in delivering updated five-year  
 29 and twenty-year plans. Hydro says that a key finding of developing and refining the five-year  
 30 and twenty-year plans during 2011 was the general increase in required sustaining capital and  
 31 required additional capacity. According to CA-NLH-4 no project in Phase I can reasonably be  
 32 deferred and specifically Hydro states:  
 33

34 *“Hydro has developed its capital budgets to address identified needs or to leverage opportunity*  
 35 *to reduce cost to its customers. To defer any project would result in either leaving the need*  
 36 *unaddressed or forgoing an opportunity to reduce rates. Deferral of required projects exposes*  
 37 *employees, customers or the environment to an avoidable risk, whether it be safety, reliability or*

1 *environmental. Hydro has carefully constructed its budget proposal, and Hydro does not*  
2 *recommend deferring any of the projects.”*  
3

4 In PUB-NLH-152 Hydro states:  
5

6 *“Hydro acknowledges the importance of rate stability and the need to avoid intergenerational*  
7 *equity issues, while continuing to provide customers with reliable and cost-effective electrical*  
8 *supply. In this regard, Hydro recognizes that balancing rate design objectives with reliability and*  
9 *operational requirements over the next few years can present a challenge and intends to fully*  
10 *examine options in concert with other parties.”*  
11

12 The review of a utility’s capital spending is one of the most challenging regulatory functions of  
13 the Board. The potential impact on rates and the provision of service can be significant. To  
14 complicate matters decisions in relation to these significant long-term expenditures are based on  
15 assumptions and forecasts of costs, load, and reliability. As argued by the Industrial Customers  
16 reliability impacts in relation to capital expenditures can be difficult to prove or disprove. The  
17 utility is clearly in the best position to make these determinations given its specialized  
18 knowledge and expertise in relation to its plant. The utility is held accountable to demonstrate  
19 that its proposals are necessary to ensure the provision of least cost reliable service. As a part of  
20 its annual capital budget application the utility must demonstrate thorough and disciplined  
21 planning with a view to achieving sustainable capital spending. Significant increases in annual  
22 capital expenditures must be fully explained and justified. Spending which is out of step with  
23 historical approaches should be supported with additional information in relation to the overall  
24 level of expenditure and in relation to each proposed expenditure. Where the level of capital  
25 spending is so high as to raise concerns in relation to sustainability, the utility will have a high  
26 evidentiary burden to show that the proposed capital projects are least cost and required for the  
27 provision of safe and reliable service.  
28

29 In Order No. P.U. 38(2010) the Board stated:  
30

31 *“In accordance with the Act the Board must ensure the provision of least cost, safe and reliable*  
32 *service. It is in this context that the Board has resisted requests over the years to set arbitrary*  
33 *limits on capital spending...Sometimes a higher level of spending is reasonable and necessary in*  
34 *circumstances which may involve aging assets, increasing load, inflation, and changing*  
35 *regulatory standards and requirements. Each capital budget is comprehensively reviewed for*  
36 *reasonableness with a view to ensuring the provision of least cost, safe and reliable service. This*  
37 *standard is tested through an open and public process which involves the participation of all*  
38 *interested parties who are provided with a full opportunity to request information and make*  
39 *submissions.”*  
40

41 The Board continues to believe that the best way to assess capital expenditures is to consider all  
42 of the circumstances in the context of the legislated requirement to provide least cost, safe and  
43 reliable service. The Board agrees with Hydro that its ranking of capital expenditures provides  
44 greater transparency as to Hydro’s project selection process and allows the Board and  
45 Intervenors to gain a better understanding of the relative importance of the projects. The ranking  
46 provides insight as to Hydro’s evaluation of a project in the context of a number of criteria,

1 specifically work classification, net present value, safety, environment, alignment, schedule risk,  
2 continue service, number of customers impacted, system impact, impact intensity, loss type, loss  
3 mitigation all weighed with probability and confidence level. (2011 Capital Budget Application,  
4 CA-NLH-4; 2012 Capital Budget Application, CA-NLH-3) This information can be considered  
5 by the Board along with the detailed justification provided in relation to each proposed capital  
6 expenditure.

7  
8 The Board believes that the comprehensive annual review of each utility's capital budget  
9 contributes to due diligence within the utility, improved understanding of stakeholders, and  
10 ultimately, a capital program which appropriately balances costs and reliability. The Board will  
11 continue to subject all proposed capital spending to a comprehensive and rigorous review with  
12 the participation of all interested parties. Hydro's ranking of the projects will be considered as  
13 part of this comprehensive review. The Board also believes that it would enhance transparency  
14 further if the detailed prioritization criteria for each capital expenditure is provided so that the  
15 basis for the ranking is apparent. For example, it would be useful to know whether an  
16 expenditure is ranked very low relative to other projects mainly because fewer customers are  
17 affected than the other projects. Therefore in future capital budget applications Hydro should  
18 provide its ranking of proposed capital projects including the underlying details in relation to the  
19 prioritization criteria. The Board also notes its comments in Order No. P.U. 26(2011) with  
20 respect to Newfoundland Power's 2012 Capital Budget that a review of the Capital Budget  
21 Guidelines may be timely. This review would incorporate the experience and feedback in  
22 relation to recent capital budget applications by both Newfoundland Power and Hydro.

1 **IV PHASE I CAPITAL EXPENDITURES**

2

3 **1. Overview**

4

5 Hydro’s proposed Phase I capital expenditures by asset class are as follows:

<b>2012 CAPITAL BUDGET PHASE I (\$000)</b>		<u>2012</u>
GENERATION		2,109.4
TRANSMISSION AND RURAL OPERATIONS		19,443.3
GENERAL PROPERTIES		4,022.4
MAJOR OVERHAULS AND INSPECTIONS		1,430.7
<b>Total Phase I Single Year Projects over \$50,000</b>		<b>\$27,005.8</b>
CONTINGENCY FUND		1,000.0
TOTAL PROJECTS UNDER \$50,000		743.9
MULTI-YEAR (2012 Expenditures):		
	Multi-year Projects Commencing in 2012	13,274.9
	Multi-year Projects Commencing in 2011	12,522.5
	Multi-year Projects Commencing Prior to 2011	15,208.4
<b>TOTAL CAPITAL BUDGET PHASE I</b>		<b>\$69,755.5</b>

6 Source: Hydro, Phase I Schedule C, December 19, 2011

7

8 Hydro advises that it proposes no new leases for 2012 in excess of \$5,000 per year.

9

10 **2. Phase I Capital Expenditures Over \$50,000**

11

12 In accordance with historical practice, the Board’s Capital Budget Guidelines and the legislation,  
 13 the Application includes an explanation in relation to each expenditure over \$50,000, setting out  
 14 a description, justification, projected expenditures, costing methodology and future  
 15 commitments, as applicable. Additional studies and reports, including detailed engineering  
 16 reports, are provided in relation to a number of projects.

17

18 The Board’s Capital Budget Guidelines set out detailed requirements with respect to projects  
 19 over \$50,000. Each of these projects must be classified and segmented by materiality. They  
 20 must also be defined as clustered, pooled or other, and classified as mandatory, normal, or  
 21 justifiable. A project classified as mandatory is one which the utility is obliged to carry out as  
 22 the result of legislation, Board Order, safety issues or environment risk. A normal capital  
 23 expenditure is one that is required based on identified need or historical patterns of repair and  
 24 replacement. Justifiable expenditures are proposed based on the positive impact the project will  
 25 have on the utility’s operations. As set out in section F of the Application well over ninety  
 26 percent of the projects in Hydro’s 2012 Capital Budget are classified as normal.



1 The following sections set out the Board's considerations and findings for Hydro's proposed  
2 Phase I capital projects to be completed in 2012 and also for Hydro's proposed multi-year  
3 projects.  
4

5  
6 **i. Projects to be completed in 2012**  
7

8 The table in Section IV(1) sets out Hydro's proposed Phase I projects over \$50,000 by asset  
9 class, which total \$27,005,800. The Board has reviewed Hydro's proposed Phase I capital  
10 projects in excess of \$50,000, the reports filed in support, the additional information filed by  
11 Hydro in its responses to RFIs, and the final submissions. The Board is satisfied that all the  
12 projects, except those specifically addressed below, are adequately justified and are appropriate  
13 and necessary in the circumstances.  
14

15 Upgrade Burnt Dam Spillway, Bay d'Espoir - \$1,702,800 (2012)  
16

17 Hydro proposes this expenditure as the second year of a four-year program to upgrade  
18 mechanical and electrical equipment at the Burnt Dam Spillway Structure. In Order No. P.U.  
19 38(2010) the Board approved an expenditure of \$257,900 for the first year of this project to  
20 replace the stop log hoist and associated motor, bus bars, housing and access platform at the  
21 Burnt Dam Spillway.  
22

23 The project for 2012 involves inspection, refurbishment, replacement and includes upgrading the  
24 stop log system and gate infrastructure. Hydro states that the work in relation to the mechanical  
25 drive components forms a significant portion of the overall scope of the work. This project is  
26 justified by Hydro based on the requirement to replace failing or deteriorated infrastructure so  
27 that Hydro can provide safe, reliable flood management for the Victoria and Burnt Pond  
28 Reservoirs as well as fisheries compensation flow into the White Bear River. Hydro notes that  
29 the condition assessment completed by Hatch in 2008 identified this structure as having the  
30 lowest overall Health Index when compared to seven other hydraulic structures of similar  
31 vintage within the Bay d'Espoir Development. Hydro reports that when the four-year upgrade  
32 program for Burnt Spillway is complete it will be in a condition to operate safely and reliably for  
33 at least another 15 years. (Application, Volume I, pgs. B-14, 15) Future plans include additional  
34 upgrade work in 2013 and 2014. In PUB-NLH-47 Hydro forecasts spending in relation to this  
35 spillway of: 2011 - \$257,800; 2012 - \$1,702,800; 2013 - \$649,500 (though some work cannot be  
36 quantified yet); 2014 - \$992,000.  
37

38 Hydro engaged Weir Canada, Inc. ("Weir") which recommended that the gearboxes and hoists  
39 be removed from the site and sent to a qualified machine shop for assessment. According to  
40 Hydro this would be a time and labour intensive process which would provide an opportunity to  
41 perform comprehensive inspections on major mechanical drive components of the 45-year old  
42 spillway. Hydro notes that there was an incident in 2006 whereby the gates failed to operate  
43 when required, resulting in a loss of a significant amount of reservoir water, estimated at the time  
44 to have been valued at \$2.6 million. Such a failure could lead to a fuse plug failure which would  
45 cost approximately \$1,000,000 to fix. This would also cause Burnt Pond Reservoir to drain

1 down to the bottom elevations resulting in an estimated lost energy value of \$78 million. Hydro  
2 also notes that there have been several safety incidents in relation to the stop log storage system  
3 in use at Burnt Spillway. (Application, Volume I, pgs. B-16, 17) Hydro notes that a new stop log  
4 storage system was installed at the Salmon River Spillway for similar reasons in 2008.  
5

6 The Industrial Customers note that Hydro has assigned this project a priority ranking of “26”, the  
7 second last ranked of the Phase I projects, and argue that, in the context of unprecedented  
8 increases in capital expenditures over the next five years, this project represents a significant  
9 expenditure. The Industrial Customers state that neither the pricing provided by the Hatch report  
10 nor the Weir report justify anywhere near the \$1.7 million expenditure proposed by Hydro. The  
11 Industrial Customers conclude:  
12

13 *“In light of the above, and the low rank priority to which Hydro itself assigns to this expensive*  
14 *and largely premature and anticipatory capital expenditure, Island Industrial Customers submit*  
15 *that no more than the Weir pricing for the full condition assessment, of \$257,440, should be*  
16 *approved for the 2012 Capital Budget.”* (Industrial Customers, Submission Phase I, pgs. 18, 19)  
17

18 The Consumer Advocate also notes that Hydro ranks this project second from last, and argues  
19 that Hydro’s relatively low ranking as well as the material filed in support of the project *“does*  
20 *not lead one to conclude that deferring this project would, in fact, be unreasonable or*  
21 *imprudent”*. The Consumer Advocate notes that the Health Index score determined by Hatch  
22 indicates that it is in good condition. The Consumer Advocate says that the cause of the 2006  
23 incident, hardening of the grease, is a problem which is fixable. The Consumer Advocate  
24 concludes:  
25

26 *“Hydro has not shown that this project as defined is necessarily required at this time which no*  
27 *doubt helps explain why Hydro gives this project a relatively low priority.”* (Consumer Advocate,  
28 Submission Phase I, pg. 7)  
29

30 In its submission (pg. 12) Hydro references the comments of the Industrial Customers and the  
31 Consumer Advocate in relation to the ranking of this project and reiterates that the prioritization  
32 methodology is a screening tool, that each project proposed in the 2012 Capital Budget  
33 Application met the screening test, and that justification has been provided for each project.  
34 Hydro says that arbitrarily dropping the lowest ranked project is not a prudent manner of  
35 considering and deciding upon a utility’s capital budget and should be rejected in favour of a  
36 careful consideration by the Board of all proposed projects based on individual merit. Hydro  
37 submits that it agrees with the Weir report recommendation that the gear boxes be sent to a  
38 machine shop and further that this offers an opportunity to perform a comprehensive inspection  
39 of other components of the structure. Hydro states:  
40

41 *“Hydro submits that the most prudent course is to be prepared to complete necessary*  
42 *refurbishment at the same time as dismantling occurs for inspection, both to achieve the*  
43 *synergistic efficiencies found by completing the work at the same time and to be in a position to*  
44 *immediately respond if identified deficiencies are so severe in nature that the structure cannot be*  
45 *put back into service until such deficiencies are remedied.”* (Hydro, Submission Phase I, pg. 11)

1 According to Hydro the project will be delivered under budget if the remedial work is less costly  
2 than forecasted. Hydro argues that the Consumer Advocate is incorrect in suggesting that the  
3 hardening of the grease on the stem screws is the essence of the problem, noting that both the  
4 Hatch and Weir reports make recommendations with scopes beyond lubrication of stem screws.  
5

6 The Board acknowledges that certain aspects of the Burnt Dam Spillway project are necessary.  
7 However the issue raised by the evidence and submissions is the extent of the project. The  
8 Board agrees that the current stop log storage system should be replaced to mitigate safety  
9 hazards. The evidence is also clear that an inspection is required. In CA-NLH-11 Hydro states  
10 that this project will involve internal inspections and that the budget for the project also includes  
11 the refurbishment work that is commonly encountered after a detailed inspection on this type of  
12 equipment. Hydro says that it is cost effective to address any deficiencies that are identified at  
13 that time before the equipment is returned to service. The Board is not prepared, however, to  
14 approve an expenditure for work on the basis that it is seen to be commonly encountered without  
15 specific evidence as to the necessity of the work. The Board will therefore approve the condition  
16 assessment recommended by Weir. When the inspection is completed Hydro may make a  
17 supplementary application for approval to proceed with work that is found to be necessary and  
18 appropriate to do before reassembly. This will allow Hydro to achieve the desired synergies and  
19 respond immediately while ensuring that only the work that is reasonable and necessary is done.  
20 The Board will approve the capital expenditure to install the stop log storage system in the  
21 amount of \$266,400 as set out by Hydro in PUB-NLH-47 as well as the expenditure to complete  
22 the inspection in the amount of \$257,440, as estimated by Wier, for a total of \$523,840.  
23

#### 24 Perform Wood Pole Line Management Program, Various Sites - \$2,519,300 (2012)

25

26 Hydro proposes the continuation of this comprehensive pole inspection and testing program  
27 which uses conventional sound and bore methods supplemented with Non Destructive  
28 Evaluation, periodic full scale tests of poles removed from service, and remedial treatment  
29 application. Structural analysis to assess the line reliability, taking into account the system  
30 concept, is applied against all inspection information. Any replacement and/or refurbishment is  
31 based on the assessment of quantitative risk with respect to in-service pole strength. The  
32 program is based on two 10-year inspection cycles beginning in 2005 and provides an annual  
33 report to identify problem areas for the regional asset managers and to develop recommendations  
34 for appropriate pole replacements as well as other components, in the following years.  
35

36 Based on the results of a pilot study in 2003 Hydro determined that the program should continue  
37 as a long-term asset management and life extension program. The program was approved by the  
38 Board in Order No. P.U. 53(2004) as part of Hydro's 2005 Capital Budget. Hydro justifies the  
39 continuation of this program based on the fact that previous pole inspections indicate that almost  
40 half of the poles sampled did not meet the minimum preservative retention levels and full scale  
41 pole tests of selected poles indicate a twenty-five percent reduction of average pole strength over  
42 a 35-year period. According to Hydro, these two facts justify the strong need for a well managed  
43 wood pole inspection and treatment program. Hydro submits that this program detects "*danger*  
44 *poles*" early to avoid safety hazards and to identify poles that are at early stages of decay to  
45 ensure that corrective measures can be taken. Hydro reports that there is insufficient long-term

1 data to give quantitative benefits on the improvement of transmission line reliability. Instead  
2 Hydro suggests that an analysis of recent storms provide a snapshot of how the transmission  
3 lines are performing. (Application, Volume II, Tab 15, pgs. 4, 6)  
4

5 In their submission the Industrial Customers note that they have repeatedly expressed concern  
6 about this program since its introduction in 2005. The Industrial Customers argue that, at a cost  
7 of well over \$2.0 million dollars a year, this program represents a substantial continuing capital  
8 burden on ratepayers. The Industrial Customers note that Hydro apparently intends to inspect all  
9 26,000 of its poles before repeating a second ten-year inspection cycle. The Industrial  
10 Customers argue that Hydro is only able to present anecdotal evidence in relation to the program  
11 and has not presented evidence in relation to the reliability of poles which have not yet been  
12 inspected. The Industrial Customers argue that Hydro's information in relation to the program  
13 experience undermines the pole by pole inspection approach as Hydro speaks of not having to  
14 replace many transmission size poles during the past thirty years. The Industrial Customers note  
15 Hydro's previous approach of "*targeting lines for specific issues*" and suggest that after six  
16 years of the program the older and more at risk lines have already been inspected. The Industrial  
17 Customers argue that it can be expected that with the data compiled in the last six years that  
18 Hydro can provide some substantial analysis of the benefits of the program and develop a more  
19 targeted approach to inspection and replacement of transmission poles. In final submission (pg.  
20 24) the Industrial Customers state:

21  
22 *"In the coming period of projected high capital expenditure, the Island Industrial Customers*  
23 *would submit that the cost benefit of the Wood Pole Line Management Program is a luxury which*  
24 *Hydro's rate payers can ill-afford. The Island Industrial Customers urge the Board to direct*  
25 *Hydro to prepare a quantitative benefit analysis, based on the data it has already collected from*  
26 *this Program, and to pause this Program, indefinitely, until Hydro files such a quantitative*  
27 *benefit report."*  
28

29 The Consumer Advocate does not make any comment in relation to this project.  
30

31 Hydro submits that the aim of the program is to ensure that deteriorated poles are identified and  
32 retreated or replaced before in service failures thereby avoiding more expensive repairs, rebuilds  
33 and service outages and dangers to line workers. Hydro argues that the combined advantages of  
34 avoiding failures in service, which would otherwise result in customer outages and expensive  
35 emergency repairs, and extending the age of the poles, fully justify this project. Hydro submits  
36 that the alternative to a wood pole testing program is a simple visual inspection or an age-based  
37 replacement approach. According to Hydro overlooking poles that will prematurely fail in  
38 service or replacing poles while they still have remaining life disregards an available, intelligent  
39 methodology that enables cost effective, safe and reliable management of Hydro's transmission  
40 poles.  
41

42 The Board calculates expenditures in relation to this project since it began on a pilot basis in  
43 2003 to be approximately \$17,000,000. Hydro forecasts spending \$18,979,600 from 2012 to  
44 2016. The Board agrees with the Industrial Customers that this is a substantial continuing capital  
45 burden for ratepayers, especially in light of projected significant increases in capital expenditures

1 over the next five years. In this context the Board also agrees that, if the program is to continue,  
 2 there must be quantifiable evidence of the benefits of the program. The Board is still satisfied  
 3 that a reliability centered maintenance approach for wood pole lines is the better approach to  
 4 managing these assets. However, given that the program has been in place for six years, the  
 5 Board is of the view that there should be sufficient data and experience to provide a more  
 6 comprehensive report on the benefits of the program to ratepayers. This report should provide  
 7 evidence of, for example, results of non-destructive testing undertaken to date, whether the  
 8 program has met the stated objective of deferring replacement of assets, if the program has  
 9 resulted in improved reliability of the system, and what the current best practice is in other  
 10 jurisdictions with respect to wood pole asset management. The Board will approve this project  
 11 for 2012 but will require additional demonstrable evidence of the actual and expected long-term  
 12 benefits of the program in the 2013 capital budget application.

13  
 14 Increase Generation Capacity, Mary's Harbour - \$1,489,400 (2012)

15  
 16 Hydro proposes this project to increase the firm generation capacity as well as the capacity of the  
 17 substation at the Mary's Harbour Diesel Generating Station. The project involves the  
 18 procurement and installation of a 725 kW mobile diesel generator and three 500 kVA  
 19 transformers. During 2010 plans were announced to construct a larger crab processing plant in  
 20 Mary's Harbour which will increase the load associated with the crab plant, already the largest  
 21 customer on the Mary's Harbour Distribution System, to 1,300 kW. Space limitations in the  
 22 plant make it impossible to add sufficient generation within the existing building. Hydro  
 23 considered the possibility of constructing a new diesel plant or significantly expanding the  
 24 existing facility. Hydro advises it is also investigating the feasibility of an interconnection  
 25 between Mary's Harbour and Port Hope Simpson, or an interconnection between three systems  
 26 to also include Charlottetown where there are also issues in relation to meeting the electrical  
 27 supply needs of the area. Hydro proposes the mobile diesel generator in the short term and  
 28 advises that it plans to submit a recommended solution with its 2013 Capital Budget Application.  
 29 (Application, Volume II, Tab 16, pgs. 2-4)

30  
 31 According to Hydro Mary's Harbour is, in general, less reliable than other systems in the same  
 32 region due to more frequent outages due to problems at the diesel plant. Hydro states, however,  
 33 that insufficient information exists to determine if adding capacity to the diesel plant will  
 34 improve the reliability of the system. If the project is not completed Hydro advises it is likely  
 35 that the reliability will worsen due to outages resulting from insufficient generation to supply the  
 36 load. Hydro states that this project will ensure that there is sufficient generating capacity  
 37 available to maintain a reliable electrical supply over the next three years and, if there is an  
 38 interconnection and the capacity is no longer required, the mobile diesel generator can be used  
 39 elsewhere. (Application, Volume II, Tab 16, pgs. 14, 17)

40  
 41 Neither the Consumer Advocate nor the Industrial Customers comment with respect to this  
 42 proposal.

43  
 44 The Board finds that the evidence provided in relation to this project raises issues as to the  
 45 reliability of the Mary's Harbour system and how best to meet load growth on this and

1 neighbouring systems. The Board notes that Hydro responded to similar load growth issues in  
2 the Charlottetown system with a similar project in 2011. In PUB-NLH-87 Hydro reports that the  
3 majority of outages on the Mary's Harbour system are due to the loss of supply and therefore  
4 originate from the Mary's Harbour Diesel Generating Station. Hydro says that reliability will  
5 likely worsen if this project is not done but cannot say that it will improve as a result of the  
6 project. Hydro does not offer alternative approaches which may be considered to improve  
7 reliability. According to PUB-NLH-89 the scheduled completion of the new crab processing  
8 plant is now delayed one year to April 2013. Hydro states this will not change the requirement  
9 to complete the work at the generating station in 2012 but it does change the project scope in that  
10 it eliminates the need for the temporary generator installation and provides additional time for  
11 delivery of equipment later in the year. Hydro did not provide a revision to the proposed capital  
12 expenditure to reflect the change in scope in the project. The Board notes that Hydro plans to  
13 submit a recommended solution to the Board with its 2013 Capital Budget which is expected to  
14 be filed in the summer of 2012.

15  
16 The Board agrees that the capacity of the Mary's Harbour Diesel Generating Plant needs to be  
17 increased. There are, however, significant issues outstanding with respect to reliability and long-  
18 term plans for the area in terms of electrical supply that need to be addressed. The delay in the  
19 completion date for the crab plant may, in the Board's view, provide an opportunity for Hydro to  
20 finalize its long-term plans with regard to this region. The Board would expect Hydro to propose  
21 alternatives that will address the long-term issues, especially the issues in relation to reliability  
22 and the possible interconnection of the system. The Board would like Hydro to take this extra  
23 time to consider the alternatives and bring forward a comprehensive proposal which will address  
24 these issues. If required Hydro can apply for approval of a short-term solution showing why it is  
25 necessary and detailing the scope and costs of its proposal. The project will not be approved as  
26 proposed for 2012.

27  
28 Upgrade Transmission Line Access Trails, Stoney Brook to Springdale - \$313,000(2012)

29  
30 Hydro proposes this project to improve the condition of Hydro's transmission line access trail  
31 system on the Island Interconnected System. This is the first year of a program starting in 2012  
32 and extending to 2016. Upgrade work will involve widening of existing trails to a minimum of  
33 four meters, reducing all hill slopes, and adding clear marking so that travel is limited to a single  
34 route along the surveyed right of way. Hydro submits that the work is required to bring the  
35 condition of the trails up to current Hydro safety and environmental standards.

36  
37 Hydro reports a number of incidents involving injury and near miss incidents on the access trails,  
38 including all terrain vehicle rollovers, vehicle collisions with a stump or rock, vehicles sinking or  
39 hitting snow drifts. An access trail standard was developed in 2010 in an effort to improve safety  
40 and reduce the number of all terrain vehicle and snowmobile incidents on access trails. Hydro  
41 argues that it has observed over past years that all terrain vehicle incidents involving personal  
42 injury have increased and therefore it is critical that a program be started to improve upon the  
43 original condition of the access trail system as provided for in the new trail standard. Hydro also  
44 states that properly constructed trails on wetlands and bogs will minimize the damage currently  
45 caused by heavy equipment and all terrain vehicles.

1 The Industrial Customers note that the access trails are on Crown-owned land that Hydro is  
2 permitted to use and submit that this project raises the issue of whether this is a capital  
3 expenditure which can be demanded from the ratepayers and should therefore be denied. The  
4 Industrial Customers also submit that this project falls well below the level of justification  
5 necessary under the power policy principles set out in the *EPCA*. The Industrial Customers note  
6 that this project has a priority ranking of “22”. The Industrial Customers submit that a review of  
7 the incident reports speaks to the need for better operational management rather than the need for  
8 capital expenditure on non-Hydro owned property to upgrade the access trails. The Industrial  
9 Customers argue that, given the character of these incidents, even if the access trails are  
10 upgraded it appears likely that the risk of these incidents will remain if Hydro fails to implement  
11 adequate operational management. The Industrial Customers note that Hydro is projecting  
12 expenditures of \$1,600,000 over the next five years. The Industrial Customers also note that all  
13 the incidents which Hydro reported follow the date that Hydro phased out its ground  
14 maintenance crews. The Industrial Customers submit that Hydro should first address operational  
15 issues related to maintenance and use of the trails and training of operators before proposing a  
16 capital solution.

17  
18 The Consumer Advocate questions why regular maintenance of the trails was phased out in 2001  
19 and not implemented again until 2008. The Consumer Advocate submits that it appears that  
20 inspections, along with detailed employee training, would go a long way towards alleviating  
21 some of the incidents. The Consumer Advocate argues that some accidents are unavoidable and  
22 consistent trail monitoring and maintenance appears to be a reasonable alternative to the  
23 proposal. The Consumer Advocate acknowledges that worker safety is a concern but submits  
24 that the proposal as put forth does not adequately address why the current maintenance efforts or  
25 a revamped effort could not address the issues raised by employees when accessing transmission  
26 lines. The Consumer Advocate notes a comment in the Conclusions section of an incident report  
27 provided by Hydro in response to an RFI from the Industrial Customers:

28  
29 *“The main point seems to be the cause of this accident is that the terrain that the equipment is*  
30 *used on is inherently rough with hidden stumps, holes, rocks and sticks. Clearing the rocks and*  
31 *stumps and making a clear ‘road’ for the ATV’s, and marking off ‘no drive’ areas would greatly*  
32 *reduce the tip over incidents, but could also result in more serious accidents as the driving speed*  
33 *would likely increase with better conditions.”* (IC-NLH-18, Attachment, pg. 209 of 365)  
34

35 The Consumer Advocate submits that another option to the proposal put forward by Hydro is to  
36 increase the maintenance schedule and allow more input from those employees who actually  
37 utilize the equipment on a daily basis. The Consumer Advocate suggests reducing the grade of a  
38 hill or widening a large area is not a simple task and these proposals have no foreseeable limit as  
39 to cost.

40  
41 Hydro argues that paragraph 78(2)(f) of the *Act* provides the Board with the clear authority to  
42 rule that Hydro may include in its rate base costs incurred for plant which it uses even where it  
43 does not own the underlying asset. Hydro states that its approach to addressing the access trails  
44 safety concerns is multi-faceted in that Hydro has, aside from the proposed capital expenditures,  
45 taken measures designed to provide training and deal with inappropriate and improperly

1 maintained equipment. Hydro reiterates that the work performed by the ground maintenance  
 2 crews would have no impact on the access trail slopes or other problems that cannot be addressed  
 3 through maintenance work. Hydro states that it has addressed the operational issues raised by  
 4 the Industrial Customers by reinstating maintenance on the trails since 2008 and by reinforcing  
 5 safety measures. Hydro argues:

6  
 7 *“The proposed capital project to improve the trails is the third required measure to ensure safety*  
 8 *of Hydro personnel and contractors before, rather than after, the condition of the trail cause a*  
 9 *severe injury or a fatality.”* (Hydro, Submission Phase I, pg. 16)

10  
 11 In Order No. P.U. 23(2011) the Board rejected arguments by Hydro in relation to paragraph  
 12 78(2)(f) of the *Act*, specifically stating:

13  
 14 *“The Board finds that section 41 of the Act contemplates property which is owned by the utility*  
 15 *and subsection 78(2)(f) allows amounts to be included in rate base which relate to property*  
 16 *which may not be held in a traditional ownership or leasehold structure but there must be a legal*  
 17 *right or interest or some other evidence of control over the property by the utility.”*

18  
 19 The Board finds that Hydro has not provided evidence which would meet the test set out by the  
 20 Board in relation to ownership or control. In PUB-NLH-120 Hydro states that it has an  
 21 agreement in place to use the access trails based on a policy directive letter issued in 1995 by the  
 22 Government of Newfoundland and Labrador, a copy of which is attached to IC-NLH-22. Hydro  
 23 did not provide details of this agreement to show that the test set out in Order No. P.U. 23(2011)  
 24 is met. In the absence of evidence in relation to this issue this project will not be approved.  
 25 Given the issues in relation to ownership of the trails it is not necessary to address the  
 26 justification for the project. The Board does, however, share the concerns of the Industrial  
 27 Customers and the Consumer Advocate in relation to the costs and benefits of this project.

28  
 29 Legal Survey of Primary Distribution Line Right of Way - \$197,900

30  
 31 Hydro proposes to continue the program, which began in 2004, to obtain easements for  
 32 approximately 2,370 km of distribution lines located on provincially owned Crown land. From  
 33 2004 to 2010 a total of 792 km of distribution line has been surveyed and are being processed by  
 34 the Lands Division (Crown Lands). Another 50 km of distribution line was planned to be  
 35 surveyed in 2011. In 2012 Hydro plans to acquire legal surveys and prepare documentation to  
 36 acquire Crown easements for approximately 150 kms of primary distribution line. Assuming  
 37 continued funding Hydro reports that title for the distribution systems located on Crown land will  
 38 be in place by the end of 2021. Hydro argues that lack of adequate title is a risk to the operation  
 39 of the lines should competing requirements for the lands arise. Maintenance and upgrading of the  
 40 lines could be cumbersome and costly without appropriate legal easements.

41  
 42 The Consumer Advocate notes that the amount proposed for 2012 is much higher than the annual  
 43 expenditures for the period 2006-2010, which were in the range of \$50,000 to \$60,000. The  
 44 Consumer Advocate recommends against increasing annual expenditures on this initiative as



1 compared to previous years and submits that no reason has been shown why this project cannot  
2 be kept in line with expenditures in previous years.

3  
4 The Industrial Customers do not comment in relation to this project.

5  
6 Hydro submits that the *Lands Act*, S.N.L. 1991, c. 36 makes it an offense to possess Crown lands  
7 without specific permission or grants of right and allows the removal of structures from this land.  
8 Hydro argues that continuing at the pace permitted by the level of spending in prior years would  
9 mean that the acquisition of title for the lines would not be completed for more than 25 years and  
10 Hydro would continue to be in violation of the *Lands Act*.

11  
12 The Board agrees with the approach taken by Hydro with respect to this project. Hydro should  
13 take all reasonable steps to ensure compliance with the *Lands Act* and minimize risks to the  
14 operation of the lines in a reasonable period of time. Hydro's plan to complete this project in ten  
15 years appears to be a reasonable approach to achieving compliance with the *Lands Act* and  
16 securing its property rights. This project will be approved as proposed.

17  
18 Summary Board Findings: Projects to be completed in 2012

19  
20 The Board will approve the proposed expenditures in relation to the purchase and construction of  
21 improvement or additions to Hydro's property in excess of \$50,000 to be started and completed  
22 in 2012, except:

- 23  
24 a. Upgrade Burnt Dam Spillway, Bay d'Espoir – \$1,702,800 is not approved but  
25 approval is given for expenditures in the amount of \$523,840 to install the stop log  
26 storage system and to conduct the recommended condition assessment;  
27 b. Increase Generation Capacity, Mary's Harbour - \$1,489,400 is not approved; and  
28 c. Upgrade Transmission Line Access Trails, Stoney Brook to Springdale - \$313,000 is  
29 not approved.

30  
31  
32 **ii. Multi-Year Projects**

33  
34 Multi-year project approval allows a utility to proceed with large expenditures that span a  
35 number of years with the certainty that the whole project, including future year expenditures, has  
36 been reviewed and approved by the Board. This approval is critical where the expenditure  
37 relates to a project that is so large it cannot be completed in one year, and can also be important  
38 for planning and efficiency purposes where discrete projects are proposed together because of  
39 similar justification and need or because doing the work together is more efficient.

1 The Phase I proposed multi-year expenditures are as follows:

<b>2012 CAPITAL BUDGET PHASE I (\$000)</b>					
<b>Project Description</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Total</b>
Total Phase I Multi-year Projects over \$50,000 commencing 2012	13,274.9	12,369.7	7,284.8		<b>32,929.4</b>
Total Phase I Multi-year Projects over \$50,000 commencing 2011	12,522.5	2,573.9	1,268.9	758.5	<b>17,123.8</b>
<b>Totals</b>	<b>25,797.4</b>	<b>14,943.6</b>	<b>8,553.7</b>	<b>758.5</b>	<b>50,053.2</b>

2 Source: Hydro, Phase I Schedule B, December 19, 2011

3  
4 Because the Board normally approves future year expenditures in the first year of the multi-year  
5 project it is not necessary for the Board to specifically approve the spending in each subsequent  
6 year. However, in Order No. P.U. 38(2010) the Board did not provide specific approval for  
7 Hydro to proceed with the future years of the multi-year projects which Hydro proposed to begin  
8 in 2011. In Section E of the Application Hydro provides details in relation to multi-year  
9 expenditures which were started in 2011. The parties consented to these expenditures being  
10 considered as part of Phase I, including those that relate to the Holyrood Thermal Generating  
11 Station. Neither the Industrial Customers nor the Consumer Advocate commented on the multi-  
12 year projects set out in Section E of the Application.

13  
14 The Board has reviewed the documentation and evidence on the record and is satisfied that the  
15 proposed multi-year purchase and construction projects in excess of \$50,000 commencing in  
16 2011 and 2012, except those specifically addressed below, are adequately justified and are  
17 appropriate and necessary in the circumstances.

18  
19 Rewind Stators Units 1, 3 and 4, Bay d’Espoir - \$4,953,800 (2012), \$5,054,200 (2013),  
20 \$3,634,600 (2014)

21  
22 Hydro proposes to replace the stator windings at Bay d’Espoir Unit 4 in 2012, Unit 1 in 2013 and  
23 Unit 3 in 2014. This work will include an upgrade to the generator protection, the remediation of  
24 asbestos from stator components, and the refurbishment of other generator components such as  
25 the rotor poles. According to the Application the windings of Units 1, 3 and 4 are beyond the  
26 anticipated useful life and failure of a stator in service would cause significant damage and could  
27 result in a 12 to 18 month outage.

28  
29 In support of the proposals in relation to the stator windings Hydro filed two reports. In the first  
30 report, *Replacement of Stator Windings at the Bay d’Espoir Hydroelectric Generating Station*,  
31 dated July 2011, Hydro states that, like Unit 2 which had a stator replacement in 2010, Unit 4 has  
32 failed the over-potential test and is deemed to have the next highest potential for imminent  
33 failure. Units 1 and 3 are critical to the overall reliability of the powerhouse as these units  
34 provide station service power to the generating station. During the replacement of Unit 2 in

1 2010 signs of wear were found that raised concern about the condition of the stators on the  
2 remaining units. There is no way, however, to test for these conditions on the other three units  
3 without a major rebuild. Units 1, 3 and 4 have visual signs that the insulation is degrading and  
4 losing its dielectric strength as the insulation is cracked and brittle when dry and drips asphalt  
5 when it is heated. The report states that, should a stator fail in service, it would cause significant  
6 damage to the stator and its rotor, resulting in an estimated repair cost of \$450,000 and 100 days  
7 of effort.

8  
9 The second report, *Bay d'Espoir Generating Station Powerhouse No. 1, Unit Generators #1, #3*  
10 *and #4, Condition Assessment Report*, dated September 1, 2011, was prepared by AMEC  
11 Americas Limited. This report concludes that Unit 4 is in the worst condition and will need to be  
12 rewound as soon as possible or a failure during operation will be imminent. There is weakness  
13 of the stator winding insulation in Unit 1 but it is likely able to operate without high probability  
14 of major failure until the spring of 2013. The Unit 3 stator winding insulation is still in good  
15 condition and can be expected to be in service for a few years.

16  
17 Neither the Industrial Customers nor the Consumer Advocate comment with respect to this  
18 project.

19  
20 In Order No. P.U. 36 (2008) the Board approved Hydro's proposal to purchase a spare stator  
21 winding for the Bay d'Espoir Hydroelectric Generating Station. In Order No. P.U. 1(2010) the  
22 Board approved a two-year capital expenditure to install the spare winding in Unit 2 and  
23 purchase another spare winding. Hydro did not make any proposals in relation to the stator  
24 windings in its 2011 Capital Budget but in the 2011 five-year capital expenditure plan Hydro  
25 forecasted spending \$4,609,000 in 2014 in relation to Rewind Stator Units 4, 1 and 3. Hydro  
26 now seeks approval to spend a total of \$13,643,000 over three years from 2012-2014.

27  
28 The Board finds that the results of the condition assessment prepared by AMEC Americas  
29 Limited is conclusive evidence that, unless the Unit 4 stator rewinding proceeds, a failure during  
30 operation is imminent. The result of such a failure as set out by Hydro is significant. Based on  
31 the evidence the Board is satisfied that the Unit 4 stator rewinding should proceed in 2012 as  
32 proposed.

33  
34 The Board also finds that the evidence shows that the stator windings in Units 1 and 3 are also at  
35 or near the end of useful life. This work will clearly have to be done soon. In 2009, 2010 and  
36 2011 Hydro's plan was to keep a spare winding on hand so that it could be installed when a  
37 winding failure occurred. Now, in 2012, Hydro states that it is taking a proactive approach and  
38 is seeking approval for a three-year project starting in 2012. The Board is not persuaded that this  
39 project should be approved as a multi-year project. The Board notes that the evidence suggests  
40 that Unit 1 and 3 are likely not in the same deteriorated condition as Unit 4. The AMEC report  
41 says that there is not a high probability of failure of Unit 1 until spring of 2013 and that, with  
42 follow-up testing, Unit 3 can be expected to be in service at least until 2014. Rather than  
43 approving the work on Units 1 and 3 as part of a multi-year project the Board will approve the  
44 work on Unit 4 and require Hydro to seek subsequent approval of the work on the other two  
45 units. This will ensure that the most up-to-date information as to the condition of each of the

1 units is available at the time that these proposals are made. The Board is satisfied that this  
 2 approach should not jeopardize Hydro's proposed timeline for doing the rewind on the other  
 3 units as Hydro should have a spare stator winding on hand and, should it be necessary, Hydro  
 4 can seek approval to do the work on the other units as planned in each of its 2013 and 2014  
 5 Capital Budgets.

6  
 7 Replace Emergency Diesel Generator, Bay d'Espoir - \$611,400 (2012) and \$282,700 (2013)

8  
 9 Hydro proposes to replace the existing 200 kW emergency diesel generator, control panel and  
 10 associated auxiliary equipment in Powerhouse No. 1 at the Bay d'Espoir Generating Station with  
 11 a 500 kW containerized module unit. This unit serves as the last chance source for station  
 12 service and provides black start capability for the plant. The existing diesel generator was  
 13 installed in 1967 before two additional hydroelectric generating units were added in 1970.  
 14 Additional generating units and auxiliary equipment added to the plant since have increased the  
 15 essential service load which resulted in the existing generator being undersized. According to  
 16 Hydro the generator will trip if it is required to provide station service because it is not capable  
 17 of supplying all of the critical loads for the plant. As a result the plant operator must, while in  
 18 the dark, turn off all the breakers on the emergency panel while attending to other issues created  
 19 by unit auxiliaries shutting down. (Application, Volume II, Tab 9, pgs. 2-4)

20  
 21 Hydro reports that in 2003 a partial overhaul of the 200 kW unit was completed instead of the  
 22 scheduled complete overhaul because of limited availability of replacement parts. In 2003 the  
 23 generator failed to pick up load resulting in a several hour delay in bringing the station service  
 24 units back on-line. During the 2003 overhaul it was found that a key part that allows the  
 25 governor to pick-up load was not working and could not be reasonably and reliably repaired.  
 26 According to Hydro this means that the generator has to be manually loaded which results in  
 27 unnecessary safety risks. Hydro provides a cost benefit analysis to show that a containerized unit  
 28 has the lower cumulative net present value. (Application, Volume II, Tab 9, pgs. 5, 7 and 11)

29  
 30 The Industrial Customers note that Hydro assigns this project a rank of "21" and that there have  
 31 been only three black start conditions since 1974. Also the Industrial Customers note that the  
 32 existing generator became undersized for the task in 1970. The Industrial Customers note that  
 33 there is battery equipped lighting for about one hour and submit that if one hour is insufficient  
 34 then providing for additional battery power "*would be, by several magnitudes, less expensive*  
 35 *than the proposed capital expenditure*". (Industrial Customers, Submission Phase I, pg. 20) The  
 36 Industrial Customers suggest that it is unclear whether the existing generator has some remaining  
 37 useful life but, if that is the case, then the Board should only approve the cost of installing a 200  
 38 kW emergency generator, at approximately half the cost of the proposed unit as set out in IC-  
 39 NLH-13.

40  
 41 The Consumer Advocate does not comment with respect to this project.

42  
 43 Hydro argues that this project is required to replace obsolete equipment required for the reliable  
 44 and safe supply of power. Hydro submits that the original manufacturer no longer supports the  
 45 existing model, spare parts cannot be reliably secured and, most importantly, the existing unit is

1 undersized for the required station service. Hydro says that the manual work-around procedure  
 2 that was adopted resulted in safety issues as a result of the need to manually trip off essential  
 3 loads and to work without lighting in an enclosed space. Hydro submits that it would be  
 4 imprudent to ignore the need to be able to successfully respond to a black start condition in the  
 5 largest generating facility on the Island Interconnected system and, further, it is unreasonable to  
 6 continue to endanger staff by requiring them to interact with hot and moving parts at times with  
 7 only a flashlight. Hydro argues that the Industrial Customers' emphasis on how a project is  
 8 ranked suggests reliance on the prioritization for something other than the purpose for which it  
 9 was designed.

10  
 11 According to Hydro's evidence, this emergency diesel generator is critical to the system. Hydro  
 12 states in its response to PUB-NLH-54:

13  
 14 *“Emergency preparedness is critical and when all other station service sources are lost, 604 MW*  
 15 *of generation for delivery to the island interconnected system may depend on the operation of an*  
 16 *emergency diesel generator that has exceeded its service life, cannot be properly maintained due*  
 17 *to obsolescence, and is undersized.”*  
 18

19 Given the critical importance of this unit to the interconnected system, especially under  
 20 emergency or outage conditions, the Board must question why the situation was not addressed  
 21 before now. While the Board acknowledges the efforts of Hydro to defer costs associated with  
 22 the replacement of this unit the evidence suggests that this decision may have potentially put  
 23 workers at risk in an emergency black start situation, even with the mitigation measures put in  
 24 place. The Board notes that there is no evidence that the delay in replacing this unit has resulted  
 25 in loss of supply or injury, which are the primary justifications put forth by Hydro for this  
 26 project. Given this fact the Board acknowledges the argument of the Industrial Customers.  
 27 However the Board is satisfied that there should be a fully functioning, safe and adequately sized  
 28 emergency generator at the Bay d'Espoir plant, which is one of the primary supply points for the  
 29 island interconnected system. This project will be approved as proposed.  
 30

31 Install Additional 230kV Transformer, Oxen Pond - \$3,535,200(2012), \$3,354,100(2013),  
 32 \$3,650,200(2014)  
 33

34 Hydro proposes to install a fourth 230/66 kV transformer at the Oxen Pond Terminal Station,  
 35 along with the addition of a 230 kV ring bus arrangement, and replace the remaining 230 kV air  
 36 blast circuit breaker with a new 230 kV sulphur hexafluoride (SF<sub>6</sub>) gas filled circuit breaker.  
 37 The project scope also includes the removal of an air handling and compression system  
 38 associated with the air blast breakers to facilitate the installation of the required protection and  
 39 control panels.  
 40

41 This project is justified on the basis that load forecasts for the St. John's area indicate that peak  
 42 load in 2012 will exceed transformer capacity in the Hardwoods-Oxen Pond Loop System by  
 43 approximately 11 percent. Hydro states based on the 2010 Energy Supply Forecast from  
 44 Newfoundland Power, the 2014 peak load for the Oxen Pond Terminal Station will exceed the  
 45 installed transformer capacity. Hydro reports that the 2009 Hardwoods-Oxen Pond Loop

1 analysis indicated no transformer overload or backup criteria violation in the near term but the  
2 next available forecast from Newfoundland Power for use in the planning and capital budget  
3 cycle revealed actual system peaks from 2010 with figures significantly higher than previously  
4 forecast. As a result Hydro advanced the addition of the Oxen Pond transformer from 2015 to  
5 2013, the earliest possible in-service date. (Application, Volume II, Tab 11, pgs. 1-3)  
6

7 Neither the Industrial Customers nor the Consumer Advocate commented on this project.  
8

9 The unplanned advancement of this project is of great concern to the Board especially given the  
10 fact that it appears that at this stage it is already too late to ensure that Hydro's own transformer  
11 back up criteria are not violated. Further information in relation to why Hydro was not able to  
12 anticipate this important change in circumstances even one year ago in its 2011 Capital Budget is  
13 required.  
14

15 Another issue which has not been fully canvassed in relation to the transformers at Oxen Pond is  
16 how the age of these transformers has been considered in the planning. Hydro states in PUB-  
17 NLH-57 that the economic life of the power transformers within the Island Interconnected  
18 System is 40 years and the four transformers in the loop range in age from 35 to 44 years. In  
19 PUB-NLH-57 the Board asked Hydro how the age of the transformers at Hardwoods and Oxen  
20 Pond affects the replacement/addition strategy of transformers in the Hardwoods-Oxen Pond  
21 loop. Hydro reports that given continued favourable condition assessments for these units, they  
22 will be replaced due to load growth. Hydro further states:  
23

24 *"Should condition assessment indicate potential issues with a specific 40/53.3/66.7 MVA*  
25 *transformer prior to its intended replacement date based upon load growth, an upgrade or*  
26 *replacement will be covered under a future Upgrade Power Transformers capital budget*  
27 *proposal."*  
28

29 Hydro did not address the risk of the failure of the T1 transformer in advance of the planned  
30 replacement in 2020 or 2024, when T1 will have been in service for 53 or 57 years. Notably, the  
31 impact of an earlier than planned replacement of T1 on the cumulative net present value  
32 calculations of the two alternatives is not presented. Neither does Hydro address the impact of  
33 the failure of one of the other transformers and the potential impacts of replacing other  
34 transformers with larger units. The Board notes that there was a great deal of information  
35 provided about Hydro's transformers in relation to a separate project Upgrade Power  
36 Transformers. Hydro does not show how this information has been considered in the context of  
37 the Hardwoods-Oxen Pond loop. The Board finds that this project has not been justified on the  
38 record and that further information in relation to the changes in load forecasts, age, condition and  
39 replacement of the transformers in Hardwoods-Oxen Pond loop is required. The Board will not  
40 approve this project at this time but would expect Hydro to file an application in relation to the  
41 Hardwoods-Oxen Pond loop system fully addressing the outstanding issues as soon as possible.

1 Summary Board Findings: Multi-year Projects

2

3 The Board will approve the proposed multi-year expenditures in relation to purchases and  
4 construction of improvements and additions to Hydro's property in excess of \$50,000 which  
5 began in 2011 and which are proposed to begin in 2012, except:

6

7 a. Rewind Stator Units 1 and 3, Bay d'Espoir - \$5,054,200 (2013) and \$3,634,600  
8 (2014) is not approved but approval is given for expenditures in the amount of  
9 \$4,953,800 for the 2012 capital project Rewind Stator Unit 4; and

10 b. Install Additional 230kV Transformer, Oxen Pond - \$3,535,200 (2012), \$3,354,100  
11 (2013), \$3,650,200 (2014) is not approved.

1 **V 2010 AVERAGE RATE BASE**

2

3 The following table, taken from Section K of the Application, shows the calculation of the actual  
4 average rate base for 2010 compared with 2009:

	(\$000s)	
	<u>2010</u>	<u>2009</u>
Capital Assets	\$2,124,663	\$2,082,459
<u>Less:</u>		
Accumulated Depreciation	669,742	632,085
Contributions in Aid of Construction	97,257	96,749
Net Capital Assets	1,357,664	1,353,625
Balance Previous Year	1,353,625	1,344,892
Average Capital Assets	1,355,645	1,349,259
Working Capital	3,093	2,965
Fuel	29,908	20,817
Supplies Inventory	24,089	23,567
Average Deferred Charges	71,924	76,870
<b>Average Rate Base at Year End</b>	<b><u>\$ 1,484,659</u></b>	<b><u>\$ 1,473,478</u></b>

5

6 Grant Thornton, the Board's financial consultants, reviewed the calculation of the 2010 average  
7 rate base, as contained in Section K of the Application and shown above, and concluded that the  
8 calculation is accurate and in accordance with Board Orders and established regulatory practice.

9

10 Based on the information provided and verified by Grant Thornton the Board will approve all the  
11 components of and Hydro's average rate base for 2010 in the amount of \$1,484,659,000.



1 **VI CLAIM FOR COSTS**  
2

3 The Industrial Customers request that in the context of the present Application there be an award  
4 of costs on the same or similar basis on which the Consumer Advocate's costs are dealt with in  
5 the capital budget process. The Industrial Customers argue that there are a number of aspects of  
6 the Application which strongly militate towards an award of costs. In particular the Industrial  
7 Customers argue the following aspects:

- 8 i) Decisions made in relation to these capital projects may have significant effect on  
9 future decisions to be made on related capital projects leading up to 2017;  
10 ii) The unprecedented proposed increase in capital expenditure for 2012 and coming  
11 years;  
12 iii) Hydro's late filing and failure to present evidence has resulted in additional costs  
13 for all parties including the Industrial Customers; and  
14 iv) It is not fair to assume that the Consumer Advocate can represent the interests of  
15 all of Hydro's ratepayers, in all circumstances, from every needed perspective.  
16

17 Neither Hydro, the Consumer Advocate nor Newfoundland Power comment on the Industrial  
18 Customers' request for costs.  
19

20 The Board has jurisdiction to award costs to a party under s. 90 of the *Act*. Hydro did not make  
21 any argument with respect to the request for costs. The Board found the participation of the  
22 Industrial Customers contributed to the Board's understanding of the issues. The Board accepts  
23 the arguments of the Industrial Customers that, in the circumstances, an award of costs is  
24 appropriate. Unlike the Consumer Advocate's cost recovery, which is set out in s. 117 of the  
25 *Act*, an award of costs to the Industrial Customers is made in accordance with s. 90 of the *Act*.  
26 The Industrial Customers will be required to submit a bill of costs to the Board for its  
27 consideration.

1 **VII ORDER**

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

- 4
- 5 1. Hydro's proposed changes to its capital expenditure methodology to incorporate the  
6 requirements of International Financial Reporting Standards are approved.  
7
- 8 2. As set out in Schedule A, Hydro's proposed construction and purchase of  
9 improvements or additions to its property in excess of \$50,000 to be completed in 2012  
10 are approved, except:
- 11 a. Upgrade Burnt Dam Spillway, Bay d'Espoir – \$1,702,800 is not approved but  
12 approval is given for expenditures in the amount of \$523,840 to install a stop log  
13 system and to conduct the recommended condition assessment;
- 14 b. Increase Generation Capacity, Mary's Harbour - \$1,489,400 is not approved;  
15 and
- 16 c. Upgrade Transmission Line Access Trails, Stoney Brook to Springdale -  
17 \$313,000 is not approved.  
18
- 19 3. As set out in Schedule B, Hydro's proposed multi-year construction and purchase of  
20 improvements or additions to its property in excess of \$50,000, which began in 2011 and  
21 which are proposed to begin in 2012, are approved, except:
- 22 a. Rewind Stator Units 1 and 3, Bay d'Espoir - \$5,054,200 (2013) and \$3,634,600  
23 (2014) is not approved but approval is given for expenditures in the amount of  
24 \$4,953,800 for the 2012 capital project Rewind Stator Unit 4; and
- 25 b. Install Additional 230kV Transformer, Oxen Pond - \$3,535,200(2012),  
26 \$3,354,100(2013), \$3,650,200(2014) is not approved.  
27
- 28 4. Pursuant to Section 78 of the *Act* the rate base for the year ending December 31, 2010  
29 is hereby fixed and determined at \$1,484,659,000.  
30
- 31 5. The Industrial Customers are entitled to an award of costs in an amount to be fixed by  
32 the Board.  
33
- 34 6. Hydro shall pay all costs and expenses of the Board incurred in connection with the  
35 Application.

Dated at St. John's, Newfoundland and Labrador this 24<sup>th</sup> day of January, 2012.

---

Darlene Whalen, P.Eng.  
Vice-Chair

---

Dwanda Newman, LL.B.  
Commissioner

---

James Oxford  
Commissioner

---

Cheryl Blundon  
Board Secretary

**Schedule A**

**ORDER No. P. U. 2(2012)**

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

**ISSUED: JANUARY 24, 2012**

NEWFOUNDLAND AND LABRADOR HYDRO  
 2012 CAPITAL BUDGET  
 PHASE I  
 SINGLE YEAR PROJECTS OVER \$50,000  
 (\$000)

PROJECT DESCRIPTION	2012
<i>Generation</i>	
<b><u>HYDRAULIC PLANT</u></b>	
Upgrade Burnt Dam Spillway - Bay d'Espoir	523.8
Replace Fuel Tank - Burnt Dam	207.5
Replace Rip Rap - Bay d'Espoir	199.1
<b>TOTAL GENERATION</b>	930.4
<i>Transmission and Rural Operations</i>	
<b><u>TERMINAL STATIONS</u></b>	
Upgrade Circuit Breakers - Various Sites	1,677.3
Upgrade Power Transformers - Various Sites	1,246.3
Replace Instrument Transformers - Various Sites	452.4
Replace Insulators - Various Sites	411.6
Replace Disconnects - Various Sites	351.8
Replace Surge Arrestors - Various Sites	75.7
Perform Wood Pole Line Management Program - Various Sites	2,519.3
<b><u>DISTRIBUTION</u></b>	
Provide Service Extensions - All Service Areas	4,172.0
Upgrade Distribution Systems - All Service Areas	2,508.0
Distribution System Additions - Various Sites	2,172.1
Replace Recloser Control Panels - Various Sites	202.3
<b><u>GENERATION</u></b>	
Replace Fuel Storage Tanks - St. Lewis	465.1
Perform Front End Engineering Design for Diesel Plant Remediation -Various Sites	110.4
<b><u>PROPERTIES</u></b>	
Install Fall Protection Equipment - Various Sites	199.2
Legal Survey of Primary Distribution Line Right of Way - Various Sites	197.9
Upgrade Mechanical Workshop - St. Anthony	87.0
Install Waste Oil Storage Tank - L'Anse au Loup	81.5
<b><u>METERING</u></b>	
Purchase Meters, Equipment and Metering Tanks - Various Sites	190.4
<b><u>TOOLS AND EQUIPMENT</u></b>	
Replace Light Duty Mobile Equipment - Various Sites	400.6
Replace Excavator - L'Anse au Loup	120.0
<b>TOTAL TRANSMISSION AND RURAL OPERATIONS</b>	17,640.9

NEWFOUNDLAND AND LABRADOR HYDRO  
2012 CAPITAL BUDGET  
PHASE I  
SINGLE YEAR PROJECTS OVER \$50,000  
(\$000)

PROJECT DESCRIPTION	2012
<i>Capital Budget: General Properties</i>	
<b><u>INFORMATION SYSTEMS</u></b>	
<b><u>SOFTWARE APPLICATIONS</u></b>	
<b><u>New Infrastructure</u></b>	
Perform Minor Application Enhancements - Hydro Place	123.4
Cost Recoveries	(41.9)
Implement Work Protection Safety Code Application - Hydro Place	115.6
<b><u>Upgrade of Technology</u></b>	
Upgrade Energy Management System - Hydro Place	117.8
Upgrade Microsoft Project - Hydro Place	91.3
Cost Recoveries	(31.0)
Upgrade Creditron System - Hydro Place	37.5
<b><u>COMPUTER OPERATIONS</u></b>	
<b><u>Infrastructure Replacement</u></b>	
Replace Personal Computers - Various Sites	490.6
Replace Peripheral Infrastructure - Various Sites	327.5
Upgrade Enterprise Storage Capacity - Hydro Place	306.3
Cost Recoveries	(104.1)
<b><u>Upgrade of Technology</u></b>	
Upgrade Server Technology Program - Hydro Place	202.6
Cost Recoveries	(30.9)
Upgrade Computer Room - Hydro Place	122.0
Cost Recoveries	(41.5)
<b><u>TELECONTROL</u></b>	
<b><u>NETWORK SERVICES</u></b>	
<b><u>Infrastructure Replacement</u></b>	
Replace Radomes - Various Sites	172.0
Upgrade Communication Services - Paradise River	97.5
Purchase Tools and Equipment Less than \$50,000	85.3
<b><u>Network Infrastructure</u></b>	
Replace Battery Banks and Chargers - Various Sites	880.8
Replace Network Communications Equipment - Various Sites	521.6
<b><u>Upgrade of Technology</u></b>	
Replace Telephone Systems - Port Saunders and Whitbourne	199.3
<b><u>ADMINISTRATION</u></b>	
Remove Safety Hazards - Various Sites	249.1
Purchase Tools and Equipment Less than \$50,000	131.6
<b>TOTAL GENERAL PROPERTIES</b>	4,022.4
<i>Capital Budget: Major Overhauls and Inspections</i>	
<b><u>MAJOR OVERHAULS AND INSPECTIONS</u></b>	
Overhaul Diesel Units - Various Sites	974.1
Overhaul Turbine/Generator Units - Granite Canal and Upper Salmon	456.6
<b>TOTAL MAJOR OVERHAULS AND INSPECTIONS</b>	1,430.7
<b>TOTAL PHASE I SINGLE YEAR PROJECTS OVER \$50,000</b>	<b>24,024.4</b>

**Schedule B**

**ORDER No. P. U. 2(2012)**

**Multi-year projects over \$50,000**

**ISSUED: JANUARY 24, 2012**

**NEWFOUNDLAND AND LABRADOR HYDRO**  
**2012 CAPITAL BUDGET - Phase I**  
**PROJECTS OVER \$50,000**  
**MULTI-YEAR PROJECTS**  
**(\$000)**

***Multi-year Projects Commencing in 2012***

<b>PROJECT DESCRIPTION</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Rewind Stators Unit 4 - Bay d'Espoir	4,953.8				
Replace Emergency Diesel Generator - Bay d'Espoir	611.4	282.7			
Replace Compressed Air Piping and Install Dew Point Monitor - Buchans	28.4	278.3			
Upgrade Distribution Lines - Bay d'Espoir, Parsons Pond and Plum Point	1,385.2	1,110.5			
Install Automated Meter Reading - Rocky Harbour and Glenburnie	379.6	287.7			
Replace Off Road Track Vehicles - Flower's Cove and Cow Head	482.5	395.6			
Upgrade JD Edwards - Hydro Place	284.0	587.6			
Cost Recoveries	(96.6)	(199.8)			
Replace Vehicles and Aerial Devices (2012-2013) - Various Sites	1,711.4	1,218.8			
<b>Total phase I Multi-year Projects over \$50,000 commencing 2012</b>	<b>9,739.7</b>	<b>3,961.4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>



**NEWFOUNDLAND AND LABRADOR HYDRO**  
**2012 CAPITAL BUDGET**  
**PHASE I**  
**PROJECTS OVER \$50,000**  
**MULTI-YEAR PROJECTS**  
**(\$000)**

***Multi-year Projects Commencing in 2011***

<b>PROJECT DESCRIPTION</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Replace Static Excitation Systems - Upper Salmon, Holyrood and Hinds Lake	2,402.5	1,219.3			
Upgrade Intake Gate Controls - Bay d'Espoir	468.0				
Upgrade Generating Station Service Water System - Cat Arm	440.0				
Upgrade Hydrogen System - Holyrood	800.4				
Upgrade Synchronous Condenser Unit 3 - Holyrood	405.5				
Replace Relay Panels Unit 3 - Holyrood	553.6				
Upgrade Electrical Equipment - Holyrood	206.3				
Replace Steam Seal Regulator Unit 2 - Holyrood	438.4	284.5			
Perform Grounding Upgrades - Various Sites	324.0	329.0	337.1	345.4	
Upgrade Substation - Wabush	626.4				
Upgrade Station Reliability and Safety - Rocky Harbour	360.1				
Replace 69 kV SF6 Breakers - St. Anthony Airport	290.1				
Replace Compressed Air System - Bay d'Espoir	563.6				
Replace 230 kV Circuit Breaker - Sunnyside	590.1				
Install Alternate Station Services - Stony Brook and Massey Drive	109.2				
Replace Guy Wires TL-215 - Doyles to Grand Bay	318.0	350.1	530.0		
Upgrade Distribution Systems - Francois, Rigolet and Happy Valley	652.4				
Replace Substation Infrastructure - Burgeo	368.3				
Perform Arc Flash Remediation - Various Sites	380.3	391.0	401.8	413.1	
Replace Mini Hydro Turbine - Roddickton	235.4				
Install Automated Meter Reading - Labrador City	58.3				
Replace Off-Road Track Vehicles - Bishop's Falls and Fogo	609.4				
Replace MDR 6000 Microwave Radio (West) - Various Sites	683.3				
Replace Vehicles and Aerial Devices (2011-2012) - Various Sites	638.9				
<b>Total phase I Multi-year Projects over \$50,000 commencing 2011</b>	<b>12,522.5</b>	<b>2,573.9</b>	<b>1,268.9</b>	<b>758.5</b>	<b>0.0</b>

---

*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

---