

IN THE MATTER OF THE
2010 CAPITAL BUDGET APPLICATION

FILED BY
NEWFOUNDLAND AND LABRADOR HYDRO

**DECISION AND ORDER
OF THE BOARD**

ORDER No. P. U. 1 (2010)

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. 1(2010)

IN THE MATTER OF the *Electrical Power Control Act*, RSNL 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 pursuant to Sections 41 and 78 of the *Act*:

- (a) approving its 2010 capital budget of \$52,775,000;
- (b) approving its 2010 capital purchases and construction projects in excess of \$50,000;
- (c) approving the proposed estimated contributions in aid of construction for 2010; and
- (d) fixing and determining its average rate base for 2008 in the amount of \$1,489,786,000.

BEFORE:

Darlene Whalen, P. Eng.
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TABLE OF CONTENTS

I	BACKGROUND	1
	1. The Application	1
	2. Board Authority	1
	3. Application Process	2
II	PROPOSED 2010 CAPITAL BUDGET	3
	1. Overview	3
	2. Overall Capital Budget	4
	3. Capital Projects Over \$50,000	6
	4. Summary of Board Findings	13
III	2008 AVERAGE RATE BASE	14
IV	ORDER	15
	SCHEDULE A	

1 **I BACKGROUND**

2
3 **1. The Application**

4
5 Hydro filed its 2010 Capital Budget Application (the “Application”) with the Board of
6 Commissioners of Public Utilities (the “Board”) on August 3, 2009. In the Application Hydro
7 requests that the Board make an Order:

- 8
9 (i) approving its 2010 Capital Budget of \$52,775,000;
10 (ii) approving 2010 capital purchases and construction projects in excess of \$50,000;
11 (iii) approving the estimated contributions in aid of construction for 2010 of
12 approximately \$300,000; and
13 (iv) fixing and determining its average rate base for 2008 in the amount of
14 \$1,489,786,000.
15

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

22 **2. Board Authority**

23
24 Section 41 of the *Act* requires a public utility to submit an annual capital budget of proposed
25 improvements or additions to its property to the Board for approval no later than December 15th
26 in each year for the next calendar year. In addition, the utility is required to include an estimate
27 of contributions toward the cost of improvements or additions to its property which the utility
28 intends to demand from its customers.
29

30 Subsection 41(3) prohibits a utility from proceeding without the prior approval of the Board with
31 the construction, purchase or lease of improvements or additions to its property where (a) the
32 cost of the construction or purchase is in excess of \$50,000; or (b) the cost of the lease is in
33 excess of \$5,000 in a year of the lease.
34

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

40 Board procedures and processes are established in accordance with the *Act* and the regulations
41 thereunder. The Board’s Capital Budget Guidelines set out the detailed process for capital
42 budget applications.

1 **3. Application Process**

2
3 Notice of the Application was published in newspapers in the Province beginning on August 8,
4 2009 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 received from Hydro's Island Industrial Customers
8 (Corner Brook Pulp and Paper Limited, North Atlantic Refining Limited, Teck Resources
9 Limited, and Vale Inco Newfoundland and Labrador Limited), Newfoundland Power Inc., and
10 the Consumer 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 95 RFIs were answered by
14 Hydro. No request for a public hearing was received and the Board determined the Application
15 would be considered on the basis of the written record.

16
17 The Consumer Advocate and the Industrial Customers filed written submissions on October 20,
18 2009. Newfoundland Power did not file any RFIs or a written submission. Hydro filed its
19 written submission on October 23, 2009.

20
21 Grant Thornton, the Board's financial consultants, reviewed the calculations of the 2008 average
22 rate base and filed a report on November 25, 2009 which was copied to all participants.

1 **II PROPOSED 2010 CAPITAL BUDGET**

2
3 **1. Overview**

4
5 Hydro's proposed total capital budget for 2010 is \$52,775,000. The proposed expenditures by
6 asset class are as follows:

<u>Asset Class</u>	<u>Budget (\$000s)</u>
<u>Generation</u>	
Hydraulic Plant	\$11,455
Thermal Plant	5,352
Gas Turbines	1,638
Tools and Equipment	234
Total Generation	\$18,679
<u>Transmission and Rural Operations</u>	
Terminal Stations	\$5,553
Transmission	5,115
Distribution	8,512
Generation	2,858
Properties	1,039
Metering	34
Tools and Equipment	1,642
Total Transmission and Rural Operations	\$24,753
<u>General Properties</u>	
Information Systems	\$2,008
Telecontrol	2,969
Transportation	2,156
Administrative	1,210
Total General Properties	\$8,343
Contingency Fund	\$1,000
Total 2010 Capital Budget	\$52,775

2. Overall Capital Budget

The Island Industrial Customers express concerns about the increasing trend and overall level of Hydro's capital spending. In written submission the Industrial Customers reference their previous comments on this issue in relation to the 2009 Capital Budget Application. Of particular concern to the Industrial Customers is the increasing use by Hydro of supplementary applications for capital projects. The Industrial Customers suggest that the Board must exercise control over Hydro's capital spending to *"keep it within the limits that competition would otherwise dictate and to ensure compliance with the legislation which requires least cost electricity be provided to customers in the Province."*

The Consumer Advocate did not make any submissions on this issue.

The Board continues to monitor the level of capital expenditures in each category that makes up the full delivery of service by Hydro to its customers. As set out in Appendix G to the Application capital expenditures are expected to reach \$66.1 million in 2011, with the forecast levels for 2012 to 2014 ranging from \$65.5 million to \$60.4 million. This compares to forecast levels for 2009 of \$56.8 million and for 2010 of \$52.8 million. The actual average expenditure for 2005-2008 is \$39.3 million. In the 2010 Capital Plan Hydro acknowledges the increasing levels of capital expenditures and notes at pg. 4:

"...many of Hydro's major assets have reached, or are about to reach, maturity, at which time steps must be taken to ensure that reliable service is maintained. These steps can include refurbishment and partial or total replacement. Over recent years many projects were implemented to replace mature assets or asset components, and the number of these projects will increase significantly if Hydro is to continue to provide a reliable supply of electricity to customers. Hydro manages assets to provide least cost electricity to its customers. The methodology for managing assets is currently being updated, and will be submitted to the Board in the near future."

With respect to the increased capital expenditure levels forecast for 2011 and 2012 Hydro states that these increases relate to two specific projects: the conversion of the operating voltage of the Labrador City distribution system; and the construction of a new diesel plant at Charlottetown to address increases in demand as a result of the expansion of a fish plant on the Charlottetown system. As to forecast overall capital expenditures Hydro states:

"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. An additional influence on the magnitude of the plan is the rapidly fluctuating equipment cost which has been changing much faster than the Consumer Price Index in recent years. Raw materials, such as copper, iron and alloy steels required for the production of the equipment have fluctuated greatly in price, making it difficult to accurately estimate the cost of some projects. The return to near historical prices for materials early in 2009 was short lived and their prices have escalated markedly since then."

1 The Board accepts this explanation for the higher levels of capital expenditures forecast for the
 2 next five years, especially given Hydro's aging infrastructure and the recent trend of increasing
 3 costs for materials. The Industrial Customers' suggestion that the Board should somehow
 4 constrain Hydro's annual capital spending based on its anticipated revenues as would be the case
 5 for non-regulated enterprises is not one that should be contemplated in the context of the
 6 obligation by Hydro to provide service as set out in the legislation. In a competitive market
 7 companies can make choices about factors such as the type and level of service provided, the
 8 products they produce, and the price charged. In reviewing Hydro's proposed capital budget the
 9 Board must satisfy itself that the proposed projects are, as required by the *Act*, consistent with the
 10 requirement for least cost and safe and reliable service.

11
 12 The Board does, however, have concerns with the increasing number of supplementary capital
 13 budget applications that are filed after the approval of the annual capital budget by the Board.
 14 This combined with carryovers, which have also been high in recent years, causes the actual
 15 approved capital expenditures to be significantly higher than proposed. This is illustrated in the
 16 chart below.
 17

	Original Proposed Capital Budget	Supplementary Requested	Carried From Prev Year	Total Requested	Total Approved (Inc Prev. Carryover)
2009	47,856,000	25,630,900 ¹	6,609,000	80,095,900	65,083,400
2008	45,061,000	5,921,571	5,882,000	56,864,571	53,579,100
2007	41,421,000 ²	555,000	5,065,000	47,041,000	43,304,100
2006	42,636,000	583,800	5,804,000	49,023,800	49,023,800
2005	42,431,000	9,375,200	1,778,000	53,584,200	47,759,200

18
 19 The Board acknowledges that there may be circumstances and exigencies that could not
 20 reasonably be anticipated as part of the capital budget planning process. However, the Board is
 21 concerned that the level of supplementary requests and carryovers in 2009 may be indicative of
 22 inadequate planning and budgeting in relation to capital matters. The Board will require Hydro
 23 to provide a report providing detailed explanations in relation to each of the 2009 carryovers and
 24 supplemental capital budget applications. This report will analyze the circumstances of each
 25 supplemental request and carryover with a view to determining why the changed circumstances
 26 were not anticipated and reflected in the annual capital budget. The report should also contain an
 27 explanation of the actions that Hydro has taken to better reconcile planned with actual capital
 28 spending in the future. This report will be filed with the Board no later than April 15, 2010 and

¹ Approval for a project Holyrood Condition Assessment was originally requested in the 2007 Capital Budget Application at a cost of \$3,334,900 but was denied. 2009 Supplementary Requests includes an application for a condition assessment and life extension study for Holyrood Thermal Generating Station at a cost of \$1,895,000. The Supplementary Requests also includes an application filed December 15, 2009 for the construction of a terminal station and extension to a transmission line at Long Harbour at a cost of \$14,800,000 which will be fully funded by the customer. This application is pending.

1 thereafter Hydro may be required to conduct a technical conference, if necessary, to address
2 alternatives and recommendations in relation to amendments to the Capital Budget Guidelines
3 which will enhance requirements and standards with respect to supplemental capital budget
4 applications as well as carryovers.

5 6 **3. Capital Projects Over \$50,000**

7
8 Hydro's Application was filed and reviewed in the context of the Board's capital budget
9 guidelines. These guidelines direct the utility in the manner in which the capital budget is to be
10 presented and require the utility to provide certain information. Each capital expenditure over
11 \$50,000 must be defined and classified according to the guidelines. As well expenditures must
12 be segmented by materiality. Expenditures are defined as clustered, pooled or other, and
13 classified as mandatory, normal capital, or justifiable. A project classified as mandatory is one
14 which the utility is obliged to carry out as the result of legislation, Board Order, safety issues, or
15 risk to the environment. A normal capital expenditure is one that is required based on identified
16 or historical patterns of repair and replacement. Justifiable expenditures are justified based on
17 the positive impact the project will have on the utility's operations.

18
19 In Sections B, C and D of the Application Hydro provides a summary of its proposed 2010
20 capital projects over \$50,000, which comprise \$51,013,000 of the total proposed capital budget
21 of \$52,775,000². The majority (\$49,967,000 or 98%) of Hydro's 2010 capital projects over
22 \$50,000 are classified as normal. Of the remaining 2010 expenditures \$810,000 are classified as
23 mandatory, and \$236,000 are classified as justified.

24
25 The Board has reviewed Hydro's proposed capital projects in excess of \$50,000 as set out in
26 Section B, pages B-1 to B-53, Section C, pages C-1 to C-195, and Section D, pages D-1 to D-
27 133, the additional information filed by Hydro in its responses to RFIs, and the final
28 submissions. The following discussion addresses the particular projects identified by the
29 Industrial Customers and/or the Consumer Advocate in their submissions as those that should not
30 be approved. The Board is satisfied that the remaining projects, not specifically addressed, are
31 adequately justified based on the evidentiary record and are appropriate and necessary in the
32 circumstances. Therefore all projects over \$50,000 that are not specifically addressed below will
33 be approved.

34
35 Hydro has proposed a number of projects involving expenditures beyond 2010. The Board notes
36 that capital budget spending in the utility context is often long term with projects spanning more
37 than one financial year. This fact has been acknowledged in the Capital Budget Application
38 Guidelines whereby the Board may provide approval for the utility to proceed with a project,
39 which may involve spending over the course of several years. In relation to the projects in the
40 Application requiring expenditures beyond 2010, the Board will approve the expenditures for
41 future years as a part of its approval of Hydro's 2010 capital budget. This approval to proceed
42 with these multi-year projects is provided consistent with the provisions and requirements of the

² The balance of the proposed 2009 capital budget consists of \$762,000 for projects less than \$50,000 and \$1,000,000 for a contingency fund.

1 Capital Budget Application Guidelines. Future years' budgeted expenditures, however, will be
2 included in the capital budgets of those years.

3
4 The specific projects identified for further review are discussed below along with the Board's
5 findings for each.

6
7 Page B-2 Upgrade Gas Turbine Plant Life Extension: \$1,305,000 – 2010; \$4,690,000 Future
8 Years

9
10 Hydro is proposing to refurbish equipment and systems at the Hardwoods Gas Turbine Plant
11 (Hardwoods). This is a multi-year project with a total estimated project cost of approximately \$6
12 million. The Board notes that it has already approved a capital expenditure in relation to the
13 planned multi-year upgrades for this facility as part of Hydro's 2009 capital budget.

14
15 Hydro justifies this project on the basis that major equipment at the facility has reached the end
16 of its useful life. Hydro provides a detailed engineering report with recommendations from an
17 outside engineering firm in support of this project. Since the Hardwoods plant is required to
18 provide voltage support and generation during the peak load and emergency periods Hydro states
19 that these recommended refurbishments must be completed to enable Hydro to continue
20 operating the plant reliably.

21
22 The Industrial Customers submit that this project has not been justified by Hydro and that the
23 evidence does not support a conclusion that failures or outages in this equipment have reached
24 the stage where such substantial expenditure is warranted. The Industrial Customers also note
25 that, according to CA-NLH-31, the 2009 work to determine what additional work needs to be
26 done in 2010 has not yet been completed.

27
28 In its written submission Hydro argues that the Board ought to consider the whole of the
29 information provided in connection with this project. In Hydro's view the current failure rate for
30 this facility is unacceptable and there are a number of causes and particular systems involved. In
31 addition, while acknowledging that there is additional investigational work required to finally
32 delineate the project, Hydro points out that this work requires that the plant be out of service.
33 According to Hydro it is not practical or prudent to take plant out of service for the sole purpose
34 of performing this inspection or to defer the capital project until every work detail has been
35 confirmed. Hydro states:

36
37 *"The prudent approach is to do an extensive study, which has been done, to determine within a*
38 *reasonable level of uncertainty what work that (sic) will be performed. It should be realized that*
39 *the specific amounts of work cannot be ascertained until a detailed, hands-on, inspection occurs*
40 *– often, as is the case here, these final details will not be known until a plant outage is taken and*
41 *the refurbishing work commences."*

42
43 The Board accepts Hydro's explanation as to why it is prudent to proceed with this project as
44 proposed. In the Board's view it is not reasonable for Hydro to wait for a major breakdown
45 before implementing a program for the upgrading of a facility that is relied on to control the

1 voltage of the Island Interconnected System. It is noted that failure may also impair Hydro's
2 ability to deliver power during peak and emergency periods. The Board finds that the evidence
3 shows that the operational reliability of Hardwoods is critical to ensure voltage regulation on the
4 Island Interconnected System and that these units would still have to produce electricity until
5 2015 and well beyond in the absence of a power corridor being brought to the island from the
6 Lower Churchill development. The Board was persuaded in Hydro's last annual capital budget
7 application that this work should be undertaken and, in light of the information presented in this
8 Application, the Board is satisfied that the proposed multi-year capital expenditure to upgrade
9 the Hardwoods plant should be approved.

10
11 Page B-8 Refurbish Fuel Storage Facility – Holyrood: \$2,500,000

12
13 According to the Application this project involves the upgrade of existing components within the
14 Fuel Oil Storage Facility at the Holyrood Thermal Generating Station (Holyrood) for the purpose
15 of extending its useful life, ensuring system reliability, increasing the level of safety and
16 reducing environmental risks within the facility. The proposed project includes cleaning,
17 inspection, replacement of floor plates, painting the floor and installing a roof platform on Tank
18 4. The proposed scope of work for the project was based on recommendations arising from an
19 inspection of Tank 4 in 2004. Hydro states that the project is justified based on the risk of oil
20 leakage and inoperability because of the deterioration in Tank 4.

21
22 The Industrial Customers submit that this project approval is being requested before the
23 necessity for it has been established. According to the Industrial Customers the information filed
24 to justify this project was produced in 2004 and has not been updated. As well the project cost,
25 including contingencies, estimated at \$1,453,000 in 2006, has increased to \$2,500,000 for 2010
26 with no explanation provided by Hydro. The Industrial Customers also note that the impact of
27 the Labrador infeed, which it says will eventually render these assets redundant, has not been
28 considered.

29
30 Hydro states in its written submission that the reason more recent inspections have not been
31 completed is that the oil tanks must first be cleaned, which is very expensive. Hydro submits
32 that the results of the 2004 inspection are still valid as it would not be rational to conclude that
33 the condition of the tanks has actually improved since that inspection was carried out.

34
35 The arguments put forth by the Industrial Customers are based on the assumption that these
36 facilities will be redundant at some undefined time in the future. As long as the period of time is
37 indefinite for the use of these facilities they must be maintained in a safe and operational
38 condition. The Board is satisfied that is necessary to refurbish the fuel storage facility to avoid
39 environmental risks in the short to medium term. The Board notes that Hydro has stated that it
40 plans similar projects in relation to Tank 3 and Tank 1 in the next two years. The Board would
41 expect Hydro to support these proposals with updated engineering evidence given the timeframe
42 since the inspection and recommendations as well as the developing circumstances in relation to
43 the intended use of this equipment. However, the Board is satisfied that this proposal has been
44 supported and will approve the capital funding for this project.

1 Page B-10 Upgrade Plant Access Road Bay d’Espoir: \$1,550,000

2
3 This project involves roadside ditching, removal and replacement of 20 culverts, removal of old
4 asphalt, sub grade repairs and placement of new Class “A” road topping and pavement along the
5 3.5 km main access road to the Bay d’Espoir Power House. According to Hydro the road, which
6 has been in service for over 40 years, has deteriorated to the point where the numerous holes,
7 depressions, bumps and frost heaves make driving extremely difficult. The asphalt surface is 30
8 years old and, in its present state, is somewhat hazardous to use, particularly in wintertime, and is
9 hard on vehicles, both fleet and personal, using the road. Hydro also states that, while it does not
10 hold title to the road, Hydro built the road during construction in the 1960s and subsequently
11 paved the road in 1977.

12
13 The Industrial Customers submit that, since the Government of Newfoundland and Labrador
14 owns this asset, it is the responsibility of Government and not Hydro to maintain and refurbish
15 this road. According to the Industrial Customers this asset should not be included in Hydro’s
16 rate base and the value of the improvement will accrue to Government as owner. The Industrial
17 Customers note that, in assessing the condition of the road, Government was unable to place a
18 high priority to this project on the basis that there were other roads in the immediate area in need
19 of substantial upgrading and that the road functions solely as access to Hydro’s facilities.

20
21 The Board notes the issue of ownership but the fact remains this road, albeit owned by
22 Government, is used almost solely by Hydro in the operation of the Bay d’Espoir generation
23 facility. It is clear from the evidence that this road has deteriorated to a point that it has become
24 unsafe for any travel. The state of the road may also result in increased maintenance expenses for
25 Hydro’s fleet and also employees’ vehicles. The Board also notes Hydro’s comments regarding
26 the impact of the road condition on its emergency response capability:

27
28 *“Hydro Generation's Emergency Response Plan is structured around rapid response. This*
29 *existing road is not in a suitable condition to quickly transport sick and/or injured people or to*
30 *quickly mobilize emergency response equipment and materials. In addition, when the local fire*
31 *department has to respond to the site, the fully loaded pumper truck would be at risk traveling the*
32 *road in its current condition and would not be able to respond as quickly as it should. This*
33 *exposes the province's largest hydroelectric plant to unnecessary risk. For instance, in 2000*
34 *there was a fuel spill on site and in 2007 there was a grass fire to which emergency vehicles had*
35 *to respond. There have also been times when ambulances had to travel in over the access road to*
36 *reach personnel in need of medical attention. The state of the road delays these emergency*
37 *vehicles from reaching the scene of the accident in a reasonably short amount of time.”*

38
39 While Hydro states it has requested that the Government upgrade this road Government has, to
40 date, rejected this request. This road was paved in 1977 and the evidence demonstrates
41 considerable deterioration and safety concerns. The Board accepts that the road is in need of
42 repair. This road access is a necessary component of Hydro’s generation operations in the area
43 and in this context the Board will approve the proposed capital expenditure for this project.
44 However, the Board shares the Industrial Customers’ concern regarding Hydro’s proposal to
45 undertake capital improvements to a major asset it does not own. Therefore, Hydro will not be

1 permitted to reflect this expenditure in rate base until it has satisfied the Board that the inclusion
2 of these costs in rate base is consistent with generally accepted sound public utility practice.
3

4 Page B-12 Replace Pump House Motor Control Centers: \$1,048,800
5

6 This proposed project includes replacing the motor control center in pump house 1 and pump
7 house 2, construction of a new room in each pump house to accommodate the new motor control
8 centers, replacing power cable feeding the motor control centers from the main plant, and
9 modification of power supply cables and piping in the pump houses. Hydro states this project is
10 necessary because of safety and reliability concerns. According to Hydro the existing equipment
11 does not comply with current safety codes and standards relating to exposure of live parts and the
12 use of certain materials such as asbestos. As well, because the existing equipment is located in a
13 general purpose enclosure there has been deterioration such as moisture build up and rusting of
14 electrical contacts which results in interruptions to the reliable supply of water to the plant and
15 unplanned outages to the generating units. Hydro provided further project details in a report,
16 “Replace Pump House Motor Control Centers”.
17

18 The Consumer Advocate submits that there is no compelling evidence to justify approval of this
19 project. In particular the safety issues related to asbestos and safety hazards for employees due
20 to the design of the equipment have not been demonstrated to be of such risk that would require
21 this project to proceed. The Consumer Advocate points out that there is no evidence that the
22 asbestos contained in this installation is in a state that would require its removal. In addition the
23 Consumer Advocate suggests that Hydro’s well-documented and standardized work methods and
24 safety protocols protect staff from safety hazards during maintenance work. With respect to
25 Hydro’s justification on the basis of reliability the Consumer Advocate notes that Hydro has
26 provided no evidence of unplanned outages or unit failures due to failures of the pump house
27 motor control centers.
28

29 The Board is satisfied that this project should be approved as proposed by Hydro. The pump
30 houses are essential components of the Holyrood Thermal Generating Station and must be
31 operated reliably and safely. The Board notes the Consumer Advocate’s submission that there
32 have been no injuries to personnel because of Hydro’s safe work methods and protocols but the
33 Board accepts Hydro’s evidence with respect to safety concerns in relation to the existing
34 equipment configuration. The existing motor control centers were installed in 1969 and 1977
35 and are deteriorated due to the environment in which they are located. This project will replace
36 these control centers with equipment that meets existing standards and codes and that is properly
37 housed and protected.
38

39 Page B-32 Upgrade TL-244 – Plum Point to Bear Cove: \$141,000 – 2010; \$1,055,000 Future
40 Years
41

42 This project involves improvements to the transmission line TL-244 which Hydro proposes to
43 correct problems that were identified in an engineering study completed by Hydro in 2008. This
44 study was undertaken at the time to identify the reasons why TL-244 had an outage frequency
45 four times higher than the Hydro average. As a result of the study Hydro is proposing to correct

1 the ground clearance on one span, replace the cross-arms on 41 structures to improve the
 2 structural performance as well as to increase the electrical clearance on these structures, and also
 3 to provide alternate generation to the areas north of Plum Point. The project is justified by
 4 Hydro on the basis of safety and operational performance of the line. TL-244 was constructed in
 5 1983 and was upgraded from a 66 kV transmission line to a 138 kV line in 1996. According to
 6 Hydro the energized conductors that violate electrical clearances pose a general safety risk to the
 7 public and Hydro employees.

8
 9 The Industrial Customers state that there is a portion of this project relating to meeting ice loads
 10 which arises directly from defective work on the part of Hydro for which ratepayers have already
 11 paid. According to the Industrial Customers, the evidence shows that the clearances were
 12 miscalculated originally by using hot thermal weather conditions as opposed to ice load figures.
 13 The Industrial Customers submit that, since Hydro identified and used the wrong standard at the
 14 time, the cost of the 20 cross-arms and one span being replaced as a result of this error should be
 15 excluded from the project and borne by Hydro.

16
 17 Hydro's submission states:

18
 19 *"It is important to realize that, with the exception of one span of this transmission line, none of*
 20 *the proposed upgrades replace or duplicate work that was done through the upgrades that were*
 21 *carried out to this line in 1996 when the voltage was increased from 69 kV to 138 kV. In 1983,*
 22 *this line was built to the standard used in the period of its original construction and the voltage*
 23 *upgrade in 1996 was constructed in accordance to the standard that applied at the time. The*
 24 *ratepayer is not being asked to pay any additional capital costs now due to a substandard design*
 25 *that occurred in 1983 or 1996; rather, the upgrades proposed for 2010 have been chosen by*
 26 *Hydro with the benefits of hindsight and additional engineering effort."*

27
 28 The Board accepts Hydro's evidence that the outage frequency is at unacceptable levels and
 29 should be corrected. The Board is satisfied that the line in question was engineered to meet the
 30 standards of the day and that it is reasonable and prudent to correct an existing problem that
 31 clearly impacts the delivery of service to Hydro customers. In this context the Board will
 32 approve the proposed capital funding for this project.

33
 34 Page C-2 Install Meteorological Stations – Various Sites: \$443,000

35
 36 This project involves the purchase and installation of meteorological stations at the Long Pond
 37 Reservoir, the Meelpaeg Reservoir, the Victoria Reservoir, and the Hind's Lake Reservoir. All
 38 stations will be equipped to provide precipitation data, air temperature, humidity, and snowpack
 39 data. These stations will complement Hydro's Water Management Decision Support System
 40 (WMDSS), which includes long-term and short-term generation forecasting and inflow forecasts
 41 for the purposes of generation scheduling and flood management. According to Hydro the
 42 meteorological stations will provide real time data such as temperature, precipitation, snowpack,
 43 wind speed and direction to be used in conjunction with the WMDSS to enhance decision
 44 making pertaining to optimization of hydraulic production, and therefore reducing thermal power
 45 production at Holyrood. This is the third year of a five-year program to install meteorological

1 stations at all of Hydro's reservoirs. The Board approved similar projects in both 2008 (four
2 locations) and 2009 (three locations).

3
4 The Industrial Customers submit that the evidence provides no justification or reason why this
5 project could not be deferred in light of the additional hydro resources now available to Hydro
6 due to the shutdown of the Abitibi Grand Falls facility.

7
8 Hydro responded by way of IC-NLH-34 as follows:

9
10 *"The installation of the meteorological stations will allow Hydro access to real time data in the*
11 *watersheds above its hydroelectric stations. The data will be used to optimize hydraulic power*
12 *production and minimize thermal power production from Holyrood, thereby reducing fuel costs*
13 *and emissions.*

14
15 *In wet years and in Hydro's present situation of high water levels resulting from reduced*
16 *demand, the hydrometeorologic data can also be used to plan and minimize spill from the*
17 *reservoirs.*

18
19 *Hydrometeorologic data collection is most valuable when it is undertaken routinely over a long*
20 *period of time. Several years' data are required before meaningful comparisons can be made*
21 *between gauges to determine regional characteristics and trends. Real time hydrometric data*
22 *collection is required to evaluate the accuracy of weather forecasts for the watersheds and to*
23 *improve understanding of the climate in the watersheds."*

24
25 For these reasons Hydro submits that it is important that the installation of these sites be
26 completed as soon as possible so that collection of required data can begin.

27
28 The Board notes that this project is part of a planned five-year program and is satisfied that the
29 proposed installations of data collection stations will enhance Hydro's ability to manage its
30 resources in a more efficient and prudent manner. The Board also agrees that continuity in
31 hydrometeorologic data collection is important and that deferral of this phase of the project is not
32 reasonable or prudent at this time. Given these circumstances the Board will approve the capital
33 funding proposal for this project.

34
35 Page C-166 Replace Peripheral Infrastructure – Various Sites: \$222,000

36
37 This project consists of the replacement of five Multi-Function Devices (MFDs) used for
38 printing, copying, faxing, and scanning as well as 29 laser printers. These units are located at
39 various Hydro sites. The project also includes expenditures for two new video-conferencing
40 units, one in Hydro Place and another in Stephenville. According to Hydro the units scheduled
41 for replacement have been in service for five years or more and normal maintenance contracts
42 have expired.

43
44 The Industrial Customers state that, according to IC-NLH-35, there is currently one printer or
45 multi-function machine for every 5 employees in each of the locations noted which appears

1 excessive. While this project does not represent a particularly large expenditure the Industrial
2 Customers submit that the Board should reduce the allotment by one half.

3
4 The Board accepts Hydro's statement that this proposal is for routine replacement of computer
5 peripherals based on industry accepted standards. This equipment was purchased over five years
6 ago and normal maintenance contracts have expired. The Board accepts that approval of the
7 project is consistent with the routine replacement of infrastructure used in the day-to-day
8 operation of the business. The Board is satisfied that this project should be approved as
9 proposed.

10 11 **4. Summary of Board Findings**

12
13 The Board will approve all projects in excess of \$50,000 as presented by Hydro in its 2010
14 Capital Budget Application. The Board will also approve Hydro's 2010 capital budget for
15 improvement and additions to its property in the amount of \$52,775,000. This amount consists
16 of expenditures in relation to all approved projects in excess of \$50,000, as well as projects under
17 \$50,000.

1 **III. 2008 AVERAGE RATE BASE**

2

3 The following table, taken from Section J of the Application, shows the calculation of the actual
4 average rate base for 2008 compared with 2007:

5

	(\$000s)	
	<u>2007</u>	<u>2008</u>
Capital Assets	\$2,016,315	\$2,044,398
<u>Less:</u>		
Accumulated Depreciation	570,225	603,363
Contributions in Aid of Construction	96,396	96,143
Net Capital Assets	1,349,694	1,344,892
 Balance Previous Year	 1,345,766	 1,349,694
 Average Capital Assets	 1,347,730	 1,347,293
Working Capital	3,496	3,547
Fuel	25,874	34,389
Supplies Inventory	21,669	22,561
Average Deferred Charges	84,725	81,996
 Average Rate Base at Year End	 <u>\$ 1,483,524</u>	 <u>\$ 1,489,786</u>

6

7 Grant Thornton, the Board's Financial Consultants, reviewed the calculation of the 2008 average
8 rate base as contained in Section J of the Application and shown above and concluded that the
9 calculation is accurate and in accordance with Board Orders and established regulatory practice.

10

11 Based on the information provided and verified by Grant Thornton the Board will approve all the
12 components of and Hydro's average rate base for 2008 in the amount of \$1,489,786,000.

1 **IV ORDER**

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

- 4
- 5 **1. Pursuant to Section 41 of the *Act* Hydro’s proposed capital purchases and construction**
 - 6 **projects in excess of \$50,000 are approved, as set out in Schedule A to this Order.**
 - 7
 - 8 **2. Pursuant to Section 41 of the *Act* the 2010 Capital Budget for improvements and**
 - 9 **additions to Hydro’s property in an amount of \$ 52,775,000 is approved.**
 - 10
 - 11 **3. The project Upgrade Plant Access Road – Bay d’Espoir (Page B-10): \$1,550,000 is**
 - 12 **approved but the costs for this project shall not be recovered from customers unless**
 - 13 **otherwise ordered by the Board.**
 - 14
 - 15 **4. Unless otherwise directed by the Board Hydro shall file an annual report to the Board**
 - 16 **on its 2010 capital expenditures by March 1, 2011.**
 - 17
 - 18 **5. Unless otherwise directed by the Board Hydro shall file a report on April 15, 2010 in**
 - 19 **relation to supplementary capital budget applications and carryovers associated with**
 - 20 **the 2009 capital budget.**
 - 21
 - 22 **6. Unless otherwise directed by the Board Hydro shall provide, in conjunction with the**
 - 23 **2011 Capital Budget Application, a status report on the 2010 capital budget**
 - 24 **expenditures showing for each project:**
 - 25
 - 26 **(i) the approved budget for 2010;**
 - 27 **(ii) the expenditures prior to 2010;**
 - 28 **(iii) the 2010 expenditures to the date of the application;**
 - 29 **(iv) the remaining projected expenditures for 2010;**
 - 30 **(v) the variance between the projected total expenditures and the approved**
 - 31 **budget; and**
 - 32 **(vi) an explanation of the variance.**
 - 33
 - 34 **7. Pursuant to Section 78 of the *Act* the rate base for the year ending December 31, 2008 is**
 - 35 **hereby fixed and determined at \$1,489,786,000.**
 - 36
 - 37 **8. Hydro shall pay all costs and expenses of the Board incurred in connection with the**
 - 38 **Application.**

Dated at St. John's, Newfoundland and Labrador this 22nd day of January 2010.

Darlene Whalen, P.Eng.
Vice-Chair

Dwanda Newman, LL.B.
Commissioner

James Oxford
Commissioner

Cheryl Blundon
Board Secretary

Schedule A

ORDER No. P. U. 1(2010)

ISSUED: JANUARY 22, 2010

NEWFOUNDLAND AND LABRADOR HYDRO
2010 CAPITAL BUDGET
PROJECTS OVER \$50,000 - APPROVED EXPENDITURES

	<u>2010</u>	<u>Future</u> <u>Years</u>
		(\$000)
GENERATION	18,477	8,046
TRANSMISSION AND RURAL OPERATIONS	24,481	23,574
GENERAL PROPERTIES	8,057	947
CONTINGENCY FUND	<u>1,000</u>	<u>-</u>
TOTAL PROJECTS OVER \$50,000	<u><u>51,015</u></u>	<u><u>32,567</u></u>

**NEWFOUNDLAND AND LABRADOR HYDRO
2010 CAPITAL BUDGET
PROJECTS OVER \$50,000
GENERATION**

PROJECT DESCRIPTION	2010	Future Years	Application Page Reference
		(\$000)	
Upgrade Gas Turbine Plant Life Extension - Hardwoods	1,305	4,690	B-2
Replace and Purchase Stator Windings - Bay d'Espoir	4,687	-	B-4
Purchase Spare Stator Winding Units 2 - Bay D'Espoir	2,806	-	
Replace Programmable Logic Controllers - Holyrood	1,208	1,649	B-6
Refurbish Fuel Storage Facility - Holyrood	2,500	-	B-8
Condition Assessment and Life Extension Study - Holyrood	686	-	
Upgrade Plant Access Road - Bay d'Espoir	1,550	-	B-10
Replace Pump House Motor Control Centers - Holyrood	50	999	B-12
Upgrade Glycol Systems - Stephenville	261	299	B-14
Replace Steam Seal Regulator Unit 1 - Holyrood	335	214	B-16
Install Meteorological Stations - Various Sites	443	-	C-2
Replace 50 kW Diesel Generator - Bay d'Espoir	289	-	
Replace Diesel Fire Pump - Holyrood	112	195	C-9
Upgrade Units 5 and 6 Cooling Water Systems - Bay d'Espoir	305	-	C-22
Upgrade Intake Gate Controls - Upper Salmon	284	-	C-31
Install Diesel Fuel Tank Monitoring System at Ebbegunbaeg - Bay d'Espoir	236	-	C-43
Install Unit 1 Cold Reheat Condensate Drains and High Pressure Heater Trip Level - Holyrood	231	-	C-50
Purchase Spare Spherical Valve Seal and Ring Assemblies - Bay d'Espoir	223	-	C-67
Replace A/C Units in Control Room and Communications Room Upper Salmon	197	-	D-3
Install Warm Air Make-up Access - Holyrood	170	-	D-6
Replace Human Machine Interface (HMI) Computer - Paradise River	158	-	D-10
Upgrade Fuel Storage - Hinds Lake	149	-	D-12
Install Gain Heaters Gate 2 Burnt Dam Spillway - Bay d'Espoir	81	-	D-15
Purchase 21 Inch Metal Cutting Lathe - Bay d'Espoir	80	-	D-18
Upgrade Fuel Tank Farm Controls - Happy Valley	72	-	D-20
Improve On Site Paving and Drainage - Holyrood	59	-	D-26
TOTAL GENERATION APPROVED	<u>18,477</u>	<u>8,046</u>	

**NEWFOUNDLAND AND LABRADOR HYDRO
2010 CAPITAL BUDGET
PROJECTS OVER \$50,000
TRANSMISSION AND RURAL OPERATIONS**

PROJECT DESCRIPTION	2010	Future Years	Application Page Reference
		(\$000)	
New 25 kV Terminal Station - Labrador City	2,700	7,007	
Voltage Conversion - Labrador City	1,089	8,311	B-18
Upgrade Distribution Systems - All Service Areas	2,572	-	B-20
Upgrade Line 2 Distribution Feeder - Glenburnie	267	3,289	B-24
Provide Service Extensions - All Service Areas	2,428	-	B-26
Perform Wood Pole Line Management Program - Various Sites	2,308	-	B-28
Upgrade Transmission line TL-212 - Sunnyside to Linton Lake	964	-	
Upgrade Distribution Lines - Various Sites	218	1,645	B-30
Upgrade Line TL-244 - Plum Point to Beer Cove	141	1,055	B-32
Replace Poles - Various Sites	1,083	-	B-34
Construct Transmission Line Equipment Off-Loading Areas-Variou Sites	990	-	B-36
Upgrade Power Transformers - Various Sites	816	-	B-38
Perform Grounding Upgrades - Various Sites	291	-	
Replace Off Road Track Vehicles - Whitbourne and Bishop's Falls	685	-	B-40
Replace Diesel Unit 2001 and Engine 566 - Francois	168	450	B-42
Replace Diesel Units - Norman Bay, Postville and Paradise River	1,700	-	
Increase Generation Capacity - L'Anse au Loup	821	-	
Replace Recloser Control Panels - Various Sites	603	-	B-44
Upgrade Line 2 Voltage Conversion to 25 kV - Gaultois	82	511	B-46
Replace Light Duty Mobile Equipment - Various Sites	554	-	B-48
Upgrade Trailer and Mobile Substation - Bishop's Falls	30	468	C-78
Replace Compressed Air Piping and Install Dew Point Monitoring - Holyrood	79	417	C-84
Replace Diesel Unit 2018 - McCallum	19	421	C-95
Replace Insulators - Various Terminal Stations	399	-	C-103
Upgrade Anchors on C Structures TL-259 - Parson's Pond	353	-	C-110
Upgrade Circuit Breakers - Various Terminal Stations	342	-	C-119
Replace Guy Wires TL-215 - Doyles to Grand Bay	301	-	C-128
Replace Disconnects - Various Sites	199	-	D-29
Install Fall Protection Equipment - Various Sites	198	-	D-32
Replace Instrument Transformers - Various Sites	197	-	D-42
Upgrade Great Northern Peninsula Protection - Various Sites	91	-	
Upgrade Accommodations - Norman Bay	196	-	D-44
Install New Voltage Regulators - Happy Valley	170	-	D-47
Replace Heavy Duty Forklift - Unit 9799 - Bishop's Falls	166	-	D-52
Install Digital Fault Recorder - Deer Lake	166	-	D-54
Upgrade Fire Protection System - Bishop's Falls	158	-	D-57
Replace Main Bus Splitter - Postville	149	-	D-59
Replace Air Compressors - Western Avalon	97	-	D-65
Install Pole Storage Ramps - Various Sites	90	-	D-68
Install Transformer Storage Ramps - Various Sites	89	-	D-70
Replace Aviation Fuel Tank and Dispensing Unit - Bishop's Falls	88	-	D-74
Install Waste Oil Storage Tank - Port Hope Simpson	84	-	D-77
Replace Surge Arrestors - Various Sites	73	-	D-80
Replace 230 kV Breaker Controls - Massey Drive and Buchans	73	-	D-82
Upgrade Properties - Port Hope Simpson	71	-	D-86
Legal Survey of Primary Distribution Line Right of Way - Various Sites	65	-	D-89
Install Remote Ice Growth Detector Beams - Various Sites	58	-	D-93
TOTAL TRANSMISSION AND RURAL OPERATIONS APPROVED	<u>24,481</u>	<u>23,574</u>	

**NEWFOUNDLAND AND LABRADOR HYDRO
2010 CAPITAL BUDGET
PROJECTS OVER \$50,000
GENERAL PROPERTIES**

PROJECT DESCRIPTION	2010	Future Years	Application Page Reference
		(\$000)	
Replace Vehicles and Aerial Devices - Various Sites	2,156	-	B-49
Replace Stationary Battery Banks and Charges - Various Sites	717	-	B-50
Corporate Application Environment - Upgrade Microsoft Products	751	1,353	B-52
Cost Recoveries	(225)	(406)	
Replace Radio Link with Fibre - Bay d'Espoir	489	-	C-141
PC Replacement Program - Various Sites	407	-	C-149
Upgrade Private Automated Branch Exchange (PABX) - Various Sites	339	-	C-154
Remove Safety Hazards - Various Sites	252	-	C-161
Replace Peripheral Infrastructure - Various Sites	222	-	C-166
Replace Radomes - Various Sites	212	-	C-172
Install Mobile Communications - Port Hope Simpson, Charlottetown	208	-	C-187
Upgrade Remote Terminal Units - Various Sites	190	-	D-96
Upgrade Enterprise Storage Capacity - Hydro Place	241	-	D-103
Cost Recoveries	(72)	-	
Upgrade Server Technology Program - Various Sites	197	-	D-107
Cost Recoveries	(59)	-	
Replace Network Communications Equipment - Various Sites	131	-	D-112
Develop Learning Management System Safety Courses - Hydro Place	138	-	D-114
Cost Recoveries	(41)	-	
Smart Card Implementation - Various Sites	133	-	D-116
Cost Recoveries	(40)	-	
Upgrade Operator Training Simulator - Hydro Place	92	-	D-118
Perform Minor Application Enhancements - Hydro Place	121	-	D-120
Cost Recoveries	(36)	-	
Replace Humidifiers in Air Handling Units - Hydro Place	75	-	D-122
Upgrade Security SCADA Intrusion Prevention System - Hydro Place	62	-	D-124
Upgrade Business Intelligence Toolset Software - Hydro Place	84	-	D-126
Cost Recoveries	(25)	-	
Upgrade Security Vulnerability Management System - Hydro Place	81	-	D-127
Cost Recoveries	(24)	-	
Work Protection Software Design - Hydro Place	71	-	D-129
Cost Recoveries	(21)	-	
Upgrade Intranet - Hydro Place	66	-	D-132
Cost Recoveries	(20)	-	
Install Fibre Optic Cable - Hind's Lake	483	-	
Upgrade System Security - Various Sites	702	-	
TOTAL GENERAL PROPERTIES APPROVED	8,057	947	

Newfoundland & Labrador

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