Page 1 of 1

1	Q.	Please provide the capital budget and actual expenditures in each year from 2004
2		through 2013 and include the details specifically for projects greater than \$500,000
3		
4		
5	A.	Please see PUB-NLH-227 Attachment 1 for the Capital Expenditures reports for
6		years 2004-2006 and the Capital Expenditures and Carryover reports for years
7		2007-2013. PUB-NLH-227 Attachment 2 details multiyear projects greater than
8		\$500,000 for the years 2004 to 2011. Details for multiyear projects greater than
9		\$500,000 are included in the Capital Expenditures and Carryover reports for 2012-
10		2013.

NEWFOUNDLAND AND LABRADOR HYDRO 2004 CAPITAL EXPENDITURES YEAR ENDING DECEMBER 31, 2004

Filed with the Public Utilities Board February/2005

NEWFOUNDLAND AND LABRADOR HYDRO 2004 CAPITAL EXPENDITURES

For Year Ending December 31, 2004

TABLE OF CONTENTS

			Page
Table of Contents		•••••	(l)
CAPITAL EXPENDITURE OVERVIEW			
CAPITAL EXPENDITURE OVERVIEW			1
CAPITAL EXPENDITURE SUMMARY BY CATEGORY: Generation			2
Transmission & Rural Operations			2
Other Approved Funds			3 3
CAPITAL EXPENDITURE DETAIL:			
Generation		4.	
Hydro Plants Thermal Plant	•••••	******************	4 5
Transmission & Rural Operations			
Transmission			
System Performance & Protection			
Terminals			*.
Distribution			
General			
General Properties		••••••	
Information Systems & Telecommunications			8
Administrative			
Other Approved Funds		•••••	11
Variance Explanation (Greater than \$50,000)			
Generation			
Transmission & Rural Operations			
General Properties	•••••	• • • • • • • • • • • • • • • • • • • •	15
Other Approved Funds			16

NEWFOUNDLAND & LABRADOR HYDRO

2004 CAPITAL EXPENDITURES - OVERVIEW

FOR THE QUARTER ENDING DECEMBER 31, 2004 (\$,000)

	PUB Approved Budget 2004	4th Quarter Actuals 2004	Total Actual Expenditures 2004	Variance From 2004 Budget
	•	-		
GENERATION	4,049	1,084	3,759	(290)
			• .	
TRANSMISSION & RURAL OPERATIONS	11,999	4,166	14,298	2,299
THANGING OF A TOTAL OF		.,	. ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-,
GENERAL PROPERTIES	11,350	3,006	7,332	(4,018)
			•	
ALLOWANCE FOR UNFORESEEN EVENTS	1,000	. 0	0	(1,000)
	•			
PROJECTS APPROVED BY PUB	2,798	1,470	2,389	(409)
				, ,
	100			
NEW PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO	239	103	206	(33)
	·	•		
				· · · · · · · · · · · · · · · · · · ·
	•			*
TOTAL CAPITAL BUDGET	31,435	9,829	27,984	(3,451)
				•
Approved PU 29 (2003)	27,316		4	
Approved PU 5 (2004)	1,534			
Approved PU 13 (2004)	303	* *		
Approved PU 16 (2004)	465			
Approved PU 28 (2004)	258	•		
Approved PU 34 (2004)	95		•	
Carryover Projects	1,255			
New Projects Under \$ 50,000 Approved by Hydro	209			
Revised TOTAL CAPITAL BUDGET	31,435	•		
UCAISCO IO IMP OMELIME DODGET	31,703			

NEWFOUNDLAND & LABRADOR HYDRO

2004 CAPITAL EXPENDITURES - OVERVIEW

FOR THE QUARTER ENDING DECEMBER 31, 2004 (\$,000)

	PUB Approved Budget 2004	4th Quarter Actuals 2004	Total Actual Expenditures 2004	Variance From 2004 Budget
GENERATION				
				•
HYDRO PLANTS				
Construction Projects	1,474	344	1,307	(167)
Tools & Equipment	194	30	189	(5)
THERMAL PLANT			95.°4.9866	•
Construction Projects	2,281	697	2,215	(66)
Property Additions	78	. 7	8	(70)
Tools & Equipment	22	.6	40	-18
			• — — •	
TOTAL GENERATION		4 004	0.750	(000)
TOTAL GENERATION	4,049	1,084	3,759	(290)
TRANSMISSION & RURAL OPERATIONS	·			•
THAT INCOME A TOTAL OF ENAMED OF				•
TRANSMISSION	3,926	1,336	5,339	1,413
SYSTEM PERFORMANCE & PROTECTION	303	168	318	15
TERMINALS	1,690	307	1,548	(142)
DISTRIBUTION	5,153	2,153	6,337	1,184
GENERATION	238	70	220	(18)
GENERAL				
Metering	104	41	62	(42)
Properties	49	46	49	0
Tools & Equipment	536	45	425	(111)
TOTAL TRANSMISSION & BURN OFFICE				
TOTAL TRANSMISSION & RURAL OPERATIONS	11,999	4,166	14,298	2,299

NEWFOUNDLAND & LABRADOR HYDRO

2004 CAPITAL EXPENDITURES - OVERVIEW

FOR THE QUARTER ENDING DECEMBER 31, 2004 (\$,000)

	PUB Approved Budget 2004	4th Quarter Actuals 2004	Total Actual Expenditures 2004	Variance From 2004 Budget
	•	· ·		
GENERAL PROPERTIES				
INFORMATION SYSTEMS & TELECOMMUNICATIONS	8,512	2,619	4,928	(3,584)
ADMINISTRATIVE	2,838	387	2,404	(434)
TOTAL GENERAL PROPERTIES	11,350	3,006	7,332	(4,018)
			•	
ALLOWANCE FOR UNFORESEEN EVENTS	1,000	0	0	(1,000)
PROJECTS APPROVED BY PUB	2,798	1,470	2,389	(409)
PROJECTS APPROVED FOR LESS THAN \$50,000	239	103	206	(33)
TOTAL CAPITAL BUDGET	31,435	9,829	27,984	(3,451)

NEWFOUNDLAND & LABRADOR HYDRO GENERATION 2004 CAPITAL EXPENDITURES - DETAIL FOR THE QUARTER ENDING DECEMBER 31, 2004 (\$,000)

PROJECT DESCRIPTION		PUB Approved Budget 2004	4th Quarter Actuals 2004	Total Actual Expenditures 2004	Variance From 2004 Budget	Variance Explanation Reference
HYDRO PLANTS						
CONSTRUCTION PROJECTS		•.				
Replace Vibration/Data System - Bay D'Espoir Replace Unit 7 Exciter - Bay D'Espoir		18 760	0 (9)	19 639	1 (121)	Note 1
Replace Gate Hoist No. 2 - Ebbegunbaeg Control Structure Upgrade Controls Spherical Valve #3 - Bay D' Espoir		513 183	353 0	437 212	(76) 29	Note 2
TOTAL CONSTRUCTION PROJECTS		1,474	344	1,307	(167)	
	·. ·					
TOOLS & EQUIPMENT	· ·					
Replace Loader/Backhoe - Bay d'Espoir Purchase & Replace Tools & Equipment Less than \$50,000		124 70	0 30	119 70	(5) 0	·
TOTAL TOOLS & EQUIPMENT		194	30	189	(5)	

NEWFOUNDLAND & LABRADOR HYDRO GENERATION 2004 CAPITAL EXPENDITURES - DETAIL FOR THE QUARTER ENDING DECEMBER 31, 2004 (\$,000)

PROJECT DESCRIPTION	PUB Approved Budget 2004	4th Quarter Actuals 2004	Total Actual Expenditures 2004	Variance From 2004 Budget	Variance Explanation Reference
THERMAL PLANT					
CONSTRUCTION PROJECTS					
Upgrade Control System - Holyrood Purch/Inst Ambient Monitoring System Enhancement	1,553 728	510 187	1,499 716	(54) (12)	Note 3
TOTAL CONSTRUCTION PROJECTS	2,281	697	2,215	(66)	=
PROPERTY ADDITIONS					
Upgrade Civil Structures - Holyrood	78	7	8	(70);	Note 4
TOTAL PROPERTY ADDITIONS	78	7	. 8	(70)	
TOOLS & EQUIPMENT					= - -
Purchase & Replace Tools & Equipment Less than \$50,000	22	6	40	18	· · · · · · · · · · · · · · · · · · ·
TOTAL TOOLS & EQUIPMENT	22	6	40	18	
TOTAL GENERATION	4,049	1,084	3,759	(290)	

NEWFOUNDLAND & LABRADOR HYDRO TRANSMISSION & RURAL OPERATIONS 2004 CAPITAL EXPENDITURES - DETAIL FOR THE QUARTER ENDING DECEMBER 31, 2004 (\$,000)

PROJECT DESCRIPTION	PUB Approved Budget 2004	4th Quarter Actuals 2004	Total Actual Expenditures 2004	Variance From 2004 Budget	Variance Explanation Reference
	•				
TRANSMISSION	. *				
Upgrade TL214 - (138kV Bottom Brook - Doyles) Replace Insulators TL233 - (230kV Buchans - Bottom Brook)	2,546 1,055	607 489	3,893 1,114	1,347 59	Note 5 Note 6
Replace Wood Poles - Transmission	325	240	332	7	
TOTAL TRANSMISSION	3,926	1,336	5,339	1,413	
					•
SYSTEM PERFORMANCE & PROTECTION					
Purch/Install 138kV Breaker Fail Protection Addition - Deer Lake/Sunnyside Replace Digital Fault Recorder - BDE	150 77	123 18	175 61	25 (16)	
Purchase and Install Remote Relay Data Acquisition Equipment Upgrade Breaker Controls - Western Avalon & Holyrood Terminal Stations	46 30	4 23	39 43	(7) 13	
TOTAL SYSTEM PERFORMANCE & PROTECTION	303	168	318	15	
TERMINALS					
Purchase and Install Transformer Addition - Happy Valley Terminal Station nstall Motor Drive Mechanisms on Disconnect Switches - West Coast	1,245 207	189 44	1,215 103	(30) (104)	Note 7
Replace Instrument Transformers Replace Surge Arrestors	77 70	25 28	65 65	(12) (5)	
Upgrade Breaker Controls - Sunnyside Terminal Station Replace Digital Fault Recorder - Holyrood Terminal Station	15 6	0	7 7	(8) 1	
Upgrade Station Services - Long Harbour TS Replace 125V Battery Banks - Bottom Brook and Holyrood Terminal Stations	12 58	0 21	8 78	(4) 20	
TOTAL TERMINALS	1,690	307	1,548	(142)	

NEWFOUNDLAND & LABRADOR HYDRO TRANSMISSION & RURAL OPERATIONS 2004 CAPITAL EXPENDITURES - DETAIL FOR THE QUARTER ENDING DECEMBER 31, 2004 (\$,000)

PROJECT DESCRIPTION	PUB Approved Budget 2004	4th Quarter Actuals 2004	Total Actual Expenditures 2004	Variance From 2004 Budget	Variance Explanation Reference
					,
DISTRIBUTION					•
Service Extensions	1,558	923	2,283	725	Note 8
Distribution Upgrades	1,471	835	2,670	1,199	Note 9
Pole Replacements Insulator Replacements	.993 945	356 12	749 553	(244) (392)	Note 10 Note 11
Purchase and Install Recloser L6 - Bear Cove	85	14	36	(49)	Note 11
Replace Substation Transformer - Rigolet	76	11	29	(47)	
Purchase and Install Recloser L1 - Conche	25	. 2	17	(8)	
	<u>.</u>			· · · · · · · · · · · · · · · · · · ·	• •
TOTAL DISTRIBUTION	E 450	0.450	6 007	4.04	
TOTAL DISTRIBUTION	5,153	2,153	6,337	1,184	•
				i.	
GENERATION			•		
Protection Upgrades - isolated Systems	33	0.	13	(20)	
Upgrade Generator Relaying - Happy Valley North Plant	170	55	176	6	
Purchase and Install P.T.'s - Ramea	35	15	31	(4)	
			. 		
TOTAL GENERATION	238	70	220	(18)	
			· · · · · · · · · · · · · · · · · · ·		
GENERAL	•	•			
				•	
METERING					
handara Batara A.F. atau ana TDO O atau					
Purchase Meters & Equipment - TRO System Purchase Metering Spares - Bulk Electrical System	98 6	35	56 6	(42) 0	
aronase metering opares - burk Electrical dystem	•	•			
				:	
TOTAL METERING	104	41	62	(42)	
PROPERTIES					-
Numero of Handania Balanca, Blatchada a Line Blata of Maria	40		40		
Survey of Hydro's Primary Distribution Line Right-of-Ways	49	. 46	49	0	
	 	• •			
TOTAL PROPERTIES	49	46	49	0	
	<u> </u>				
TOOLS & EQUIPMENT					
Purchase & Replace Tools & Equipment Less than \$ 50,000 (Carryover 2003)	45	. 0	60	15	
Purchase & Replace Tools & Equipment Less than \$ 50,000	102	12	90	(12)	
Replace Light Duty Mobile Equipment Less than \$50,000	389	33	275	(114)	
	 .				
TOTAL TOOLS & EQUIPMENT	536	45	425	(111)	
				7::.7	•
TOTAL GENERAL	689	132	536	(153)	

NEWFOUNDLAND & LABRADOR HYDRO GENERAL PROPERTIES 2004 CAPITAL EXPENDITURES - DETAIL FOR THE QUARTER ENDING DECEMBER 31, 2004 (\$,000)

PROJECT DESCRIPTION	PUB Approved Budget 2004	4th Quarter Actuals 2004	Total Actual Expenditures 2004	Variance From 2004 Budget	Variance Explanation Reference
INFORMATION SYSTEMS & TELECOMMUNICATIONS	-				
SOFTWARE APPLICATIONS				•	
INFRASTRUCTURE REPLACEMENT					
Replace Energy Management System - Energy Control Centre	5,120	685	1,409	(3,711)	Note 12
NEW INFRASTRUCTURE					· .
Corporate Applications Environment	540	335	474	(66)	Note 13
Applications Enhancements Security Program - Centralized Log Monitoring & Analysis System Security Program - Secure Remote Access	463 69 75	272 80 80	464 90 86	1 21 11	
TOTAL SOFTWARE APPLICATIONS	6,267	1,452	2,523	(3,744)	
		1			•
COMPUTER OPERATIONS					
INFRASTRUCTURE REPLACEMENT					
NEW INFRASTRUCTURE					
Peripheral Infrastructure Replacement	101.	16	101	0	
TOTAL COMPUTER OPERATIONS	101	16	101	.0	j.

NEWFOUNDLAND & LABRADOR HYDRO GENERAL PROPERTIES 2004 CAPITAL EXPENDITURES - DETAIL FOR THE QUARTER ENDING DECEMBER 31, 2004 (\$,000)

	PUB	4th	Total	Variance	-
	Approved	Quarter	Actual	From	Variance
	Budget	Actuals	Expenditures	2004	Explanation
PROJECT DESCRIPTION	2004	2004	2004	Budget	Reference
INFORMATION SYSTEMS & TELECOMMUNICATIONS			7 .		•
NETWORK CERVICES					
NETWORK SERVICES					
INFRASTRUCTURE REPLACEMENT	•				
		•		•	
Replace Powerline Carrier Equipment - Transmission System - West Coast	391	98	396	. 5	
Replace Battery System - Multiple Sites - 2004	274	63	311	37	*
Replace Remote Terminal Unit for Hydro - Phase 5	314	53	325	11	•
Replace Telephone Isolation Equipment - Doyles	49	35	74	25	
Upgrade Site Grounding at Telecontrol Site - Phase 5	49	45	48	(1)	
			•		
NETWORK INFRASTRUCTURE			· · · · · · · · · · · · · · · · · · ·		
			•	**	. •
Purchase Test Equipment	48	-0	48	0	
Upgrade Local Area Networks (LANs) - Multiple Sites - 2004	48	25	50	2	
LIDODADE OF TEOLINOLOGY	.*		•		
UPGRADE OF TECHNOLOGY					· .
Replacement of Operational Data & Voice Network - Phase II	971	832	1,052	81	Note 14
	-				
TOTAL NETWORK SERVICES	2,144	1,151	2,304	160	•
TOTAL INFORMATION SYSTEMS & TELECOMMUNICATIONS	8,512	2,619	4,928	(3,584)	

NEWFOUNDLAND & LABRADOR HYDRO GENERAL PROPERTIES 2004 CAPITAL EXPENDITURES - DETAIL FOR THE QUARTER ENDING DECEMBER 31, 2004 (\$,000)

			•			
PROJECT DESCRIPTION	:	PUB Approved Budget 2004	4th Quarter Actuals 2004	Total Actual Expenditures 2004	Variance From 2004 Budget	Variance Explanation Reference
		······································				
ADMINISTRATIVE						
VEHICLES	:					
Replace Vehicles - Hydro System - 2003 Replace Vehicles - Hydro System - 2004		1,588 1,081	253 79	1,450 877	(138) (204)	Note 15 Note 16
ADMINISTRATION	*.					
Purchase Cash Remittance Processor Electronic Metering Reading Purchase & Replace Admin Office Equip less than \$50,000		60 36 73	22 30 3	22 36 19	(38) 0 (54)	
TOTAL ADMINISTRATIVE	·.	2,838	387	2,404	(434)	
TOTAL GENERAL PROPERTIES		11,350	3,006	7,332	(4,018)	•

NEWFOUNDLAND & LABRADOR HYDRO OTHER APPROVED FUNDS 2004 CAPITAL EXPENDITURES - DETAIL FOR THE QUARTER ENDING DECEMBER 31, 2004 (\$,000)

PROJECT DESCRIPTION	PUB Approved Budget 2004	4th Quarter Actuals 2004	Total Actual Expenditures 2004	Variance From 2004 Budget	Variance Explanation Reference
ALLOCATION FOR UNFORESEEN EVENTS					:
ALLOCATION FOR UNFORESEEN EVENTS					
Allocation for Unforeseen Events	1,000	0	. 0	(1,000)	Note 17
	 		·	<u> </u>	
TOTAL ALLOCATION FOR UNFORESEEN EVENTS	1,000	0	. 0	(1,000)	
	.,,,,,			- (1,000)	
PROJECTS APPROVED BY PUB	1.5				
			•		
Carryover			•		
Load Research - Island and Labrador Interconnected Systems	143	. 32	127	(16)	
Wind Generation - Ramea	89	2	83	(6)	
Contribution	(89)	(12)	(83)	6	
New		.*		•	
		•			
Upper Salmon Slope Stabilization	102	114	207	105	Note 18
Office Server & Productivity Tools Evergreen	639	541	609	(30)	
End User Evergreen Program	793	263	796	. 3	
Increase Generation - Port Hope Simpson	303	122	132	. (171)	Note 19
Holyrood Marine Terminal - Security Upgrade	465	326	436	(29)	
Replacement of Diesel Unit -Hopedale	258	0	0	(258)	Note 20
Relocate Mobile Diesel Unit-Roddickton to St. Anthony	95	. 82	82	(13)	•
					
TOTAL PROJECTS APPROVED BY PUB	2,798	1,470	2,389	(409)	
NEW PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO					• •
DATE HOUSE OF THAT WOOD ALT HOUSE OF THE DE					
Carryover					
		•			
Project Review - Replace VHF Mobile Radio Systems	61	<i>i</i> 0	60	(1)	. *
NI					
New	•				
Purchase Site License for Proworx 32	33	26	27	(6)	•
Replace Battery Bank - Grand Lake Crossing	26	14	23	(3)	
Purchase VHF Radios	27	37	39	12	
Replace Air Conditioning Unit - Hardwoods Terminal Station	24	0	23	(1)	•
Preliminary Engineering - Rencontre Interconnection	49	8	16	(33)	
Purchase Condensor Easi Drive Mechanism-Units 1&2 Holyrood	19	18	18	(1)	
		,			
TOTAL PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO	239	103	206	(33)	
	-				

NEWFOUNDLAND & LABRADOR HYDRO VARIANCE EXPLANATIONS (Greater than \$50,000)

GENERATION

1. Replace Unit 7 Exciter - Bay d'Espoir

This was a multi-year project started in 2003 and completed in 2004. The original budget was based on the exciter model ABB Unitrol P identical to the exciters replaced for Units 1 to 6 at Bay d'Espoir Powerhouse 1. However, by late 2003, Hydro had a very good experience with a new exciter model ABB Unitrol F, at Granite Canal and Cat Arm Unit 1, which is \$110,000 cheaper than the Unitrol P model. The Unitrol F model is equipped with standard off-the-shelf software and is easier to program and maintain. Based on the performance, experience and cost, the ABB Unitrol F model was procured and installed and is working satisfactorily.

2. Replace Gate Hoist No. 2 - Ebbegunbaeg control Structure

This was the first conversion ever from a screw-type gate hoist to a "wire-rope" type within the Hydro system. The budget estimate was prepared based on a budget price provided by a contractor. Three (3) tender prices for equipment supply were received; the lowest was \$245,500 and the highest was \$641,135. The lowest successful bidder was a local reputable contractor. The overall cost of the project is lower due to lower contractor costs due to competitive bidding and favourable weather conditions during installation.

3. Upgrade Control System - Holyrood

This is a multi-year project. Under Phase I in 2004, the Distributed Control System (DCS) for Units 1 and 2 were successfully replaced and commissioned. Hydro will replace the DCS for Unit 3 and Station Service in 2005. The variance of \$54,000 during 2004 is not expected to carry through project completion. The \$54,000 is a timing variance in the recording of the expenses for this multi-year \$2.6 million project.

4. Upgrade Civil Structures - Holyrood

This is a multi-year project. Under Phase I in 2004, engineering design and the tender to replace the steel liner of Stack No. 2 was prepared. The tender has been issued for Phase II and the tender closing date is February 8, 2005. The variance of \$70,000 during 2004 is due to the late arrival of invoices from a consultant.

NEWFOUNDLAND & LABRADOR HYDRO VARIANCE EXPLANATIONS (Greater than \$50,000)

TRANSMISSION & RURAL OPERATIONS

5. Upgrade TL214 - (138kV Bottom Brook - Doyles)

The original budget was based on the work being done in a six-week total line outage. However, system operational constraints only allowed a three-week outage. Therefore, additional contractor resources had to be employed to meet the accelerated schedule. Market conditions for available lineworkers to meet the accelerated schedule contributed to the increase in costs. Design changes resulted in structure changes and an extra circuit kilometre of conductor which further increased the project costs. Finally, the operational requirements of Hydro and Newfoundland Power for the temporary generation plant were more extensive than what was conceived in the budget. This additional scope, resulted in further increases in the overall project costs.

6. Replace Insulators TL233 - (230kV Buchans - Bottom Brook)

The budget was based on the line being taken out of service for the duration of the insulator replacement work. As the fieldwork was being planned, the long-term outage plan could not be implemented. The line was required to be put back in service each night. This new plan required daily switching, which increased the length of time for the work and thus the total project cost.

7. Install Motor Drive Mechanisms on Disconnects Switches - West Coast

The budget was based on a preliminary design concept and methodology. This concept and methodology were revised considerably as the detailed engineering progressed. The equipment and material costs were less than anticipated and the installation work proceeded simpler and faster than expected, so the overall project costs were reduced.

8. Service Extensions

The budgeted amount is an annual allotment based on the average of the annual expenditures for service extensions over the last five years. It is not based on a summary of specific project costs. The variance represents the amount by which the current year's service extensions and corresponding expenditures exceeded the average of the last five years.

NEWFOUNDLAND & LABRADOR HYDRO VARIANCE EXPLANATIONS (Greater than \$50,000)

TRANSMISSION & RURAL OPERATIONS

9. <u>Distribution Upgrades</u>

The budgeted amount is an annual allotment based on the average of the annual expenditures for distribution upgrades over the last five years. It is not based on a summary of specific project costs. The variance represents the amount by which the current year's distribution upgrades and corresponding expenditures exceeded the average of the last five years.

10. Pole Replacements

The total amount of the budget was the sum of the individual amounts for each system (Bottom Waters, and St. Anthony). The individual budgets were estimated as "stand-alone" projects. Once approved, the execution plan was to consolidate the two projects into one package for contract management. This consolidation resulted in more favourable tender prices and greater efficiencies in project and construction management. This resulted in an overall reduction in the total cost for the two projects.

11. Insulator Replacements

The total amount of the budget was the sum of the individual amounts for each system (Bottom Waters, Fleur-de-Lys and South Brook). The individual budgets were estimated as "standalone" projects. Once approved, the execution plan was to consolidate the three projects into one package for contract management. This consolidation resulted in more favourable tender prices and greater efficiencies in project and construction management. This resulted in an overall reduction in the total cost for the three projects.

NEWFOUNDLAND & LABRADOR HYDRO VARIANCE EXPLANATIONS (Greater than \$50,000)

GENERAL PROPERTIES

12. Replace Energy Management System - Energy Control Centre

This is a multi-year project. The contract for this project was not awarded until June of 2004, whereas the original estimate assumed a 2003 award. This combined with other changes in the Schedule, has resulted in the transfer of funds to 2005 and 2006. The total estimated capital cost and the project completion date have not changed however, the project budget will be reviewed thoroughly in 2005 and forecast revised as appropriate.

13. Corporate Applications Environment

The actual cost of the project was under budget because 3 of the 4 work items under this project heading came in below budget. On one item that was below budget, a local consultant was used rather than the original software supplier; this resulted in 50% of the variance.

14. Replacement of Operational Data & Voice Network - Phase II

This is a two-year project. The variance is simply a cash flow difference between 2004 and 2005.

15. Replace Vehicles - Hydro System - 2003

The transportation review and the fleet review identified opportunities for less heavy transport equipment, standardization of some light duty equipment, relocation and sharing of some equipment and the elimination of some light duty mobile equipment. These resulted in fewer and less expensive units being purchased, and thus a reduction in the overall project cost.

16. Replace Vehicles - Hydro System - 2004

The reduction in project cost is a result of the opportunities identified in the transportation and fleet review. These opportunities resulted in fewer and lesser expensive units being purchased. The individual costs for category 1000, 2000 and 3000 units were generally less than budgeted. As well, the delayed delivery of one medium/heavy duty unit from 2004 to 2005 reduced the 2004 expenditures. Payment for this unit will be made in 2005. The delayed delivery and the reduced unit costs resulted in less contingency being used, giving the combined effect of a lower overall project cost.

NEWFOUNDLAND & LABRADOR HYDRO VARIANCE EXPLANATIONS (Greater than \$50,000)

OTHER APPROVED FUNDS

17. Allocation for Unforeseen Events

There were no capital projects during 2004 that met the conditions imposed by the Board in P.U. 7 (2002 - 2003) for inclusion in the expenditure category.

18. <u>Upper Salmon Slope Stabilization</u>

This is a multi-year project. Based on the preliminary estimate, the Board approved the above budget amounts for the years 2004 and 2005. Under Phase I in 2004, an engineering study was commissioned to review the concerns with slope stability, evaluate the options and prepare the design and cost estimates. This has been successfully completed and Hydro is now preparing the revised cost estimates and the detailed design and tender. Hydro plans to complete this work during 2005.

Based on the study completed, this repair work will be carried out from a barge, which makes it a complex operation, to carry out the repairs under water to achieve the desired slope accurately. This will have a significant impact on cost and following completion of the revised estimates, the Board will be updated on the project.

19. Increase Generation - Port Hope Simpson

This was an unbudgeted project made necessary by the failure of a 300kW diesel generating unit at the Port Hope Simpson Diesel Plant. Hydro applied to the Board for approval for this project on March 22, 2004 and obtained approval on May 7, 2004 through Board Order # P.U. 13 (2004). The schedule for the project was for it to be completed in 2004. However, the replacement unit failed the first factory tests. Repairs and retesting caused a delay in delivery to late December such that installation and commissioning had to be re-scheduled to 2005. The project is now scheduled to be completed by the end of February 2005.

NEWFOUNDLAND & LABRADOR HYDRO VARIANCE EXPLANATIONS (Greater than \$50,000)

OTHER APPROVED FUNDS

20. Replacement of Diesel Unit - Hopedale

This was an unbudgeted project made necessary by the failure of a 550kW diesel generating unit at the Hopedale Diesel Plant. Hydro applied to the Board for approval for this project on June 11, 2004 and obtained approval on July 30, 2004 through Board Order #P.U. 28 (2004). The tenders that were received for the replacement unit were not technically acceptable to Hydro, so the tender had to be recalled. There was insufficient time to recall the tender and obtain delivery to Hopedale before the close of the 2004 shipping season. It was therefore decided to re-schedule the project for completion in 2005. A mobile diesel generating unit was temporarily installed to meet the 2004/2005 winter peak. The tender will be recalled in February 2005 and installation will be completed by September 2005.



NEWFOUNDLAND AND LABRADOR HYDRO

2005 CAPITAL EXPENDITURES
YEAR ENDING DECEMBER 31, 2005

Filed with the Public Utilities Board February/2006

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL EXPENDITURES

For Year Ending December 31, 2005

TABLE OF CONTENTS

Pag
able of Contents(I)
CAPITAL EXPENDITURE OVERVIEW
CAPITAL EXPENDITURE SUMMARY BY CATEGORY: Generation
CAPITAL EXPENDITURE DETAIL: Generation Hydro Plants
Transmission & Rural OperationsTransmission6System Performance & Protection6Terminals6Distribution7Generation7General8
General Properties Information Systems & Telecommunications 9 Administrative 11 Other Approved Funds 12
ARIANCE EXPLANATION (GREATER THAN \$50,000) Generation

OVERVIEW

	PUB Approved Budget 2005	4th Quarter Actuals 2005	Total Actual Expenditures 2005	Variance From 2005 Budget
GENERATION	7,779	3,236	7,386	(393
TRANSMISSION & RURAL OPERATIONS	19,753	6,752	15,991	(3,762
GENERAL PROPERTIES	15,920	3,828	7,909	(8,011
ALLOWANCE FOR UNFORESEEN EVENTS	1,000	103	103	(897
PROJECTS APPROVED BY PUB	3,112	(721)	2,477	(635
NEW PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO	196	58	86	(110
TOTAL CAPITAL BUDGET	47,760	13,256	33,952	(13,808
Approved P.U. 53 (2004) Approved P.U. 3 (2005)/P.U. 12(2005) Approved P.U. 3 (2005)/P.U. 12(2005) Carryover Projects 2004 to 2005 Approved P.U. 11 (2005) Approved P.U. 14 (2005) Approved P.U. 24 (2005) Approved P.U. 29 (2005) Approved P.U. 29 (2005) Approved P.U. 29 (2005) New Projects under \$50,000 Approved by Hydro	42,431 5,826 (5,826) 1,778 3,154 991 (790) 172 (172) 196			
Revised TOTAL CAPITAL BUDGET	47,760			

CATEGORY

			4th Quarter Actuals 2005	Total Actual Expenditures 2005	Variance From 2005 Budget
GENERATION					
HYDRO PLANTS					
Construction Projects Tools & Equipment		3,204 294	1,558 50	3,162 199	(42 (95
THERMAL PLANT					
Construction Projects		1,854	625	1,598	(256
Property Additions Tools & Equipment		2,072 26	778 5	2,009 25	(63 (1
		20	J	20	()
GAS TURBINES Construction Projects		329	220	393	64
то	OTAL GENERATION	7,779	3,236	7,386	(393
FRANSMISSION & RURAL OPERATIONS					
TRANSMISSION		3,590	1,091	2,721	(869
SYSTEM PERFORMANCE & PROTECTION		468	227	546	78
TERMINALS		598	160	471	(127
DISTRIBUTION		9,559	2,563	8,076	(1,483
GENERATION		2,401	1,323	1,912	(489
GENERAL					
Metering Properties		192 1,023	33 627	131 979	(61 (44
Tools & Equipment		1,922	728	1,155	(44 (767
TOTAL TRANSMISSION & RU	IRAL OPERATIONS	19,753	6,752	15,991	(3,762

CATEGORY

	PUB Approved Budget 2005	4th Quarter Actuals 2005	Total Actual Expend. 2005	Variance From 2005 Budget	
GENERAL PROPERTIES					
INFORMATION SYSTEMS & TELECOMMUNICATIONS	13,722	3,553	6,452	(7,270)	
ADMINISTRATIVE	2,198	275	1,457	(741)	
TOTAL GENERAL PROPERTIES	15,920	3,828	7,909	(8,011)	
ALLOWANCE FOR UNFORESEEN EVENTS	1,000	103	103	(897)	
PROJECTS APPROVED BY PUB	3,112	(721)	2,477	(635)	
PROJECTS APPROVED FOR LESS THAN \$50,000	196	58	86	(110)	
TOTAL CAPITAL BUDGET	47,760	13,256	33,952	(13,808)	

GENERATION

PROJECT DESCRIPTION	PUB Approved Budget 2005	4th Quarter Actuals 2005	Total Actual Expend. 2005	Variance From 2005 Budget
HYDRO PLANTS				
CONSTRUCTION PROJECTS				
Upgrade Slope Stabilization - Upper Salmon Power Canal Replace Underground Fuel Tanks - Upper Salmon Generating Facility Upgrade Controls Spherical Valve No. 6 - Bay d'Espoir Replace Penstock - Snook's Arm Generating Station	2,566 327 196 115	1,269 231 7 51	2,543 329 212 78	(23) 2 16 (37)
TOTAL CONSTRUCTION PROJECTS	3,204	1,558	3,162	(42)
TOOLS & EQUIPMENT				
Purchase Dry Ice Cleaning System - BDE Replace Doble F2000 Relay Test Equipment - BDE Purchase Wedge Tightness Detector - BDE Purchase & Replace Tools & Equipment Less than \$50,000	59 96 49 90	14 0 1 35	14 56 28 101	(45) (40) (21) 11
TOTAL TOOLS & EQUIPMENT	294	50	199	(95)

GENERATION

PROJECT DESCRIPTION	PUB Approved Budget 2005	4th Quarter Actuals 2005	Total Actual Expend. 2005	Variance From 2005 Budget	Variance Explan. Ref. No.
THERMAL PLANT			2000	Dadgot	1101.110.
CONSTRUCTION PROJECTS					
Upgrade Control System - Holyrood Purch/Inst Anti-Fouling System for Cooling Water Systems - Holyrood	1,088 705	69 504	1,016 527	(72) (178)	Note 1 Note 2
Purch/Inst Fire Protection System - Microwave Radio Room - Holyrood	61	52	55	(6)	
TOTAL CONSTRUCTION PROJECTS	1,854	625	1,598	(256)	
PROPERTY ADDITIONS					
Upgrade Civil Structures	2,072	778	2,009	(63)	Note 3
TOTAL PROPERTY ADDITIONS	2,072	778	2,009	(63)	
TOOLS & EQUIPMENT					
Purchase & Replace Tools & Equipment Less than \$50,000	26	5	25	(1)	
TOTAL TOOLS & EQUIPMENT	26	5	25	(1)	
TOTAL THERMAL PLANTS	3,952	1,408	3,632	(320)	
GAS TURBINES					
CONSTRUCTION PROJECTS					
Install Main Fuel Line Valve - Hardwoods	91	3	74	(17)	
Install Transferred Diesel Generating Set - Stephenville	87	107	121	34	
Replace Battery Bank - Hardwoods	58	19	57	(1)	
Purchase/Install Reconciliation Flow Meters - Stephenville Purchase/Install Reconciliation Flow Meters - Hardwoods	26 24	10	21	(5)	
Replace Control Module HVAC Unit - Hardwoods	24 24	5 0	18 24	(6) 0	
Automate Diesel Backup System - Hardwoods	19	76	78	59	Note 4
TOTAL CONSTRUCTION PROJECTS	329	220	393	64	
TOTAL THERMAL PLANTS	329	220	393	64	
TOTAL GENERATION	7,779	3,236	7,386	(393)	

TRANSMISSION & RURAL OPERATIONS

PROJECT DESCRIPTION	PUB Approved Budget 2005	4th Quarter Actuals 2005	Total Actual Expend. 2005	Variance From 2005 Budget	Variance Explan. Ref. No.
TRANSMISSION					
Replace Wood Poles - Transmission Upgrade TL221 - (69kV Peter's Barren - Hawkes Bay) Replace Insulators TL243 - (138kV Hinds Lake - Howley)	2,588 774 228	739 270 82	2,243 315 163	(345) (459) (65)	Note 5 Note 6 Note 7
TOTAL TRANSMISSION	3,590	1,091	2,721	(869)	
SYSTEM PERFORMANCE & PROTECTION					
Provide Remote Control - Farewell Head Terminal Station Purch/Install Digital Fault Recorder - Bottom Brook Purch/Install 66Kv Breaker Fail Protection Addition - Massey Drive TS Upgrade Protection 66Kv Lines - Peter's Barren , Daniel's Harbour Upgrade Breaker Controls - BBK/MDR Terminal Station Purch/Install 66Kv Breaker Protection Upgrade - Bay d'Espoir	127 122 81 78 33 27	159 2 24 17 11	266 91 50 62 30 47	139 (31) (31) (16) (3) 20	Note 8
TOTAL SYSTEM PERFORMANCE & PROTECTION	468	227	546	78	
<u>TERMINALS</u>					
Install Motor Drive Mechanisms on Disconnect Switches - East Coast Replace Battery Banks Replace Instrument Transformers Replace Surge Arrestors Purch/Install Conduit and Cable - (Bay d'Espoir TS - Powerhouse) Construct Yard Extension - Conne River Substation	183 166 75 68 61 45	42 47 11 31 7 22	118 158 54 80 35 26	(65) (8) (21) 12 (26) (19)	Note 9
TOTAL TERMINALS	598	160	471	(127)	

TRANSMISSION & RURAL OPERATIONS

					 -
	PUB	4th	Total	Variance	
	Approved	Quarter	Actual	From	Variance
	Budget	Actuals	Expend.	2005	Explan.
PROJECT DESCRIPTION	2005	2005	2005	Budget	Ref. No.
DISTRIBUTION					
Interconnect - Rencontre East	3,250	555	1,804	(1,446)	Note 10
Service Extensions	1,728	742	2,009	281	Note 11
Distribution Upgrades	1,601	651	2,495	894	Note 12
Insulator Replacements	971	107	455	(516)	Note 13
Upgrade Distribution Line - Cook's Harbour	718	131	478	(240)	Note 14
Upgrade Distribution Line - L'Anse au Loup L1 & L2	636	165	281	(355)	Note 15
Relocate Substation- Roberts Arm/Triton	319	106	331	12	
Distribution Line Pole Replacements	168	77	127	(41)	
Purchase and Install Reclosers - Makkovik & Hopedale	125	29	96	(29)	
Relocate Regulator Bank - Happy Valley	43	0	0	(43)	

TOTAL DISTRIBUTION	9,559	2,563	8,076	(1,440)	
GENERATION					
GENETIATION					
Upgrade Generator Relaying - Happy Valley North Plant	29	0	55	26	
Increase Generation - L'Anse au Loup	392	392	442	50	
Replace Diesel Generating Unit No. 266 - Williams Hr.	304	215	237	(67)	Note 16
Replace Dam - Roddickton Mini Hydro	232	70	134	(98)	Note 17
Installation of Fall Arrest Equipment - Hydro facilities	206	149	182	(24)	
Install Shut-Off Valves - Diesel Plants	165	51	69	(96)	Note 18
Install Fuel Storage Tanks - Hopedale & Paradise River	152	140	167	15	
Replacement of Circuit Breakers - Hawkes Bay Diesel	111	18	78	(33)	
Upgrade Cooling System - Black Tickle	107	58	87	(20)	
Install Day Tank and Fuel Meter - Ramea	106	11	41	(65)	Note 19
Upgrade Building System North Plant - Goose Bay	99	20	79	(20)	
Raise Stack Heights - St. Brendan's, Black Tickle, Cartwright	96	47	62	(34)	
Purch.& Inst. Digital Metering - Francois, McCallum, Grey River, Little Bay	90	37	64	(26)	
Upgrade Diesel Plant - Black Tickle	85	77	103	18	
Purchase Data Acquisition Software - Diesel Plants Install Intermediate Fuel Storage Tank - Charlottetown	70 00	24	64	(6)	Mata 00
Modify Heating System - Hopedale	66 54	13	13	(53)	Note 20
Replace Battery Banks - L'Anse au Loup & Hawkes Bay	54 37	1	1	(53)	Note 21
Topiaco Dattory Dattio - Emilios da Loup a Hawkes Day	31	0	34	(3)	
TOTAL GENERATION	2,401	1,323	1 010	(490)	
TOTAL GLIVERATION	۷,401	1,323	1,912	(489)	

TRANSMISSION & RURAL OPERATIONS

PROJECT DESCRIPTION	PUB Approved Budget 2005	4th Quarter Actuals 2005	Total Actual Expend. 2005	Variance From 2005 Budget	Variance Explan. Ref. No.
<u>GENERAL</u>					
<u>METERING</u>					
Purchase Meters & Equipment - Rural System Purchase Metering Spares - Bulk Electrical System	159 33	18 15	114 17	(45) (16)	
TOTAL METERING	192	33	131	(61)	
PROPERTIES					
Install Central Air Conditioning - Whitbourne & Stephenville Warehouse Renovations - St. Anthony	289 147	184 7	205 150	(84)	Note 22
Upgrade Line Depot/Shed - Baie Verte, Sop's Arm & Bay d'Espoir Replace Line Depot Building - Mary's Harbour Purchase Global Positioning System	151 74 57	114 123 0	133 131 41	(18) 57 (16)	Note 23
Replace Fence Daniels Harbour Terminal Station Construct PCB Storage Building - Wabush	52 52	0 32	57 45	5 (7)	
Legal Survey of Distribution Line Right-of-Ways Extend Fence - Quartzite Terminal Station	50 49	79 33	93 49	43 0	
Provide Security System - Port Saunders Office Construct Storage Ramp - Stephenville & Whitbourne	43 36	17 35	32 38	(11) 2	
Replace Wooden Gantry Crane - Salvage Stores Construct Lube Oil Storage Ramp - Williams Harbour	16 7	0 3	0 5	(16) (2)	
TOTAL PROPERTIES	1,023	627	979	(44)	
TOOLS & EQUIPMENT					
Replace Nodwell V7600 & Boom V6067 - Stephenville	798	649	653	(145)	Note 24
Purchase Mobile Oil Reclaimation Unit Replace Doble F2000 Relay Test Equipment - BFL, WBN, STV & BDE	531 266	8	28 169	(503) (97)	Note 25 Note 26
Purchase & Replace Tools & Equipment Less than \$ 50,000	200 67	6	60	(7)	NOIG ZU
Replace Light Duty Mobile Equipment Less than \$50,000	260	64	245	(15)	
TOTAL TOOLS & EQUIPMENT	1,922	728	1,155	(767)	
TOTAL GENERAL	3,137	1,388	2,265	(872)	
TOTAL TRANSMISSION & RURAL OPERTIONS	19,753	6,752	15,991	(3,762)	

GENERAL PROPERTIES

PROJECT DESCRIPTION	PUB Approved Budget 2005	4th Quarter Actuals 2005	Total Actual Expend. 2005	Variance From 2005 Budget	Variance Explan. Ref. No.
INFORMATION SYSTEMS & TELECOMMUNICATIONS					
SOFTWARE APPLICATIONS					
INFRASTRUCTURE REPLACEMENT					
INFRASTRUCTURE REPLACEMENT					
Replace Energy Management System - Energy Control Centre	6,836	1,016	2,108	(4,728)	Note 27
NEW INFRASTRUCTURE					
Applications Enhancements	311	141	334	23	
Security Program - Secure Remote Access	76	69	69	(7)	
Upgrade of Technology					
Corporate Application Environment - 2005	274	44	261	(13)	
Cost Recovery CF(L)Co	(52)	(13)	(52)	0	
TOTAL SOFTWARE APPLICATIONS	7,445	1,257	2,720	(4,725)	
COMPUTER OPERATIONS					
INFRASTRUCTURE REPLACEMENT					
iSeries Replacement	228	329	399	171	Note 28
Cost Recovery CF(L)Co	(79)	97	(80)	(1)	
End User Infrastructure Evergreen Program - 2005	711	219	644	(67)	Note 29
NEW INFRASTRUCTURE					
Peripheral Infrastructure Replacement - 2005	118	54	121	3	
Security Strategy Deployment - 2005	99	71	106	7	
Cost Recovery CF(L)Co	(19)	(7)	(21)	(2)	
UPGRADE OF TECHNOLOGY					
Server & Operating Systems Evergreen Program - 2005	212	36	179	(33)	
TOTAL COMPUTER OPERATIONS	1,270	799	1,348	78	

GENERAL PROPERTIES

PROJECT DESCRIPTION	PUB Approved Budget 2005	4th Quarter Actuals 2005	Total Actual Expend. 2005	Variance From 2005 Budget	Variance Explan. Ref. No.
INFORMATION SYSTEMS & TELECOMMUNICATIONS					
NETWORK SERVICES					
INFRASTRUCTURE REPLACEMENT					
Replace VHF Mobile Radio System Cost Recovery - WST Replace Battery System - Multiple Sites - 2005 Microwave Site Refurbishing - 2005 Replace Remote Terminal Unit for Hydro - Phase 6 Replace Air Conditioners - Stoney Brook & Hardwoods Replace Voice and Data Communications - Berry Hill	2,915 0 364 294 150 55	67 (176) 238 270 25 68 (2)	352 (176) 321 291 204 77 0	(2,563) (176) (43) (3) 54 22 (15)	Note 30 Note 31
UPGRADE OF TECHNOLOGY					
Replacement of Operational Data & Voice Network - Phase II Upgrade Site Grounding - 2005	1,166 48	991 16	1,262 53	96 5	Note 32
TOTAL NETWORK SERVICES	5,007	1,497	2,384	(2,623)	
TOTAL INFORMATION SYSTEMS & TELECOMMUNICATIONS	13,722	3,553	6,452	(7,270)	

GENERAL PROPERTIES

PROJECT DESCRIPTION	PUB Approved Budget 2005	4th Quarter Actuals 2005	Total Actual Expend. 2005	Variance From 2005 Budget	Variance Explan. Ref. No.
<u>ADMINISTRATIVE</u>		• "'			
<u>VEHICLES</u>					
Replace Vehicles - Hydro System - 2004 Replace Vehicles - Hydro System - 2005	505 868	34 0	249 650	(256) (218)	Note 33 Note 34
ADMINISTRATION					
Electronic Metering Reading	224	34	35	(189)	Note 35
Replace Chiller - Hydro Place	213	0	201	(12)	
Security Assessment of System Operations	110	82	82	(28)	
Upgrade Standby Diesel Fuel System - Hydro Place	91	39	58	(33)	
Re-Construct Storage Ramps - Bishop's Falls	73	70	70	(3)	
Purchase & Replace Admin Office Equip less than \$50,000	114	16	112	(2)	
TOTAL ADMINISTRATIVE	2,198	275	1,457	(741)	
TOTAL GENERAL PROPERTIES	15,920	3,828	7,909	(8,011)	

OTHER APPROVED FUNDS

PROJECT DESCRIPTION	PUB Approved Budget 2005	4th Quarter Actuals 2005	Total Actual Expend. 2005	Variance From 2005 Budget	Variance Explan. Ref. No.
ALLOCATION FOR UNFORESEEN EVENTS					
Allocation for Unforeseen Events Repair Leaking Underground Fuel Supply, Return/Drain Pipes	1,000	0 103	0 103	(1,000) 103	
TOTAL ALLOCATION FOR UNFORESEEN EVENTS	1,000	103	103	(897)	Note 36
PROJECTS APPROVED BY PUB					
CARRYOVER					
Replacement of Diesel Unit - Hopedale Increase Generation - Port Hope Simpson Relocate Mobile Diesel Unit - Roddickton to St. Anthony	258 171 13	29 3 0	247 136 11	(11) (35) (2)	
<u>NEW</u>					
Transmission Interconnection - Duck Pond Mine Site Contribution	5,826 (5,826)	2,191 (4,513)	4,594 (4,594)	(1,232) 1,232	
Cat Arm Road - Rehabilitation Replace Diesel Engine # 2046, Ramea	1,260 226	878 176	1,358 176	98 (50)	Note 37
Cat Arm Unit 1 Governor Controls Replacement Disconnecting Means to 600 Volt MCC Branch Feeders Replace Diesel Generator - Holyrood	378 613 193	7 328 180	13 356 180	(365) (257) (13)	Note 38 Note 39
TOTAL PROJECTS APPROVED BY PUB	3,112	(721)	2,477	(635)	
NEW PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO					
Ebbegunbaeg Water Level Station	42	33	39	(3)	
Remote Monitoring System - Granite Canal	26	10	10	(16)	
Electrical Arc Flash Personal Protection Equipment	42	0	0	(42)	
Purchase Hydraulic Operated Drill	2	0	2	0	
Replace Broken Poles - TL# 239	10	0	10	0	
Portland Creek, Application for Water Use License	10	0	10	0 (40)	
New Well and Septic System - Springdale Line Depot Replace Circuit Breaker Unit # 2044	49 15	1 14	1 14	(48) (1)	
NEW PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO	196	58	86	(110)	

NEWFOUNDLAND & LABRADOR HYDRO VARIANCE EXPLANATIONS (Greater than \$50,000)

GENERATION

1. Upgrade Control System - Holyrood

Due to the planned extended outage of the plant to facilitate the asbestos removal program, further extending the outage to permit all aspects of the control systems upgrade would risk generation and transmission security. Due to the nature of the asbestos removal procedures, work could not generally be done concurrently. The project will be fully completed in 2006.

2. Purchase/Install Anti-Fouling System for Cooling Water Systems - Holyrood

The reason for delay is longer than anticipated delivery of customer designed equipment. The equipment was ordered the end of May with delivery expected by mid-October. Delivery did not actually take place until late December. There will be 4 to 6 weeks installation/commissioning required after that. It is expected to be complete by the end of February. The total estimated capital cost remains unchanged.

3. <u>Upgrade Civil Structures</u>

This project benefited from the successful completion of a similar project in 2003. There was a modest cost saving in engineering and management through the re-use of the same designs and personnel.

4. <u>Automate Diesel Backup System - Hardwoods</u>

The original scope of work consisted of installation of an automatic transfer switch for the existing 40kW backup diesel unit, however, upon further engineering review, the installation of an automatic battery charger using 3-phase power from the diesel unit is a more reliable alternative. It would also provide this gas turbine unit with a backup battery charger for its battery bank, especially during start-up. The existing diesel unit was replaced with a 40kW diesel unit (#572 from Petites) which has a standard protection control panel, and for which automatic controls is not an issue.

NEWFOUNDLAND & LABRADOR HYDRO VARIANCE EXPLANATIONS (Greater than \$50,000)

TRANSMISSION & RURAL OPERATIONS

5. Replace Wood Poles - Transmission

Part of the Wood Pole Line Management program was substantial refurbishment work required on TL201 and TL203. Due to reliability problems in providing power to the Avalon Peninsula given a combination of Holyrood operational unit schedules, power demands in St. John's and a line being out for this work, outage availability for the lines were very restricted. This combined with a shortage of line workers resulted in a delay of the refurbishment work for TL201 and TL203 until early in 2006. It is estimated that an extra \$25,000 will be required to complete this work.

6. <u>Upgrade TL221 - (69kV Peter's Barren - Hawkes Bay)</u>

The approved proposal was to upgrade a 27km section of TL221 between Peter's Barren and Hawkes Bay in 2005. The scope included the replacement of approximately 1000 insulators and associated wood cross-arms for the entire 27km section which has performed poorly due to flashovers during periods of heavy salt contamination in this section of line. The insulators were to be replaced with resistive glazed (RG) insulators which perform better than the standard insulators under these salt contamination conditions. However, this year this type of insulator was not available from the manufacturer, NGK. As an alternative, it was proposed to apply a high voltage insulator coating (HVIC) to the insulators. This product helps prevent insulator flashovers in heavily contaminated environments, such as the salt environment experienced on this section of line. The expected life for this product is from 15 to 20 years before reapplication is necessary and the cost of this application was less expensive than the RG insulator proposal. Cross-arm replacement and upgrade were also part of the original proposal to give wider phase spacing to mitigate outages caused by high winds. Review of the outage causes in the outage database did not support this and thus, cross-arm replacement was removed from the project scope further reducing the cost.

7. Replace Insulators TL243 - (138kV Hinds Lake - Howley)

The budget was based on the most probable plan of the work being done by Contract. Thus it included costs for contract management, site supervision, environmental monitoring of the contractor and commissioning inspections by Hydro forces. Factors such as location of the work, availability of work crews, required outages and requirements for 'hot line' work, resulted in this work being completed by internal resources thus reducing the final project cost.

TRANSMISSION & RURAL OPERATIONS

8. <u>Provide Remote Control - Farewell Head Terminal Station</u>

There was no control building existing on site and one was required for the communications and protection equipment. This was not included in the budget. In addition, there was a substantial increase in communication costs and new protection relays purchased failed the bench test and had to be returned causing further delays and cost over runs.

9. <u>Install Motor Drive Mechanisms on Disconnect Switches - East Coast</u>

All the work planned for 2005 could not be accomplished due to the unavailability of equipment outages. Pending the availability of outages, all work is planned to be finished in 2006.

10. Interconnect - Recontre East

The major factor contributing to the extended schedule was the contractor underestimated the degree of difficulty in constructing a distribution line and access route over a section of very rough terrain. Although the contractor made a reasonable effort to perform the work, the duration of the project was extended considerably. It is estimated the project will extend into the first quarter of 2006. The total estimated capital cost remains unchanged.

11. Service Extensions

The budgeted amount is an annual allotment based on the average of the annual expenditures for service extensions over the last five years. It is not based on a summary of specific project costs. The variance represents the amount by which the current year's service extensions and corresponding expenditures exceeded the average of the last five years.

12. <u>Distribution Upgrades</u>

The budgeted amount is an annual allotment based on the average of the annual expenditures for distribution upgrades over the last five years. It is not based on a summary of specific project costs. The variance represents the amount by which the current year's distribution upgrades and corresponding expenditures exceeded the average of the last five years.

TRANSMISSION & RURAL OPERATIONS

13. <u>Insulator Replacements</u>

The budget was based on the most probable plan of the work being done by Contract. Thus it included costs for contract management, site supervision, environmental monitoring of the contractor and commissioning inspections by Hydro forces. Factors such as location of the work, availability of work crews, required outages and requirements for 'hot line' work, resulted in this work being completed by internal resources thus reducing the final project cost.

14. <u>Upgrade Distribution Line - Cook's Harbour</u>

The budget was based on the most probable plan of the work being done by Contract. Thus it included costs for contract management, site supervision, environmental monitoring of the contractor and commissioning inspections by Hydro forces. Factors such as location of the work, availability of work crews, required outages and requirements for 'hot line' work, resulted in this work being completed by internal resources thus reducing the final project cost.

15. <u>Upgrade Distribution Line - L'Anse au Loup L1 & L2</u>

Originally, the project scope included the replacement of the two single-pole structures on the Forteau River crossing with two 2-pole structures. Due to problems with obtaining the necessary approvals from the Environment Department for the poles to be installed near the river, and the late time of the year, plus the reassessment of the job which determined that it could be postponed until the summer of 2006, it was not done under this project. The project also had included replacement of automatic splicing sleeves throughout the L'Anse au Loup system. A reassessment of this portion of the project was also done to determine if it was necessary to replace all of the sleeves. It was concluded that they needed to be replaced in some critical locations, and would not necessarily be required in all locations. There were additional cost savings due to the reduction in project inspection and commissioning costs.

16. Replace Diesel Generating Unit No. 266 - Williams Hr.

The majority of differences between budget and actuals is accounted for by lower than anticipated costs for project/construction management, installation and commissioning, which were based on historical costs for work of the same scope.

TRANSMISSION & RURAL OPERATIONS

17. Replace Dam - Roddickton Mini Hydro

The scope of the project proposed in the 2005 Capital Budget was to completely replace the rock filled crib-dam with a new structure. This recommendation was based on the appearance of the downstream face, significant leakage through the dam and the fact that the dam was 25 years old when the life expectancy of this type of dam in fresh water is 25 to 30 years. Prior to commencing detail design an engineering consultant familiar with this type of dam was hired to evaluate the dam's condition. The consultant recommended further destructive testing to access the interior structure of the dam. This was completed and it was discovered that contrary to the appearance of the downstream face that the interior timbers and the dam facing wood was in very good condition. Based on the results of this investigation it was decided to proceed with a lesser scope repair. This stopped the leakage by replacing the existing till toe at the upstream face and installing sheeting plywood and polyethelene over the existing sheeting on the upstream face and installing blocking timber in the downstream face. This remedial work is expected to extend the life of the dam by 5 to 7 years, possibly longer.

18. <u>Install Shut-Off Valves - Diesel Plants</u>

The major reason for the reduced costs for installation of shut-off valves was the amount of capital work undertaken last year allowed for the installation of most of these valves to be completed in conjunction with other work. Therefore, significant savings was achieved with respect to travel, accommodations and labour. Two of the sites could not be completed due to logistical issues at the time the work was scheduled to be undertaken. The valves are on hand and will be installed when practical to do so, in coordination with other scheduled work.

19. <u>Instail Day Tank and Fuel Meter - Ramea</u>

This project involves the installation of a day tank system and fuel meter in the Ramea Diesel Plant. This will allow for fuel reconciliation to be performed in accordance with the Gasoline and Associated Products regulations. Due to delays in completing other work, this project has been postponed until February 2006, however the total estimated capital cost remains unchanged.

TRANSMISSION & RURAL OPERATIONS

20. <u>Install Intermediate Fuel Storage Tank - Charlottetown</u>

This project involves the installation of an intermediate fuel storage tank to allow for transfer of sufficient fuel from the bulk storage to the plant prior to fuel delivery so that the day tank does not require filling during the fuel transfer. Currently, the day tank must be filled during the transfer operation, and this results in it being impossible to perform a fuel reconciliation as required by the Gasoline and Associated Products regulations. Operational problems also occur due to dirt and water being drawn into the engine fuel systems. The requirement for this project was reviewed as a result of the availability of fuel delivery by truck, and the start of the project was delayed as a result. After review, it was decided that the project would proceed and the job cost was raised in late August. This project will now be completed by the end of March 2006.

21. Modify Heating System - Hopedale

This project involves modifying the plant hydronic heating system to capture sufficient waste heat from the diesel engines to heat the plant. The existing system configuration cannot utilize the total heat available, and cannot provide sufficient heat for the plant. This project has not been completed due to delays in completing earlier scheduled projects. This project will be completed by the end of February.

22. Install Central Air Conditioning - Whitbourne & Stephenville

The original estimate for construction costs of \$180,000 was within range of Consultant's estimates of \$119,000 to \$183,000. Actual construction costs were approximately \$144,000. Total engineering and management costs were under budget by \$15,000, which is very near the difference of \$12,000 between high and low bids for design services. In addition, final commissioning was not complete at year-end, therefore, travel and labour costs associated with this portion of the job are not included.

TRANSMISSION & RURAL OPERATIONS

23. Replace Line Depot Building - Mary's Harbour

The increase in cost for building construction is the result of unfavourable bidding. The budget price to construct this very basic building was approximately \$260 per meter square whereas the lowest bid was approximately \$430 per meter square. Inspection costs also increased as a result of the inability to coordinate this work with other projects ongoing in the area.

24. Replace Nodwell V7600 & Book V6067 - Stephenville

This job was completed at \$145,000 below budget primarily due to the fact that Altec Ltd., the successful bidder had just completed building 3 similar units and as a result had refined the costs of construction and through the competitive bidding process passed the savings along to Hydro. The lower tender price and a bid which met all of our specifications also meant there was no requirement to utilize the budgeted contingency.

25. <u>Purchase Mobile Oil Reclaimation Unit</u>

A contract was awarded to GE Energy Services of Ohio in 2005 to supply a self-contained mobile oil reclamation unit to facilitate refurbishing the oil of aged power transformers. This reclamation unit was to have been delivered to Hydro in the fall of 2005. Hydro sent two technicians to Ohio to perform an inspection and function testing of this unit in early November 2005, at which time a list of deficiencies was identified. GE are working on the deficiencies which will require some redesign and further inspection and testing before we will take receipt of this equipment. Delivery is now anticipated to be in the spring of 2006.

26. Replace Doble F2000 Relay Test Equipment -BFL, WBN, STV & BDE

The purchase of Doble F2000 relay test equipment were based on original estimates from Doble Engineering. However, Hydro was eventually able to negotiate a better price thus reducing the overall cost.

VARIANCE EXPLANATIONS (Greater than \$50,000)

GENERAL PROPERTIES

27. Replace Energy management System - Energy control Centre

This is a multi-year project. Payments to the contractor are based on milestones being completed. A couple of milestone dates have been missed as well as scheduled training delays. The total estimated capital cost and the project completion date have not changed.

28. <u>iSeries Replacement</u>

The iSeries replacement was under budget due to a price reduction and performance enhancement of the iSeries computers. The iSeries model type that we purchased was not available at the time the budget was prepared.

29 <u>End User Infrastructure Evergreen Program - 2005</u>

The number of units required were less than forecast as well as drop in the overall unit price. There was \$19,000 carried over into 2006 due to equipment that was ordered but not received by year-end.

30. Replace VHF Mobile Radio System

This is a multi-year project. Due to delays associated with completing the Tender Evaluations and the subsequent contract negotiations, it is anticipated that the project will be delayed by approximately 3 months, however the total estimated capital cost has not changed.

31. Replace Remote Terminal Unit for Hydro - Phase 6

Due to the installation of a fiber optic cable between the powerhouse and terminal station no. 2 at the Bay d'Espoir Plant, Hydro was able to upgrade the proposed design for the remote terminal unit. This will facilitate gathering fault type and location data not provided by the existing system design. The enhanced design also included a GPS clock that was recognized as a system deficiency by System Operations.

VARIANCE EXPLANATIONS (Greater than \$50,000)

GENERAL PROPERTIES

32. Replacement of Operational Data & Voice Network - Phase II

Resolving a number of technical issues created significant costs in field testing, increases in internal resources and delays in the project. To keep the schedule, extra crews were utilized. To overcome technical problems, extra prototyping was utilized. Most of this cost was contracted through our partner agreement with Aliant/XWave.

33. Replace Vehicles - Hydro System - 2004

The reduction in project cost is a result of the opportunities identified in the transportation and fleet review. These opportunities resulted in fewer and lesser expensive units being purchased. The individual costs for category 1000, 2000 and 3000 units were generally less than budgeted.

34. Replace Vehicles - Hydro System - 2005

Vehicle replacement completed at \$100,000 below budget reflecting the fact that the vehicles and aerial devices purchased at the estimated cost per unit, and the contingency funds did not need to be utilized.

35. Electronic Metering Reading

The purchase cost for the electronic metering units have dropped since the initial approval as have the Cdn/US exchange rate. This is reflected in the revised cost.

OTHER APPROVED FUNDS

36. Allocation for Unforeseen Events

There was one capital project during 2005 that met the conditions imposed by the Board in P.U.7 (2002-2003) for inclusion in the expenditure category. Replacement of Underground Fuel Supply - Hardwoods Gas Turbine was filed as a separate report on October 27, 2005.

37. Cat Arm Road - Rehabilitation

When tenders were received for the work, the low bid was approximately \$300,000 more than estimated. With the four lowest tenders being within 10% of each other and based on unit prices, this confirmed that the bid was the right price for the work tendered. The design was reviewed, however, nothing was revealed that could be changed to realize any significant savings. There was also no time for redesign and re-tendering to complete the work within the 2005 construction season. As the work was critical to ensure safe access to the generating plant, it was decided to proceed with the work for the tendered amount. This resulted in using the \$200,000 project contingency and approximately \$100,000 in additional funds.

38. Cat Arm Unit 1 Governor Controls Replacement

This is a multi-year project and due to work scheduling conflicts, only the engineering specifications got completed. The total estimated capital cost remains unchanged, however, the completion date is estimated to be October 2006.

39. Disconnecting Means to 600-Volt MCC Branch Feeders

The work planned required a number of outages during the year. The limited availability for scheduled outages resulted in this work being delayed until 2006.



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2006 CAPITAL EXPENDITURES
YEAR ENDING DECEMBER 31, 2006

Filed with the Public Utilities Board February/2007

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL EXPENDITURES

For Year Ending December 31, 2006

TABLE OF CONTENTS

	Page
Table of Contents	(I)
CAPITAL EXPENDITURE OVERVIEW	1
CAPITAL EXPENDITURE SUMMARY BY CATEGORY:	
Generation	
Transmission & Rural Operations	2
General Properties	
Other Approved Funds	3
CAPITAL EXPENDITURE DETAIL:	
Generation	
Hydro Plants	4
Thermal Plant	5
Transmission & Rural Operations	
Transmission	6
System Performance & Protection	
Terminals	
Distribution	7
Generation	
General	
General Properties	
Information Systems & Telecommunications	9
Administrative	
Other Approved Funds	
Variance Explanation (Greater than \$50,000)	
Generation	13
Transmission & Rural Operations	
General Properties	
Other Approved Funds	
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OVERVIEW

	PUB Approved Budget 2006	4th Quarter Actuals 2006	Total Actual Expend. 2006	Variance From 2006 Budget
GENERATION	10,106	4,616	7,458	(2,648)
TRANSMISSION & RURAL OPERATIONS	19,992	7,579	18,730	(1,262)
GENERAL PROPERTIES	17,229	8,512	14,100	(3,129)
ALLOWANCE FOR UNFORESEEN EVENTS	1,000	(1)	226	(774)
PROJECTS APPROVED BY PUB	471	(174)	488	17
NEW PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO	226	170	215	(11)
TOTAL CAPITAL BUDGET	49,024	20,702	41,217	(7,807)
Approved P.U. # 31 (2005) 2006 Capital Budget Carryover Projects 2005 to 2006 Carryover Projects 2005 to 2006 Approved P.U. # 10 (2006) Approved P.U. # 12 (2006) New Projects under \$50,000 Approved by Hydro	5,876 (72) 184			
TOTAL APPROVED CAPITAL BUDGET	49,024			

CATEGORY

	PUB Approved Budget 2006	4th Quarter Actuals 2006	Total Actual Expend. 2006	Variance From 2006 Budget
GENERATION				
NEW GENERATION SOURCE Generation Projects	1,937	1,022	1,135	(802)
HYDRO PLANTS Construction Projects Tools & Equipment	3,231 63	2,569 11	3,185 50	(46) (13)
THERMAL PLANT Construction Projects Property Additions Tools & Equipment	4,301 275 57	866 (3) 0	2,885 0 29	(1,416) (275) (28)
GAS TURBINES Construction Projects	242	151	174	(68)
TOTAL GENERATION	10,106	4,616	7,458	(2,648)
TRANSMISSION & RURAL OPERATIONS				
TRANSMISSION	4,207	1,206	3,356	(851)
SYSTEM PERFORMANCE & PROTECTION	297	137	300	3
TERMINALS	858	394	643	(215)
DISTRIBUTION	8,852	2,239	9,094	242
GENERATION	3,731	2,568	3,426	(305)
GENERAL Metering Properties Tools & Equipment	114 134 1,799	19 53 963	81 149 1,681	(33) 15 (118)
TOTAL TRANSMISSION & RURAL OPERATIONS	19,992	7,579	18,730	(1,262)

CATEGORY

	PUB Approved Budget 2006	4th Quarter Actuals 2006	Total Actual Expend. 2006	Variance From 2006 Budget	
GENERAL PROPERTIES					
INFORMATION SYSTEMS & TELECOMMUNICATIONS	14,461	7,181	11,546	(2,915)	
ADMINISTRATIVE	2,768	1,331	2,554	(214)	
TOTAL GENERAL PROPERTIES	17,229	8,512	14,100	(3,129)	
ALLOWANCE FOR UNFORESEEN EVENTS	1,000	(1)	226	(774)	
PROJECTS APPROVED BY PUB	471	(174)	488	17	
PROJECTS APPROVED FOR LESS THAN \$50,000	226	170	215	(11)	
TOTAL CAPITAL BUDGET	49,024	20,702	41,217	(7,592)	

GENERATION

PROJECT DESCRIPTION	PUB Approved Budget 2006	4th Quarter Actuals 2006	Total Actual Expend. 2006	Variance From 2006 Budget	Variance Explan.
NEW GENERATION SOURCE					
GENERATION PROJECTS					
Island Pond Development - Feasibilty Update Portland Creek Development -Final Feasibility Study Wind Generation Inventory Study	998 796 143	805 217 0	895 240 0	(103) (556) (143)	2
TOTAL GENERATION PROJECTS	1,937	1,022	1,135	(802)	=
HYDRO PLANTS					
CONSTRUCTION PROJECTS					
Replace Penstock - Snook's Arm Generating Station Replace Unit 1 Governor Controls - Cat Arm Upgrade Controls Spherical Valve #6 - Bay d'Espoir Replace Underground Fuel Tanks - Cat Arm Powerhouse Provide Remote Operation By-Pass Fisheries Comp. Valve -	2,029 676 200 137 107	1,863 640 5 35 22	1,941 851 177 134 46	(88) 175 (23) (3) (61)	5
Granite Canal Install Waste Oil Holding Tanks - BDE, USL, HLK & PRV	82	4	36	(46)	_
TOTAL CONSTRUCTION PROJECTS	3,231	2,569	3,185	(46)	•
TOOLS & EQUIPMENT					
Purchase & Replace Tools & Equipment Less than \$50,000 Purchase & Replace Tools & Equipment Less than \$50,000	24 39	0 11	11 39	(13) 0	<u>.</u>
TOTAL TOOLS & EQUIPMENT	63	11	50	(13)	=:
TOTAL HYDRO PLANTS	3,294	2,580	3,235	(59)	_

GENERATION

PROJECT DESCRIPTION	PUB Approved Budget 2006	4th Quarter Actuals 2006	Total Actual Expend. 2006	Variance From 2006 Budget	Variance Explan. Ref. No.
THERMAL PLANT					
CONSTRUCTION PROJECTS					
Upgrade Control System - Holyrood	316	122	561	245	7
Purch/Inst Anti-Fouling System for Cooling Water Systems - Holyrood Addition of Disconnecting Means to 600 Volt MCC Branch	178	26	310	132	8
Feeders - HRD Fire Protection Upgrades - HRD	1,116 916	309 28	728 28	(388) (888)	
Replace Warm Air Make-Up Units Steam Coil - HRD HVAC Replacements - Relay, Control & Exciter Rms - HRD	602 565	91 146	594 485	(8) (80)	
Replace Superheater Unit 2 - Holyrood Study of Regeneration Waste Treatment - HRD	319 172	0 137	4 137	(315) (35)	
Modify Boiler Protection and Control - HRD		7	38	(79)	. 13
TOTAL CONSTRUCTION PROJECTS	4,301	866	2,885	(1,416)	•
PROPERTY ADDITIONS					
Replace Paging System - HRD	275	(3)	0	(275)	14
TOTAL PROPERTY ADDITIONS	275	(3)	0	(275)	=
TOOLS & EQUIPMENT					
Purchase & Replace Tools & Equipment Less than \$50,000	57	0	29	(28)	-
TOTAL TOOLS & EQUIPMENT	57	0	29	(28)	
TOTAL THERMAL PLANTS	4,633	863	2,914	(1,719)	•
GAS TURBINES					
CONSTRUCTION PROJECTS					
Replace Automatic Voltage Regulator - Hardwoods	242	151	174	(68)	15 -
TOTAL GAS TURBINE PLANTS	242	151	174	(68)	=
TOTAL THERMAL PLANTS	484	0	29	(28)	=
TOTAL GENERATION	10,348	4,465	7,313	(2,608)	•

TRANSMISSION & RURAL OPERATIONS

PROJECT DESCRIPTION	PUB Approved Budget 2006	4th Quarter Actuals 2006	Total Actual Expend. 2006	Variance From 2006 Budget	Variance Explan.
TRANSMISSION					
Replace Wood Poles - Transmission - 2005 Replace Wood Poles - Transmission - 2006 Upgrade Corner Brook Frequency Converter Replace Insulators TL231 - (230kV Bay d'Espoir - Stoney Brook)	370 2,303 617 917	0 1,150 20 36	369 2,362 186 439	(1) 59 (431) (478)	16 17 18
TOTAL TRANSMISSION	4,207	1,206	3,356	(851)	:
SYSTEM PERFORMANCE & PROTECTION					
Upgrade Breaker Controls - BBK/MDR Terminal Station Purch/Install 138Kv & 66Kv Protection Upgrades - Bottom Brook Replace Data Collection and Monitoring System - Hawke Hill Install Feeder Backup Protection - Happy Valley Install Feeder MW Telemetry - Happy Valley Upgrade Breaker Controls - BDE/BUC Terminal Station	5 109 56 48 40 39	0 52 52 13 13 7	5 118 64 42 42 29	0 9 8 (6) 2 (10)	
TOTAL SYSTEM PERFORMANCE & PROTECTION	297	137	300	3	•
<u>TERMINALS</u>					
Replace Insulators - Various Stations Replace Battery Chargers - BDE, DLK, GFC & WAV Replace Air Compressor and Dryer - Grand Falls Frequency	307 90	225 85	256 97	(51) 7	19
Converter Station Replace Air Compressors - Holyrood T.S. Replace Instrument Transformers - Various Stations Replace Battery Bank - Various Stations (GBK,IRV,BDE)	80 80 78 72	9 2 4 21	20 4 81 69	(60) (76) 3 (3)	20 21
Replace Surge Arrestors - Various Stations Install Transformer Oil Monitoring System - Upper Salmon Install RIGD (Remote Ice Growth Detection) Beam - Various Stations	70 53 28	6 19 23	67 19 30	(3) (34)	
TOTAL TERMINALS	858	394	643	(215)	

TRANSMISSION & RURAL OPERATIONS

	PUB	4th	Total	Variance	
	Approved	Quarter	Actual	From	Variance
PROJECT DESCRIPTION	Budget 2006	Actuals 2006	Expend. 2006	2006 Budget	Explan. Ref. No.
		2000	2000	Duaget	TCI. IVO.
DISTRIBUTION					
Interconnect - Rencontre East	1,446	29	1,533	87	22
Upgrade Distribution Feeders - Various Locations	2,017	578	2,057	40	
Service Extensions	1,984	651	1,972	(12)	
Distribution Upgrades	1,912	538	2,150	238	23
Insulator Replacements	1,020	321	1,041	21	
Distribution Line Pole Replacements	332	114	254	(78)	24
Purchase and Install Voltage Regulator L7 - Happy Valley	122	4	76	(46)	
Install Substation P.T Mary's Harbour	19	4	11	(8)	_
TOTAL DISTRIBUTION	8,852	2,239	9,094	242	- -
GENERATION					
Increase Generation - L'Anse au Loup	23	0	(18)	(41)	
Upgrade Cooling System - Black Tickle	20	1	29	` 9 [′]	
Install Day Tank and Fuel Meter - Ramea	65	(9)	67	2	
Purch.& Inst. Digital Metering - Francois, McCallum, Grey River,					
Little Bay Island	26	0	14	(12)	
Install Intermediate Fuel Storage Tank - Charlottetown	53	2	19	(34)	
Modify Heating System - Hopedale	53	25	106	53	25
Construct New Diesel Plant - St. Lewis	2,227	1,788	2,242	15	
Installation of Fall Arrest Equipment - Hydro facilities	24	31	26	2	
Installation of Fall Arrest Equipment - Hydro facilities	268	108	242	(26)	
Replace Diesel Generating Units - Various Location	663	509	555	(108)	
Replace Control Panel - Rigolet	135	59	66	(69)	
Install Nox Monitor - Little Bay Islands	106	25	25	(81)	
Replace Generating Unit Breakers - Francois, Grey River, Little Bay	68	29	53	(15)	

TRANSMISSION & RURAL OPERATIONS

PROJECT DESCRIPTION	PUB Approved Budget 2006	4th Quarter Actuals 2006	Total Actual Expend. 2006	2006	Variance Explan. Ref. No.
<u>GENERAL</u>					
METERING					
Purchase Meters & Equipment - TRO System 2006 Purchase Metering Spares	93 21	19 0	59 22	(34) 1	
TOTAL METERING	114	19	81	(33)	•
<u>PROPERTIES</u>					
Legal Survey of Distribution Line Right-of-Ways - 2006 Replace Waste Oil Storage Tank - Ramea Construct Line Material Storage Shed - Black Tickle Construct Sewage Disposal Field - Charlottetown Construct Storage Ramp - L'Anse au Loup	50 29 28 17 10	33 2 8 10 0	51 45 28 15 10	1 16 0 (2) 0	
TOTAL PROPERTIES	134	53	149	15	
TOOLS & EQUIPMENT Purchase Mobile Oil Reclaimation Unit Replace Off-Road Tracked Vehicles - Various Locations Purchase & Replace Tools & Equipment Less than \$ 50,000 Replace Light Duty Mobile Equipment Less than \$ 50,000	503 636 386 274	583 303 24 53	612 554 272 243	109 (82) (114) (31)	29 30 31
TOTAL TOOLS & EQUIPMENT	1,799	963	1,681	(118)	
TOTAL GENERAL	2,047	1,035	1,911	(136)	1
TOTAL TRANSMISSION & RURAL OPERTIONS	19,992	7,579	18,730	(1,262)	ı

GENERAL PROPERTIES

PUB Approved Quarter Actual From Budget Actuals 2006 PROJECT DESCRIPTION 2006 2006 2006 2006 Expend. 2006 INFORMATION SYSTEMS & TELECOMMUNICATIONS SOFTWARE APPLICATIONS INFRASTRUCTURE REPLACEMENT Replace Energy Management System - Energy Control Centre 6,334 2,790 5,453 (887) NEW INFRASTRUCTURE Applications Enhancements 946 339 489 (457) Cost Recovery CF(L)Co (165) (17) (77) 887	Δ
Budget Actuals Expend. 2006 2006 2006 Budget	C
PROJECT DESCRIPTION 2006 2006 2006 Budge INFORMATION SYSTEMS & TELECOMMUNICATIONS SOFTWARE APPLICATIONS INFRASTRUCTURE REPLACEMENT Fig. 10 cm section of the control of t	Varian
INFORMATION SYSTEMS & TELECOMMUNICATIONS SOFTWARE APPLICATIONS INFRASTRUCTURE REPLACEMENT Replace Energy Management System - Energy Control Centre 6,334 2,790 5,453 (887) NEW INFRASTRUCTURE Applications Enhancements 946 339 489 (457) Cost Recovery CF(L)Co (165) (17) (77) 887	Expla
SOFTWARE APPLICATIONS INFRASTRUCTURE REPLACEMENT Replace Energy Management System - Energy Control Centre 6,334 2,790 5,453 (883) NEW INFRASTRUCTURE Applications Enhancements 946 339 489 (457) Cost Recovery CF(L)Co (165) (17) (77) 883	
INFRASTRUCTURE REPLACEMENT Replace Energy Management System - Energy Control Centre 6,334 2,790 5,453 (883) NEW INFRASTRUCTURE Applications Enhancements 946 339 489 (457) Cost Recovery CF(L)Co (165) (17) (77) 883	
Replace Energy Management System - Energy Control Centre 6,334 2,790 5,453 (883) NEW INFRASTRUCTURE Applications Enhancements 946 339 489 (457) Cost Recovery CF(L)Co (165) (17) (77) 883	
NEW INFRASTRUCTURE Applications Enhancements 946 339 489 (457) Cost Recovery CF(L)Co (165) (17) (77) 88	
Applications Enhancements 946 339 489 (457 Cost Recovery CF(L)Co (165) (17) (77) 88) 32
Cost Recovery CF(L)Co (165) (17) (77) 88	
	") 33
Ungrade of Tachaelagy	3
<u>Upgrade of Technology</u>	
Corporate Application Environment - 2006 592 207 608 16	6
Cost Recovery CF(L)Co (36) (19) (47)	
Network Management Tools - 2006 48 41 51 3	<u> </u>
TOTAL SOFTWARE APPLICATIONS 7,719 3,341 6,477 (1,242	<u>2)</u>
COMPUTER OPERATIONS	
INFRASTRUCTURE REPLACEMENT	
End User Infrastructure Evergreen Program - 2005 19 0 19)
NEW INFRASTRUCTURE	
Security - Personal Firewalls 47 32 44 (3	3)
Cost Recovery CF(L)Co (9) (8) (8)	
Security - Scan, Block & Quarantine 46 43 43 (3 Cost Recovery CF(L)Co (9) (8) (8)	
Peripheral Infrastructure Replacement - 2006 199 14 196 (3	
UPGRADE OF TECHNOLOGY	
TOTAL COMPUTER OPERATIONS 293 73 286 (7	7)

GENERAL PROPERTIES

PROJECT DESCRIPTION INFORMATION SYSTEMS & TELECOMMUNICATIONS	PUB Approved Budget 2006	4th Quarter Actuals 2006	Total Actual Expend. 2006	Variance From 2006 Budget	Variance Explan. Ref. No.
NETWORK SERVICES					
INFRASTRUCTURE REPLACEMENT Replace VHF Mobile Radio System	8,036	2,788	5,131	(2,905)	34
Cost Recovery - WST	(3,416)	0	(1,620)	1,796	
Microwave Site Refurbishing - 2005 Replace Voice and Data Communications - Berry Hill	40 15	61 0	61 4	21 (11)	
Replace Power Line Carrier TL240 - Churchill Falls - Goose Bay	189	66	81	(108)	35
Microwave Site Refurbishing - Bay D'Espoir Hill & Blue Grass Hill	407	218	251	(156)	36
Replace Battery System - Multiple Sites	404	202	312	(92)	37
Replace Remote Terminal Unit for Hydro	351	214	226	(125)	38
Westcoast Communications System - Study	175	94	95	(80)	39
Replace Telephone Isolation Equipment - Happy Valley	57	0	0	(57)	40
Video Conferencing for Regional Offices - H Valley , P Saunders & Holyrood	49	7	51	2	
Network Infrastructure					
Communications Network Technology	97	80	143	46	
UPGRADE OF TECHNOLOGY					
Upgrade Site Facilities	45	37	48	3	
TOTAL NETWORK SERVICES	6,449	3,767	4,783	(1,666)	
TOTAL INFORMATION SYSTEMS & TELECOMMUNICATIONS	14,461	7,181	11,546	(2,915)	:

GENERAL PROPERTIES

	PUB	4th	Total	Variance	
	Approved	Quarter	Actual		Variance
PROJECT DESCRIPTION	Budget 2006	Actuals 2006	Expend. 2006	2006 Budget	Explan. Ref. No.
PROJECT DESCRIPTION		2000	2000	Buugei	Rei. No.
ADMINISTRATIVE					
VEHICLES					
B Will Will 0 0 0005	440		440	•	
Replace Vehicles - Hydro System - 2005	118	700	118	(400)	44
Replace Vehicles - Hydro System - 2006	1733	723	1,571	(162)	41
ADMINISTRATION					
Abminionation					
Electronic Metering Reading	122	1	69	(53)	42
Upgrade Standby Diesel Fuel System - Hydro Place	33	10	66	`33 [°]	
Construct New Warehouse - Port Saunders	431	387	411	(20)	
Replace Storage Ramps - Bishop's Falls	159	154	157	(2)	
Purchase & Replace Admin Office Equip less than \$50,000	172	56	162	(10)	
TOTAL ADMINISTRATIVE	0.700	4 004	0.554	(0.4.4)	
TOTAL ADMINISTRATIVE	2,768	1,331	2,554	(214)	
TOTAL GENERAL PROPERTIES	17,229	8,512	14,100	(3,129)	
TOTAL GLINLINAL PROPERTIES	11,229	0,012	14,100	(3, 129)	

OTHER APPROVED FUNDS

PROJECT DESCRIPTION	PUB Approved Budget 2006	4th Quarter Actuals 2006	Total Actual Expend. 2006	Variance From 2006 Budget	Variance Explan. Ref. No.
ALLOCATION FOR UNFORESEEN EVENTS					
Replace Breaker B7T2 - Hardwoods Terminal Station Bishop's Falls Main Office Roof - Structural Steel Upgrade Allocation for Unforeseen Events	100 122 778	0 (1) 0	108 118 0	8 (4) (778)	
TOTAL ALLOCATION FOR UNFORESEEN EVENTS	1,000	(1)	226	(774)	- =
PROJECTS APPROVED BY PUB CARRYOVER					
New Well and Septic System - Springdale Line Depot Transmission Interconnection - Duck Pond Mine Site Contribution Electrical Arc Flash Personal Protection Equipment Remote Monitoring System - Granite Canal Replace Diesel Generator - Holyrood Dome Mountain Service - Coast Guard Contribution	42 1,232 (1,232) 42 16 13 172 (172)	0 16 (16) 0 0 (7) (172)	45 850 (850) 36 17 82 184 (172)	3 (382) 382 (6) 1 69 12 0	
<u>NEW</u>					
Charlottetown Unit # 2060 Engine Replacement Land Acquisition - Hardwoods Terminal Station	184 174	5 0	122 174	(62) 0	44
TOTAL PROJECTS APPROVED BY PUB	471	(174)	488	17	• •
NEW PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO					
Meeting Room Furniture - 5th Floor, Hydro Place Office Furniture - 6th Floor, Hydro Place Replace Fitness Equipment, Hydro Place Replace Air Dryer Towers - BBK Terminal Station Purchase Oil Inspection Kit & AUX SW Angle Protractor Install Oil Water Separators - Various Stations Replace Disconnect Switch B7C1-1, HWD Terminal Station Purchase Two 4160 Volt Grounding Trucks Replace Radiators T1 - Bottom Waters Terminal Station	22 14 7 17 7 49 15 49 46	16 12 4 14 0 14 0 52 58	21 35 4 14 6 14 11 52 58	(1) 21 (3) (3) (1) (35) (4) 3 12	
TOTAL PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO	226	170	215	(11)	_

GENERATION

1. Island Pond Development - Feasibility Update

This project is on budget however there was a delayed start date due to internal labor availability which subsequently resulted in a delayed completion by the consultant. This project is expected to be complete by the end of February, 2007.

2. Portland Creek Development - Final Feasibility Study

The draft report is completed with the final report expected in January. This project is expected to be \$276,000 less than the \$796,000 due to a scope change resulting in less field investigation work.

3. Wind Generation Inventory Study - Project Cancelled

The Wind Generation Study was proposed in the spring of 2005 to identify potential wind generation sights on the Island which Hydro could add to its portfolio as potential resource options. In late 2005 subsequent to the Capital Budget Proposal Hydro initiated Request for Proposals (RFP) process for the purchase of wind generation from private developers with the intent being that should the RFP identify favorable projects Hydro would reconsider its decision to develop its own wind generation project and delay or cancel its proposed Wind Generation Study. The results of the RFP were encouraging and Hydro is in the process of negotiating Power Purchase Agreements with two proponents for a total of 50 MW of wind generation. Based on the results of the RFP Hydro has decided to cancel the proposed Wind Generation study as there appear to be adequate private sector alternatives available at attractive rates.

4. Replace Penstock - Snook's Arm Generating Station

The Penstock went into service on December 20, 2006. Some design changes were required in order to more appropriately suit site topography and other physical conditions resulting in increased material and construction costs. This project is expected to be complete by July 31, 2007 at a cost of \$2,311,000 up from \$2,110,000 in the 2006 Capital Budget submission. Work left to be completed includes epoxy coating of welded joints as well as site upgrading and landscaping.

GENERATION

5. Replace Unit 1 Governor Controls - Cat Arm

The Governor Controls are in-service however contract deficiencies need to be satisfied before final completion. The original proposal was based on replacing only the electronic controls however it was subsequently decided that the replacement of all mechanical parts would ensure a reliable governor control system. This increased the costs from \$688,000 to \$895,000.

6. <u>Provide Remote Operation By-Pass Fisheries Comp. Valve - Granite Canal</u>

This project was to be completed in August of 2006 however changes in personnel as well as scheduling issues have delayed the completion of this project until May 2007. The cost is estimated to be \$128,000 up from the \$107,000 due to additional labour costs for designing and testing the system.

7. <u>Upgrade Control System - Holyrood</u>

This project is in-service however training has to be provided for Hydro personnel in the operation and the design of the system. The overall cost of the project has increased to \$3,281,000 due installation problems that resulted in additional motor logic and installation work.

8. Purch/Inst. Anit-Fouling System for Cooling Water Systems - Holyrood

This project has been delayed due to both engineering and plant labour availability. The construction is complete awaiting Operations personnel to perform terminations and commissioning. It is expected to be complete by the end of February 2007 at a cost of \$853,000. This increase is due to higher than anticipated electrical installation costs.

9. Addition of Disconnecting Means to 600 Volt MCC Branch Feeders - HRD

This is a multi-year project expected to be complete by December of 2007. The total estimated capital cost remains unchanged.

10. Fire Protection Upgrades - HRD

This is a multi-year project to be completed by the end of 2007. Due to delays in receiving technical clarifications from our insurers for requested fire protection improvements and other work commitments, the bulk of the work will be completed in 2007. The total estimated capital cost remains unchanged.

GENERATION

11. HVAC Replacements - Relay, Control & Exciter Rms - HRD

This project came in under budget because labour costs were less than estimated therefore contingency did not have to be utilized.

12. Replace Superheater Unit 2 - Holyrood

This is a multi-year project to be completed in the fall of 2007. The contract has been awarded and the material ordered. The project is estimated to be on time and budget.

13. <u>Modify Boiler Protection and Control - HRD</u>

Late in the project Hydro was informed that the consultant's proposal was patented by another company. The fee to use the patented information is too high so alternate methods are being explored therefore the project has to be delayed to next fall to allow for the next available outage season.

14. Replace Paging System - HRD

This project was cancelled. Public tenders for the scope of work greatly exceeded budgeted dollars. The project will be re-evaluated and submitted at a later date.

15. Replace Automatic Voltage Regulator - Hardwoods

This project came in below cost because the lowest tendered price for the regulator was much less than expected.

TRANSMISSION & RURAL OPERATIONS

16. Replace Wood Poles - Transmission - 2006

The additional funding is required due to additional work being identified and carried out in the Central Region. There were also additional fuel costs incurred to operate the various gas turbines in the Central region.

17. Upgrade Corner Brook Frequency Converter

Recent increases in the cost of steel and copper, along with increased demand, have led to significant increases in the cost of power transformers therefore the cost of this project has increased to \$862,000 from \$617,000. An outage could not be scheduled in 2006 in order to install the new transformer therefore the project is now scheduled to be complete by the end of April 2007.

18. Replace insulators TL231 - (230kV Bay d'Espoir - Stoney Brook)

Project completion has been delayed until April 2007 due to the tendered contract quotes being higher than budgeted. This work will now be completed by Regulated Operations within budget.

19. Replace Insulators - Various Stations

This project was slightly under budget resulting in no contingency being utilized as well as a reduction in overheads and interest.

20. Replace Air Compressor and Dryer - Grand Falls Frequency Converter Station

The delivery of the compressed air dryer was originally scheduled for October 2006 however the manufacturer was unable to meet the delivery date therefore project completion is delayed until the end of April 2007.

21. Replace Air Compressors - Holyrood T.S.

Due to a labour dispute at the manufacturing plant where the compressors are fabricated, delivery was delayed until late December. Installation manpower was not available until the New Year. This project is expected to be completed by the end of February 2007 within budget.

TRANSMISSION & RURAL OPERATIONS

22. Interconnect - Rencontre East

Inspection costs and equipment rentals were higher than expected resulting in the increase in costs.

23. <u>Distribution Upgrades</u>

The budgeted amount is an annual allotment based on the average of the annual expenditures for distribution upgrades over the last five years. It is not based on a summary of specific project costs. The variance represents the amount by which the current year's distribution upgrades and corresponding expenditures exceeded the average of the last five years.

24. Distribution Line Pole Replacements

Part of this job was pole replacements for Nain and the tenders received for this job was much higher than anticipated. Therefore this work will be done internally in the first half of the 2007.

25. Modify Heating System - Hopedale

The preliminary design and costing estimate did not include a requirement for the system header to be replaced as well as other standard changes resulting in increased labour, materials, travel and indirect costs.

26. Replace Diesel Generating Units - Various Location

This project includes the replacement of two generating units at Rigolet and one at Black Tickle. The Black Tickle job has been carried over into 2007 because the contractor was unable to deliver the unit before the end of the shipping season. The units at Rigolet are on site and the mechanical installation is complete.

27. Replace Control Panel - Rigolet

The installation of the control panel has been delayed until the replacement of generating units is completed. The total budget remains unchanged.

28. <u>Install Nox Monitor - Little Bay Islands</u>

This project was late getting started due to other work commitments. It will be completed in the first quarter of 2007 on budget.

TRANSMISSION & RURAL OPERATIONS

29. Purchase Mobile Oil Reclaimation Unit

There were deficiencies discovered during the factory acceptance testing in Ohio requiring a second factory acceptance testing trip. Start up and commissioning of the equipment on site revealed further deficiencies requiring further analysis and redesign input from Hydro staff. System failure combined with the complexity of the system resulted in more extensive training for staff than anticipated. All of these factors resulted in the total project costs increasing from \$531,000 to \$634,000.

30. Replace Off-Road Tracked Vehicles - Various Locations

Hydro received exceptionally good pricing on the purchase of three excavators thus allowing the overall expenditure to be reduced.

31. Purchase and Replace Tools and Equipment Less than \$50,000

There are approximately 21 separate purchases of tools and equipment under this classification and almost all of them came in under budget.

GENERAL PROPERTIES

32. Replace Energy Management System - Energy Control Centre

There was a reduction in software and hardware costs due to minor design changes that occurred after detailed engineering was completed. This was followed by additional savings resulting from purchasing support contracts with a third party and reductions in training requirements. These reductions resulted in less contingency and overhead being utilized.

33. Applications Enhancements

This project provided for funding to support the Business Process Improvement Project. Since the business case of the BPI Enabler Product did not get the approval of Senior Management, the funds were no longer required for part of the project thus reducing the overall costs.

34. Replace VHF Mobile Radio System

Based on the cost and scope of the selected tender for the mobile radio system, the original labour, materials and contract budget estimates have decreased since the system will be contractor owned with Hydro and the Department of Transportation and Works as anchor tenants. This project is expected to be completed by the end of March with a total cost of approximately \$4.0 million compared to the original estimate of \$8 million.

35. Replace Power Line Carrier TL240 - Churchill Falls - Goose Bay

This is the first power line carrier to be replaced since the new Energy Management System came in service. This is more complex and time consuming than with the previous system. It is scheduled to be completed in the first quarter of 2007 at a total cost of \$105,000, a reduction of \$19,000.

36. <u>Microwave Site Refurbishing - Bay d'Espoir & Blue Grass Hill</u>

Due to limited labour resources, this project will be completed by March 2007. The total budget remains unchanged.

37. Replace Battery Systems - Multiple Sites

Due to an extended delivery time for the batteries combined with limited labour availability, this project will be completed by March 2007 within budget.

GENERAL PROPERTIES

38. Replace Remote Terminal Unit for Hydro

Both the materials and the installation were less than budgeted resulting in less overhead costs and contingency not being utilized.

39. West Coast Communications Systems

The draft report from the consultant was delivered considerably later than originally anticipated. This job is forecast to be complete by the end of March 2007 at a cost of \$137,000 down from the \$175,000 budgeted.

40. Replace Telephone Isolation Equipment - Happy Valley

The design of the project Replace Power Line Carrier TL 240 - Churchill Falls - Goose Bay was modified from the original proposal to provide a more cost-effective solution; in the process, detailed engineering determined that this project was unnecessary.

41. Replace Vehicles - Hydro System - 2006

This project was under budget due to good tender pricing resulting in less contingency and overhead being utilized.

42. Electronic Metering Reading

The cost for the electronic metering units were less than budgeted.

OTHER APPROVED FUNDS

43. Replace Diesel Generator - Holyrood

The original estimate was based on a 400 kW diesel generator however this unit was unavailable at order time due to virtually all available units having been purchased by customers in the southern United States in the wake of hurricane Katrina. The only unit available with an acceptable delivery time was a 635 kW machine, at an additional cost of \$32,000. In addition, the completion of project was delayed by four months as a result of technical and scheduling issues, resulting in increased labour costs, overheads, and interest charges.

44. Charlottetown Unit # 2060 Engine Replacement

The replacement engine and installation costs were less than budgeted therefore contingency and overhead expenses were also reduced.



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Head Office: St. John's, Newfoundland P.O. Box 12400, A1B 4K7 Tetephone (709) 737-1400 • Fax (709) 737-1231 • Website, www.nlh.nf.ca

February 29, 2008

Board of Commissioners of Public Utilities 120 Torbay Road St. John's, Newfoundland

ATTENTION: Ms. Cheryl Blundon

Director Corporate Services & Board

Secretary

Dear Ms. Blundon:

RE: 2007 CAPITAL EXPENDITURES AND CARRYOVER - Year End

Enclosed please find ten (10) copies of a report on Hydro's 2007 Capital Expenditures and Carryover for the Year ended December 31, 2007.

Should you have any questions on the enclosed, please contact the undersigned.

Yours truly

Geoff P. Young,

Senior Legal Counsel

GPY/mmcd Encls

CAPITAL EXPENDITURES AND CARRYOVER REPORT

YEAR ENDING DECEMBER, 2007

BOARD OF COMMISSIONERS OF PUBLIC UTILITIES



CAPITAL EXPENDITURES AND CARRYOVER REPORT

For Quarter Ending December 31, 2007

TABLE OF CONTENTS

	Page
Table of Contents	(I)
CAPITAL EXPENDITURES OVERVIEW	1
CAPITAL EXPENDITURES SUMMARY BY CATEGORY: Generation	2
Transmission & Rural Operations	3
General Properties	4
Other Approved Funds	4
CAPITAL EXPENDITURES DETAIL: Generation	5
Transmission & Rural Operations	8
General Properties	12
Other Approved Funds	16
VARIANCE EXPLANATIONS (GREATER THAN \$100,000): Generation	18
Transmission & Rural Operations	20
General Properties	24
CAPITAL BUDGET VERSUS EXPENDITURES 1998 - 2007	26
CARRYOVER REPORT	28

Capital Expenditures and Carryover Report

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES OVERVIEW

FOR THE QUARTER ENDING DECEMBER 31, 2007 (\$000)

	PUB Approved Budget 2007	4th Quarter Actuals 2007	Total Actual Expend. 2007	Variance From Budget 2007
GENERATION	12,057	4,531	9,366	(2,691)
TRANSMISSION AND RURAL OPERATIONS	21,266	8,158	18,241	(3,025)
GENERAL PROPERTIES	8,391	3,393	6,811	(1,580)
ALLOWANCE FOR UNFORESEEN EVENTS	1,000	150	743	(257)
PROJECTS APPROVED BY PU BOARD	231	202	202	(29)
NEW PROJECTS APPROVED FOR LESS THAN \$50,000	359	191	306	(53)
TOTAL CAPITAL BUDGET	43,304	16,625	35,669	(7,635)
2007 Capital Budget Approved by Board Order No. P.U. 35 (2006)	37,684			
Carryover Projects 2006 to 2007	5,065			
New Projects Approved by Board Order No. P.U. 25 (2007)	231			
2007 New Projects Approved for less than \$50,000	324			
TOTAL APPROVED CAPITAL BUDGET	43,304			

Capital Expenditures and Carryover Report

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES OVERVIEW

FOR THE QUARTER ENDING DECEMBER 31, 2007 (\$000)

	PUB Approved Budget 2007	4th Quarter Actuals 2007	Total Actual Expend. 2007	Variance From Budget 2007
GENERATION				
NEW GENERATION SOURCE				
Generation Projects	421	0	356	(65)
HYDRO PLANTS				
Construction Projects	1,813	501	1,400	(413)
Property Additions	0	0	0	0
Tools and Equipment	83	24	84	1
THERMAL PLANT				
Construction Projects	8,262	3,186	6,523	(1,739)
Property Additions	599	326	434	(165)
Tools and Equipment	42	6	33	(9)
GAS TURBINES				
Construction Projects	837	488	536	(301)
TOTAL GENERATION	12,057	4,531	9,366	(2,691)

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES SUMMARY BY CATEGORY

	PUB Approved Budget 2007	4th Quarter Actuals 2007	Total Actual Expend. 2007	Variance From Budget 2007
TRANSMISSION AND RURAL OPERATIONS				
TRANSMISSION	7,046	2,111	5,661	(1,385)
SYSTEM PERFORMANCE AND PROTECTION	261	104	184	(77)
TERMINALS	1,617	671	1,320	(297)
DISTRIBUTION	7,746	4,112	8,296	550
GENERATION	2,145	142	977	(1,168)
GENERAL				
Metering	811	267	308	(503)
Properties	655	381	559	(96)
Tools and Equipment	985	370	936	(49)
TRANSMISSION AND RURAL OPERATIONS	21,266	8,158	18,241	(3,025)

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES SUMMARY BY CATEGORY

	PUB Approved Budget 2007	4th Quarter Actuals 2007	Total Actual Expend. 2007	Variance From Budget 2007
GENERAL PROPERTIES				
INFORMATION SYSTEMS AND TELECOMMUNICATIONS	3,999	1,344	3,459	(540)
ADMINISTRATIVE	4,392	2,049	3,352	(1,040)
TOTAL GENERAL PROPERTIES	8,391	3,393	6,811	(1,580)
ALLOWANCE FOR UNFORESEEN EVENTS	1,000	150	743	(257)
PROJECTS APPROVED BY PU BOARD	231	202	202	(29)
PROJECTS APPROVED FOR LESS THAN \$50,000	359	191	306	(53)
TOTAL CAPITAL BUDGET	43,304	16,625	35,669	(7,635)

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES GENERATION

	PUB Approved Budget 2007	4th Quarter Actuals 2007	Total Actual Expend. 2007	Variance From Budget 2007	Percentage Variance From Budget 2,007	Variance Explan. Ref. No.
NEW GENERATION SOURCE						
GENERATION PROJECTS						
Island Pond Development - Feasibilty Update	108	0	80	(28)	-26%	
Portland Creek Development - Final Feasibility Study	280	0	276	(4)	-1%	
Wind Generation Inventory Study	33	0	0	(33)	-100%	
TOTAL GENERATION PROJECTS	421	0	356	(65)		
HYDRO PLANTS						
CONSTRUCTION PROJECTS						
Replace Penstock - Snook's Arm Generating Station	292	6	129	(163)	-56%	1
Replace Unit 1 Governor Controls - Cat Arm	32	0	34	2	6%	
Replace Underground Fuel Tanks - Cat Arm Powerhouse	15	0	15	0	0%	
Provide Remote Operation By-Pass Valve - Granite Canal	82	41	83	1	1%	
Upgrade Access Road - Upper Salmon	675	15	650	(25)	-4%	
Upgrade Access Road - Burnt Dam	309	274	289	(20)	-6%	
Upgrade Cooling Water System Unit 1 and 2 - Bay d'Espoir	112	0	0	(112)	-100%	2
Replace Station Service Control - Bay d'Espoir	105	62	66	(39)	-37%	
Replace Air Dryer - Cat Arm	76	38	41	(35)	-46%	
Replace Bridge Paradise Access Rd	66	41	64	(2)	-3%	
Stator Windings Design Review - Bay d'Espoir	49	24	29	(20)	-41%	
TOTAL CONSTRUCTION PROJECTS	1,813	501	1,400	(413)		

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES GENERATION

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget 2007	Actuals 2007	•	•	Budget 2007	Explan. Ref. No.
		2007	2007	2007	2007	Rei. No.
PROPERTY ADDITIONS						
TOTAL PROPERTY ADDITIONS	0	0	0	0		
TOOLS AND EQUIPMENT						
Tools and Equipment Less than \$50,000	83	24	84	1	1%	
TOTAL TOOLS AND EQUIPMENT	83	24	84	1		
TOTAL HYDRO PLANTS	1,896	525	1,484	(412)		
THERMAL PLANT - HOLYROOD						
CONSTRUCTION PROJECTS						
Upgrade Control System	55	0	217	162	295%	3
Purch/Inst Anti-Fouling System for Cooling Water Systems	16	0	81	65	406%	
Addition of Disconnecting Means to 600 Volt MCC Branch Feeders	1,138	294	772	(366)	-32%	4
Fire Protection Upgrades	1,797	503	578	(1,219)	-68%	5
Replace Superheater Unit 2	3,133	2,256	3,065	(68)	-2%	
Study of Regeneration Waste Treatment	35	0	19	(16)	-46%	
Modify Boiler Protection and Control	79	77	81	2	3%	
Turbine and Generator Upgrade Unit 3	1,654	55	1,705	51	3%	
Contaminated Water Treatment	276	0	0	(276)	-100%	6
UPS Battery Monitoring Program	79	1	5	(74)		
TOTAL CONSTRUCTION PROJECTS	8,262	3,186	6,523	(1,739)		

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES GENERATION

PROPERTY ADDITIONS	
	_
Air Preheater Steam Condenser Pumps - Unit 3 599 326 434 (165) -28%	7
TOTAL PROPERTY ADDITIONS 599 326 434 (165)	
TOOLS AND EQUIPMENT Tools and Equipment Less than \$50,000 42 6 33 (9) -21% TOTAL TOOLS AND EQUIPMENT 42 6 33 (9) TOTAL THERMAL PLANTS 8,903 3,518 6,990 (1,913)	
GAS TURBINES	
CONSTRUCTION PROJECTS	
Replace Fuel Piping - Hardwoods, Stephenville 530 302 312 (218) -41%	8
Gas Turbine Assessments - Hardwoods, Stephenville 307 186 224 (83) -27%	
TOTAL GAS TURBINE PLANTS 837 488 536 (301)	
TOTAL GENERATION 12,057 4,531 9,366 (2,691)	

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES TRANSMISSION AND RURAL OPERATIONS

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explan.
	2007	2007	2007	2007	2007	Ref. No.
TRANSMISSION						
Upgrade Corner Brook Frequency Converter - 2006	676	119	823	147	22%	9
Replace Insulators TL231 - (230kV Bay d'Espoir - Stoney Brook)	478	0	466	(12)	-3%	
Replace Wood Poles - Transmission - 2007	2,148	1,168	2,214	66	3%	
Replace Insulators - TL251, TL252 and TL234	2,118	707	1,769	(349)	-16%	10
Upgrade Corner Brook Frequency Converter - 2007	1,320	25	26	(1,294)	-98%	11
Supply and Install Bridge - South West River	212	2	273	61	29%	
Install Deadend Structure - Conne River Tap TL220	94	90	90	(4)	-4%	
TOTAL TRANSMISSION	7,046	2,111	5,661	(1,385)		
SYSTEM PERFORMANCE AND PROTECTION						
Upgrade Breaker Controls - BDE/BUC Terminal Station	6	0	3	(3)	-50%	
Upgrade 138kV Protection Upgrades - Springdale, Howley, Indian River	215	101	169	(46)	-21%	
Upgrade Breaker Controls - OPD/SSD Terminal Station	40	3	12	(28)	-70%	
TOTAL SYSTEM PERFORMANCE AND PROTECTION	261	104	184	(77)		

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES TRANSMISSION AND RURAL OPERATIONS

									Percentage											
PUB		4th	Total	Variance	Variance															
Approv	Tr.	Budget A	Budget	Budget A	Budget Ad	Budget Actuals	Approved	Approved	Approved	Approved C	Quarter	Actual	From	From	Variance					
Budg							Actuals	Expend.	Budget	Budget	Explan.									
							2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007
TERMINALS																				
Replace Air Compressor and Dryer - Grand Falls Frequency Converter	48	12	42	(6)	-13%															
Replace Air Compressors - Holyrood Terminal Station	76	0	54	(22)	-29%															
Install Transformer Oil Monitoring System - Upper Salmon	34	12	13	(21)	-62%															
	349	191	204	(145)	-42%	12														
• • • •	313	159	298	(15)	-5%															
Upgrade Breakers - Various Stations	258	(54)	146	(112)	-43%	13														
Replace Breaker B7C1 - Hardwoods	136	129	143	7	5%															
Replace Instrument Transformers - Various Stations	80	29	80	0	0%															
Replace Compressors - Various Stations	78	64	67	(11)	-14%															
Replace Battery Banks - Various Stations	72	20	68	(4)	-6%															
Replace Battery Chargers - Various Stations	72	65	70	(2)	-3%															
Replace Surge Arrestors - Various Stations	71	29	85	14	20%															
Install RIGD (Remote Ice Growth Detection) Beam - Various Stations	30	15	50	20	67%															
TOTAL TERMINALS 1,	617	671	1,320	(297)																
DISTRIBUTION																				
Upgrade Distribution Feeders - Various Locations 1,	118	429	1,129	(289)	-20%	14														
· ·	085	1,755	2,800	715	34%	15														
Distribution Upgrades 2,	035	762	2,224	189	9%															
Replace Distribution Lines - South Brook, Harbour Breton	741	538	783	42	6%															
Distribution Line Pole Replacements	337	299	845	8	1%															
·	179	244	277	(202)	-42%	16														
	151	85	108	(43)	-28%															
Interconnect - Rencontre East	0	0	130	130		17														
	746	4,112	8,296	550																

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NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES TRANSMISSION AND RURAL OPERATIONS

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Expend. Budget	Budget	Explan.
	2007	2007	2007	2007	2007	Ref. No.
GENERATION						
Construct New Diesel Plant - St. Lewis	369	20	527	158	43%	18
Replace Diesel Generating Units - Various Location	146	85	189	43	29%	
Replace Control Panel - Rigolet	69	0	90	21	30%	
Install Nox Monitor - Little Bay Islands	81	17	82	1	1%	
Purchase Spare Transformer - Upper Salmon	1,366	13	19	(1,347)	-99%	19
Replace Diesel Unit Breakers - Mary's Harbour	114	7	70	(44)	-39%	
TOTAL GENERATION	2,145	142	977	(1,168)		
GENERAL						
METERING						
Automatic Meter Reading	696	195	201	(495)	-71%	20
Purchase Meters and Equipment - Rural Systems	94	65	100	6	6%	
Purchase Metering Spares	21	7	7	(14)	-67%	
TOTAL METERING	811	267	308	(503)		
PROPERTIES						
Installation of Fall Arrest Equipment - Hydro facilities	251	110	245	(6)	-2%	
Upgrade Fuel Storage - Norman Bay	222	156	164	(58)	-26%	
Installation of Card Access System - Bishop Falls and Whitbourne	131	97	102	(29)	-22%	
Legal Survey of Distribution Line Right-of-Ways	51	18	48	(3)	-6%	
TOTAL PROPERTIES	655	381	559	(96)		

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES TRANSMISSION AND RURAL OPERATIONS

	PUB Approved Budget	4th Quarter Actuals	Total Actual Expend.	Variance From Budget	Percentage Variance From Budget	Variance Explan.
	2007	2007	2007	2007	2007	Ref. No.
TOOLS AND EQUIPMENT						
Confined Space Entry Equipment	13	0	11	(2)	-15%	
Replace Off Road Track Vehicle - Unit 7696 - Cow Head	307	352	352	45	15%	
Replace Light Duty Mobile Equipment Less than \$ 50,000	241	0	244	3	1%	
Replace Doble Relay Test Equipment - St. Anthony, Happy Valley	174	3	132	(42)	-24%	
Replace Off Road Track Vehicle - Unit 7734 - Flowers Cove	139	0	91	(48)	-35%	
Tools and Equipment Less than \$ 50,000	111	15	106	(5)	-5%	
TOTAL TOOLS AND EQUIPMENT	985	370	936	(49)		
TOTAL GENERAL	2,451	1,018	1,803	(648)		
TOTAL TRANSMISSION AND RURAL OPERTIONS	21,266	8,158	18,241	(3,025)		

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES GENERAL PROPERTIES

	PUB Approved Budget 2007	4th Quarter Actuals 2007	Total Actual Expend. 2007	Variance From Budget 2007	Percentage Variance From Budget 2007	Variance Explan. Ref. No.
FORMATION SYSTEMS						
FTWARE APPLICATIONS						
ASTRUCTURE REPLACEMENT						
IFRASTRUCTURE						
olications Enhancements	149	74	148	(1)	-1%	
Cost Recovery CF(L)Co	(27)	(11)	(28)	(1)	4%	
ade of Technology						
ate Application Environment	377	73	107	(270)	-72%	21
ost Recovery CF(L)Co	(75)	(6)	(21)	54	-72%	
WARE APPLICATIONS	424	130	206	(218)		

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES GENERAL PROPERTIES

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explan.
	2007	2007	2007	2007	2007	Ref. No.
COMPUTER OPERATIONS						
INFRASTRUCTURE REPLACEMENT						
Enterprise Storage Capacity Upgrade	186	168	182	(4)	-2%	
Cost Recovery CF(L)Co	(37)	(11)	(36)	1	-3%	
End User Infrastructure Evergreen Program	395	176	394	(1)	0%	
NEW INFRASTRUCTURE						
Peripheral Infrastructure Replacement	139	15	141	2	1%	
Security Information Management System	73	14	75	2	3%	
Cost Recovery CF(L)Co	(15)	(5)	(15)	0	0%	
UPGRADE OF TECHNOLOGY						
Server Technology Program	82	39	79	(3)	-4%	
TOTAL COMPUTER OPERATIONS	823	396	820	(3)		

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES GENERAL PROPERTIES

·	•		Percentage						
	PUB Approved Budget 2007	4th Quarter Actuals 2007	Total Actual Expend. 2007	Variance From Budget 2007	Variance From Budget 2007	Variance Explan. Ref. No.			
TELECONTROL									
NETWORK SERVICES									
INFRASTRUCTURE REPLACEMENT									
Replace VHF Mobile Radio System	2,185	637	1,712	111	22%	22			
Cost Recovery of Works and Transporation	(1,680)	(547)	(1,096)						
Replace Power Line Carrier TL240 - Churchill Falls - Goose Bay	24	0	35	11	46%				
Microwave Site Refurbishing - Bay d'Espoir Hill and Blue Grass Hill	156	28	114	(42)	- 27%				
Replace Battery Systems - 2006 - Multiple Sites	92	0	107	15	16%				
Westcoast Communications System - Study	42	0	46	4	10%				
Replace Battery Systems - 2007 - Multiple Sites	485	138	279	(206)	- 42%	23			
<u> </u>				, ,		24			
· · · · · · · · · · · · · · · · · · ·				, ,					
·									
Replace Radomes - Multiple Sites	27	9	9	(18)	- 67%				
Network Infrastructure									
IRIG-B Distributions	103		105	2	2%				
Communications Network Technology		55							
Test Equipment		9							
Hydro Place Wireless	44	7	51	7	16%				
UPGRADE OF TECHNOLOGY									
MWIC Quad - Diversity Upgrade	114	0	116	2	2%				
Network Management Tools	49	19	48	(1)	- 2%				
Upgrade Site Facilities	49	6	51	2	4%				
TOTAL NETWORK SERVICES	2,752	818	2,433	(319)					
TOTAL INFORMATION SYSTEMS AND TELECONTROL	3,999	1,344	3,459	(540)					
IRIG-B Distributions Communications Network Technology Test Equipment Hydro Place Wireless UPGRADE OF TECHNOLOGY MWIC Quad - Diversity Upgrade Network Management Tools Upgrade Site Facilities TOTAL NETWORK SERVICES	102 49 44 114 49 49 2,752	7 0 19 6 818	122 52 51 116 48 51 2,433	20 3 7 2 (1) 2 (319)	20% 6% 16% 2% - 2%	24			

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES GENERAL PROPERTIES

	PUB Approved Budget 2007	4th Quarter Actuals 2007	Total Actual Expend. 2007	Variance From Budget 2007	Percentage Variance From Budget 2007	Variance Explan. Ref. No.
ADMINISTRATIVE						
VEHICLES						
Replace Vehicles - Hydro System - 2007	2686	1,530	2,218	(468)	-17%	25
Purchase Trucks, Snowmobiles, lifts, storage bldings- Labrador Coast	842	331	798	(44)	-5%	
ADMINISTRATION						
Construct New Warehouse - Port Saunders	66	0	74	8	12%	
Security Assessment of System Operations	668	131	137	(531)	-79%	26
Replace Storage Ramp - Bishop's Falls	62	13	63	1	2%	
Replace Administration Office Equipment less than \$50,000	68	44	62	(6)	-9%	
TOTAL ADMINISTRATIVE	4,392	2,049	3,352	(1,040)		
TOTAL GENERAL PROPERTIES	8,391	3,393	6,811	(1,580)		

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES OTHER APPROVED FUNDS

(4000	-,				Percentage
	PUB Approved Budget 2007	4th Quarter Actuals 2007	Total Actual Expend. 2007	Variance From 2007 Budget	Variance From 2007 Budget
ALLOCATION FOR UNFORESEEN EVENTS					
Cartwright Distribution - Upgrade Sleet Storm	113	0	105	(8)	-7%
Daniel's Harbour Distribution Line Re-Route	81	0	78	(3)	-4%
Ice Storm Damage - Northern	231	0	245	14	6%
Replace Insulators on TL221	252	0	165	(87)	-35%
Replace Structure 34 on TL212 (Sunnyside to Linton Lake)	203	150	150	(53)	-26%
Unused Allocation for Unforeseen Events	120	0	0	(120)	-100%
TOTAL ALLOCATION FOR UNFORESEEN EVENTS	1,000	150	743	(257)	
PROJECTS APPROVED BY PU BOARD					
NEW					
Replace Atomic Absorption with ICP Mass Spectrometer - Order No. P.U. 25 (2007)	231	202	202	(29)	-13%
TOTAL PROJECTS APPROVED BY PU BOARD	231	202	202	(29)	

NEWFOUNDLAND & LABRADOR HYDRO 2007 CAPITAL EXPENDITURES OTHER APPROVED FUNDS

	(4000)				Percentage
	PUB Approved Budget 2007	4th Quarter Actuals 2007	Total Actual Expend. 2007	Variance From 2007 Budget	Variance From 2007 Budget
NEW PROJECTS APPROVED FOR LESS THAN \$50,000					
Install Oil Water Separators - Various Stations	35	4	23	(12)	-34%
Replace Annuciator - Come By Chance Terminal Station	49	48	65	16	33%
Replace Battery Charger - Hawkes Bay	4	0	3	(1)	-25%
Purchase High Angle Rescue Equipment	4	0	3	(1)	-25%
Vibration Monitoring Systems Upgrade - Hardwoods and Stephenville	49	32	34	(15)	-31%
Transfer and Overhaul Diesel Unit 2058 - Little Bay Islands	49	(7)	52	3	6%
Replace Portable Oil Dielectric Test Set - Happy Valley	8	7	7	(1)	-13%
Replace Lube Oil Storage Tank - St. Anthony	6	6	6	0	0%
Replace 125 V DC Battery Charger System - L'Anse au Loup	14	10	10	(4)	-29%
Purchase Office Furniture - Hydro Place	22	20	20	(2)	-9%
Install Corporate Emergency Response Centre - Hydro Place	49	23	35	(14)	-29%
Energy Audit - Hydro Place	28	17	17	(11)	-39%
Upgrade Operator Console - Hardwood Gas Turbine	42	31	31	(11)	-26%
TOTAL PROJECTS APPROVED FOR LESS THAN \$50,000	359	191	306	(53)	

NEWFOUNDLAND & LABRADOR HYDRO 2007 VARIANCE EXPLANATIONS GENERATION OR THE QUARTER ENDING DECEMBER 31, 200

FOR THE QUARTER ENDING DECEMBER 31, 2007 (Greater than \$100,000)

1. Replace Penstock - Snook's Arm Generating Station

The project was substantially complete in December of 2006 with only site cleanup and landscaping to be done in 2007; however the contractor claimed that they were owed additional amounts due to design changes and site conditions. The final agreement with the contractor was for \$131,000 less than expected. This reduction resulted in less overhead and no contingency being utilized.

2. Upgrade Cooling Water System Unit 1 and 2 - Bay d'Espoir

The anticipated cost of this project had escalated considerably since the proposal was prepared early in 2006, partially due to the unusually high price escalation of stainless steel piping, pipe fittings and equipment, therefore it was cancelled and resubmitted in the 2008 Capital Budget Application. This project was approved for \$264,000 in Board Order No. P.U. 30 (2007).

3. Upgrade Control System - Holyrood

The cost of the project increased by \$170,000 due to unanticipated difficulties in system compatibility that resulted in additional programming, testing and training. There was no change in scope nor was a cost benefit analysis originally prepared for the installation of this system. In addition, this project remains the least cost alternative.

4. Addition of Disconnecting Means to 600 Volt Motor Control Centre (MCC) Branch Feeders - Holyrood

The project is under budget primarily due to the cost for the contracted portion of the work being less than estimated in the original budget. At the time the budget was prepared, the exact outage schedules for the Holyrood plant were not known, so assumptions were made when estimating the contract portion of the project. Worst case scenarios were used, estimating outages over an extended timeframe, which increased the length and cost of the project. Once outage schedules for the plant were confirmed, and included in the tender documents, the tenders were less than the estimates included in the budget.

NEWFOUNDLAND & LABRADOR HYDRO 2007 VARIANCE EXPLANATIONS GENERATION

FOR THE QUARTER ENDING DECEMBER 31, 2007 (Greater than \$100,000)

5. Fire Protection Upgrades - Holyrood

Due to delays in receiving technical clarification from the corporation's insurers for requested fire protection improvements and other work commitments, the bulk of the work will be completed in 2008. The total estimated capital cost remains unchanged.

6. <u>Contaminated Water Treatment - Holyrood</u>

The Contaminated Water Treatment Study is deferred until the long-term future of the Holyrood Plant has been determined.

7. <u>Air Preheater Steam Condenser Pumps - Unit 3 - Holyrood</u>

This project was under budget due to the installation contract being significantly less than the amount estimated in 2006. The successful contractor submitted a very favourable tender because of work shortage at the time. The original estimate for the major component of the work was approximately \$342,000, while the actual contract cost was approximately \$227,000, resulting in savings of \$115,000. These reductions also resulted in less overhead and no contingency being utilized.

8. Replace Fuel Piping - Hardwoods, Stephenville

On December 11, 2007, during excavation operations for this project at Stephenville Gas Turbine, the contractor struck an electrical cable causing a delay in this project. The location of the cable was not shown on any existing Hydro drawings. When excavation work resumes it will be performed manually, without the use of an excavator. Due to the manual digging, this work will have to take place when there is no frost in the ground. As well, a complete unit shutdown is required, with all equipment in the area de-energized to minimize the possibility of striking another live wire. This work is scheduled to be completed in the summer of 2008, within budget.

NEWFOUNDLAND & LABRADOR HYDRO 2007 VARIANCE EXPLANATIONS TRANSMISSION AND RURAL OPERATIONS FOR THE QUARTER ENDING DECEMBER 31, 2007 (Greater than \$100,000)

9. <u>Upgrade Corner Brook Frequency Converter - 2006</u>

The 2006 work was delayed in starting due to negotiations with Corner Brook Pulp & Paper concerning ownership of the facility. The project costs exceeded the budget primarily for three reasons:

- The pressure relief valve on the new transformer was damaged when the transformer arrived on site. Delays and extra work were incurred while waiting for and installing the replacement valve.
- The tenders for the upgrades to the compressed air system were higher than estimated because there were no contractors in the Corner Brook area that submitted tenders and the contract was awarded to a contractor based in St. John's. There were extra costs incurred in mobilizing this contractor to the work site.
- There were no competitive tenders received for the upgrades to the ventilation systems. The systems had to be redesigned twice, in order to attract competitive bids.

These delays and extra work required additional engineering and project management and also increased the overhead and interest expenses for the project. The scope and justification for the project has not changed from the original project proposal. The execution of the work is still being done at the least costs available in the marketplace.

10. Replace Insulators - TL251, TL252 and TL234

There were efficiencies gained and costs saved because additional work crews and equipment were deployed to the area at the time this project was executed. This also resulted in less overhead costs and contingency not being utilized. Both the material and the contract costs were less than estimated by approximately \$149,000. In addition, the work was completed in less time than originally budgeted causing the construction labour to be approximately \$93,000 under budget.

11. <u>Upgrade Corner Brook Frequency Converter - 2007</u>

This project is expected to be completed within budget. The 2007 project work was delayed due to delays in the 2006 upgrade work (the reasons for which are outlined in (9) above); consequently, the 2007 project is being carried over to 2008.

NEWFOUNDLAND & LABRADOR HYDRO
2007 VARIANCE EXPLANATIONS
TRANSMISSION AND RURAL OPERATIONS
FOR THE QUARTER ENDING DECEMBER 31, 2007
(Greater than \$100,000)

12. Safety and Reliability Upgrade - Hawkes Bay Terminal Station

The 2007 work was delayed due to a system planning analysis which indicated potential modifications to the station. Consequently, work on the project did not start until the early summer of 2007. This left only enough time to complete the general civil works in 2007. The tenders for the civil works were higher than estimated due to local contractors not being available, the time of the year when the tender was called and the general cost of grounding materials. It is not yet confirmed whether this increase in the civil costs will result in an increase in the overall project costs. The electrical portion of the upgrades is currently planned for the summer of 2008. There may be some long delivery times on some electrical equipment, which may further delay final project completion.

13. Upgrade Breakers - Various Stations

This project was budgeted to upgrade four breakers but due to outage and resource unavailability only two breakers were upgraded. This resulted in less overhead costs and the contingency amount not being utilized.

14. Upgrade Distribution Feeders - Various Locations

The budget estimates for upgrading distribution feeders are based on contracted out labour, since internal labour availability was unknown at the project proposal stage. The use of internal labour resulted in an overall reduction of project costs. As well, each project is estimated individually, however, efficiencies were gained and costs were reduced due to work crews being deployed to areas and working on multiple projects concurrently.

15. Service Extensions

The budgeted amount is an annual allotment based on the average of the annual expenditures for services extensions over the last five years. It is not based on a summary of specific projects. There was a \$330,000 increase from the estimate in the Labrador Interconnected System as well as a new North West Arm Cottage Development expenditure of \$310,000 and Pine Cove Interconnection expenditure of \$103,000.

NEWFOUNDLAND & LABRADOR HYDRO 2007 VARIANCE EXPLANATIONS TRANSMISSION AND RURAL OPERATIONS FOR THE QUARTER ENDING DECEMBER 31, 2007 (Greater than \$100,000)

16. Upgrade Unit 290 and Upgrade Fuel Storage - Williams Harbour

This was a pooled project to upgrade Unit 290 and upgrade the fuel storage. The upgrade Unit 290 portion will be carried over into 2008. During testing it was discovered that the genset to be supplied by the winning bidder was not in compliance with the specification. The deficiencies could not be corrected and the order was cancelled. The genset supply must be retendered which will delay completion until approximately September, 2008. Additional costs will be incurred for retendering, acceptance testing of the new genset, training for a potentially new make of genset, and rewiring/recertification of the control panel to suit an alternative genset. The budget for this portion of the project has increased from \$290,000 to \$370,000.

17. <u>Interconnect - Rencontre East</u>

This project was completed in 2006 however a contract claims settlement resulted in an additional \$130,000 being required for this project.

18. Construct New Diesel Plant - St. Lewis

During construction, extra labor charges associated with plant automation and commissioning as well as other in-house work resulted in an increased cost of \$136,000 for the new St. Lewis Diesel Plant. Along with this, increased cost of steel and copper components resulted in an increased cost of \$22,000.

A cost benefit analysis performed in June 2005 determined that the construction of a new diesel plant at St. Lewis was the preferred option over the other alternative which was to construct an interconnection to Port Hope Simpson. The Net Present Value (NPV) for the new diesel plant was \$530,732 in January 2005 dollars. With the discount rate of 8.4% used in the original cost benefit analysis, the \$158,000 equals \$124,042 in January 2005. Thus, the original NPV benefits have been reduced by \$124,042 to \$406,690, remaining the least cost alternative.

NEWFOUNDLAND & LABRADOR HYDRO
2007 VARIANCE EXPLANATIONS
TRANSMISSION AND RURAL OPERATIONS
FOR THE QUARTER ENDING DECEMBER 31, 2007
(Greater than \$100,000)

19. Purchase Spare Transformer - Upper Salmon

Transformer manufacturers are experiencing significant increases in demand for new transformers which has extended manufacturing time from less than one year to eighteen months. The resultant extended delivery times for large power transformers has changed the project in-service date to December, 2008. The total project cost is still forecast at \$2.2 million, of which \$1.36 million was budgeted to be spent in 2007 with the remainder to be spent in 2008.

20. Automatic Meter Reading

The cost of the Automatic Meter Reading (AMR) project has increased from \$696,000 to \$1,135,000 due to additional requirements identified during the detailed project design in 2007, including costs related to the interface between the AMR system and the existing Customer Billing system and receivers required in each distribution system. Additional time is also required to replace the required meters, therefore this project will be carried over with a completion date of October, 2008.

With respect to cost, the projected operating cost per meter for the Bay d'Espoir and St. Anthony service areas for 2007 is \$35 per meter. The implementation of AMR will lower the cost to \$10 per meter. The cumulative present worth analysis of AMR and the current system has a positive net present value starting in 2017 (11 years), and totals approximately \$266,000 in 2022.

NEWFOUNDLAND & LABRADOR HYDRO 2007 VARIANCE EXPLANATIONS GENERAL PROPERTIES FOR THE QUARTER ENDING DECEMBER 31, 2007 (Greater than \$100,000)

21. Corporate Application Environment

This project consisted of an operating system upgrade and JD Edwards software upgrade. The software upgrade was required because the vendor support for the current release of JD Edwards was terminating. Subsequently, the vendor decided to support Hydro's current software until 2013 therefore it was decided to delay this upgrade, reducing the net budget by \$267,000.

22. Replace VHF Mobile Radio System

The cost overrun can be attributed to increased costs incurred with respect to the work and material associated with our user equipment such as VHF radios, Energy Control Centre interface, installation, testing, and training. Issues encountered during the transition phase caused by faulty user equipment required the old VHF radio system to operate three months longer than anticipated while all units in service were reprogrammed to work with the new system. There was no change in the scope and the project remains the least cost solution. The two tenders received had approximately the same capital cost however the chosen solution had a considerably lower operating cost over the 15 year life span. The increased cost of approximately \$111,000 on the total project budget of approximately \$7.1 million (1.5%) has minimal impact on the NPV calculation.

23. Replace Battery System - Multiple Sites

The material and contract costs were \$162,000 less than budgeted for three reasons:

- One battery and charger system originally included in the 2007 budget was replaced in 2006 because additional capacity was needed at that time.
- The tendering process resulted in more competitive bids for installation services than in previous years.
- The contingency of \$40,000 was not used.

24. Microwave Site Refurbishing

The original budget of \$360,000 was based on a deficiency report generated by Tiller Engineering in 2005. Between that time and the start of this job, some of the items included in the budget had already been replaced. Other items were operating costs and therefore removed from the list. This resulted in the actual expenditure being significantly below the original budget.

NEWFOUNDLAND & LABRADOR HYDRO 2007 VARIANCE EXPLANATIONS GENERAL PROPERTIES FOR THE QUARTER ENDING DECEMBER 31, 2007 (Greater than \$100,000)

25. Replace Vehicles - Hydro System - 2007

The remainder of this budget has been carried over to 2008 for the boom remount project dealing with stability issues on two boom trucks V4483 and V4486. This includes supply and installation of two new booms on the old chassis.

26. <u>Security Assessment of System Operations</u>

The work completed in 2007 consisted of installing anti-climb devices on communication towers throughout the system, purchasing high voltage and personal protective equipment signage for installation throughout the system, and the initiation of a telecommunication design review. In 2008, the work scope consists of purchasing, and installing a card reader, surveillance camera and alarm equipment throughout the system. As well, upgrades to fencing, area lighting and signage will begin. The requirements for these upgrades were outlined in a summary document produced in 2007, however, the schedule for this work has not yet been finalized. The work will be completed through a combination of external contracts and some work by Hydro Operations. This project will be carried over into 2008 with a scheduled completion date of December, 2008 within budget.

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL BUDGET VERSUS EXPENDITURES 1998 - 2007 AS AT DECEMBER 31 (\$000)

		Actual		Percentage
Year	Budget	Expenditures	Variance	Variance
1998	47,522	28,017	19,505	41.0%
1999	38,142	29,684	8,458	22.2%
2000	43,824	38,569	5,255	12.0%
2001	55,897	47,501	8,396	15.0%
2002	44,660	40,217	4,443	9.9%
2003	36,122	32,506	3,616	10.0%
2004	31,435	27,984	3,451	11.0%
2005	47,760	33,952	13,808	28.9%
2006	49,024	41,217	7,807	15.9%
2007	43,304	35,669	7,635	17.6%

It should be noted that the above variances include amounts related to the carryover of projects from year to year. Variances from budget for completed projects are 8% and 5% for 2006 and 2007 respectively, well within acceptable ranges. Project carryovers worsened considerably in 2005, with retirements, transfers and reassignments, primarily as a result of the reorganization of Hydro's engineering function. Since then, improvements have been made, and efforts are underway to further improve the completion of projects on schedule. These efforts include:

- more two-year schedules to accommodate the construction seasons rather than the calendar year;
- more two-year schedules to allow adequate lead time on materials, such as that now required for the purchase of power transformers, as identified in the variance explanation for the Upper Salmon transformer, which contributed to the 2007 carryover amount;
- newly hired engineers obtaining the experience and knowledge required to be able to more independently complete assignments;

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL BUDGET VERSUS EXPENDITURES 1998 - 2007 AS AT DECEMBER 31 (\$000)

capital budget preparation now including review of staff availability. The internal 2008 Capital
Budget review resulted in a deferral of projects which remain necessary, but could not be completed
with existing staff. This type of deferral, however, contains a risk to the reliability of Hydro's aging
infrastructure, which will be mitigated when the maintenance plan is completed.

It is not anticipated that carryovers of capital projects will ever be eliminated. There are frequently sound or unavoidable reasons for delay in project completion, such as in 2007, when projects were delayed due to:

- consideration of the prudence of a particular project under changing circumstances, such as the
 delay experienced in the safety and reliability upgrades at Hawkes Bay. The project was delayed
 pending analysis of a reconfiguration of the terminal station to address a separate problem, and
 work proceeded once it was determined that such a reconfiguration was not required.
- consideration of the requirements of the customer. The Corner Brook frequency converter project was delayed due to discussions with the customer to whom the converter is specifically assigned concerning possibly transferring ownership.

NEWFOUNDLAND & LABRADOR HYDRO CARRY OVER REPORT FOR THE YEAR ENDED DECEMBER 31 (\$000)

	PUB				Variance
	Approved	Revised		Carryover	Explan.
	Budget	Budget	Actuals	Amount	Ref. No.
Replace Station Service Control - Bay d'Espoir	105	124	66	58	
Stator Windings Design Review - Bay d'Espoir	49	49	29	20	
Fire Protection Upgrades - Holyrood	1,797	1,797	578	1,219	5
UPS Battery Monitoring Program - Holyrood	79	79	5	74	
Replace Fuel Piping - Hardwoods and Stephenville ¹	530	242	145	97	
Upgrade Corner Brook Frequency Converter - 2007	1,320	1,320	26	1,294	11
Upgrade 138kV Protection - Springdale, Howley, Indian River	215	215	169	46	
Upgrade Breaker Controls - OPD/SSD Terminal Station	40	40	12	28	
Safety and Reliability Upgrade - Hawkes Bay Terminal Station	349	349	204	145	12
Upgrade Unit 290 and Upgrade Fuel Storage - Williams Harbour ²	479	370	92	278	16
Purchase Spare Transformer - Upper Salmon	665	665	19	646	19
Automatic Meter Reading	696	1,135	201	934	20
Installation of Card Access System -					
Bishop's Falls and Whitbourne	131	131	102	29	
Replace Vehicles - Hydro System - 2007	2,686	2,686	2,218	468	25
Security Assessment of System Operations	668	668	137	531	26
Vibration Monitoring System Upgrade -					
Hardwoods and Stephenville	49	49	34	15	
TOTAL CARRYOVER	9,858	9,919	4,037	5,882	

¹This was a pooled project to replace fuel piping in the Hardwoods and Stephenville terminal stations. The Hardwoods portion of the job is complete.

²This was a pooled project to upgrade Unit 290 and the fuel storage system in William's Harbour. The fuel storage system replacement is complete.



Hydro Place. 500 Columbus Drive. P.O. Box 12400. St. John's. NL Canada A1B 4K7 t. 709.737.1400 f. 709.737.1800 www.nlh.nl.ca

March 2, 2009

The Board of Commissioners of Public Utilities Prince Charles Building 120 Torbay Road, P.O. Box 21040 St. John's, NL A1A 5B2

ATTENTION: Ms. Cheryl Blundon

Director of Corporate Services & Board Secretary

Dear Ms. Blundon:

Re: 2008 Capital Expenditures and Carryover – Year End

Pursuant to Board Order No. P.U. 30 (2007), p. 26, item 6, enclosed please find the original and eight copies of Newfoundland and Labrador Hydro's (Hydro) report on 2008 Capital Expenditures and Carryover for the year ended December 31, 2008.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

Geoffrey P. Young

Senior Legal Counsel

GPY/jc Encls.

A REPORT TO THE BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

CAPITAL EXPENDITURES AND CARRYOVER REPORT

For Year Ending December 31, 2008

March 2009



NEWFOUNDLAND AND LABRADOR HYDRO

CAPITAL EXPENDITURES AND CARRYOVER REPORT

For Quarter Ending December 31, 2008

TABLE OF CONTENTS

	Page
CAPITAL EXPENDITURES OVERVIEW	1
CAPITAL EXPENDITURES SUMMARY BY CATEGORY: Generation	2
Transmission and Rural Operations	2
General Properties	3
Other Approved Funds	3
CAPITAL EXPENDITURES DETAIL: Generation	4
Transmission and Rural Operations	7
General Properties	12
Other Approved Funds	15
Variance Explanations (Greater than \$100,000): Generation	17
Transmission and Rural Operations	19
General Properties	23
Other Approved Funds	25
CAPITAL BUDGET VERSUS EXPENDITURES 1998 - 2007	27
CARRYOVER REDORT	31

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES OVERVIEW

	PUB	4th	Total	Variance
	Approved	Quarter	Actual	From
	Budget	Actuals	Expend.	Budget
	2008	2008	2008	2008
GENERATION	8,965	5,823	9,460	495
TRANSMISSION AND RURAL OPERATIONS	27,617	10,730	23,931	(3,686)
GENERAL PROPERTIES	10,698	3,994	7,565	(3,133)
ALLOWANCE FOR UNFORESEEN EVENTS	1,000	779	933	(67)
PROJECTS APPROVED BY PU BOARD	5,182	338	4,260	(922)
NEW PROJECTS APPROVED FOR LESS THAN \$50,000	117	84	97	(20)
TOTAL CAPITAL BUDGET	53,579	21,748	46,246	(7,333)
Projects Approved by PU Board				
2008 Capital Budget Approved by Board Order No. P.U. 30 (2007)	42,398			
New Projects Approved by Board Order No. P.U. 17 (2008)	4,542			
New Projects Approved by Board Order No. P.U. 23 (2008)	420			
New Projects Approved by Board Order No. P.U. 25 (2008)	220			
New Projects Approved by Board Order No. P.U. 26 (2008)	0			
New Projects Approved by Board Order No. P.U. 30 (2008)	0			
Carryover Projects 2007 to 2008	5,882			
2008 New Projects Approved for Less than \$50,000	117			
TOTAL APPROVED CAPITAL BUDGET	53,579			

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES SUMMARY BY CATEGORY

	PUB Approved Budget 2008	4th Quarter Actuals 2008	Total Actual Expend. 2008	Variance From Budget 2008
GENERATION		2000	2000	2000
HYDRAULIC PLANTS	4,052	3,494	5,025	973
THERMAL PLANT	4,065	2,162	3,767	(298)
GAS TURBINES	143	94	181	38
TOOLS AND EQUIPMENT	705	73	487	(218)
TOTAL GENERATION	8,965	5,823	9,460	495
TRANSMISSION AND RURAL OPERATIONS				
TERMINAL STATIONS	4,065	1,518	2,478	(1,587)
TRANSMISSION	5,977	3,118	6,606	629
DISTRIBUTION	9,265	3,838	9,745	480
GENERATION	1,956	631	1,287	(669)
PROPERTIES	2,409	565	813	(1,596)
METERING	1,593	240	1,543	(50)
TOOLS AND EQUIPMENT	2,352	820	1,459	(893)
TOTAL TRANSMISSION AND RURAL OPERATIONS	27,617	10,730	23,931	(3,686)

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES SUMMARY BY CATEGORY

	PUB	4th	Total	Variance
	Approved	Quarter	Actual	From
	Budget	Actuals	Expend.	Budget
	2008	2008	2008	2008
GENERAL PROPERTIES				
INFORMATION SYSTEMS	3,444	1,192	3,317	(127)
TELECONTROL	2,817	1,270	1,750	(1,067)
TRANSPORTATION	2,294	877	1,508	(786)
ADMINISTRATIVE	2,143	655	990	(1,153)
TOTAL GENERAL PROPERTIES	10,698	3,994	7,565	(3,133)
ALLOWANCE FOR UNFORESEEN EVENTS	1,000	779	933	(67)
PROJECTS APPROVED BY PU BOARD	5,182	338	4,260	(922)
PROJECTS APPROVED FOR LESS THAN \$50,000	117	84	97	(20)
TOTAL CAPITAL BUDGET	53,579	21,748	46,246	(7,333)

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES

GENERATION

. ,					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2008	2008	2008	2008	2008	Ref. No.
HYDRAULIC PLANTS						_
Replace Station Service Control - Bay d'Espoir	58	33	189	131	226%	1
Stator Windings Design Review - Bay d'Espoir	20	7	9	(11)	-55%	
Upgrade Spherical Valve Maintenance Seals - Cat Arm	1,060	1,628	1,969	909	86%	2
Replace Governor Controls Unit 2 - Cat Arm	975	677	1,096	121	12%	3
Arc Flash Analysis - Various Sites	342	217	259	(83)	-24%	
Replace Cooling Water Systems Units 1 and 2 - Bay d'Espoir	264	69	198	(66)	-25%	
Replace 40 kW Diesel Generator - Burnt Dam	157	135	148	(9)	-6%	
Install Meteorological Stations - Various Locations	222	99	225	3	1%	
Hydraulic Structure Life Study - Bay d'Espoir	196	109	123	(73)	-37%	
Replace Cooling Water Piping System - Hinds Lake	193	81	143	(50)	-26%	
Salmon Spillway Stoplog Handling System	141	154	207	66	47%	
Upgrade Intake No. 4 Gate Controls - Bay d'Espoir	116	2	134	18	16%	
Replace Back-Up Air Dryer - Bay d'Espoir	73	52	53	(20)	-27%	
Replace Communications Room Air Conditioner - Bay d'Espoir	64	51	51	(13)	-20%	
Upgrade Access Trail - Venam's Bight	64	91	100	36	56%	
Replace Fire Alarm System - Cat Arm	54	70	82	28	52%	
Replace Auxiliary Service Water Pump - Cat Arm	53	19	39	(14)	-26%	
TOTAL HYDRAULIC PLANTS	4,052	3,494	5,025	973		

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES

GENERATION

· ·					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
<u>-</u>	2008	2008	2008	2008	2008	Ref. No.
THERMAL PLANT						
Fire Protection Upgrades - Holyrood	1,219	438	1,085	(134)	-11%	4
UPS Battery Monitoring Program - Holyrood	74	2	80	6	8%	
Tank Farm Upgrade	500	775	776	276	55%	5
Replace Unit 2 High Pressure Heater	20	56	62	42	210%	
Replace Unit 1 and 2 Condenser Valve Actuators	313	66	236	(77)	-25%	
Replace Unit 2 Electromechanical Trip Device	305	174	345	40	13%	
Precipitator and Scrubber Installation Study	272	221	247	(25)	-9%	
Replace 4160 Volt Motor Relays	172	63	128	(44)	-26%	
Replace Unit 2 Main Steam Stop Valve	171	0	190	19	11%	
Environmental Effects Monitoring Study of Waste Water	73	26	31	(42)	-58%	
Upgrade Ambient Monitoring Station	128	11	91	(37)	-29%	
Soot Blowing Controls Study	123	95	107	(16)	-13%	
Stack Breeching Study	115	37	42	(73)	-63%	
Install Safety Egress Lighting	97	15	20	(77)	-79%	
Auto Synchronizing Units 1 and 2	93	44	46	(47)	-51%	
Install Stator Ground Fault Protection	85	57	118	33	39%	
Upgrade Meteorological Station	75	15	59	(16)	-21%	
Construct Beta Attenuation Meter (BAM) Unit Enclosure	60	0	0	(60)	-100%	
Programmable Logic Controller Replacement Study	58	7	41	(17)	-29%	
Motor Control Centres Assessment	43	20	23	(20)	-47%	
Install UV Domestic Water Treatment	36	15	15	(21)	-58%	
Jetty Building Ventilation	33	25	25	(8)	-24%	
TOTAL THERMAL PLANTS	4,065	2,162	3,767	(298)		

NEWFOUNDLAND & LABRADOR HYDRO

2008 CAPITAL EXPENDITURES GENERATION

					Percentage	!
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2008	2008	2008	2008	2008	Ref. No.
GAS TURBINES						
Replace Fuel Piping -Stephenville	97	58	114	17	18%	
Vibration Monitoring System Upgrade - Hardwoods and Stephenville	15	37	38	23	153%	
Gas Turbine Electrical Assessment - Holyrood	31	(1)	29	(2)	-6%	
TOTAL GAS TURBINE PLANTS	143	94	181	38		
TOOLS AND EQUIPMENT						
Replace Champion Grader V-9797 - Bay d'Espoir	404	0	239	(165)	-41%	6
Purchase Grounding Trucks	61	0	55	(6)	-10%	
Tools and Equipment Less than \$50,000	240	73	193	(47)	-20%	
TOTAL TOOLS AND EQUIPMENT	705	73	487	(218)		
TOTAL GENERATION	8,965	5,823	9,460	495		

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES TRANSMISSION AND RURAL OPERATIONS FOR THE QUARTER ENDING DECEMBER 31, 2008 (\$000)

				Percentage		
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2008	2008	2008	2008	2008	Ref. No.
TERMINAL STATIONS						
Upgrade Breaker Controls - Oxen Pond and Sunnyside Terminal Stations	28	27	35	7	25%	
Safety and Reliability Upgrade - Hawkes Bay Terminal Station	145	230	521	376	259%	7
Purchase Spare Transformer - Upper Salmon	2,198	375	416	(1,782)	-81%	8
Replace Battery Banks and Chargers - Various Locations	430	282	473	43	10%	
Replace Disconnect Switches - Cow Head and Daniel's Harbour	368	237	284	(84)	-23%	
Upgrade Circuit Breakers - Various Locations	315	143	295	(20)	-6%	
Replace Digital Fault Recorder - Buchans	130	51	104	(26)	-20%	
Replace Compressors - Buchans	94	61	74	(20)	-21%	
Replace Instrument Transformers - Various Locations	74	(2)	75	1	1%	
Replace Surge Arrestors - Various Locations	67	2	73	6	9%	
Upgrade Station Services - Hardwoods	59	1	1	(58)	-98%	
On-Line Dewpoint Monitoring - Bay d'Espoir	38	27	34	(4)	-11%	
Replace Control Building Roof - Doyles	34	20	22	(12)	-35%	
Secondary Air Line for Switchgear - Cat Arm	33	14	14	(19)	-58%	
Replace Breaker Control Panels - Western Avalon	32	25	28	(4)	-13%	
Replace Equipment Concrete Foundation - Stoney Brook	20	25	29	9	45%	
TOTAL TRANSMISSION	4,065	1,518	2,478	(1,587)		

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES TRANSMISSION AND RURAL OPERATIONS FOR THE QUARTER ENDING DECEMBER 31, 2008 (\$000)

	PUB Approved Budget 2008	4th Quarter Actuals 2008	Total Actual Expend. 2008	Variance From Budget 2008	Percentage Variance From Budget 2008	Variance Explanation Ref. No.
TRANSMISSION						
Upgrade Corner Brook Frequency Converter - 2007	1,294	494	1,185	(109)	-8%	
Upgrade 138kV Protection - Springdale, Howley and Indian River	46	0	55	9	20%	
Wood Pole Line Management Program	2,188	1,274	2,393	205	9%	
Replace Insulators TL232 and TL253	848	115	878	30	4%	
Upgrade Corner Brook Frequency Converter - 2008	495	905	943	448	91%	9
Upgrade Line TL212 - (Sunnyside to Linton Lake)	464	6	474	10	2%	
Construct Transmission Line Equipment Off-Loading Areas	302	261	305	3	1%	
Replace Insulators - Various Locations	294	47	324	30	10%	
Install Remote Ice Growth Detection Beam - Various Locations	46	16	49	3	7%	
TOTAL TERMINALS	5,977	3,118	6,606	629		

Percentage

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES TRANSMISSION AND RURAL OPERATIONS FOR THE QUARTER ENDING DECEMBER 31, 2008

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	PUB Approved Budget 2008	4th Quarter Actuals 2008	Total Actual Expend. 2008	Variance From Budget 2008	Variance From Budget 2008	Variance Explanation Ref. No.
DISTRIBUTION						
Replace Diesel Unit No. 290 - William's Harbour	278	191	218	(60)	-22%	
Upgrade Distribution Systems - Various Locations	2,727	1,066	2,551	(176)	-6%	
Service Extensions	2,158	1,352	3,328	1,170	54%	10
Distribution Upgrades	2,293	635	2,236	(57)	-2%	
Replace poles - South Brook and Bay d'Espoir	701	394	588	(113)	-16%	11
Replace Insulators - Various Locations	623	124	572	(51)	-8%	
Replace Recloser Control Panels - Various Locations	223	38	134	(89)	-40%	
Reconfigure Feeders - Happy Valley	151	31	76	(75)	-50%	
Replace Submarine Cable Terminator - Gaultois	64	7	42	(22)	-34%	
Recloser Assessment - Happy Valley	47	0	0	(47)	-100%	
TOTAL DISTRIBUTION	9,265	3,838	9,745	480		
GENERATION						
Replace Diesel Units - Norman Bay, Cartwright and Black Tickle	335	4	8	(327)	-98%	12
Diesel Plant Automation - Makkovik and Rigolet	516	361	589	73	14%	
Increase Generation Capacity - Charlottetown	18	1	6	(12)	-67%	
Replace Switchgear - Cartwright	383	102	117	(266)	-69%	13
Replace Mufflers - L'Anse au Loup and St. Anthony	479	117	340	(139)	-29%	14
Replace Underground Fuel Lines - Little Bay Islands and Grey River	89	20	65	(24)	-27%	
Upgrade Meter House Equipment - Various Locations	75	25	87	12	16%	
Install Day Tank and Meter - Hopedale	61	1	75	14	23%	
TOTAL GENERATION	1,956	631	1,287	(669)		

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES TRANSMISSION AND RURAL OPERATIONS FOR THE QUARTER ENDING DECEMBER 31, 2008 (\$000)

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2008	2008	2008	2008	2008	Ref. No.
PROPERTIES						
Installation of Card Access System - Bishop Falls and Whitbourne	29	0	29	0	0%	
Construct New Office/Warehouse/Line Depot Facilities - Happy Valley	1,248	85	94	(1,154)	-92%	15
Upgrade Ventilation System - Makkovik - Project Cancelled	217	0	0	(217)	-100%	16
Construct Diesel Plant Extension - William's Harbour	177	0	11	(166)	-94%	17
Replace Fire Alarm System - Hopedale and Paradise River	168	122	139	(29)	-17%	
Install Storage Ramp - Holyrood and Port Saunders	136	127	132	(4)	-3%	
Install Chain Link Fencing - Port Hope Simpson	84	14	58	(26)	-31%	
Upgrade Parking Lot - Whitbourne	67	55	65	(2)	-3%	
Install Waste Oil Storage Tank - Cartwright	53	4	62	9	17%	
Survey of Hydro's Primary Right of Ways - Various Locations	52	47	54	2	4%	
Install Waste Oil Storage Tank - L'Anse au Loup - Changed to Charlottown	46	2	54	8	17%	
Construct Lube Oil Storage Ramps - Various Locations	44	34	37	(7)	-16%	
Install Pole Storage Ramp - Burgeo	43	47	49	6	14%	
Construct Storage Shed - Paradise River	30	17	18	(12)	-40%	
Transformer Storage Ramp-Port Saunders - St. Lewis Lube Oil Storage Ramp	15	11	11	(4)	-27%	
TOTAL PROPERTIES	2,409	565	813	(1,596)		

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES TRANSMISSION AND RURAL OPERATIONS FOR THE QUARTER ENDING DECEMBER 31, 2008 (\$000)

					Percentage	:
	• •	4th d Quarter	Total Actual	Variance From	Variance From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2008	2008	2008	2008	2008	Ref. No.
METERING						
Install Automatic Meter Reading 2007 - Various Locations	934	102	967	33	4%	
Install Automatic Meter Reading 2008 - Various Locations	567	96	493	(74)	-13%	
Purchase Meters and Equipment	67	42	58	(9)	-13%	
Purchase Metering Spares	25	0	25	0	0%	
TOTAL METERING	1,593	240	1,543	(50)		
TOOLS AND EQUIPMENT						
Replace Off Road Track Vehicles - Bishop's Falls and Whitbourne	746	509	511	(235)	-32%	18
Replace Light Duty Mobile Equipment Less than \$50,000	588	121	454	(134)	-23%	19
Installation of Fall Arrest Equipment - Various Locations	404	96	194	(210)	-52%	20
Replace Boom 6069 on Track Vehicle - Stephenville	236	0	0	(236)	-100%	21
Purchase Hydraulic Cutters and Presses - Various Locations	66	1	53	(13)	-20%	
Purchase Forklift for Salvage Stores - Bishop's Falls	49	0	37	(12)	-24%	
Tools and Equipment Less than \$50,000	263	93	210	(53)	-20%	
TOTAL TOOLS AND EQUIPMENT	2,352	820	1,459	(893)		
TOTAL GENERAL	6,354	1,625	3,815	(2,539)		
TOTAL TRANSMISSION AND RURAL OPERATIONS	27,617	10,730	23,931	(3,686)		

Percentage

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES

GENERAL PROPERTIES

					Percentage	
	PUB Approved Budget 2008	4th Quarter Actuals 2008	Total Actual Expend. 2008	Variance From Budget 2008	Variance From Budget 2008	Variance Explanation Ref. No.
INFORMATION SYSTEMS		2000	2000	2000	2000	itel. ito.
SOFTWARE APPLICATIONS						
INFRASTRUCTURE REPLACEMENT						
New Infrastructure						
Application Enhancements - Work Protection Code	678	54	676	(2)	0%	
Application Enhancements - Energy Systems Water Management	651	428	625	(26)	-4%	
Applications Enhancements Corporate Systems	373	281	365	(8)	-2%	
Cost Recovery CF(L)Co	(75)	(16)	(66)	`9 [°]	-12%	
Application Enhancements - Energy Systems Optimum Power flow	216	19	115	(101)	-47%	22
Upgrade of Technology				. ,		
Corporate Application Environment	331	211	331	0	0%	
Cost Recovery CF(L)Co	(41)	(12)	(41)	0	0%	
TOTAL SOFTWARE APPLICATIONS	2,133	965	2,005	(128)		
COMPUTER OPERATIONS						
INFRASTRUCTURE REPLACEMENT						
End User Infrastructure Evergreen Program	451	22	457	6	1%	
Enterprise Storage Capacity Upgrade	327	5	326	(1)	0%	
Cost Recovery CF(L)Co	(65)	0	(65)	0	0%	
NEW INFRASTRUCTURE						
Peripheral Infrastructure Replacement	159	7	159	0	0%	
Video Conferencing	140	113	139	(1)	-1%	
Security Configuration Auditing	72	72	72	0	0%	
Cost Recovery CF(L)Co	(14)	(14)	(14)	0	0%	
UPGRADE OF TECHNOLOGY						
Server Technology Program	241	22	238	(3)	-1%	
TOTAL COMPUTER OPERATIONS	1,311	227	1,312	1		
TOTAL INFORMATION SYSTEMS	3,444	1,192	3,317	(127)		

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES

GENERAL PROPERTIES

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2008	2008	2008	2008	2008	Ref. No.
TELECONTROL						
NETWORK SERVICES						
INFRASTRUCTURE REPLACEMENT						
Customer Service Application - Hydro Place	768	11	40	(728)	-95%	23
Replace Power Line Carrier TL212 - Sunnyside to Paradise River	466	311	369	(97)	-21%	
Replace Remote Terminal Units - Various Sites	319	100	281	(38)	-12%	
Refurbish Microwave Site - Gull Pond Hill	202	183	188	(14)	-7%	
Replace Dial Backup System - Various Sites	201	87	98	(103)	-51%	24
Install Recloser Remote Control - Change Islands	194	96	150	(44)	-23%	
Replace Radomes - Various Sites	124	111	111	(13)	-10%	
Network Infrastructure						
Replace Network Communications Equipment - Various Sites	131	87	144	13	10%	
Test Equipment - Hydro Place and Deer Lake	49	12	54	5	10%	
Wireless Networking - Various Sites	46	49	53	7	15%	
UPGRADE OF TECHNOLOGY						
Voice Communications Strategy Study - Hydro Place	190	85	118	(72)	-38%	
Replace Network Management Tools - Hydro Place	81	85	91	10	12%	
Upgrade Site Facilities - Various Sites	46	53	53	7	15%	
TOTAL TELECONTROL	2,817	1,270	1,750	(1,067)		

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES

GENERAL PROPERTIES

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2008	2008	2008	2008	2008	Ref. No.
TRANSPORTATION						
Replace Vehicles - Hydro System - 2007	468	0	317	(151)	-32%	25
Replace Vehicles - Hydro System - 2008	1,826	877	1,191	(635)	-35%	26
TOTAL TRANSPORTATION	2,294	877	1,508	(786)		
ADMINISTRATION						
Security Assessment of System Operations	531	333	579	48	9%	
Upgrade System Security - Various Sites	906	145	145	(761)	-84%	27
Purchase Spare Transformer - Hydro Place	87	47	51	(36)	-41%	
Install Computer Room Inergen Fire Protection System - Hydro Place	116	0	0	(116)	-100%	28
Safety Hazards Removal - Various Sites	252	117	131	(121)	-48%	29
Purchase and Replace Admin Office Equip less than \$50,000	137	13	84	(53)	-39%	
Replace Humidifiers in Air Handling Units - Hydro Place	58	0	0	(58)	-100%	
Replace Air Conditioning Units - Hydro Place	56	0	0	(56)	-100%	
TOTAL ADMINISTRATIVE	2,143	655	990	(1,153)		
TOTAL GENERAL PROPERTIES	10,698	3,994	7,565	(3,133)		

Percentage

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES OTHER APPROVED FUNDS

					Percentage	
	PUB Approved Budget 2008	4th Quarter Actuals 2008	Total Actual Expend. 2008	Variance From Budget 2008	Variance From Budget 2008	Variance Explanation Ref. No.
ALLOCATION FOR UNFORESEEN EVENTS						
Replace Structure No. 380 on TL212	65	0	67	2	3%	
Replace Air Compressors No. 4 and 5 - Holyrood	256	215	215	(41)	-16%	
Nain Diesel Plant Rehabilitation	0	291	304	304	0%	30
Install Midspan Structure - Roddickton	68	6	61	(7)	-10%	
Grounding Upgrades - Bottom Brook, Hinds Lake and Oxen Pond	0	267	286	286	0%	31
Allocation for Unforeseen Events	611	0	0	(611)		
TOTAL ALLOCATION FOR UNFORESEEN EVENTS	1,000	779	933	(67)		
PROJECTS APPROVED BY PUB CARRYOVER NEW						
Replace Superheater Unit 1 - Holyrood	4,446	106	4,028	(418)	-9%	
Public Address System - Holyrood	96	3	3	(93)	-97%	
Condition Assessment and Life Extension Study - Holyrood	420	0	0	(420)	-100%	32
Replace Front End Loader V9614 - Bay d'Espoir	220	229	229	9	4%	
Install Neutral Grounding Resistors - Come by Chance	227	0	0	(227)	-100%	33
Cost Recovery - North Atlantic Refining Limited	(227)	0	0	227		
Relocate Transmisson Line TL227 and TL262 - Daniels Harbour	350	152	152	(198)	0%	34
Cost Recovery - Department Works and Transportation	(350)	(152)	(152)	198		
Coastal Labrador Alternative Energy Study	250	29	29	(221)	-88%	35
Cost Recovery - Department Works and Transportation	(250)	(29)	(29)	221		
TOTAL PROJECTS APPROVED BY PU BOARD	5,182	338	4,260	(922)		

NEWFOUNDLAND & LABRADOR HYDRO 2008 CAPITAL EXPENDITURES OTHER APPROVED FUNDS

					Percentage	!
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2008	2008	2008	2008	2008	Ref. No.
NEW PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO						
Electronic White Board - Hydro Place	14	0	13	(1)	-7%	
Install Water and Sewer System - Hopedale	49	45	45	(4)	-8%	
Replace Diesel Unit No. 562 - Norman Bay	17	17	17	0	0%	
Purchase Exercise Equipment - Corporate Wellness Strategy	21	14	14	(7)	-33%	
Purchase Office Furniture - Hydro Place	9	8	8	(1)	-11%	
Purchase Pressure Sealer - Hydro Place	7	0	0	(7)	-100%	
TOTAL PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO	117	84	97	(20)		

NEWFOUNDLAND AND LABRADOR HYDRO 2008 VARIANCE EXPLANATIONS GENERATION

FOR THE QUARTER ENDING DECEMBER 31, 2008 (Greater than \$100,000)

1. Replace Station Services Control – Bay D'Espoir

Station Services is critical to the operation of the generating units in Bay d'Espoir Powerhouse 1. An outage to the Station Services would cause an outage to Units 1-6. Due to the critical nature of the Station Services, extra precautions and equipment, engineering time and plant personnel time were required to ensure the availability of the Station Services during the preliminary installation work, final installation work and commissioning. All of the cost increases are due to labour for both installation and commissioning.

2. <u>Upgrade Spherical Valve Maintenance Seals - Cat Arm</u>

The original estimate was based upon a preliminary design in a 2007 proposal by the manufacturer of the spherical valves to replace the existing maintenance seals with a new design. In early 2008, the manufacturer commenced detailed engineering and design and concluded that the proposed design would be ineffective. The manufacturer subsequently submitted a new proposal on March 26, 2008, with an improved design for the maintenance seal. This new design resulted in an increase of \$279,000 to the contract.

In addition, the cost estimate was based upon availability of camp facilities on-site. The cookhouse and bunkhouse at Cat Arm was closed due to mould issues, as reported in Hydro's 2009 Capital Budget Application ¹. This resulted in additional costs associated with housing workers at the nearest available lodging in the community of Pollard's Point, as well as the additional labour incurred for workers travelling between Pollard's Point and Cat Arm. This resulted in increased costs of \$145,000 due to labour, overtime and travel expenses. Furthermore, the scope of the project was expanded to include the construction of a cookhouse on-site to feed workers during the construction period at a cost of \$102,000.

A further cost increase of \$305,000 is attributed to the provision of additional in-house engineering to permit a more thorough review of the new design, more extensive factory acceptance testing, additional labour and materials to address a number of deficiencies in the contractor's design and work plan and to expedite the return of the generating units to service.

¹ Volume II, Tab 7, "Cat Arm Hydro Generating Station Replacement of Accommodations" report.

NEWFOUNDLAND AND LABRADOR HYDRO 2008 VARIANCE EXPLANATIONS GENERATION

FOR THE QUARTER ENDING DECEMBER 31, 2008 (Greater than \$100,000)

3. Replace Governor Controls Unit 2 - Cat Arm

As stated previously, the on-site accommodations at Cat Arm have been closed. Personnel from Hydro and General Electric, the control system supplier, stayed at a motel during the installation and commissioning of the governor controls and its associated equipment. The budget variance is due to increased labour costs due to travel time plus the cost of accommodations.

4. <u>Fire Protection Upgrades – Holyrood</u>

The fire protection system is installed, however, there is some contractor work left to be completed resulting in this project being carried over into 2009. It is expected to be completed within budget.

5. <u>Tank Farm Upgrade - Holyrood</u>

The increase in the cost of this project is due to a contract cost for upgrading fuel storage tank No. 2 that was \$306,000 greater than estimated. Factors contributing to the increased contract cost include an increase in material costs and the high demand for skilled labour which has increased contracting costs and a heightened awareness of safety hazards, requiring more involved mitigation procedures during construction.

6. Replace Champion Grader V-9797 – Bay d'Espoir

The budgeted price was developed following discussions with a single manufacturer. Competitive bidding and optimizing the specification resulted in the purchase of a machine which meets requirements at a lower cost.

NEWFOUNDLAND AND LABRADOR HYDRO

2008 VARIANCE EXPLANATIONS

TRANSMISSION AND RURAL OPERATIONS

FOR THE QUARTER ENDING DECEMBER 31, 2008 (Greater than \$100,000)

7. <u>Safety and Reliability Upgrades – Hawkes Bay Terminal Station</u>

This project was approved by Board Order No. P.U. 35(2006) as a one-year project and then subsequently

carried over into 2007². This delay resulted in a significant increase in costs for material and contracts. The

contract cost increased by \$149,000 as well as additional labour costs of \$163,000.

8. <u>Purchase Spare Transformer – Upper Salmon</u>

In addition to the delay in this project reported in the 2007 Capital Expenditure Report (Page 23), there was a

further three-month delay in production by the manufacturer, therefore, this project will be carried over into

2009. Due to the size of this equipment, transportation permits are required in order to get the transformer

on site. The Department of Transportation does not usually grant these permits during the winter months,

therefore the expected in service date has been extended until June 2009. The total budgeted expenditure

remains unchanged.

9. <u>Upgrade Corner Brook Frequency Converter - 2008</u>

This is a multi-year project also reported in the 2007 Capital Expenditures Report (Page 20) and the original

plan was to perform two rotor rewinds in separate years, requiring two outages. This plan was reviewed and

it was decided to complete both of the rewinds in one longer outage period, therefore more work was done

in 2008 than was originally planned. This project is expected to be completed on time and within budget.

10. <u>Service Extensions</u>

The budgeted amount is an annual allotment based on the average of the annual expenditures for service

extensions over the last five years. It is not based on a summary of specific projects. The majority of the

increase is due to growth located across the Labrador Interconnected System accounting for approximately

\$700,000. Other areas that had significant increases from the estimate were the central area of the Island

Interconnected System, the L'Anse au Loup System and the Pine Cove Interconnection at approximately

\$150,000, \$120,000 and \$130,000 respectively.

² Page 21 of the 2007 Capital Expenditure and Carryover Report

Newfoundland & Labrador Hydro December 31, 2008

Quarterly Report Page 19

NEWFOUNDLAND AND LABRADOR HYDRO
2008 VARIANCE EXPLANATIONS
TRANSMISSION AND RURAL OPERATIONS
FOR THE QUARTER ENDING DECEMBER 31, 2008
(Greater than \$100,000)

11. Replace Poles – South Brook and Bay d'Espoir

This is a pooled project for South Brook and Bay d'Espoir. The cost of the pole replacement for South Brook was underestimated by \$47,000 and the one for Bay d'Espoir was underestimated by \$66,000. This was due to contract bids that came in less than expected as well as savings in material costs. This resulted in less overheads and no contingency funds being required.

12. Replace Diesel Units – Norman Bay, Cartwright and Black Tickle

This is a pooled multiyear project. The bulk of the variance relates to Black Tickle, where \$293,000 was budgeted to be spent for the purchase and delivery of the diesel unit. Due to other work commitments, this did not occur. This project is expected to be completed on time and within budget in 2009.

13. Replace Switchgear - Cartwright

This is a multiyear project to be completed in 2009. Initially the tendering and delivery of the switchgear was to be completed in 2008 however, scheduling issues with the Makkovik and Rigolet automation project, resulted in the delay of this work until 2009. This project is expected to be completed on time and within budget.

14. Replace Mufflers – L'Anse au Loup and St. Anthony

For the St. Anthony project, labour and travel costs were reduced as a result of using local area labour. The work in L'Anse au Loup had to be completed faster than planned due to low water levels in the Hydro Québec Lac Robertson system that required diesel system availability be restored as quickly as possible. The cost savings for both projects resulted in less overheads and as well as contingency amounts not being utilized.

PUB-NLH-227, Attachment 1
Page 121 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO

2008 VARIANCE EXPLANATIONS

TRANSMISSION AND RURAL OPERATIONS

FOR THE QUARTER ENDING DECEMBER 31, 2008 (Greater than \$100,000)

15. Construct New Office/Warehouse/Line Depot Facilities – Happy Valley

This project was reforecast as part of the 2009 Capital Budget application³. There was \$358,000 to be spent in 2008 which included the land purchase and project design. The project design will now be completed early in 2009. The design process was extended due to a new requirement to construct the building to LEED (Leadership in Energy and Environmental Design) standard, preventing construction from beginning in 2008.

The project is expected to be completed on time and within budget.

16. <u>Upgrade Ventilation System - Makkovik</u>

This project has been cancelled. There is an overall concern with the age and condition of many of Hydro's Diesel Plants. Therefore, before addressing any specific issues, it was decided to complete a comprehensive condition assessment of all the plants in question in order to prioritize recommendations for improvements.

17. Construct Diesel Plant Extension – William's Harbour

The bid prices obtained for this project were significantly over budget therefore it was decided to do some design modifications and re-tender the work early in 2009. This project will be completed late in 2009 and there is no change in the overall budget.

18. Replace Off Road Track Vehicles – Bishop's Falls and Whitbourne

The original specifications for these units included pricing for backhoes or booms that were not purchased. A thorough needs analysis permitted specifying vehicle with less auxiliary equipment than originally envisaged. There were also cost savings by purchasing two units with the same specifications and contingency amounts were not utilized.

³ Page B40 of Hydro's 2009 Capital Budget Application

Newfoundland & Labrador Hydro December 31, 2008

Quarterly Report Page 21

PUB-NLH-227, Attachment 1
Page 122 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2008 VARIANCE EXPLANATIONS
TRANSMISSION AND RURAL OPERATIONS

FOR THE QUARTER ENDING DECEMBER 31, 2008 (Greater than \$100,000)

19. Replace Light Duty Mobile Equipment Less than \$50,000

The reduction in cost for this project is mainly due to not purchasing several pieces of equipment that were included in this budget. A review of the condition of several pieces of equipment indicated that their useful operating lives could be extended and that replacement of two boom trailers, three boat trailers and a back hoe attachment were not required at this time. These cost reductions resulted in contingency not being utilized.

20. <u>Installation of Fall Arrest Equipment – Various Locations</u>

The cost of this project was less than budgeted for several reasons. Firstly, horizontal lifelines were purchased but not installed at Cat Arm, Hinds Lake and Paradise River. These will be installed using funds from the 2009 fall arrest project. Secondly, the initial plan was to install railings on the perimeter of the roof at the Holyrood Thermal Generating Plant however it was determined that railings were only required near the emergency ladders, resulting in cost savings. Thirdly, the installation of fall arrest equipment at the Nain Diesel Plant was delayed due to the fire.

21. Replace Boom 6069 on Track Vehicle – Stephenville

This project will be carried over into 2009 and was delayed due to the fact that a boom is to be installed on an existing unit. This unit had to be reconfigured and the resulting boom specially designed to fit the track unit therefore the order could not be completed and delivered before the end of the year. This project is expected to be completed within budget.

NEWFOUNDLAND AND LABRADOR HYDRO

2008 VARIANCE EXPLANATIONS GENERAL PROPERTIES

FOR THE QUARTER ENDING DECEMBER 31, 2008 (Greater than \$100,000)

22. Application Enhancements – Energy Systems Optimum Powerflow

The vendor, Open Systems International, has been unable to supply all the required functionality in accordance with the originally planned timeline. This functionality was received early in 2009 and testing will take place up to the end of March. This project is expected to be completed within budget.

23. Customer Service Application – Hydro Place

This is a multiyear project to be completed by the end of 2009. There was very little money spent in 2008 due to an unsuccessful tendering process. The project was tendered twice, first with no responses and then the second resulting in one noncompliant bid. Hydro is currently working with vendors to arrive a solution that meets the requirements. This project is expected to be completed on schedule and within budget.

24. Replace Dial Backup System – Various Sites

No bids were received when the project was initially tendered therefore the project had to be retendered. This resulted in the project completion being delayed until the end of March 2009. This project is expected to cost \$178,000 rather than \$201,000 budgeted due to lower than expected contract costs.

25. Replace Vehicles – Hydro System – 2007

The remainder of this project was carried over from 2007 for the supply and installation of two new booms on existing chassis. The variance results from competitive bidding and not utilizing all of the contingency from this project.

26. Replace Vehicles – Hydro System - 2008

This project is being carried over into 2009 due to change in policy whereby custom built vehicles costing more than \$200,000 will be inspected by Hydro staff on site before shipping, since it is time consuming and potentially costly to correct deficiencies after delivery. This situation pertains to two boom trucks budgeted in 2008. The project is still expected to be completed within budget.

NEWFOUNDLAND AND LABRADOR HYDRO
2008 VARIANCE EXPLANATIONS
GENERAL PROPERTIES

FOR THE QUARTER ENDING DECEMBER 31, 2008 (Greater than \$100,000)

27. <u>Upgrade System Security – Various Sites</u>

This project will be carried over into 2009 due to several factors. Because the Upgrade System Security 2007 was carried over into 2008, this increased the scope of work required for 2008. Also, the design and tendering stages of the new system-wide video surveillance program was extensive, largely due to the fact that significant research had to be done before the work could be tendered. This will be an interconnected system, using technologies new to Hydro. This project is expected to be completed within budget by the end of 2009.

28. Install Computer Room Inergen Fire Protection System – Hydro Place

This project was cancelled following a detailed review of the computer room and Hydro Place fire protection systems. A concern was identified that the replacement of the computer room existing sprinkler fire protection and replacement by a gas fire suppression system could compromise the overall building fire protection.

29. Safety Hazards Removal – Various Sites

The purpose of this project was to ensure that adequate capital funding was available to quickly address capital-related safety issues as they were identified. It was not based on specifically identified projects. The amount spent reflects the safety hazards identified and addressed using this funding.

30. Nain Diesel Plant Rehabilitation

The allocation for unforeseen events was used in order to address a fire that occurred at the Nain Diesel Plant in September 2008. In 2009, Hydro will be applying for approval of this project separately and will not continue to use this allocation for this project.

NEWFOUNDLAND AND LABRADOR HYDRO
2008 VARIANCE EXPLANATIONS
OTHER APPROVED FUNDS

FOR THE QUARTER ENDING DECEMBER 31, 2008 (Greater than \$100,000)

31. Grounding Upgrades at Bottom Brook, Hinds Lake and Oxen Pond

Hydro obtained approval for Grounding Upgrades – Various Sites in Board Order No. P.U. 36 (2008) for a multi-year project to modify existing ground grids and install or modify gradient control mats. Subsequent to filing the 2009 Capital Budget Application, it was determined that the identified hazards at the sites listed above were serious enough that Hydro could not wait until 2009 to correct these hazards. The allocation for unforeseen events was used in last quarter of 2008 in order to rectify the identified hazards.

32. Condition Assessment and Life Extension Study – Holyrood

Hydro applied for approximately \$4.0 million to do a condition assessment and life extension study for the Holyrood Thermal Generating Station, however, only \$420,000 was approved by Board Order No. P.U. 23 (2008). This was an approval to begin the study involving the issuance of a request for proposals, evaluation of the proposals and the preparation of a detailed scope of work. Hydro feels that this approach is not a good use of funds and proposed an alternate methodology during a meeting with Board Staff on 2009-01-28, which was accepted in principal. Hydro is in the process of preparing a revised proposal and expects to submit this document in March.

33. <u>Install Neutral Grounding Resistors – Come by Chance</u>

This project is fully contributed by Hydro's customer North Atlantic Refining Limited (NARL) and it was initially going to be completed by the end of 2008 however it will now be completed in the spring of 2009. The project is delayed because NARL was late in approving the project that in turn delayed the design work and the delivery of the resistors.

PUB-NLH-227, Attachment 1
Page 126 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2008 VARIANCE EXPLANATIONS
OTHER APPROVED FUNDS
FOR THE QUARTER ENDING DECEMBER 31, 2008
(Greater than \$100,000)

34. Relocate Transmission Line TL227 and TL262 – Daniels Harbour

This project was approved late November by Board Order No. P.U. 30(2008). Even though Hydro intended to complete this work by the end of 2008, adverse weather conditions and the inability of the contractor to provide enough adequately trained individuals to complete this work in the required time frame resulted in this projected being carried over into 2009. This project is scheduled to be completed by the end of March 2009.

35. <u>Coastal Labrador Alternate Energy Study</u>

This project was announced by the Provincial Government in the 2008 Provincial Budget however the funds were not received by Hydro until October 2008. It will therefore be carried over into 2009. Hydro is in the process of preparing the project specifications and will file an application for approval in the near future.

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL BUDGET VERSUS EXPENDITURES 1999 – 2008 AS AT DECEMBER 31 (\$000)

		Actual		Percentage
Year	Budget	Expenditures	Variance	Variance
1999	38,142	29,684	8,458	22.2%
2000	43,824	38,569	5,255	12.0%
2001	55,897	47,501	8,396	15.0%
2002	44,660	40,217	4,443	9.9%
2003	36,122	32,506	3,616	10.0%
2004	31,435	27,984	3,451	11.0%
2005	47,760	33,952	13,808	28.9%
2006	49,024	41,217	7,807	15.9%
2007	43,304	35,669	7,635	17.6%
2008	53,579	46,246	7,333	13.7%

These variances include amounts related to the carryover of projects from year to year. Variances from budget for completed projects are 5% and 1% for 2007 and 2008 respectively, well within acceptable ranges. Staff retirements, resignations, transfers and reassignments, primarily as a result of the reorganization of Hydro's engineering function, were the cause of the significant 2005 carryover amounts. While Hydro has made improvements since then, and continues to make efforts to further improve the completion of projects on schedule, staffing challenges continue.

Project delivery has been improving since 2005. The apparent setback in 2007 can primarily be attributed to a single project, the purchase of a transformer to be used as a spare at Upper Salmon, Bay d'Espoir or Granite Canal. When originally proposed, the delivery cycle for such a transformer was ten months, however, when the project was initiated the international demand for transformers had increased substantially, resulting in a doubling of the delivery cycle, causing the carry over of this project to 2009. This single project accounts for approximately 3.0% of the 17.6% carry over for 2007 and 3.3% of the 13.7% of the carry over from 2008 to 2009.

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL BUDGET VERSUS EXPENDITURES 1999 – 2008 AS AT DECEMBER 31 (\$000)

The 13.7% actual carryover can be attributed principally to two factors:

- 1. The construction of new office/warehouse/line depot facilities at Happy Valley Goose Bay was delayed, as reported in Hydro's 2009 Capital Budget Application⁴. The approved proposal had construction beginning in 2008, with an expenditure of \$1.25 million in that year. The September 2007 requirement that this building be constructed to Leadership in Energy and Environmental Design (LEED) standards which was not included in the proposal, delayed the project schedule while the building was redesigned from an architectural and engineering perspective. The delay of this project accounts for approximately 2.2% of the 13.7% carry over for 2008. In addition costs related to this project increased substantially, as reported in the 2009 Capital Budget Application.
- 2. In the fall of 2008 Hydro suffered two major losses, a fire at the Nain diesel plant and a failure of the dock at the Holyrood Thermal Generating Station. These emergencies required the diversion of staff from scheduled activities. The Nain fire required the reassignment of staff from Engineering Services and Regulated Operations to construct a temporary diesel pant and begin repairs to the existing plant. The Holyrood dock repairs required staff from Engineering Services to design and contract the implementation of emergency component replacements, to ensure that fuel was able to be received at Holyrood for the winter season. Both events caused delays to several capital projects.

⁴ Pages B-40 and B-41 of Hydro's 2009 Capital Budget Application

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL BUDGET VERSUS EXPENDITURES 1999 – 2008 AS AT DECEMBER 31 (\$000)

It is anticipated that some carryovers of capital projects will occur in most years as there are frequently unavoidable reasons for delay in project completion. Some examples of such delays which occurred in 2008 are:

- Unforeseeable events interfering with scheduled activities, such as occurred following the Nain diesel plant
 fire and the failure at the Holyrood dock. This contributed to the carry over of capital projects such as
 Replace Fire Alarm System at Hopedale and Paradise River and Install Meteorological Stations Various Sites.
- 2. Changes in market conditions between the time when a project is proposed, approved and implemented, such as happened with the delivery of the spare transformer for Upper Salmon, Bay d'Espoir and Granite Canal. Changes in market conditions can also significantly effect project costs as the escalating cost of commodities result in large price changes in goods (such as copper wire) and services. This applies as well to heavy equipment delivery when a supplier's manufacturing plant may have had capacity available at time of proposal but at time of tender they may be booked which can affect price and in particular delivery schedule.
- 3. Difficulties with new equipment which must be resolved with the manufacturer. Hydro installed approximately 6,500 meters as part of the Automatic Meter Reading Various Systems project in 2008, of which about 500 do not perform as they should, requiring collaboration between the meter supplier and the AMR vendor to sort out a software issue and preventing completion of the project. These meters contain an internal programming error, which must be remedied by the manufacturer, tested and reinstalled in the 500 meters, following which, the meters must be installed in the field, adding delays and some rework

Such events as these and others are outside the control of project managers and will result in the carry over of some projects in most years. Hydro continues to improve its project management practices and expects to continue to reduce the number of projects carried over. The project management practices, as reported in the 2007 Capital Expenditures and Carryover year-end report, include:

- more two-year schedules to accommodate the construction seasons rather than the calendar year.
- more two-year schedules to allow adequate lead time on materials, such as that now required for the purchase of power transformers,

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL BUDGET VERSUS EXPENDITURES 1999 – 2008 AS AT DECEMBER 31 (\$000)

- newly hired engineers obtaining the experience and knowledge required to be able to more independently complete assignments; and
- Capital Budget preparation now including review of staff availability.

Project estimators and managers have been challenged in recent years by the rapidly changing costs of commodities, equipment and services. Staff are preparing project proposal estimates to the best of their abilities and the price fluctuations of recent years are beginning to abate somewhat, although there has not yet been a return to the relative stability of past years. These fluctuations have been manifested in a significant reduction in the number of projects completed within +/- 10% of the original cost estimate. We have been fortunate in that the number of projects completed over budget has been essentially equally compensated for by the number of projects completed under budget, conveniently cancelling each other, but this cannot be relied upon to happen consistently each year. It should be expected, that as has been experienced by other industries during these volatile times, Hydro's project completion costs for the next several years will probably vary from original estimated costs by amounts greater than in the past.

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2008 CARRYOVER REPORT

Project Name ¹	PUB Approved Budget 2008	Revised Budget 2008	Total Actual Expend. 2008	Carryover Amount	Variance Explanation Ref. No.
Replace Governor Controls Unit 2 - Cat Arm	975	1,238	1,096	142	3
Replace 40 kW Diesel Generator - Burnt Dam	157	157	148	9	
Install Meteorological Stations - Various Locations	222	252	225	27	
Fire Protection Upgrades - Holyrood	1,219	1,219	1,085	134	4
Replace Unit 2 High Pressure Heater - Holyrood	20	20	62	(42)	
Environmental Effects Monitoring Study of Waste Water - Holyrood	73	73	31	42	
Install Safety Egress Lighting - Holyrood	97	112	20	92	
Auto Synchronizing Units 1 and 2 - Holyrood	93	93	46	47	
Construct Beta Attenuation Meter (BAM) Unit Enclosure - Holyrood	60	60	0	60	
Tools and Equipment Less than \$50,000 - Generation ²	240	24	0	24	
Purchase Spare Transformer - Upper Salmon	2,198	2,198	416	1,782	8
Replace Disconnect Switches - Cow Head and Daniel's Harbour	368	368	284	84	
Upgrade Station Services - Hardwoods	59	59	1	58	
Replace Insulators TL232 and TL253 ³	848	561	571	(10)	
Upgrade Corner Brook Frequency Converter - 2008	495	801	943	(142)	9
Reconfigure Feeders - Happy Valley	151	151	76	75	
Recloser Assessment - Happy Valley	47	47	0	47	
Replace Diesel Units - Norman Bay, Cartwright and Black Tickle	335	335	8	327	12
Diesel Plant Automation - Makkovik and Rigolet	516	516	589	(73)	
Increase Generation Capacity - Charlottetown	18	18	6	12	
Replace Switchgear - Cartwright	383	383	117	266	13

¹ Projects shaded in yellow are multi-year projects scheduled to be completed in future years.

² Comprised of a number of items of which a portion is being carried forward.

 $^{^{^3}}$ Replace Insulators TL253 is complete. Replace Insulators TL232 is a multiyear project.

NEWFOUNDLAND AND LABRADOR HYDRO 2008 CARRYOVER REPORT

FOR THE QUARTER ENDING DECEMBER 31, 2008

(\$000)

	PUB Approved	Revised	Total Actual	Commission	Variance
Project Name ¹	Budget 2008	Budget 2008	Expend. 2008	Carryover Amount	Explanation Ref. No.
Construct New Office/Warehouse/Line Depot Facilities - Happy Valley	1,248	358	94	264	15
Construct Diesel Plant Extension - William's Harbour	177	177	11	166	17
Replace Fire Alarm System - Hopedale and Paradise River	168	168	139	29	
Install Automatic Meter Reading 2007 - Various Locations	934	1,075	967	108	
Install Automatic Meter Reading 2008 - Various Locations	567	606	493	113	
Replace Boom 6069 on Track Vehicle - Stephenville	236	236	0	236	21
Application Enhancements - Energy Systems Water Management	651	651	625	26	
Application Enhancements - Energy Systems Optimum Power flow	216	216	115	101	22
Customer Service Application - Hydro Place	768	768	40	728	23
Replace Dial Backup System - Various Locations	201	201	98	103	24
Install Recloser Remote Control - Change Islands	194	194	150	44	
Replace Vehicles - Hydro System - 2008	1,826	1,826	1,191	635	26
Upgrade System Security - Various Locations	906	906	145	761	27
Purchase Spare Transformer - Hydro Place	87	87	51	36	
Purchase and Replace Admin Office Equipment less than \$50,000 ²	137	50	0	50	
Replace Humidifiers in Air Handling Units - Hydro Place	58	58	0	58	
Replace Air Conditioning Units - Hydro Place	56	56	0	56	
Replace Air Compressors No. 4 and 5 - Holyrood	256	256	215	41	

¹ Projects shaded in yellow are multi-year projects scheduled to be completed in future years.

² Comprised of a number of items of which a portion is being carried forward.

NEWFOUNDLAND AND LABRADOR HYDRO 2008 CARRYOVER REPORT

FOR THE QUARTER ENDING DECEMBER 31, 2008

(\$000)

1	PUB Approved Budget	Revised Budget	Total Actual Expend.	Carryover	Variance Explanation
Project Name ¹	2008	2008	2008	Amount	Ref. No.
Nain Diesel Plant Rehabilitation	0	0	304	0	30
Public Address System - Holyrood	96	96	3	93	
Install Neutral Grounding Resistors - Come by Chance	227	227	0	227	32
Cost Recovery - North Atlantic Refining Limited	(227)	(227)	0	(227)	
Relocate Transmisson Line TL227 and TL262 - Daniels Harbour	350	350	152	198	
Cost Recovery - Department Works and Transportation	(350)	(350)	(152)	(198)	
Coastal Labrador Alternative Energy Study	250	250	29	221	33
Cost Recovery - Government Of Newfoundland and Labrador	(250)	(250)	(29)	(221)	
Total Carryover Amount	21,372	20,686	10,365	6,609	

¹ Projects shaded in yellow are multi-year projects scheduled to be completed in future years.



Hydro Place. 500 Columbus Drive. P.O. Box 12400. St. John's. NL Canada A1B 4K7 t. 709.737.1400 f. 709.737.1800 www.nlh.nl.ca

March 3, 2010

The Board of Commissioners of Public Utilities Prince Charles Building 120 Torbay Road, P.O. Box 21040 St. John's, NL A1A 5B2

ATTENTION: Ms. Cheryl Blundon

Director of Corporate Services & Board Secretary

Dear Ms. Blundon:

Re: 2009 Capital Expenditures and Carryover – Year End

Pursuant to Board Order No. P.U. 30 (2007), p. 26, item 6, enclosed please find the original and eight copies of Newfoundland and Labrador Hydro's (Hydro) report on 2009 Capital Expenditures and Carryover for the year ended December 31, 2009.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

Geoffrey P. Young

Senior Legal Counse

GPY/mmcd Encls.

A REPORT TO THE BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

CAPITAL EXPENDITURES AND CARRYOVER REPORT

For Year Ending December 31, 2009

March 2010



NEWFOUNDLAND AND LABRADOR HYDRO

CAPITAL EXPENDITURES AND CARRYOVER REPORT

For Quarter Ending December 31, 2009

TABLE OF CONTENTS

	Page
CAPITAL EXPENDITURES OVERVIEW	1
CAPITAL EXPENDITURES SUMMARY BY CATEGORY: Generation	2
Transmission and Rural Operations	2
General Properties	3
Other Approved Funds	3
CAPITAL EXPENDITURES DETAIL: Generation	4
Transmission and Rural Operations	6
General Properties	12
Other Approved Funds	16
VARIANCE EXPLANATIONS (GREATER THAN \$100,000): Generation	18
Transmission and Rural Operations	19
General Properties	25
Other Approved Funds	27
CAPITAL BUDGET VERSUS EXPENDITURES 2000 - 2009	30
CARRYOVER REPORT	33

NEWFOUNDLAND & LABRADOR HYDRO 2009 CAPITAL EXPENDITURES OVERVIEW

	PUB Approved Budget 2009	4th Quarter Actuals 2009	Total Actual Expend. 2009	Variance From Budget 2009
GENERATION	8,287	9,933	7,909	(378)
TRANSMISSION	11,154	5,300	10,732	(422)
RURAL SYSTEMS	20,038	10,364	19,634	(404)
GENERAL PROPERTIES	13,980	4,546	11,420	(2,560)
ALLOWANCE FOR UNFORESEEN EVENTS	1,000	109	672	(328)
PROJECTS APPROVED BY PU BOARD	6,915	1,749	3,618	(3,297)
NEW PROJECTS APPROVED FOR LESS THAN \$50,000	171	129	167	(4)
TOTAL CAPITAL BUDGET	61,544	32,130	54,152	(7,392)
Approved Board Order No. P.U. 36 (2008) 2009 Capital Budget	47,856			
Carryover Projects 2008 to 2009	6,609			
New Project Approved by Board Order No. P.U. 4 (2009)	351			
New Project Approved by Board Order No. P.U. 8 (2009)	1,093			
New Project Approved by Board Order No. P.U. 10 (2009)	704			
New Project Approved by Board Order No. P.U. 16 (2009)	0			
New Project Approved by Board Order No. P.U. 23 (2009)	161			
New Project Approved by Board Order No. P.U. 28 (2009)	1,210			
New Project Approved by Board Order No. P.U. 31 (2009)	2,416			
New Project Approved by Board Order No. P.U. 33 (2009)	291			
New Project Approved by Board Order No. P.U. 34 (2009)	492			
New Project Approved by Board Order No. P.U. 40 (2009)	197			
2009 New Projects Approved For Less than \$50,000	164			
TOTAL APPROVED CAPITAL BUDGET	61,544			

NEWFOUNDLAND & LABRADOR HYDRO 2009 CAPITAL EXPENDITURES SUMMARY BY CATEGORY

	PUB	4th	Total	Variance
	Approved	Quarter	Actual	From
	Budget	Actuals	Expend.	Budget
	2009	2009	2009	2009
GENERATION				
HYDRO PLANTS	1,712	789	1,847	135
THERMAL PLANT	5,862	3,072	5,264	(598)
GAS TURBINES	712	6,072	798	86
TOTAL GENERATION	8,287	9,933	7,909	(378)
TRANSMISSION				
TERMINAL STATIONS	5,291	2,049	4,863	(428)
TRANSMISSION	5,832	3,251	5,854	22
TOOLS AND EQUIPMENT	31	0	15	(16)
TOTAL TRANSMISSION	11,154	5,300	10,732	(422)
RURAL SYSTEMS				
CONSTRUCTION PROJECTS	11,982	6,176	13,786	1,804
GENERAL	6,752	3,982	5,096	(1,656)
METERING	745	52	229	(516)
TOOLS AND EQUIPMENT	560	154	523	(37)
TOTAL RURAL SYSTEMS	20,038	10,364	19,634	(404)

NEWFOUNDLAND & LABRADOR HYDRO 2009 CAPITAL EXPENDITURES SUMMARY BY CATEGORY FOR THE QUARTER ENDING DECEMBER 31, 2009 (\$000)

	PUB Approved Budget 2009	4th Quarter Actuals 2009	Total Actual Expend. 2009	Variance From Budget 2009
GENERAL PROPERTIES				
INFORMATION SYSTEMS	1,760	363	1,786	26
TELECONTROL	4,683	1,173	2,650	(2,033)
TRANSPORTATION	4,110	1,544	3,620	(490)
ADMINISTRATIVE	3,426	1,466	3,364	(62)
TOTAL GENERAL PROPERTIES	13,980	4,546	11,420	(2,560)
ALLOWANCE FOR UNFORESEEN EVENTS	1,000	109	672	(328)
PROJECTS APPROVED BY PU BOARD	6,915	1,749	3,618	(3,297)
PROJECTS APPROVED FOR LESS THAN \$50,000	171	129	167	(4)
TOTAL CAPITAL BUDGET	61,544	32,130	54,152	(7,392)

NEWFOUNDLAND & LABRADOR HYDRO 2009 CAPITAL EXPENDITURES GENERATION

HYDRAULIC PLANTS	PUB Approved Budget 2009	4th Quarter Actuals 2009	Total Actual Expend. 2009	Variance From Budget 2009	Percentage Variance From Budget 2009	Variance Explanation Ref. No.
Replace Governor Controls Unit 2 - Cat Arm	216	191	226	10	5%	
Replace 40 kW Diesel Generator at Spillway - Burnt Dam	112	(6)	138	26	23%	
Install Meteorological Stations 2008 - Various Locations	27	0	48	21	78%	
Replace Cooling Water Systems on Units 3 and 4 - Bay d'Espoir	287	12	192	(95)	-33%	
Install Meteorological Stations 2009 - Various Locations	253	144	268	16	6%	
Replace 50kW Diesel Generator - Bay d'Espoir	36	7	7	(29)	-81%	
Upgrade Intake Gate Controls - Hinds Lake	263	224	312	49	19%	
Replace Generator Oil Level System on Units 1 and 2 - Cat Arm	68	113	134	66	98%	
Purchase Spare Stator Windings Units 1 to 4 - Bay d'Espoir	37	5	131	95	259%	
Replace Service Water Piping Unit 7 - Bay d'Espoir	144	31	138	(6)	-4%	
Purchase Tools and Equipment Less Than \$50,000	270	68	253	(17)	-6%	
TOTAL HYDRAULIC PLANTS	1,712	789	1,847	135	8%	

NEWFOUNDLAND & LABRADOR HYDRO

2009 CAPITAL EXPENDITURES GENERATION

	PUB Approved Budget 2009	4th Quarter Actuals 2009	Total Actual Expend. 2009	Variance From Budget 2009	Percentage Variance From Budget 2009	Variance Explanation Ref. No.
THERMAL PLANT						_
Fire Protection Upgrades - Holyrood	134	(54)	113	(21)	-16%	
Replace Unit 2 High Pressure Heater - Holyrood	877	203	946	69	8%	
Environmental Effects Monitoring Study of Waste Water	129	45	71	(58)	-45%	
Install Safety Egress Lighting	92	166	184	92	100%	
Construct Beta Attenuation Meter (BAM) Unit Enclosure	60	0	63	3	5%	
Automatic Synchroniziation Units 1 and 2	47	107	140	93	198%	
Replace No.'s 4 and 5 Air Compressors - Holyrood	41	0	47	6	15%	
Install Motorized Stack Winches - Holyrood	174	3	49	(125)	-72%	1
Replace Unit 2 Air Preheater Cold End - Holyrood	320	192	314	(6)	-2%	
Replace Unit 1 Hydrogen Emergency Vent Valves - Holyrood	214	3	213	(1)	0%	
Install Unit 1 CR Condensate Drains and HP Heater Trip Level - Holyrood	192	207	284	92	48%	
Replace Unit 3 Steam Seal Regulator - Holyrood	475	483	518	43	9%	
Install Marine Terminal Capstans Lifting Frames - Holyrood	93	79	122	29	31%	
Refurbish Fuel Storage Facility - Holyrood	2,867	1,556	2,086	(781)	-27%	2
Purchase Boom Style Hydraulic Lift - Holyrood	82	55	55	(27)	-33%	
Purchase Tools and Equipment Less Than \$50,000	65	27	59	(6)	-10%	
TOTAL THERMAL PLANTS	5,862	3,072	5,264	(598)	-10%	
GAS TURBINES						
Upgrade Gas Turbine Plant Life Extension - Hardwoods	450	381	540	90	20%	
Replace Automatic Voltage Regulator on Gas Turbine - Stephenville	262	209	258	(4)	-2%	
TOTAL GAS TURBINE PLANTS	712	6,072	798	86	12%	
TOTAL GENERATION	8,287	9,933	7,909	(378)	-5%	

NEWFOUNDLAND & LABRADOR HYDRO 2009 CAPITAL EXPENDITURES TRANSMISSION AND RURAL OPERATIONS FOR THE QUARTER ENDING DECEMBER 31, 2009 (\$000)

(1)						
	PUB Approved Budget 2009	4th Quarter Actuals 2009	Total Actual Expend. 2009	Variance From Budget 2009	Percentage Variance From Budget 2009	Variance Explanation Ref. No.
TERMINAL STATIONS						
Purchase Spare Transformer - Upper Salmon	1,782	662	1,702	(80)	-4%	
Replace Disconnect Switches - Cow Head and Daniel's Harbour	84	41	277	193	230%	3
Upgrade Station Services - Hardwoods	58	30	89	31	53%	
Replace Insulators - Various Terminal Stations	391	219	427	36	9%	
Upgrade Circuit Breakers - Various Terminal Stations	422	87	365	(57)	-14%	
Replace Air Compressors - Sunny Side	96	99	108	12	13%	
Install Digital Fault Recorders - Oxen Pond, Massey Drive and St. Anthony	462	107	331	(131)	-28%	4
Replace 230kV Breaker Controls - Oxen Pond, Bay d'Espoir	100	25	60	(40)	-40%	
Upgrade Power Transformers - Various Terminal Stations	654	291	590	(64)	-10%	
Replace 69kV Breaker L51T2 - Howley	199	211	251	53	26%	
Replace Drainage System - Western Avalon	84	10	67	(17)	-20%	
Perform Grounding Upgrades - Various Terminal Stations	252	129	154	(98)	-39%	
Upgrade Great Northern Peninsula Protection - Various Locations	101	53	68	(33)	-32%	
Install 138kV Capacitive Voltage Transformer - St. Anthony Airport	71	4	42	(29)	-40%	
Install 69kV Capacitive Voltage Transformer - St. Anthony Diesel Plant	67	13	23	(44)	-66%	
New 25kV Terminal Station - Labrador City	283	79	101	(182)	-64%	5
Replace Instrument Transformers - Various Terminal Stations	107	7	128	21	20%	
Replace Surge Arrestors - Various Terminal Stations	81	(18)	80	(1)	-1%	
TOTAL TERMINAL STATIONS	5,291	2,049	4,863	(428)	-8%	

NEWFOUNDLAND & LABRADOR HYDRO 2009 CAPITAL EXPENDITURES TRANSMISSION AND RURAL OPERATIONS FOR THE QUARTER ENDING DECEMBER 31, 2009 (\$000)

	PUB Approved Budget 2009	4th Quarter Actuals 2009	Total Actual Expend. 2009	Variance From Budget 2009	Percentage Variance From Budget 2009	Variance Explanation Ref. No.
TRANSMISSION						
Replace Insulators on 230kV Line TL-253 - Stony Brook, Buchans	960	866	1,017	57	6%	
Upgrade Corner Brook Frequency Converter - 2008	1,010	701	1,179	169	17%	6
Perform Wood Pole Line Management Program - Various Locations	2,256	1,211	2,613	357	16%	7
Construct Transmission Line Equip Off-Loading Areas - Various Locations	498	299	324	(174)	-35%	8
Construct Transmission Storage Ramps - Bay d'Espoir	75	45	45	(30)	-40%	
Upgrade Transmission Line TL-212 - Sunnyside to Linton Lake	968	100	609	(359)	-37%	9
Install Remote Ice Growth Detector Beams - Various Locations	65	29	67	2	4%	
TOTAL TRANSMISSION	5,832	3,251	5,854	22	0%	
TOOLS AND EQUIPMENT						
Purchase and Replace Tools and Equipment Less than \$50,000	31	0	15	(16)	-51%	
TOTAL TOOLS AND EQUIPMENT	31	0	15	(16)	-51%	

	PUB Approved Budget 2009	4th Quarter Actuals 2009	Total Actual Expend. 2009	Variance From Budget 2009	Percentage Variance From Budget 2009	Variance Explanation Ref. No.
DISTRIBUTION						
Provide Service Extensions - All Service Areas	2,439	1,988	4,011	1,572	64%	10
Upgrade Distribution Systems - All Service Areas	2,526	1,139	2,660	134	5%	
Replace Poles - Jackson's Arm and Hampton	697	291	660	(37)	-5%	
Replace Insulators - Jacksons Arm, Hampden and Little Bay	874	206	712	(162)	-19%	11
Reconfigure Feeders - Happy Valley	75	0	74	(1)	-1%	
Recloser Assessment - Happy Valley	47	23	27	(20)	-43%	
Replace Recloser Control Panels - Various Locations	132	33	107	(25)	-19%	
Replace Submarine Cable Terminator Kit - Change Islands/Fogo Island	96	2	81	(15)	-16%	
Purchase and Install Voltage Regulator Bank - English Harbour West	123	21	102	(21)	-17%	
Upgrade L7 Distribution System - St. Anthony	689	221	504	(185)	-27%	12
Replace Conductor on L2 - Rocky Harbour	325	(130)	348	24	7%	
Replace Line L36 - Wabush	498	222	466	(32)	-6%	
Upgrade Voltage Conversion Phase 1 - Labrador City	189	121	191	2	1%	
Purchase and Install Electronic Recloser - Cartwright	96	59	162	66	69%	
TOTAL DISTRIBUTION	8,807	4,196	10,105	1,298	15%	

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2009	2009	2009	2009	2009	Ref. No.
GENERATION						
Replace Diesel Units - Norman Bay, Cartwright and Black Tickle	1,265	455	1,003	(262)	-21%	13
Replace Diesel Units - Norman Bay, Postville and Paradise River	170	220	469	299	176%	14
Diesel Plant Automation - Makkovik and Rigolet	306	157	627	321	105%	15
Increase Generation Capacity - Charlottetown (Project Cancelled)	589	0	(6)	(595)	-101%	16
Replace Switchgear - Cartwright	435	130	450	15	3%	
Replace Speed Increaser - Roddickton	125	132	141	16	13%	
Install Furnace Fuel Storage Tank - Williams Harbour (Project Cancelled)	59	0	0	(59)	-100%	
Increase Generation - L'Anse au Loup	23	775	783	760	3319%	17
Upgrade Fuel Storage - Cartwright	139	39	142	3	2%	
Install Meter Station for Fuel Reconcilation - Hawke's Bay	64	72	72	8	13%	
TOTAL GENERATION	3,175	1,980	3,681	506	16%	
TOTAL CONSTRUCTION PROJECTS	11,982	6,176	13,786	1,804	15%	

· · · · ·	PUB Approved Budget 2009	4th Quarter Actuals 2009	Total Actual Expend. 2009	Variance From Budget 2009	Percentage Variance From Budget 2009	Variance Explanation Ref. No.
GENERAL						
Construct New Office/Warehouse/Line Depot Facilities - Happy Valley	3,224	2,392	2,696	(528)	-16%	18
Construct Diesel Plant Extension - William's Harbour (Project Cancelled)	166	0	(11)	(177)	-107%	19
Replace Fire Alarm System - Hopedale and Paradise River	29	0	11	(18)	-62%	
Install Fall Arrest Equipment - Various Locations	322	132	303	(19)	-6%	
Legal Survey of Primary Distribution Line Right of Ways - Various Locations	56	(14)	55	(1)	-2%	
Install Air Conditioning at Training Centre - Bay d'Espoir	34	22	28	(6)	-19%	
Replace Accom, Septic Sys and Upgrade Plant Communications Sys - Cat Arm	1,254	683	733	(521)	-42%	20
Upgrade CEMS Room Ventilation - Holyrood	39	70	72	33	83%	
Build ATV/snowmobile Storage - Whitbourne	86	70	95	9	10%	
Replace Dock Lighting - Holyrood	33	26	26	(7)	-22%	
Replace Explosive Storage Magazines - Various Locations	293	30	143	(150)	-51%	21
Install Pole Storage Ramps - Various Locations	77	(27)	36	(41)	-53%	
Install Transformer Storage Ramps - Labrador	121	69	96	(25)	-20%	
Upgrade Ventilation System - Little Bay Islands Diesel Plant	186	153	196	10	5%	
Build New Maintenance Shop - St. Anthony	429	263	293	(136)	-32%	22
Install Waste Oil Storage Tanks - Mary's Harbour	84	21	70	(14)	-17%	
Install Water and Sewer System - Paradise River (Project Cancelled)	77	(4)	0	(77)	-100%	
Construct Sewage Disposal Field - Makkovik	50	44	45	(5)	-9%	
Install Storage Ramp - Whitbourne	41	52	55	14	33%	
Pave Parking Lots and Roadways - Bishops Falls	150	0	154	4	3%	
TOTAL GENERAL	6,752	3,982	5,096	(1,656)	-25%	

	PUB Approved Budget 2009	4th Quarter Actuals 2009	Total Actual Expend. 2009	Variance From Budget 2009	Percentage Variance From Budget 2009	Variance Explanation Ref. No.
METERING						
Install Automatic Meter Reading - Various Locations	108	21	123	15	14%	
Install Automatic Meter Reading - VariousLocations	113	30	105	(8)	-7%	
Install Automatic Meter Reading - Change Islands and Fogo Island	491	1	1	(490)	-100%	23
Purchase Meters and Equipment - Various Locations	33	0	0	(33)	-100%	
TOTAL METERING	745	52	229	(516)	-69%	
TOOLS AND EQUIPMENT						
Replace Boom 6069 on Track Vehicle - Stephenville	236	0	240	4	2%	
Purchase High Definition Infrared Camera - Central	87	1	79	(8)	-9%	
Tools and Equipment Less Than \$50,000	237	153	204	(33)	-14%	
TOTAL TOOLS AND EQUIPMENT	560	154	523	(37)	-7%	

2009 CAPITAL EXPENDITURES GENERAL PROPERTIES

	PUB Approved Budget 2009	4th Quarter Actuals 2009	Total Actual Expend. 2009	Variance From Budget 2009	Percentage Variance From Budget 2009	Variance Explanation Ref. No.
INFORMATION SYSTEMS	2003	2003	2003	2003	2003	Keil No.
SOFTWARE APPLICATIONS						
INFRASTRUCTURE REPLACEMENT						
NEW INFRASTRUCTURE						
Application Enhancements - Energy Systems Water Management	26	0	75	49	188%	
Application Enhancements - Energy Systems Optimum Powerflow	101	0	114	13	13%	
Application Enhancements - Perform Minor Application Enhancements	120	42	121	1	1%	
Cost Recoveries	(35)	(12)	(35)	(0)	0%	
Upgrade Intranet - Hydro Place	67	60	66	(1)	-1%	
Cost Recoveries	(19)	(6)	(19)	0	-2%	
Application Enhancements - Performance Management Software Budgeting Tool	127	0	130	3	2%	
Purchase Protection Relay Event Report Software - Hydro Place	54	22	31	(23)	-42%	
UPGRADE OF TECHNOLOGY						
Citrix Enhancement - Hydro Place	118	22	118	(0)	0%	
Cost Recoveries	(34)	(11)	(34)	0	-1%	
Corporate Application Environment Upgrade Showcase Strategy Suite - Hydro Place	158	75	160	2	1%	
Cost Recoveries	(46)	(15)	(46)	(0)	0%	
TOTAL SOFTWARE APPLICATIONS	637	177	681	44	7%	

NEWFOUNDLAND & LABRADOR HYDRO 2009 CAPITAL EXPENDITURES GENERAL PROPERTIES OF THE OLIABTER ENDING DECEMBER 31, 20

	PUB			_			4th	4th Total	Variance	Percentage Variance	
	Approved	Quarter	Actual	From	From	Variance					
	Budget	Actuals	Expend.	Budget	Budget	Explanation					
	2009	2009	2009	2009	2009	Ref. No.					
<u>COMPUTER OPERATIONS</u>											
INFRASTRUCTURE REPLACEMENT											
End User Evergreen Program - Various Locations	491	93	490	(1)	0%						
Replace Peripheral Infrastructure - Hydro Place	161	24	161	(0)	0%						
Perform Hawke Hill Improvements - Hawke Hill	50	36	37	(13)	-25%						
Replace Drafting Scanner/Plotter - Hydro Place	139	0	139	0	0%						
NEW INFRASTRUCTURE											
Security Smartcard and Disk Encryption for Laptops - Hydro Place	125	2	124	(1)	-1%						
Cost Recoveries	(36)	(12)	(36)	0	-1%						
UPGRADE OF TECHNOLOGY											
Upgrade Server Technology Program - Hydro Place	273	69	269	(4)	-1%						
Cost Recoveries	(79)	(26)	(79)	0	0%						
TOTAL COMPUTER OPERATIONS	1,123	186	1,105	(18)	-2%						
TOTAL INFORMATION SYSTEMS	1,760	363	1,786	26	1%						

2009 CAPITAL EXPENDITURES GENERAL PROPERTIES

					Percentage	
	PUB Approved Budget 2009	4th Quarter Actuals 2009	Total Actual Expend. 2009	Variance From Budget 2009	Variance From Budget 2009	Variance Explanation Ref. No.
TELECONTROL						
NETWORK SERVICES						
INFRASTRUCTURE REPLACEMENT						
Customer Service Application - Hydro Place	910	275	360	(550)	-60%	24
Replace Dial Backup System - Various Locations	103	22	60	(43)	-42%	
Install Recloser Remote Control - Change Islands	44	(11)	64	20	45%	
Public Address System - Holyrood	1,275	42	119	(1,156)	-91%	25
Replace Remote Terminal Units - Various Locations	278	120	258	(20)	-7%	
Replace Radomes - Various Locations	130	11	111	(19)	-14%	
Install Fibre Optic Cable - Hinds Lake	209	9	9	(200)	-96%	26
Replace Power Line Carrier on TL250 - Bottom Brook to Grandy Brook	473	62	476	4	1%	
NETWORK INFRASTRUCTURE						
Replace Network Communications Equipment - Various Locations	141	55	132	(9)	-6%	
Purchase Test Equipment - Various Locations	74	2	70	(4)	-5%	
Install Wireless Networking - Various Locations	45	39	39	(6)	-14%	
Replace Radio Tower - Ebbegunbaeg	179	112	124	(55)	-31%	
Replace Batteries and Chargers - Various Locations	729	409	776	47	7%	
UPGRADE OF TECHNOLOGY						
Replace Network Management Tools - Various Locations (Project Cancelled)	47	0	0	(47)	-100%	
Upgrade Site Facilities - Various Locations	47	26	52	5	10%	
TOTAL TELECONTROL	4,683	1,173	2,650	(2,033)	-43%	

2009 CAPITAL EXPENDITURES GENERAL PROPERTIES

	PUB Approved Budget 2009	4th Quarter Actuals 2009	Total Actual Expend. 2009	Variance From Budget 2009	Percentage Variance From Budget 2009	Variance Explanation Ref. No.
TRANSPORATION						
Replace Vehicles and Aerial Devices 2008 - Various Locations	635	0	449	(186)	-29%	27
Replace Vehicles and Aerial Devices 2009 - Various Locations	2,156	731	2,044	(112)	-5%	
Replace Light Duty Mobile Equipment Less Than \$50,000 - Various Locations	561	216	530	(31)	-6%	
Replace Off Road Tracked Vehicles - Whitbourne and Bishop's Falls	758	597	597	(161)	-21%	28
TOTAL TRANSPORATION	4,110	1,544	3,620	(490)	-12%	
ADMINISTRATION						
Upgrade System Security 2008 - Various Locations	762	4	812	50	7%	
Upgrade System Security 2009 - Various Locations	767	232	488	(279)	-36%	29
Purchase Spare Transformer - Hydro Place	389	155	460	71	18%	
Replace Humidifiers in Air Handling Units 2008 - Hydro Place	58	20	20	(38)	-66%	
Replace Air Conditioning Units 2008 - Hydro Place	56	6	6	(50)	-89%	
Replace Humidifiers in Air Handling Units 2009 - Hydro Place	74	34	34	(40)	-54%	
Replace Air Conditioning Units 2009 - Hydro Place	37	30	30	(7)	-20%	
Energy Conservation Upgrades - Hydro Place	833	814	1,167	334	40%	30
Replace Fire Protection Panels - Hydro Place	89	94	104	15	17%	
Purchase and Replace Admin Office Equipment Less Than \$50,000	361	77	243	(118)	-33%	
TOTAL ADMINISTRATION	3,426	1,466	3,364	(62)	-2%	
	13,980	4,546	11,420	(2,560)	-18%	

2009 CAPITAL EXPENDITURES OTHER APPROVED FUNDS

	PUB Approved Budget 2009	4th Quarter Actuals 2009	Total Actual Expend. 2009	Variance From Budget 2009	Percentage Variance From Budget 2009	Variance Explanation Ref. No.
ALLOCATION FOR UNFORESEEN EVENTS						
Replace Diesel Engine - Mary's Harbour	569	5	454	(115)	-20%	31
TL 221 - Insulator Upgrade	192	104	218	26	14%	
Allocation for Unforeseen Events	239	0	0	(239)	-100%	
TOTAL ALLOCATION FOR UNFORESEEN EVENTS	1,000	109	672	(328)	-33%	
PROJECTS APPROVED BY PUB						
CARRYOVER						
TL227/262 Upgrde Daniel's Harbour, Transmission Line Re-Location	198	(1)	295	97	49%	
Cost Recovery - Dept Works and Transportation	(198)	1	(295)	(97)	49%	
Install Neutral Grounding Resistors - Come By Chance	227	0	0	(227)	-100%	32
Cost Recovery - North Atlantic Refining Limited	(227)	0	0	227	-100%	
<u>NEW</u>						
Replace Programable Logic Controllers - Holyrood	1,093	283	877	(216)	-20%	33
Upgrade Continuous Emission Monitoring System - Holyrood	704	2	7	(697)	-99%	34
Condition Assessment and Life Extension Study - Holyrood	1,210	38	50	(1,160)	-96%	35
Nain Diesel Plant Rehabilitation	2,416	619	1,764	(652)	-27%	36
Replacement of Power Transformer - Wiltondale Terminal Station	351	70	70	(281)	-80%	37
Gas Turbine Refurbishment - Stephenville	291	0	0	(291)	-100%	38
Hinds Lake Powerhouse Slope Stabilization	492	667	704	212	43%	39
Microwave Replacement - Godaleich Hill	197	120	120	(77)	-39%	
Work Protection Code eLearning Program	227	92	92	(135)	-59%	40
Cost Recoveries	(66)	(28)	(66)	0	0%	
Hydro Place Parking Lot Extension	93	0	114	21	23%	
Cost Recovery - Nalcor Energy	(93)	(114)	(114)	(21)	23%	
TOTAL PROJECTS APPROVED BY PU BOARD	6,915	1,749	3,618	(3,297)	-48%	

NEWFOUNDLAND & LABRADOR HYDRO 2009 CAPITAL EXPENDITURES OTHER APPROVED FUNDS FOR THE QUARTER ENDING DECEMBER 31, 2009 (\$000)

					Percentage	
		4th Quarter Actuals	Total Actual Expend.	Variance From Budget	Variance From Budget	Variance Explanation
		2009	2009	2009	2009	Explanation Ref. No.
NEW PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO						
Pressure Sealer - Treasury	7	0	6	(1)	-14%	
Purchase Former Diesel Plant Property - Fogo Island	4	0	4	0	0%	
Replace Roof - Stony Brook Terminal Station	49	29	29	(20)	-41%	
Replace Roof - Bottom Brook Terminal Station	49	47	47	(2)	-4%	
Purchase Hydraulic Drill and Impact Wrench	5	4	4	(1)	-20%	
Test Console No's 1 and 2 Upgrade	41	41	41	0	0%	
Purchase Towable ATV Backhoe - Mud Lake	10	8	8	(2)	-20%	
Purchase Meters and Equipment	6	0	28	22	367%	
TOTAL PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO	171	129	167	(4)	-2%	

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2009 VARIANCE EXPLANATIONS GENERATION

FOR THE QUARTER ENDING DECEMBER 31, 2009 (Greater than \$100,000)

1. <u>Install Motor Stack Winches – Holyrood</u>

Consultants were hired to complete the detailed engineering design for the stack winches and their respective restraint systems. The cost associated with the installation of this design was prohibitive. It was necessary to design a less elaborate restraint system while offering the same level of safety. Due to the timing and scheduling of other work during the fall, this project will be completed in 2010.

2. Refurbish Fuel Storage Facility - Holyrood

Better than expected competition for the civil site work and drainage system installation provided competitive bids resulting in an overall lower price for the work by approximately \$250,000. Based on work performed on pipe supports several years ago, it was estimated that the pipe supports would require extensive modification to return them to serviceable condition, however, once the supports were exposed and detail design was completed, the work required was much less extensive than originally anticipated resulting in further savings of approximately \$400,000. Corporate Overhead costs were less based on the reduced cost of the site, drainage and pipe support work. Additionally, the project contingency was not required.

3. Replace Disconnect Switches – Cow Head and Daniel's Harbour

During installation of the disconnect switches in Cow Head, it was discovered that several poles and bus work needed to be replaced, increasing the scope, duration and cost of the project. Due to other work commitments and the increased scope, Hydro's crews were not able to perform all the work and it became necessary to prepare and tender a contract document to have the work performed by a contractor. This additional engineering work, site supervision and contract management was not anticipated in the original project scope, nor was the added cost of having the work performed by a contractor.

4. <u>Install Digital Fault Recorders – Oxen Pond, Massey Drive and St. Anthony</u>

Both the engineering design and installation of the digital fault recorders (DFR) required less time than budgeted resulting in less labour and travel costs. The same model of digital fault recorder was purchased for this project as was installed in Buchans in 2008 therefore the design and drawing preparatory effort was reduced since only modifications to the Buchan's design was required. Similarly, installation personnel were familiar with the Buchan's installation, which expedited the installation at these three locations. This also resulted in less overhead costs and contingency fund being required.

5. New 25kV Terminal Station – Labrador City

This is a multi-year project to be completed in 2011. There were issues which arose during the acquisition of the land required for the new terminal stations which delayed the finalization of the design and the ordering of equipment. These activities will now be completed during the first quarter of 2010. This project is expected to be completed on time within budget.

6. <u>Upgrade Corner Brook Frequency Converter - 2008</u>

The scope of this job included the replacement of the old liquid rheostat which is used to start and stop the frequency converter. The preliminary design and budget was based upon the replacement of the original liquid rheostat with a variable speed drive. During the finalization of the electrical design, it became evident that the use of a variable speed drive was not the preferred solution for this application and it was decided to simply replace the old liquid rheostat with a new one. During disassembly of this 40 year old machine it was also discovered that more remedial work was encountered than expected which increased the scope, duration and cost of the work.

7. <u>Perform Wood Pole Line Management Program – Various Locations</u>

The wood pole line management program consists of a replacement program for deteriorated poles identified in previous inspections as well as new line inspections. During the 2009 inspection of TL-201, 29 poles were found to be in such condition that, for reliability and safety reasons, they had to be replaced immediately. These additional poles and the associated installation costs were unbudgeted and totaled approximately \$500,000. This included the cost of utilizing a contractor and Hydro crews from across the island to complete the work during the limited outage time in November and December. There were also outage restrictions on TL-215 and TL-250 that resulted in additional costs due to the requirement to use of alternate generation and additional labour costs due to the compressed time frame to complete the work. These increased costs were offset by other refurbishment work that was deferred until 2010 and 2011, however, there was still an overall increase of approximately \$360,000.

8. Construct Transmission Equipment Off-Loading Areas – Various Locations

The tenders received for construction of off-loading areas, prepared with estimates based on actual contract costs for the previous year, were lower than expected. In addition, the Department of Transportation and Works initially required new culvert installation at all sites but changed the final requirements to the installation of new culvert at sites on an as-needed basis only. They also initially requested that all sites on the Burin Peninsula highway be equipped with guard rails. They eventually concluded that guard rails provided no additional safety benefits to the public and could interfere with both the Department of Transportation and Works snow clearing operations and Hydro's off-loading operations, thus they were removed from the design. The reduced cost of construction work resulted in less engineering labour costs as well as less overhead costs and no contingency fund being required.

9. <u>Upgrade Transmission Line TL-212 – Sunnyside to Linton Lake</u>

Due to environmental constraints related to bog along parts of the line, several of the mid-span structures proposed for 2009 have been deferred until March 2010, to minimize the environmental damage. This multi-year project is to be completed in 2010 and is expected to be completed within budget.

PUB-NLH-227, Attachment 1
Page 157 of 362, Isl Int System Power Outages

NEWFOUNDLAND AND LABRADOR HYDRO
2009 VARIANCE EXPLANATIONS
TRANSMISSION AND RURAL OPERATIONS
FOR THE QUARTER ENDING DECEMBER 31, 2009
(Greater than \$100,000)

10. <u>Provide Service Extensions – All Service Areas</u>

The budgeted amount is an annual allotment based on the average of the annual expenditures for service extensions over the last five years. It is not based on a summary of specific projects. There have been increases in expenditures in all service areas with the bulk pertaining to Labrador (\$800,000) and Northern (\$600,000) regions.

The increase in costs in Labrador is mainly due to housing developments in Happy Valley, Nain, Hopedale and Makkovik; a new school in Happy Valley, and a hotel in Labrador City. The increase in expenditures in the Northern region, which include Southern Labrador, is partly due to an increase in customers converting to electric heat causing a load increase on existing electrical infrastructure, requiring an increase in transformer and conductor sizing and, in certain cases, involves the installation and/or replacement of poles. In addition, there are new schools in Port Hope Simpson and Port Saunders, a wood pellet plant in Roddickton as well as the addition of the ice-making capacity for the Charlottetown Shrimp plant contributing to the increased costs for the Northern region.

11. Replace Insulators – Jacksons Arm, Hampden and Little Bay

The budget estimate for insulator replacement is based on contracted out labour, since internal labour availability was unknown at the project proposal stage. The use of internal labour resulted in an overall reduction of project costs. These factors resulted in less overhead costs and no contingency funds being required.

12. <u>Upgrade L7 Distribution System – St. Anthony</u>

The availability of internal labour to work on this project, which was not anticipated in the budget, resulted in a shorter outage duration therefore reducing labour costs. The contracted portion of the project was also less than expected. This resulted in less overhead costs and no contingency funds being required.

13. Replace Diesel Units – Norman Bay, Cartwright and Black Tickle

The diesel unit replacement for Cartwright is complete however, the ones for Norman Bay and Black Tickle will be carried over and completed in 2010. Due to the design of the existing automatic controls for Norman Bay, extensive engineering for protection and control work would have to be done to temporarily integrate the new equipment with the existing gensets. A capital budget to replace two diesel units and automate the Norman Bay Plant was approved by Board Order No. P.U. 36 (2009). Rather than incur unnecessary costs for temporary configurations and mobilization, it is prudent to install all the equipment at the same time in 2010. The Black Tickle installation was scheduled for completion in late October of 2009. Due to delays in shipping from the manufacturer and further delays with the coastal ferry service, the genset did not arrive until early December, at which time there was no available manpower to complete the installation in 2009. The genset will be installed in the spring of 2010.

14. Replace Diesel Units – Norman Bay, Postville and Paradise River

This project is a multi-year project to be completed in 2010. Due to unforeseen work commitments such as the Nain fire and failures of generating sets at Postville and Mary's Harbour, which negatively impacted the resource availability of both Engineering Services and Operations personnel, there was limited work done on the Norman Bay and Paradise River replacements. However, the genset being replaced in Postville failed prematurely in the winter of 2009 leaving the town vulnerable to outages therefore this project was completed in 2009.

15. Diesel Plant Automation – Makkovik and Rigolet

Originally all project engineering work was to be done by Hydro personnel, however, due to resource constraints within Engineering Services, outside technical assistance was required for the automation design portion of the project. The work that was outsourced included onsite installation of this automation equipment as well as commissioning of the entire diesel plant automation systems followed by operator training. This increased the cost by approximately \$185,000. Additionally, there was a significant disruption in the work schedule for operating crews as a result of the diesel plant fire at the Nain Plant in 2008 that affected the work schedule at Makkovik into 2009 resulting in an increase of approximately \$100,000 in labour and travel costs.

16. <u>Increase Generation Capacity – Charlottetown (Project Cancelled)</u>

The primary reason for the new generation to be installed at Charlottetown was to continue supporting the high summer load associated with the operation of the seasonal fish plant that was built in the community in 2000. In the fall of 2008, Hydro was advised by the owners of the fish plant that the installation of additional ice making capacity in 2009 would increase demand by 150 kW and that another similar addition could be expected in two to three years. This requires a reassessment of the long-term suitability of the existing generation plant. Hydro expects to have this assessment completed in time for the 2011 Capital Budget Application. The generation shortfall experienced during the summer when the fish plant is operating is being addressed with a temporary mobile generator relocated from L'Anse Au Loup. (See variance explanation 17.)

17. <u>Increase Generation – L'Anse au Loup</u>

This is a multi-year project, the original scope of which was to replace an existing 600 kW diesel generating set with a 1,100 kW unit. Load growth on this system has increased faster than expected and Hydro found it necessary to lease a 1,825 kW mobile generating set to provide sufficient capacity, following notification from Hydro-Québec that it might not be able to provide power from its Lac Robertson hydro facility due to low water levels and its own load requirements. Combined effects of increased demand on the L'Anse au Loup system and potentially less available energy from Hydro Québec has caused Hydro to change the scope of this project to procurement of the 1,825 kW mobile generating set which has been connected to the power system in a temporary fashion. During 2010 a more permanent interconnection will be completed and protection and control enhancements will be effected. This mobile can also be used as an emergency unit for other isolated diesel systems.

18. <u>Construct New Office/Warehouse/Line Depot Facilities – Happy Valley</u>

The office, warehouse and line depot facilities were completed in January 2010, however, pavement and landscaping cannot be completed until the spring and summer of 2010. Therefore this project will be carried over into 2010.

19. Construct Diesel Plant Extension – William's Harbour (*Project Cancelled*)

Project cancelled due to the potential relocation of the residents of William's Harbour to other communities.

20. Replace Accom, Septic Sys, and Upgrade Plant Communications Sys – Cat Arm

The six modular accommodations units were constructed and are at the Cat Arm Generating station waiting to be installed. The septic system and fencing has also been completed. The lowest acceptable tender for the installation was much greater than the estimated cost. The remaining work will be retendered early in 2010 and is expected to result in a more reasonable installation cost.

21. Replace Explosive Storage Magazines – Various Sites

This project came in under budget due to the magazines costing less than expected. The budget for this proposal was based on a quote of approximately \$200,000 for the fourteen magazines. The actual contracted cost was approximately \$90,000. This resulted in less overhead costs and no contingency fund being required.

22. <u>Build New Maintenance Shop – St. Anthony</u>

During excavation for the building foundations, organic material (bog) was encountered, requiring additional excavation and structural fill placement. Additional consultant time was also required to make the necessary geotechnical recommendations. This resulted in an increase in the overall budget by \$171,000 as well as construction delays. This project will be completed in the first quarter of 2010.

23. <u>Install Automatic Metering Reading – Change Islands and Fogo Island</u>

This project was delayed as the economics were tied, in part, to the expected retirement of a meter reader. The meter reader provided notification later than expected, thus delaying implementation. The revised completion date is November 2011.

NEWFOUNDLAND AND LABRADOR HYDRO 2009 VARIANCE EXPLANATIONS GENERAL PROPERTIES

(Greater than \$100,000)

FOR THE QUARTER ENDING DECEMBER 31, 2009

24. Customer Service Application – Hydro Place

The procurement phase of the project resulted in two unsuccessful tender calls, with no bids in the first and a single non-compliant bid in the second, thereby delaying the project by approximately three months. The decision was made to proceed with the non-compliant tenderer however, with a revised proposal, which will utilize purchased software for the Call Centre portion of the work. The refined bid and the time to negotiate the contract for the work has delayed the implementation by a further three months. Utilizing purchased software will lessen the risk associated with application development and reduce future operational costs for program design. This project will be completed within budget by the end of the second quarter in 2010.

25. Public Address System - Holyrood

The public tendering process resulted in a tender which significantly exceeded the budget allocation. The system was redesigned in a simpler configuration which provided similar functionality and will be retendered early in 2010 for installation during the summer.

26. <u>Install Fibre Optic Cable – Hinds Lake</u>

Due to resource limitations within the Engineering Division, this project was not started until the fall of 2009. Originally the right of way clearing and the purchase of equipment was to be done in 2009 before the winter season. This work is now scheduled to be completed as soon as the construction season begins again in the spring of 2010, with the remainder of the work such as pole line construction and fiber cable installation being completed by the fall of 2010. This project is expected to be completed within budget.

27. Replace Vehicles and Aerial Devices 2008 – Various Locations

The project was carried over from 2008 for the purchase of two boom trucks. The variance resulted from the favorable pricing due to the exchange rate in effect during the tendering process as well as the contingency not being required.

NEWFOUNDLAND AND LABRADOR HYDRO 2009 VARIANCE EXPLANATIONS GENERAL PROPERTIES

FOR THE QUARTER ENDING DECEMBER 31, 2009 (Greater than \$100,000)

28. Replace Off Road Tracked Vehicles – Whitbourne and Bishop's Falls

The project was carried over from 2008 to purchase two tracked units fitted for backhoe attachments. The tracked vehicles were purchased without the attachments due to a safety requirement, therefore reducing the cost. Additionally, the contingency was not utilized.

29. Upgrade System Security 2009 – Various Locations

This is a multi-year project that included a security camera contract for approximately \$500,000 that was awarded in 2009. Due to design issues and internal labour shortages, only a small portion of this contract was completed. The remaining portion of this contract will be completed in 2010. This project is expected to be completed on time and within budget.

30. Energy Conservation Upgrades – Hydro Place

The majority of the cost overrun results from the higher than anticipated engineering consulting fees as well as the cost of the new energy management system components. This project was originally justified based on a payback of 9 years. The cost benefit analysis was recalculated using the new estimated cost. Results from the revised cost benefit analysis indicate that this project will now have a payback of 11 years, well within the 15 year expected service life of the upgrades.

NEWFOUNDLAND AND LABRADOR HYDRO 2009 VARIANCE EXPLANATIONS

OTHER APPROVED FUNDS
FOR THE QUARTER ENDING DECEMBER 31, 2009

(Greater than \$100,000)

31. Replace Diesel Engine – Mary's Harbour

This project was initiated in March of 2009 following the sudden failure of generating unit 2048. High level estimates were developed for budgeting purposes. Due to various uncertainties concerning compatibility of the new equipment with the existing controls, and a high workload for the Protection and Control department, the Protection and Control estimate contained extensive engineering and the possibility of utilizing outside consultants which were ultimately not required.

32. Install Neutral Grounding Resistors – Come by Chance

This project is to be fully contributed by Hydro's customer North Atlantic Refining Limited (NARL) and was approved by Board Order No. P.U. 26 (2008). Hydro is waiting for NARL to approve the expenditure for this project.

33. Replace Programmable Logic Controllers - Holyrood

It was anticipated that a substantial amount of collaborative work involving engineering services and plant engineering and operations forces would have been needed during the development of the project but this was found not to be necessary. Installation costs were significantly less than anticipated. This resulted in less overhead costs and no contingency funds being required.

34. <u>Upgrade Continuous Emission Monitoring System – Holyrood</u>

This project was approved March 20, 2009 with estimated expenditures in 2008 and 2009. The project was scheduled to start in February 2009 with a closeout of March 2010. The majority of the tenders pertaining to this project were awarded late in 2009. However, due to longer than expected manufacturing time, the equipment will not arrive on site until March 2010. It is expected that the project will be completed by the end of the third quarter, 2010.

NEWFOUNDLAND AND LABRADOR HYDRO 2009 VARIANCE EXPLANATIONS

OTHER APPROVED FUNDS

FOR THE QUARTER ENDING DECEMBER 31, 2009 (Greater than \$100,000)

35. <u>Condition Assessment and Life Extension Study – Holyrood</u>

This is a multi-year project to be completed in 2010. A consultant was selected in 2009 to do the condition assessment but the key members of the consultant's project team were not available until January 2010 to begin work. Therefore the bulk of the project costs will be incurred during 2010 and the project will be completed in 2010.

36. Nain Diesel Plant Rehabilitation

This is a multi-year project to be completed in 2010. The project schedule had the bulk of the plant automation work being done in the fall of 2009 to be completed by February of 2010. However, due to unavailability of Protection and Control staff for the plant automation, this work will not be completed until the last quarter of 2010.

37. Replacement of Power Transformer – Wiltondale Terminal Station

The original project scope was to upgrade a spare transformer owned by Hydro, and to transport and install it in Wiltondale. It was determined that it would be less costly to purchase a transformer, which had been borrowed from Newfoundland Power, and perform related modifications rather than to proceed with the original plan.

38. <u>Gas Turbine Refurbishment – Stephenville</u>

This is a multi-year project to be completed in 2010. The investigation, research and specifications preparation for this project was completed in late 2009. The majority of the budget for this project will now be spent in 2010.

39. Hinds Lake Powerhouse Slope Stabilization

This is a multi-year project to be completed in 2010. The 2009 final cost was higher than originally proposed due to design improvements and quantity variances during construction which resulted in additional rock removal adding \$160,000 to the estimated cost of this activity. The additional work also resulted in increased labor cost of approximately \$50,000. Hydro is currently reviewing the design and the required 2010 work to finalize the remaining scope and budget to complete the work.

NEWFOUNDLAND AND LABRADOR HYDRO 2009 VARIANCE EXPLANATIONS OTHER APPROVED FUNDS FOR THE QUARTER ENDING DECEMBER 31, 2009 (Greater than \$100,000)

40. Work Protection Code eLearning Program

This was an unbudgeted capital project that was approved on June 16, 2009 by Board Order No. P.U. 23 (2009). This project has a scheduled duration of at least 33 weeks, therefore it will be completed by the second quarter of 2010. This project is expected to be completed within budget.

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL BUDGET VERSUS EXPENDITURES 2000 – 2009 AS AT DECEMBER 31 (\$000)

Table 1: CAPITAL BUDGET VERSUS EXPENDITURES 2000 – 2009

		Actual		Percentage
Year	Budget	Expenditures	Variance	Variance
2000	43,824	38,569	5,255	12.0%
2001	55,897	47,501	8,396	15.0%
2002	44,660	40,217	4,443	9.9%
2003	36,122	32,506	3,616	10.0%
2004	31,435	27,984	3,451	11.0%
2005	47,760	33,952	13,808	28.9%
2006	49,024	41,217	7,807	15.9%
2007	43,304	35,669	7,635	17.6%
2008	53,579	46,246	7,333	13.7%
2009	61,544	54,152	7,392	12.0%

These variances include amounts related to the carryover of projects from year to year. Total variances from budget for completed projects are 1% and 1% for 2008 and 2009 respectively, well within acceptable ranges, however the variances of individual projects completed in 2008 and 2009 tend to be greater than in previous years, due to continued high volatility in commodity prices, which are reflected in the cost of materials and manufactured goods. This period of unprecedented volatility began in mid 2005 and as long as it continues individual project variances will be greater than in years prior to 2005. To illustrate this volatility, the graph below indicates the price of copper for the 10 year period ending in December 2009.

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL BUDGET VERSUS EXPENDITURES 2000 – 2009 AS AT DECEMBER 31 (\$000)

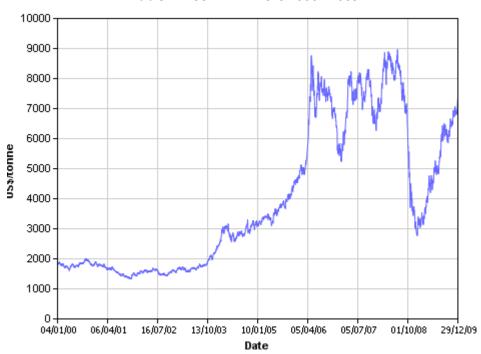


Table 2: COPPER PRICES 2000 - 2009

The variances indicated in Table 1 for the years 2000-2009 are due almost entirely to under-spending as a result of not completing all projects approved each year. Hydro continues to have staffing issues, especially within the Engineering Services Division where the bulk of the capital budgets are managed. The maturing of this workforce has resulted in the loss of some of the most experienced staff to retirement and this, coupled with a number of resignations, resulted in the loss of about 30% of the technical staff and their replacement with younger and relatively inexperienced staff. This, combined with increased demand for technical support to deal with an aging infrastructure across the Hydro system, continues to present challenges to lowering the percentage variances as shown above.

It is anticipated that some carryovers of capital projects will occur in most years as there are frequently unavoidable reasons for delays in project completion. The Nain diesel plant fire had a significant affect on the success of the 2009 capital program. The burden it placed on Engineering Services and Operations personnel directly caused the carryover of two projects; Cartwright Switchgear Replacement and Black Tickle Generating Unit Replacement; and adversely affected the schedules of several other projects, contributing to their carryover. Several of the carryover projects missed their year end completion dates by only a few weeks. For example, Happy Valley/Goose Bay staff began moving into the new office building on January 18, and the installation of Meteorlogical Stations was completed in the first week of January.

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL BUDGET VERSUS EXPENDITURES 2000 – 2009 AS AT DECEMBER 31 (\$000)

Hydro has also carried over to 2010 two projects which could have been completed in 2009, as we felt we would obtain lower cost tenders if the work was retendered. The Cat Arm Accommodations building was designed as a prefabricated building, ordered and delivered to site. The installation contract was tendered mid year and resulted in the receipt of bids for much greater than the estimated cost, a reflection of the high level of activity in that segment of the industry at the time. Hydro feels that the installation will be completed for a lower cost if retendered during the winter of 2009/10 for installation in the spring of 2010. The tenders for the Holyrood Paging System were also much higher than expected, the estimate for which was based on discussions held with equipment manufacturers when the budget proposal was prepared. Hydro has changed the design of the system to reduce cost while maintaining functionality. The completion of both these projects in 2010 should result in lower costs to our customers.

Hydro continues to improve its project management practices and expects to continue to reduce the percentage variance between the budget and actual expenditures as well as reduce the number of projects carried over.

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2009 CARRYOVER REPORT FOR THE QUARTER ENDING DECEMBER 31, 2009 (\$000)

	PUB		Total			
	Approved	Revised	Actual		Variance	Original
	Budget	Budget	Expend.	Carryover	Explanation	Completion
Project Name	2009	2009	2009	Amount	Ref. No.	Year
Install Meteorological Stations 2009 - Various Locations	253	253	268	(16)		2009
Install Motorized Stack Winches - Holyrood	174	174	49	125	1	2009
Replace Diesel Units - Norman Bay, Cartwright and Black Tickle	1,265	787	440	347	13	2009
Replace Switchgear - Cartwright	435	758	450	308		2009
Construct New Office/Warehouse/Line Depot Facilities - Happy Valley	3,224	3,224	2,696	528	18	2009
Replace Accom, Septic Sys and Upgrade Plant Communications Sys - Cat Arm	1,254	1,254	733	521	20	2009
Build New Maintenance Shop - St. Anthony	429	600	293	307	22	2009
Install Automatic Meter Reading - Change Islands and Fogo Island	491	491	1	490		2009
Purchase Meters and Equipment - Various Locations	33	33	0	33		2009
Tools and Equipment Less Than \$50,000	237	28	0	28		2009
Customer Service Application - Hydro Place	910	1,140	360	780	24	2009
Public Address System - Holyrood	1,275	1,275	119	1,156	25	2009
Replace Vehicles and Aerial Devices 2009 - Various Locations	2,156	2,156	2,044	112		2009
Replace Light Duty Mobile Equipment Less Than \$50,000 - Various Locations	561	561	530	31		2009
Purchase Spare Transformer - Hydro Place	389	481	460	21		2009
Replace Air Conditioning Units 2008 - Hydro Place	56	56	6	50		2009
Replace Fire Protection Panels - Hydro Place	89	114	104	10		2009
Install Neutral Grounding Resistors - Come By Chance	227	227	0	227	32	2009
Cost Recovery - North Atlantic Refining Limited	(227)	(227)	0	(227)		2009

NEWFOUNDLAND AND LABRADOR HYDRO 2009 CARRYOVER REPORT FOR THE QUARTER ENDING DECEMBER 31, 2009 (\$000)

	Approved Budget	Revised Budget	Actual Expend.	Carryover	Variance Explanation	Original Completion
Project Name	2009	2009	2009	Amount	Ref. No.	Year
Replace 50kW Diesel Generator - Bay d'Espoir	36	36	7	29		2011
Purchase Spare Stator Windings Units 1 to 4 - Bay d'Espoir	37	37	131	(95)		2011
Upgrade Great Northern Peninsula Protection - Various Locations	101	101	68	33		2011
Upgrade Transmission Line TL-212 - Sunnyside to Linton Lake	968	968	609	359	8	2011
Replace Diesel Units - Norman Bay, Postville and Paradise River	170	610	470	140	14	2011
Increase Generation - L'Anse Au Loup	23	1,002	783	219	17	2011
Install Fibre Optic Cable - Hinds Lake	209	209	9	200	26	2011
Upgrade System Security 2009 - Various Locations	767	767	488	279	29	2011
Upgrade Continuous Emission Monitoring System - Holyrood	704	704	7	697	34	2011
Condition Assessment and Life Extension Study - Holyrood	1,210	1,210	50	1,160	35	2011
Nain Diesel Plant Rehabilitation	2,416	2,416	1,764	652	36	2011
Gas Turbine Refurbishment - Stephenville	291	291	0	291	38	2011
Hinds Lake Powerhouse Slope Stabilization	492	492	704	(212)	39	2011
Work Protection Code eLearning Program	227	227	92	135	40	2011
Cost Recovery - Nalcor Energy, Churchill Falls	(66)	(66)	(66)	0		
New 25kV Terminal Station - Labrador City	283	283	101	182	_ 5	2012
	21,098	22,672	13,770	8,902	=	



Hydro Place. 500 Columbus Drive. P.O. Box 12400. St. John's. NL Canada A1B 4K7 t. 709.737.1400 f. 709.737.1800 www.nlh.nl.ca

March 4, 2011

The Board of Commissioners of Public Utilities Prince Charles Building 120 Torbay Road, P.O. Box 21040 St. John's, NL A1A 5B2

ATTENTION: Ms. Cheryl Blundon

Director of Corporate Services & Board Secretary

Dear Ms. Blundon:

Re: 2010 Capital Expenditures and Carryover – Year End

Pursuant to Board Order No. P.U. 1 (2010), p. 15, item 4, enclosed please find eight copies of Newfoundland and Labrador Hydro's (Hydro) report on 2010 Capital Expenditures and Carryover for the year ended December 31, 2010.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

Senior Legal Counsel

GPY/jc Encls.

A REPORT TO THE BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

CAPITAL EXPENDITURES AND CARRYOVER REPORT

For Year Ending December 31, 2010

March 2011



NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL EXPENDITURES AND CARRYOVER REPORT

For Year Ending December 31, 2010

TABLE OF CONTENTS

	Page
CAPITAL EXPENDITURES OVERVIEW	1
CAPITAL EXPENDITURES SUMMARY BY CATEGORY:	
Generation	2
Transmission	2
Rural Systems	2
General Properties	3
Other Approved Funds	3
CAPITAL EXPENDITURES DETAIL:	
Generation	4
Transmission	6
Rural Systems	8
General Properties	12
Other Approved Funds	16
VARIANCE EXPLANATIONS (GREATER THAN \$100,000):	
Generation	18
Transmission	23
Rural Systems	26
General Properties	32
Other Approved Funds	36
CAPITAL BUDGET VERSUS EXPENDITURES 2001 - 2010	39
CARRYOVER REPORT	40

NEWFOUNDLAND & LABRADOR HYDRO 2010 CAPITAL EXPENDITURES OVERVIEW FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2010 (\$000)

	PUB Approved Budget 2010	4th Quarter Actuals 2010	Total Actual Expend. 2010	Variance From Budget 2010
GENERATION	18,333	5,023	13,736	(4,597)
TRANSMISSION	11,276	5,930	10,654	(622)
RURAL SYSTEMS	16,133	5,941	17,361	1,228
GENERAL PROPERTIES	10,982	3,689	10,084	(898)
ALLOWANCE FOR UNFORESEEN EVENTS	1,694	325	851	(843)
PROJECTS APPROVED BY PU BOARD	4,731	1,079	2,762	(1,969)
NEW PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO	148	56	105	(43)
TOTAL CAPITAL BUDGET	63,297	22,043	55,553	(7,744)
2010 Capital Budget Approved by Board Order No. P.U. 1 (2010)*	51,225			
Carryover Projects 2009 to 2010	8,902			
Changes to Multi-year Projects in 2009 affecting 2010**	(840)			
New Project Approved by Board Order No. 31 (2009)	389			
New Project Approved by Board Order No. 33 (2009)	1,795			
New Project Approved by Board Order No. 34 (2009)	644			
New Project Approved by Board Order No. 16 (2010)	0			
New Project Approved by Board Order No. 21 (2010)	694			
New Project Approved by Board Order No. 26 (2010)	120			
New Project Approved by Board Order No. 29 (2010)	18			
New Project Approved by Board Order No. 34 (2010)	202			
2010 New Projects under \$50,000 Approved by Hydro	148			
TOTAL APPROVED CAPITAL BUDGET	63,297			

^{*} The total Capital Budget for \$52,775 was approved less Upgrade Plant Acess Road - Bay d'Espoir for \$1,550 that has been cancelled by Hydro since this cost cannot be recovered from its customers.

^{**} a) Increase Generation - L'Anse au Loup was approved by Board Order No. P.U. 36 (2008) with a budget of \$23,000 for 2009 and \$821,000 for 2010. On August 20, 2009 Hydro filed documentation indicating a change in scope resulting in a budget increase for the project with \$1,002,000 to be spent in 2009 and \$517,000 in 2010. Therefore the 2010 budget is reduced by \$304,000.

b) Replace Diesel Units - Norman Bay, Postville and Paradise River is a multi-year project to be completed in 2010, however, the genset being replaced in Postville failed prematurely and was replaced in 2009 reducing the 2010 budget by \$536,000.

NEWFOUNDLAND & LABRADOR HYDRO 2010 CAPITAL EXPENDITURES SUMMARY BY CATEGORY FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2010 (\$000)

	PUB	4th	Total	Variance
	Approved	Quarter	Actual	From
	Budget	Actuals	Expend.	Budget
<u>-</u>	2010	2010	2010	2010
<u>GENERATION</u>				
HYDRO PLANTS	10,057	1,135	6,722	(3,335)
THERMAL PLANT	6,637	3,178	6,228	(409)
GAS TURBINES	1,638	710	786	(852)
TOTAL GENERATION	18,333	5,023	13,736	(4,597)
TRANSMISSION				
TERMINAL STATIONS	5,768	2,881	4,730	(1,038)
TRANSMISSION	5,474	3,042	5,902	428
TOOLS AND EQUIPMENT	33	7	22	(11)
TOTAL TRANSMISSION	11,276	5,930	10,654	(622)
RURAL SYSTEMS				
DISTRIBUTION	8,512	3,632	10,478	1,966
RURAL GENERATION	3,032	1,488	2,810	(222)
GENERAL	2,396	601	2,770	374
METERING	558	157	453	(105)
TOOLS AND EQUIPMENT	1,636	63	850	(786)
TOTAL RURAL SYSTEMS	16,133	5,941	17,361	1,228

NEWFOUNDLAND & LABRADOR HYDRO 2010 CAPITAL EXPENDITURES SUMMARY BY CATEGORY FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2010 (\$000)

	PUB Approved Budget 2010	4th Quarter Actuals 2010	Total Actual Expend. 2010	Variance From Budget 2010
GENERAL PROPERTIES				
INFORMATION SYSTEMS	2,008	514	1,811	(197)
TELECONTROL	5,105	1,937	4,485	(620)
TRANSPORTATION	2,299	656	2,060	(239)
ADMINISTRATIVE	1,570	582	1,728	159
TOTAL GENERAL PROPERTIES	10,982	3,689	10,084	(898)
OTHER APPROVED FUNDS				
ALLOWANCE FOR UNFORESEEN EVENTS	1,694	325	851	(843)
PROJECTS APPROVED BY PU BOARD	4,731	1,079	2,762	(1,969)
NEW PROJECTS APPROVED FOR LESS THAN \$50,000	148	56	105	(43)
TOTAL CAPITAL BUDGET	63,297	22,043	55,553	(7,744)

NEWFOUNDLAND & LABRADOR HYDRO 2010 CAPITAL EXPENDITURES GENERATION FOR THE YEAR QUARTER AND ENDING DECEMBER 31, 2010 (\$000)

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2010	2010	2010	2010	2010	Ref. No.
HYDRO PLANTS						
Install Meteorological Stations 2009 - Various Sites	(16)	0	9	25	-158%	
Replace 50 kW Diesel Generator - Bay d'Espoir	317	167	330	13	4%	
Purchase Spare Stator Windings Units 2 - Bay d'Espoir	2,711	(66)	1,655	(1,056)	-39%	1
Replace and Purchase Stator Winding - Bay d'Espoir	4,687	284	3,143	(1,544)	-33%	2
Upgrade Plant Access Road - Bay d'Espoir - (Project Cancelled)	0	0	0	0	0%	
Install Meteorological Stations 2010 - Various Sites - (Project Cancelled)	443	0	0	(443)	-100%	3
Upgrade Units 5 and 6 Cooling Water Systems - Bay d'Espoir	305	166	349	44	15%	
Upgrade Intake Gate Controls - Upper Salmon	284	42	328	44	15%	
Install Diesel Fuel Tank Monitoring System at Ebbegunbaeg - Bay d'Espoir	236	68	160	(76)	-32%	
Purchase Spare Spherical Valve Seal and Ring Assemblies - Bay d'Espoir	223	153	164	(59)	-26%	
Replace A/C Units in Control and Communications Room - Upper Salmon	197	61	67	(130)	-66%	4
Replace Human Machine Interface (HMI) Computer - Paradise River	158	51	82	(76)	-48%	
Upgrade Fuel Storage - Hinds Lake	149	80	167	18	12%	
Install Gain Heaters Gate 2 Burnt Dam Spillway - Bay d'Espoir	81	48	65	(16)	-20%	
Install Air Conditioning at Burnt Spillway - Bay d'Espoir	48	47	54	6	13%	
Replace 21 Inch Metal Cutting Lathe	80	0	0	(80)	-100%	
Purchase Tools and Equipment Less than \$50,000	154	34	149	(5)	-3%	
TOTAL HYDRO PLANTS	10,057	1,135	6,722	(3,335)		

NEWFOUNDLAND & LABRADOR HYDRO 2010 CAPITAL EXPENDITURES GENERATION FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2010 (\$000)

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2010	2010	2010	2010	2010	Ref. No.
THERMAL PLANT						
Install Motorized Stack Winches - Holyrood	125	209	272	147	117%	
Condition Assessment and Life Extension Study - Holyrood	1,846	484	1,278	(568)	-31%	5
Refurbish Fuel Storage Facility - Holyrood	2,500	1,275	2,560	60	2%	
Replace Programmable Logic Controllers - Holyrood	1,208	828	1,358	150	12%	6
Replace Pumphouse Motor Control Centres - Holyrood	50	15	99	49	97%	
Replace Steam Seal Regulator Unit 1 - Holyrood	335	12	16	(319)	-95%	7
Replace Diesel Fire Pump - Holyrood	112	1	28	(84)	-75%	
Install Cold Reheat Condensate Drains and High Pressure Heater Trip Level						
Units 1 and 3 - Holyrood	231	148	346	115	50%	8
Install Warm Air Make-up Access - Holyrood	170	206	219	49	29%	
Improve On Site Paving and Drainage - Holyrood	59	0	52	(7)	-12%	
Purchase Tools and Equipment Less than \$50,000	0	0	0	0	0%	
TOTAL THERMAL PLANTS	6,637	3,178	6,228	(409)		
<u>GAS TURBINES</u>						
Upgrade Gas Turbine Plant Life Extension - Hardwoods	1,305	700	705	(600)	-46%	9
Upgrade Glycol Systems - Stephenville	261	2	3	(258)	-99%	10
Upgrade Fuel Tank Farm Controls - Happy Valley	72	8	78	6	8%	
TOTAL GAS TURBINE PLANTS	1,638	710	786	(852)		
TOTAL GENERATION	18,333	5,023	13,736	(4,597)		

NEWFOUNDLAND & LABRADOR HYDRO 2010 CAPITAL EXPENDITURES TRANSMISSION FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2010 (\$000)

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2010	2010	2010	2010	2010	Ref. No.
TERMINAL STATIONS						
Upgrade Great Northern Peninsula Protection - Various Sites	124	45	196	72	58%	
New 25 kV Terminal Station - Labrador City	2,882	1,336	1,693	(1,189)	-41%	11
Upgrade Power Transformers - Various Sites	816	545	913	98	12%	
Upgrade Circuit Breakers - Various Terminal Stations	342	47	501	159	46%	12
Replace Insulators - Various Terminal Stations	399	227	324	(75)	-19%	
Replace Instrument Transformers - Various Sites	197	112	227	30	15%	
Replace Disconnects - Various Sites	199	91	97	(102)	-51%	13
Perform Grounding Upgrades - Various Sites	291	216	272	(19)	-7%	
Upgrade Trailer and Mobile Substation - Bishop's Falls	30	3	151	121	397%	14
Replace Compressed Air Piping and Install Dew Point Monitoring - Holyrood	79	16	19	(60)	-76%	
Replace Surge Arrestors - Various Sites	73	10	72	(1)	-2%	
Install Digital Fault Recorder - Various Sites	166	111	128	(38)	-23%	
Replace Air Compressors - Various Sites	97	83	86	(11)	-11%	
Replace 230 kV Breaker Controls - Massey Drive and Buchans	73	39	51	(22)	-30%	
TOTAL TERMINAL STATIONS	5,768	2,881	4,730	(1,038)		

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2010	2010	2010	2010	2010	Ref. No.
TRANSMISSION						
Upgrade Transmission Line TL-212 - Sunnyside to Linton Lake	1,323	1,068	1,804	481	36%	15
Construct Transmission Line Equipment Off-Loading Areas - Various Sites	990	912	984	(6)	-1%	
Perform Wood Pole Line Management Program - Various Sites	2,308	556	2,501	193	8%	
Replace Guy Wires TL-215 - Doyles to Grand Bay	301	281	326	25	8%	
Upgrade Line TL-244 - Plum Point to Bear Cove	141	0	0	(141)	-100%	16
Upgrade Anchors on C Structures TL-259 - Parson's Pond	353	171	225	(128)	-36%	17
Install Remote Ice Growth Detector Beams - Various Sites	58	54	62	4_	7%	
TOTAL TRANSMISSION	5,474	3,042	5,902	428		
TOOLS AND EQUIPMENT						
Purchase Tools and Equipment Less than \$50,000	33	7	22	(11)		
TOTAL TOOLS AND EQUIPMENT	33	7	22	(11)		
TOTAL TRANSMISSION	11,276	5,930	10,654	(622)		

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2010	2010	2010	2010	2010	Ref. No.
DISTRIBUTION						
Provide Service Extensions - All Service Areas	2,428	1,949	4,855	2,427	100%	18
Upgrade Distribution Systems - All Service Areas	2,572	519	2,299	(273)	-11%	19
Upgrade Line 2 Distribution Feeder - Glenburnie	267	64	110	(157)	-59%	20
Upgrade Distribution Lines - Various Sites	218	67	84	(134)	-61%	21
Replace Poles - Various Sites	1,083	468	1,005	(78)	-7%	
Voltage Conversion - Labrador City	1,089	238	1,525	436	40%	22
Replace Recloser Control Panels - Various Sites	603	189	370	(233)	-39%	23
Upgrade Line 2 Voltage Conversion to 25 kV - Gaultois	82	27	40	(42)	-51%	
Install New Voltage Regulators - Various Sites	170	111	190	20	12%	
TOTAL DISTRIBUTION	8,512	3,632	10,478	1,966		

NEWFOUNDLAND & LABRADOR HYDRO 2010 CAPITAL EXPENDITURES RURAL SYSTEMS FOR THE YEAR QUARTER AND ENDING DECEMBER 31, 2010 (\$000)

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2010	2010	2010	2010	2010	Ref. No.
RURAL GENERATION						
Replace Diesel Units - Norman Bay, Cartwright and Black Tickle	347	109	432	85	24%	
Replace Diesel Units - Norman Bay, Postville and Paradise River	1,304	1,079	1,497	193	15%	24
Replace Switchgear - Cartwright	308	64	412	104	34%	25
Increase Generation Capacity - L'Ance Au Loup	736	215	448	(288)	-39%	26
Replace Diesel Unit 2001 and Engine 566 - Francois	168	11	11	(157)	-93%	27
Replace Diesel Unit 2018 - McCallum	19	10	10	(9)	-48%	
Replace Main Bus Splitter - Postville - (Project Cancelled)	149	0	0	(149)	-100%	28
TOTAL RURAL GENERATION	3,032	1,488	2,810	(222)		

	PUB	4th	Total	Variance	Variance	
	Approved C	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2010	2010	2010	2010	2010	Ref. No.
<u>GENERAL</u>						
Construct New Office/Warehouse/Line Depot Facilities - Happy Valley	528	16	334	(194)	-37%	29
Replace Accom, Septic Sys and Upgrade Plant Communications Sys - Cat Arm	521	164	1,108	587	113%	30
Build New Maintenance Shop - St. Anthony	307	0	316	9	3%	
Upgrade Properties - Port Hope Simpson	71	49	52	(19)	-27%	
Install Fall Protection Equipment at Hydro Facilities - Various Sites	198	103	216	18	9%	
Install Pole Storage Ramps - Various Sites	90	3	78	(12)	-14%	
Legal Survey of Primary Distribution Line Right of Way - Various Sites	65	54	65	(0)	-1%	
Install Waste Oil Storage Tanks - Various Sites	84	43	91	7	8%	
Install Transformer Storage Ramps - Various Sites	89	59	84	(5)	-5%	
Upgrade Accommodations - Norman Bay and Ebbegunbaeg	196	6	302	106	54%	31
Upgrade Fire Protection System - Bishop's Falls	158	86	103	(55)	-35%	
Replace Aviation Fuel Tank and Dispensing Unit - Bishop's Falls	88	18	21	(67)	-76%	
TOTAL GENERAL	2,396	601	2,770	374		

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2010	2010	2010	2010	2010	Ref. No.
METERING						
Purchase Meters and Equipment 2010 - Various Sites	34	30	30	(4)	-13%	
Install Automatic Meter Reading - Various Sites	490	127	390	(100)	-20%	32
Purchase Meters and Equipment 2009 - Various Sites	33	0	33	(0)	0%	
TOTAL METERING	558	157	453	(105)		
TOOLS AND EQUIPMENT						
Replace Off-Road Track Vehicles - Various Sites	685	0	1	(684)	-100%	33
Replace Light-Duty Mobile Equipment - Various Sites	554	8	518	(36)	-6%	
Replace Heavy-Duty Forklift - Unit 9799 - Bishop's Falls	166	0	118	(48)	-29%	
Tools and Equipment Less than \$50,000	232	55	213	(19)	-8%	
TOTAL TOOLS AND EQUIPMENT	1,636	63	850	(786)		
TOTAL RURAL SYSTEMS	16,133	5,941	17,361	1,228		

					Percentage		
	PUB	4th	Total	Variance	Variance		
	Approved	Quarter	Actual	From	From	Variance	
	Budget	Actuals	Expend.	Budget	Budget	Explanation	
	2010	2010	2010	2010	2010	Ref. No.	
INFORMATION SYSTEMS							
SOFTWARE APPLICATIONS							
INFRASTRUCTURE REPLACEMENT							
NEW INFRASTRUCTURE							
Perform Minor Application Enhancements - Hydro Place	121	61	123	2	2%		
Cost Recoveries	(36)	(33)	(42)	(6)	16%		
Work Protection Software Design	71	32	66	(5)	-7%		
Cost Recoveries	(21)	(17)	(22)	(1)	4%		
Upgrade Intranet - Hydro Place	66	60	66	(0)	0%		
Cost Recoveries	(20)	(19)	(23)	(3)	16%		
UPGRADE OF TECHNOLOGY							
Corporate Application Environment - Upgrade Microsoft Products	751	33	562	(189)	-25%	34	
Cost Recoveries	(225)	(33)	(191)	34	-15%		
Upgrade Business Intelligence Toolset Software - Hydro Place	84	40	86	2	3%		
Cost Recoveries	(25)	(23)	(29)	(4)	16%		
TOTAL SOFTWARE APPLICATIONS	765	101	596	(169)			

	PUB	4th	Total	Variance	Percentage Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2010	2010	2010	2010	2010	Ref. No.
COMPUTER OPERATIONS						
INFRASTRUCTURE REPLACEMENT						
PC Replacement Program - Various Sites	406	63	404	(2)	-1%	
Replace Peripheral Infrastructure - Various Sites	222	27	227	5	2%	
Upgrade Enterprise Storage Capacity - Hydro Place	241	64	241	(0)	0%	
Cost Recoveries	(72)	(64)	(82)	(10)	13%	
NEW INFRASTRUCTURE						
Develop Learning Management System Safety Courses - Hydro Place	138	110	139	1	1%	
Cost Recoveries	(41)	(37)	(47)	(6)	14%	
Smart Card Implementation - Various Sites	133	117	133	0	0%	
Cost Recoveries	(40)	(35)	(45)	(5)	13%	
Upgrade Security SCADA Intrusion Prevention System - Hydro Place	62	66	68	6	10%	
Upgrade Security Vulnerability Management System - Hydro Place	81	70	70	(11)	-14%	
Cost Recoveries	(24)	(19)	(24)	0	-2%	
UPGRADE OF TECHNOLOGY						
Upgrade Server Technology Program - Various Sites	197	103	198	1	1%	
Cost Recoveries	(59)	(52)	(67)	(8)	14%	
TOTAL COMPUTER OPERATIONS	1,243	413	1,215	(28)		
TOTAL INFORMATION SYSTEMS	2,008	514	1,811	(197)		

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2010	2010	2010	2010	2010	Ref. No.
TELECONTROL						
NETWORK SERVICES						
INFRASTRUCTURE REPLACEMENT						
Customer Service Application - Hydro Place	780	254	1,210	430	55%	35
Public Address System - Holyrood	1,156	500	540	(616)	-53%	36
Install Fibre Optic Cable - Hinds Lake	683	148	459	(224)	-33%	37
Replace Radomes - Various Sites	212	44	110	(102)	-48%	38
Upgrade Remote Terminal Units - Various Sites	190	(7)	398	208	109%	39
Purchase Tools and Equipment less than \$50,000	109	40	89	(20)	-19%	
NETWORK INFRASTRUCTURE						
Replace Stationary Battery Banks and Chargers - Various Sites	717	315	559	(158)	-22%	40
Replace Network Communications Equipment - Various Sites	131	78	149	18	14%	
Install Mobile Communications - Port Hope Simpson, Charlottetown	208	182	202	(6)	-3%	
UPGRADE OF TECHNOLOGY						
Replace Radio Link with Fiber - Bay d'Espoir	489	32	375	(114)	-23%	41
Upgrade Private Automated Branch Exchange (PABX) - Various Sites	339	344	384	45	13%	
Upgrade Operator Training Simulator - Hydro Place	92	7	10	(82)	-89%	
TOTAL TELECONTROL	5,105	1,937	4,485	(620)		

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2010	2010	2010	2010	2010	Ref. No.
<u>TRANSPORATION</u>						
Replace Vehicles and Aerial Devices 2009 - Various Sites	112	0	28	(84)	-75%	
Replace Light Duty Mobile Equipment Less than \$50,000 - Various Sites	31	0	35	4	12%	
Replace Vehicles and Aerial Devices 2010 - Various Sites	2,156	656	1,997	(159)	-7%	42
TOTAL TRANSPORATION	2,299	656	2,060	(239)		
<u>ADMINISTRATION</u>						
Upgrade System Security 2009 - Various Sites	981	355	1,295	314	32%	43
Purchase Spare Transformer - Hydro Place	21	0	12	(9)	-43%	
Replace Air Conditioning Units 2008 - Hydro Place	50	0	46	(4)	-8%	
Replace Fire Protection Panels - Hydro Place	10	0	8	(2)	-20%	
Remove Safety Hazards - Various Sites	252	160	208	(44)	-18%	
Replace Humidifiers in Air Handling Units - Hydro Place	75	5	14	(61)	-81%	
Purchase Tools and Equipment less than \$50,000	180	62	145	(35)	-19%	
TOTAL ADMINISTRATION	1,570	582	1,728	159		
		•				
TOTAL GENERAL PROPERTIES	10,982	3,689	10,084	(898)		
		•	•	<u> </u>		

					Percentage		
	PUB	4th	Total	Variance	Variance		
	Approved	Quarter	Actual	From	From	Variance	
	Budget	Actuals	Expend.	Budget	Budget	Explanation	
	2010	2010	2010	2010	2010	Ref. No.	
ALLOWANCE FOR UNFORESEEN EVENTS							
Structure Failure TL-208 - Long Harbour	249	3	340	91	37%		
Microwave Radio Site Ice Storm Damage - Four Mile Hill	445	131	320	(125)	-28%	44	
Ice Storm - Southern Labrador	207	191	191	(16)	-8%		
Allowance for Unforeseen Events	793	0	0	(793)			
TOTAL ALLOWANCE FOR UNFORESEEN EVENTS	1,694	325	851	(843)			
PROJECTS APPROVED BY PUB							
CARRYOVER							
Install Neutral Grounding Resistors - Come By Chance	227	0	0	(227)	-100%	45	
Cost Recovery - North Atlantic Refining Limited	(227)	0	0	227			
Upgrade Continuous Emission Monitoring System - Holyrood	697	177	614	(83)	-12%		
Nain Diesel Plant Rehabilitation	1,041	89	117	(924)	-89%	46	
Gas Turbine Refurbishment - Stephenville	2,086	165	1,269	(817)	-39%	47	
Hinds Lake Powerhouse Slope Stabilization	432	465	497	65	15%		
Work Protection Code Elearning Program	135	34	116	(19)	-14%		
<u>NEW</u>							
Voisey's Bay Nickel - Long Harbour Power Supply	3,605	931	1,332	(2,273)	-63%	48	
Cost Recovery - Vale Inco	(3,605)	(931)	(1,332)	2,273			
Replace Fuel Tank - Bay d'Espoir Campsite	120	10	10	(110)	-92%	49	
Confined Space Isolation (Blanks and Blinds) - Holyrood	202	139	139	(63)	-31%		
Replace Unit 565 - Little Bay Islands	18	0	0	(18)	-100%		
TOTAL PROJECTS APPROVED BY PUB	4,731	1,079	2,762	(1,969)			

					Percentage			
	PUB	4th	Total	Variance	Variance			
	Approved	Quarter	Actual	From	From	Variance		
	Budget	Actuals	Expend.	Budget	Budget	Explanation		
	2010	2010	2010	2010	2010	Ref. No.		
NEW PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO								
Replace Generator Unit 2066 - Black Tickle	18	12	18	0	0%			
Replace Domestic Water Pump - Upper Salmon - (Project Cancelled)	26	0	0	(26)	-100%			
Replace Drainage Piping - Stephenvill Gas Turbine	48	29	72	24	50%			
Replace Switch - Oxen Pond Terminal Station	38	0	0	(38)	-100%			
Purchase Test Equipment - Hydro Place	18	15	15	(3)	-17%			
TOTAL PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO	148	56	105	(43)				

PUB-NLH-227, Attachment 1
Page 191 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2010 VARIANCE EXPLANATIONS
GENERATION
FOR THE YEAR ENDING DECEMBER 31, 2010
(Greater than \$100,000)

1. Purchase Spare Stator Windings Unit 2 – Bay d'Espoir

Budget: \$2,711 Actual: \$1,655 Variance: (\$1,056)

This project has been carried over into 2011. When budgetary quotes were received in 2008 for the supply of stator windings, the material cost of the windings was budgeted at \$2.3 million. Between the time the quote was provided and the contract was tendered, the price of copper declined. This, combined with favorable tenders, reduced the material cost of the windings to approximately \$1.5 million. The reduction in material costs also resulted in less interest and overhead cost, and no contingency being required.

2. Replace and Purchase Stator Winding – Bay d'Espoir

Budget: \$4,687 Actual: \$3,143 Variance: (\$1,544)

From the time that budgetary quotes were provided for this project in 2008, and the time the contract was tendered in 2010, the price of copper declined. This, combined with favorable tenders, reduced the material cost of the windings by approximately \$700,000. Conversely, the contract cost for the installation came in approximately \$350,000 higher than quoted. This project has been carried over to 2011 and is expected to be completed for approximately \$500,000 less than budgeted.

PUB-NLH-227, Attachment 1
Page 192 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2010 VARIANCE EXPLANATIONS GENERATION FOR THE YEAR ENDING DECEMBER 31, 2010 (Greater than \$100,000)

3. <u>Install Meteorological Stations 2010 – Various Sites</u> (Project Cancelled)

Budget: \$443 Actual: \$0 Variance: (\$443)

Part of the Install Meteorological Stations project for 2008 approved by Board Order No. P.U. 30 (2007) included the installation of a remote station in the Cat Arm watershed with a snow water equivalent measurement device (snow pillow). This installation of the snow pillow was a first for Hydro and some problems were encountered with communication of the data from the site to Hydro's data collection center in St. John's. Although the gauge has been in place since 2008, difficulties with the satellite communications have prevented the use of this data. The 2010 program was to add more snow pillows (in remote locations in the watersheds of the Victoria, Long Pond, Hinds Lake and Meelpaeg reservoirs), however, because of the communication difficulties experienced with the Cat Arm snow pillow it was decided to cancel the 2010 project and resubmit it when there was certainty that the data collection issues were resolved and that the data received provides the intended benefit of improved inflow forecasting.

4. Replace A/C Units in Control and Communications Rooms - Upper Salmon

Budget: \$197 Actual: \$67 Variance: (\$130)

This project has been carried over into 2011. The equipment supplier failed to approve required modification drawings on time resulting in a ten week delay in the fabrication and delivery of the air conditioning units which did not arrive on site until late December 2010. The budget for this project was prepared based on a supply and install contract, however, the project was executed with owner supply of equipment and installation by a separate contractor thus reducing the overall cost of the project. The cost of the project was reduced by approximately \$41,000 as a result of favorable material and installation prices received during the public tender process. This project will be completed by the end of the first quarter of 2011.

PUB-NLH-227, Attachment 1
Page 193 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2010 VARIANCE EXPLANATIONS
GENERATION
FOR THE YEAR ENDING DECEMBER 31, 2010
(Greater than \$100,000)

5. Condition Assessment and Life Extension Study - Holyrood

Budget: \$1,846 Actual: \$1,278 Variance: (\$568)

This project was carried over into 2011 due to scope changes to include a more detailed condition assessment of the marine terminal, gas turbine plant and the stack breeching on Units 1 and 2. While completing this project, it was recognized that a more in depth analysis on the items listed above should be undertaken as part of this assessment. It was determined that there were sufficient funds within this project in order to complete this additional work therefore this project is still expected to be completed within budget.

6. Replace Programmable Logic Controllers – Holyrood

Budget: \$1,208 Actual: \$1,358 Variance: \$150

This is a multiyear project scheduled to be completed in 2012. The burner management system controls for Units 1 and 2 were replaced during 2010. There were safety related deficiencies in the burner management control systems that were not identified during the preparation of this proposal. The modifications required to correct these deficiencies resulted in an additional \$50,000 for completion and commissioning. As well, the tender for the engineering and supply of the burner management systems and the electrical systems were \$100,000 greater than expected. In addition, the scope of this project has been changed to exclude the replacement of the control systems for the warm air makeup system. There are mechanical issues with this system that have to be addressed therefore it would not be prudent to replace the control systems at this time. Overall, this project is expected to be completed within budget.

PUB-NLH-227, Attachment 1
Page 194 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2010 VARIANCE EXPLANATIONS
GENERATION
FOR THE YEAR ENDING DECEMBER 31, 2010
(Greater than \$100,000)

7. Replace Steam Seal Regulator Unit 1 – Holyrood

Budget: \$335 Actual: \$16 Variance: (\$319)

This is a multiyear project scheduled to be completed in 2011. The original plan for 2010 was to complete the project mechanical design requirements by the beginning of the second quarter and then engage a consultant to complete a pipe stress analysis which would then enable tender preparation and award by the third quarter and construction starting in the fourth quarter. However, due to the system operating conditions (extreme changes in temperature during operation) and piping configuration, the stress analysis required several iterations before acceptable thermal stress levels were achieved. As a result, the stress analysis was not completed until January 2011. The construction tender will now be issued in the first quarter of 2011. Also, the initial plan was to install flow meters in the steam lines that would enable measuring flow rates required for control valve sizing. Unfortunately, this was determined not possible due to the existing piping configuration. This information was later determined by locating another utility that had completed an identical project on a similar turbine to Holyrood Unit 1. As a result, the specification for control and manual isolation valves was not completed and tendered until January 2011. This project is expected to be completed within budget.

8. <u>Install Cold Reheat Condensate Drains and High Pressure Heater Trip Level Units 1 and 3 - Holyrood</u>

Budget: \$231 Actual: \$346 Variance: \$115

After capital budget approval, and during the detailed engineering design, it was determined that the installation of a maintenance platform and a more sophisticated electrical and controls package were required. This resulted in an increase in the cost of the installation contract by \$70,000. This extra work also required an increase to the cost of in-house resources by \$39,000. Also contributing to the increase in installation cost was a reduced unit outage duration which resulted in the contractor having to work overtime shifts to complete the work within the scheduled outage.

PUB-NLH-227, Attachment 1
Page 195 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2010 VARIANCE EXPLANATIONS
GENERATION
FOR THE YEAR ENDING DECEMBER 31, 2010
(Greater than \$100,000)

9. <u>Upgrade Gas Turbine Plant Life Extension – Hardwoods</u>

Budget: \$1,305 Actual: \$705 Variance: (\$600)

This is a multiyear project scheduled to be completed in 2012. A major portion of the 2010 budget for this project was allocated to overhauling one gas turbine engine. The proposal assumed that a plant outage would occur early in the year so that the gas turbine engine could be removed, refurbished and returned to service before winter. The plant outage at Hardwoods did not occur until late in October. This did not allow sufficient time to have the engine overhauled and returned to service prior to the winter operation season. Depending on the outage schedule for 2011 and the degree of overhaul required once the engine is disassembled and inspected, the work planned for 2011 which involves the overhaul of another of the gas turbine engines may be delayed to 2012.

10. <u>Upgrade Glycol System – Stephenville</u>

Budget: \$261 Actual: \$3 Variance: (\$258)

This multiyear project was scheduled to start in 2010 with completion in 2011. Equipment scheduled to be ordered in 2010 has been rescheduled for ordering in the first quarter of 2011 due to unavailability of resources with project completion still anticipated for 2011.

PUB-NLH-227, Attachment 1
Page 196 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2010 VARIANCE EXPLANATIONS TRANSMISSION FOR THE YEAR ENDING DECEMBER 31, 2010 (Greater than \$100,000)

11. New 25 kV Terminal Station – Labrador City

Budget: \$2,882 Actual: \$1,693 Variance: (\$1,189)

This is a multi-year project scheduled to be completed in 2012. There were issues which arose during the acquisition of the land required for the new terminal stations which delayed the finalization of the design and the ordering of equipment. The design and ordering of equipment is ongoing with scheduled completion during the first quarter of 2011. This project is expected to be completed within budget.

12. <u>Upgrade Circuit Breakers – Various Terminal Stations</u>

Budget: \$342 Actual: \$501 Variance: \$159

The original plan for the 2010 Upgrade Circuit Breaker program was to complete five overhauls during 2010. There was an unplanned replacement due to the failure of a 138 kV breaker at Bottom Brook. To help minimize the impact to the overall budget the plan was reduced to two replacements after the breaker failed at Bottom Brook in April. In June, a 230 kV Current Transformer failed at Holyrood Terminal Station that damaged an adjacent breaker, resulting in one phase of breaker B1B11 being replaced. Then in October we experienced a problem with breaker B4B5 at Bay d'Espoir and as a result, this originally deferred breaker overhaul had to be advanced. This action resulted in the cost of this project being approximately \$160,000 greater than budgeted.

13. Replace Disconnects – Various Sites

Budget: \$199 Actual: \$97 Variance: (\$102)

This project has been carried over into 2011. The station post insulator specifications were updated in 2009 however the corresponding disconnect specifications were not updated. This resulted in delivery delays since the supplier had to procure insulators and switches to meet our new specification requirements. The disconnect switches were not delivered until September therefore it was not possible to schedule an outage in 2010 and this project will be completed in 2011.

PUB-NLH-227, Attachment 1
Page 197 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2010 VARIANCE EXPLANATIONS TRANSMISSION FOR THE YEAR ENDING DECEMBER 31, 2010

(Greater than \$100,000)

14. Upgrade Trailer and Mobile Substation – Bishop's Falls

Budget: \$30 Actual: \$151 Variance: \$121

The original budget estimate for this project was based on upgrading the trailer and replacing the circuit breaker of the existing mobile substation. An assessment of the condition of the existing trailer concluded that the trailer was near its maximum loading limits which had contributed to the deflection of its support beams and that the trailer should be replaced.

The purchase of a new trailer required that the power transformer be transferred from the existing trailer, function-tested and re-commissioned for service by a qualified contractor in a certified test shop. Given the need to go to a certified testing and fabrication shop, it was seen as an opportune time to perform other necessary work on the transformer. As a result all bushings cover gaskets (including the top cover), coolers, pumps and pipe work will be replaced. In addition all steel control panels will be replaced with lighter weight aluminum with upgrades to the control systems to meet current Nalcor standards. An additional set of CTs will be installed on the 69 kV winding of the transformer to provide increased versatility for the application of the substation, as this asset is essential to provide service to customers during planned and emergency work.

While replacement of the 25 kV oil filled circuit breaker with a lighter more environmentally friendly vacuum style breaker was included in the budget estimate, additional modifications are required to the breaker control system to connect it to the main control panel of the substation and bring it up to Nalcor standards, which were not budgeted. The tendered bids were all higher than anticipated.

PUB-NLH-227, Attachment 1
Page 198 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2010 VARIANCE EXPLANATIONS
TRANSMISSION
FOR THE YEAR ENDING DECEMBER 31, 2010
(Greater than \$100,000)

15. Upgrade Transmission Line TL-212 – Sunnyside to Linton Lake

Budget: \$1,323 Actual: \$1,804 Variance: \$481

The budget estimate for this project was based on tender pricing received during the 2007 and 2008 construction seasons. The tender pricing was higher than expected resulting in this project being over budget by approximately \$480,000.

16. Upgrade Transmission Line TL-244 – Plum Point to Bear Cove

Budget: \$141 Actual: \$0 Variance: (\$141)

This project was submitted as a multiyear project to be completed in 2011. Due to the unavailability of resources in the Engineering discipline, it was decided to execute and complete this project in a single year, 2011. This project is expected to be completed within budget.

17. Upgrade Anchors on C Structures TL-259 – Parson's Pond

Budget: \$353 Actual: \$225 Variance: (\$128)

The planned scope of this project was to replace existing anchors that were deteriorated due to corrosion. Since anchor components are buried underground, no visual inspection or assessment can be performed at site during the budget preparation. As a result, a worst- case scenario was anticipated in which specially designed concrete gravity based anchors would be utilized to prevent any further deterioration due to corrosion.

During the excavation of the existing anchors, it was determined that the anchors were not as deteriorated as anticipated and it was decided to use standard anchor replacements with rock backfill instead of the concrete anchor design. Therefore, the final project cost was \$128,000 less than budgeted.

PUB-NLH-227, Attachment 1
Page 199 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2010 VARIANCE EXPLANATIONS
RURAL SYSTEMS
FOR THE YEAR ENDING DECEMBER 31, 2010
(Greater than \$100,000)

18. <u>Provide Service Extensions – All Service Areas</u>

Budget: \$2,428 Actual: \$4,855 Variance: \$2,427

The increase in this budget is due to the growth in all areas serviced by Hydro. In the Labrador Interconnected system, there are three new subdivisions being developed in Happy Valley and Sheshatshui with an additional 90 homes being developed in total. Housing developments in the Labrador West area have resulted in an additional 130 new houses planned for that area as well as the connection of the new College of North Atlantic facility. In the Northern region, increased services were required as a result of customers converting from oil fired to electric heating systems. In addition, the interconnection of a wood pellet plant, a saw mill and a high school resulted in additional costs.

19. <u>Upgrade Distribution Systems – All Service Areas</u>

Budget: \$2,572 Actual: \$2,299 Variance: (\$273)

The Upgrade Distribution Systems budget is based on a five year average rather than specifically identified projects. The expenditures for this project were below average in the Labrador region.

20. Upgrade Line 2 Distribution Feeder – Glenburnie

Budget: \$267 Actual: \$110 Variance: (\$157)

This is a four year project and in first year, 2010, it was planned to complete a line assessment and environmental assessment. The environmental assessment cost was less than anticipated due to the limited number of environmental issues which were encountered. Due to other capital work commitments, the line assessment was delayed. The overall project is expected to be completed within budget.

PUB-NLH-227, Attachment 1
Page 200 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2010 VARIANCE EXPLANATIONS
RURAL SYSTEMS
FOR THE YEAR ENDING DECEMBER 31, 2010
(Greater than \$100,000)

21. <u>Upgrade Distribution Lines – Various Sites</u>

Budget: \$218 Actual: \$84 Variance: (\$134)

This is a multiyear project to be completed in 2011 for the communities of Makkovik and Roddickton. The under expenditure in 2010 is due primarily to the Roddickton portion of the project. The first year was designated for an assessment of the line to be completed. This assessment would have provided the necessary information required to order materials for the construction phase in 2011. The assessment was not completed in 2010, due to other work commitments, and therefore materials were not ordered for the project. Although there is an under expenditure for 2010, the project is expected to be completed within budget.

22. <u>Voltage Conversion – Labrador City</u>

Budget: \$1,089 Actual: \$1,525 Variance: \$436

This is a four year project. This first year of this project was designated for the ordering of materials and the upgrade of Harrie Lake Trailer Court to be 25 kV ready. The cost estimate for this project was created prior to an assessment of the line being performed. Once the assessment of the line was completed late in 2009, it was discovered that dual voltage distribution transformers were required to allow for the Harrie Lake 25 kV conversion. Although there is an over expenditure for the budget year 2010, the four-year project is expected to be completed within budget overall.

23. Replace Recloser Control Panels – Various Sites

Budget: \$603 Actual: \$370 Variance: (\$233)

This project has been carried over into 2011 due to the unavailability of resources to complete this work. A cable run is required to the terminal station equipment and the snow must be melted before this work can be completed in June 2011. Repeated recloser installations have decreased the engineering and install/commissioning time required to complete each recloser replacement. This project is expected to be completed under budget.

NEWFOUNDLAND AND LABRADOR HYDRO 2010 VARIANCE EXPLANATIONS RURAL SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 2010 (Greater than \$100,000)

24. Replace Diesel Units – Norman Bay, Postville and Paradise River

Budget: \$1,304 Actual: \$1,497 Variance: \$193

Costs were higher than anticipated on this project for two reasons. Firstly, the budget was prepared in 2007 with cost estimates from a local vendor. The final tendered costs for gensets in 2009 and 2010 were approximately double the 2007 budget quotes, or \$75,000 greater than budgeted. Secondly, the replacement of gensets was planned to take place while the plant remained in operation. This was not possible due to existing equipment constraints and, as a result, temporary generation was required to maintain service to the community while the work was performed. Additional costs of approximately \$96,000 were incurred to rent and transport these gensets, and approximately \$65,000 in labour and material costs to install and later remove them. These increases in cost were partially offset by a decrease in the protection and control equipment costs.

25. Replace Switchgear - Cartwright

Budget: \$308 Actual: \$412 Variance: \$104

Originally, all project engineering work was to be done by Hydro personnel, however, due to resource constraints within Engineering Services, outside technical assistance was required to complete the automation portion of the project. The work outsourced included onsite installation of the automation equipment, commissioning of the switchgear system, and operator training. This increased the project cost by approximately \$65,000. Project construction costs also increased by \$25,000 due to additional changes required for the plant Direct Current (DC) system and remediation of arc flash levels.

26. <u>Increase Generation Capacity – L'Anse Au Loup</u>

Budget: \$736 Actual: \$448 Variance: (\$288)

This project has been carried over into 2011. The mobile transformer has been ordered but due to a longer than expected delivery time is not expected on site in L'Anse Au Loup until mid January of 2011. The new protection and control installations can not take place until after the 2011 winter generation season and will be complete by early fall.

PUB-NLH-227, Attachment 1
Page 202 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2010 VARIANCE EXPLANATIONS
RURAL SYSTEMS
FOR THE YEAR ENDING DECEMBER 31, 2010
(Greater than \$100,000)

27. Replace Diesel Unit 2001 and Engine 566 – Francois

Budget: \$168 Actual: \$11 Variance: (\$157)

Due to a high engineering work load and priorities on other projects already in progress in 2010, this project began later than originally planned. During the design phase it became apparent that arc flash mitigation requirements¹, which were implemented after the project budget was prepared in 2009, would require replacement of the switchgear for unit 566. When replacement of the switchgear was taken into consideration, replacement of the entire genset is the least cost alternative when compared to replacing switchgear and engine only.

As a result of the expanded equipment replacement scope, additional engineering is now required along with longer lead times on equipment delivery. The lead time on a replacement engine was expected to be approximately 12 weeks, whereas, the lead time for a complete genset is 20 to 26 weeks. In addition, with a direct engine replacement, very little engineering time was required, however, a genset and switchgear replacement requires additional engineering effort. The overall impact on the project was to delay replacement of unit 566 from late fall 2010 to late summer of 2011.

28. Replace Main Bus Splitter – Postville (Project Cancelled)

Budget: \$149 Actual: \$0 Variance: (\$149)

The scope of this project was to upgrade the main plant splitter from a 400 amp rating to meet load growth in the community. During the initial development stage of this project, it was determined that the main plant splitter is actually rated at 800 amp which is adequate to meet the load requirements for Postville for the foreseeable future. Therefore this project has been cancelled.

¹Arc flash hazards are given a Hazard Risk Category (HRC) rating. The target for diesel plants is HRC 2 or below. HRC 3 or above has to be reduced to HRC 2 or below and it has been made a requirement to address arc flash issues whenever performing work on or around equipment classified as an arc flash hazard. Stantec report 133530034-R09, Rev. 0 *Arc Flash Hazard analysis Report Francois Diesel Generating Plant*, classifies the Francois diesel plant as HRC 4.

NEWFOUNDLAND AND LABRADOR HYDRO 2010 VARIANCE EXPLANATIONS RURAL SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 2010 (Greater than \$100,000)

29. Construct New Office/Warehouse/Line Depot Facilities – Happy Valley

Budget: \$528 Actual: \$334 Variance: (\$194)

This project has been carried over into 2011. Delays in receiving operating information from the Contractor have delayed the consultant's submission for "LEED" certification which is expected to take 3 to 4 months after acceptable information is received. In addition, there is a secondary coat of asphalt required for the parking lot that cannot be done until summer. This project is expected to be completed within budget.

30. Replace Accommodations, Septic System and Upgrade Plant Communications System – Cat Arm

Budget: \$521 Actual: \$1,108 Variance: \$587

The budget of \$521,000 was carried over from 2009. The foundation, placement of units, electrical, and mechanical pricing for the installation contract for Cat Arm accommodation units was greater than the original budget. It was decided in 2009 to retender the installation contract in 2010 to provide more competition in the tender process; however, only one bid was received. In order to complete the work in time to use the facility in 2010, there was no option but to proceed with the project based on the tendered price. This added approximately \$550,000 to the project cost. The cost benefit analysis was recalculated using updated budgeted cost of \$1.8 million and the installation option remained the least cost alternative as the table below shows:

Cat Arm Accommodations Alternative Comparison Cumulative Net Present Value To The Year 2030						
Cumulative CPW Difference between Alternatives Net Present Alternative and the Value (CPW) Least Cost Alternative						
Construct Accomodations Stay Off-Site	1,887,752 2,533,795	0 646,043				

PUB-NLH-227, Attachment 1
Page 204 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2010 VARIANCE EXPLANATIONS RURAL SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 2010 (Greater than \$100,000)

31. <u>Upgrade Accommodations – Norman Bay and Ebbegunbaeg</u>

Budget: \$196 Actual: \$302 Variance: \$106

The increase in costs is due primarily to the contract price for the building construction at Norman Bay with a number of factors contributing to the increased cost. First, due to the relocation of the new building to the opposite side of the site, additional water line trenching, installation of a new septic system, and cleaning and removal of the old system were required. Secondly, the completion date for the project was advanced making it necessary for the contractor to use additional workers to complete the project within the time allowed. The advance in the completion date was due to additional projects in Norman Bay that required use of the new accommodation building.

32. Install Automatic Meter Reading – Various Sites

Budget: \$490 Actual: \$390 Variance: (\$100)

This project was under budget due to the fact that deployment of a second collector on Fogo Island was not required. All meter readings from both Fogo Island and Change Islands were accessible through the submarine cable from the collector installed at the Farewell Head terminal station. Prior to installation, it was unknown if there would be issues with reception of the signals through the submarine cable therefore two collectors were budgeted.

33. Replace Off-Road Track Vehicles – Various Sites

Budget: \$685 Actual: \$1 Variance: (\$684)

The project has been carried over into 2011. The purchase of the two track units is delayed as a result of component shortages due to the down turn in the economy. The supplier estimates the units will be delivered by the end of March 2011. This project is expected to be completed within budget.

PUB-NLH-227, Attachment 1
Page 205 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2010 VARIANCE EXPLANATIONS
GENERAL PROPERTIES
FOR THE YEAR ENDING DECEMBER 31, 2010
(Greater than \$100,000)

34. <u>Corporate Application Environment – Upgrade Microsoft Products</u>

Budget: \$751 Actual: \$562 Variance: (\$189)

This is a three-year project started in 2010. Due to a lack of resources, one component of the upgrade, Sharepoint, that was originally scheduled to be implemented in 2010, will now be done in 2011. This project is expected to be completed on time and within budget.

35. <u>Customer Service Application – Hydro Place</u>

Budget: \$780 Actual: \$1,210 Variance: \$430

This project was over budget due to the following reasons. Firstly, there was a change in scope in order to address perceived security issues with the web application, as identified by a third party security assessment. This led to additional contract work as well as additional internal labour to implement and test the resulting modified system. Secondly, there was a another scope change in order to purchase hardware spares for the upgraded PBX. This was an unexpected expense in that the original intention was that support for the system, both hardware and software, would be completely outsourced to the vendor with costs to be covered by operating budgets. However, this support model was determined to be prohibitively expensive. As a result, the decision was made to bring support in house for major components of this system, requiring Hydro to purchase its own set of capital spares.

36. <u>Public Address System – Holyrood</u>

Budget: \$1,156 Actual: \$540 Variance: (\$616)

This project has been carried over into 2011. Initially, this project was tendered in 2008/2009 and the tender responses received exceeded the planned budget so it was re-tendered and divided into two parts, design/supply and installation/commissioning. Project costs have risen for the following reasons:

PUB-NLH-227, Attachment 1
Page 206 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2010 VARIANCE EXPLANATIONS
GENERAL PROPERTIES
FOR THE YEAR ENDING DECEMBER 31, 2010
(Greater than \$100,000)

36. Public Address System - Holyrood (cont'd.)

- The requirement for On-Site Representatives during construction, arising out of the corporation's
 Contractor Safety Management program, were not included in the original budget as this requirement did not exist when the budget was prepared;
- Site specific requirements (rigid conduit, additional devices for infill, higher than estimated cable quantities) have increased material costs; and,
- Labour costs for installation are higher than originally estimated.

As a result, the overall cost of this project is \$660,000 greater than originally budgeted.

37. <u>Install Fibre Optic Cable – Hinds Lake</u>

Budget: \$683 Actual: \$459 Variance: (\$224)

This project has been carried over into 2011. The completion date has been extended to 2011 due to the delayed delivery of the Alcatel Multiplexers and the training, installation and commissioning of the OC3 Multiplexing equipment. This project is expected to be completed within budget.

38. Replace Radomes – Various Sites

Budget: \$212 Actual: \$110 Variance: (\$102)

Costs for the project were lower than budgeted for two reasons. First, several of the radomes originally planned to be replaced were located at Four Mile Hill microwave site and were damaged in the March ice storm and subsequently replaced as part of the emergency capital project for that site. Second, the contract for supply and installation of radomes was much lower than budgeted, the budget being based on previous years' experience.

PUB-NLH-227, Attachment 1
Page 207 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2010 VARIANCE EXPLANATIONS
GENERAL PROPERTIES
FOR THE YEAR ENDING DECEMBER 31, 2010
(Greater than \$100,000)

39. <u>Upgrade Remote Terminal Units (RTUs) – Various Sites</u>

Budget: \$190 Actual: \$398 Variance: \$208

This project has been carried over into 2011. The outage associated with the Bay d'Espoir portion of this project for the Bay d'Espoir Unit 7 RTU installation was originally scheduled for October 2010. However, the overall outage planning schedule resulted in the outage being scheduled in June 2010. As a result of this change, engineering and operational overtime was required in order to meet the revised outage dates. Also, during commissioning of the new RTU, an issue with the GE Energy Systems RTU hardware and firmware integration caused equipment failure, which resulted in unanticipated labour and travel being required to develop and implement a temporary fix. GE Energy Services were requested to replicate the failure and provide a permanent solution. However, during this time, GE Energy Services moved their facilities from Calgary, Alberta to Markham, Ontario which resulted in a number of the key players on GE's side changing which caused a delay in the investigation and the development of a permanent solution. A solution was finally proposed by GE in December, 2010 which will require additional labour, material and travel in 2011 to implement. This project is estimated to be \$275,000 greater than budgeted.

40. Replace Stationary Battery Banks and Chargers – Various Sites

Budget: \$717 Actual: \$559 Variance: (\$158)

The total actual cost for this project was less than budget for the following reasons. Internal labour was less than anticipated due to increased efficiencies realized from lessons learned during last year's project. The same internal personnel were leveraged for this year's project. The original budget assumed two distinct installation and commission phases but we were able to complete both activities concurrently. This decreased the labour portion of the installation and commission activities by approximately \$106,000. This resulted in less interest and overhead costs as well as no contingency being required.

PUB-NLH-227, Attachment 1
Page 208 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2010 VARIANCE EXPLANATIONS
GENERAL PROPERTIES
FOR THE YEAR ENDING DECEMBER 31, 2010
(Greater than \$100,000)

41. Replace Radio Link with Fiber – Bay d'Espoir

Budget: \$489 Actual: \$375 Variance: (\$114)

Both the engineering design and installation of the equipment required less time than budgeted reducing the cost of these activities by approximately \$70,000. This resulted in less interest and overhead costs as well as no contingency being required.

42. Replace Vehicles and Aerial Devices 2010 – Various Sites

Budget: \$2,156 Actual: \$1,997 Variance: (\$159)

This project has been carried over into 2011. The project was intended to be submitted as two year project due to the difficulty in ordering and receiving all the equipment in one calendar year. Inadvertently, only the first year of this project was submitted and approved. The equipment delivery is expected in mid March 2011.

43. Upgrade System Security 2009 – Various Sites

Budget: \$981 Actual: \$1,295 Variance: \$314

This is a multiyear project started in 2009 to be completed in 2010. It has now been carried over into 2011. There were three major components to this project during 2010; fencing upgrades, card access installation and security camera installation, all at various locations throughout the Hydro system. The fencing upgrades and card access installations have been completed. Security camera installations were scheduled to be completed by late December however, due to complications with the installations at several sites in November and December, and equipment delivery delays from the supplier, the work had to be rescheduled for the first quarter of 2011.

PUB-NLH-227, Attachment 1 Page 209 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2010 VARIANCE EXPLANATIONS
OTHER APPROVED FUNDS
FOR THE YEAR ENDING DECEMBER 31, 2010
(Greater than \$100,000)

44. <u>Microwave Radio Site Ice Storm Remediation – Four Mile Hill</u>

Budget: \$445 Actual: \$320 Variance: (\$125)

This project was initiated on an emergency basis to repair ice damage sustained at Hydro's Four Mile Hill site in March, 2010. The storm destroyed two microwave antennas and damaged ice shields, fire protection and the building's roof. At the time the budgetary proposal was developed, it was difficult to assess the extent of the damage without removing the roof membrane and external siding. In order to restore service as soon as possible, a budget proposal was generated to investigate the extent of the damage and effect repairs.

Detailed aerial and structural assessments of the tower were required in order to provide an accurate budget for the project. The contract for the tower repairs included the material costs. Fortunately the costs were lower than anticipated.

45. Install Neutral Grounding Resistors – Come by Chance (*Project Cancelled*)

Budget: \$227 Actual: \$0 Variance: (\$227)

This project was to be fully contributed by Hydro's customer North Atlantic Refining Limited (NARL) and was approved by Board Order No. P.U. 26 (2008). Hydro was waiting for NARL to approve the cost recovery expenditure for this project; however, this has been ongoing for 3 years and has still not been approved. Therefore Hydro will cancel this project and will resubmit when NARL makes the decision to proceed.

46. Nain Diesel Plant Rehabilitation

Budget: \$1,041 Actual: \$117 Variance: (\$924)

Protection and control labour resources were not available to start the Nain automation work until November 2010 due to previous commitments in Ramea and Cartwright. This work is currently on-going. It has been subsequently determined that insurance proceeds estimated at \$884,000 will reduce this years estimated expenditure of \$1,041,000.

PUB-NLH-227, Attachment 1
Page 210 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2010 VARIANCE EXPLANATIONS
OTHER APPROVED FUNDS
FOR THE YEAR ENDING DECEMBER 31, 2010
(Greater than \$100,000)

47. <u>Gas Turbine Refurbishment – Stephenville</u>

Budget: \$2,086 Actual: \$1,269 Variance: (\$817)

The actual cost of the overhaul work performed by Rolls Wood Group was approximately \$709,000 less than budgeted. Due to the nature of gas turbine engine overhaul work, it is impossible to fully understand the scope of refurbishment required until the engine is disassembled and inspected. The required refurbishment work was less than originally anticipated resulting in an overall cost savings to this project.

48. <u>Voisey's Bay Nickel – Long Harbour Power Supply</u>

Budget: \$3,605 Actual: \$1,332 Variance: (\$2,273)

This is a multiyear project started in 2010 with completion due in 2012. The delayed signing until May 2010 of the Contribution in Aid of Construction agreement with Vale resulted in no deliveryof terminal station electrical equipment in 2010. Additional delays occurred when a tender award for transmission line towers had to be cancelled due to supplier issues. Project activity has restarted with a new tender award and a review of the project indicates it will be completed within budget and on time.

PUB-NLH-227, Attachment 1
Page 211 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2010 VARIANCE EXPLANATIONS OTHER APPROVED FUNDS FOR THE YEAR ENDING DECEMBER 31, 2010 (Greater than \$100,000)

49. Replace Fuel Tank – Bay d'Espoir Campsite

Budget: \$120 Actual: \$10 Variance: (\$110)

There are two main contributing factors that caused this project to carry over into 2011. The project was an unbudgeted capital project that was initially submitted to the PUB in early August, with approval received the last week of September. Once the tenders for fabrication and supply of the tank and fuelling cabinet were received in October, there was an 8 to 10 week delivery on most of the major components of the fuelling cabinet. This delivery schedule coupled with the planned holiday shut down of the fabrication plant meant it was impossible to meet the original delivery of mid December. All components were received by the end of December, and fabrication of the cabinet and tank is expected to be completed by the end of the first quarter, 2011.

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL BUDGET VERSUS ACTUAL EXPENDITURES 2001 – 2011 AS AT DECEMBER 31 (\$000)

Table 1: CAPITAL BUDGET VERSUS ACTUAL EXPENDITURES 2001 – 2010

		Actual		Percentage	
Year	Budget	Expenditures	Variance	Variance	
2001	55,897	47,501	8,396	15.0%	
2002	44,660	40,217	4,443	9.9%	
2003	36,122	32,506	3,616	10.0%	
2004	31,435	27,984	3,451	11.0%	
2005	47,760	33,952	13,808	28.9%	
2006	49,024	41,217	7,807	15.9%	
2007	43,304	35,669	7,635	17.6%	
2008	53,579	46,246	7,333	13.7%	
2009	61,544	54,152	7,392	12.0%	
2010	63,297	55,553	7,744	12.2%	

The variances shown in Table 1 above include amounts related to the carryover of projects from year to year. Total variances actual to budget for completed projects are 1% for 2009 and 2010. These are well within acceptable ranges; however, the number of individual projects with variances greater than \$100,000 in 2009 and 2010 tend to be greater than in previous years, due to continued high volatility in commodity prices and a trend of increasing costs associated with the strong labour market currently being experienced in the province.

The variances presented in Table 1 are almost entirely due to under-spending as a result of not completing all projects approved each year. It is anticipated that some carryover of projects will occur in most years as there may be unavoidable reasons for delays in project completion, for example, system constraints which are precipitated by changes in hydrology, equipment failures, etc.

In spite of strong continued effort by Hydro's project execution team, and largely due to an imbalance between project workload and resource allocation in support of project execution, capital budget versus actual expenditure percentage variance continues to be greater than 10%. Recently there have been organizational structure changes within both Hydro and Nalcor with the establishment of a Project Execution and Technical Services division that should lead to improved delivery and compliance of capital projects in future.

NEWFOUNDLAND AND LABRADOR HYDRO 2010 CARRYOVER REPORT FOR THE YEAR ENDING DECEMBER 31, 2010 (\$000)

	PUB		Total			
	Approved	Revised	Actual		Variance	Original
	Budget	Budget	Expend.	Carryover	Explanation	Completion
Project Name	2010	2010	2010	Amount	Ref. No.	Year
Developed Control (Note to Note the Note No	4.607	4.402	2 4 42	4 040	2	2040
Purchase Spare Stator Windings Units 2 - Bay d'Espoir	4,687	4,192	3,143	1,049	2	2010
Replace A/C Units in Control and Communications Room - Upper Salmon	197	156	67	89	3	2010
Replace 21 Inch Metal Cutting Lathe	80	80	0	80		2010
Condition Assessment and Life Extension Study - Holyrood	1,846	1,846	1,278	568	5	2010
Install Warm Air Make-up Access - Holyrood	170	306	219	87		2010
Replace Disconnects - Various Sites	199	199	97	102	13	2010
Replace 230 kV Breaker Controls - Massey Drive and Buchans	73	73	51	22		2010
Replace Recloser Control Panels - Various Sites	603	385	370	15	23	2010
Increase Generation Capacity - L'Ance Au Loup	736	736	448	288	26	2010
Construct New Office/Warehouse/Line Depot Facilities - Happy Valley	528	528	334	194	29	2010
Replace Aviation Fuel Tank and Dispensing Unit - Bishop's Falls	88	94	21	73		2010
Replace Off Road Track Vehicles - Various Sites	685	685	1	684	33	2010
Tools and Equipment Less than \$50,000	232	44	29	15		2010
Public Address System - Holyrood	1,156	1,548	540	1,008	36	2010
Install Fibre Optic Cable - Hinds Lake	683	683	459	224	37	2010
Upgrade Remote Terminal Units - Various Sites	190	468	398	70	39	2010
Replace Vehicles and Aerial Devices 2010 - Various Sites	2,156	2,830	1,997	833	42	2010
Upgrade System Security 2009 - Various Sites	981	1,436	1,295	141	43	2010
Replace Humidifiers in Air Handling Units - Hydro Place	75	75	14	61		2010
Replace Fuel Tank - Bay D'Espoir Campsite	120	120	10	110	49	2010
Replace Switch - Oxen Pond Terminal Station	38	38	0	38		2010

NEWFOUNDLAND AND LABRADOR HYDRO 2010 CARRYOVER REPORT FOR THE YEAR ENDING DECEMBER 31, 2010

(\$000)

Project Name	PUB Approved Budget 2010			Carryover Amount	Variance Explanation Ref. No.	Original Completion Year
Replace Pumphouse Motor Control Centres - Holyrood	50	50	99	(49)		2011
Replace Steam Seal Regulator Unit 1 - Holyrood	335	335	16	319	7	2011
· · · · · · · · · · · · · · · · · · ·	112	333 112	28		/	
Replace Diesel Fire Pump - Holyrood				84	0	2011
Upgrade Gas Turbine Plant Life Extension - Hardwoods	1,305	1,305	705	600	9	2011
Upgrade Glycol Systems - Stephenville	261	261	3	258	10	2011
Replace Compressed Air Piping and Install	70	70	40	60		
Dew Point Monitoring - Holyrood	79	79	19	60	4.4	2011
New 25 kV Terminal Station - Labrador City	2,882	2,882	1,693	1,189	11	2011
Upgrade Trailer and Mobile Substation - Bishop's Falls	30	517	151	366	14	2011
Upgrade Line TL-244 - Plum Point to Bear Cove	141	141	0	141	16	2011
Upgrade Line 2 Distribution Feeder - Glenburnie	267	267	110	157	20	
Upgrade Distribution Lines - Various Sites	218	218	84	134	21	2011
Upgrade Line 2 Voltage Conversion to 25 kV - Gaultois	82	82	40	42		2011
Replace Diesel Unit 2001 and Engine 566 - Francois	168	168	11	157	27	2011
Replace Diesel Unit 2018 - McCallum	19	19	10	9		2011
Corporate Application Environment - Upgrade Microsoft Products	751	751	562	189	34	2011
Cost Recoveries	(225)	(225)	(191)	(34)		
Nain Diesel Plant Rehabilitation	1,041	1,041	118	923		2011
Confined Space Isolation (Blanks & Blinds) - Holyrood	202	202	139	63		2011
Replace Unit 565 - Little Bay Islands	18	18	0	18		2011
Replace Programmable Logic Controllers - Holyrood	1,208	1,543	1,358	185	6	2012
Voltage Conversion - Labrador City	1,089	1,089	1,525	(436)	22	2012
Voisey's Bay Nickel - Long Harbour Power Supply	3,605	3,605	1,332	2,273	48	2012
Cost Recovery - Vale Inco	(3,605)	(3,605)	(1,332)	(2,273)		
•	25,556	27,377	17,251	10,126		



Hydro Place. 500 Columbus Drive. P.O. Box 12400. St. John's. NL Canada A1B 4K7 t. 709.737.1400 f. 709.737.1800 www.nlh.nl.ca

March 8, 2012

The Board of Commissioners of Public Utilities Prince Charles Building 120 Torbay Road, P.O. Box 21040 St. John's, NL A1A 5B2

ATTENTION: Ms. Cheryl Blundon

Director of Corporate Services & Board Secretary

Dear Ms. Blundon:

Re: 2011 Capital Expenditures and Carryover – Year End

Pursuant to Board Order No. P.U. 38 (2010), p. 19, item 3, enclosed please find the original and eight copies of Newfoundland and Labrador Hydro's (Hydro) report on 2011 Capital Expenditures and Carryover for the year ended December 31, 2011.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

Geoffrey P. Young Senior Legal Counsel

GPY/mmcd Encls.

A REPORT TO THE BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

CAPITAL EXPENDITURES AND CARRYOVER REPORT

For Year Ending December 31, 2011

March 2012



NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL EXPENDITURES AND CARRYOVER REPORT

For Year Ending December 31, 2011

TABLE OF CONTENTS

CAPITAL EXPENDITURES OVERVIEW	1
CAPITAL EXPENDITURES SUMMARY BY CATEGORY:	
Generation	2
Transmission	2
Rural Systems	2
General Properties	3
Other Approved Funds	3
CAPITAL EXPENDITURES DETAIL:	
Generation	4
Transmission	6
Rural Systems	8
General Properties	11
Other Approved Funds	14
VARIANCE EXPLANATIONS (GREATER THAN \$100,000 and 10% Variance from Budget):	
Generation	15
Transmission	30
Rural Systems	37
General Properties	49
Other Approved Funds	52
CAPITAL BUDGET VERSUS EXPENDITURES 2001 - 2010	54
CARRYOVER REPORT	56
REMOVE SAFETY HAZARDS	59
APPENDIX A - PUB-NLH-36	A1
APPENDIX B - CA-NLH-9	В1
APPENDIX C - IC-NLH-1	C1

NEWFOUNDLAND and LABRADOR HYDRO 2011 CAPITAL EXPENDITURES OVERVIEW FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2011 (\$000)

	PUB Approved Budget 2011	4th Quarter Actuals 2011	Total Actual Expend. 2011	Variance From Budget 2011
GENERATION	15,560	3,912	11,500	(4,060)
TRANSMISSION	14,889	4,804	15,516	628
RURAL SYSTEMS	23,729	9,381	23,245	(484)
GENERAL PROPERTIES	9,911	2,923	8,734	(1,176)
ALLOWANCE FOR UNFORESEEN EVENTS	1,000	579	2,001	1,001
PROJECTS APPROVED BY PU BOARD	2,267	915	2,054	(213)
PROJECTS UNDER \$50,000 APPROVED BY HYDRO	99	57	66	(33)
TOTAL CAPITAL BUDGET	67,454	22,571	63,116	(4,338)

2011 Capital Budget Approved by Board Order No. P.U. 38 (2010) ¹	55,043
Carryover Projects 2010 to 2011	10,126
New Project Approved by Board Order No. 29 (2010)	450
New Project Approved by Board Order No. 34 (2010)	1,602
New Project Approved by Board Order No. 20 (2011)	134
2011 New Projects under \$50,000 Approved by Hydro	99
TOTAL APPROVED CAPITAL BUDGET	67,454

¹ Due to rounding, there was a slight difference in the amount approved by the PU Board for the 2011 Capital Budget. The amount approved was \$55,046.

NEWFOUNDLAND and LABRADOR HYDRO 2011 CAPITAL EXPENDITURES SUMMARY BY CATEGORY FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2011 (\$000)

	PUB	4th	Total	Variance
	Approved	Quarter	Actual	From
	Budget	Actuals	Expend.	Budget
	2011	2011	2011	2011
GENERATION				
HYDRO PLANTS	5,371	629	4,139	(1,232)
THERMAL PLANT	7,637	2,083	5,555	(2,082)
GAS TURBINES	2,552	1,200	1,806	(746)
TOTAL GENERATION	15,560	3,912	11,500	(4,060)
TRANSMISSION				
TERMINAL STATIONS	11,384	4,401	11,205	(179)
TRANSMISSION LINES	3,504	403	4,311	807
TOTAL TRANSMISSION	14,889	4,804	15,516	628
RURAL SYSTEMS				
DISTRIBUTION	14,633	5,850	15,994	1,361
GENERATION	5,218	1,732	4,001	(1,217)
PROPERTIES	623	96	512	(111)
METERING	637	116	417	(220)
TOOLS AND EQUIPMENT	2,618	1,587	2,321	(297)
TOTAL RURAL SYSTEMS	23,729	9,381	23,245	(484)

NEWFOUNDLAND and LABRADOR HYDRO 2011 CAPITAL EXPENDITURES SUMMARY BY CATEGORY FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2011 (\$000)

	PUB Approved Budget 2011	4th Quarter Actuals 2011	Total Actual Expend. 2011	Variance From Budget 2011
GENERAL PROPERTIES				
INFORMATION SYSTEMS	2,189	586	2,184	(5)
TELECONTROL	3,930	1,601	3,600	(330)
TRANSPORTATION	3,184	460	2,072	(1,112)
ADMINISTRATIVE	609	276	878	269
TOTAL GENERAL PROPERTIES	9,911	2,923	8,734	(1,176)
ALLOWANCE FOR UNFORESEEN EVENTS	1,000	579	2,001	1,001
PROJECTS APPROVED BY PU BOARD	2,267	915	2,054	(213)
PROJECTS UNDER \$50,000 APPROVED BY HYDRO	99	57	66	(33)
TOTAL CAPITAL BUDGET	67,454	22,571	63,116	(4,338)

NEWFOUNDLAND and LABRADOR HYDRO 2011 CAPITAL EXPENDITURES GENERATION FOR THE YEAR QUARTER AND ENDING DECEMBER 31, 2011 (\$000)

	PUB Approved Budget 2011	4th Quarter Actuals 2011	Total Actual Expend. 2011	Variance From Budget 2011	Percentage Variance From Budget 2011	Variance Explanation Ref. No.
HYDRO PLANT						
Replace Static Excitation System - Upper Salmon,						
Holyrood and Hinds Lake	1,214	17	18	(1,196)	-99%	1
Upgrade Burnt Dam Access Road Phase 2 - Bay d'Espoir	998	148	1,095	97	10%	
Upgrade Generating Station Service Water System - Cat Arm	360	218	349	(11)	-3%	
Upgrade Intake Gate Controls - Bay d'Espoir	352	27	507	155	44%	2
Upgrade Burnt Dam Spillway Structure - Bay d'Espoir	258	44	161	(97)	-38%	
Purchase Spare Disconnect - Bay d'Espoir	176	40	73	(103)	-58%	3
Replace Automatic Transfer Switches - Bay d'Espoir and						
Hinds Lake	156	5	54	(102)	-65%	4
Purchase Hydro Meteorological Stations - Various Sites	113	0	0	(113)	-100%	5
Replace Fire Alarm System - Hinds Lake	109	14	21	(88)	-81%	
Install Compressor for Frazil Ice Removal - Upper Salmon		0				
Changed to Granite Canal	69	28	60	(9)	-13%	
Upgrade Public Safety Around Dams and Waterways -		0				
Bay d'Espoir	49	31	48	(1)	-3%	
Purchase Spare Stator Windings Units 2 - Bay d'Espoir	1,049	7	1,344	295	28%	6
Replacement of Fuel Tank - Bay d'Espoir Campsite	110	2	103	(7)	-6%	
Replace A/C Units in Control and Communications Room - Upper Salmon	89	(5)	74	(15)	-17%	
Replace 21 Inch Metal Cutting Lathe	80	0	77	(3)	-4%	
Purchase Tools and Equipment Less than \$50,000	186	53	155	(31)	-17%	
TOTAL HYDRO PLANT	5,371	629	4,139	(1,232)		

NEWFOUNDLAND and LABRADOR HYDRO 2011 CAPITAL EXPENDITURES GENERATION FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2011 (\$000)

	PUB Approved Budget 2011	4th Quarter Actuals 2011	Total Actual Expend. 2011	Variance From Budget 2011	Percentage Variance From Budget 2011	Variance Explanation Ref. No.
THERMAL PLANT						
Replace Programmable Logic Controllers - Holyrood	932	212	877	(55)	-6%	
Upgrade Hydrogen System - Holyrood	1192	206	281	(911)	-76%	7
Replace Pumphouse Motor Control Centres - Holyrood	950	236	1,091	141	15%	8
Upgrade Synchronous Condenser Unit 3 - Holyrood	484	142	147	(337)	-70%	9
Upgrade Forced Draft Fan Ductwork Unit 1 - Holyrood	843	62	416	(427)	-51%	10
Replace Relay Panels Unit 3 - Holyrood	277	69	139	(138)	-50%	11
Replace Boiler Blowdown Tanks - Holyrood	750	202	743	(7)	-1%	
Upgrade Electrical Equipment - Holyrood	188	76	187	(1)	-1%	
Replace Steam Seal Regulator Unit 2 - Holyrood	175	32	54	(121)	-69%	12
Replace Steam Seal Regulator Unit 1 - Holyrood	533	78	318	(215)	-40%	13
Replace Diesel Fire Pump - Holyrood	279	(26)	156	(123)	-44%	14
Install Weatherhoods for Vent Fans - Holyrood	208	542	549	341	164%	15
Purchase Laser Alignment Equipment - Holyrood	79	31	31	(48)	-61%	
Condition Assessment and Life Extension Study - Holyrood	568	104	416	(152)	-27%	16
Install Warm Air Make-up Access - Holyrood	87	48	81	(6)	-7%	
Purchase Tools and Equipment Less than \$50,000	94	69	69	(25)	-26%	
TOTAL THERMAL PLANT	7,637	2,083	5,555	(2,082)		
GAS TURBINES						
Upgrade Gas Turbine Plant Life Extension - Hardwoods	1,924	1,052	1,215	(709)	-37%	17
Upgrade Glycol Systems - Stephenville	557	97	539	(18)	-3%	
Upgrade Gas Turbine Operator Console - Stephenville	72	51	52	(20)	-27%	
TOTAL GAS TURBINE PLANTS	2,552	1,200	1,806	(746)		
TOTAL GENERATION	15,560	3,912	11,500	(4,060)		

NEWFOUNDLAND and LABRADOR HYDRO 2011 CAPITAL EXPENDITURES TRANSMISSION FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2011 (\$000)

	PUB Approved Budget 2011	4th Quarter Actuals 2011	Total Actual Expend. 2011	Variance From Budget 2011	Percentage Variance From Budget 2011	Variance Explanation Ref. No.
TERMINAL STATIONS						
Upgrade Terminal Stations to 25 kV - Labrador City	4689	2,817	6,262	1,573	34%	18
Perform Grounding Upgrades - Various Sites	321	120	288	(33)	-10%	
Upgrade Substation - Wabush	459	4	14	(445)	-97%	19
Upgrade Power Transformers - Various Sites	866	217	329	(537)	-62%	20
Upgrade Station Reliability and Safety - Rocky Harbour	435	(1)	5	(430)	-99%	21
Replace 69 kV SF6 Breakers - St. Anthony Airport	490	25	499	9	2%	
Replace Breaker, Structures and Disconnects - Hawke's Bay	687	267	340	(347)	-51%	22
Replace Compressed Air System - Bay d'Espoir	84	56	87	3	4%	
Replace 230 kV Circuit Breaker - Sunnyside	41	5	8	(33)	-81%	
Upgrade Trailer and Mobile Substation - Bishop's Falls	834	36	895	61	7%	
Replace Compressed Air Piping and Install Dew Point Monitoring -						
Holyrood	477	200	552	75	16%	
Replace Insulators - Various Sites	401	247	512	111	28%	23
Upgrade Air Blast Circuit Breakers - Various Sites	334	(37)	297	(37)	-11%	
Replace Disconnects - Various Sites	295	316	408	113	38%	24
Replace Compressor, Dryer and Air Piping Header System -						
Corner Brook Frequency Converter Station	280	28	147	(133)	-48%	25
Replace Instrument Transformers - Various Sites	199	15	149	(50)	-25%	
Install Alternate Station Services - Stony Brook and Massey Drive	86	6	6	(80)	-93%	
Replace Digital Fault Recorder - Bay d'Espoir	169	28	72	(97)	-57%	
Replace Surge Arresters - Various Sites	75	7	67	(8)	-10%	
Voisey's Bay Nickel - Long Harbour Power Supply	10,600	4,137	10,338	(262)	-2%	
Cost Recovery - Vale Inco	(10,600)	(4,137)	(10,338)	262		
Replace Disconnects - Various Sites	102	44	205	103	101%	26
Replacement of Switch B5B2-2, Oxen Pond Terminal Station	38	0	50	12	32%	
Replace 230 kV Breaker Controls - Massey Drive and Buchans	22	1	13	(9)	-41%	
TOTAL TERMINAL STATIONS	11,384	4,401	11,205	(179)		

NEWFOUNDLAND and LABRADOR HYDRO 2011 CAPITAL EXPENDITURES TRANSMISSION FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2011 (\$000)

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2011	2011	2011	2011	2011	Ref. No.
TRANSMISSION LINES						
Perform Wood Pole Line Management Program - Various Sites	2,019	125	2,219	200	10%	
Replace Guy Wires TL-215 - Doyles to Grand Bay	289	9	465	176	61%	27
Upgrade Line TL-244 - Plum Point to Bear Cove	1,196	269	1,627	431	36%	28
TOTAL TRANSMISSION LINES	3,504	403	4,311	807		
TOTAL TRANSMISSION	14,889	4,804	15,516	628		

NEWFOUNDLAND and LABRADOR HYDRO 2011 CAPITAL EXPENDITURES RURAL SYSTEMS FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2011 (\$000)

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2011	2011	2011	2011	2011	Ref. No.
DISTRIBUTION						
Voltage Conversion - Labrador City	3,065	1,327	2,932	(133)	-4%	
Upgrade L2 Distribution Feeder - Glenburnie	735	201	418	(317)	-43%	29
Provide Service Extensions - All Service Areas	3,385	1,998	5,591	2,206	65%	30
Upgrade Distribution Systems - All Service Areas	2,499	1,238	3,401	902	36%	31
Upgrade Distribution Lines - Roddickton and Makkovik	1,779	162	1,160	(619)	-35%	32
Upgrade Distribution Systems - Rigolet, Happy Valley and Francois	1,068	398	614	(454)	-42%	33
Replace Poles - Various Sites	882	357	985	103	12%	34
Upgrade Line 2 Voltage Conversion to 25 kV - Gaultois	553	(1)	590	37	7%	
Replace Substation Infrastructure - Burgeo	128	3	7	(121)	-95%	35
Install Voltage Regulators - Conne River and L'Anse au loup	293	81	118	(175)	-60%	36
Replace Recloser Control Panels (2011) - Various Sites	232	168	178	(54)	-23%	
Replace Recloser Control Panels (2010) - Various Sites	15	(82)	0	(15)	-100%	
TOTAL DISTRIBUTION	14,633	5,850	15,994	1,361		

NEWFOUNDLAND and LABRADOR HYDRO 2011 CAPITAL EXPENDITURES RURAL SYSTEMS FOR THE YEAR QUARTER AND ENDING DECEMBER 31, 2011 (\$000)

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2011	2011	2011	2011	2011	Ref. No.
GENERATION	•					_
Perform Arc Flash Remediation - Various Sites	430	81	108	(322)	-75%	37
Replace Fuel Storage Facility - Postville	2,007	988	1,835	(172)	-9%	
Replace Diesel Unit 2001 and Engine 566 - Francois	607	187	466	(141)	-23%	38
Replace Diesel Unit 2018 - McCallum	430	243	371	(59)	-14%	
Replace Mini Hydro Turbine - Roddicton	87	11	11	(76)	-87%	
Install Sequence of Events Monitor in Diesel Plant -						
Port Hope Simpson	155	7	7	(148)	-95%	39
Replace Fuel Storage Tank - Francois	131	107	139	8	6%	
Upgrade Fuel Storage - Norman Bay	114	8	95	(19)	-17%	
Upgrade Plant Overhead Crane Lifting System - Mary's Harbour	47	25	31	(16)	-33%	
Nain Diesel Plant Rehabilitation	923	333	1,237	(526)	-57%	40
Cost Recovery - Insurance Claim	0	(344)	(840)	0		
Increase Generation Capacity - L'Anse Au Loup	288	86	541	253	88%	41
TOTAL GENERATION	5,218	1,732	4,001	(1,217)		

NEWFOUNDLAND and LABRADOR HYDRO 2011 CAPITAL EXPENDITURES RURAL SYSTEMS FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2011 (\$000)

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2011	2011	2011	2011	2011	Ref. No.
<u>PROPERTIES</u>						
Install Fall Protection Equipment - Various Sites	198	67	213	15	7%	
Legal Survey of Primary Distribution Line Right of Way - Various Sites	79	1	5	(74)	-94%	
Install Waste Oil Storage Tank - St. Lewis	79	(2)	78	(1)	-1%	
Construct New Office/Warehouse/Line Depot Facilities -						
Happy Valley	194	30	130	(64)	-33%	
Replace Aviation Fuel Tank and Dispensing Unit - Bishop's Falls	73	0	86	13	18%	
TOTAL PROPERTIES	623	96	512	(111)		
<u>METERING</u>						
Install Automatic Meter Reading - Labrador City and						
Port au Choix	451	69	237	(214)	-47%	42
Purchase Meters, Equipment and Tanks - Various Sites	186	47	180	(6)	-3%	
TOTAL METERING	637	116	417	(220)		
TOOLS AND EQUIPMENT						
Replace Off Road Track Vehicles - Bishop's Falls and Fogo	494	377	404	(90)	-18%	
Replace Light Duty Mobile Equipment - Various Sites	757	466	582	(175)	-23%	43
Purchase Excavators - Bishop's Falls	361	339	339	(22)	-6%	
Purchase Tools and Equipment Less than \$50,000 (2011)	183	59	174	(9)	-5%	
Purchase Tools and Equipment Less than \$50,000 (2010)	87	50	83	(4)	-5%	
Purchase Portable Dissolved Gas Analysis Unit - Bishop's Falls	52	44	44	(8)	-15%	
Replace Off Road Track Vehicles - Bishop's Falls and Whitbourne	684	252	695	11	2%	
TOTAL TOOLS AND EQUIPMENT	2,618	1,587	2,321	(297)		
TOTAL RURAL SYSTEMS	23,729	9,381	23,245	(484)		

NEWFOUNDLAND and LABRADOR HYDRO 2011 CAPITAL EXPENDITURES GENERAL PROPERTIES FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2011 (\$000)

	DUD	ALL	Tatal	Marianaa	Percentage	
	PUB	4th	Total	Variance -	Variance -	
	Approved	Quarter	Actual	From	From	Variance
	Budget 2011	Actuals 2011	Expend. 2011	Budget 2011	Budget 2011	Explanation Ref. No.
INFORMATION CYCTERIC		2011	2011	2011	2011	Kei. No.
INFORMATION SYSTEMS						
SOFTWARE APPLICATIONS						
NEW INFRASTRUCTURE						
Perform Minor Application Enhancements - Hydro Place	121	38	121	0	0%	
Cost Recoveries	(39)	(12)	(39)	0		
UPGRADE OF TECHNOLOGY						
Corporate Application Environment - Upgrade Microsoft Products	864	253	860	(43)	-5%	
Cost Recoveries	(237)	(81)	(275)	0		
Replace iSeries Computer and Upgrade Operating System						
- Hydro Place	643	103	641	(2)	0%	
Cost Recoveries	(206)	(33)	(206)	0		
TOTAL SOFTWARE APPLICATIONS	1,147	268	1,102	(45)		
COMPUTER OPERATIONS						
INFRASTRUCTURE REPLACEMENT						
PC Replacement Program - Hydro Place	404	76	422	19	5%	
Replace Peripheral Infrastructure - Various Sites	258	85	276	18	7%	
Upgrade Enterprise Storage Capacity - Hydro Place	227	78	226	0	0%	
Cost Recoveries	(73)	(25)	(72)	0		
NEW INFRASTRUCTURE						
Develop Learning Management System Courses - Hydro Place	123	112	124	0	0%	
Cost Recoveries	(40)	(36)	(40)	0		
UPGRADE OF TECHNOLOGY						
Upgrade Server Technology Program - Hydro Place	209	41	214	4	2%	
Cost Recoveries	(67)	(13)	(68)	0		
TOTAL COMPUTER OPERATIONS	1,042	318	1,082	40		
TOTAL INFORMATION SYSTEMS	2,189	586	2,184	(5)		

NEWFOUNDLAND and LABRADOR HYDRO 2011 CAPITAL EXPENDITURES GENERAL PROPERTIES FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2011 (\$000)

					Percentage	
	PUB	4th	Total	Variance	Variance	
	Approved	Quarter	Actual	From	From	Variance
	Budget	Actuals	Expend.	Budget	Budget	Explanation
	2011	2011	2011	2011	2011	Ref. No.
TELECONTROL						
NETWORK SERVICES						
INFRASTRUCTURE REPLACEMENT						
Replace MDR 6000 Microwave Radio (West) - Various Sites	72	24	28	(44)	-61%	
Refurbish Microwave Site - Deer Lake	207	90	114	(93)	-45%	
Replace Radomes - Various Sites	196	54	102	(94)	-48%	
Purchase Tools and Equipment less than \$50,000	86	36	36	(50)	-58%	
Public Address System - Holyrood	1,008	356	1,206	198	20%	44
Install Fibre Optic Cable - Hinds Lake	224	10	117	(107)	-48%	45
Upgrade Remote Terminal Units - Various Sites	70	(18)	95	25	36%	
NETWORK INFRASTRUCTURE						
Replace Battery Banks and Chargers - Various Sites	978	558	872	(106)	-11%	46
Replace Network Communications Equipment - Various Sites	667	265	669	2	0%	
UPGRADE OF TECHNOLOGY						
Install Tower Ice Protection - Chapel Hill Microwave Site	294	199	231	(63)	-21%	
Replace Telephone Keyset - Wabush	80	12	84	5	6%	
Upgrade Site Facilities - Various Sites	48	15	46	(2)	-4%	
TOTAL TELECONTROL	3,930	1,601	3,600	(330)		

NEWFOUNDLAND and LABRADOR HYDRO 2011 CAPITAL EXPENDITURES GENERAL PROPERTIES FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2011 (\$000)

PUB	4.1				
	4th	Total	Variance	Variance	
Approved	Quarter	Actual	From	From	Variance
Budget	Actuals	Expend.	Budget	Budget	Explanation
2011	2011	2011	2011	2011	Ref. No.
2,351	457	1,254	(1,097)	-47%	47
833	3	818	(15)	-2%	
3,184	460	2,072	(1,112)		
252	142	240	(12)	-5%	
76	16	18	(58)	-76%	
79	7	44	(35)	-44%	
141	110	527	386	274%	48
61	1	49	(12)	-20%	
609	276	878	269		
9,911	2,923	8,734	(1,176)		
	2,351 833 3,184 252 76 79 141 61 609	Budget 2011 Actuals 2011 2,351 457 833 3 3,184 460 252 142 76 16 79 7 141 110 61 1 609 276	Budget 2011 Actuals 2011 Expend. 2011 2,351 457 1,254 833 3 818 3,184 460 2,072 252 142 240 76 16 18 79 7 44 141 110 527 61 1 49 609 276 878	Budget 2011 Actuals 2011 Expend. 2011 Budget 2011 2,351 457 1,254 (1,097) 833 3 818 (15) 3,184 460 2,072 (1,112) 252 142 240 (12) 76 16 18 (58) 79 7 44 (35) 141 110 527 386 61 1 49 (12) 609 276 878 269	Budget 2011 Actuals 2011 Expend. 2011 Budget 2011 Page 2011

NEWFOUNDLAND and LABRADOR HYDRO 2011 CAPITAL EXPENDITURES OTHER APPROVED FUNDS FOR THE QUARTER AND YEAR ENDING DECEMBER 31, 2011 (\$000)

	PUB Approved Budget 2011	4th Quarter Actuals 2011	Total Actual Expend. 2011	Variance From Budget 2011	Percentage Variance From Budget 2011	Variance Explanation Ref. No.
ALLOCATION FOR UNFORESEEN EVENTS						
Increase Generation Capacity - Charlottetown	1,000	60	1,482	482	48%	49
Ice Storm - Baie Verte Peninsula	0	519	519	519	100%	50
Allocation for Unforeseen Events	0	0	0	0		
TOTAL ALLOCATION FOR UNFORESEEN EVENTS	1,000	579	2,001	1,001		
PROJECTS APPROVED BY PU BOARD CARRYOVER Confined Space Isolation (Blanks and Blinds) - Holyrood Replace Unit 565 - Little Bay Islands NEW Upgrade Stack Breeching Unit 1 - Holyrood	1,665 468 134	415 228 272	1,330 452 272	(335) (16) 138	-20% -3% 103%	51 52
TOTAL PROJECTS APPROVED BY PU BOARD	2,267	915	2,054	(213)		
NEW PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO Replace Domestic Service Water Pump in Powerhouse	28	10	10	(10)	-64%	
Upper Salmon	26 26	28	32	(18) 6	-04% 25%	
Replace Generator Unit 2073 - Port Hope Simpson Purchase Crown Land - Mary's Harbour	20 5	0	52	(0)	-6%	
Replace Gas/Diesel Fuel Storage Tank - Cat Arm		19	19	(0)	12%	
Replace Engine 2062 - Grey River	23	0	0	(23)	-100%	
TOTAL PROJECTS LESS THAN \$50,000 APPROVED BY HYDRO	99		66	(33)	-100/0	
10 MET NOTES DE LOS MINIT POSSOS MET NOTES DE MIDIO				(33)		

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERATION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

Although this is a 2011 Capital Variance Report, Hydro has explained the variances in context of the full project since many of the variances pertain to multi-year projects. Any differences in the approved annual cash flows compared to the amounts shown in the tables below are due to carry over amounts from the previous year.

1. Replace Static Excitation System – Upper Salmon, Holyrood and Hinds Lake

Budget: \$1,214 Actual: \$18 Variance: (\$1,196)

This is a three year project from 2011 to 2013 to replace static excitation systems at Upper Salmon, Holyrood and Hinds Lake. The initial project schedule and estimated cost are listed in the table below.

Year	Activity	Cost (\$000)
2011	Design and Installation of the Static Excitation System – Upper Salmon	1,214.3
2012	Design and Installation of the Static Excitation System – Holyrood Unit 3	1,528.0
2013	Design and Installation of the Static Excitation System – Hinds Lake	1,366.8
	Total	\$4,109.1

The overall project scope, budget and completion date are unchanged.

In the first quarter of 2011, a thorough analysis of the project execution plan was undertaken. A review of updated vendor delivery times and outage schedules, and consideration of a failure event for the Hinds Lake excitation system, led to an adjustment to the project execution plan. Installation of the Hinds Lake excitation system was advanced from 2013 to 2012; installation of the Upper Salmon excitation system was deferred from 2011 to 2013; and installation of the Holyrood excitation system was unchanged. The updated cash flow is shown in the table below.

Year	Activity	Cost (\$000)
2011A	Design and tender for all three excitation systems.	17.5
2012	Install Excitation Systems – Hinds Lake and Holyrood Unit 3	2,872.3
2013	Install Excitation System – Upper Salmon	1,219.3
	Total	\$4,109.1

NEWFOUNDLAND AND LABRADOR HYDRO

2011 VARIANCE EXPLANATIONS GENERATION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

1. Replace Static Excitation System – Upper Salmon, Holyrood and Hinds Lake (cont'd.)

Progress is on pace with the new schedule. The equipment supply contracts for the three excitation systems are in the tendering stage and are expected to be awarded in the first quarter of 2012. Installation has been incorporated into the 2012 and 2013 work plans.

2. Upgrade Intake Gate Controls – Bay d'Espoir

Budget: \$352 Actual: \$507 Variance: \$155

This is a two year project from 2011 to 2012 to upgrade the electrical controls at the Bay d'Espoir Intake Gates 1, 2 and 3, including the establishment of the supporting communications network between Intakes 1, 2, 3 and 4 and Powerhouse 1. The original budgeted project cost by year is shown in the table below.

Year	Activity	Cost (\$000)
2011	Upgrade gate controls at one Intake Structure and establish communications network	352.3
2012	Upgrade gate controls at two Intake Structures	468.0
	Total	\$820.3

The overall project scope and completion date are unchanged and the scope of work for 2011 is complete.

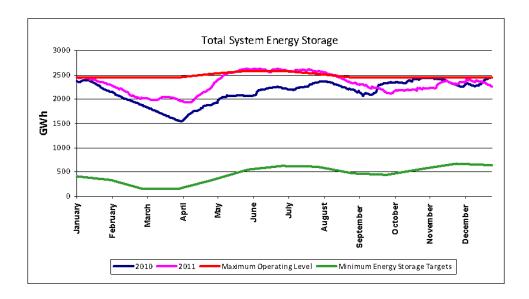
In 2011, design and procurement were completed on schedule and on budget, and construction commenced during the planned summer outage. Part way through construction, however, Hydro had to change the outage schedule due to exceptionally high inflows into the Bay d'Espoir Reservoir System. The inflows during July 2011 were the highest in Hydro's sixty-year record and surpassed the previous July maximum set in 1996 by four percent as shown in the graph below. With the high reservoir levels, the required outage would have increased the risk of spilling water. To protect rate payer interests, Hydro decided to defer the balance

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERATION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

2. <u>Upgrade Intake Gate Controls – Bay d'Espoir</u> (cont'd.)

of the planned work until reservoir levels subsided (to reduce spill potential). The project team shifted focus to designing, installing and commissioning temporary gate controls, which was accomplished, and the units were released for service in July 2011. The required unit outages were secured in September 2011, at which time the project team remobilized, removed the temporary controls, and completed the original planned work.



The requirement for temporary controls and remobilization led to an increase in the project budget. The table below shows the actual expenditures for 2011 and the updated cash flow for 2012, resulting in a new project total budget:

Year	Cost (\$000)
2011A	507.0
2012	495.4
Total	\$1,002.4

Hydro conducted a lessons learned exercise on the 2011 portion of this project. Through this exercise, Hydro has identified an opportunity to enhance aspects of its project risk management processes. Enhancements are being implemented early in 2012 and will be applied to the 2012 work for this project.

PUB-NLH-227, Attachment 1
Page 235 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERATION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

3. <u>Purchase Spare Disconnect – Bay d'Espoir</u>

Budget: \$176 Actual: \$73 Variance: (\$103)

This is a single year project to engage a vendor to design, construct and supply a spare unit disconnect switch for Bay d'Espoir. The project scope has not changed but the project schedule will carry over into 2012. The work was initially tendered without response. Hydro retendered after an effort to identify qualified bidders and was successful in engaging a vendor at a price that was within the budget. The retendering, combined with the vendor's failure to meet their promised delivery schedule, led to this project being carried into 2012. The switch design is complete and fabrication is in progress. Delivery is anticipated in 2012 with a revised project cost of \$132,734 which is approximately 25 percent under budget.

4. Replace Automatic Transfer Switches – Bay d'Espoir and Hinds Lake

Budget: \$156 Actual: \$54 Variance: (\$102)

This was a single year project to replace automatic transfer switches at Hinds Lake and Bay d'Espoir Powerhouse 2 in 2011. The planned scope of work was completed on budget and on schedule for Bay d'Espoir Powerhouse 2. Regarding Hinds Lake, it was discovered in the project planning phase that the available off-the-shelf automatic transfer switches could not provide the functionality required at Hinds Lake. A technical solution that is substantially different has since been identified, a new scope of work developed, and a preliminary estimate prepared. The approved budget was insufficient to execute the work for Hinds Lake. Accordingly, Hydro has cancelled the Hinds Lake portion of this project. A separate project proposal with the new scope of work will be prepared for consideration by the Board as part of Hydro's 2013 Capital Budget Application.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERATION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

5. <u>Purchase Hydro Meteorological Stations – Various Sites</u>

Budget: \$113 Actual: \$0 Variance: (\$113)

This project has been cancelled. The project was to take over management responsibility of three existing hydro meteorological stations that are presently managed by Environment Canada, through a partnership with the provincial Department of Environment and Conservation (DEC). In the second quarter of 2011, DEC asserted its authority under the Water Resources Act to require Hydro to continue with the existing arrangement in cooperation with DEC and Environment Canada.

6. Purchase Spare Stator Windings Unit 2 – Bay d'Espoir

Budget: \$1,049 Actual: \$1,344 Variance: \$295

This was a one year project in 2010 to install spare windings on Bay d'Espoir Unit 2 and procure one set of spare windings for future installation on Bay d'Espoir Units 1, 3 or 4. The project is complete and there was no change to the scope. The original budget of \$4,687,100 was revised in 2010 to \$4,191,900. The project carried over into 2011 due to late delivery of the spare windings. The forecast final cost is \$4,487,687, which is seven percent over the revised budget, but four percent below the original estimate.

7. <u>Upgrade Hydrogen System - Holyrood</u>

Budget: \$1,192 Actual: \$281 Variance: (\$911)

This is a two year project to upgrade the hydrogen gas system at Holyrood. The original proposed project cost and activity by year is shown in the table below.

Year	Activity	Cost (\$000)
2011	Design, procure and start construction of a hydrogen electrolyzer, low pressure hydrogen bulk storage tanks, and three hydrogen gas control panels	1,191.9
2012	Complete construction; procure and install automatic hydrogen venting systems on generating Units 2 and 3, and replace the manual gas control valves and piping	800.4
	Total	\$1,992.3

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERATION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

7. <u>Upgrade Hydrogen System – Holyrood</u> (cont'd.)

The overall project scope, budget and completion date are unchanged.

As a part of Hydro's overall efforts to improve project execution during the planning phase of this project in early 2011, the project execution plan was reviewed and adjusted to reduce the risk of impacting plant reliability. The focus in 2011 was changed to achieving a more complete engineering design of the new system and ordering all long lead items. These objectives were achieved in 2011. The focus in 2012 will be developing a detailed construction plan and completing the construction and commissioning. The revised cash flow is as follows:

Voor	A ativity	Cost
Year	Activity	(\$000)
2011A	Design and order long lead items	281.2
2012	Construction and commissioning	1,711.1
	Total	\$1,992.3

8. Replace Pumphouse Motor Control Centres - Holyrood

Budget: \$950 Actual: \$1,091 Variance: \$141

This is a two year project scheduled to be completed in 2011, but which will carry over into 2012 with an 11 percent increase in the total budget. The carry over and budget increase are a result of the original design and associated technical specification not including replacement of the relay controls required for operation of the pump house equipment. The new MCC panels, which had already been procured, did not include space for relay controls. As a result, separate relay control panels had to be designed, procured and installed. This design was conducted during construction and the relay panels were successfully incorporated into the system for one of the three generating units. The delays, however, prevented Hydro from completing the work for the other two generating units in 2011, causing the carry-over into 2012. Remaining work is integrated into the 2012 work plan.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERATION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

8. Replace Pumphouse Motor Control Centres – Holyrood (cont'd.)

Both Hydro and the engineering consultant engaged for this project reviewed their respective quality control processes as to the design omission and met to share lessons learned. One of the outcomes of that review was to obtain agreement by the consultant to cover a significant portion of the cost for the incremental scope of work.

The original and revised budget estimate by year is shown in the table below. The credit from the engineering consultant is included in the revised figures.

	Original	Revised
Year	Cost	Cost
	(\$000)	(\$000)
2010	50.0	99.5
2011	998.6	561.3
2012	-	508.0
Total	\$1,048.6	\$1,168.8

9. <u>Upgrade Synchronous Condenser Unit 3 – Holyrood</u>

Budget: \$484 Actual: \$147 Variance: (\$337)

This is a two year project to perform modifications to the Holyrood Generating Unit 3 synchronous condenser to reduce vibration levels during operation. The original cash flow by year is shown in the table below.

Voor	Cost		
Year	(\$000)		
2011	483.6		
2012	405.5		
Total	\$889.0		

The overall project scope, budget and completion date are unchanged.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERATION FOR THE YEAR ENDING DESCRIPTION 21, 2011

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

9. <u>Upgrade Synchronous Condenser Unit 3 – Holyrood</u> (cont'd.)

There has been a revision to the project execution plan affecting the cash flow. Hydro engaged a specialist vendor in 2011 to design and supply the equipment for this project. The sole source engagement took longer than anticipated to reach an agreement that allows for performance guarantees. Some of the progress payments that were forecast to occur in 2011 have moved into 2012, but there is no impact on delivery of the overall project. The updated cash flow is shown in the table below.

Year	Cost (\$000)
2011A	147.0
2012	742.0
Total	\$889.0

10. <u>Upgrade Forced Draft Fan Ductwork Unit 1 - Holyrood</u>

Budget: \$843 Actual: \$416 Variance: (\$427)

This was a one year project to upgrade the forced draft fan ductwork on Unit 1, which was carried over into 2012 with a budget increase from \$843,000 to \$1,497,941 due to exceptionally higher than estimated construction contract cost. The schedule delay was a result of Hydro taking the additional time needed to reduce contract cost and to confirm that the higher cost was warranted.

The design and procurement phases of this project were delivered on budget and on schedule; however, initial tendering of the installation work produced an evaluated low bid that was 212 percent higher than the budgeted cost. The work was not awarded at this stage. To improve pricing through the benefits of scale, Hydro packaged this work with other approved work for Holyrood and retendered. This tender included optional pricing for construction in 2011 and separate optional pricing for construction in 2012.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERATION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

10. <u>Upgrade Forced Draft Fan Ductwork Unit 1 – Holyrood</u> (cont'd.)

Hydro conducted a critical review of the project before proceeding. A cost benefit analysis of three alternatives was studied: (1) complete the project in 2011 with construction during an exceptional unit outage in the shoulder season prior to the winter availability period; (2) complete the project in 2012 with construction during the planned unit outage; and (3) terminate the project. The analysis was conducted in the same manner as that used in the submission under the 2011 Capital Budget Application, with the exceptions that updated project costs were used and a more conservative assumption was made regarding the probability of failure. In the original analysis, it was assumed that failure of the ductwork would occur in 2018 for the status quo alternative. In this updated analysis, a more conservative assumption was made that the probability of failure for the remainder of the study period is 50%. The results are summarized in the table below. The analysis clearly demonstrates that it is prudent to complete the project at the higher total project cost in 2012, on the basis of mitigation of the risk of failure and energy savings from a reduced load on the forced draft fans.

Holyrood - Upgrade Unit 1 Forced Draft Fan (FDF) Ductwork Alternative Comparison Cumulative Net Present Value To The Year 2020		
Alternatives	Cumulative Net Present Value (CPW)	CPW Difference between Alternative and the Least Cost Alternative
(1) Modify FDF Ductwork In 2011(2) Modify FDF Ductwork In 2012(3) Status Quo (Terminate	1,787,683 850,017	937,666 0
Project)	1,572,911	722,894

Hydro awarded the construction contact in 2011 and has incorporated the project into the 2012 work plan, for project completion in November 2012.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERATION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

11. Replace Relay Panels Unit 3 - Holyrood

Budget: \$277 Actual: \$139 Variance: (\$138)

This is a two year project to replace the existing hardwired relay logic infrastructure contained in the three relay panels on Unit 3 with a distributed control system (DCS). The original cash flow by year is shown in the table below.

Year	Activity	Cost (\$000)
2011	Design and DCS programming	277.1
2012	Installation and commissioning	553.6
	Total	\$830.7

The overall project scope and budget are unchanged. There has been a revision to the design phase of the project execution plan affecting the cash flow. The execution plan for the construction phase is being reviewed and project completion may be delayed.

This project includes an extensive engineering planning phase to compile and field verify the termination schedules and to develop control logic diagrams, from which a vendor will design and program new controls equipment. The field verification step is crucial; proceeding without accurate termination schedules would introduce high risk of project re-work and may lead to technical issues affecting unit reliability. In 2011, the termination schedules were assembled from existing drawings and field verification commenced during planned outages. The discrepancies between the drawings and actual field conditions resulted in additional termination schedule field checks and revisions are required in 2012. Hydro was therefore not in a position in 2011 to engage a vendor for design and programming. Hydro is reviewing the impact of this delay on the construction phase of the project and some of the construction may carry over into 2013. When field verification is complete, Hydro will provide the Board with a revised project schedule, budget and cash flow with the 2013 Capital Budget Application.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERATION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

11. Replace Relay Panels Unit 3 – Holyrood (cont'd.)

The revised cash flow by year, subject to further revision in 2012, is shown in the table below.

Year	Cost
	(\$000)
2011A	139.4
2012	691.3
Total	\$830.7

12. Replace Steam Seal Regulator Unit 2 - Holyrood

Budget: \$175 Actual: \$54 Variance: (\$121)

This is a two year project to replace the existing hydraulic steam seal regulator on Unit 2 with two pneumatically operated steam pressure control valves. The original budgeted cash flow by year is shown in the table below.

Year	Activity	Cost (\$000)
2011	Design and DCS programming	175.0
2012	Installation and commissioning	438.4
	Total	\$613.4

The project completion date is unchanged.

The original project execution plan included ordering of the control valves in 2011. As a measure to mitigate project risk, there was a deliberate delay in ordering the valves until experience was gained for identical valves on the similar steam seal regulator project for Holyrood Unit 1 that were scheduled to be installed and commissioned in 2011. The valve procurement delay will not impact overall project completion.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERATION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

12. Replace Steam Seal Regulator Unit 2 – Holyrood (cont'd.)

The overall cost of this project will increase to \$794,600. During detailed design in 2011, it was determined that the replacement of the pressure safety valve, associated discharge piping and pipe supports would be required in order to provide adequate steam venting for the new steam seal regulator system.

The revised budget estimate by year is shown in the table below.

Year	Cost
	(\$000)
2011A	53.7
2012	740.9
Total	\$794.6

13. Replace Steam Seal Regulator Unit 1 – Holyrood

Budget: \$533 Actual: \$318 Variance: (\$215)

This is a two year project that was scheduled to be completed in 2011. The original budget is shown below.

Year	Cost
	(\$000)
2010	335.0
2011	213.7
Total	\$548.7

The project is carried into 2012 and the total cost of this project has increased to \$658,900 with the breakdown by year as shown below.

Year	Cost
	(\$000)
2010A	16.1
2011A	315.5
2012	327.3
Total	\$658.9

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERATION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

13. Replace Steam Seal Regulator Unit 1 – Holyrood (cont'd.)

The construction contract was awarded in 2011 in time for the planned outage. Shortly after the award, the contractor submitted a revised schedule that extended the work beyond the planned outage window. The contractor was unable to revise their schedule to meet the outage requirements. The contract was terminated and retendered for execution in 2012. The work has been incorporated into the 2012 work plan.

The overall cost of this project will increase to \$658,900. As outlined in Item 12 – Replace Steam Seal Regulator Unit 2, during detailed design, it was determined that the replacement of the pressure safety valve, associated discharge piping and pipe supports would be required in order to provide adequate steam venting for the new steam seal regulator system.

14. Replace Diesel Fire Pump – Holyrood

Budget: \$279 Actual: \$156 Variance: (\$123)

This is a two year project to replace the diesel fire pump. The original budget is shown below.

Year	Cost
	(\$000)
2010	111.9
2011	195.4
Total	\$307.3

The project scope is unchanged.

The design and procurement phases of this project were delivered on budget. Initial tendering of the installation work resulted in an evaluated low bid that was 182 percent higher than the budgeted cost. The work was not awarded at this stage. To improve pricing through the benefits of scale, Hydro packaged this work with other approved work for Holyrood and retendered to attract additional competitive bidders. This was successful in that the evaluated low bid on the second tender was \$93,700 less than the evaluated low bid for the first tender call. The decision to retender meant that the 2011 outage window would be missed.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERATION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

14. Replace Diesel Fire Pump - Holyrood (cont'd.)

Hydro awarded the contract for construction in 2012 and the work has been incorporated into 2012 work plan.

The revised budget is shown below.

Year	Cost
	(\$000)
2010A	27.9
2011A	155.8
2012	191.5
Total	\$375.2

15. <u>Install Weatherhoods for Vent Fans - Holyrood</u>

Budget: \$208 Actual: \$549 Variance: \$341

This was a one year project to replace weatherhoods on the powerhouse ventilation fans.

The project was completed in 2011 and the scope was unchanged.

The design and procurement phases of this project were delivered on budget. Initial tendering of the installation work resulted in an evaluated low bid that was 420 percent higher than the budgeted cost. The work was not awarded at this stage. To improve pricing through the benefits of scale, Hydro packaged this work with other approved work for Holyrood and retendered to attract additional competitive bidders. Hydro conducted a review of the project justification at this stage, and confirmed that the project was justified on the basis of documented air quality concerns in the powerhouse, and the associated health risk to workers. Hydro awarded the construction contract and adjusted the 2011 work plan to complete the work in the fourth quarter of 2011. The work was successfully completed.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERATION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

16. Condition Assessment and Life Extension Study - Holyrood

Budget: \$568 Actual: \$416 Variance: (\$152)

This was a two year project to conduct a condition assessment for Holyrood, scheduled to be completed in 2010; however, it was carried into 2011 to complete more detailed condition assessment of the marine terminal, gas turbine plant and the stack breeching on Units 1 and 2. The project is complete and the total cost at completion was eight percent under budget.

17. <u>Upgrade Gas Turbine Plant Life Extension - Hardwoods</u>

Budget: \$1,924 Actual: \$1,215 Variance: (\$709)

This is a three year project to upgrade the Gas Turbine at Hardwoods. The original budget is as follows.

Year	Activity	Cost (\$000)
2010	Refurbish end B gas turbine equipment. Site retrofits and upgrades.	1,304.5
2011	Refurbish end A gas turbine equipment. Site retrofits and upgrades.	
2012	Refurbish generator and exciter. Site retrofits and upgrades.	
	Total	\$5,994.7

The scope of this project remains unchanged and the project is expected to be completed within budget.

The original project execution plan allowed for the overhaul of one gas turbine engine in each of the first two years of the project. As a result of the first engine not being completed in 2010, the plan was revised to complete one engine in 2011 and the second engine in 2012. The revised cash flow for this project is shown in the table below.

Year	Cost
	(\$000)
2010A	704.5
2011A	1,214.6
2012	4,075.6
Total	\$5,994.7

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS TRANSMISSION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

18. Upgrade Terminal Stations to 25 kV – Labrador City

Budget: \$4,689 Actual: \$6,262 Variance: \$1,573

The original budget was submitted as a three year project to construct two new 46/25 kV terminal stations. Each station will have two new 46/25 kV, 15/20/25 MVA power transformers, new 46 kV and 25 kV electrical equipment, and new control buildings. The budget estimate by year is shown in the table below.

Year	Cost
	(\$000)
2009	283.2
2010	3,894.8
2011	5,812.6
Total	\$9,990.6

The budget for this project was previously increased to \$12,650,000 and the 2012 expenditure has been adjusted to incorporate the change in the overall budget. Also, see PUB-NLH-36 (Appendix A) in the Newfoundland and Labrador Hydro 2012 Capital Budget Application.

Year	Cost
	(\$000)
2009A	100.8
2010A	1,693.5
2011A	6,262.4
2012	4,593.3
Total	\$12,650.0

This project was estimated in 2008 based on market conditions at the time and using standard escalation indices for future year expenditures. The market conditions realized in Labrador West in the past 24 months have been atypical, driven by strong economic activity in the area. The outcome is an escalation beyond Hydro's standards in contracts, materials and labour.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS TRANSMISSION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

19. Upgrade Substation - Wabush

Budget: \$459 Actual: 14 Variance: (\$445)

This is a two year project to upgrade the Wabush substation. Detailed engineering design, outside substation civil works and equipment delivery were to be completed in 2011 with the substation electrical equipment installation and upgrades completed in 2012. The budget estimate by year is shown in the table below.

Year	Cost
	(\$000)
2011	459.3
2012	626.4
Total	\$1,085.7

The scope of this project remains unchanged; however the final cost of this project budget is subject to tender pricing. Demand for labour resources in Labrador West has significantly increased since original submission, thus it is expected that project cost will rise.

The work completed in 2011 included the line inspections and identification of material requirements to allow for preparation of the contract for completion of the work in 2012. Contract preparation is ongoing and will be tendered in the first quarter of 2012. The revised project cash flow is shown in the table below.

Year	Cost (\$000)
2011A	14.3
2012	1,071.4
Total	\$1,085.7

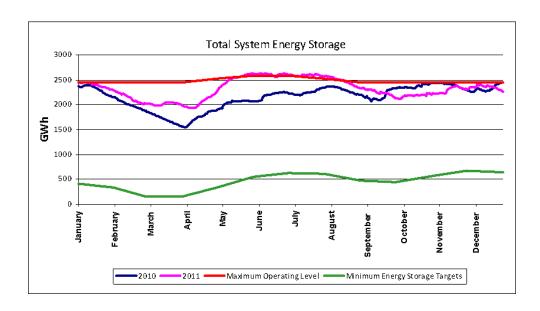
NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS TRANSMISSION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

20. <u>Upgrade Power Transformers – Various Sites</u>

Budget: \$866 Actual: \$329 Variance: (\$537)

This is a single year repeating project that Hydro applies for on an annual basis. The primary reasons for reduced spending on this project in 2011 were a reduced outage window for planned work in Bay d'Espoir and technical difficulties with bushing replacements. Exceptionally high inflows into the Bay d'Espoir reservoir system prompted increased hydraulic production from Bay d'Espoir Generating Station, resulting in a decreased outage window and thus a necessary reduction in planned work scope as illustrated in the graph below. Due to the unavailability of direct replacements for bushings, there was a need to resolve technical issues related to installation of bushings procured in 2010, and in procurement and installation of bushings in 2011. This resulted in less work being completed than planned. Additionally, this reduced work scope resulted in less overhead costs being applied and no contingency being required.



NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS TRANSMISSION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

21. Upgrade Station Reliability and Safety – Rocky Harbour

Budget: \$435 Actual: \$5 Variance: (\$430)

This is a two year project to perform a general upgrade to the Rocky Harbour Terminal Station. The detailed design engineering and equipment delivery was to be completed in 2011 with the outside civil work and electrical equipment installation completed in 2012. The budget estimate for this project is shown in the table below.

Year	Cost
	(\$000)
2011	434.8
2012	360.1
Total	\$794.9

During the project detail design phase, it was discovered that the original approach to executing the work was not correct, requiring reevaluation of the execution plan, which will likely have budget and schedule implications. The revised budget and schedule will be included in the Status Report on the 2012 Capital Expenditures to June 30 as part of the 2013 Capital Budget Application.

22. Replace Breaker, Structures and Disconnects – Hawke's Bay

Budget: \$687 Actual: \$340 Variance: (\$347)

This was a single year project to replace the 69 kV circuit breaker B7 L21 and its auxiliary equipment at the Hawke's Bay Terminal Station. This project has been carried over into 2012. This project was originally budgeted assuming that the stand-by diesels in the Hawke's Bay Terminal Station would be used extensively during the replacement of the breaker, disconnects, and structure. In order to decrease costs (particularly fuel costs) it was decided to utilize Hydro's portable substation which allowed the structure to be bypassed. The savings are approximately \$187,000. The work has now been substantially completed but there are some deficiencies which need to be addressed by the contractor. The commissioning of the new equipment will be completed in 2012.

PUB-NLH-227, Attachment 1
Page 251 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS TRANSMISSION FOR THE YEAR ENDING DECEMBER 31, 2011

(Greater than \$100,000 and 10% Variance from Budget)

23. Replace Insulators – Various Sites

Budget: \$401 Actual: \$512 Variance: \$111

There was significantly more overtime required to complete the necessary insulator replacements at Sunnyside due to a fixed outage window and lost time due to weather, resulting in an extra \$40,000 labour costs to complete this work. Material costs were also greater than budgeted due to more materials being required to complete the work than originally estimated resulting in an increased cost of \$50,000.

24. Replace Disconnects – Various Sites (2011)

Budget: \$295 Actual: \$408 Variance: \$113

The original plan for replacement of disconnects switches at Conne River and English Harbour West was to utilize Hydro's mobile substation in sequential outages. Due to the number of forced outages previously experienced on the Connaigre Peninsula, it was decided to avail of Newfoundland Power's mobile substation and install both mobile substations on a common outage. This minimized the frequency of outages to customers, but required extra Hydro resources to be utilized from other parts of the Province to complete the work.

25. Replace Compressor, Dryer and Air Piping Header System – Corner Brook Frequency Converter Station Budget: \$280 Actual: \$147 Variance: (\$133)

This is a single year project that has been carried over into 2012 and is scheduled to begin in mid March. The project was tendered in 2011 and no bids were received. To improve pricing through the benefit of scale, Hydro packaged this work with other approved work and retendered to attract additional competitive bidders. The tender has been awarded and the work is planned to be completed in the first half of 2012.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS TRANSMISSION

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

26. Replace Disconnects – Various Sites (2010)

Budget: \$102 Actual: \$205 Variance: \$103

This project was a single year project carried over from 2010. The total budget was \$198,800 with a total expenditure of \$301,000. Material costs were approximately \$100,000 greater than budgeted.

27. Replace Guy Wires TL-215 – Doyles to Grand Bay

Budget: \$289 Actual: \$465 Variance: \$176

This is a four year project to replace the existing guy wire arrangement on TL-215 with an assembly that helps reduce the fatigue problem on the existing pre-form grips. A single year project was completed in 2010 which replaced guy wires on approximately 20 percent of the line. This project will replace the guy wires on the remainder of the line with approximately 20 percent being replaced each year. The cash flow estimate by year is shown in the table below.

Year	Cost (\$000)
2011	288.8
2012	318.0
2013	350.1
2014	530.0
Total	\$1,486.9

The scope for this project remains unchanged and the project is expected to be completed within budget. Extra costs were incurred in 2011 due to future work and material procurement being advanced from future years into 2011, to take advantage of savings related to bulk minimum quantity orders, and to complete full sections of line in some areas.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS TRANSMISSION FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

27. Replace Guy Wires TL-215 – Doyles to Grand Bay (cont'd.)

The revised cash flow estimate by year is shown in the table below.

Year	Cost (\$000)	
2011A	465.1	
2012	141.7	
2013	350.1	
2014	530.0	
Total	\$1,486.9	

28. <u>Upgrade Line TL-244 – Plum Point to Bear Cove</u>

Budget: \$1,196 Actual: \$1,627 Variance: \$431

This was a two year project to upgrade transmission line TL-244, however, all the expenditures were incurred in 2011. The original budget was:

Year	Cost (\$000)
2010	141.3
2011	1,055.2
Total	1,196.5

The increase in the cost is due mainly to the use of alternate generation requirements. The budget estimate was for three generating diesel units however five units were required.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS RURAL SYSTEMS

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

29. Upgrade L2 Distribution Feeder - Glenburnie

Budget: \$735 Actual: \$418 Variance: (\$317)

This is a four year project for the design, supply and construction of an 18.5 kilometer (km) three phase distribution line from the Tablelands area to Trout River. It will also include the replacement of approximately 20 deteriorated poles located within the first 5.5 km from the Glenburnie Terminal Station.

The original project schedule and budget estimate are listed in the table below.

Year	Activity	Cost (\$000)
2010	Line/Environmental Assessment	267.3
2011	Field Assessment / Line Design	578.2
2012	Material Order/ Procurement/Installation	2,114.6
2013	Environmental	596.6
	Total	\$3,556.7

The overall budget and schedule are expected to remain the same.

The original project scope allowed for the completion of a technical and environmental assessment as well as the purchase of a limited amount of material in 2010 and 2011. The assessments are completed, but material will be ordered early in 2012.

The revised cash flow showing actuals for 2010 and 2011 is shown in the table below.

Year	Cost
	(\$000)
2010A	109.9
2011A	417.9
2012	2,432.3
2013	596.6
Total	\$3,556.7

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS RURAL SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 2011

(Greater than \$100,000 and 10% Variance from Budget)

30. Provide Service Extensions – All Service Areas

Budget: \$3,385 Actual: \$5,591 Variance: \$2,206

This is an annual allotment based on past expenditures to provide service connections to new customers. The budget and actual expenditures by area is shown in the table below.

	2011 Cost	
	(\$00	00)
Region	Budget	Actual
Central	1,045	1,886
Northern	1,092	1,040
Labrador	1,248	2,665
Total	\$3,385	\$5,591

The Central Region incurred approximately \$800,000 in additional service extension work. This was primarily due to new installations in the mining industry, the sawmill/logging industry, the aquaculture industry on the Connaigre Peninsula and the electrification of a cabin area on the Baie Verte Peninsula. In addition, many new service extensions involved upgrading of the existing supporting infrastructure due to larger customer loads. Customers are also converting to electric heat which requires a switch to 200 amp or in some cases 400 amp service.

The Labrador Interconnected system has several new subdivisions under development that are driving cost increases. Examples are the New Hamel, Sheshatshui, Hudson West and Snow's Lane subdivisions. There are new homes being built in Edmunds Crescent and McGregor Avenues. There are also camp developments at Harrie Lake and Labrador City Industrial Park as well as new 3 phase services required in Wabush Industrial Park.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS RURAL SYSTEMS

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

31. <u>Upgrade Distribution System – All Service Areas</u>

Budget: \$2,499 Actual: \$3,401 Variance: \$902

The Upgrade Distribution Systems budget is based on a five year average rather than specifically identified projects. The budget and expenditure by area is shown in the table below.

	2011 (\$00	
Region	Budget	Actual
Central	998	1,365
Northern	1,051	1,488
Labrador	450	548
Total	\$2,499	\$3,401

The increased cost in the Central Region is due in large part to the removal of and replacement of defective distribution insulators (\$125,000), the removal and replacement of rusty voltage regulators located near coastal regions (\$165,000) and the removal of several rusty transformer banks located near environmentally sensitive areas (\$65,000).

The increased cost in the Northern Region is due in large part to the replacement of voltage regulators (\$250,000), reclosers (\$80,000) and distribution line damage and equipment failures (\$40,000) and due to an ice storm in Hawkes Bay.

32. Upgrade Distribution Lines – Roddickton and Makkovik

Budget: \$1,779 Actual: \$1,160 Variance: (\$619)

This was a two year pooled project started in 2010 to upgrade distribution lines in Roddickton and Makkovik. The Roddickton portion of the project is complete. The total project for Roddickton was budgeted for \$1,063,200 and the total expenditure for this work was \$1,106,200.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS RURAL SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 2011

(Greater than \$100,000 and 10% Variance from Budget)

32. <u>Upgrade Distribution Lines – Roddickton and Makkovik</u> (cont'd.)

The Makkovik portion of the upgrade will be carried over into 2012. This project was tendered twice in 2011. The first tender received no bidders and the second was 42 percent (\$337,000) over the budgeted cost. In 2012, there are distribution upgrades planned for Rigolet. These two projects will be pooled together in an effort to receive more competitive pricing. The total budget for the Makkovik upgrade is \$799,500 of which \$137,300 has been spent to the end of 2011.

33. <u>Upgrade Distribution Systems – Rigolet, Happy Valley and Francois</u>

Budget: \$1,068 Actual: \$614 Variance: (\$454)

This is a two year pooled project to upgrade the distribution systems in Rigolet, Happy Valley and Francois. The Happy Valley and Francois portions of this project were budgeted to be completed in 2011 while the Rigolet upgrade will be completed in 2012. The budget for this project is shown below.

	Cost	
	(\$00	00)
	2011	2012
Francois	440.9	-
Happy Valley	553.5	-
Rigolet	73.3	652.4
Total	\$1,067.7	\$652.4

The Francois upgrade will be carried over into 2012. This project was tendered twice in 2011 for the summer and fall construction period and there were no bidders each time. It is anticipated that contractors will be available to complete this work in May/June before the peak summer construction season.

The Happy Valley portion of this project was completed in 2011.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS RURAL SYSTEMS

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

33. <u>Upgrade Distribution Systems – Rigolet, Happy Valley and Francois</u> (cont'd.)

The total expenditures for 2011 and the expected expenditures for 2012 are shown below.

	Cost (\$000)	
	2011A	2012
Francois	116.0	324.9
Happy Valley	488.2	-
Rigolet	10.5	715.2
Total	\$614.7	\$1,040.1

34. Replace Poles – Various Sites

Budget: \$882 Actual: \$985 Variance: \$103

This is a one year pooled project to replace poles in Farewell Head, Grandy Brook and Westpoint. The budgeted cost and actual expenditures are shown below.

	2011 Cost (\$000)	
	Budget	Actual
Farewell Head	339.6	394.0
Grandy Brook	286.4	312.4
Westpoint	256.4	279.4
Total	\$882.4	\$985.8

The largest variance occurred in Farewell Head and this was due to the increased labour cost compared to budget.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS RURAL SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 2011

(Greater than \$100,000 and 10% Variance from Budget)

35. Replace Substation Infrastructure - Burgeo

Budget: \$128 Actual: \$7 Variance: (\$121)

This is a two year project to replace the poles, cross arms, insulation and switches. The budget estimate by year is shown in the table below.

Vaar	Cost
Year	(\$000)
2011	127.5
2012	368.3
Total	\$495.8

The scope for this project remains unchanged and the project is expected to be completed within budget.

The original project scope allowed for the completion of a technical and environmental assessment as well as the purchase of a limited amount of material in 2011. The assessments were completed, but all material will be ordered in 2012. The overall project budget will remain the same. The new project cash flow showing 2011 actual and 2012 estimate is shown in the table below.

Year	Cost (\$000)
2011A	7.2
2012	488.6
Total	\$495.8

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS RURAL SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 2011

(Greater than \$100,000 and 10% Variance from Budget)

36. <u>Install Voltage Regulators – Conne River and L'Anse au Loup</u>

Budget: \$293 Actual: \$118 Variance: (\$175)

This was a single year project to install voltage regulators at Conne River and L'Anse au Loup. The breakdown of costs between the two portions of the project is shown below.

	2011 Cost	
	(\$00)0)
	Budget	Actual
Conne River	147.8	81.7
L'Anse au Loup	144.8	35.9
Total	\$292.6	\$117.6

The Conne River installation was completed however the voltage regulators for L'Anse au Loup were delayed at the manufacturer. The expected delivery date was October 31, 2011 but the regulators left the factory mid December, and therefore there was not enough time to install them before year end. The installation is expected to be completed by the end of the first quarter 2012, resulting in a carry over of \$108,900 for the L'Anse au Loup portion of the project.

37. Perform Arc Flash Remediation – Various Sites

Budget: \$430 Actual: \$108 Variance: (\$322)

This project is a five year program to upgrade facilities to reduce the arc flash levels on electrical equipment throughout the Hydro system. The budget estimate by year is shown in the table below.

Year	Cost (\$000)
2011	429.5
2012	380.3
2013	391.0
2014	401.8
2015	413.1
Total	\$2,015.7

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS RURAL SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 2011

(Greater than \$100,000 and 10% Variance from Budget)

37. <u>Perform Arc Flash Remediation – Various Sites</u> (cont'd.)

The overall scope for this project remains unchanged and the project is expected to be completed within budget.

Three sites were completed in 2011. The primary reasons for the variance are related to less work being completed and savings realized on the work that was completed by coordinating arc flash upgrades with other planned work. The revised cash flow including the 2011 actuals is shown in the table below.

Voor	Cost
Year	(\$000)
2011A	107.6
2012	702.2
2013	391.0
2014	401.8
2015	413.1
Total	\$2,015.7

38. Replace Diesel Unit 2001 and Engine 566 - Francois

Budget: \$607 Actual: \$466 Variance: (\$141)

This was a two year project started in 2010 and is to be carried over into 2012. The replacement genset for Unit 566 has been installed and commissioned, but the delivery of the replacement genset for Unit 2001 has been delayed. During factory acceptance testing, it became evident the unit was not meeting the specified vibration limits and therefore Hydro could not accept the engine. Troubleshooting of this issue by the manufacturer is currently on-going, but has not yet been resolved.

PUB-NLH-227, Attachment 1
Page 262 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS RURAL SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

39. Install Sequence of Events Monitor in Diesel Plant – Port Hope Simpson

Budget: \$155 Actual: \$7 Variance: (\$148)

This project is a one year project that will be carried over into 2012. Due to the unexpected departure of three engineers in 2011, the project planning and engineering could not be started as planned. Material specifications and ordering has begun and the project is currently scheduled to be completed by mid July 2012.

40. Nain Diesel Plant Rehabilitation

Budget: \$923 Actual: \$397 Variance: (\$526)

In the fall of 2008 there was a fire at the Nain Diesel Plant. Hydro used the Allowance for Unforeseen Events in order to do the necessary work in 2008 for a total of \$304,000. In 2009, Hydro filed a multi-year unbudgeted proposal for \$2,804,700 to complete the rehabilitation work which was approved by Board Order P.U. 31(2009). The total budget for this project is shown in the table below. Because there were no protection and control resources available to complete this project until late into 2010, this project was carried over into 2011.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS RURAL SYSTEMS

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

40. <u>Nain Diesel Plant Rehabilitation</u> (cont'd.)

The total costs including insurance proceeds are also shown in the table below.

Cost				
	(\$000)			
		Actual		
		before	Insurance	
Year	Budget	Proceeds	Proceeds	Net Costs
2008	304.0	304.0	-	304.0
2009	2,415.7	2,146.2	382.0	1,764.2
2010	389.0	1,001.5	883.5	118.0
2011	-	1,236.5	839.7	396.8
Total	\$3,108.7	\$4,688.2	\$2,105.2 ¹	\$2,583.0

Excluding insurance proceeds, this project was approximately \$1.5 million over budget.

Three main drivers were identified for the variance – protection and control work, addition of a septic system, and addition of a hydronic plant heating system. The bulk of cost overruns were due to protection and control work that accounted for over \$600,000 in cost increases. The total cost of the scope additions accounted for \$400,000. Additional interest and overhead costs associated with the extended schedule added another \$300,000.

41. <u>Increase Generation Capacity – L'Anse Au Loup</u>

Budget: \$288 Actual: \$541 Variance: \$253

This was a two year project to replace a 600 kW diesel unit with a 1,100 kW rated diesel unit. The original budget was approved as part of the 2009 Capital Budget and is shown in the table below.

¹ The difference between the insurance proceeds quoted above and the insurance proceeds of \$2,119.7 in IC-NLH-1 International Financial Reporting Standards (IFRS) is approximately \$15,000 that was incorrectly classified as a capital recovery in 2009. This difference has now been recorded as an operating cost recovery for the Nain fire.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS RURAL SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

41. <u>Increase Generation Capacity – L'Anse Au Loup</u> (cont'd.)

Year	Cost
	(\$000)
2009	22.9
2010	820.8
Total	\$843.7

Due to the requirement for additional capacity, it was decided to not replace a diesel unit but to add a mobile unit with a capacity of 1,825 kW. The revised budget as well as the actual amount spent is shown in the table below.

	Co	st
	(\$00	00)
	Budget	Actual
2009	1,002.3	783.2
2010	516.9	447.7
2011	-	540.7
Total	\$1,519.2	\$1,771.6

The cost increase is due to extra costs incurred on labour and materials. The main reason for the extra labour associated with the project is that the project was carried over for an additional year therefore additional engineering and project management was required in order to finish the job. Additionally there was an overrun on the material cost. This was primarily due to the cost of the mobile transformer coming in higher than originally budgeted.

42. <u>Install Automatic Meter Reading – Labrador City and Port au Choix</u>

Budget: \$451 Actual: \$237 Variance: (\$214)

This is a two year project to implement Automated Meter Reading (AMR) in Hydro's customer service areas of Labrador City and Port au Choix.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS RURAL SYSTEMS

FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

42. <u>Install Automatic Meter Reading – Labrador City and Port au Choix</u> (cont'd.)

In 2011, the meters and the terminal station equipment were purchased for Labrador City and the terminal station equipment and a portion of the meters were installed. The remaining meters will be installed early in 2012. The budget estimate by service area and year are shown in the table below.

	Labrador City	Port au Choix	
Year	Cost	Cost	Total
	(\$000)	(\$000)	
2011	292.2	159.0	451.2
2012	58.3	29.4	87.7
Total	\$350.5	\$188.4	\$538.9

The implementation of AMR for Port au Choix has been cancelled. The project was originally proposed based on a meter reader position becoming vacant, however, due to a change in circumstances, this did not occur and the benefit anticipated from the implementation of this project would not be realized. The budget for this work will, therefore, not be spent. The revised budget is shown in the table below

Year	Labrador City
	Budget (\$000)
2011A	237.0
2012	113.5
Total	\$350.5

43. Replace Light Duty Mobile Equipment – Various Sites

Budget: \$757 Actual: \$582 Variance: (\$175)

This project will be carried over into 2012 due to the delay in delivering two new prototype trailers. In addition, the overall cost is reduced by \$160,000 due to changes in the types of heavy duty trailers being purchased resulting in lower cost per unit.

PUB-NLH-227, Attachment 1
Page 266 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS RURAL SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

44. Public Address System - Holyrood

Budget: \$1,008 Actual: \$1,206 Variance: \$198

This project is carried over into 2012 due to a small amount of contract work left to be completed. The project is substantially complete and will be completed in 2012. The budget variance is primarily a result of the extended project schedule which has resulted in additional project management, supervision, and overhead costs.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERAL PROPERTIES FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

45. <u>Install Fibre Optic Cable – Hinds Lake</u>

Budget: \$224 Actual: \$117 Variance: (\$107)

This is a two year project to replace microwave radio link between Blue Grass Hill Microwave site and Hinds Lake Generating Station with fibre optic cable. It was approved as part of the 2009 Capital Plan with the budget shown in the following table:

	Co: (\$00	
	Budget	Actual
2009	209.2	9.0
2010	482.9	459.1
2011	-	116.9
Total	\$692.1	\$585.0

The actual amount spent by year is also shown in the table above. The budget savings are due to lower project management and contract costs and no contingency being required.

46. Replace Battery Banks and Chargers – Various Sites

Budget: \$978 Actual: \$872 Variance: (\$106)

This is a single year project to replace battery banks and chargers. This project is under budget mainly due to the project contingency not being required.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERAL PROPERTIES FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

47. Replace Vehicles and Aerial Devices 2011 – Various Sites

Budget: \$2,351 Actual: \$1,254 Variance: (\$1,097)

This is a two year project to replace 25 light-duty vehicles and five heavy-duty work vehicles. The budgeted cost by year is shown in the table below.

Year	Cost
	(\$000)
2011	2,350.5
2012	638.9
Total	\$2,989.4

The total cost of this project has been reduced by \$989,400 due to two factors. Firstly there was a saving of \$289,000 as a result of a downturn in the economy, which resulted in better pricing on vehicles and reduced escalation costs. Secondly, the 2010 project was intended to be submitted as a two year project due to the difficulty in ordering and receiving all the equipment in one calendar year. Inadvertently, only the first year of this project was submitted and approved in 2010 and a change order was completed for the portion of equipment ordered in 2010 and received in 2011. The 2011 multi-year project had already included the \$700,000 for the equipment being received in 2011 resulting in a second change to correct the duplication.

Year	Cost
	(\$000)
2011A	1,254.4
2012	745.6
Total	\$2,000.0

48. <u>Upgrade System Security 2009 – Various Sites</u>

Budget: \$141 Actual: \$527 Variance: \$386

This was a two year project approved as part of the 2009 Capital Budget with a total budget of \$1,469,000 as shown in the table below.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS GENERAL PROPERTIES FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

48. Upgrade System Security 2009 – Various Sites (cont'd.)

Year	Cost
	(\$000)
2009	767.2
2010	701.8
Total	\$1,469.0

There were three major components to this project, fencing upgrades, and access installation and security camera installation.

The budget for this project was increased by \$455,300 in 2010 due to the difficulty in estimating the costs since it involved security upgrade in over 90 sites. Additionally expansions of existing fencing affected the grounding grids, requiring unplanned modifications.

The installation of the security cameras was completed in 2011. However, there were difficulties in making the sites operational which required multiple site visits to troubleshoot problems and rectify the issues. This resulted in greater than anticipated labour, materials and travel costs.

The overall cost is greater than the revised budget mainly due to an increase in labour costs by \$100,000, material costs by \$200,000 and overhead costs by \$160,000. The revised budget and actual costs are shown in the table below.

	Co	Cost			
	(\$00	00)			
	Revised	Actual			
	Budget	Actual			
2009	488.0	488.0			
2010	1,436.3	1,295.0			
2011	-	527.2			
Total	\$1,924.3	\$2,310.2			

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS OTHER APPROVED FUNDS FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

49. <u>Increase Generation Capacity - Charlottetown</u>

Budget: \$1,000 Actual: \$1,482 Variance: \$482

The project utilized the allocation for unforeseen events. Please see the report called "Unforeseen Item: Increase Generating Capacity Charlottetown" filed under a separate cover.

50. <u>Ice Storm – Baie Verte Peninsula</u>

Budget: \$0 Actual: \$519 Variance: \$519

The project utilized the allocation for unforeseen events. Please see the report called "Unforeseen Item: Ice Storm Damage – Baie Verte Peninsula" filed under a separate cover.

51. Confined Space Isolation (Blanks and Blinds) - Holyrood

Budget: \$1,665 Actual: \$1,330 Variance: (\$335)

This was a two year unbudgeted project approved by Board Order No. P.U. 34(2010). The budget and actuals amount spent for this project is shown in the table blow.

	Cost				
	(\$000)				
	Budget	Actual			
2010	202.0	138.9			
2011	1,602.3	1,329.6			
Total	\$1,804.3	\$1,468.5			

There was a reassessment on the installation methods and location of the blanks and blinds that lead to the lower than estimated labour costs. These labour cost were approximately \$280,000 less than budgeted which also resulted in less overheads and interest being incurred.

PUB-NLH-227, Attachment 1
Page 271 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2011 VARIANCE EXPLANATIONS OTHER APPROVED FUNDS FOR THE YEAR ENDING DECEMBER 31, 2011 (Greater than \$100,000 and 10% Variance from Budget)

52. Upgrade Stack Breeching Unit 1 - Holyrood

Budget: \$134 Actual: \$272 Variance: \$138

This was a one year project to upgrade stack breeching and replace the stack breeching support structure. Through Board Order No. 20(2011), the Board approved only the replacement of the stack breeching support structure at a cost of \$133,700. This amount was from CA-NLH-9 (Appendix B) as quoted by the contractor. It did not include additional project costs such as project management, interest and overhead costs. In Table 4 of Hydro's response to the Request for information IC-NLH-1 (Appendix C), it was stated that:

"if approval is received in September 2011 to proceed with the refurbishment project, Hydro proposes to address the most pressing concern – the condition of the support structures in 2011."

The revised schedule and revised budget estimate (Schedules 3 and 4, respectively, of that RFI response) indicated that only stack breeching support replacement work was scheduled for 2011 and the cost of that 2011 work was \$277,900. The work was completed in 2011.

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL BUDGET VERSUS ACTUAL EXPENDITURES 2002 – 2011 AS AT DECEMBER 31 (\$000)

Table 1: CAPITAL BUDGET VERSUS ACTUAL EXPENDITURES 2002 – 2011

		Actual		Percentage
Year	Budget	Expenditures	Variance	Variance
2002	44,660	40,217	4,443	9.9%
2003	36,122	32,506	3,616	10.0%
2004	31,435	27,984	3,451	11.0%
2005	47,760	33,952	13,808	28.9%
2006	49,024	41,217	7,807	15.9%
2007	43,304	35,669	7,635	17.6%
2008	53,579	46,246	7,333	13.7%
2009	61,544	54,152	7,392	12.0%
2010	63,297	55,553	7,744	12.2%
2011	67,454	63,116	4,338	6.4%

In 2011, Hydro delivered the highest Board approved dollar value capital program execution in recent history. During 2011, Hydro commenced execution of its plan to enhance its project delivery capability. A key step in the process included organizational structure changes within both Hydro and Nalcor with the establishment of a Project Execution and Technical Services division that have lead to improved delivery and compliance of capital projects. While the reorganization has been helpful, there is still work to be done and Hydro is achieving a balance between project workload and resource allocation in support of project execution. Hydro anticipates continued progress in 2012 and further improvement in project delivery and budget compliance.

Total variances of actual to budget costs for completed projects are 1 percent for 2009 and 2010; however, it has increased to 12 percent in 2011. This is due in large part to the trend of increasing costs associated with the strong labour market currently being experienced in the province. The variance per project increased in 2011 over previous years. In 2011 Hydro was intentional and deliberate in stepping back where and when required with an objective of reduced project risk and improved probability for successful delivery in 2012.

PUB-NLH-227, Attachment 1 Page 273 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL BUDGET VERSUS ACTUAL EXPENDITURES 2002 – 2011 AS AT DECEMBER 31 (\$000)

The variances presented in Table 1 are partially due to under-spending as a result of not completing all projects approved each year. It is anticipated that some carryover of projects will occur in most years as there may be unavoidable reasons for delays in project completion, for example, system constraints which are precipitated by changes in hydrology, equipment failures, etc. There are also cost increases and project delays being experienced due to the strong labour market. This has manifested itself for example, in eight of the projects in 2011 for which either no bids were received or bids far exceeded estimated costs. Hydro is working to address these issues by reviewing its packaging of projects to encourage competitive bids, as well as attracting additional bidders.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 CARRYOVER REPORT FOR THE YEAR ENDING DECEMBER 31, 2011 (\$000)

	PUB		Total			
	Approved	Revised	Actual		Variance	Original
	Budget	Budget	Expend.	Carryover	Explanation	Completion
Project Name	2011	2011	2011	Amount	Ref. No.	Year
Upgrade Burnt Dam Spillway Structure - Bay d'Espoir	258	258	161	97		2011
Purchase Spare Disconnect - Bay d'Espoir	176	133	73	59	3	2011
Replace Fire Alarm System - Hinds Lake	109	109	21	88		2011
Replace Pumphouse Motor Control Centres - Holyrood	949	1,069	1,091	(22)	8	2011
Upgrade Forced Draft Fan Ductwork Unit 1 - Holyrood	843	1,498	416	1,082	10	2011
Replace Steam Seal Regulator Unit 1 - Holyrood	532	643	318	325	13	2011
Replace Diesel Fire Pump - Holyrood	279	347	156	192	14	2011
Upgrade Glycol Systems - Stephenville	557	1,115	539	576		2011
Replace Breaker, Structures and Disconnects - Hawke's Bay	687	687	340	347	22	2011
Replace Compressor, Dryer and Air Piping Header System -						
Corner Brook Frequency Converter Station	280	280	147	133	25	2011
Replace Digital Fault Recorder - Bay d'Espoir	169	169	72	97		2011
Upgrade Distribution Lines - Makkovik	781	781	119	662	32	2011
Upgrade Distribution System - Francois	441	441	116	325	34	2011
Install Voltage Regulator - L'Anse au loup	145	145	36	109	36	2011
Replace Diesel Unit 2001 and Engine 566 - Francois	607	607	466	141	38	2011
Install Sequence of Events Monitor in Diesel Plant -						
Port Hope Simpson	155	155	7	148	39	2011
Legal Survey of Primary Distribution Line Right of Way - Various Sites	79	79	5	74		2011
Replace Light Duty Mobile Equipment - Various Sites	757	597	583	15	43	2011
Public Address System - Holyrood	1,008	1,245	1,206	39	45	2010

NEWFOUNDLAND AND LABRADOR HYDRO 2011 CARRYOVER REPORT FOR THE YEAR ENDING DECEMBER 31, 2011 (\$000)

	PUB		Total			
	Approved	Revised	Actual		Variance	Original
	Budget	Budget	Expend.	Carryover	Explanation	Completion
Project Name	2011	2011	2011	Amount	Ref. No.	Year
Upgrade Generating Station Service Water System -Cat Arm	360	360	349	11		2012
Upgrade Intake Gate Controls - Bay d'Espoir	352	534	507	27	2	2012
Replace Programmable Logic Controllers - Holyrood	933	873	877	(5)		2012
Upgrade Hydrogen System - Holyrood	1,192	1,192	281	911	7	2012
Upgrade Synchronous Condenser Unit 3- Holyrood	484	484	147	337	9	2012
Replace Relay Panels Unit 3- Holyrood	277	277	140	138	11	2012
Replace Steam Seal Regulator Unit 2 - Holyrood	175	356	54	303	12	2012
Upgrade Gas Turbine Plant Life Extension - Hardwoods	1,924	1,010	1,215	(205)	17	2012
Upgrade Terminal Stations to 25 kV - Labrador City	4,689	6,915	6,262	652	18	2012
Upgrade Substation - Wabush	459	459	14	445	19	2012
Upgrade Station Reliability and Safety - Rocky Harbour	435	435	5	429	21	2012
Replace 69 kV SF6 Breakers - St. Anthony Airport	490	490	499	(10)		2012
Replace Compressed Air System - Bay d'Espoir	84	84	87	(3)		2012
Replace 230 kV Circuit Breaker - Sunnyside	41	41	8	34		2012
Install Alternate Station Services - Stony Brook and Massey Drive	86	86	6	80		2012
Voisey's Bay Nickel - Long Harbour Power Supply	10,600	10,600	10,338	262		2012
Cost Recovery - Vale Inco	(10,600)	(10,600)	(10,338)	(262)		
Upgrade Distribution Systems - Rigolet	73	73	11	63	33	2012
Replace Substation Infrastructure- Burgeo	128	128	7	120	35	2012

NEWFOUNDLAND AND LABRADOR HYDRO 2011 CARRYOVER REPORT FOR THE YEAR ENDING DECEMBER 31, 2011 (\$000)

	PUB Approved Budget	Revised Budget	Total Actual Expend.	Carryover	Variance Explanation	Original Completion
Project Name	2011	2011	2011	Amount	Ref. No.	Year
Replace Mini Hydro Turbine - Roddicton	87	87	11	76		2012
Install Automatic Meter Reading - Labrador City	292	292	237	55		2012
Replace Off Road Track Vehicles - Bishop's Falls	265	154	219	(65)		2012
Replace Off Road Track Vehicles - Fogo	230	68	185	(117)		2012
Corporate Application Environment - Upgrade Microsoft Products	864	864	860	4		2012
Cost Recoveries	(237)	(237)	(275)	39		
Replace MDR 6000 Microwave Radio (West) - Various Sites	72	72	28	45		2012
Replace Vehicles and Aerial Devices 2011 - Various Sites	2,351	1,361	1,254	107	47	2012
Replace Engine # 2062 - Grey River	23	23	0	23		2012
Replace Static Excitation System - Upper Salmon,						
Holyrood and Hinds Lake	1,214	487	18	470	1	2013
Upgrade Electrical Equipment - Holyrood	188	188	187	1		2013
Voltage Conversion - Labrador City	3,066	3,066	2,932	134		2013
Upgrade L2 Distribution Feeder - Glenburnie	736	736	418	318	29	2013
Replace Guy Wires TL-215 - Doyles to Grand Bay	289	289	465	(176)	27	2014
Perform Grounding Upgrades - Various Sites	321	321	288	34		2015
Perform Arc Flash Remediation - Various Sites	430	430	108	322	37	2015
		Total Carry	over	9,083		

NEWFOUNDLAND AND LABRADOR HYDRO 2011 REMOVE SAFETY HAZARDS FOR THE YEAR ENDING DECEMBER 31, 2011 (\$000)

Total Approved Budget: \$252.4 Total Expenditure: \$239.9

Board Order P.U. 38(2010)

As part of Board Order No. P.U. 38(2010) 2011 Capital Budget, the following was included "Because of the nature of this project the Board would expect to see an explanation in Hydro's annual report on capital expenditures as to each project that was undertaken, setting out the safety hazard that was identified, the location, the steps taken to address the issue and the amount of the expenditure." Please see the following table:

Project Title/Location	Expenditure	Safety Hazard Identified	Project Scope
Purchase Highway Signs TRO Central, Northern, and Labrador	\$144.3	As a result of new traffic control legislation in the province effective January 1, 2011 Hydro was required to purchase road signs and follow guidelines in the Traffic Control Manual published by the Department of Transportation and Works. Occupational Health and Safety (OH and S) Regulations require that traffic control procedures shall at minimum meet the requirements of the Department of Transportation and Works "Traffic Control Manual for Roadway Work Operations" or procedures established by a municipality that have been approved by the minister and all relevant specifications".	Highway traffic signs were purchased to be used in daily execution of work to ensure uniform and consistent methods of traffic control when completing work occurring within the right of way of a roadway.
Upgrade Burnt Bridge Bay d'Espoir System	20.5	Safety Work Observation Program (SWOP) #2011002968 Bridge decking is deteriorated and needs to be replaced.	Replaced running boards and decking
Upgrade Venam's Trail Venam's Bight	28.3	SWOP#2011002276 Trail leading to powerhouse along side of penstock is very rough; there is a high potential/concern to flip or to wipe out on an ATV.	Installed railings, retaining walls, brook crossings, and landings to improve safety of access to Venam's Bight powerhouse and intake.

NEWFOUNDLAND AND LABRADOR HYDRO 2011 REMOVE SAFETY HAZARDS FOR THE YEAR ENDING DECEMBER 31, 2011 (\$000)

Project Title/Location	Expenditure	Safety Hazard Identified	Project Scope
Powerhouse #1 Stairway	36.9	SWOP#2010000480	Replaced parking lot stairway from
Bay d'Espoir		Concrete steps between upper parking lot and main level	employee parking lot to powerhouse.
		are severely eroded and in need of replacement. Several	
		concrete patches came loose and pose a significant tripping	
		hazard.	
Mobile Foam Carts	10.0	Holyrood had one mobile foam cart, positioned on level 1 of	Purchased two mobile foam carts for
Holyrood		the Powerhouse to control larger pool fires that cannot be	Emergency Response Team
		contained by the fixed fire protection. There was no other	
		mobile or fixed foam protection on either level I or level III.	
		While our units are protected with fixed deluge, pre-action	
		and/or wet-type sprinkler systems, there was no capability	
		to suppress flammable vapors and provide protection from	
		re-ignition or potential fire migration from flammable liquids	
		fires is sparse. The acquisition of 3 additional mobile foam	
		carts would mitigate the risk to Operators and/or ERT	
		members who may have to combat fuel-based fires.	

PUB-NLH-227, Attachment 1
Page 279 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report Appendix A

APPENDIX A PUB-NLH-36

Capital Expenditures and Carryover Report Appendix A

PUB-NLH-36 NLH 2012 Capital Budget Application

Page 1 of 1

1	Q.	Page E-9, New 25 kV Terminal Station – Labrador City, \$3,507,000
2		Given the time that has elapsed since the original budget was prepared and the
3		issues that have arisen in obtaining tenders, please provide a revised budget based
4		on the most recent best available information.
5		
6		
7	A.	As indicated, the budget for this multi-year project was prepared in 2008. The work
8		was approved and began in 2009 and is scheduled to be completed in 2012. A
9		significant amount of the work to be completed in 2011/2012 is contract work
10		related to the construction of the terminal stations and the installation of
11		equipment.
12		
13		Hydro has recently completed the tender phase and has recognized a variance
14		between the 2008 estimates and the 2011 tender responses.
15		
16		The table below provides a summary of the approved budget, the amount spent to
17		date, and projections of the additional expenses to the end of the project.
16		

Approved Budget:	\$9,900,000
Spent to Date (Sept 2011):	\$3,400,000
Budget for the Remainder of 2011:	\$5,500,000
Projection for 2012:	\$3,750,000
Final Forecasted Expenses:	\$12,650,000
Variance:	\$2,750,000

PUB-NLH-227, Attachment 1
Page 281 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report Appendix B

APPENDIX B CA-NLH-9

Capital Expenditures and Carryover Report Appendix B

CA-NLH-9 Holyrood (HTGS) Stack Breeching and Fuel Tank Refurbishment

Page 1 of 1

1	Q.	Re: Holyrood: Upgrade Unit 1 Stack Breeching
2		With respect to the budget Estimate at Section 5.1, please break out the project
3		costs for each element or aspect of the work which Hydro is proposing to undertake
4		in this overall project, eg. refurbishing steel casing, work on East Support Structure,
5		work on West Support Structure, insulation of breeching externally, ice protection
6		shelters, etc.
7		
8		

9 A. A breakout of the project cost for the budget estimate at Section 5.1 is included in 10 the table below.

Project Task Description	Cost (\$)
Labour (Internal Hydro engineering, operations, and project management labour):	114,400
Contract (Labour & Materials):	
Remove internal insulation blocks and supply/install 6 inches of external insulation	461,328
Install an ice protection shield	112,428
Replacement of expansion joints and casing repairs	774,144
Supply and install East and West support structures. Includes additional cost to replace the breeching support structures with the existing breeching left in place. A temporary support	
structure will be required.	133,700
Travel	2,000

11 12

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14

The cost estimates provided by Hatch are not broken down by East and West structure, although it is not unreasonable to expect that the relevant costs can be split evenly between the two structures. Please also refer to response to IC-NLH-1.

PUB-NLH-227, Attachment 1
Page 283 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report Appendix C

APPENDIX C IC-NLH-9

IC-NLH-1

Holyrood (HTGS) Stack Breeching and Fuel Tank Refurbishment

Page 1 of 4 Q. 1 Provide for each project (Unit 1 Stack Breeching; Fuel Oil Storage Facility), updated 2 versions of the schedules at section 5.2 of each of the respective July 11 Hydro 3 reports filed to support these projects, based on the assumption these projects 4 would be approved by the Board in September 2011. Identify in each updated 5 schedule the estimated amount of proposed expenditure planned to be incurred at each milestone date. 6 8 9 A. Fuel Oil Storage Facility: 10 When the last report was filed with the Board in July 2011, the schedule was based 11 on receiving approval to proceed with the refurbishment project early enough so 12 that tender documents could be prepared and a construction contract awarded by 13 the end of September 2011. The tank would be taken out of service in 2011 to allow 14 refurbishment to be performed such that it could be placed back in service as early 15 as possible (estimated to be mid March 2012). This would minimize the amount of 16 time the tank would be out of service during the 2011/12 peak load season and also 17 during the ice season when there is risk that pack ice may be present in Conception 18 Bay that could disrupt fuel deliveries to Holyrood. 19 20 Based on receiving approval to proceed with the project in September 2011, the 21 target date of mid March to have the tank back in service following refurbishment is 22 no longer realistic. The earliest back-in-service date would need to be extended well 23 into the 2012 ice season. Hydro believes that it is less risky during the ice season to 24 have the tank in service in its present condition then to have it out of service 25 undergoing refurbishment. For this reason, Hydro has revised its schedule as

indicated in Table 1 below. The revised schedule has resulted in changes to the

26

IC-NLH-1 Holyrood (HTGS) Stack Breeching and Fuel Tank Refurbishment

Page 2 of 4

overall project budget such that it has increased marginally. A revised budget estimate has been provided in Table 2.

Table 1:

Activity	Milestone	Proposed Expenditure (\$X1000)
Prepare Tender Documents	October 2011	20
Invite and Award Tenders	November 2011	35
Procurement Of Material	December 2011	128
Mobilization	April 2012	480
Complete Construction	September 2012	1,966
Closeout Project	October 2012	125
Total:		2,754

Table 2:

Project Cost: (\$ x1,000)	<u>2011</u>	2012	<u>Beyond</u>	<u>Total</u>
Material Supply	0.0	0.0	0.0	0.0
Labour	45.0	159.5	0.0	204.5
Consultant	38.0	170.0	0.0	208.0
Contract Work	100.0	1,776.0	0.0	1,876.0
Other Direct Costs	0.0		0.0	2.0
O/H, AFUDC & Escin.	7.8	227.0	0.0	234.8
Contingency	0.0	229.1	0.0	229.1
TOTAL	190.8	2,563.6	0.0	2,754.4

Unit 1 Stack Breeching:

When the last report was filed with the Board in July 2011, the schedule was based on receiving approval to proceed with the refurbishment project early enough so that a refurbishment contract could be awarded in August 2011 and the breeching returned to service by the end of its planned scheduled outage period (late October 2011).

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Based on receiving approval to proceed with the project in September 2011, the completion date for the project coinciding with the end of the planned outage

IC-NLH-1 Holyrood (HTGS) Stack Breeching and Fuel Tank Refurbishment

Page 3 of 4

schedule (late October 2011) is no longer realistic. The breeching has to be in service for the upcoming 2011/12 peak load season. If approval is received in September 2011 to proceed with the refurbishment project, Hydro proposes to address the most pressing concern - the condition of the support structures, in 2011. The intention is to replace them and in the process minimize any extension required to the planned outage period to complete the work. For this reason, Hydro revised its milestone schedule as indicated in Table 3 below. The revised schedule has resulted in changes to the overall project budget such that it has increased marginally. A revised budget estimate has been provided in Table 4.

Table 3:

Activity	Milestone	Proposed Expenditure (\$X1000)
Prepare Tender Documents	October 2011	35
Invite and Award Tenders	October 2011	20
Procurement of Material Required For Breeching Support Structure Replacement November 2011		80
Mobilization & Replace Breeching Support Structures	November 2011	40
Procurement Of Material Required For Remaining Refurbishment Work	March 2012	420
Commence Remaining Refurbishment (In Accordance With Planned Outage) May 2012		616
Construction Complete	September 2012	620
Project Final Documentation and Closeout	October 2011	88
Total:		1,919

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Capital Expenditures and Carryover Report Appendix C

IC-NLH-1 Holyrood (HTGS) Stack Breeching and Fuel Tank Refurbishment

Page 4 of 4

Table 4:

Project Cost: (\$ x1,000)	<u>2011</u>	2012	<u>Beyond</u>	<u>Total</u>
Material Supply	0.0	0.0	0.0	0.0
Labour	65.0	49.4	0.0	114.4
Consultant	0.0	0.0	0.0	0.0
Contract Work	200.0	1,281.6	0.0	1,481.6
Other Direct Costs	0.5	1.5	0.0	2.0
O/H, AFUDC & Escin.	12.4	148.8	0.0	161.2
Contingency	0.0	159.8	0.0	159.8
TOTAL	277.9	1.641.1	0.0	1.919.0



Hydro Place. 500 Columbus Drive. P.O. Box 12400. St. John's. NL Canada A1B 4K7 t. 709.737.1400 f. 709.737.1800 www.nlh.nl.ca

March 1, 2013

The Board of Commissioners of Public Utilities Prince Charles Building 120 Torbay Road, P.O. Box 21040 St. John's, NL A1A 5B2

ATTENTION: Ms. Cheryl Blundon

Director of Corporate Services & Board Secretary

Dear Ms. Blundon:

Re: 2012 Capital Expenditures and Carryover – Year End

Pursuant to Board Order No. P.U. 5 (2012), p. 19, item 5, enclosed please find the original and eight copies of Newfoundland and Labrador Hydro's (Hydro) report on 2012 Capital Expenditures and Carryover for the year ended December 31, 2012.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

Seoffrey P. Young Senior Legal Counsel

GPY/mmcd Encls.

A REPORT TO THE BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

CAPITAL EXPENDITURES AND CARRYOVER REPORT

For Year Ending December 31, 2012

March 2013



NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL EXPENDITURES AND CARRYOVER REPORT

For Year Ending December 31, 2012

TABLE OF CONTENTS

Capital Budget Overview	1
CAPITAL EXPENDITURES BY YEAR	2
Capital Expenditures by Category	3
VARIANCE EXPLANATIONS (GREATER THAN \$100,000 and 10% Variance from Budget):	17
Capital Budget versus Actual Expenditures 2003 - 2012	32
REMOVE SAFETY HAZARDS	34

2012 Capital Budget Variance Overview (\$000)

HYDRAULIC PLANT
THERMAL PLANT
GAS TURBINES
TERMINAL STATIONS
TRANSMISSION
DISTRIBUTION
GENERATION
PROPERTIES
METERING
RURAL SYSTEMS TOOLS AND EQUIPMENT
INFORMATION SYSTEMS
TELECONTROL
TRANSPORTATION
ADMINISTRATIVE
MAJOR OVERHAUL AND INSPECTIONS
CONTINGENCY FUND
PROJECTS APPROVED BY PU BOARD
PROJECTS APPROVED FOR LESS THAN \$50,000
TOTAL CAPITAL BUDGET

Board		
Approved	Total	
Budget	Expend.	Variance
13,205	13,906	701
20,578	21,723	1,145
6,555	7,300	745
24,099	27,086	2,986
4,053	4,095	42
28,878	31,144	2,266
3,687	3,603	(84)
644	601	(43)
1,209	1,202	(7)
3,666	3,217	(449)
3,734	3,679	(54)
4,037	4,111	74
5,920	4,941	(979)
381	212	(169)
6,840	7,213	373
1,000	1,374	374
10,656	8,636	(2,020)
196	161	(35)
139,336	144,203	4,867

2012 Capital Expenditures By Year (\$000)

Summary
2012 Projects
2011 Projects
2010 Projects
2009 Projects
2008 Projects
Grand Total

	Capital Budget ¹									
					2013 and					
2008	2009	2010	2011	2012	Beyond	Total				
	•	•				_				
-	-	-	-	56,327.0	9,112.2	65,439.4				
-	-	-	14,469.1	12,548.7	4,601.3	31,619.0				
-	-	5,088.4	10,236.0	11,458.4	1,566.1	28,348.8				
-	100.8	1,693.5	7,105.7	3,750.0	-	12,650.0				
96.3	1,182.2	-	-	-	-	1,278.5				
96.3	1,283.0	6,781.9	31,810.8	84,084.1	15,279.6	139,335.7				
	•	•	•			_				

Actual Expenditure and Forecast									
					2013 and	Carryovers			
2008	2009	2010	2011 2	2012	Beyond	to 2013	Total		Variance
-	-	-	-	45,882.3	9,112.2	8,898.5	63,893.0		(1,546.4)
-	-	-	7,522.6	15,129.4	5,604.7	5,241.6	33,498.3		1,879.3
-	-	4,310.3	9,501.8	8,872.1	1,566.1	5,584.1	29,834.4		1,485.6
-	291.8	1,693.5	6,022.7	7,320.1	-	(223.3)	15,104.8		2,454.8
2.8	119.1	539.9	1,161.7	48.5	-	-	1,872.1		593.6
2.8	410.9	6,543.7	24,208.8	77,252.4	16,283.0	19,500.9	144,202.6		4,866.9
				•					•

2012 Capital Budget Approved by Board Order No. P.U. 2 and 5 (2012)	76,992.3
New Project Approved by Board Order No. 24 (2012)	492.1
New Project Approved by Board Order No. 25 (2012)	2,940.5
New Project Approved by Board Order No. 26 (2012)	321.4
New Project Approved by Board Order No. 27 (2012)	3,154.9
New Project Approved by Board Order No. 35 (2012)	10.2
2012 New Projects under \$50,000 Approved by Hydro	172.7
Total Approved Capital Budget Before Carryovers	84,084.1
Carryovers from 2011 to 2012	9,755.9
TOTAL APPROVED CAPITAL BUDGET (As per Table 1 p. 32)	93,840.0

 $^{^{1}}$ Annual budgets previous to 2012 pertain to projects that have expenditures in 2012.

² There has been a restatement of expenditures in 2011 resulting from the conversion to International Financial Reporting Standards (IFRS).

Hydraulic Plant		Capita	l Budget			Actual Ex	penditure a	nd Forecast			
			2013 and				2013 and	Carryovers			
	2011	2012	Beyond	Total	2011	2012	Beyond	to 2013	Total	Variance	Notes
2012 Projects											
Rewind Stators Unit 4 - Bay d'Espoir	_	4,953.8	-	4,953.8	_	2,548.7	_	2,405.1	4,953.8	-	
Replace Emergency Diesel Generator - Bay d'Espoir	-	611.4	282.7	894.1	-	80.0	282.7	531.4	894.1	-	
Replace Fuel Tank at Burnt Dam - Bay d'Espoir	-	207.5	-	207.5	-	196.3	-	-	196.3	(11.2)	
Replace Rip Rap - Bay d'Espoir	-	199.1	-	199.1	-	114.4	-	-	114.4	(84.7)	
Upgrade Burnt Dam Spillway - Bay d'Espoir	-	523.8	-	523.8	-	168.9	-	621.2	790.1	266.3	1
Purchase Tools and Equipment Less than \$50,000	-	106.4	-	106.4	-	94.8	-	-	94.8	(11.6)	
Upgrade Public Safety Around Dams and Waterways - Bay d'Espoir	-	48.3	-	48.3	-	50.1	-	-	50.1	1.8	
2011 Projects											
Replace Fire Alarm System - Hinds Lake	109.1	-	-	109.1	20.2	92.9	-	-	113.1	4.0	
Replace Static Excitation Systems - Upper Salmon,											
Holyrood and Hinds Lake ³	487.3	2,402.5	1,219.3	4,109.1	16.8	818.8	2,295.2	978.3	4,109.1	-	
Upgrade Generating Station Service Water System - Cat Arm	360.4	440.0	-	800.4	349.3	259.6	-	191.5	800.4	-	
Upgrade Burnt Dam Spillway Structure - Bay d'Espoir	257.9	-	-	257.9	154.8	70.2	-	228.8	453.8	195.9	2
Purchase Spare Disconnect - Bay d'Espoir	175.6	-	-	175.6	70.6	43.8	-	-	114.4	(61.2)	
Upgrade Intake Gate Controls - Bay d'Espoir	352.3	468.0		820.3	507.0	373.6	-	341.2	1,221.8	401.5	3
Total Hydraulic Plant	1,742.6	9,960.8	1,502.0	13,205.4	1,118.7	4,912.1	2,577.9	5,297.5	13,906.2	700.8	

³ Original budget was \$4,109.1 (2010 - \$1,214.3, 2011 - \$1,528.0, 2012 - \$1,366.8) Approved by Order No. P.U. 38 (2010). The revised budget was approved by Order No. P.U. 2 (2012).

Thermal Plant		C	apital Budge	et				Actu	al Expendit	ure and For	ecast			
				2013 and		2013 and Carryovers								
	2010	2011	2012	Beyond	Total		2010	2011	2012	Beyond	to 2013	Total	Variance	Notes
2012 Projects														
Refurbish Fuel Storage Facility - Holyrood	-	-	2,641.2	-	2,641.2		-	-	1,767.1	-	874.1	2,641.2	-	
Replace Beta Attenuation Monitoring Analyzers - Holyrood	-	-	160.9	-	160.9		-	-	133.2	-	-	133.2	(27.7)	
Upgrade Forced Draft Fan Ductwork Unit 2 - Holyrood	-	-	928.6	-	928.6		-	-	102.4	-	826.2	928.6	-	
Upgrade Stack Breaching Unit 1 - Holyrood	-	-	1,522.3	-	1,522.3		-	-	1,059.5	-	-	1,059.5	(462.8)	4
Upgrade Stack Breaching Unit 2 - Holyrood	-	-	1,505.1	-	1,505.1		-	-	1,123.2	-	-	1,123.2	(381.9)	5
Replace Fuel Oil Heat Tracing - Holyrood	-	-	1,474.3	1,413.9	2,888.2		-	-	783.4	1,413.9	690.9	2,888.2	-	
Rewind Generator Units 1 and 2 - Holyrood ⁴	-	-	112.2	-	112.2		-	-	-	-	-	-	(112.2)	6
Purchase Tools and Equipment Less than \$50,000	-	-	89.4	-	89.4		-	-	37.4	-		37.4	(52.0)	
2011 Projects														
Upgrade Synchronous Condenser Unit 3 - Holyrood	-	483.5	405.5	-	889.0		-	141.4	784.4	-	-	925.8	36.8	
Upgrade Forced Draft Fan Ductwork Unit 1 - Holyrood	-	843.0	-	-	843.0		-	400.4	976.3	-	-	1,376.7	533.7	7
Replace Relay Panels Unit 3 - Holyrood	-	277.1	553.6	-	830.7		-	134.2	121.5	-	1,449.4	1,705.1	874.4	8
Upgrade Electrical Equipment - Holyrood	-	188.0	206.3	284.5	678.8		-	179.6	41.9	212.1	(11.9)	421.7	(257.1)	9
Upgrade Hydrogen System - Holyrood	-	1,191.9	800.4	-	1,992.3		-	270.5	1,194.5	-	527.3	1,992.3	-	
Replace Steam Seal Regulator Unit 2 - Holyrood	-	175.0	438.4	-	613.4		-	51.6	761.6	-	-	813.2	199.8	10
2010 Projects														
Replace Diesel Fire Pump - Holyrood	111.9	195.4	-	-	307.3		27.9	149.9	208.1	-	-	385.9	78.6	
Replace Pumphouse Motor Control Centres - Holyrood	50.2	998.6	-	-	1,048.8		99.5	1,070.2	285.7	-	62.2	1,517.6	468.8	11
Replace Programmable Logic Controllers - Holyrood ⁵	1,357.5	872.5	748.0	-	2,978.0		1,357.5	877.2	659.8	-	-	2,894.5	(83.5)	
Replace Steam Seal Regulator Unit 1 - Holyrood	334.7	213.7	-	-	548.4		16.1	305.2	557.5	-	-	878.8	330.4	12
Total Thermal Plant	1,854.3	5,438.7	11,586.2	1,698.4	20,577.6		1,501.0	3,580.2	10,597.5	1,626.0	4,418.2	21,722.9	1,145.3	_

Total 2009 total 2008

 $^{^{\}rm 4}$ The total budget was \$11,901.2. Removed future years since project is cancelled.

⁵ Original budget was \$2,856.7 (2010 - \$1,207.9, 2011 - \$747.1, 2012 - \$901.7) Approved by Order No. P.U. 1 (2010). The revised Budget was approved by Order No. P.U. 2 (2012).

Gas Turbines
2010 Projects
Upgrade Glycol Systems - Stephenville
Upgrade Gas Turbine Plant Life Extension - Hardwoods ⁶
Total Gas Turbines

Capital Budget								
2010	2011	2012	Total					
261.3	298.9	-	560.2					
704.5	1,009.8	4,280.4	5,994.7					
965.8	1,308.7	4,280.4	6,554.9					

	Actual Exp	enditure a	and Forecas	t
			Carryovers	
2010	2011	2012	to 2013	Total
3.3	517.9	113.2	543.0	1,177.4
704.5	1,168.9	505.7	3,743.6	6,122.7
707.8	1,686.8	618.9	4,286.6	7,300.1

	Variance	Notes
	617.2	13
	128.0	
	745.2	

⁶ Original budget was \$5,994.7 (2010 - \$1,304.5, 2011 - \$1,323.6, 2012 - \$3,366.6) Approved by Order No. P.U. 1 (2010). The revised Budget was approved by Order No. P.U.

			oup.	ital Budget					Actual	Expenditur	e and Fore	cast			
	2009	2010	2011	2012	2013 and Beyond	Total	2009	2010	2011	2012	2013 and Beyond	Carryovers to 2013	Total	Variance	Notes
012 Projects pgrade Circuit Breakers - Various Sites eplace Surge Arrestors - Various Sites eplace Instrument Transformers - Various Sites		-	- - -	1,677.3 75.7 452.4	- - -	1,677.3 75.7 452.4		-		1,287.9 69.4 318.6	- - -	- - -	1,287.9 69.4 318.6	(389.4) (6.3) (133.8)	15
pgrade Power Transformers - Various Sites	-	-	-	1,246.3	-	1,246.3	-	-	-	1,406.6	-	=	1,406.6	160.3	16
eplace Disconnects - Various Sites eplace Compressed Air Piping and Install Dew Point Monitor - Buchan: eplace Insulators - Various Sites	5 -	-	-	351.8 28.4 411.6	278.3 -	351.8 306.8 411.6	-	-	-	319.2 - 104.2	278.3	28.5	319.2 306.8 104.2	(32.6) - (307.4)	17
O11 Projects erform Grounding Upgrades - Various Sites eplace Compressed Air System - Bay d'Espoir eplace Digital Fault Recorder - Bay d'Espoir eplace 230 kV Circuit Breaker - Sunnyside istall Alternate Station Services - Stony Brook and Massey Drive eplace Compressor, Dryer and Air Piping Header System - Corner Brook Frequency Converter Station pgrade Substation - Wabush eplace 69 kV SF6 Breakers - St. Anthony Airport pgrade Station Reliability and Safety - Rocky Harbour eplace Breaker, Structures and Disconnects - Hawke's Bay	- - - - - -	-	321.2 83.9 168.6 41.3 86.0 280.2 459.3 489.9 434.8 687.4	324.0 563.6 590.1 109.2 626.4 290.1 360.1	1,011.5	1,656.7 647.5 168.6 631.4 195.2 280.2 1,085.7 779.9 794.9 687.4	-	- - - - -	287.6 83.7 69.1 7.3 5.5 141.8 13.8 480.5 5.2 331.2	240.7 1,084.2 74.6 638.8 155.7 139.2 907.6 276.4 1,180.8 260.5	1,011.5	116.9 136.9 - - 34.0 122.1 362.6	1,656.7 1,304.8 143.7 646.1 195.2 403.1 1,284.0 756.9 1,186.0 591.7	122.9 198.3 (23.0) 391.1 (95.7)	18 19 20 21
010 Projects oisey's Bay Nickel - Long Harbour Power Supply Cost Recovery - Vale Inco 009 Projects pgrade Terminal Stations to 25 kV - Labrador City ⁷	100 8	122.9 (122.9) 1.693.5	5,505.3 (5,505.3) 7,105.7	9,169.8 (9,169.8) 3,750.0		14,798.0 (14,798.0) 12,650.0	-	1,332.0 (1,332.0) 1,693.5	(9,854.0)	2,187.4 (2,187.4) 7,320.1	-	-	13,373.4 (13,373.4) 15,104.8	(1,424.6) 1,424.6 2,454.8	22
pgrade reminal Stations to 25 kV - Labrador City		,	10,158.3	10,857.0	1,289.8	24,099.4				15,784.5		, ,	27,085.7	2,434.8	

⁷ Original budget was \$9,990.6 (2009 - \$283.2, 2010 - \$3,894.8, 2011 - \$5,812.6) Approved by Order No. P.U. 36 (2008). The revised Budget was approved by Order No. P.U. 2 (2012).

Transmission
2012 Projects
Install Ice Monitoring Equipment - Various Sites
Perform Wood Pole Line Management Program - Various Sites
2011 Projects
Replace Guy Wires TL-215 - Doyles to Grand Bay
Total Transmission

Capital Budget							
		2013 an	d				
2011	2012	Beyond	Total				
·			_				
	47.0		47.0				
_	47.0	-	-				
-	2,519.3	-	2,519.3				
288.8	318.0	880.1	1,486.9				
288.8	2,884.3	880.1	4,053.2				
	·	·	_				

,	Actual Exp					
		2013 and	Carryovers			
2011	2012	Beyond	to 2013	Total	Variance	Notes
- - - 447.6	45.4 2,562.8 256.0 2,864.2	- - 880.0	(96.7) (96.7)	45.4 2,562.8 1,486.9 4,095.1	(1.6) 43.5 - 41.9	
	, - • · · · ·		(5.511)	,		

Distribution		
		2010
2012 Projects		
Replace Recloser Control Panels - Various Sites		
Provide Service Extensions - All Service Areas		
Upgrade Distribution Systems - All Service Areas		
Upgrade Distribution Lines - Bay d'Espoir, Parsons Pond and Plum Point		
Distribution Systems Additions - Various Sites		
2011 Projects		
Replace Substation Infrastructure- Burgeo		
Upgrade Distribution Systems Francois, Rigolet and Happy Valley		
Install Voltage Regulators - Conne River and L'Anse au loup		
2010 Projects		
Voltage Conversion - Labrador City		1,088
Upgrade L2 Distribution Feeder - Glenburnie		267
Upgrade Distribution Lines - Roddickton and Makkovik		217
Total Distribution		1,573
	ı	

Capital Budget						Actu	al Expendi	ture and For	ecast			
			2013 and					2013 and	Carryovers			
2010	2011	2012	Beyond	Total	2010	2011	2012	Beyond	to 2013	Total	Variance	Notes
-	-	202.3	-	202.3	-	-	113.9	-	-	113.9	(88.4)	
-	-	4,172.0	-	4,172.0	-	-	6,031.8	-	-	6,031.8	1,859.8	23
-	-	2,508.0	-	2,508.0	-	-	3,134.1	-	-	3,134.1	626.1	24
-	-	1,385.2	1,110.5	2,495.7	-	-	1,189.1	1,110.5	17.2	2,316.8	(178.9)	
-	-	2,172.1	-	2,172.1	-	-	2,115.9	-	-	2,115.9	(56.2)	
		2522		405.0			- 000					
-	127.5	368.3	-	495.8	-	6.9	739.0	-	-	745.9	250.1	25
-	1,067.7	652.4	-	1,720.1	-	609.8	1,187.3	-	-	1,797.1	77.0	
-	292.6	-	-	292.6	-	116.1	96.7	-	-	212.8	(79.8)	
1,088.9	3,501.2	3,840.7	969.5	9,400.3	1,524.6	2,825.0	4,120.6	969.5	(39.4)	9,400.3	-	
267.3	578.2	2,114.6	596.6	3,556.7	109.9	402.4	1,382.7	596.6	1,065.1	3,556.7	-	
217.7	1,645.0	-	-	1,862.7	83.4	1,155.5	479.9	-	-	1,718.8	(143.9)	
1,573.9	7,212.2	17,415.6	2,676.6	28,878.3	1,717.9	5,115.7	20,591.0	2,676.6	1,042.9	31,144.1	2,265.8	

Generation
2012 Projects
Perform FEED for Diesel Plant Remediation - Various Sites
Replace Fuel Storage Tanks - St. Lewis
2011 Projects
Perform Arc Flash Remediation - Various Sites
Replace Mini Hydro Turbine - Roddickton
Install Sequence of Events Monitor in Diesel Plant - Port Hope Simpson
2010 Projects
Replace Diesel Unit 2001 and Engine 566 - Francois
Total Generation

Capital Budget								
2010	2044	2042	2013 and	T I				
2010	2011	2012	Beyond	Total				
-	-	110.4	-	110.4				
-	-	465.1	-	465.1				
-	429.5	380.3	1,205.9	2,015.7				
-	86.8	235.4	-	322.2				
-	154.8	-	-	154.8				
160.4	450.4			C10 F				
168.4	450.1			618.5				
168.4	1,121.2	1,191.2	1,205.9	3,686.7				

2010	2011		2013 and Beyond	Carryovers to 2013	Total	Variance	Notes
_	_	43.6		66.8	110.4		
-	-	249.3	-	-	249.3	(215.8)	26
-	103.5	91.7	1,205.9	614.6	2,015.7	-	
-	10.7	221.0	-	246.6	478.3	156.1	27
-	6.6	(6.6)	-	-	-	(154.8)	28
11.2	446.9	81.3	-	209.6	749.0	130.5	29
11.2	567.7	680.3	1,205.9	1,137.6	3,602.7	(84.0)	

Properties
2012 Projects
2012 Projects Install Fall Protection Equipment - Various Sites
Upgrade Mechanical Workshop - St. Anthony
Install Waste Oil Storage Tank - L'Anse au Loup
Legal Survey of Primary Distribution Line Right of Ways - Various Sites - 2012
2011 Projects
Legal Survey of Primary Distribution Line Right of Ways - Various Sites - 2011
Total Properties

Capital Budget							
2011	2012	Total					
-	199.2	199.2					
-	87.0	87.0					
-	81.5	81.5					
-	197.9	197.9					
78.7	-	78.7					
78.7	565.6	644.3					

Actual Expenditure and Forecast						
		Carryovers				
2011	2012	to 2013	Total			
_	186.5	_	186.5			
_	75.3	_	75.3			
_	82.7	_	82.7			
-	190.4	-	190.4			
4.5	61.5		66.0			
		-				
4.5	596.4	-	600.9			

	Variance	Notes
5	(12.7)	
5 3 7	(11.7)	
	1.2	
4	(7.5)	
0 9	(12.7)	
9	(43.4)	

Metering
2012 Projects
Purchase Meters, Equipment and Metering Tanks - Various Sites
Install Automatic Meter Reading - Plum Point and Bear Cove
2011 Projects
Install Automatic Meter Reading - Labrador City ⁸
Total Metering

Capital Budget						
		2013 and				
2011	2012	Beyond	Total			
_	190.4	_	190.4			
		200.0				
_	379.6	288.0	667.6			
202.2	F0 2		2505			
292.2	58.3	-	350.5			
292.2	628.3	288.0	1,208.5			

	Δctual Ex	nenditure a	and Forecast			
	netaar Ex	•	Carryovers			
2011	2012	Beyond	to 2013	Total	Variance	Notes
	193.3			193.3	2.9	
_		-	-		_	
-	390.8	288.0	(19.3)	659.5	(8.1)	
228.0	120.8	-	-	348.8	(1.7)	
228.0	704.9	288.0	(19.3)	1,201.6	(6.9)	

⁸ Original budget was \$538.9 (2011 - \$451.2, 2012 - \$87.7) Approved by Order No. P.U. 38 (2010) to install automatic meter reading for Labrador City and Port aux Chois. The Port aux Choix portion of the project was cancelled. The revised Budget was approved by Order No. P.U. 2 (2012).

Tools and Equipment		Capita	ıl Bu
			20
	2011	2012	Be
2012 Projects			
Replace Off Road Track Vehicles - Flowers Cove and Cow Head	-	482.5	
Replace Light Duty Mobile Equipment - Various Sites	-	400.6	
Replace Excavator - L'Anse au Loup	-	120.0	
Tools and Equipment Less than \$50,000	-	406.3	
2011 Projects			
Replace Off Road Track Vehicles - Bishop's Falls and Fogo	494.3	609.4	
Replace Light Duty Mobile Equipment - Various Sites	757.0	-	
Total Tools and Equipment	1,251.3	2,018.8	

	Capita	l Budget			
	2013 and				
2011	2012	Beyond	Total		
-	482.5	395.6	878.1		
-	400.6	-	400.6		
-	120.0	-	120.0		
-	406.3	-	406.3		
494.3	609.4	-	1,103.7		
757.0	-	-	757.0		
1,251.3	2,018.8	395.6	3,665.7		
		•			

	Actual Ex				
		2013 and	Carryovers		
2011	2012	Beyond	to 2013	Total	Variance Notes
-	-	395.6	482.5	878.1	-
-	413.1	-	-	413.1	12.5
-	79.2	-	-	79.2	(40.8)
-	360.1	-	18.3	378.4	(27.9)
403.5	426.5	_		830.0	(273.7) 30
		_	_		` '
582.5	55.6		-	638.1	(118.9) 31
986.0	1,334.5	395.6	500.8	3,216.9	(448.8)

Information Systems
2012 Projects
Perform Minor Application Enhancements - Hydro Place
Cost Recoveries
Implement Work Protection Safety Code Application - Hydro Place
Upgrade JD Edwards - Hydro Place
Cost Recoveries
Upgrade Energy Management System - Hydro Place
Upgrade Microsoft Project - Hydro Place
Cost Recoveries
Upgrade Creditron System - Hydro Place
Replace Personal Computers - Various Sites
Replace Peripheral Infrastructure - Various Sites
Upgrade Enterprise Storage Capacity - Hydro Place
Cost Recoveries
Upgrade Server Technology Program - Hydro Place
Cost Recoveries
Upgrade Computer Room - Hydro Place
Cost Recoveries
2010 Projects
Corporate Application Environment - Upgrade Microsoft Products
Cost Recoveries
Total Information Systems
·

Capital Budget					
			2013 and		
2010	2011	2012	Beyond	Total	
-	-	123.4	-	123.4	
-	-	(41.9)	-	(41.9)	
-	-	115.6	-	115.6	
-	-	284.0	587.6	871.6	
-	-	(96.6)	(199.8)	(296.3)	
-	-	117.8	-	117.8	
-	-	91.3	-	91.3	
-	-	(31.0)	-	(31.0)	
-	-	37.5	-	37.5	
-	-	490.6	-	490.6	
-	-	327.5	-	327.5	
-	-	306.3	-	306.3	
-	-	(104.1)	-	(104.1)	
-	-	202.6	-	202.6	
-	-	(30.9)	-	(30.9)	
-	-	122.0	-	122.0	
-	-	(41.5)	-	(41.5)	
751.4	675.1	678.1	_	2,104.6	
(225.4)	(202.5)	(203.4)	_	(631.4)	
526.0	472.6	2,347.3	387.8	3,733.7	
				<u> </u>	

		Ac	tual Expe	nditure and	l Forecast			
				2013 and	Carryovers			
	2010	2011	2012	Beyond	to 2013	Total	Variance	Notes
			113.3			113.3	(10.1)	
ı	-	-		-	-		3.4	
ı	-	-	(38.5)	-	-	(38.5)	_	
ı	-	-	114.2	-	- (2242)	114.2	(1.4)	
ı	-	-	518.3	587.6	(234.3)	871.6	-	
ı	-	-	(176.2)	(199.8)	79.7	(296.3)	-	
ı	-	-	107.0	-	-	107.0	(10.8)	
	-	-	91.3	-	-	91.3	-	
	-	-	(31.0)	-	-	(31.0)	-	
	-	-	39.0	-	-	39.0	1.5	
	-	-	499.0	-	-	499.0	8.4	
	-	-	328.5	-	-	328.5	1.0	
	-	-	298.1	-	-	298.1	(8.2)	
	-	-	(101.3)	-	-	(101.3)	2.8	
	-	-	201.7	_	-	201.7	(0.9)	
ı	-	-	(30.4)	_	-	(30.4)	0.5	
ı	-	-	9.3	_	112.7	122.0	-	
ı	_	_	(3.2)	_	(38.3)	(41.5)	_	
ı			, ,		, ,	` '		
	563.4	858.1	682.3	-	-	2,103.8	(0.8)	
ı	(191.0)	(275.4)	(204.7)	-	-	(671.1)	(39.7)	
	372.4	582.7	2,416.7	387.8	(80.2)	3,679.4	(54.3)	
ı					· '			

Teleco	ntrol
2012 Projects	
Upgrade Communication Services	- Paradise River
Replace Radomes - Various Sites	
Replace Battery Banks and Charge	rs - Various Sites
Replace Network Communications	
Replace Telephone Systems - Port S	Saunders and Whitbourne
Upgrade Site Facilities - Various Si	tes
Purchase Tools and Equipment Les	s than \$50,000
2011 Projects	
Replace MDR 6000 Microwave Rac	lio (West) - Various Sites
2008 Projects	
Public Address System - Holyrood	
Total Telecontrol	

		Capital	Budget		
2008	2009	2010	2011	2012	Total
-	-	-	-	97.5	97.5
-	-	-	-	172.0	172.0
-	-	-	-	880.8	880.8
-	-	-	-	521.6	521.6
-	-	-	-	199.3	199.3
-	-	-	-	46.5	46.5
-	-	-	-	85.3	85.3
-	-	-	72.0	683.3	755.3
00.3	1 102 2				1 270 5
96.3	1,182.2	=	72.0	2,686.3	4,036.8
96.3 96.3	1,182.2 1,182.2	-	72.0	2,686.3	1,278.5 4,036.8

2008	2009	2010	2011	2012	Carryovers to 2013	Total	Variance	Notes
-	-	-	-	80.2	-	80.2	(17.3)	
-	-	-	-	157.4	-	157.4	(14.6)	
-	-	-	-	662.1	-	662.1	(218.7)	32
-	-	-	-	448.8	-	448.8	(72.8)	
-	-	-	-	173.1		173.1	(26.2)	
-	-	-	-	41.4	-	41.4	(5.1)	
-	-	-	-	45.2		45.2	(40.1)	
-	-	-	26.4	603.8	-	630.2	(125.1)	33
2.8	119.1	539.9	1,161.7	48.5	-	1,872.1	593.6	34
2.8	119.1	539.9	1,188.1	2,260.5	-	4,110.5	73.7	

Replace Vehicles and Aerial Devices (2012-2013) - Various Sites

Transportation

2011 Projects

2012 Projects

Replace Vehicles and Aerial Devices (2011-2012) - Various Sites

Total Transportation

Capital Budget							
2013 and							
2012	Beyond	Total					
1,711.4	1,218.8	2,930.2					
638.9	-	2,989.4					
2,350.3	1,218.8	5,919.6					
	2012 1,711.4 638.9	2013 and 2012 Beyond 1,711.4 1,218.8					

Actual Expenditure and Forecast					
		2013 and	Carryovers		
2011	2012	Beyond	to 2013	Total	
-	1,594.1	1,218.8	117.3	2,930.2	
1,254.4	756.2	-	-	2,010.6	
1,254.4	2,350.3	1,218.8	117.3	4,940.8	

	Variance	Notes
	-	
	(978.8)	35
4	(978.8)	

Administration

2012 Projects

Remove Safety Hazards - Various Sites

Purchase Tools and Equipment Less than \$50,000

Total Administation

Capital Budget						
2013 and						
2011	2012	Beyond	Total			
-	249.1	-	249.1			
-	131.6	-	131.6			
- 380		-	380.7			

Actual Expenditure and Forecast						
2013 and Carryovers						
2011	2012	Beyond	to 2013	Total		
-	141.4	-	-	141.4		
-	70.7	-	-	70.7		
-	212.1	-	-	212.1		

	Variance	Notes
	741141166	110100
	(107.7)	36
	(60.9)	
	(168.6)	
٦		

Major Overhauls and Inspections

2012 Projects

Condition Assessment and Life Extension Phase 2 - Holyrood

Overhaul Turbine Unit 1 - Holyrood

Overhaul Diesel Units - Various Sites

Overhaul Turbine/Generator Units - Granite Canal and Upper Salmon

Total Major Overhauls and Inspections

2011	2012	Beyond	Total
-	1,215.7	-	1,215.7
-	4,193.1	-	4,193.1
-	974.1	-	974.1
-	456.6	-	456.6
- 6,839.		-	6,839.5

	Actual Expenditure and Forecast							
Ī	2013 and Carryovers							
L	2011	2012	Beyond	to 2013	Total			
	-	565.2	-	650.5	1,215.7			
	-	4,007.5	-	-	4,007.5			
	-	1,605.2	-	-	1,605.2			
	-	384.1	-	-	384.1			
	-	6,562.0	-	650.5	7,212.5			
ſ								

Variance	Notes
-	
(185.6)	
631.1	37
(72.5)	
373.0	

Contingency Fund

2012 Projects

Black Tickle Plant Rehabiliation

Total Contingency Fund

Capital Budget					
		2013 and			
2011	2012	Beyond	Total		
-	1,000.0	-	1,000.0		
-	1,000.0	-	1,000.0		
		-	,		

Actual Expenditure and Forecast					
		2013 and	Carryovers		
2011	2012	Beyond	to 2013	Total	
	1,374.4	-	-	1,374.4	
	1,374.4	-	-	1,374.4	

Notes
38

Unbudgeted Projects Approved by PUB

2012 Projects

Upgrade Access Road - Cat Arm

Upgrade Dam - Cat Arm

Increase Generation - Mary's Harbour

Gas Turbine Alternator Rewind - Stephenville

Hydro Place Penthouse Roof Replacement

Total Unbudgeted Projects Approved by PUB

Capital Budget				
		2013 and		
2011	2012	Beyond	Total	
-	492.1	-	492.1	
-	3,154.9	-	3,154.9	
-	321.4	1,295.0	1,616.4	
-	2,940.5	2,252.1	5,192.6	
-	10.2	189.5	199.7	
_	6,919.1	3,736.6	10,655.7	
	•			

Actual Expenditure and Forecast						
		2013 and	Carryovers			
2011	2012	Beyond	to 2013	Total	Variance	Notes
		<u> </u>				
-	233.6	-	-	233.6	(258.5)	39
-	1,188.5	-	-	1,188.5	(1,966.4)	40
-	51.0	1,295.0	270.4	1,616.4	-	
-	1,758.0	2,252.1	1,387.4	5,397.5	204.9	
-	-	189.5	10.2	199.7	-	_
	3,231.1	3,736.6	1,668.0	8,635.7	(2,020.0)	_
						•

Projects Less than \$50,000 Approved by Hydro
2012 Projects
Purchase Diesel Plant Property - English Harbour West
Replace Wavetrap - Sunnyside
Gate Hoist Rehabilitation - Burnt Dam
Land Purchase - Happy Valley-Goose Bay
2011 Projects
Replace Engine 2062 - Grey River
Total Projects Less than \$50,000 Approved by Hydro

Capital Budget					
		2013 and			
2011	2012	Beyond	Total		
-	50.0	-	50.0		
-	14.6	-	14.6		
-	35.7	-	35.7		
-	46.2	-	46.2		
23.0	26.2	-	49.2		
23.0	172.7	-	195.7		

Actual Expenditure and Forecast					
		2013 and	Carryovers		
2011	2012	Beyond	to 2013	Total	
-	49.7	-	-	49.7	
-	10.8	-	-	10.8	
-	32.0	-	-	32.0	
-	46.2	-	-	46.2	
-	22.3	-	-	22.3	
-	161.0	-	-	161.0	
•			•		

Variance	Notes
(0.0)	
(0.3) (3.8)	
(3.8)	
-	
(25.0)	
(26.9)	
(34.7)	

PUB-NLH-227, Attachment 1
Page 307 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2012 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2012
(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

1. Upgrade Burnt Dam Spillway - Bay d'Espoir

Budget: \$523.8 Total: \$790.1 Variance: \$266.3

This is a one-year project which has been carried over into 2013. There is a budget increase due to the difference between the budgeted and actual tendered costs for the disassembly and inspection contract and the consultant design cost. The project has been carried over into 2013 as a result of having to reapply for a project to refurbish the stop logs to allow for the approved inspections to be completed safely.

2. <u>Upgrade Burnt Dam Spillway Structure- Bay d'Espoir</u>

Budget: \$257.9 Total: \$453.8 Variance: \$195.9

This is a one-year project initiated in 2011 that was carried over into 2012. The budget increase is due to the use of external resources to design and oversee project execution. In addition, contract pricing obtained through competitive bid process was higher than estimated. The internal review and approval of the budget variances resulted in delayed tender award for the execution of the work. This project will be completed in 2013.

3. Upgrade Intake Gate Controls - Bay d'Espoir

Budget: \$820.3 Total: \$1,221.8 Variance: \$401.5

This is a two-year project initiated in 2011. The scope of this project remains unchanged however due to the timing and the complexity of the work resulted in increased labour costs. The work planned for 2011 was completed; however the work to be completed in 2012 has been delayed until at least 2013 due to system constraints which prevented a suitable outage window to complete the work.

4. <u>Upgrade Stack Breaching Unit 1 - Holyrood</u>

Budget: \$1,522.3 Total: \$1,059.5 Variance: (\$462.8)

This is a one-year project completed in 2012. As a result of tendering the contract work for both Unit 1 and Unit 2 Stack Breaching projects together, a savings was realized. In addition, no project contingency funds were used.

PUB-NLH-227, Attachment 1
Page 308 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2012 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2012
(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

5. Upgrade Stack Breaching Unit 2 - Holyrood

Budget: \$1,505.1 Total: \$1,123.2 Variance: (\$381.9)

This is a one-year project completed in 2012. As a result of tendering the contract work for both Unit 1 and Unit 2 Stack Breaching projects together, a savings was realized. In addition, no project contingency funds were used.

6. Rewind Generator Units 1 and 2 - Holyrood

Budget: \$112.2 Total: \$0 Variance: (\$112.2)

This project has been cancelled. With the updated long-term plan for Holyrood, Units 1 and 2 will no longer be required to operate as synchronous condensers to 2041. A 2012 review of the Unit 1 and 2 generator stator windings concluded that the windings are expected to operate reliably up to 2017 and do not require replacement.

7. <u>Upgrade Forced Draft Fan Ductwork Unit 1 - Holyrood</u>

Budget: \$843.0 Total: \$1,376.7 Variance: \$533.7

This was a one-year project to be completed in 2011 which was carried over into 2012. The increased project cost is a result of higher than estimated pricing for the installation contract.

A risk-based cost benefit analysis completed in September 2011 clearly demonstrated that it was prudent to complete the project at the higher cost, based upon energy savings from a reduced load on the forced draft fans and mitigation of the risk of failure which could result in an unplanned outage of Unit 1.

PUB-NLH-227, Attachment 1
Page 309 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2012 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2012
(Greater than \$100,000 and 10% Variance from Budget)

(\$000)

8. Replace Relay Panels Unit 3 - Holyrood

Budget: \$830.7 Total: \$1,705.1 Variance: \$874.4

This is a two-year project initiated in 2011. Additional engineering and plant resource time was required in 2012 in order to complete the field investigations to bring the existing Unit 3 relay panel control schematics and termination schedules up to 'as-built' status. As these 'as-built' drawings form the basis of the control panel design, the contract for the design and supply of the new control panel will now be executed in 2013. As a result, the project will be carried over into 2013.

The installation time for the control panel will be longer than anticipated due to the greater than originally estimated number of cables and conductors entering the Unit 3 relay panel. Cables must be properly labeled and organized for successful commissioning. Also, the commissioning period will be longer in 2013 because in addition to the new control processor being added to the project, the existing Unit 3 control processors will have to be partially re-commissioned. These factors have increased the outage from eight to 12 weeks and have increased both labour and construction costs.

9. <u>Upgrade Electrical Equipment - Holyrood</u>

Budget: \$678.8 Total: \$421.7 Variance: (\$257.1)

This is a three-year project initiated in 2011 to replace the circuit protection equipment in six motor control centers (MCCs) located in the Holyrood plant powerhouse and to replace one MCC and items of the electrical switchgear in the Holyrood Gas Turbine building.

The MCC refurbishments planned for 2011 were completed. A portion of this project was to perform electric upgrades to the Holyrood Gas Turbine however, that work has been cancelled as the Gas Turbine is currently not in service. The remaining MCC refurbishments will be completed in 2013.

PUB-NLH-227, Attachment 1
Page 310 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2012 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2012
(Greater than \$100,000 and 10% Variance from Budget)

(\$000)

10. Replace Steam Seal Regulator Unit 2 - Holyrood

Budget: \$613.4 Total: \$813.2 Variance: \$199.8

This project was a two-year project initiated in 2011 to replace the existing hydraulic steam seal regulator on

Unit 2 with two pneumatically operated steam pressure control valves.

During the detailed design phase in 2011, it was determined that the replacement of the pressure safety

valve, associated discharge piping and pipe supports would be required in order to provide adequate steam

venting for the new steam seal regulator system. This work scope was not included in the original project

scope and thus increased the project above the original estimated cost.

11. Replace Pumphouse Motor Control Centres - Holyrood

Budget: \$1,048.8 Total: \$1,517.6 Variance: \$468.8

This is a two-year project initiated in 2010 which was carried over into 2012. The engineering design and construction specification prepared for this budget did not cover all the aspects of work required to complete

this project. This resulted in increased costs for labour and for the installation contract. The installation and

commissioning of the Units 1 and 2 pumphouse motor control centers (MCCs) will now be completed during

the scheduled 2013 unit outages.

12. Replace Steam Seal Regulator Unit 1 - Holyrood

Budget: \$548.4 Total: \$878.8 Variance: \$330.4

This is a two-year project initiated in 2010 and then carried over into 2012 due to the inability of the contractor to complete the work within the planned outage window. The total cost of this project has

increased due to an increase in contract and labour costs over the budgeted amounts, as the contract was

retendered which extended the project schedule.

PUB-NLH-227, Attachment 1
Page 311 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2012 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2012
(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

13. Upgrade Glycol Systems - Stephenville

Budget: \$560.1 Total: \$1,177.4 Variance: \$617.3

This is a two-year project initiated in 2010 which was carried over into 2012 due to multiple tenders being required to secure suitable bids. While the construction work was planned to be completed in the spring of 2012, it was postponed as a result of the alternator failure at the Stephenville Gas Turbine. The glycol system upgrade project cannot be commissioned and placed in service until the alternator refurbishment work is completed. The cost of this project has increased due to an increase in engineering, labour and material costs and also as a result of project delays.

14. <u>Upgrade Circuit Breakers - Various Sites</u>

Budget: \$1,677.3 Total: \$1,287.9 Variance: (\$389.4)

This 2012 project was to replace four breakers at the Bottom Brook, Doyles, Hardwoods and Massey Drive Terminal Stations. Due to the unavailability of a suitable outage window, the breaker replacement in Hardwoods could not be completed. The replacement of the Hardwoods breaker will now be completed under a future circuit breaker project.

15. Replace Instrument Transformers - Various Sites

Budget: \$452.4 Total: \$318.6 Variance: (\$133.8)

This is a one-year project completed in 2012. The final project cost was lower than budgeted as a result of delayed delivery of instrument transformers and the unavailability of suitable outage windows for some installations. The replacement of these instrument transformers will be completed under a future instrument transformer project.

PUB-NLH-227, Attachment 1
Page 312 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2012 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2012
(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

16. <u>Upgrade Power Transformers - Various Sites</u>

Budget: \$1,246.3 Total: \$1,406.6 Variance: \$160.3

In addition to the planned 2012 power transformer upgrades, there was an additional transformer upgrade required to ensure the winter load in Happy Valley/Goose Bay resulting in increased project costs.

17. Replace Insulators - Various Sites

Budget: \$411.6 Total: \$104.2 Variance: (\$307.4)

The insulators ordered for 2012 were not received due to issues experienced at the manufacturing plant in Japan. These insulators are committed for delivery in 2013 and will be installed as part of the 2013 capital program.

18. Replace Compressed Air System - Bay d'Espoir

Budget: \$647.5 Total: \$1,304.8 Variance: \$657.3

This is a two-year project initiated in 2011 which has been carried into 2013. The project is approximately 90% complete; however it was not completed on time due to limited breaker outage availability. The increase in project cost is primarily due to tendered bids for construction that were higher than estimated.

19. Replace Compressor, Dryer, and Air Piping Header System - Corner Brook Frequency Converter Station

Budget: \$280.2 Total: \$403.1 Variance: \$122.9

This project was originally planned to be completed in 2011 and was carried into 2012 due to difficulties in obtaining bids for the work in 2011. The contract work for this project was combined with other project work and tendered a second time which resulted in contract pricing which was higher than estimated.

PUB-NLH-227, Attachment 1 Page 313 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2012 VARIANCE EXPLANATIONS FOR THE YEAR ENDING DECEMBER 31, 2012

(Greater than \$100,000 and 10% Variance from Budget)

(\$000)

19. Replace Compressor, Dryer, and Air Piping Header System - Corner Brook Frequency Converter Station

(cont'd.)

In addition to increased contract pricing, design changes were required in the course of the project which

resulted in increased engineering and material costs. The material required to complete the design changes

could not be delivered in 2012, and as a result, this project has been carried into 2013. The project is 90%

complete.

20. **Upgrade Substation - Wabush**

Budget:

\$1,085.7

Total:

\$1,284.0

Variance: \$198.3

This is a two-year project initiated in 2011 which has been carried into 2013. During the detail design phase,

additional required design work was identified related to the grounding and yard upgrade work which

affected both the project budget and schedule. The project scope includes grounding upgrades within the

substation that, for safety reasons, could not be completed late in the year. These upgrades will now be

completed during the construction season in the summer of 2013. The overall budget for this project has

increased due to higher than anticipated contract pricing.

21. **Upgrade Station Reliability and Safety - Rocky Harbour**

Budget:

\$794.9

Total:

\$1,186.0

Variance: \$391.1

This is a two-year project completed in 2012. During the detail design phase, it was realized that some work

necessary to complete the project had not been identified at the budget stage which resulted in higher than

budgeted contract costs.

PUB-NLH-227, Attachment 1
Page 314 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2012 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2012
(Greater than \$100,000 and 10% Variance from Budget)

(\$000)

22. Upgrade Terminal Stations to 25 kV - Labrador City

Budget: \$12,650 Total: \$15,104.8 Variance: \$2,454.8

The original budget was submitted as a three-year project to construct two new 46/25 kV terminal stations. Each station will have two new 46/25 kV, 15/20/25 MVA power transformers, new 46 kV and 25 kV electrical equipment and new control buildings. The budget for this project was previously increased to \$12,650,000 and the 2012 budget has been adjusted to incorporate the change in the overall budget.

This project was estimated in 2008 based on market conditions at the time and using standard escalation indices for future year expenditures. The market conditions realized in Labrador West during the project execution phase have been a-typical, driven by strong economic activity in the area. The outcome is an escalation beyond Hydro's anticipation in construction contracts, materials and labour.

An additional \$2.4 million is required to complete this project as a result of contract pricing increases above estimated amounts for contracts to project completion, use of consultants for design review, commissioning cost estimates which were low compared to the actual cost to commission the specific type and size of stations involved, and additional material costs. All contracts have now been awarded and construction is complete. One of the two terminal stations is in service as of December 2012, and commissioning of the remaining station is ongoing.

This project has been carried over into 2013 as a result of delays in building delivery which have resulted in a delay in completion of the station commissioning work.

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2012 VARIANCE EXPLANATIONS FOR THE YEAR ENDING DECEMBER 31, 2012 (Greater than \$100,000 and 10% Variance from Budget) (\$000)

23. Provide Service Extensions - All Service Areas

Budget: \$4,172.0 Total: \$6,031.8 Variance: \$1,859.8

This is an annual allotment based on past expenditures to provide service connections to new customers. The budget and actual expenditures by area is shown in the table below.

	Budget	Actual
	(\$000)	(\$000)
Central	1,200.0	1,231.3
Northern	1,267.0	1,727.7
Labrador	1,705.0	3,072.8
Total	4,172.0	6,031.8

The Labrador Interconnected system has new subdivisions and line extensions under development that are driving cost increases. Examples are the construction of two new subdivisions Tibett & Brett and Osprey; the extension and rerouting of poles on Hamilton River Road; and as well, the line extensions on Northwest River and Sheshatshiu. In addition, there are developments such as an apartment building, office building, sewer treatment plant and other business developments.

The northern region has also had greater than normal expenditures for service extensions driven by new subdivisions in St. Anthony and Port Saunders, as well as other commercial developments such as a stadium, school, cabin development and health center.

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2012 VARIANCE EXPLANATIONS FOR THE YEAR ENDING DECEMBER 31, 2012 (Greater than \$100,000 and 10% Variance from Budget) (\$000)

24. <u>Upgrade Distribution System - All Service Areas</u>

Budget: \$2,508.0 Total: \$3,134.1 Variance: \$626.1

The budget for distribution upgrades is based on a five-year average. The budget and expenditure by area is shown in the table below.

	Budget	Actual
	(\$000)	(\$000)
Central	993.0	1,854.2
Northern	1,089.0	1,010.2
Labrador	426.0	269.7
Total	2,508.0	3,134.1

The increase in costs compared to budget is due to a transformer failure in Paradise River, a larger than normal replacement of voltage regulators, porcelain cut-outs and transformers as well as the replacement of Hendrix Insulators on Fogo Island.

25. Replace Substation Infrastructure - Burgeo

Budget: \$495.8 Total: \$745.9 Variance: \$250.1

This is a two-year project completed in 2012. The increase in project cost is due to tendered contract pricing which was higher than budgeted.

26. Replace Fuel Storage Tanks - St. Lewis

Budget: \$465.1 Total: \$249.3 Variance: (\$215.8)

This is a one-year project completed in 2012. The decrease in project cost is mainly due to contract costs which were lower than budgeted.

PUB-NLH-227, Attachment 1
Page 317 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2012 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2012
(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

27. Replace Mini Hydro Turbine - Roddickton

Budget: \$322.2 Total: \$478.3 Variance: \$156.1

This is a two-year project initiated in 2011. The increase in project cost compared to budget is due to a scope change to include a generator replacement. The generator rotor shaft failed in 2010. This failure occurred after the project proposal was submitted for approval. A cost-benefit analysis was performed to compare the feasibility of replacing the generator at additional cost under the same project, postponing the work, or cancelling the current project and shutting down the plant. The results of the cost-benefit analysis favoured proceeding with the turbine overhaul and replacement of the generator.

This project has been carried over into 2013 as a result of longer than anticipated lead time for procurement of a replacement generator.

28. <u>Install Sequence of Events Monitor in Diesel Plant - Port Hope Simpson</u>

Budget: \$154.8 Total: 0 Variance: (\$154.8)

This is a one-year project that was carried over from 2011. Hydro has decided to cancel this project at this time given studies on-going regarding power generation for the area that could affect the requirement for this functionality.

29. Replace Diesel Unit 2001 and Engine 566 - Francois

Budget: \$618.5 Total: \$749.0 Variance: \$130.5

This project is a two-year project initiated in 2010. The replacement genset for Unit 566 was installed and commissioned in 2011, but delivery of the replacement genset for Unit 2001 was delayed. During factory acceptance testing, the unit did not meet the specified vibration limits. Factory troubleshooting of this issue has been on-going with resolution in December 2012. The replacement genset will now be delivered in 2013.

The project cost has increased as a result of increased genset installation costs for Unit 566 and additional engineering costs associated with troubleshooting of engine issues and extension of the project schedule.

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2012 VARIANCE EXPLANATIONS FOR THE YEAR ENDING DECEMBER 31, 2012 (Greater than \$100,000 and 10% Variance from Budget) (\$000)

30. Replace Off-Road Track Vehicles - Bishop's Falls and Fogo

Budget: \$1,103.7 Total: \$830.0 Variance: (\$273.7)

Due to new products available in the utility track industry subsequent to the budget approval, Hydro was able to obtain more versatile units and achieve savings on the original budget.

31. Replace Light Duty Mobile Equipment - Various Sites

Budget: \$757.0 Total: \$638.1 Variance: (\$118.9)

The project cost is less than budgeted due to changes in the types of heavy duty trailers being purchased resulting in lower cost per unit.

32. Replace Battery Banks and Chargers - Various Sites

Budget: \$880.8 Total: \$662.1 Variance: (\$218.7)

The project cost was lower than budgeted as a result of lower than budgeted labour and material costs. In addition, no project contingency funds were used.

33. Replace MDR 6000 Microwave Radio (West) - Various Sites

Budget: \$755.3 Total: \$630.2 Variance: (\$125.1)

This is a two-year project initiated in 2011. The project cost is lower than budgeted as a result of there being no requirement to use contingency funds.

PUB-NLH-227, Attachment 1
Page 319 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2012 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2012
(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

34. <u>Public Address System - Holyrood</u>

Budget: \$1,278.5 Total: \$1,872.1 Variance: \$593.6

This project was a two-year project planned to be completed in 2009. Initially, the project was tendered in 2008/2009 and the tender responses received exceeded the budget. As a result, the work was divided into two parts, design/ supply and installation/commissioning and re-tendered. This resulted in an extended project schedule which had the design and supply work completed in 2010 and installation and commissioning work substantially completed in 2011.

Project costs have risen primarily for the following reasons:

- the requirement for On-Site Representatives during construction, arising out of Hydro's Contractor Safety Management program, were not included in the original budget as this requirement did not exist when the budget was prepared;
- site specific requirements (rigid conduit, additional devices for infill, higher than estimated cable quantities) have resulted in increased material costs;
- contract costs for installation were higher than originally estimated; and,
- extension of the project schedule which resulted in additional project management, supervision and overhead costs.

PUB-NLH-227, Attachment 1
Page 320 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2012 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2012
(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

35. Replace Vehicles and Aerial Devices 2011 - Various Sites

Budget: \$2,989.4 Total: \$2,010.6 Variance: (\$978.8)

This is a two-year project to replace 25 light-duty vehicles and five heavy-duty work vehicles.

There are two factors contributing to the favourable variance. Firstly, there was a saving of \$289,000 as a result of a downturn in the national economy, which resulted in better pricing on vehicles and reduced escalation costs. Secondly, the 2010 project was intended to be submitted as a two-year project due to the difficulty in ordering and receiving all the equipment in one calendar year. Inadvertently, only the first year of this project was submitted and approved in 2010 and a change order was completed for the portion of equipment ordered in 2010 and received in 2011. The 2011 multi-year project had already included the \$700,000 for the equipment being received in 2011 resulting in a second change to correct the duplication.

36. Remove Safety Hazards - Various Sites

Budget: \$249.1 Total: \$141.4 Variance: (\$107.7)

This is a one-year project completed in 2012. This project is based on the requirement to ensure adequate capital funding is available to quickly address capital related safety hazards as they are identified. Therefore, it is only utilized to the extent that specific hazards are identified. The hazards identified in 2012 are itemized in the 2012 Remove Safety Hazards table, p. 34-35.

37. Overhaul Diesel Units - Various Sites

Budget: \$974.1 Total: \$1,605.2 Variance: \$631.1

The project planned for completion of 12 overhauls in 2012. Hydro also completed eight unplanned overhauls in 2012 due to engine failures, resulting in additional costs. Hydro is reviewing its work processes on diesel units to make recommendations to potentially minimize future diesel failures.

PUB-NLH-227, Attachment 1
Page 321 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO
2012 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2012
(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

38. Black Tickle Plant Rehabilitation

Contingency Fund: \$1,000.0 Total: \$1,374.4 Variance: \$374.4

The variance between the budgeted cost of \$2.6 million and actual expenditures for this project is due primarily to lower than anticipated engineering and internal labour costs. There was less engineering input required to carry out the work and the operations crew's performance and productivity was higher than anticipated, thus reducing the associated labour costs. Rental costs, including temporary generation and chopper usage, were also less than estimated. In addition, no project contingency funds were used.

39. Upgrade Access Road - Cat Arm

Budget: \$492.1 Total: \$233.6 Variance: (\$258.5)

This is a one-year project completed in 2012. The original budget estimate was based on the construction material having to be trucked from a distant quarry. During project execution, an acceptable source of suitable material was found within a short distance of the work site which resulted in a reduction in transportation and processing costs for construction material.

40. Upgrade Dam - Cat Arm

Budget: \$3,154.9 Total: \$1,188.5 Variance: (\$1,966.4)

This is a one-year project completed in 2012. The project cost is lower than budgeted primarily as a result of tendered contract costs which were lower than estimated. The savings on the contract cost also resulted in lower costs for internal labour, equipment rentals and travel costs. In addition, no project contingency funds were used.

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL BUDGET VERSUS ACTUAL EXPENDITURES 2003 - 2012 AS AT DECEMBER 31 (\$000)

Table 1: CAPITAL BUDGET VERSUS ACTUAL EXPENDITURES 2003 – 2012

Capital Budgets/Expenditures 2003 - 2012

		Actual		Percentage
Year	Budget	Expenditures	Variance	Variance
2003	36,122	32,506	3,616	10.0%
2004	31,435	27,984	3,451	11.0%
2005	47,760	33,952	13,808	28.9%
2006	49,024	41,217	7,807	15.9%
2007	43,304	35,669	7,635	17.6%
2008	53,579	46,246	7,333	13.7%
2009	61,544	54,152	7,392	12.0%
2010	63,297	55,553	7,744	12.2%
2011	67,454	63,116	4,338	6.4%
2012	93,840	77,252	16,588	17.7%

In 2012, Hydro delivered the highest Board approved dollar value capital program execution in recent history. During 2011, Hydro commenced execution of its plan to enhance its project delivery capability. A key step in the process included organizational structure changes within both Hydro and Nalcor with the establishment of a Project Execution and Technical Services division that has lead to improved delivery of and compliance on capital projects. While the reorganization has been helpful, there is still work to be done and Hydro is achieving a balance between project workload and resource allocation in support of project execution. Hydro anticipates continued progress in 2013 and further improvement in project delivery and budget compliance.

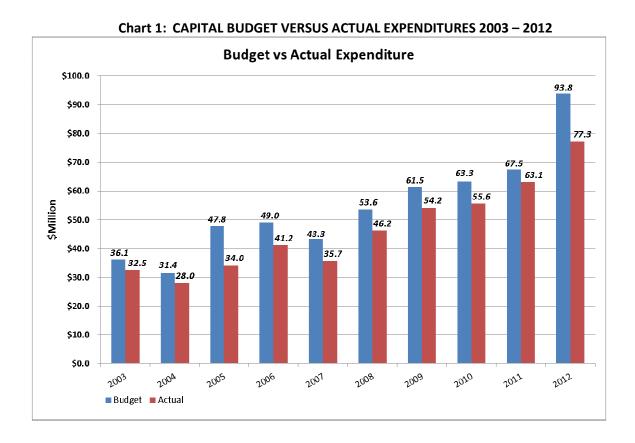
The variances presented in Table 1 are partially due to under-spending as a result of not completing all projects approved each year. It is anticipated that some carryover of projects will occur in most years as there may be unavoidable reasons for delays in project completion, for example, system constraints which are precipitated by changes in hydrology, equipment failures, etc. There are also cost increases and project

Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL BUDGET VERSUS ACTUAL EXPENDITURES 2003 – 2012 AS AT DECEMBER 31 (\$000)

delays being experienced due to the strong labour market. Hydro is working to address these issues by reviewing its packaging of projects to encourage competitive bids, as well as attracting additional bidders.

The chart below is a graphical representation of the data presented in Table 1. This chart clearly illustrates the upward trend in both budgeted and actual expenditures over the ten year period.



Capital Expenditures and Carryover Report

NEWFOUNDLAND AND LABRADOR HYDRO 2012 REMOVE SAFETY HAZARDS FOR THE YEAR ENDING DECEMBER 31, 2012 (\$000)

Total Approved Budget: \$249.1 Total Expenditure: \$141.4

Board Order P.U. 38(2010)

As part of Board Order No. P.U. 38(2010) 2011 Capital Budget, the following was included: "Because of the nature of this project the Board would expect to see an explanation in Hydro's annual report on capital expenditures as to each project that was undertaken, setting out the safety hazard that was identified, the location, the steps taken to address the issue and the amount of the expenditure." Please see the following table for projects undertaken in 2012:

Safety Hazards

Project Title/Location	Expenditure	Safety Hazard Identified	Project Scope
Replacement of GP plugs in Bay d'Espoir turbine pits	\$19.0	SWOP#2007002794, #2007002795, #2007002797, and #2010003509 In the turbine pit areas of Bay d'Espoir powerhouse 1 there are 60A, 600V plugs installed for use by maintenance personnel. These plugs are undersized (require minimum 100A capacity) and several have grounding issues and have been tagged out. The current practice is to power maintenance equipment in this area from 600V plugs located at the floor above the turbine pit and run cables along the floor to the area where work is being performed. By replacing these plugs with higher capacity, grounded plugs, the maintenance crews will be able to perform work in a safer manner as tripping hazards will be eliminated and the distance to run cables and to de-energize equipment will be greatly reduced.	Replacement of 60A, 600V plugs with 100A, 600V plugs and correction of grounding deficiencies.
Purchase new master log for Bay d'Espoir powerhouse 1	35.7	SWOP #2008001675 The master log is a critical piece of equipment used to safely isolate the draft tubes of the turbines so that work can be completed in this area. In addition to this, Occupational Health and Safety Regulations of Newfoundland (Part XV, section 371) require that "Below-the-Hook Lifting Devices" be designed, constructed, inspected, tested, and maintained in accordance with ASME B30.20-1993.	Purchase of new master log which meets the requirements of Occupational Health and Safety regulations.

NEWFOUNDLAND AND LABRADOR HYDRO 2012 REMOVE SAFETY HAZARDS FOR THE YEAR ENDING DECEMBER 31, 2012 (\$000)

Safety Hazards (cont'd.)

Repair Victoria Control	19.7	SWOP #2011006545 and #2012000034	Decking and runners were
Structure access road		On the road to Victoria Control Structure there are three wooden bridges. The	replaced on Bridge 1 and
Bridges – Bay d'Espoir		bridges were constructed in early 90's. Bridge 1 is about 5.5 km and 2 and 3 are	runners were replaced on
		about 6 km from Burnt Dam Spillway accommodations, respectively. There are	bridges 2 and 3.
		several areas on the bridges where the decking is cracked or missing. All three	
		bridges require decking and/or runners to be replaced.	
Installation of disconnect	12.0	SWOP #2011006262	Three 100A, 600V disconnect
switches at Salmon River		The switch type and rotary type breakers installed in gatehouses 1, 2 and 3 do not	switches were installed at the
spillway gates		provide sufficient worker protection. To operate the breakers, the operator must	Salmon River spillway gate
		open the panel cover and directly switch or engage the breakers; a hazardous	houses.
		exposure of personnel to arc flash and other hazards.	
Holyrood overhead door	25.0	SWOP #2011003212, and #2011003235	Installed retractable barricades,
safety enhancements		A high-potential incident involving an overhead door initiated an investigation into	erected signage, and replaced
		the condition and the operational safety of all overhead doors at HTGS. Two	mechanical safety edge on two
		separate condition assessments revealed a number of recommended replacements	overhead doors.
		and modifications that should be made in order to improve on the overall safety and	
		reliability of all overhead doors	
Stephenville parking lot	30.0	SWOP #2009003239, #2011001195, and #2011007408	Relocated the fence to increase
upgrade		The safety issue identified was that there was not enough room for larger vehicles	space in the existing yard and
		(especially when towing a trailer) to enter the existing yard and be able to maneuver	re-positioned the main gate.
		in the yard safely.	

A REPORT TO THE BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

CAPITAL EXPENDITURES AND CARRYOVER REPORT

For Year Ending December 31, 2013

March 2014



NEWFOUNDLAND AND LABRADOR HYDRO CAPITAL EXPENDITURES AND CARRYOVER REPORT

For Year Ending December 31, 2013

TABLE OF CONTENTS

Capital Budget Overview	1
Capital Expenditures By Year	2
Capital Expenditures by Category	3
Variance Explanations (Greater than \$100,000 and 10% Variance from Budget):	17
Capital Budget versus Actual Expenditures 2004 - 2013	32
Carryover Report	33
REMOVE SAFETY HAZARDS	35

2013 Capital Budget Variance Overview (\$000)

HYDRAULIC PLANT
THERMAL PLANT
GAS TURBINES
TERMINAL STATIONS
TRANSMISSION
DISTRIBUTION
RURAL GENERATION
PROPERTIES
METERING
RURAL SYSTEMS TOOLS AND EQUIPMENT
INFORMATION SYSTEMS
TELECONTROL
TRANSPORTATION
ADMINISTRATIVE
ALLOWANCE FOR UNFORESEEN
PROJECTS APPROVED BY PU BOARD
PROJECTS APPROVED FOR LESS THAN \$50,000
TOTAL CAPITAL BUDGET

Board		
Approved	Total	
Budget	Expend.	Variance
22,767	19,981	(2,786)
19,442	18,801	(641)
7,745	5,830	(1,915)
31,021	34,823	3,802
3,954	4,037	83
32,509	32,707	198
15,443	15,874	431
1,074	930	(144)
1,627	1,777	150
3,369	3,219	(150)
3,656	3,597	(59)
2,777	2,429	(348)
4,912	4,859	(52)
340	99	(242)
1,000	846	(154)
52,998	45,608	(7,390)
185	170	(15)
204,818	195,586	(9,232)

2013 Capital Expenditures By Year (\$000)

Summary
2013 Projects
2012 Projects
2011 Projects
2010 Projects
2009 Projects
Grand Total

			Capital Bud	get ¹		
					2014 and	
2009	2010	2011	2012	2013	Beyond	Total
			-	82,617.0	42,422.0	125,039.0
			19,915.4	9,111.9	-	29,027.3
		4,671.7	6,646.0	3,577.4	2,027.4	16,922.5
	2,540.6	6,836.8	10,235.7	1,566.1	-	21,179.2
100.8	1,693.5	7,105.7	3,750.0	-	-	12,650.0
100.8	4,234.1	18,614.2	40,547.1	96,872.4	44,449.4	204,818.0
		•				•

Actual Expenditure and Forecast												
			Carryovers									
					2014 and							
2009	2010	2011 ²	2012 ³	2013 4	Beyond	to 2014	Total		Variance			
			231.9	57,057.0	42,422.0	13,633.8	113,344.7		(11,746.7)			
			11,309.4	15,427.2	-	690.2	27,426.8		(1,600.5)			
		2,706.4	5,976.2	6,491.0	2,027.4	1,331.2	18,532.2		1,609.7			
	2,453.0	6,431.3	6,489.2	4,264.3	-	(199.7)	19,438.1		(1,741.1)			
291.8	1,693.5	6,022.7	7,320.1	1,515.9	-	-	16,844.0		4,194.0			
291.8	4,146.5	15,160.4	31,326.8	84,755.4	44,449.4	15,455.5	195,585.8		(9,284.6)			

2013 Capital Budget Approved by Board Order No. P.U. 4 (2013)	62,272.5
New Project Approved by Board Order No. 25 (2012)	2,252.1
New Project Approved by Board Order No. 26 (2012)	1,295.0
New Project Approved by Board Order No. 35 (2012)	189.5
New Project Approved by Board Order No. 1 (2013)	284.1
New Project Approved by Board Order No. 12 (2013)	5,198.2
New Project Approved by Board Order No. 14 (2013)	12,809.7
New Project Approved by Board Order No. 15 (2013)	3,823.6
New Project Approved by Board Order No. 20 (2013)	8,015.8
New Project approved by Board Order No. 33 (2013)	388.7
New Project approved by Board Order No. 39 (2013)	158.3
2013 New Projects under \$50,000 Approved by Hydro	184.9
Total Approved Capital Budget Before Carryovers	96,872.4
Carryovers from 2012 to 2013	19,500.8
TOTAL APPROVED CAPITAL BUDGET	116,373.2

¹ Annual budgets previous to 2013 pertain to projects that have expenditures in 2013.

 $^{^2}$ There has been a restatement of expenditures in 2011 resulting from the conversion to new accounting standards.

³ 2013 Front End Engineering Design (FEED) costs of \$231.9 incurred in 2012 are included in 2012 capital expenditures in this report. FEED costs of \$252.5 incurred in 2013 relating to 2014 are not included in this report.

⁴ Excludes insurance proceeds, which are offset against the cost of capital assets, of \$3,323.6 for Restore Unit 1 Holyrood, \$1,072.2 for Rewind Gas Turbine Alternator Stephenville and \$104.3 for Black Tickle Plant Rehabilitation.

Hydraulic Plant	Hydraulic Plant Ca			et		Actual Expenditure and Forecast							
				2014 and					2014 and	Carrvovers			
	2011	2012	2013	Beyond	Total	2011	2012	2013	Beyond	to2014	Total	Variance	Notes
2013 Projects													
Replace Automatic Transfer Switches - Hinds Lake	-	-	314.7	-	314.7	-	-	323.4	-	32.6	356.0	41.3	
Install Automatic Fuel Monitoring System - Upper Salmon	-	-	192.7	-	192.7	-	1.9	94.8	-	96.0	192.7	-	
Replace Emergency Diesel Fuel Tank - Paradise River	-	-	46.3	-	46.3	-	-	25.2	-	-	25.2	(21.1)	
Replace Stator Windings Units 1, 3 and 4 - Bay d'Espoir	-	-	5,663.5	-	5,663.5	-	8.8	2,265.7	-	3,389.0	5,663.5	-	
Automate Generator Deluge Systems - Bay d'Espoir	-	-	532.0	-	532.0	-	3.9	311.6	-	55.4	370.9	(161.1)	1
Upgrade Units 1 to 6 By-Pass Valves - Bay d'Espoir	-	-	141.9	-	141.9	-	3.0	9.5	-	129.4	141.9	-	
Upgrade Generator Bearings - Bay d'Espoir	-	-	480.9	-	480.9	-	5.3	24.3	-	451.3	480.9	-	
Upgrade Burnt Dam Spillway - Bay d'Espoir	-	-	885.8	-	885.8	-	15.0	223.1	-	647.7	885.8	-	
Purchase Low Pressure Screw Compressor Set - Bay d'Espoir	-	-	97.3	-	97.3	-	3.3	78.7	-	15.3	97.3	-	
Upgrade Public Safety Around Dams and Waterways - Bay d'Espoir	-	-	298.1	-	298.1	-	3.4	337.0	-	-	340.4	42.3	
Replace Fall Arrest System on Surge Tank 1 and 2 - Bay d'Espoir	-	-	153.0	-	153.0	-	3.1	80.2	-	-	83.3	(69.7)	
Replace Cooling Water Pumps - Bay d'Espoir	-	-	175.4	-	175.4	-	2.0	86.5	-	86.9	175.4	-	
Replace North End Equipment Door - Bay d'Espoir	-	-	265.5	-	265.5	-	-	136.3	-	-	136.3	(129.2)	2
Install Waste Oil Storage Tank for PCB's - Bay d'Espoir	-	-	48.9	-	48.9	-	-	31.3	-	-	31.3	(17.6)	
Replace Units 1 to 6 Auto Greasing Systems - Bay d'Espoir	-	-	260.1	-	260.1	-	-	189.9	-	70.2	260.1	-	
Upgrade Water Flow Control Structure RR Pond - Granite Canal	-	-	43.5	-	43.5	-	3.6	25.1	-	-	28.7	(14.8)	
Replace MicroSCADA Computers - Granite Canal	-	-	297.4	-	297.4	-	6.1	226.9	-	-	233.0	(64.4)	
Overhaul Turbine/Generator Units - Cat Arm and Bay d'Espoir	-	-	428.1	-	428.1	-	-	214.4	-	-	214.4	(213.7)	3
Purchase Tools and Equipment Less than \$50,000	-	-	82.8	-	82.8	-	-	56.1	-	-	56.1	(26.7)	
2012 Projects													
Rewind Stators Unit 4 - Bay d'Espoir	-	4,953.8	-	-	4,953.8	-	2,548.7	1,540.6	-	-	4,089.3	(864.5)	4
Replace Emergency Diesel Generator - Bay d'Espoir	-	611.4	282.7	-	894.1	-	80.0	618.3	-	-	698.3	(195.8)	5
Upgrade Burnt Dam Spillway - Bay d'Espoir	-	523.8	-	-	523.8	-	168.9	1,084.7	-	-	1,253.6	729.8	6
2011 Projects													
Replace Static Excitation Systems - Upper Salmon,													
Holyrood and Hinds Lake ⁵	16.8	1,797.1	2,295.2	_	4,109.1	16.8	818.8	869.1	_	-	1,704.7	(2,404)	7
Upgrade Generating Station Service Water System - Cat Arm	360.4	440.0	-,	_	800.4	349.3	259.6	133.6	_	-	742.5	(57.9)	
Upgrade Burnt Dam Spillway Structure - Bay d'Espoir	257.9	-	_	_	257.9	154.8	70.2	272.9	-	-	497.9	240.0	8
Upgrade Intake Gate Controls - Bay d'Espoir	352.3	468.0	_	_	820.3	507.0	373.6	108.6	-	232.6	1,221.8	401.5	9
Total Hydraulic Plant	987.4	8,794.1	12,985.8	-	22,767.3	1,027.9	4,379.2	9,367.8	-		19,981.3	(2,786.0)	

⁵ Original budget was \$4,109.1 (2010 - \$1,214.3, 2011 - \$1,528.0, 2012 - \$1,366.8) Approved by Order No. P.U. 38 (2010). The revised budget was approved by Order No. P.U. 2 (2012). The second revised budget was approved by Order No. P.U. 4 (2013)

Thermal Plant	Capital Budget				Actual Expenditure and Forecast										
			2014 and 2014 and Carryovers												
	2010	2011	2012	2013	Beyond	Total	2010	2011	2012	2013	Beyond	to 2014	Total	Variance	Notes
2013 Projects															
Complete Condition Assessment Phase 2 (Year 2) - Holyrood	-	-	-	1,170.2	-	1,170.2	-	-	5.0	554.0	-	-	559.0	(611.2)	10
Overhaul Turbine Valves - Holyrood	-	-	-	993.9	-	993.9		-	-	978.0	-	-	978.0	(15.9)	
Overhaul Boiler Feed Pumps - Holyrood	-	-	-	178.5	-	178.5		-	-	143.1	-	-	143.1	(35)	
Overhaul Extraction Pumps - Holyrood	-	-	-	101.5	-	101.5		-	-	-	-	108.7	108.7	7.2	
Upgrade Fuel Oil Day Tank - Holyrood	-	-	-	584.2	-	584.2		-	11.5	477.1	-	-	488.6	(95.6)	
Install Variable Frequency Drives on Forced Draft Fans - Holyrood	-	-	-	697.6	2,659.7	3,357.3		-	13.8	206.0	2,659.7	477.8	3,357.3	-	
Replace Condensate Polisher Annunciator Panels - Holyrood	-	-	-	123.5	-	123.5		-	0.3	20.9	-	39.5	60.7	(62.8)	
Install Backup System for Raw Water Supply and Clarifier - Holyrood	-	-	-	955.6	-	955.6		-	2.4	483.1	-	-	485.5	(470.1)	11
Purchase Tools and Equipment Less than \$50,000	-	-	-	10.5	-	10.5	-	-	-	8.5	-	-	8.5	(2.0)	
2012 Projects															
Refurbish Fuel Storage Facility - Holyrood	-	-	2,641.2	-	-	2,641.2		-	1,767.1	835.5	-	-	2,602.6	(38.6)	
Upgrade Forced Draft Fan Ductwork Unit 2 - Holyrood	-	-	928.6	-	-	928.6		-	102.4	(102.4)	-	-	-	(928.6)	12
Replace Fuel Oil Heat Tracing - Holyrood	-	-	1,474.3	1,413.9	-	2,888.2		-	783.4	1,266.9	-	-	2,050.3	(837.9)	13
Condition Assessment and Life Extension Phase 2 - Holyrood	-	-	1,215.7	-		1,215.7	-	-	565.2	426.5	-	-	991.7	(224.0)	14
2011 Projects															
Replace Relay Panels Unit 3 - Holyrood	-	277.1	553.6	-	-	830.7	-	134.2	121.5	1,111.0	-	-	1,366.7	536.0	15
Upgrade Electrical Equipment - Holyrood ⁶	-	179.6	30.0	212.1	-	421.7		179.6	41.9	287.1	-	-	508.6	86.9	
Upgrade Hydrogen System - Holyrood	-	1,191.9	800.4	-	-	1,992.3	-	270.5	1,194.5	1,917.5	-	105.3	3,487.8	1,495.5	16
2010 Projects															
Replace Pumphouse Motor Control Centres - Holyrood	50.2	998.6	-	-	-	1,048.8	99.5	1,070.2	285.7	148.5	-	-	1,603.9	555.1	17
Total Thermal Plant	50.2	2,647.2	7,643.8	6,441.5	2,659.7	19,442.4	99.5	1,654.5	4,894.7	8,761.3	2,659.7	731.3	18,801.0	(641.4)	
								•	•						

⁶ Original budget was \$678.8 (2011 - \$188.0, 2012 - \$206.3, 2013 - \$284.5) Approved by Order No. P.U. 38(2010). The revised Budget was approved by Order No. P.U. 4 (2013).

Gas Turbines
2013 Projects Upgrade Gas Turbine PLC - Happy Valley
2010 Projects Upgrade Glycol Systems - Stephenville
Upgrade Gas Turbine Plant Life Extension - Hardwoods ⁷ Total Gas Turbines

Capital Budget												
				2014 and								
2010	2011	2012	2013	Beyond	Total							
-	-	-	61.4	1,128.6	1,190.0							
261.3	298.9	-	-	-	560.2							
704.5	1,009.8	4,280.4	-	-	5,994.7							
965.8	1,308.7	4,280.4	61.4	1,128.6	7,744.9							

		Actual Ex	kpenditure	and Forecas	t			
				2014 and	Carryover			
2010	2011	2012	2013	Beyond	to 2014	Total	Variance	Notes
-	-	2.3	22.6	1,128.6	36.5	1,190.0	-	
3.3	517.9	113.2	512.1	-	-	1,146.5	586.3	18
704.5	1,168.9	505.7	1,114.0	-	-	3,493.1	(2,501.6)	19
707.8	1,686.8	621.2	1,648.7	1,128.6	36.5	5,829.6	(1,915.3)	

⁷ Original budget was \$5,994.7 (2010 - \$1,304.5, 2011 - \$1,323.6, 2012 - \$3,366.6) Approved by Order No. P.U. 1 (2010). The revised Budget was approved by Order No. P.U. 2 (2012).

Terminal Stations			(Capital Budg	get					A	ctual Expen	diture and F	orecast				
						2014 and							2014 and	Carryovers			
	2009	2010	2011	2012	2013	Beyond	Total	2009	2010	2011	2012	2013	Beyond	to 2014	Total	Variance	Notes
2013 Projects																	
Upgrade Circuit Breakers - Various Sites	-	-	-	-	2785.3	-	2,785.3	-	-	-	12.2	2408.8	-	-	2,421.0	(364.3)	20
Replace Surge Arrestors - Various Sites	-	-	-	-	121.3	-	121.3	-	-	-	3.4	14.3	-	-	17.7	(103.6)	21
Replace Instrument Transformers - Various Sites	-	-	-	-	593.2	3,074.8	3,668.0	-	-	-	9.6	230.7	3,074.8	352.9	3,668.0	-	
Upgrade Power Transformers - Various Sites	-	-	-	-	1621.1	-	1,621.1	-	-	-	7.5	476.0	-	-	483.5	(1,137.6)	22
Replace Disconnects - Various Sites	-	-	-	-	492.6	-	492.6	-	-	-	14.5	360.1	-	-	374.6	(118.0)	23
Replace Insulators - Various Sites	-	-	-	-	187.1	287.9	475.0	-	-	-	5.1	67.0	287.9	115.0	475.0	-	
Replace Optimho Relays on TL242 - Holyrood to Hardwoods	-	-	-	-	189.2	-	189.2	-	-	-	2.3	(2.3)	-	-	-	(189.2)	24
Install Online Vibration Monitoring System																	
- Corner Brook Frequency Converter	-	-	-	-	382.8	-	382.8	-	-	-	4.6	50.6	-	327.6	382.8	-	
Install Transformer Fans - Conne River	-	-	-	-	114.9	-	114.9	-	-	-	-	39.9	-	-	39.9	(75.0)	
Replace 230 kV Breaker Controls - Bottom Brook	-	-	-	-	68.9	-	68.9	-	-	-	-	78.5	-	-	78.5	9.6	
Upgrade Terminal Station - Wiltondale	-	-	-	-	697.7	1,173.3	1,871.0	-	-	-	10.7	134.0	1,173.3	553.0	1,871.0	-	
Replace Compressed Air System - Various Sites	-	-	-	-	303.0	2,105.9	2,408.9	-	-	-	17.2	32.3	2,105.9	253.5	2,408.9	-	
2012 Projects																	
Replace Compressed Air Piping and Install Dew Point Monitor - Buchans	-	-	-	28.4	278.3	-	306.7	-	-	-	-	557.4	-	194.2	751.6	444.9	25
2011 Projects																	
Perform Grounding Upgrades - Various Sites	-	-	321.2	324.0	329.0	682.5	1,656.7	-	-	287.6	240.7	507.2	682.5	(61.3)	1,656.7	-	
Replace Compressed Air System - Bay d'Espoir	-	-	83.9	563.6	-	-	647.5	-	-	83.7	1,084.2	231.3	-	-	1,399.2	751.7	26
Install Alternate Station Services - Stony Brook and Massey Drive	-	-	86.0	109.2	-	-	195.2	-	-	5.5	155.7	54.2	-	-	215.4	20.2	
Replace Compressor, Dryer and Air Piping Header System -														-			
Corner Brook Frequency Converter Station	-	-	280.2	-	-	-	280.2	-	-	141.8	139.2	100.3	-	-	381.3	101.1	27
Upgrade Substation - Wabush	-	-	459.3	626.4	-	-	1,085.7	-	-	13.8	907.6	432.4	-	-	1,353.8	268.1	28
2009 Projects																	
Upgrade Terminal Stations to 25 kV - Labrador City ⁸	100.8	1,693.5	7,105.7	3,750.0	-	-	12,650.0	291.8	1,693.5	6,022.7	7,320.1	1,515.9	-	-	16,844.0	4,194.0	29
Total Terminal Stations	100.8	1,693.5	8,336.3	5,401.6	8,164.4	7,324.4	31,021.0	291.8	1,693.5	6,555.1	9,934.6	7,288.6	7,324.4	1,734.9	34,822.9	3,801.9	_

⁸ Original budget was \$9,990.6 (2009 - \$283.2, 2010 - \$3,894.8, 2011 - \$5,812.6) Approved by Order No. P.U. 36 (2008). The revised Budget was approved by Order No. P.U. 2 (2012).

Transmission
2013 Projects Perform Wood Pole Line Management Program - Various Sites
2011 Projects Replace Guy Wires TL215 - Doyles to Grand Bay Total Transmission

	Capital Budget												
			2014 and										
2011	2012	2013	Beyond	Total									
-	-	2,466.7	-	2,466.7									
288.8	318.0	350.1	530.0	1,486.9									
288.8	318.0	2,816.8	530.0	3,953.6									

Actual Expenditure and Forecast												
2011	2012	2013	2014 and Beyond	Carryovers to 2014	Total							
-	-	2,550.1	-	-	2,550.1							
447.6	256.0	286.7	530.0	(33.4)	1,486.9							
447.6	256.0	2,836.8	530.0	(33.4)	4,037.0							

		Variance	Notes
L		83.4	
9		-	
)		83.4	
	l		

December 31, 2013

Distribution
2013 Projects
Replace Recloser Control Panels - Various Sites
Provide Service Extensions - All Service Areas
Upgrade Distribution Systems - All Service Areas
Additions for Load - Distribution Systems - Various Sites
Upgrade Distribution Systems - Various Sites
2012 Projects
Upgrade Distribution Lines - Bay d'Espoir, Parsons Pond and Plum Poin
2010 Projects
Voltage Conversion - Labrador City
Upgrade L2 Distribution Feeder - Glenburnie
Total Distribution

Capital Budget												
2014 and												
2010	2011	2012	2013	Beyond	Total							
-	-	-	209.7	-	209.7							
-	-	-	5,006.0	-	5,006.0							
-	-	-	2,790.0	-	2,790.0							
-	-	-	3,114.7	-	3,114.7							
-	-	-	1,940.1	3,995.5	5,935.6							
-	-	1,385.2	1,110.5	-	2,495.7							
1,088.9	3,501.2	3,840.7	969.5	-	9,400.3							
267.3	578.2	2,114.6	596.6	-	3,556.7							
1,356.2	4,079.4	7,340.5	15,737.1	3,995.5	32,508.7							

		Actual Exp	oenditure ar	nd Forecast				
	2014 and Carryovers							
2010	2011	2012	2013	Beyond	to 2014	Total	Variance	Notes
-	-	5.4	155.4	-	-	160.8	(48.9)	
-	-	-	5,689.4	-	-	5,689.4	683.4	30
-	-	-	2,974.4	-	-	2,974.4	184.4	
-	-	-	3,326.7	-	-	3,326.7	212.0	
-	-	-	1,714.1	3,995.5	(61.1)	5,648.5	(287.1)	
-	-	1,189.1	1,243.0	-	-	2,432.1	(63.6)	
1,524.6	2,825.0	4,120.6	1,129.8	-	(199.7)	9,400.3	- (402.2)	24
109.9	402.4	1,382.7	1,179.4	2.005.5	(260.0)	3,074.4	(482.3)	31
1,634.5	3,227.4	6,697.8	17,412.2	3,995.5	(260.8)	32,706.6	197.9	

	Rural Generation
ſ	
	2013 Projects
	Overhaul Diesel Units - Various Sites
,	Additions for Load Isolated Generation Stations-Various Sites
	2012 Projects
ı	Perform FEED for Diesel Plant Remediation - Various Sites
	2011 Projects
	Perform Arc Flash Remediation - Various Sites
	Replace Mini Hydro Turbine - Roddickton
	2010 Projects
ı	Replace Diesel Unit 2001 and Engine 566 - Francois
ŀ	Total Rural Generation

Capital Budget												
	2014 and											
2010	2011	2012	2013	Beyond	Total							
-	-	-	977.8	-	977.8							
-	-	-	2,040.2	9,357.9	11,398.1							
-	-	110.4	-	-	110.4							
-	429.5	380.3	391.0	814.9	2,015.7							
-	86.8	235.4	-	-	322.2							
168.4	450.1	-	-	-	618.5							
168.4	966.4	726.1	3,409.0	10,172.8	15,442.7							

	Actual Expenditure and Forecast									
	2010	2011	2012	2013	2014 and Beyond	Carryovers to 2014	Total	Var	iance	Notes
	-	-	- 27.8	1,134.3 1,196.4	- 9,357.9	- 816.0	1,134.3 11,398.1		156.5 -	32
	-	-	43.6	69.2	-	-	112.8		2.4	
	-	103.5 10.7	91.7 221.0	149.8 29.3	814.9	855.8 232.2	2,015.7 493.2		171.0	33
-	11.2 11.2	446.9 561.1	81.3 465.4	180.5 2,759.5	10,172.8	1,904.0	719.9 15,874.0		101.4 431.3	34

Properties
2013 Projects
Install Automatic Fire Sprinkler System - Bay d'Espoir Install Fall Protection Equipment - Various Sites
Install Additional Washrooms - Various Sites Legal Survey of Primary Distribution Line Right of Ways - Various Sites 2013
Total Properties

	2014 and	
2013	Beyond	Total
429.9	-	429.9
196.6	-	196.6
250.9	-	250.9
156.2	40.0	196.2
1,033.6	40.0	1,073.6

	2014 and	Carryovers		
2013	beyond	to 2014	Total	Variance
352.4	-	-	352.4	(77.5)
163.5	-	-	163.5	(33.1)
217.8	-	-	217.8	(33.1)
-	40.0	156.2	196.2	-
733.7	40.0	156.2	929.9	(143.7)

Notes

	Metering
2013 Projects	S
-	ters, Equipment and Metering Tanks - Various Sites
Purchase 10	Position Meter Calibration Test Console - Hydro Place
Install Autom	natic Meter Reading - Glenburnie and Rocky Harbour
2012 Projects	<u>s</u>
Install Autom	natic Meter Reading - Various Sites
Total Meterir	ng

		2014 and	
2012	2013	Beyond	Total
-	199.5	-	199.5
-	192.5	-	192.5
-	397.9	258.8	656.7
290.4	287.7	-	578.1
290.4	1,077.6	258.8	1,626.8

		2014 and	Carryovers	
2012	2013	Beyond	to 2014	Total
-	180.1	-	-	180.1
-	-	-	192.5	192.5
-	537.8	258.8	13.8	810.4
309.7	284.0	-	-	593.7
309.7	1,001.9	258.8	206.3	1,776.7

	Variance	Notes
.1 .5 .4	(19.4) - 153.7	35
.7	15.6	
.7	149.9	

Tools and Equipment											
			2014 and				2014 and	Carryovers			
	2012	2013	Beyond	Total	2012	2013	Beyond	to 2014	Total	Variance	Notes
2013 Projects											
Replace Off Road Track Vehicles											
- Whitbourne, Port Saunders and Happy Valley	-	416.8	1,054.1	1,470.9	-	324.7	1,054.1	92.1	1,470.9	-	
Replace Light Duty Mobile Equipment - Various Sites	-	476.5	-	476.5	-	448.2	-	-	448.2	(28.3)	
Tools and Equipment Less than \$50,000	-	525.3	-	525.3	-	397.7	-	51.4	449.1	(76.2)	
2012 Projects											
Replace Off Road Track Vehicles - Flowers Cove and Cow Head	482.5	395.6	-	878.1	-	843.1	-	-	843.1	(35.0)	
Tools and Equipment Less than \$50,000	18.3	-	-	18.3	-	7.5	-	-	7.5	(10.8)	
Total Tools and Equipment	500.8	1,814.2	1,054.1	3,369.1	-	2,021.2	1,054.1	143.5	3,218.8	(150.3)	1

Information Systems
2013 Projects
Perform Minor Application Enhancements - Hydro Place
Cost Recoveries
Upgrade Energy Management System - Hydro Place
Upgrade Microsoft Project - Hydro Place
Cost Recoveries
Upgrade Business Intelligence Software - Hydro Place
Cost Recoveries
Replace Personal Computers - Various Sites
Replace Peripheral Infrastructure - Various Sites
Upgrade Enterprise Storage Capacity - Hydro Place
Cost Recoveries
Upgrade Server Technology Program - Hydro Place
Cost Recoveries
Upgrade Computer Room Air Conditioner - Hydro Place
Cost Recoveries
Replace Helpdesk Service Manager Application - Hydro Place
Cost Recoveries
2012 Projects
Upgrade JD Edwards - Hydro Place
Cost Recoveries
Upgrade Computer Room - Hydro Place
Cost Recoveries
Total Information Systems

		2014 and	
2012	2013	Beyond	Total
-	126.8	-	126.8
-	(45.7)	-	(45.7)
-	129.9	-	129.9
-	656.7	920.3	1,577.0
-	(236.4)	(331.3)	(567.7)
-	576.9	-	576.9
-	(207.7)	-	(207.7)
-	463.9	-	463.9
-	309.9	-	309.9
-	194.9	-	194.9
-	(70.2)	-	(70.2)
-	499.4	-	499.4
-	(131.8)	-	(131.8)
-	130.0	-	130.0
-	(46.8)	-	(46.8)
-	96.5	-	96.5
-	(34.7)	-	(34.7)
284.0	587.6	-	871.6
(96.6)	(199.8)	-	(296.4)
122.0	-	-	122.0
(41.5)	-	-	(41.5)
267.9	2,799.4	589.0	3,656.3

		2014 and	Carryovers			
2012	2013	Beyond	to 2014	Total	Variance	Notes
-	132.6	-	-	132.6	5.8	
-	(47.7)	-	-	(47.7)	(2.0)	
-	133.8	-	-	133.8	3.9	
-	619.6	920.3	37.1	1,577.0	-	
-	(223.1)	(331.3)	(13.3)	(567.7)	-	
-	245.9	-	331.0	576.9	-	
-	(88.5)	-	(119.2)	(207.7)	-	
-	432.0	-		432.0	(31.9)	
-	298.6	-	-	298.6	(11.3)	
-	185.7	-	-	185.7	(9.2)	
-	(66.9)	-	-	(66.9)	3.3	
-	497.4	-	-	497.4	(2.0)	
-	(131.3)	-	-	(131.3)	0.5	
-	98.3	-	31.7	130.0	-	
-	(35.4)	-	(11.4)	(46.8)	-	
-	90.4	-	-	90.4	(6.1)	
-	(32.5)	-	-	(32.5)	2.2	
518.3	315.6	-	-	833.9	(37.7)	
(176.2)	(107.3)	-	-	(283.5)	12.9	
9.3	131.6	-	-	140.9	18.9	
(3.2)	(44.7)	-	-	(47.9)	(6.4)	
348.2	2,404.1	589.0	255.9	3,597.2	(59.1)	
					1	

Telecontrol
2013 Projects
Replace MDR 4000 Microwave Radio (West) - Various Sites
Replace Radomes - Various Sites
Replace Battery Banks and Chargers - Various Sites
Replace Network Communications Equipment - Various Sites
Replace Telephone Systems - Various Sites
Upgrade Site Facilities - Various Sites
Purchase Tools and Equipment Less than \$50,000
Total Telecontrol

	2014 and	
2013	Beyond	Total
539.0	706.9	1,245.9
336.0	-	336.0
782.0	-	782.0
182.4	-	182.4
135.4	-	135.4
49.8	-	49.8
45.6	-	45.6
2,070.2	706.9	2,777.1

		2014 and	Carryovers	
2012	2013	Beyond	to 2014	Total
2.9	95.1	706.9	441.0	1,245.9
2.6	260.4	-	-	263.0
3.8	549.4	-	-	553.2
2.4	154.5	-	-	156.9
2.4	116.9	-	-	119.3
-	47.4	-	-	47.4
-	43.2	-	-	43.2
14.1	1,266.9	706.9	441.0	2,428.9
				_

	Variance	Notes
9	_	
0.	(73.0)	
.2	(228.8)	36
9	(25.5)	
.3	(16.1)	
4	(2.4)	
2	(2.4)	
9	(348.2)	

Transportation
<u>2013 Projects</u> Replace Vehicles and Aerial Devices (2013-2014) - Various Sites
<u>2012 Projects</u> Replace Vehicles and Aerial Devices (2012-2013) - Various Sites
Total Transportation

2012	2013	2014 and Beyond	Total
-	1,302.3	679.2	1,981.5
1,711.4	1,218.8	-	2,930.2
1,711.4	2,521.1	679.2	4,911.7

2012	2013	2014 and Beyond	Carryovers to 2014	Total	Variance N	١o
-	692.9	679.2	609.4	1,981.5	-	
1,594.1	1,283.7	-	-	2,877.8	(52.4)	
1,594.1	1,976.6	679.2	609.4	4,859.3	(52.4)	
					L	_

<u>2013 Projects</u> Remove Safety Hazards - Various Sites Purchase Tools and Equipment Less than \$50,000

2013 Projects

Administration

			2014 and	
2012		2013	Beyond	Total
	-	250.5	-	250.5
	-	89.9	-	89.9
	-	340.4	-	340.4

		2014 and	Carryovers	
2012	2013	Beyond	to 2014	Total
2.8	64.2	-	-	67.0
-	31.6	-	-	31.6
2.8	95.8	-	-	98.6
	_			

Variance	Notes
(183.5) (58.3)	37
(241.8)	

Allowance For Unforeseen											
	2012	2013	2014 and Beyond	Total	2012	2013	2014 and Beyond	Carryover to 2014	Total	Variance	Not
013 Projects	2012	2015	Deyona	Total	2012	2015	Deyona	10 2014	Total	variance	1101
efurbish 230 kV Breakers - Holyrood and Buchans	-	_	_	-	-	206.6	_	_	206.6	_	
lack Tickle Plant Rehabilitation	-	-	-	-	-	147.0	-	-	147.0	-	
orced Draft Fan Upgrade - Holyrood	-	-	-	-	-	6.3	-	-	6.3	-	
pgrade Gas Turbine Alternator - Happy Valley	-	-	-	-	-	365.2	-	-	365.2	-	
eplacement of Damaged Structures to 138 kV Line - TL222	-	-	-	-	-	120.9	-	-	120.9	-	
otal Allowance For Unforeseen	-	1,000.0	-	1,000.0	-	846.0	-	-	846.0	(154.0)	3
Unbudgeted Projects Approved by PUB											
Olibudgeted Frojects Approved by Fob	_		2014 and				2014 and	Carryover			
	2012	2013	Beyond	Total	2012	2013	Beyond	to 2014	Total	Variance	No
013 Projects			•				•				
efurbish Stoplogs - Burnt Dam Spillway	-	284.1	-	284.1	_	236.5	-	_	236.5	(47.6)	
efurbish Marine Terminal - Holyrood	-	5,198.2	-	5,198.2	-	2,023.7	-	-	2,023.7	(3,174.5)	3
estore Unit 1 - Holyrood	-	12,809.7	_	12,809.7	_	9,039.5	-	_	9,039.5	(3,770.2)	4
ncrease 230 kV Transformer Capacity - Oxen Pond	-	3,823.6	15,310.4	19,134.0	-	153.6	15,310.4	3,670.0	19,134.0		
eplace Breaker - Hinds Lake	-	388.7	· -	388.7	_	393.9		· -	393.9	5.2	
eplace Alternator - Hardwoods	-	8,015.8	-	8,015.8	_	7,058.2	-	_	7,058.2	(957.6)	4
urchase Equipotential Bonding and Grounding Equipment	_	158.3	_	158.3	_	-	_	158.3	158.3	_	
lackstart Capability Upgrade - Holyrood	-	-	-	-	-	84.5	-	-	84.5	84.5	
012 Projects											
ncrease Generation - Mary's Harbour	321.4	1,295.0	-	1,616.4	51.0	1,069.4	-	496.0	1,616.4	-	
ewind Gas Turbine Alternator - Stephenville	2,940.5	2,252.1	-	5,192.6	1,758.0	3,941.7	-	-	5,699.7	507.1	
eplace Penthouse Roof - Hydro Place	10.2	189.5	-	199.7	-	162.9	-	-	162.9	(36.8)	_
otal Unbudgeted Projects Approved by PUB	3,272.1	34,415.0	15,310.4	52,997.5	1,809.0	24,163.9	15,310.4	4,324.3	45,607.6	(7,389.9)	_
Projects Less than \$50,000 Approved by Hydro											
Trojects Less than \$30,000 Approved by Hydro			2014 and				2014 and	Carryover			
	2012	2013	Beyond	Total	2012	2013	Beyond	to 2014	Total	Variance	No
	2012	2013	Deyona	10141		2013	Deyona	10 LU1-T	10.01	variance	. 10

41.9

37.2

49.7

18.7

37.4

184.9

41.9

37.2

49.7

18.7

37.4

184.9

37.6

28.3

43.3

25.6

35.6

170.4

Replace Loggers - Hydrometric Stations

Pole Replacement - TL1301 - Fire Damage

Burnt Dam Refurbishment of Heated Gate

Total Projects Less than \$50,000 Approved by Hydro

Replace Structure - TL259

Replace Air Conditioning Equipment - Computer Server Room

(4.3)

(8.9)

(6.4)

6.9

(1.8)

(14.5)

37.6

28.3

43.3

25.6

35.6

170.4

PUB-NLH-227, Attachment 1
Page 344 of 362, Isl Int System Power Outages
Capital Expenditures and Carryover Report
December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO
2013 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2013
(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

1. <u>Automate Generator Deluge Systems – Bay d'Espoir</u>

Budget: \$532.0 Total: \$370.9 Variance: (\$161.1)

This is a one-year project that has been carried over into 2014. The cost for this project has been reduced as a result of lower than estimated engineering and internal labor costs. The project contingency has also been reduced as contract costs are known and thus the risk to project cost is low.

2. Replace North-End Equipment Door – Bay d'Espoir

Budget: \$265.5 Total: \$136.3 Variance: (\$129.2)

This is a one-year project completed in 2013. The contract pricing obtained through a competitive bid process for this project was less than anticipated in the original project estimate.

3. Overhaul Turbine/Generator Units – Cat Arm and Bay d'Espoir

Budget: \$428.1 Total: \$214.4 Variance: (\$213.7)

This is a one-year project completed in 2013. The overhaul for Cat Arm was lower than budgeted due to unit trend monitoring data analysis that resulted in a portion of the planned unit dismantling not being required. The overhaul cost for Bay d'Espoir was lower than anticipated in the original project estimate due to the coincident replacement of the stator windings and tasks common to both projects which resulted in project cost savings.

4. Rewind Stators Unit 4 – Bay d'Espoir

Budget: \$4,953.8 Total: \$4,089.3 Variance: (\$864.5)

This is a one-year project that was carried over into 2013. The project cost decrease is a result of lower than estimated construction labour and material costs. These cost savings resulted in lower than estimated project interest cost and no contingency funds being utilized.

PUB-NLH-227, Attachment 1
Page 345 of 362, Isl Int System Power Outages
Capital Expenditures and Carryover Report
December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO 2013 VARIANCE EXPLANATIONS FOR THE YEAR ENDING DECEMBER 31, 2013

(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

5. Replace Emergency Diesel Generator – Bay d'Espoir

Budget: \$894.1 Total: \$698.3 Variance: (\$195.8)

This is a two-year project that was completed in 2013. The project was completed under budget as a result of savings on the cost of the diesel genset and installation labour. These savings resulted in reduced project interest and no contingency funds being used.

6. Upgrade Burnt Dam Spillway – Bay d'Espoir

Budget: \$523.8 Total: \$1,253.6 Variance: \$729.8

This is a one-year project which was carried over into 2013. There was a cost increase of \$270.0 due to the difference between the budgeted and actual tendered costs for the disassembly and inspection contract and the consultant design cost. An additional \$460.0 was required to complete the approved scope of work. Specifically, additional funds were required for internal costs including labour, material, travel, interest and contingency not originally approved as part of this project. The project was carried over into 2013 as a result of having to reapply for a portion of the planned project to refurbish the stop logs to allow for the approved inspections to be completed safely.

7. Replace Static Excitation Systems – Upper Salmon, Holyrood Unit 3 and Hinds Lake

Budget: \$4,109.1 Total: \$1,704.7 Variance: (\$2,404.0)

This is a three-year project completed in 2013. The project was completed under budget as a result of much lower than expected supply, installation contract, and internal labour costs.

8. <u>Upgrade Burnt Dam Spillway Structure – Bay d'Espoir</u>

Budget: \$257.9 Total: \$497.9 Variance: \$240.0

This is a one-year project initiated in 2011 that was carried over into 2012 and 2013. The cost increase is due to the unplanned use of external resources to complete design and oversee project execution. In addition, contract pricing obtained through the competitive bid process was higher than anticipated in the original project estimate. This project was completed in 2013.

PUB-NLH-227, Attachment 1
Page 346 of 362, Isl Int System Power Outages
Capital Expenditures and Carryover Report
December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO
2013 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2013
(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

9. Upgrade Intake Gate Controls – Bay d'Espoir

Budget: \$820.3 Total: \$1,221.8 Variance: \$401.5

This is a two-year project initiated in 2011. The scope of this project remains unchanged, however the timing and the complexity of the work has resulted in increased labour costs. The work planned for 2011 was completed; however the work which was planned to be completed in 2012 was originally delayed to 2013 and now until 2014 due to system constraints which prevented a suitable outage window to complete the work. In 2011, high water levels required the outage work to be delayed after work had commenced, requiring extra work to install temporary controls, and then to return later to complete the original scope of work. In 2012, outages to three units simultaneously were required to complete the scope of work and system loading considerations prevented a suitable outage window to complete the work. In 2013, failure of the intake gate prevented the completion of the planned work, as the repair of the gate had to be completed during the outage window.

10. Complete Condition Assessment Phase 2 (Year 2) - Holyrood

Budget: \$1,170.2 Total: \$559.0 Variance: (\$611.2)

This is a one-year project completed in 2013. The key focus area of this condition assessment was the Unit 2 boiler and high energy piping inspections. In January of 2013, a forced outage occurred on Unit 1 which impacted the 2013 Holyrood unit outage schedule. As a result, the planned outage for Unit 2 was reduced and the boiler and high energy piping condition assessment could not be completed. This work will now be completed as part of the 2014 condition assessment project. The work completed included a visual inspection of plant roofs and overhead doors, CCTV inspection of underground drainage pipelines, inspection of concrete equalization basin 2, Unit 3 generator testing, and inspection of the waste water basin building.

PUB-NLH-227, Attachment 1
Page 347 of 362, Isl Int System Power Outages
Capital Expenditures and Carryover Report
December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO
2013 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2013
(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

11. Install Backup System for Raw Water Supply and Clarifier - Holyrood

Budget: \$955.6 Total: \$485.5 Variance: (\$470.1)

This project is a one-year project which has been completed under budget. The primary reason for the reduced project cost is contract pricing obtained through the competitive bid process which was lower than anticipated in the original project estimate.

12. <u>Upgrade Forced Draft Fan Ductwork Unit 2 - Holyrood</u>

Budget: \$928.6 Total: \$0 Variance: (\$928.6)

This project has been cancelled. A component of the original project justification was based on a cost benefit analysis. With the updated long term plan for Holyrood, an updated cost benefit analysis was completed. Unit 2 will no longer be required to operate as a generator after 2021, resulting in a reduced study period. In addition, the forecasted pricing of No. 6 fuel oil is now lower than that used in the original cost benefit analysis. As a result, this project is no longer economically justified.

13. Replace Fuel Oil Heat Tracing - Holyrood

Budget: \$2,888.2 Total: \$2,050.3 Variance: (\$837.9)

This is a two-year project completed as planned in 2013. Contract pricing obtained through the competitive bid process was lower than anticipated in the original project estimate. In addition, the majority of the work was completed in year 2 of the project, resulting in lower project interest costs.

14. Condition Assessment and Life Extension Phase 2 - Holyrood

Budget: \$1,215.7 Total: \$991.7 Variance: (\$224.0)

This is a one-year project that was carried over from 2012. The scope of the project was to complete a Level II assessment of the major issues found in the Level I assessment performed previously. The total project cost was less than originally estimated due to lower than anticipated contract and project interest costs.

PUB-NLH-227, Attachment 1
Page 348 of 362, Isl Int System Power Outages
Capital Expenditures and Carryover Report
December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO
2013 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2013
(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

15. Replace Relay Panels Unit 3 – Holyrood

Budget: \$830.7 Total: \$1,366.7 Variance: \$536.0

This is a two-year project initiated in 2011. Project costs were higher than originally estimated as additional engineering and plant resource time was required in 2012 in order to complete field investigations to bring the existing Unit 3 relay panel control schematics and termination schedules up to 'as-built' status. As these 'as-built' drawings formed the basis of the control panel design, the contract for the design and supply of the new control panel was then delayed until 2013.

As a result of the additional field investigation work completed, it was realized that the installation of the control panel would take longer than originally anticipated, as would the commissioning of the new equipment into the existing system. This increased the schedule for this work from eight to twelve weeks, resulting in increased labour and construction costs.

16. <u>Upgrade Hydrogen System - Holyrood</u>

Budget: \$1,992.3 Total: \$3,487.8 Variance: \$1,495.5

This is a two-year project initiated in 2011 which has now been carried over into 2014. An increase in the original capital project budget was required to complete the original project deliverables. This increase is a result of a divergence between the budgeted and actual cost for engineering design, materials, and construction. The procurement of long lead items was completed as planned in 2011 within budget. The engineering design and tendering of the construction contract were completed in the spring of 2012. One tender was received at a price of \$1,242.3, compared to the budgeted contract cost of \$290.0. The contract was not awarded. At this point, Hydro reviewed and confirmed the project scope and justification. Following the announcement of the Muskrat Falls Project in December 2012, there was a change in the long term asset plan for Holyrood, and the conversion of Units 1 and 2 to synchronous condensers was no longer required. This necessitated a further review and confirmation of the project justification, and adjustments to the project scope. The original project justification remained unchanged; the upgrades of the hydrogen system are necessary to improve the safety and reliability of the system.

PUB-NLH-227, Attachment 1
Page 349 of 362, Isl Int System Power Outages
Capital Expenditures and Carryover Report

December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO
2013 VARIANCE EXPLANATIONS

FOR THE YEAR ENDING DECEMBER 31, 2013 (Greater than \$100,000 and 10% Variance from Budget)

(\$000)

16. Upgrade Hydrogen System – Holyrood (cont'd.)

The project was carried over into 2013 and the construction specification was re-designed to address the

scope adjustments resulting from the change in the long term asset plan for Holyrood. A revised

construction contract was tendered in the spring of 2013 and five tenders were received. The lowest

evaluated tender was \$997.0. This contract was awarded and work is substantially complete, with final

commissioning remaining to be completed.

17. Replace Pumphouse Motor Control Centres - Holyrood

Budget: \$1,048.8 Total: \$1,603.9 Variance: \$555.1

This is a two-year project initiated in 2010 which was completed in 2013. The engineering design and

construction specification originally prepared for this work did not cover all the aspects of work required

to complete this project. This resulted in increased costs for labour and for the installation contract. The

installation and commissioning of the Units 1 and 2 pumphouse motor control centers (MCCs) were

completed during the scheduled 2013 unit outages.

18. <u>Upgrade Glycol Systems - Stephenville</u>

Budget: \$560.2 Total: \$1,146.5 Variance: \$586.3

This is a two-year project initiated in 2010 which was carried over into 2012 and then into 2013 due to

multiple tenders being required to secure suitable bids. This competitive bid process resulted in contract

pricing much higher than anticipated in the original project estimate. While the construction work was

planned to be completed in the spring of 2012, it was postponed as a result of the alternator failure at

the Stephenville Gas Turbine. The glycol system upgrade project could not be commissioned and placed

in service until the alternator refurbishment work was completed. This work is now complete and the

system is in service. The cost of this project also increased as a result of project delays.

Newfoundland and Labrador Hydro

Page 22

PUB-NLH-227, Attachment 1
Page 350 of 362, Isl Int System Power Outages
Capital Expenditures and Carryover Report
December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO 2013 VARIANCE EXPLANATIONS FOR THE YEAR ENDING DECEMBER 31, 2013 (Greater than \$100,000 and 10% Variance from Budget) (\$000)

19. Upgrade Gas Turbine Plant Life Extension - Hardwoods

Budget: \$5,994.7 Total: \$3,493.1 Variance: (\$2,501.6)

This is a three-year project initiated in 2010 and carried over into 2013. The cost of this project was reduced due to the removal of the costs allocated for the alternator and excitation system inspection and refurbishment. This work was not required as the alternator and exciter were replaced under a separate project approved in Board Order No. 20(2013).

20. <u>Upgrade Circuit Breakers – Various Sites</u>

Budget: \$2,785.3 Total: \$2,421.0 Variance: (\$364.3)

This a one-year project completed in 2013. Two planned circuit breaker replacements for Cow Head and Hardwoods were not completed as a result of later than anticipated delivery of replacement circuit breakers. These replacements will now be completed in 2014. Additionally, two planned overhauls were delayed and will now be completed as part of the 2014 circuit breaker upgrade project.

21. Replace Surge Arrestors – Various Sites

Budget: \$121.3 Total: \$17.7 Variance: (\$103.6)

This is a one-year project planned to be completed in 2013. The majority of work planned for this project was not completed as a result of resources being redirected to complete critical work at Stephenville and Hardwoods gas turbines and to complete other required maintenance. Additionally, work related to Cow Head T1 was planned to be completed with planned breaker replacement work which has been deferred to 2014 as a result of late breaker delivery. This work will now be completed as part of the 2014 surge arrester replacement project.

22. <u>Upgrade Power Transformers – Various Sites</u>

Budget: \$1,621.1 Total: \$483.5 Variance: (\$1,137.6)

This is a one-year project planned to be completed in 2013. This project includes several types of upgrades to power transformers including oil refurbishment, radiator replacement, bushing replacement, and leak repair. This work is normally coordinated such that, where possible, several

PUB-NLH-227, Attachment 1
Page 351 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO 2013 VARIANCE EXPLANATIONS

FOR THE YEAR ENDING DECEMBER 31, 2013 (Greater than \$100,000 and 10% Variance from Budget)

(\$000)

22. Upgrade Power Transformers – Various Sites (cont'd.)

upgrades are performed on a transformer at the same time to avoid duplication of work and to minimize

cost and equipment outage time.

Challenges were experienced with procurement of leak repair services, delivery of replacement

radiators, and with purchase of replacement bushings. As a result, coordinated work was not completed

on Bay d'Espoir T1 (leak repair and oil refurbishment) and Happy Valley T1 Spare (leak repair, oil

refurbishment, and bushing replacement). Cow Head T1 leak repair was planned to be completed at the

same time as a breaker replacement. This work has been deferred to 2014 due to late delivery of the

breaker. Additionally, planned radiator replacement on Hardwoods T2 could not be completed due to

late delivery of replacement radiators.

The purchase and installation of bushings was reduced as a result of difficulty finding direct replacement

bushings for some transformers. The work originally planned for 2013 will now be completed as part of

the 2014 upgrade power transformers project.

23. Replace Disconnects – Various Sites

Budget: \$492.6

Total:

\$374.6

Variance: (\$118.0)

This is a one-year project completed in 2013. Not all of the planned disconnect replacements were

completed. The disconnect purchased for Bottom Brook B1T1 was used to replace Hardwoods B1T2 due

to a failure of the switch at Hardwoods. Replacements planned for Barachois were not completed due to

late delivery of a motor operator. These replacements will be completed as part of the 2014 disconnect

replacement project.

Newfoundland and Labrador Hydro

Page 24

PUB-NLH-227, Attachment 1
Page 352 of 362, Isl Int System Power Outages
Capital Expenditures and Carryover Report
December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO
2013 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2013
(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

24. Replace Optimho Relays on TL242 – Holyrood to Hardwoods

Budget: \$189.2 Total: \$0 Variance: (\$189.2)

Given the sanction of the Labrador Island Link, TL242 will be reconfigured to terminate in the new Soldiers Pond Terminal Station. The protection on TL242 will be upgraded as part of that project. As a result, Hydro decided that the protection upgrade should be delayed to be aligned with the new configuration. The protection package is currently out on tender and once it is awarded, replacement relays will be procured and installed by Hydro.

25. Replace Compressed Air Piping and Install Dew Point Monitor - Buchans

Budget: \$306.7 Total: \$751.6 Variance: \$444.9

This is a two-year project initiated in 2012 and carried over into 2014. The budget has been increased due to contract pricing obtained through the competitive bid process which was higher than anticipated in the original project estimate by approximately \$200.0. Future budgets for similar work have been adjusted to reflect the higher costs realized in completing this work.

26. Replace Compressed Air System – Bay d'Espoir

Budget: \$647.5 Total: \$1,399.2 Variance: \$751.7

This is a two-year project initiated in 2011 which was carried over into 2013. The increase in project cost is primarily due to contract pricing obtained through the competitive bid process which was higher than anticipated in the original project estimate. Future budgets for similar work have been adjusted to reflect the higher costs realized in completing this work.

27. Replace Compressor, Dryer and Air Piping Header System - Corner Brook Frequency Converter Station

Budget: \$280.2 Total: \$381.3 Variance: \$101.1

This project was originally planned to be completed in 2011 and was carried into 2012 due to difficulties in obtaining bids for the work in 2011. The contract work for this project was combined with other project work and tendered a second time which resulted in contract pricing which was still higher than originally estimated.

PUB-NLH-227, Attachment 1 Page 353 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO 2013 VARIANCE EXPLANATIONS

FOR THE YEAR ENDING DECEMBER 31, 2013 (Greater than \$100,000 and 10% Variance from Budget)

(\$000)

27. Replace Compressor, Dryer and Air Piping Header System - Corner Brook Frequency Converter Station

(cont'd.)

In addition to increased contract pricing, design changes were required in the course of the project

which resulted in increased engineering and material costs. The material required to complete the

design changes could not be delivered in 2012 and, as a result, this project was completed in 2013.

28. **Upgrade Substation - Wabush**

> Budget: \$1,085.7

Total:

\$1,353.8

Variance: \$268.1

This is a two-year project initiated in 2011 and carried over into 2013. The primary reason for the

increase in project cost is contract pricing obtained through the competitive bid process which was

higher than anticipated in the original project estimate.

29. Upgrade Terminal Stations to 25 kV - Labrador City

Budget:

\$12,650

Total:

\$16,844.0

Variance: \$4,194.0

The original budget was submitted as a three-year project to construct two new 46/25 kV terminal

stations. Each station will have two new 46/25 kV, 15/20/25 MVA power transformers, new 46 kV and

25 kV electrical equipment and new control buildings. The budget for this project was previously

increased to \$12,650.0 and the 2012 budget was adjusted to incorporate the change in the overall

budget.

This project was estimated in 2008 based on market conditions at the time and using standard escalation

indices for future year expenditures. The market conditions realized in Labrador West during the project

execution phase have been atypical, driven by strong economic activity in the area. The outcome was an

escalation beyond Hydro's anticipation in construction contracts, materials and labour.

An additional \$3.1 million was required to complete this project as a result of contract pricing increases

above estimated amounts for use of consultants for design review, commissioning cost estimates which

were low compared to the actual cost to commission the specific type and size of stations involved, and

additional material costs. Both terminal stations are now in service.

PUB-NLH-227, Attachment 1
Page 354 of 362, Isl Int System Power Outages
Capital Expenditures and Carryover Report
December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO 2013 VARIANCE EXPLANATIONS FOR THE YEAR ENDING DECEMBER 31, 2013 (Greater than \$100,000 and 10% Variance from Budget) (\$000)

30. Provide Service Extensions – All Service Areas

Budget: \$5,006.0 Total: \$5,689.4 Variance: \$683.4

This is an annual allotment based on past expenditures to provide service connections to new customers. The budget and actual expenditures by area is shown in the table below.

	Budget	Actual				
	(\$000)	(\$000)				
Central	1,437.0	1,751.4				
Northern	1,371.0	1,202.0				
Labrador	2,198.0	2,736.0				
Total	5,006.0	5,689.4				

The variance is mainly related to growth in the Labrador Interconnected System, especially in Labrador West.

31. <u>Upgrade L2 Distribution Feeder - Glenburnie</u>

Budget: \$3,556.7 Total: \$3,074.4 Variance: (\$482.3)

This is a three-year project started in 2010 and carried over into 2013. This project was completed under budget as a result of contract pricing obtained through the competitive bid process which was lower than anticipated in the original project estimate.

32. Overhaul Diesel Units – Various Sites

Budget: \$977.8 Total: \$1,134.3 Variance: \$156.5

This is a one-year project to overhaul diesel units. The increase in project cost is due to required unplanned replacement of additional parts on a diesel unit in Nain.

33. Replace Mini Hydro Turbine - Roddickton

Budget: \$322.2 Total: \$493.2 Variance: \$171.0

This is a two-year project initiated in 2011. The increase in project cost compared to budget is due to a scope change to include a generator replacement. The generator rotor shaft failed in 2010. This failure

PUB-NLH-227, Attachment 1 Page 355 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO 2013 VARIANCE EXPLANATIONS FOR THE YEAR ENDING DECEMBER 31, 2013 (Greater than \$100,000 and 10% Variance from Budget)

(\$000)

33. Replace Mini Hydro Turbine - Roddickton (cont'd.)

occurred after the project proposal was submitted for approval. A cost-benefit analysis was performed

to compare the feasibility of replacing the generator at additional cost under the same project,

postponing the work, or cancelling the current project and shutting down the plant. The results of the

cost-benefit analysis favoured proceeding with the turbine overhaul and replacement of the generator.

This project has been carried over into 2014 as a result of additional time being required for

procurement of a replacement generator.

34. Replace Diesel Unit 2001 and Engine 566 - Francois

> Budget: \$618.5

Total: \$719.9 Variance: \$101.4

This project is a two-year project initiated in 2010. The replacement genset for Unit 566 was installed

and commissioned in 2011, but delivery of the replacement genset for Unit 2001 was delayed. During

factory acceptance testing, the unit did not meet the specified vibration limits. Factory troubleshooting

of this issue was on-going with resolution in December 2012. The replacement genset was delivered in

2013.

The project cost has increased as a result of increased genset installation costs for Unit 566 and

additional engineering costs associated with troubleshooting of engine issues and increased interest

costs as a result of extension of the project schedule.

35. Install Automatic Meter Reading – Glenburnie and Rocky Harbour

> **Budget:** \$656.7 Total: \$810.4 Variance: \$153.7

There are two approved capital projects currently in progress for installation of automatic meter reading.

One project was originally budgeted to install automatic meter reading in the service areas of Rocky

Harbour and Glenburnie in 2012 and 2013, and the second project was originally budgeted to install

automatic meter reading in the service areas of Plum Point and Bear Cove in 2013 and 2014. The

anticipated retirement dates of the respective meter readers have changed, and a decision was made in

Newfoundland and Labrador Hydro

Page 28

PUB-NLH-227, Attachment 1
Page 356 of 362, Isl Int System Power Outages
Capital Expenditures and Carryover Report
December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO
2013 VARIANCE EXPLANATIONS
FOR THE YEAR ENDING DECEMBER 31, 2013
(Greater than \$100,000 and 10% Variance from Budget)
(\$000)

35. Install Automatic Meter Reading – Glenburnie and Rocky Harbour (cont'd.)

2012 to swap the two projects. The meter reader for Rocky Harbour and Glenburnie also reads the meters for the service areas of Wiltondale and Sally's Cove. These areas were not originally budgeted but are necessary to achieve the benefit of eliminating a meter reader position. An updated cost benefit analysis was completed which demonstrated that installation of automatic meter reading in Rocky Harbour, Glenburnie, Wiltondale and Sally's Cove is the least cost alternative compared to the status quo, with a \$32.0 difference in net present value. The cost increase is associated with the materials and labour associated with Wiltondale and Sally's Cove.

36. Replace Battery Banks and Chargers – Various Sites

Budget: \$782.0 Total: \$553.2 Variance: (\$228.8)

This is a one-year project completed in 2013. The reduction in project cost is a result of lower than anticipated engineering and construction labour being required.

37. Remove Safety Hazards – Various Sites

Budget: \$250.5 Total: \$67.0 Variance: (\$183.5)

This is a one-year project completed in 2013. This project is based on the requirement to ensure adequate capital funding is available to quickly address capital related safety hazards as they are identified. Therefore, this funding is only utilized to the extent that specific hazards are identified. The hazards identified in 2013 are itemized in the 2013 Remove Safety Hazards table, p. 35. In addition, the project budget for this project was reduced by \$158.3, the amount of a supplemental project for the purchase of equipotential bonding and grounding equipment, approved by Board Order P.U. 39(2013).

38. <u>Allowance for Unforeseen</u>

Budget: \$1,000.0 Total: \$846.0 Variance: (\$154.0)

The Allowance for Unforeseen items is an annual allotment that permits Hydro to act expeditiously to deal with events affecting the electrical system which cannot wait for specific approval of the Board.

Actual unforeseen expenditures for 2013 under this account include costs associated with refurbishment

PUB-NLH-227, Attachment 1 Page 357 of 362, Isl Int System Power Outages

Capital Expenditures and Carryover Report

December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO 2013 VARIANCE EXPLANATIONS FOR THE YEAR ENDING DECEMBER 31, 2013

(\$000)

(Greater than \$100,000 and 10% Variance from Budget)

38. <u>Allowance for Unforeseen</u> (cont'd.)

of 230 kV breakers at Holyrood and Buchans, upgrade of the alternator at Happy Valley Gas Turbine,

replacement of damaged structures on TL222, rehabilitation of the Black Tickle diesel plant, and upgrade

of Unit 3 forced draft fan motor at Holyrood, all of which are detailed on page 16. Detailed reports have

been or will be filed for each project that has used this allowance.

39. Refurbish Marine Terminal - Holyrood

Budget: \$5,198.2 Total: \$2,023.7 Variance: (\$3,174.5)

This is a supplemental project approved by Board Order P.U.12(2013). The project variance is primarily a

result of finding an alternative means of repairing fender number four than originally planned. The

original repair method required the use of a barge to position the form for the concrete fender. The

form was able to be placed from the shore and no barge was required. This resulted in a significant

reduction in the contract cost.

40. Restore Unit 1 - Holyrood

Budget: \$12,809.7 Total: \$9,039.5 Variance: (\$3,770.2)

This is a supplemental project approved by Board Order P.U.14(2013) which resulted from an in service

failure of Unit 1.

During the failure event, the turbine/generator bearing journals experienced significant damage as a

result of a loss of lubrication. The original project estimate included an allowance to machine the

journals to remove the damaged areas caused by liquid metal embrittlement, welding repairs to build up

the journal diameters, machining the journals to their original diameters, and post weld heat treatment.

The liquid metal embrittlement was not as "deep" as originally anticipated and it was possible to

machine the journals and install "oversized" bearings rather than welding and machining the journals to

the original diameters. This resulted in significant project cost savings.

PUB-NLH-227, Attachment 1
Page 358 of 362, Isl Int System Power Outages
Capital Expenditures and Carryover Report
December 31, 2013

NEWFOUNDLAND AND LABRADOR HYDRO 2013 VARIANCE EXPLANATIONS FOR THE YEAR ENDING DECEMBER 31, 2013 (Greater than \$100,000 and 10% Variance from Budget) (\$000)

41. Replace Alternator - Hardwoods

Budget: \$8,015.8 Total: \$7,058.2 Variance: (\$957.6)

This project is a supplemental project approved by Board Order P.U. 19(2013) Amended. The project variance is a result of the majority of the project contingency not being used.

NEWFOUNDLAND AND LABRADOR HYDRO 2013 VARIANCE EXPLANATIONS FOR THE YEAR ENDING DECEMBER 31, 2013 (Greater than \$100,000 and 10% Variance from Budget) (\$000)

Capital Budgets/Expenditures 2004-2013

		Actual		Percentage
Year	Budget	Expenditures Variance		Variance
2004	31,435	27,984	3,451	11.0%
2005	47,760	33,952	13,808	28.9%
2006	49,024	41,217	7,807	15.9%
2007	43,304	35,669	7,635	17.6%
2008	53,579	46,246	7,333	13.7%
2009	61,544	54,152	7,392	12.0%
2010	63,297	55,553	7,744	12.2%
2011	67,454	63,116	4,338	6.4%
2012	93,840	77,252	16,588	17.7%
2013	116,373	84,755	31,618	27.2%

The variances presented in Table 1 are partially due to under-spending as a result of not completing all projects approved each year. It is anticipated that some carryover of projects will occur in most years as there may be unavoidable reasons for delays in project completion, for example, system constraints which are precipitated by changes in hydrology, equipment failures, etc.

In 2013, project cost reductions related to lower than anticipated contract pricing also contributed to reduced project costs. Project cost reductions for completed projects account for approximately \$20.4 million. Project carry overs and spending shifts on multi-year projects account for approximately \$15 million. Project cost overruns account for the remaining variance.

2013 Carryover Report For the Year Ending December 31, 2013 (\$000)

Project Name
Replace Automatic Transfer Switches - Hinds Lake
Install Automatic Fuel Monitoring System - Upper Salmon
Upgrade Intake Gate Controls - Bay d'Espoir
Replace Stator Windings Units 1, 3 and 4 - Bay d'Espoir
Automate Generator Deluge Systems - Bay d'Espoir
Upgrade Units 1 to 6 By-Pass Valves - Bay d'Espoir
Upgrade Generator Bearings - Bay d'Espoir
Upgrade Burnt Dam Spillway - Bay d'Espoir
Purchase Low Pressure Screw Compressor Set - Bay d'Espoir
Replace Cooling Water Pumps - Bay d'Espoir
Replace Units 1 to 6 Auto Greasing Systems - Bay d'Espoir
Overhaul Extraction Pumps - Holyrood
Upgrade Hydrogen System - Holyrood
Replace Condensate Polisher Annunciator Panels - Holyrood
Purchase 10 Position Meter Calibration Test Console - Hydro Place
Replace Compressed Air Piping and Install Dew Point Monitor-Buchans
Install Online Vibration Monitoring System
- Corner Brook Frequency Converter
Purchase Five Hydraulic Impact Tools
Purchase Office Furniture - Various
Voltage Conversion - Labrador City
Replace Mini Hydro Turbine - Roddicton
Increase Generation - Mary's Harbour
Upgrade Business Intelligence Software - Hydro Place
Cost Recoveries
Upgrade Computer Room Air Conditioner - Hydro Place
Cost Recoveries
Equipotential Grounding and Bonding Equipment

PUB			Total		
Approved	Revised		Actual		
Budget	Budget	FEED	Expend.	Carryover	Completion
2013	2013	2013	2013	Amount	Year
314.7	356.0	-	323.4	32.6	2013
192.7	192.7	1.9	94.8	96.0	2013
341.2	341.2	-	108.6	232.6	2013
5,663.5	5,663.5	8.8	2,265.7	3,389.0	2013
532.0	370.9	3.9	311.6	55.4	2013
141.9	141.9	3.0	9.5	129.4	2013
480.9	480.9	5.3	24.3	451.3	2013
885.8	885.8	15.0	223.1	647.7	2013
97.3	97.3	3.3	78.7	15.3	2013
175.4	175.4	2.0	86.5	86.9	2013
260.1	260.1	-	189.9	70.2	2013
101.5	108.7	-	-	108.7	2013
527.3	2,022.8	-	1,917.5	105.3	2013
123.5	60.7	0.3	20.9	39.5	2013
192.5	192.5	-	-	192.5	2013
306.7	751.6	-	557.4	194.2	2013
382.8	382.8	4.6	50.6	327.6	2013
15.5	15.5	-	0.4	15.1	2013
31.0	36.3	-	-	36.3	2013
930.1	930.1	-	1,129.8	(199.7)	2013
246.6	261.5	-	29.3	232.2	2013
1,565.4	1,565.4	-	1,069.4	496.0	2013
576.9	576.9	-	245.9	331.0	2013
(207.7)	(207.7)	-	(88.5)	(119.2)	2013
130.0	130.0	-	98.3	31.7	2013
(46.8)	(46.8)	-	(35.4)	(11.4)	2013
158.3	158.3	-	-	158.3	2013

2013 Carryover Report For the Year Ending December 31, 2013 (\$000)

Project Name
Install Automatic Meter Reading - Glenburnie and Rocky Harbour
Replace MDR 4000 Microwave Radio (West) - Various Sites
Install Variable Frequency Drives on Forced Draft Fans - Holyrood
Replace Compressed Air Systems - Sunnyside and Stony Brook
Replace Insulators - Various Sites
230kV Transformer Capacity - Oxen Pond Terminal Station
Replace Vehicles and Aerial Devices - (2013-2014) - Various Sites
Replace Off Road Track Vehicles - Whitbourne, Happy Valley
and Port Saunders
Replace Guy Wires TL-215 - Doyles to Grand Bay
Upgrade Distribution Systems - Various Sites
Additions for Load Isolated Generation Stations - Various Sites
Upgrade Gas Turbine PLC - Happy Valley
Upgrade Terminal Station - Wiltondale
Perform Grounding Upgrades - Various Sites
Legal Survey of Primary Distribution Line Right of Ways - 2013
Perform Arc Flash Remediation - Various Sites
Upgrade Microsoft Project - Hydro Place
Cost Recoveries
Replace Instrument Transformers - Various Sites
Total Carry over amount

PUB Approved	Revised		Actual		Original
Budget	Budget	FEED	Expend.	Carryover	Completion
2013	2013	2013	2013	Amount	Year
397.9	551.6	-	537.8	13.8	2014
539.0	539.0	2.9	95.1	441.0	2014
697.6	697.6	13.8	206.0	477.8	2014
303.0	303.0	17.2	32.3	253.5	2014
187.1	187.1	5.1	67.0	115.0	2014
3,823.6	3,823.6	-	153.6	3,670.0	2014
1,302.3	1,302.3	-	692.9	609.4	2014
416.8	416.8	-	324.7	92.1	2014
253.3	253.3	-	286.7	(33.4)	2014
311.9	311.9	-	373.0	(61.1)	2014
2,040.2	2,040.2	27.8	1,196.4	816.0	2014
61.4	61.4	2.3	22.6	36.5	2014
697.7	697.7	10.7	134.0	553.0	2014
445.9	445.9	-	507.2	(61.3)	2014
156.2	156.2	-	-	156.2	2014
1,005.6	1,005.6	-	149.8	855.8	2015
656.7	656.7	-	619.6	37.1	2015
(236.4)	(236.4)	-	(223.1)	(13.3)	2015
593.2	593.2	9.6	230.7	352.9	2017
				15,455.5	

NEWFOUNDLAND AND LABRADOR HYDRO 2013 REMOVE SAFETY HAZARDS FOR THE YEAR ENDING DECEMBER 31, 2013 (\$000)

Total Approved Budget: \$250,500 Total Expenditure: \$ 66,995

Board Order P.U. 38(2010)

As part of Board Order No. P.U. 38(2010) 2011 Capital Budget, the following was included: "Because of the nature of this project the Board would expect to see an explanation in Hydro's annual report on capital expenditures as to each project that was undertaken, setting out the safety hazard that was identified, the location, the steps taken to address the issue and the amount of the expenditure." Please see the following table for projects undertaken in 2013:

Safety Hazards

Project Title/Location	Expenditure	Safety Hazard Identified	Project Scope
Terminal Station Fence Height Extension – Cow Head	\$29.5	Due to extensive sand buildup around terminal station fence, there is a need to raise the height of the fence to prevent public access. SWOP#2013004291 (July 2013) CHD TS Sand accumulations inside and outside fence rendering fence height substandard and allowing public access over fence rails	The height of the fence was raised, and a drift fence was installed to prevent the buildup of sand and snow in and around the terminal station.
Purchase Storage Shed – Mary's Harbour	\$19.4	During site visit discovered excessive mold on the ceiling in the storage shed.	New storage shed was purchased.
Cat Arm Draft Tube Scaffolding	\$18.1	Unit 2: Support beams for the draft tube scaffolding on Unit 2 are missing. Missing beams created safety hazard for the crews who will be working in that spot during unit annual maintenance. In the event of needle repair requirement access to the needle will not be permitted until the platform is repaired.	Design of replacement beams, purchase of materials, and construction of replacement beams.

Multi Year Projects over \$500,000 with Expenditures in 2004 to 2011 (\$,000)

	Original Budget	Revised			Annu	al Expenditures					Total	
<u>Description</u>	Approval	(PUB)	Budget	<u>2004</u>	2005	2006	2007	2008	2009	<u>2010</u>	2011	Expenditures
Replace VHF Mobile Radio System	P.U. 53(2004)	8,388	4,302	0	176	3,511	615	0	0	0	0	4,303
Replace and Purchase Stator Winding - Bay d'Espoir	P.U. 1(2010)	4,687	4,192	0	0	0	0	0	0	3,143	1,344	4,488
Interconnect - Rencontre East	P.U. 53(2004)	3,250	3,467	0	1,804	1,533	130	0	0	0	0	3,467
Replace Superheater Unit 2 - Holyrood	P.U. 31(2005)	3,137	3,137	0	0	4	3,065	0	0	0	0	3,069
Purchase Spare Stator Windings Units 1 - 4 - Bay d'Espoir	P.U. 36(2008)	2,843	1,819	0	0	0	0	0	131	1,655	0	1,786
Nain Diesel Plant Rehabilitation	P.U, 31(2009)	2,805	3,109	0	0	0	0	304	1,764	118	397	2,583
Replace Vehicles - Hydro System - 2007	P.U. 35(2006)	2,686	2,686	0	0	0	2,218	317	0	0	0	2,535
Replace Wood Poles - Transmission	P.U. 53(2004)	2,588	2,588	0	2,243	369	0	0	0	0	0	2,612
Upgrade Control System - Holyrood	P.U. 29(2003)	2,587	3,281	1,499	1,016	561	217	0	0	0	0	3,293
Disconnecting Means to 600 Volt MCC Branch Feeders	P.U. 14(2005)	2,222	2,222	0	356	728	772	0	0	0	0	1,856
Replace Vehicles and Aerial Devices 2009 - Various Sites	P.U. 36(2008)	2,156	2,156	0	0	0	0	0	2,044	28	0	2,072
Replace Vehicles and Aerial Devices 2010 - Various Sites	P.U. 1(2010)	2,156	2,830	0	0	0	0	0	0	1,997	818	2,815
Replace Penstock - Snook's Arm Generating Station	P.U. 53(2004)	2,110	2,311	0	78	1,941	129	0	0	0	0	2,147
Upgrade Transmission Line TL-212 - Sunnyside to Linton Lake	P.U. 36(2008)	1,932	1,932	0	0	0	0	0	609	1,804	0	2,413
Condition Assessment and Life Extension Study - HRD	P.U. 28(2009)	1,895	1,895	0	0	0	0	0	50	1,278	416	1,744
Fire Protection Upgrades - Holyrood	P.U. 31(2005)	1,846	1,825	0	0	28	578	1,085	113	0	0	1,804
Replace Vehicles - Hydro System - 2008	P.U. 30 (2007)	1,826	1,826	0	0	0	0	1,191	449	0	0	1,640
Confined Space Isolation (Blanks & Blinds)	P.U. 34(2010)	1,804	1,804	0	0	0	0	0	0	139	1,330	1,468
Upgrade Corner Brook Frequency Converter - 2008	P.U. 30 (2007)	1,647	1,953	0	0	0	0	943	1,180	0	0	2,122
Construct New Office/Warehouse/Line Depot Facilities - Happy Valley	P.U. 30 (2007)	1,632	3,317	0	0	0	0	94	2,696	334	130	3,255
Construct New Diesel Plant - St. Lewis	P.U. 31(2005)	1,627	1,995	0	0	1,563	437	0	0	0	0	2,000
Replace Vehicles - Hydro System - 2004	P.U. 29(2003)	1,531	1,531	877	250	0	0	0	0	0	0	1,126
Replace Insulators TL232 - (230kV Stoney Brook - Buchans)	P.U. 30 (2007)	1,531	1,531	0	0	0	0	571	1,017	0	0	1,588
Upgrade System Security 2009 - Various Sites	P.U. 36(2008)	1,469	2,310	0	0	0	0	0	488	1,295	527	2,310
Purchase Spare Transformer - Upper Salmon	P.U. 35(2006)	1,366	2,217	0	0	0	19	416	1,702	0	0	2,137
Public Address System - Holyrood	P.U. 17(2008)	1,279	1,907	0	0	0	0	3	119	540	1,162	1,872
Replace Accom, Septic Sys and Upgrade Plant Communications Sys - Cat Arm	P.U. 36(2008)	1,254	1,738	0	0	0	0	0	733	1,108	0	1,841
Hinds Lake Powerhouse Slope Stabilization	P.U. 34(2009)	1,136	1,406	0	0	0	0	0	704	497	0	1,201
Upgrade Corner Brook Frequency Converter	P.U. 35(2006)	1,123	1,123	0	0	0	23	1,010	0	0	0	1,033
Upper Salmon Slope Stabilization	P.U. 5(2004)	1,105	2,880	207	2,543	0	0	0	0	0	0	2,750
Upgrade L4 Distribution Feeder - Roddickton	P.U. 1(2010)	1,063	1,063	0	0	0	0	0	0	65	1,041	1,106
Replace Governor Controls Unit 2 - Cat Arm	P.U. 30 (2007)	1,049	1,312	0	0	0	0	1,096	226	0	0	1,322
Island Pond Development - Feasibility Update	P.U. 31(2005)	998	1,003	0	0	895	80	0	0	0	0	975
Customer Service Application - Hydro Place	P.U. 30 (2007)	949	1,531	0	0	0	0	40	360	1,210	0	1,610
Replace Unit 2 High Pressure Heater - Holyrood	P.U. 30 (2007)	939	939	0	0	0	0	62	946	0	0	1,008
Replace Insulators TL231 - (230kV Bay d'Espoir - Stoney Brook)	P.U. 31(2005)	917	917	0	0	439	466	0	0	0	0	905
Diesel Units # 562 & 563 - Norman Bay	P.U. 36(2008)	914	1,077	0	0	0	0	0	3	1,106	0	1,109
Upgrade System Security - Various Sites	P.U. 30 (2007)	906	906	0	0	0	0	145	812	0	0	957
Replace Vehicles - Hydro System - 2005	P.U. 53(2004)	868	868	0	650	118	0	0	0	0	0	768
Increase Generation - L'Ance Au Loup	P.U. 36(2008)	844	1,764	0	0	0	0	0	783	448	541	1,772

Multi Year Projects over \$500,000 with Expenditures in 2004 to 2011 (\$,000)

		Original										
		Budget	Revised			Annu	al Expenditures					Total
<u>Description</u>	<u>Approval</u>	(PUB)	Budget	2004	2005	2006	<u>2007</u>	2008	2009	<u>2010</u>	<u>2011</u>	Expenditures
Portland Creek Development -Final Feasibility Study	P.U. 31(2005)	796	520	0	0	240	276	0	0	0	0	517
Upgrade Distribution System - L6 St. Anthony	P.U. 31(2005)	778	778	0	0	743	29	0	0	0	0	772
End User Infrastructure Evergreen Program - 2005	P.U. 53(2004)	711	711	0	644	19	0	0	0	0	0	663
Purch/Inst Anti-Fouling System for Cooling Water Systems - Holyrood	P.U. 53(2004)	705	919	0	527	310	81	0	0	0	0	917
Upgrade Continuous Emission Monitoring System - HRD	P.U. 10(2009)	704	604	0	0	0	0	0	7	614	0	621
Automatic Meter Reading	P.U. 35(2006)	696	1,276	0	0	0	201	967	123	0	0	1,290
Install Fibre Optic Cable - Hinds Lake	P.U. 36(2008)	692	692	0	0	0	0	0	9	459	117	585
Cat Arm Unit 1 Governor Controls Replacement	P.U. 14(2005)	688	895	0	13	851	34	0	0	0	0	898
Security Assessment of System Operations	P.U. 35(2006)	668	668	0	0	0	137	579	0	0	0	716
Application Enhancements - Energy Systems Water Management	P.U. 30(2007)	651	651	0	0	0	0	625	75	0	0	700
Upgrade Corner Brook Frequency Converter	P.U. 31(2005)	617	998	0	0	186	823	0	0	0	0	1,010
Upgrade Line 2 Voltage Conversion to 25 kV - Gaultois	P.U. 1(2010)	593	593	0	0	0	0	0	0	40	590	630
Install Automatic Meter Reading - Various Systems	P.U. 30(2007)	567	606	0	0	0	0	493	105	0	0	598
Replace Light Duty Mobile Equipment Less than \$50,000 - Various Sites	P.U. 36(2008)	561	561	0	0	0	0	0	530	35	0	565
Replace Switchgear - Cartwright	P.U. 30(2007)	552	975	0	0	0	0	117	450	412	0	979
Diesel Plant Automation & Breaker Panel - Makkovik	P.U. 30(2007)	548	796	0	0	0	0	471	327	0	0	798
Purchase Mobile Oil Reclamation Unit	P.U. 53(2004)	531	634	0	28	612	0	0	0	0	0	639