

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

**AN ORDER OF THE BOARD**

**NO. P. U. 38(2010)**

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

and

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

- (a) approving its 2011 capital budget;
- (b) approving its 2011 capital purchases and construction projects in excess of \$50,000;
- (c) approving the estimated contributions in aid of construction for 2011; and
- (d) fixing and determining its average rate base for 2009.

**BEFORE:**

Andy Wells  
Chair and Chief Executive Officer

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	2
<b>II</b>	<b>PROPOSED 2011 CAPITAL BUDGET</b>	<b>3</b>
	1. Overview	3
	2. 2011 Capital Budget	4
	3. Capital Projects Over \$50,000	8
	4. Summary of Board Findings	17
<b>III</b>	<b>2009 AVERAGE RATE BASE</b>	<b>18</b>
<b>IV</b>	<b>ORDER</b>	<b>19</b>
	<b>SCHEDULE A</b>	
	<b>SCHEDULE B</b>	

1 **I BACKGROUND**

2  
3 **1. The Application**

4  
5 Hydro filed its 2011 Capital Budget Application with the Board of Commissioners of Public  
6 Utilities (the "Board") on August 2, 2010 requesting that the Board make an Order:

- 7  
8 (i) approving its 2011 Capital Budget of \$65,058,000;  
9 (ii) approving 2011 capital purchases and construction projects in excess of \$50,000;  
10 (iii) approving the estimated contributions in aid of construction for 2011 of  
11 approximately \$400,000; and  
12 (iv) fixing and determining its average rate base for 2009 in the amount of  
13 \$1,473,477,000.  
14

15 On November 2, 2010 Hydro filed a revised application (the "Application") with the Board  
16 requesting that the Board make an Order:

- 17  
18 (i) approving its 2011 Capital Budget of \$60,241,000;  
19 (ii) approving 2011 capital purchases and construction projects in excess of \$50,000;  
20 (iii) approving the estimated contributions in aid of construction for 2011 of  
21 approximately \$400,000; and  
22 (iv) fixing and determining its average rate base for 2009 in the amount of  
23 \$1,473,477,000.  
24  
25

26 **2. Board Authority**

27  
28 Section 41 of the *Act* requires a public utility to submit an annual capital budget of proposed  
29 improvements or additions to its property to the Board for approval no later than December 15<sup>th</sup>  
30 in each year for the next calendar year. The utility is required to include an estimate of  
31 contributions toward the cost of improvements or additions to its property which the utility  
32 intends to demand from its customers.  
33

34 Section 41 also prohibits a utility from proceeding without the prior approval of the Board with  
35 the construction, purchase or lease of improvements or additions to its property where (a) the  
36 cost of the construction or purchase is in excess of \$50,000, or (b) the cost of the lease is in  
37 excess of \$5,000 in a year of the lease.  
38

39 Section 78 gives the Board the authority to fix and determine the rate base for the service  
40 provided or supplied to the public by the utility and also gives the Board the power to revise the  
41 rate base.  
42

43 Board procedures and processes are established in accordance with the *Act* and the regulations  
44 thereunder. The Board's Capital Budget Guidelines set out the detailed process for capital  
45 budget applications.

1     **3.     Application Process**

2  
3     Notice of the 2011 Capital Budget Application was published beginning on August 14, 2010  
4     inviting participation in the proceeding. Details of the Application and supporting  
5     documentation were posted on the Board's website.

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

11  
12    The Board established a schedule for the proceeding, setting out the dates for the filing of  
13    Requests for Information (RFIs) and related responses. A total of 130 RFIs were answered by  
14    Hydro. No request for a public hearing was received.

15  
16    Grant Thornton, the Board's financial consultants, reviewed the calculations of the 2009 average  
17    rate base and filed a report on September 30, 2010 which was copied to all participants.

18  
19    The Consumer Advocate and the Industrial Customers filed written submissions on November 8,  
20    2010. Newfoundland Power did not file any RFIs or written submissions. Hydro filed its written  
21    submission on November 10, 2010.

1 **II PROPOSED 2011 CAPITAL BUDGET**

2  
3 **1. Overview**

4  
5 Hydro's proposed total capital budget for 2011 is \$60,241,000. The proposed expenditures by  
6 asset class, revised to agree to the details provided in the revised 2011 Capital Plan, are as  
7 follows:  
8  
9

<u>Asset Class</u>	<u>Budget (\$000s)</u>
<b><u>Generation</u></b>	
Hydraulic Plant	\$ 3,854
Thermal Plant	10,680
Gas Turbines	1,695
Tools and Equipment	359
<b>Total Generation</b>	<b>\$16,588</b>
<b><u>Transmission and Rural Operations</u></b>	
Terminal Stations	\$ 9,607
Transmission	4,154
Distribution	14,723
Generation	3,842
Properties	356
Metering	637
Tools and Equipment	1,920
<b>Total Transmission and Rural Operations</b>	<b>\$35,239</b>
<b><u>General Properties</u></b>	
Information Systems	\$2,032
Telecontrol	2,628
Transportation	2,351
Administrative	407
<b>Total General Properties</b>	<b>\$7,418</b>
<b>Contingency Fund</b>	<b>\$1,000</b>
<b>Total 2011 Capital Budget</b>	<b>\$60,245</b>

10  
11  
12 Hydro has estimated the total contributions in aid of construction for 2011 to be approximately  
13 \$400,000. The Application states that the 2011 Capital Budget takes into account this estimate  
14 and that all contributions shall be calculated in accordance with the relevant policies as approved  
15 by the Board.

## 2. 2011 Capital Budget

Subsection 41(1) of the *Act* requires that Hydro apply to the Board for approval of its annual capital budget, including an estimate of contributions toward the cost of improvements or additions to its property that it intends to demand from its customers. In support of the proposed 2011 Capital Budget the Application includes detailed information and reports as to the proposed overall level of capital spending.

In the 2011 Capital Plan Overview Hydro states that continuous renewal, expansion and modification of its assets is required to ensure the provision of safe, reliable, least cost service and to meet changing environmental and other regulatory requirements. Hydro notes that its 20-year Capital Plan identifies the major capital expenditures which will be required to maintain the existing assets in safe, reliable operating condition and that this plan is reviewed and revised annually to reflect new information in relation to the condition of the assets and operating demands. Hydro explains that the development of a capital proposal is made considering a number of factors including load growth, maintenance history, condition assessment, performance assessment, legislative requirements, reliability improvements, cost efficiencies, operating experience, changing operating conditions, asset maintenance strategy, discussions between Regulated Operations and Engineering Services, familiarity with the equipment, operating and maintenance cost, and professional judgement. Hydro confirms that assets are operated and maintained to deliver the least life cycle cost.

In the 2011 Capital Plan report Hydro notes that its five-year plan indicates an increasing trend in expenditures which Hydro says is required to address maturing infrastructure and to replace assets to maintain reliable service. According to Hydro there are peaks in capital spending expected in 2011 and 2012 as a result of the conversion of the operating voltage of the Labrador City distribution system and the construction of a new diesel plant at Charlottetown. Hydro says at page 9:

*“The very significant cost of these two projects resulted in a reprioritization of projects within the five and twenty year plans to maintain the total cost of the five year plan close to the value for the same period indicated in the 2009 Capital Budget Application. The total cost of the five year plan is less than 5% higher than indicated last year for 2010 to 2014, despite the inclusion of these two large projects.”*

At page 9 of the 2011 Capital Plan report Hydro acknowledges that:

*“The trend of increasing capital expenditures will continue as Hydro addresses aging infrastructure which will require significant annual expenditures to reliably enable electrical energy to be produced, transmitted and distributed.”*

In written submission the Industrial Customers raise a concern in relation to the level of Hydro’s capital budget and argue that “the unchecked growth” of Hydro’s capital expenditures continues to be of concern. The Industrial Customers submit that there is a “new normal” of high capital

1 expenditure even without any major capital expansion project. The Industrial Customers note  
 2 that the *EPCA* requires Hydro to manage and operate its facilities in a manner that results in  
 3 power being delivered to consumers in the province at the "*lowest possible cost consistent with*  
 4 *reliable service*". They say that, while amounts approved in a capital budget do not immediately  
 5 appear in rates, capital spending will ultimately increase rates through interest and depreciation  
 6 expense and Hydro's return on equity. The Industrial Customers submit at page 3:

7  
 8 *"The Board's responsibility is to act as the "governor" on Hydro's capital spending which*  
 9 *would otherwise be restrained by market forces in a non-monopoly environment, and to ensure*  
 10 *compliance with the legislation which requires least cost electricity be provided to customers in*  
 11 *the Province."*

12  
 13 In the context of their concern as to Hydro's escalating capital expenditure the Industrial  
 14 Customers note a "significant cost overrun" in a 2010 capital budget project *Replace*  
 15 *Accommodations, Septic System and Upgrade Plant Communications System at Cat Arm*, and  
 16 specifically comment:

17  
 18 *"It is submitted that the consequences of not providing reliable inputs and estimates -- capital*  
 19 *expenditure overruns -- should not be overlooked when considering whether marginal or low*  
 20 *priority project should be approved in years when Hydro is proposing, overall, a high level of*  
 21 *capital expenditure."*(Industrial Customers, Final Submission, p.6)

22  
 23 The Consumer Advocate does not comment specifically on the overall level of Hydro's 2011  
 24 Capital Budget.

25  
 26 Hydro argues that it is required by Section 37 of the *Act* to provide electrical service and  
 27 facilities that are safe and adequate and just and reasonable and further that section 3 of the  
 28 *EPCA* requires that it provide efficient service that ensures that customers have equitable access  
 29 to an adequate supply of power, that is provided at least cost consistent with reliable service.  
 30 Hydro submits that "*...the projects included in its revised Application are all prudent and*  
 31 *necessary to provide reasonable, adequate, safe and reliable service to its customers, at least*  
 32 *cost."*(Hydro, Final Submission, p.16)

33  
 34 The Board also notes the general trend of higher levels of capital spending in recent years. The  
 35 increasing level of Hydro's capital budget was also raised during the 2010 capital budget  
 36 proceeding. In addressing these concerns the Board stated in Order No. P.U. 1(2010):

37  
 38 *"The Board accepts this explanation for the higher levels of capital expenditures forecast for the*  
 39 *next five years, especially given Hydro's aging infrastructure and the recent trend of increasing*  
 40 *costs for materials. The Industrial Customers' suggestion that the Board should somehow*  
 41 *constrain Hydro's annual capital spending based on its anticipated revenues as would be the*  
 42 *case for non-regulated enterprises is not one that should be contemplated in the context of the*  
 43 *obligation by Hydro to provide service as set out in the legislation. In a competitive market*  
 44 *companies can make choices about factors such as the type and level of service provided, the*  
 45 *products they produce, and the price charged. In reviewing Hydro's proposed capital budget the*

1            *Board must satisfy itself that the proposed projects are, as required by the Act, consistent with the*  
2            *requirement for least cost and safe and reliable service."*

3  
4            The Board believes that it is more than just a "governor" on Hydro's capital spending. In  
5            accordance with the *Act* the Board must ensure the provision of least cost, safe and reliable  
6            service. It is in this context that the Board has resisted requests over the years to set arbitrary  
7            limits on capital spending. The Board does not assume that higher levels of capital budget  
8            spending are always undesirable. Sometimes a higher level of spending is reasonable and  
9            necessary in circumstances which may involve aging assets, increasing load, inflation, and  
10           changing regulatory standards and requirements. Each capital budget is comprehensively  
11           reviewed for reasonableness with a view to ensuring the provision of least cost, safe and reliable  
12           service. This standard is tested through an open and public process which involves the  
13           participation of all interested parties who are provided with a full opportunity to request  
14           information and make submissions.

15  
16           The Board is as concerned as the Industrial Customers that Hydro provide reasonable cost  
17           estimates in relation to capital projects. In the absence of reasonable estimates the review  
18           process may be complicated and the credibility of all estimates may be compromised. To  
19           monitor this and other aspects of its capital budget Hydro is required to file: i) during the year, a  
20           status report on capital budget expenditures to date; ii) after year end, an annual report on its  
21           capital expenditures; and, iii) where there is a variance in annual capital budgets over a two-year  
22           period of more than ten percent, a report is to be placed on the record in the next general rate  
23           application. These reports set out details and explanations in relation to various aspects of  
24           capital spending, including variances from budget. This reporting process serves to ensure that  
25           concerns as to the accuracy of Hydro's capital budgeting are identified and addressed. The  
26           Board agrees with the Industrial Customers that Hydro's estimates were poor in relation to the  
27           2010 Cat Arm Accommodations project and, as such, will carefully review Hydro's 2010  
28           budgeting accuracy as part of the review of the 2010 Capital Expenditure and Carryover report.

29  
30           Project Prioritization

31  
32           The Industrial Customers note that during the review of this Application Hydro disclosed a  
33           detailed ranking system for projects and provided a ranking of the projects. The Industrial  
34           Customers raise three concerns in relation to Hydro's rankings: i) multi-year projects were  
35           excluded; ii) a ranking of "1" was given to nineteen projects; and, iii) the "cut off" for projects  
36           at "53" was insufficiently explained and is arbitrary. The Industrial Customers argue that it is  
37           reasonable for the Board to not approve any of the proposed capital expenditures ranked 31 to 53  
38           in the Application. This recommendation is made bearing in mind several considerations,  
39           including that fact that this approach would result in the approval of capital expenditures in the  
40           amount of approximately \$50 million and that the average proposed capital expenditures has  
41           recently ballooned to more than \$60 million from an average of less than \$45 million for the  
42           years 2006-2009.

43  
44           The Board does not agree with the Industrial Customers that denying projects ranked 31 to 53 is  
45           a reasonable approach. The Board reviews the annual capital budget as well as individual



1 expenditures over \$50,000 to ensure reasonableness and necessity in the context of Hydro's  
2 requirement to provide least cost, safe and reliable service. The Board does not believe it is  
3 appropriate to set an arbitrary limit on the monetary level of the Capital Budget or on the number  
4 of projects or on a specific ranking which will qualify for approval. As discussed earlier, this  
5 type of approach may lead to results that are inconsistent with the requirements of the *Act* with  
6 respect to the provision of least cost, safe and reliable service.

7  
8 The Consumer Advocate submits that the ranking of projects should become a routine filing  
9 requirement in capital budget applications, as opposed to it being provided upon request. The  
10 Consumer Advocate states that he believes that this is useful information which adds  
11 transparency to the capital budget process and complements the purpose of the Board's Capital  
12 Budget Guidelines.

13  
14 It appears that both the Industrial Customers and the Consumer Advocate found the project  
15 ranking to be useful. However, the Board notes that there may be some issues which need to be  
16 clarified in relation to how the ranking is completed, presented and considered. The Board  
17 commends Hydro for adding to the transparency of the capital budgeting process and believes  
18 that refinements to the Board's Capital Budget Guidelines are best developed in a collaborative  
19 process where there is full and open exchange of ideas. As such the Board will not make  
20 changes to the guidelines in this Order but will instead invite the parties to hold discussions with  
21 a view to working towards specific and detailed changes to the guidelines that can be  
22 recommended to the Board.

#### 23 24 Supplemental Applications

25  
26 The Industrial Customers also suggest that Hydro's practice with respect to supplementary  
27 applications for capital projects is an indicator of the lack of rigour applied by Hydro to the  
28 capital budgeting process. The Industrial Customers note that supplementary applications are  
29 made for significant expenditures and where there has been a long lead time for Hydro to  
30 prepare. The Industrial Customers state:

31  
32 *"The Industrial Customers submit that the Board should not lose sight of the impact of such*  
33 *supplemental applications in assessing the justification, reasonableness and prioritization of*  
34 *Hydro's overall level of capital expenditure on a year over year basis."*(Industrial Customers,  
35 Final Submission, p.8)

36  
37 The Consumer Advocate does not comment specifically on the issue of supplementary capital  
38 budget applications.

39  
40 Hydro submits that: *"Unfortunately, in the real world that Hydro deals with, needs arise at times that*  
41 *are not synchronized with the capital budget cycle."*(Hydro, Final Submission, p. 5)

42  
43 In Order No. P.U. 1(2010) the Board discussed Hydro's 2009 supplementary capital budget  
44 applications, stating:

1           *"The Board acknowledges that there may be circumstances and exigencies that could not*  
2           *reasonably be anticipated as part of the capital budget planning process. However, the Board is*  
3           *concerned that the level of supplementary requests and carryovers in 2009 may be indicative of*  
4           *inadequate planning and budgeting in relation to capital matters."*  
5

6 In this context the Board required Hydro to provide a report explaining each of the 2009  
7 supplementary capital budget applications. This report was filed by Hydro on April 15, 2010  
8 and set out new approaches and processes that had been adopted by Hydro which may address  
9 the issue of supplementary applications. In particular Hydro stated that it was revising its asset  
10 management practices to "...provide more consistent strategic management..." of assets and that  
11 it was "...preparing more asset plan and program type capital budget submissions, to provide  
12 more flexibility in dealing with changing priorities and circumstances."  
13

14 The Board notes that Hydro made no reference in its submissions to this report or the new  
15 approaches that were detailed in this report. The Board also notes that Hydro did not mention in  
16 its submissions that, in contrast to 2009, it made only four supplementary capital budget  
17 applications in 2010. The Board would have expected to see this information in Hydro's  
18 submission.  
19

20 The Board's Capital Budget Guidelines contemplate a process for supplementary applications to  
21 account for the "real world" exigencies referenced by Hydro. The issue here is not these  
22 exigencies but rather circumstances where, as stated by the Board in Order No. P.U. 1 (2010),  
23 "*inadequate planning and budgeting in capital matters*" is evidenced by a high number of  
24 supplementary applications. The Board's concerns in relation to supplementary capital budget  
25 applications have been alleviated in the short term in light of Hydro's April 15, 2010 report and  
26 the reduced number and amount of supplementary applications in 2010. The Board believes,  
27 however, that the issue of supplementary capital budget applications may continue to be of  
28 concern at times and should be considered as part of any discussions to change the Board's  
29 Capital Budget Guidelines.  
30

### 31       **3.       Capital Projects Over \$50,000**

32

33 In addition to seeking approval of its 2011 Capital Budget Hydro is required by subsection 41(3)  
34 of the *Act* to seek the approval of the Board to proceed with the construction or purchase of  
35 improvements or additions to its property where the cost is over \$50,000 as well as approval of  
36 leases where the cost in the year is in excess of \$5,000. Hydro advises that it proposes no new  
37 leases for 2011 in excess of \$5,000 per year. Construction and purchases costing more than  
38 \$50,000 make up virtually all of Hydro's capital budget with only four projects in the 2011  
39 Capital Budget costing less than \$50,000. In accordance with historical practice, the Board's  
40 Capital Budget Guidelines and the legislation, the Application includes an explanation in relation  
41 to each of these expenditures over \$50,000, providing a description, justification, projected  
42 expenditures, costing methodology and future commitments, as applicable. Additional studies  
43 and reports, including detailed engineering reports, are provided in relation to a number of  
44 projects.

1 The Board's Capital Budget Guidelines set out detailed requirements with respect to projects  
2 over \$50,000. Each of these projects must be classified and segmented by materiality. They  
3 must also be defined as clustered, pooled or other, and classified as mandatory, normal, or  
4 justifiable. A project classified as mandatory is one which the utility is obliged to carry out as  
5 the result of legislation, Board Order, safety issues, or environment risk. A normal capital  
6 expenditure is one that is required based on identified need or historical patterns of repair and  
7 replacement. Justifiable expenditures are proposed based on the positive impact the project will  
8 have on the utility's operations. The majority of the projects set out in Hydro's 2011 Capital  
9 Budget are classified as normal.

10  
11 The Board has reviewed Hydro's proposed capital projects in excess of \$50,000, the reports filed  
12 in support, the additional information filed by Hydro in its responses to RFIs, and the final  
13 submissions. The Board is satisfied that all of the projects which are not specifically addressed  
14 below are adequately justified based on the evidentiary record and are appropriate and necessary  
15 in the circumstances.

16  
17 Upgrade Stack Breaching Unit 1, Holyrood - \$1,769,600 (B-5)

18  
19 Hydro proposes to upgrade the stack breaching serving Unit 1 at the Holyrood Thermal  
20 Generating Station. Specifically Hydro proposes to refurbish the steel casing, replace the  
21 expansion joints and the support structure, and install external insulation and ice protection. The  
22 stack breaching conveys the boiler flue gas outside the plant to the boiler exhaust stack. The  
23 existing Unit 1 stack breaching was installed in 1990, replacing the original which was installed  
24 when Unit 1 was commissioned in 1971. Hydro reports that erosion of the internal borosilicate  
25 insulation liner has been an ongoing issue and cracks have developed in the internal insulating  
26 liner and concrete floor. As a result of erosion and cracks, flue gas contacts the steel plates  
27 underneath the insulation and concrete and condenses to form sulphuric acid which causes  
28 corrosion and the failure of the internal insulation blocks has caused the flue gas temperature to  
29 break down the adhesive membrane that bonds the blocks to the breaching plate. Hydro states  
30 that the project is required to maintain the reliability of Unit 1 and that deterioration of the  
31 breaching plate has the potential to discharge boiler flue gas that containing sulphur dioxide  
32 inside the plant which is a major safety issue.

33  
34 The Industrial Customers argue that Hydro has not provided sufficient support for this  
35 substantial expenditure. They note that Hydro does not set out how or why safety concerns arise  
36 in relation to the discharge of boiler flue gas. They suggest that there is no support for Hydro  
37 positing that a failure is likely in 2013 or at all. The Industrial Customers note that the  
38 conditions leading to the deterioration of the breaching have been mitigated with the change to  
39 low sulphur fuel. They argue that the Allstrom report provides no support for the failure of the  
40 support structure and suggest that the ten year average maintenance history should be  
41 scrutinized. They note IC-NLH-16 which indicates that the casing is in generally good condition  
42 with a lot of deterioration around the expansion joints.

43  
44 The Consumer Advocate does not comment specifically on this project.

1 Hydro states that this project is justified primarily on the basis of reliability. Hydro has identified  
2 through thickness scanning that there are places where the steel casing needs to be replaced to  
3 ensure stack breeching structural integrity. Hydro states that "*The utility industry recognizes*  
4 *that boiler stack breeching may need refurbishment periodically, either completely or partially,*  
5 *after a twenty year life span.*"(Upgrade Unit 1 Stack Breeching Reports p.10) Hydro argues that  
6 the project is justified based on the need to take prudent measures to ensure the integrity of the  
7 equipment for the coming years during which it will be needed.  
8

9 The Board finds that there is support for some aspects of Hydro's proposals in relation to the  
10 stack breeching. Both the July 1010 Allstrom report filed with the Application and the  
11 Ultrasonic Examination report filed with IC-NLH-16 show that there are areas of the breeching  
12 that require repair and further that the expansion joints need to be replaced. The Board notes  
13 Hydro's conclusion that the continued deterioration of the breeching plate and expansion joints  
14 could potentially allow boiler flue gas containing sulphur dioxide to escape inside the plant and  
15 become a "*major safety concern for plant personnel.*"  
16

17 There is also evidence of some deterioration of the support structure. The Allstrom report says  
18 that the existing support structure on Units 1 & 2 breeching requires some repair and should be  
19 replaced if the breeching is replaced. Hydro does not plan to replace the breeching but still  
20 proposes to replace the support structure. The Ultrasonic Examination report shows pictures of  
21 the deterioration of the support structure but does not demonstrate thinning or make  
22 recommendations in relation to the replacement of this structure. Based on the evidence the  
23 Board is not able to conclude that it is necessary or appropriate to replace the support structure  
24 rather than repair it.  
25

26 In relation to the insulation the evidence clearly demonstrates problems with the internal  
27 insulation but does not support Hydro's proposal to install external insulation and ice protection  
28 at this time. The Allstrom report says at page A-4 that the costs of maintaining the internal liner  
29 in a serviceable condition is becoming prohibitive. The Allstrom report also says that the  
30 preferred long term solution for refurbishing the breeching is to install external insulation on the  
31 steel casing with the internal lining left alone at this time to be removed during future Unit 1  
32 annual outages as the silicate block degradation continues. Hydro has not shown, however, that  
33 the "*long term*" solution is appropriate in the circumstances. Hydro has not shown that the  
34 insulation problems have a reasonable or any potential to cause the worst case scenario of a  
35 forced outage. It would appear, based on the evidence, that the main reason for the proposal to  
36 add external insulation is the maintenance costs associated with the internal insulation. The  
37 Board notes the high maintenance costs associated with the existing internal insulation but, given  
38 the recent decision to proceed with the Labrador infeed and the switch to low sulphur fuel, it  
39 would appear to be prudent to maintain the existing insulation at this time and assess the  
40 maintenance costs against the significant immediate capital costs of installing external  
41 installation and ice protection.  
42

43 The Board finds that Hydro has shown that it is reasonable and prudent to refurbish the steel  
44 casing and the support structure and to replace the expansion joints. Hydro has not shown that it  
45 is reasonable and prudent to replace the support structure or to install external insulation and ice

1 protection. The Board notes that the cost benefit analysis which Hydro provided does not set out  
 2 the alternative of replacing the expansion joints and refurbishing the breeching and refurbishing  
 3 the support structure while maintaining the internal insulation without installing new external  
 4 insulation and ice protection. As Hydro did not provide detailed costing in relation to the various  
 5 aspects of this proposal it will be necessary for Hydro to file an application with a revised project  
 6 scope and budget for the approval of the Board. This project will not be approved as proposed.

7  
 8 Refurbish Fuel Storage Facility, Holyrood - \$2,637,900 (B-8)

9  
 10 Hydro proposes to clean, inspect, replace floor plates, paint the floor and install a roof platform,  
 11 access steps and a fuel oil level indication system for Tank 3 at the Fuel Oil Storage Facility for  
 12 No. 6 fuel at the Holyrood Thermal Generating Station. This project is part of a multi-year plan  
 13 to refurbish the Fuel Oil Storage Facility based on the March 2006 SGE Acres report,  
 14 "*Evaluation of Fuel Oil Storage Tanks, Associated Pipelines and Dyked Drainage System,*  
 15 *Holyrood Thermal Generating Station*". This Fuel Oil Storage Facility is made up of four above  
 16 ground fuel oil storage tanks and associated pipelines with a capacity of 200,000 barrels each.  
 17 Hydro notes that the Board approved the refurbishment of Tank 2 in Order No. P.U. 30 (2007),  
 18 the upgrade of the drainage system and pipe supports in Order No. P.U. 36 (2008), and the  
 19 refurbishment of Tank 4 in Order No. P.U. 1 (2010). Hydro states that the recommended  
 20 upgrades to the tanks are expected to extend the useful life of the storage facility by 20 years or  
 21 at least until the fuel storage facility is no longer required.

22  
 23 Hydro says that Tank 3 was cleaned, inspected and repaired in 2003 at a cost of over \$500,000  
 24 and that the 2003 inspection was the basis for the recommendations in the SGE Acres report. The  
 25 2006 SGE Acres report recommends that the entire floor in Tank 3 be replaced and that the  
 26 underside of the tank roof be inspected in 2010. Hydro states that this project is now one year  
 27 behind the recommended completion date and should not be delayed further. The SGE Acres  
 28 report recommended continuous monitoring for corrosion of the roof plate and Hydro states that  
 29 the evidence of water ponding on the roof of the tanks indicates a deflection in the roof and  
 30 flexibility of the rafters. Hydro notes that the deterioration of the tank floors and the settling of  
 31 tank floor support rings as a result of corrosion increases the risk of environmental spills and  
 32 leakage of No. 6 fuel from the storage tanks and notes section 8 of the *Storage and Handling of*  
 33 *Gasoline and Associated Products Regulations* in relation to the obligation of an owner as  
 34 regards pollution. Hydro states that corrective action must be taken and that Tank 3 has  
 35 deteriorated to a point where there is a significant risk for oil leakage and inoperability. Hydro  
 36 says that the installation of a fuel oil level indication system will provide feedback and will  
 37 reduce or eliminate the need to complete manual fuel reconciliations. Hydro further states that  
 38 the access steps will allow safe access to the roadway located on the west side of the tank farm.

39  
 40 The Consumer Advocate acknowledges that it goes without saying that the possibility of having  
 41 an oil spill should be guarded against but submits that there is no evidence on the record which  
 42 analyzes whether, from a fuel storage capacity perspective, Hydro may be able to postpone or  
 43 avoid this project by more fully utilizing other tanks. The Consumer Advocate notes that the  
 44 fuel storage data provided in IC-NLH-23 tends to show that total storage has been quite

1 substantially below 800,000 barrels over the past three years. The Consumer Advocate submits  
2 that the project should not be entertained until these issues are satisfactorily addressed by Hydro.

3  
4 The Industrial Customers note that the information provided to justify this project is based on an  
5 inspection by SGE Acres in 2003. The Industrial Customers argue that the fourth storage unit is  
6 effectively surplus capacity. They say that there is no evidence of a risk of near-term failure of  
7 any tank and adequate storage would be available even if one tank were to become temporarily  
8 unusable. The Industrial Customers submit that it is appropriate to defer this project for the time  
9 being and revisit it, if necessary, if it appears that the Labrador infeed will be delayed.

10  
11 Hydro notes in its submission that this project is already behind schedule according to the  
12 consultants' recommendations. Hydro says that the Consumer Advocate and the Industrial  
13 Customers rely on fuel storage data for the past two years and cautions against reliance on this  
14 data as being representative of fuel storage needs for the coming years. Hydro notes that the  
15 Island Interconnected load forecast indicates an increase in load in excess of 1,000 GWh per year  
16 from 2010 levels to 2015, which would result in estimated additional fuel consumption of 1.5  
17 million barrels of fuel. Hydro states that removal of one of the four tanks is not a plausible  
18 option given expected load increases and the corresponding need for more fuel storage.

19  
20 The Board shares the Industrial Customers' concern that the report filed to support this project is  
21 now almost five years old and is based on an inspection which was done seven years ago. The  
22 Board notes that, after the last inspection in 2003, a major refurbishment was done on Tank 3  
23 and the proposed project would be the second major repair completed since the last inspection.  
24 The SGE Acres report is not comprehensive in relation to the tank recommendations with no  
25 information as to the basis for the proposed work on Tank 3, available alternatives or other  
26 considerations. The report does not detail whether this work is required to maintain the tank in  
27 operable condition in the short term and, in this regard, it is notable that this recommendation is  
28 set out under the heading "*Life Extension Recommendations*".

29  
30 As noted by Hydro the Board has approved several projects in relation to the Fuel Oil Storage  
31 Facility in the last few years. The Board stated in Order No. P.U. 1(2010) that updated  
32 information would be expected in relation to the 2011 project:

33  
34 *"The Board notes that Hydro has stated that it plans similar projects in relation to Tank 3 and*  
35 *Tank 1 in the next two years. The Board would expect Hydro to support these proposals with*  
36 *updated engineering evidence given the timeframe since the inspection and recommendations as*  
37 *well as the developing circumstances in relation to the intended use of this equipment."*

38  
39 The Board would have expected an updated report from SGE Acres as part of this Application.  
40 Alternatively Hydro may have provided other detailed evidence as to why the project should  
41 proceed in the circumstances addressing the condition of the tank, alternatives and the  
42 circumstances surrounding the planned Labrador infeed. The Board notes that this project is by  
43 far the most expensive generation project in the 2011 Capital Budget and that Hydro plans  
44 similar expenditures in relation to Tank 1 in 2012, for a total estimated expenditure over the next  
45 two years in excess of five million dollars. The Board also notes that the fuel storage data for the

1 last two years suggests that there may be some excess storage capacity in the near term. Based  
2 on the evidence the Board finds that Hydro has failed to show that it is reasonable and prudent to  
3 proceed with this project at this time. Hydro may later apply for approval of this project with  
4 updated evidence. This project will not be approved.

5  
6 Replace Off-Road Track Vehicles, Bishop's Falls and Fogo – 2011 \$494,300 and 2012 \$609,400  
7 (B-53)

8  
9 Hydro proposes to replace two heavy-duty off-road track vehicles, one a 1993 vehicle  
10 maintained in Fogo and one a 1996 vehicle maintained in Bishop's Falls. Hydro states that  
11 heavy-duty off-road track vehicles have an average life expectancy of 12-15 years depending on  
12 location and usage. Hydro reports that the 1993 vehicle is used for work on distribution lines in  
13 remote areas and is severely rusted. The 1996 vehicle is used to transport personnel and cargo  
14 over rough terrain for work on transmission lines and, due to its age, is considered unreliable.  
15 Hydro also notes that new vehicles have improvements in noise, heat and safety levels, have full  
16 automation, and are equipped with specialized booms. Hydro says that failure to replace these  
17 units could result in increased downtime and maintenance.

18  
19 The Consumer Advocate argues that the fact that there are newer, more technologically advanced  
20 units on the market should not be regarded as justification for the project. He notes that both  
21 vehicles have operated without heavy lift capability since being brought into service. The  
22 Consumer Advocate argues that there is no evidence that the 1996 vehicle needs to be replaced at  
23 this time.

24  
25 The Industrial Customers do not comment specifically on this project.

26  
27 Hydro submits that:

28  
29 *"These vehicles are near the end of their useful lives and do not have the needed lifting capability*  
30 *to do the jobs required of them. This project will replace them with new vehicles that are better*  
31 *equipped and better suited to enable Hydro crews to carry out their work in a timely and efficient*  
32 *basis."* (Hydro, Final Submission, p. 12)

33  
34 The Board accepts that these vehicles have reached the end of their useful lives and should be  
35 replaced with the better equipped and reliable new vehicles. This project is part of a rational and  
36 strategic approach to asset management and replacement. This project will be approved.

37  
38 Upgrade Power Transformers, Various Sites - \$865,900 (B-59)

39  
40 Hydro proposes to do upgrades on power transformers at various sites based on the degree of  
41 degradation of the cellulose insulation and the amount of dissolved gas in the transformer oil.  
42 Hydro says that this is the third year of a power transformer upgrade program which started in  
43 2009 and involves oil reclamation, radiator upgrades, tap changer upgrades, bushing  
44 replacements, protective device upgrades, gasket system upgrades and periodic transformer  
45 replacement. Hydro filed a comprehensive report, dated April 2010, which detailed the problems

1 associated with the age and condition of the transformers. Hydro states that it has adopted a  
2 strategic approach to address all transformer issues collectively. Hydro states that it is of the  
3 opinion that, if proper intervention is completed on the aged units, transformer life will be  
4 extended for an additional ten to fifteen years.

5  
6 The Industrial Customers submit that Hydro's proposal is normal maintenance of transformer  
7 equipment and ought to be disallowed as a capital expenditure. They argue that any good  
8 maintenance program extends the life of the equipment.

9  
10 The Consumer Advocate does not comment specifically on this project.

11  
12 Hydro states that replacing these major components rejuvenates the asset and extends service life  
13 concluding that "*A systematic replacement of a failing component of a power transformer*  
14 *constitutes a material investment that is properly treated as capital.*" (Hydro, Final Submission,  
15 p. 10)

16  
17 The Board notes that classification of an expenditure as capital or maintenance is a part of the  
18 accounting function of a utility which is reviewed annually by the financial auditors of the  
19 company. In the absence of any evidence to the contrary the Board accepts that this  
20 classification function is being appropriately carried out and recorded by Hydro staff and  
21 overseen by its auditors. The Board will not deny the classification of this expenditure as capital.  
22 This project will be approved.

23  
24 Construct Transmission Line Equipment Off-Loading Areas, Various Sites - \$791,000 (B-63)

25  
26 Hydro proposes to construct equipment off-loading areas near secondary provincial highways at  
27 points where Hydro accesses its transmission lines. This is the fourth year of a seven-year  
28 project. Hydro states that the sites are selected on a priority basis with the highest hazard areas  
29 addressed first and further that scheduling is optimized so that mobilization and construction are  
30 performed at least cost. In 2011 fourteen off-loading areas are proposed to be constructed along  
31 the Burin Peninsula Highway, one on the Bay d'Espoir Highway and twenty along the Northern  
32 Peninsula Highway between Portland Creek and Eddies Cove West. Hydro says that the off-  
33 loading areas are needed to improve the safety of both Hydro work crews and the public and will  
34 allow more efficient transmission line work and improvements to system reliability in emergency  
35 situations.

36  
37 The Consumer Advocate proposes that this project be deferred for a year noting that this is not a  
38 "mandatory" project and that Hydro has assigned this project a rank of forty-five which the  
39 Consumer Advocate argues tends to indicate that this project is not one that must necessarily  
40 proceed this coming year. The Consumer Advocate says that this project should not be  
41 scheduled so as to coincide with the Burnt Dam access road project. The Consumer Advocate  
42 says that if such financially significant projects as the Burnt Dam project and the recent  
43 application in relation to the Holyrood pipeblinds are to be accommodated in 2011 then it is  
44 reasonable to propose that projects of much lesser priority be deferred to a subsequent year.



1 The Industrial Customers do not comment specifically on this project.

2  
3 Hydro submits that there is no merit in the Consumer Advocate's suggestion that this project  
4 should not be approved in a year in which another road project is proceeding. According to  
5 Hydro the projects are in no way functionally related or interchangeable. Hydro says that it is  
6 reasonable and prudent to construct these ramps to ensure the safety of Hydro's employees,  
7 contractors and the travelling public.

8  
9 The Board notes that this program has expanded considerably over the years since the 2008  
10 proposal to construct one hundred off-loading areas over a five-year period. Hydro now  
11 proposes to construct 210 off-loading areas over a seven-year period. The proposed expenditures  
12 have increased to reflect this expanded scope from \$301,800 in 2008 to \$990,200 in 2010.  
13 Based on available information the total approved expenditures at the end of this program would  
14 be well over four million dollars. The Board also notes that Hydro proposes to construct fourteen  
15 off-loading areas along the Burin Peninsula Highway in 2011. This would be in addition to the  
16 twenty-five off-loading areas that were constructed along the Burin Peninsula Highway in 2009  
17 and the fifteen off-loading areas planned for 2013. Hydro has not provided an explanation in  
18 relation to the basis for choosing the particular locations or the number of off-loading areas to be  
19 constructed.

20  
21 While the Board has acknowledged that off-loading areas may contribute to safe and efficient  
22 operations the Board is not satisfied as to the particulars of this proposal specifically, the number  
23 of off-loading areas, the location of the areas or the level of spending. The Board would like to  
24 see additional evidence to support this expanded program which, if approved as proposed by  
25 Hydro, would result in significant total expenditures over the course of seven years. The Board  
26 has concerns in relation to these significant capital improvements to provincial roadways and  
27 would like to see more information as to the actual experience with the existing off-loading areas  
28 now that the ramps have been operational for two years. This project will not be approved for  
29 2011.

30  
31 Upgrade Burnt Dam Spillway Structure – \$257,900 (C-2)

32  
33 Hydro proposes to replace the stop log hoist and associated motor, bus bars, housing and access  
34 platform at the Burnt Dam spillway. This is the first year of a four-year program to upgrade the  
35 Burnt Dam Spillway Structure which is at or near the end of its useful life and is in poor  
36 condition. Hydro says that at the completion of the project the spillway will be in a condition to  
37 operate safely and reliably for another 15 years.

38  
39 The Industrial Customers argue that this project should be disallowed given that the consultants  
40 hired to examine this facility did not recommend the level of expenditure that Hydro is proposing  
41 over the course of the next several years. The Industrial Customers say that it is difficult to  
42 relate this proposal to the Hatch report filed, noting that the Hatch report rates the facility in good  
43 condition. The Industrial Customers note that the likelihood of needing both gates open and not  
44 being able to do so is remote. They cite IC-NLH-33 where Hydro reports that both gates have  
45 only had to be open at the same time on four occasions in the last 18 years.

1 The Consumer Advocate does not comment specifically on this project.

2  
3 Hydro says that the safe and reliable operation of this spillway structure is critical to the  
4 operation of the reservoir in terms of safety, environmental management and economics. Hydro  
5 notes that all of the work to be performed in 2011 was identified by Hatch as requiring attention  
6 to address reliability and safety concerns.

7  
8 The Board agrees that the safe and reliable operation of the spillway is critical and that the Hatch  
9 report justifies the work to be done in 2011. In terms of the plan for future years, Hydro has  
10 undertaken to propose specific additional work to be undertaken for each additional budget year.  
11 The Board would expect that any application for future work at the Burnt Dam spillway will be  
12 fully justified with updated evidence in support of the specific proposals. This project will be  
13 approved.

14  
15 Install Weatherhoods for Vent Fans, Holyrood - \$208,200 (C-44)

16  
17 Hydro proposes to install corrosion resistant weatherhoods on twelve exhaust fan outlets located  
18 at the Holyrood Thermal Generating Station to improve the efficiency of the exhaust air system.  
19 Hydro reports that air flow testing revealed that on windy days these fans do not operate as  
20 efficiently as those with weatherhoods causing diminished air quality. Hydro reports that the  
21 Occupational Health and Safety Committee at Holyrood has regularly raised health issues  
22 regarding exhaust fans and the status of this project within Hydro's capital budget plan.

23  
24 The Industrial Customers argue that this project should be disallowed until appropriate  
25 quantitative evidence is provided indicating the extent of the problem to be addressed and the  
26 minimum scope of work necessary to fix it. The Industrial Customers argue that there is no  
27 evidence of testing of actual air quality, no evidence of how prevalent north winds are in the  
28 area, and no evidence to show that any backflow would impact air quality or that weatherhoods  
29 would repair any problem.

30  
31 The Consumer Advocate does not comment specifically on this project.

32  
33 Hydro argues that the quantitative data and analysis that has been provided clearly demonstrates  
34 the advantage of the weatherhoods.

35  
36 The Board acknowledges the flow measurement data and the reports of the Occupational Health  
37 and Safety Committee and accepts Hydro's explanation of its experience with the existing  
38 weatherhoods as sufficient justification for this project. This project will be approved.

39  
40 Remove Safety Hazards, Various Sites - \$252,400 (C-204)

41  
42 Hydro proposes this project to ensure adequate capital funding to address capital-related safety  
43 hazards as they are identified throughout 2011. Hydro says that it has initiated a Safe Work

1 Observation Program (SWOP) which involves workers identifying and reporting safety hazards.  
2 In IC-NLH-43 Hydro explains that the amount proposed is not a calculated figure but is instead a  
3 high level budget number which is considered to be adequate to address safety hazards as they  
4 are identified. Hydro says that this approach allows it to eliminate safety and health risks from  
5 the workplace quickly. A similar proposal was made and approved for 2008 and 2010 but was  
6 not made in 2009 due to an oversight by Hydro.

7  
8 The Industrial Customers argue that this project is not an identifiable capital expenditure which  
9 the Board can meaningfully consider and approve. It is noted that there is no specific work  
10 identified to be done and any amount approved under this project would essentially constitute an  
11 open account. The Industrial Customers argue that "...to simply approve this undefined  
12 expenditure year after year is to create what is, in effect, unregulated contingency fund."  
13 (Industrial Customers, Final Submission, p. 20

14  
15 The Consumer Advocate acknowledges Hydro's goal to provide a safe work environment but  
16 raises a concern in relation to whether it is permissible or appropriate to approve significant  
17 projects in this manner in the context of the existing legislative framework. The Consumer  
18 Advocate also questions whether approval of this project is necessary and notes that  
19 Newfoundland Power has no similar project.

20  
21 Hydro argues that the Board has the jurisdiction to approve this project and provides examples of  
22 several other capital approvals of this type. Specifically it says: "*Hydro submits that this project*  
23 *is justified and that approving these works in this manner is squarely within the Board's powers*  
24 *and is consistent with its long-standing capital approval practices.*"(Hydro, Final Submission, p.  
25 15)

26  
27 The Board is satisfied that approval of this proposal would support the relatively new safe work  
28 observation program by ensuring adequate funding to address safety hazards that are properly  
29 classified as capital. The Board believes that it is reasonable to approve an amount for 2011 in  
30 anticipation of high levels of capital spending during the initial stages of such a program. It  
31 would be expected that as this program matures there will be no need for approval of specific  
32 capital amounts. Because of the nature of this project the Board would expect to see an  
33 explanation in Hydro's annual report on capital expenditures as to each project that was  
34 undertaken, setting out the safety hazard that was identified, the location, the steps taken to  
35 address the issue and the amount of the expenditure. This project will be approved.

#### 36 37 38 **4. Summary of Board Findings**

39  
40 The Board will approve the projects in excess of \$50,000 proposed by Hydro in its 2011 Capital  
41 Budget Application, with the exception of the following three projects:

- 42  
43 i) Upgrade Stack Breeching Unit 1 Holyrood - \$1,769,600;  
44 ii) Refurbish Fuel Storage Facility, Holyrood - \$2,637,900; and  
45 iii) Construct Transmission Line Equipment Off-Loading Areas - \$791,000.

1 Hydro's 2011 Capital Budget for improvement and additions to its property will be approved in  
2 the amount of \$55,046,000.<sup>1</sup>

3  
4  
5 **III. 2009 AVERAGE RATE BASE**

6  
7  
8 The following table, taken from Section J of the Application, shows the calculation of the actual  
9 average rate base for 2009 compared with 2008:

	(\$000s)	
	<u>2008</u>	<u>2009</u>
Capital Assets	\$2,044,398	\$2,082,459
Less:		
Accumulated Depreciation	603,363	632,085
Contributions in Aid of Construction	96,143	96,749
Net Capital Assets	1,344,892	1,353,625
Balance Previous Year	1,349,694	1,344,892
Average Capital Assets	1,347,293	1,349,259
Working Capital	3,547 <sup>2</sup>	2,965
Fuel	34,389	20,817
Supplies Inventory	22,561	23,567
Average Deferred Charges	81,996	76,869
<b>Average Rate Base at Year End</b>	<b>\$ 1,489,786<sup>2</sup></b>	<b>\$ 1,473,477</b>

11  
12 Grant Thornton, the Board's financial consultants, reviewed the calculation of the 2009 average  
13 rate base as contained in Section J of the Application and shown above and concluded that the  
14 calculation is accurate and in accordance with Board Orders and established regulatory practice.

15  
16 Based on the information provided and verified by Grant Thornton the Board will approve all the  
17 components of and Hydro's average rate base for 2009 in the amount of \$1,473,477,000.

<sup>1</sup> This amount does not include the supplementary capital expenditure approved in Order P.U. 34(2010).

<sup>2</sup> Corrected to agree to Order No. P. U. 1(2010)

1 **IV ORDER**2  
3 **IT IS THEREFORE ORDERED THAT:**

- 4
- 
- 5 1. Hydro's proposed construction and purchase of improvements or additions to its
- 
- 6 property in excess of \$50,000 are approved as set out in Schedule A to this Order,
- 
- 7 except that the proposed:
- 
- 8 a. Upgrade Stack Breeching Unit 1, Holyrood is denied, with leave to reapply for
- 
- 9 approval to proceed with a revised project in accordance with the findings of the
- 
- 10 Board;
- 
- 11 b. Refurbish Fuel Storage Facility, Holyrood is denied with leave to reapply with
- 
- 12 updated evidence; and
- 
- 13 c. Construct Transmission Line Equipment Off-Loading Areas is denied.
- 
- 14
- 
- 15 2. Hydro's 2011 Capital Budget, as set out in Schedule B to this Order, for improvements
- 
- 16 and additions to its property in the amount of \$ 55,046,000 is approved.
- 
- 17
- 
- 18 3. Unless otherwise directed by the Board Hydro shall file an annual report with the
- 
- 19 Board in relation to its 2011 capital expenditures by March 1, 2012.
- 
- 20
- 
- 21 4. Unless otherwise directed by the Board Hydro shall file, in conjunction with the 2012
- 
- 22 Capital Budget Application, a status report on the 2011 capital budget expenditures.
- 
- 23
- 
- 24 5. Pursuant to Section 78 of the
- Act*
- the rate base for the year ending December 31, 2009 is
- 
- 25 hereby fixed and determined at \$1,473,477,000.
- 
- 26
- 
- 27 6. Hydro shall pay all costs and expenses of the Board incurred in connection with the
- 
- 28 Application.

Dated at St. John's, Newfoundland and Labrador this 23<sup>rd</sup> day of December 2010.



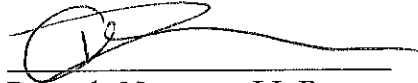
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Andy Wells  
Chair & Chief Executive Officer



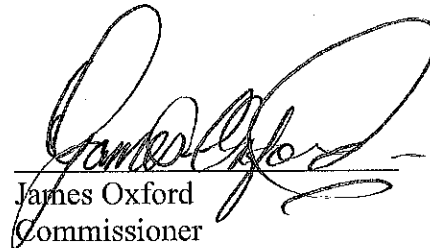
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Darlene Whalen, P.Eng.  
Vice-Chair



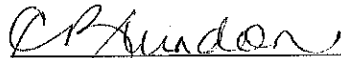
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Dwanda Newman, LL.B.  
Commissioner



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James Oxford  
Commissioner



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Cheryl Blundon  
Board Secretary

**Schedule A**

**ORDER No. P. U. 38(2010)**

**Projects over 50,000**

**ISSUED: DECEMBER 23, 2010**

NEWFOUNDLAND AND LABRADOR HYDRO  
 2011 CAPITAL BUDGET  
 PROJECTS OVER \$50,000  
 GENERATION

PROJECT DESCRIPTION	2011 (\$000)
Replace Static Excitation Systems - Upper Salmon, Holyrood and Hinds Lake	1,214
Replace Programmable Logic Controllers - Holyrood	747
Upgrade Hydrogen System - Holyrood	1,192
Replace Pumphouse Motor Control Centres -Holyrood	999
Upgrade Gas Turbine Plant Life Extension- Hardwoods	1,324
Upgrade Burnt Dam Access Road Phase 2 - Bay D'Espoir	998
Upgrade Synchronous Condensor Unit 3 - Holyrood	484
Upgrade Forced Draft Fan Ductwork Unit 1 - Holyrood	843
Replace Relay Panels Unit 3 - Holyrood	277
Upgrade Intake Gate Controls - Bay d'Espoir	352
Upgrade Generating Station Service Water System - Cat Arm	360
Replace Boiler Blowdown Tanks - Holyrood	750
Upgrade Electrical Equipment - Holyrood	188
Replace Steam Seal Regulator Unit 2 -Holyrood	175
Replace Steam Seal Regulator Unit 1 - Holyrood	214
Replace Fire Pump Diesel - Holyrood	195
Upper Burnt Dam Spillway Structure - Bay d'Espoir	258
Install Weatherhoods for Vent Fans - Holyrood	208
Purchase Spare Disconnect - Bay d'Espoir	176
Replace Automatic Transfer Switches - Bay d'Espoir and Hinds Lake	156
Purchase Hydrometeorological Stations - Various Sites	113
Replace Fire Alarm System - Hinds Lake	109
Purchase Tools and Equipment Less than \$50,000	280
Purchase Laser Alignment Equipment - Holyrood	79
Upgrade Glycol System - Stephenville	299
Upgrade Gas Turbine Operator Console - Stephenville	72
Install Compressor for Frazil Ice Removal - Upper Salmon	69
<b>APPROVED TOTAL</b>	<b>12,131</b>



NEWFOUNDLAND AND LABRADOR HYDRO  
2011 CAPITAL BUDGET  
PROJECTS OVER \$50,000  
TRANSMISSION AND RURAL OPERATIONS

PROJECT DESCRIPTION	2011
	(\$000)
Voltage Conversion - Labrador City	3,501
Upgrade L2 Distribution Feeder - Glenburnie	578
Provide Service Extensions - All Service Areas	3,385
Upgrade Distribution Systems - All Service Areas	2,499
Upgrade Distribution Lines - Roddickton and Makkovik	1,645
Perform Wood Pole Line Management Program - Various Sites	2,019
Perform Arc Flash Remediation - Various Sites	430
Replace Fuel Storage Facility - Postville	2,007
Replace Unit 566 and 2001 - Francois	450
Replace Unit 2018 - McCallum	421
Upgrade Distribution Systems - Francois, Rigolet and Happy Valley	1,068
Replace Poles - Various Sites	882
Upgrade Terminal Stations to 25 kV - Labrador City	3,500
Perform Grounding Upgrades - Various Sites	321
Replace Guy Wires TL-215 - Doyles to Grand Bay	289
Upgrade Line TL-244 - Plum Point to Bear Cove	1,055
Replace Off-Road Track Vehicles - Bishop's Falls and Fogo	494
Upgrade Substation - Wabush	459
Upgrade L2 Voltage Conversion to 25 kV - Gaultois	511
Upgrade Power Transformers - Various Sites	866
Upgrade Station Reliability and Safety - Rocky Harbour	435
Replace 69 kV SF6 Breakers - St. Anthony Airport	490
Replace Light Duty Mobile Equipment - Various Sites	757
Replace Breaker, Structures and Disconnects -Hawke's Bay	687
Replace Compressed Air System - Bay d'Espoir	84
Upgrade Trailer Mobile Substation - Bishop's Falls	468
Replace Compressed Air Piping and Install Dewpoint Monitoring - Holyrood	417
Install Automated Meter Reading - Labrador City and Port au Choix	451
Replace Substation Infrastructure - Burgeo	128
Replace Insulators - Various Sites	401
Purchase Excavators - Bishop's Falls	361
Purchase Tools and Equipment Less than \$50,000	256
Upgrade Air Blast Circuit Breakers - Various Sites	334
Replace Mini Hydro Turbine - Roddickton	87
Replace Disconnects - Various Sites	295
Install Voltage Regulators - Conne River and L'Anse au Loup	293
Replace Compressor, Dryer and Air Piping Header System - Corner Brook Frequency Converter Station	280
Replace Recloser Control Panels - Various Sites	232
Replace Instrument Transformers - Various Sites	199
Install Fall Protection Equipment - Various Sites	198
Install Alternate Station Services - Stony Brook and Massey Drive	86
Purchase Meters, Equipment and Tanks - Various Sites	186
Replace Digital Fault Recorder - Bay d'Espoir	169
Install Sequence of Events Monitor in Diesel Plant -Port Hope Simpson	155
Replace Fuel Storage Tank - Francois	131
Upgrade Fuel Storage - Norman Bay	114
Legal Survey of Primary Distribution Line Right of Way - Various Sites	79
Install Waste Oil Storage Tank - St. Lewis	79
Replace Surge Arresters - Various Sites	75
Voisey's Bay Nickel - Long Harbour Power Supply	8,327
Cost Recovery - Vale Inco	(8,327)
Purchase Portable Dissolved Gas Analysis Unit - Bishop's Falls	52
<b>APPROVED TOTAL</b>	<b>34,360</b>

NEWFOUNDLAND AND LABRADOR HYDRO  
 2011 CAPITAL BUDGET  
 PROJECTS OVER \$50,000  
 GENERAL PROPERTIES

PROJECT DESCRIPTION	2011
	(\$000)
Replace Vehicles and Aerial Devices - Various Sites	2,351
Replace Battery Banks and Charges - Various Sites	978
Replace MDR 6000 Microwave Radio (West) - Various Sites	72
Replace Network Communications Equipment - Various Sites	667
Corporate Application Environment - Upgrade Microsoft Products	675
Cost Recoveries	(203)
Replace iSeries Computer and Upgrade Operating System - Hydro Place	643
Cost Recoveries	(206)
Replace Personal Computers - Various Sites	404
Upgrade Ice Protection - Chapel Hill Microwave Site	294
Replace Peripheral Infrastructure - Various Sites	258
Remove Safety Hazards - Various Sites	252
Purchase Tools and Equipment Less than \$50,000	79
Refurbish Microwave Site - Deer Lake	207
Replace Radomes - Various Sites	196
Purchase Tools and Equipment Less than \$50,000	86
Upgrade Enterprise Storage Capacity - Hydro Place	227
Cost Recoveries	(73)
Upgrade Server Technology Program - Hydro Place	209
Cost Recoveries	(67)
Develop Learning Management System Courses - Hydro Place	123
Cost Recoveries	(40)
Perform Minor Application Enhancements - Hydro Place	121
Cost Recoveries	(39)
Replace Telephone Keyset - Wabush	80
Replace Humidifiers in Air Handling Units - Hydro Place	76
<b>APPROVED TOTAL</b>	<b>7,370</b>

**Schedule B**

**ORDER No. P. U. 38(2010)**

**2011 Capital Budget**

**ISSUED: DECEMBER 23, 2010**

NEWFOUNDLAND AND LABRADOR HYDRO  
2011 CAPITAL BUDGET

	<u>2011</u> (\$000)
GENERATION	12,180
TRANSMISSION AND RURAL OPERATIONS	34,448
GENERAL PROPERTIES	7,418
CONTINGENCY FUND	<u>1,000</u>
TOTAL PROJECTS OVER \$50,000	<u><u>55,046</u></u> <sup>1</sup>

<sup>1</sup> Includes expenditures in the amount of \$185,000 in relation to projects included in the 2011 Capital Budget that are under \$50,000.