11 12 A.

Q. Please provide the actual versus budgeted capital expenditures for the years 2004 to 2010 (f) expressed in both dollar amounts and by percentage.

Table 1 provides the approved and actual capital expenditures for the years 2004 to 2009F, as well as the expenditure variances expressed in both dollar amounts and by percentage. As there are no approved or actual capital expenditures at this time for 2010F this year has been excluded from the table.

Also included in Table 1 is the portion of each annual capital expenditure variance that is attributable to the distribution class.

Table 1 Capital Expenditures 2004 – 2009F (\$000)

	2004	2005	2006	2007	2008	2009F
	P.U. 35	P.U. 43	P.U. 30	P.U. 30	P.U. 27	P.U. 27
Board Orders	(2003)	(2004)	(2005)	(2006)	(2007)	(2008)
	P.U. 46	P.U. 26	P.U. 34	P.U. 34	P.U. 3	
	(2004)	(2005)	(2005)	(2006)	(2008)	
		P.U. 33	P.U. 13		P.U. 18	
		(2005)	(2006)		(2008)	
			P.U. 17		P.U. 19	
			(2006)		(2008)	
					P.U. 24	
					(2008)	
Approved Expenditure	52,309	49,151	52,220	62,851	55,178	61,571
Actual Expenditure <sup>1</sup>	55,922	51,012	58,712	69,019	64,025	61,945
Variance	3,613	1,861	6,492	6,168	8,847	374
Variance Percentage	6.9%	3.8%	12.4%	9.8%	16.0%	0.6%
Distribution Class						
Variance	3,189	2,106	5,352	6,326	8,487	1,004
Percentage of Total						
Expenditure Variance	88.3%	113.2%	82.4%	102.6%	95.9%	268.4%

13 14 15

16

17

Over the period 2004 to 2008, customer growth capital has been responsible for on average 96.5% of the annual capital expenditure variance. Customer growth capital relates to the capital expenditure associated with providing service to new customers.

Actual expenditure in each year is comprised of expenditures for all projects approved in that year, including those that were completed in subsequent years.

1	These expenditures are reflected primarily in the distribution class, and would include
2	portions of capital projects such as Extensions, Meters, Services, Street Lighting and
3	Transformers
4	
5	For further information regarding approved and actual capital expenditures, as well as the
6	reasons for expenditure variances, please refer to the Annual Capital Expenditure
7	Summary Reports for the years 2004, 2005, 2006, 2007 and 2008, which are attached as
8	Attachments A, B, C, D and E, respectively.

**Annual Capital Expenditure Summary Report 2004** 



Newfoundland Power Inc.

55 Kenmount Road PO Box 8910 St. John's, Newfoundland A1B 3P6 Business: (709) 737-5600 Facsimile: (709) 737-2974 www.newfoundlandpower.com

March 1, 2005

Board of Commissioners of Public Utilities P.O. Box 21040 120 Torbay Road St. John's, NF A1A 5B2

Attention:

G. Cheryl Blundon

Director of Corporate Services and Board Secretary

Ladies & Gentlemen:

Re: 2004 Capital Expenditure Report

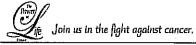
Enclosed are fifteen (15) copies of Newfoundland Power Inc.'s 2004 Capital Expenditure Summary Report (the "Report"). The Report is presented in compliance with the directive of the Board of Commissioners of Public Utilities contained in paragraph 6 of Order No. P.U. 35 (2003).

The Report provides the Capital Budget (as approved by Order Nos. P.U. 35 (2003) and P.U. 46 (2004); the Actual Expenditures to December 31<sup>st</sup>, 2004; and the Variance between Actual Expenditures and the Capital Budget by individual project.

Variances of more than 10% of approved expenditure or \$50,000 or greater are explained in the Notes contained in Appendix A to the Report.

Some 2004 capital projects had not been completed by year end, and are scheduled to be completed in 2005. The most significant single project is the purchase of three heavy duty line trucks which will not be received from the manufacturer until early in 2005. The Company is projecting a capital expenditure of \$600,000 for this expenditure in 2005.

There was also a major 2003 capital project that was not completed in 2004. The building of an overhead distribution line to serve Charlottetown in place of the underwater cable currently in service is deferred to 2005. The delay associated with concluding this project was the result of environmental factors. The Company is projecting a capital expenditure of \$424,000 for this project in 2005.



Telephone: (709) 737-5859 Email: palteen@newfoundlandpower.com

Fax: (709) 737-2974

Board of Commissioners of Public Utilities March 1, 2005 Page 2 of 2

Finally, the Company's 2004 actual expenditures exceeded the capital budget by almost \$4 million. The increased actual expenditures were principally the result of increased Distribution capital expenditures totalling almost \$4.4 million in the Extensions, Meters, Services, Street Lighting and Transformers projects. These, in turn, were principally the result of increased customer growth. To assist the Board in understanding these increased expenditures, we have also included An Analysis of 2004 Distribution Capital Expenditure Variances Affected by Customer Growth. We hope the Board finds it helpful.

If you have any questions on the enclosed, please contact the undersigned at your convenience.

Yours very truly,

Peter Alteen

Vice President, Regulatory Affairs

& General Counsel

#### Enclosures

c: Maureen Greene, Q.C.

Newfoundland and Labrador Hydro

Join us in the fight against cancer.



#### **NEWFOUNDLAND POWER INC.**

# 2004 Capital Expenditure Summary Report

### **Explanatory Note**

This report is presented in compliance with the directive of the Board of Commissioners of Public Utilities (the "Board") contained in paragraph 6 of Order No. P.U. 35 (2003).

Page 1 of the 2004 Capital Expenditure Summary Report outlines the forecast variances from budget of the capital expenditures approved by the Board in Order No. P.U. 35 (2003) and P.U. 46 (2004). The detailed tables on pages 2 to 12 provide additional detail on capital expenditures in 2004, and also include information on those capital projects approved for 2002 and 2003 that were not completed prior to 2004.

Variances of more than 10% of approved expenditure or \$50,000 or greater are explained in the Notes contained in Appendix A, which immediately follows the blue page at the conclusion of the 2004 Capital Expenditure Summary Report.

Capital expenditures that have been deferred to 2005 are shown in Column H on the attached report.

# **Newfoundland Power Inc.**

# 2004 Capital Budget Variances (000s)

	Approved by Order Nos P.U. 35 (2003) & P.U. 46 (20		<u>Variance</u>
Energy Supply	\$5,345	\$6,505	\$1,160
Substations	5,199	5,374	175
Transmission	2,315	1,983	(332)
Distribution	27,636	31,015	3,379
General Property	709	906	197
Transportation	3,487	3,260	(227)
Telecommunications	120	87	(33)
Information Systems	3,948	3, 968	20
Unforeseen Items	750	-	(750)
General Expenses Capital	2,800	3,161	361
Total	\$ <u>52,309</u>	\$ <u>56,259</u>	\$ <u>3,950</u>
Projects carried forward from 2002 & 2003	-	4,261	

<sup>&</sup>lt;sup>1.</sup> Includes forecast deferrals to 2005.

# 2004 Capital Expenditure Summary Report (000s)

	 Capital l				get		Actual Expenditures													
	 2002 A		2003 E		2004 C		Total D	2002 E		2003 F		2004 G		Deferrals H		Total I			Variance J	
2005 Projects	\$ -	\$	-	\$	-	\$	-	\$	-	\$	-	\$	116	\$	-	\$	116	\$	116	
2004 Projects	-		-		52,309		52,309		-		-		54,139		2,004	\$	56,143		3,834	
2003 Projects	-		16,400		-		16,400		50		14,538		2,659		525	\$	17,772		1,372	
2002 Projects	3,674		-		-		3,674		1,404		2,769		847		230	\$	5,250		1,576	
Grand Total	\$ 3,674	\$	16,400	\$	52,309	\$	72,383	\$	1,454	\$	17,307	\$	57,761	\$	2,759	\$	79,281	\$	6,898	

Column A	Approved Capital Budget for 2002 - only select projects with capital expenditures in 2004
Column B	Approved Capital Budget for 2003 - only select projects with capital expenditures in 2004
Column C	Approved Capital Budget for 2004
Column D	Total of Columns A, B and C
Column E	Actual Capital Expenditures for 2002
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Column G	Actual Capital Expenditures for 2004
Column H	Capital Projects Deferred to 2005
Column I	Total of Columns E, F, G and H
Column J	Column I Less Column D

Category: Energy Supply

		Capital Budget																			
<u>Project</u>		2002		2003		2004		Total		2002		2003		2004	De	ferrals		Total	Va	riance	Notes*
		A		В		С		D		E		F		G		H		I		J	
2004 Projects																					
Hydro Plants - Facility Rehabilitation	\$	-	\$	-	\$	1,222	\$	1,222	\$	-	\$	-	\$	1,356	\$	243	\$	1,599	\$	377	1
New Chelsea - Hydro Plant Refurbishment		-		-		3,973		3,973		-		-		4,395		230		4,625		652	2
Major Electrical Equipment Repairs		-				150		150				_		281		_		281		131	3
		-		-		5,345		5,345		-		-		6,032		473		6,505		1,160	
2003 Projects																					
Hydro Plants - Facility Rehabilitation		-		2,345		-		2,345		-		2,028		553		-		2,581		236	4
Purchase Portable Diesel Generation		-		1,500		-		1,500		-		589		1,229		-		1,818		318	5
Mobile Gas Turbine - Replace Governor & Control Logic		-		975		-		975		-		1,434		142		-		1,576		601	6
		-		4,820		_		4,820		_		4,051		1,924		-		5,975		1,155	
2002 Projects																					
Wesleyville Gas Turbine Relocation		1,674		-		-		1,674		1,356		1,416		512		-		3,284		1,610	7
Total - Energy Supply	\$	1,674	\$	4,820	\$	5,345	<u> </u>	11,839	-\$	1,356	\$	5,467	-\$	8,468	\$	473	-	15,764	<u>s</u>	3,925	
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<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2002
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Category: Substations

		Capital	Budget			Ac	tual Expenditu	res			
<u>Project</u>	2002 A	2003 B	2004 C	Total D	2002 E	2003 F	2004 G	Deferrals H	Total	Variance	Notes*
	A	ь	C	ь	E	r	G	n	1	J	
2005 Projects											
Distribution System Feeder Remote Control	\$ -	\$ -	\$ -	-	\$ -	\$ -	\$ 116	\$ -	\$ 116	\$ 116	8
2004 Projects											
Rebuild Substations	-	-	1,023	1,023	-	-	634	387	1,021	(2)	
Replacement and Standby Substation Equipment	-	-	1,314	1,314	-	-	1,189	69	1,258	(56)	9
Transformer Cooling Refurbishment	-	-	398	398	-	-	255	-	255	(143)	10
Protection and Monitoring Improvements	-	-	80	80	-	-	57	-	57	(23)	11
Distribution System Feeder Remote Control	-	-	1,000	1,000	-	-	1,063	-	1,063	63	12
Feeder Additions Due to Load Growth and Reliability	-	-	200	200	-	-	300	-	300	100	13
Increase Corner Brook Transformer Capacity			1,184	1,184			1,304		1,304	120	14
	-	-	5,199	5,199	-	-	4,802	456	5,258	59	
2003 Projects											
Replacement and Spare Substation Equipment	-	1,107	-	1,107	-	1,016	95	-	1,111	4	
Reliability and Power Quality Improvements	-	198	-	198	-	76	43	101	220	22	15
Chamberlains - Add 66/25kV Transformer	-	1,250	-	1,250	-	1,076	50	-	1,126	(124)	16
Virginia Waters - Add 66/12.5 kV Transformer		1,150		1,150		901	157		1,058	(92)	17
	-	3,705	-	3,705	-	3,069	345	101	3,515	(190)	
2002 Projects											
Purchase Power Transformer	2,000	-	-	2,000	48	1,353	335	230	1,966	(34)	
Total - Substations	\$ 2,000	\$ 3,705	\$ 5,199	\$ 10,904	\$ 48	\$ 4,422	\$ 5,598	\$ 787	\$ 10,855	\$ (49)	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2002
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Column J	Column I Less Column D

#### Category: Transmission

				Capital	oital Budget					Actual Expenditures											
<b>Project</b>	200 A		2	003 B		2004 C		Total D	2	002 E		2003 F		2004 G	Defe	rrals I		<u>Fotal</u> I	Va	riance J	Notes*
2004 Projects Rebuild Transmission Lines Relocation of Transmission Lines for Third Parties	\$	- - -	\$	- - -	\$	2,315	\$	2,315	\$	- - -	\$	- - -	\$	1,881 102 1,983	\$	- - -	\$	1,881 102 1,983	\$	(434) 102 (332)	18 19
2003 Projects Rebuild Transmission Lines		-		4,129		-		4,129		50		4,026		78		-		4,154		25	
Total - Transmission	\$	_	\$	4,129	\$	2,315	\$	6,444	\$	50	\$	4,026	\$	2,061	\$		\$	6,137	\$	(307)	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

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Category: Distribution

				Capita	l Budge	udget															
<u>Project</u>	200	)2	2	2003	2	2004	To	otal	:	2002		2003	2	004	Def	ferrals		Γotal	Va	ariance	Notes*
	A			В		С		D		E		F		G		Н		I		J	
2004 Projects																					
Extensions	\$	-	\$	-	\$	4,956	\$	4,956	\$	-	\$	-	\$	8,406	\$	-	\$	8,406	\$	3,450	20
Meters		-		-		1,174		1,174		-		-		1,297		-		1,297		123	21
Services		-		-		1,946		1,946		-		-		2,008		-		2,008		62	22
Street Lighting		-		-		1,242		1,242		-		-		1,399		100		1,499		257	23
Transformers		-		-		4,965		4,965		-		-		5,449		-		5,449		484	24
Reconstruction		-		-		2,461		2,461		-		-		2,420		-		2,420		(41)	
Aliant Pole Purchase		-		-		4,044		4,044		-		-		4,044		-		4,044		-	
Trunk Feeders																		-			
Rebuild Distribution Lines		-		-		4,137		4,137		-		-		3,160		145		3,305		(832)	25
Relocate/Replace Distribution Lines For Third Parties		-		-		235		235		-		-		440		-		440		205	26
Distribution Reliability Initiative		-		-		949		949		-		-		763		150		913		(36)	
Feeder Additions and Upgrades to Accommodate Growth		-		-		677		677		-		-		702		80		782		105	27
Switch Replacement and Upgrade Underground																		-			
Distribution - Water Street, St. John's		-		-		750		750		-		-		386		-		386		(364)	28
Interest During Construction		-		-		100		100		-		-		66		-		66		(34)	29
•		-		-	_	27,636	-	27,636		-		-		30,540		475		31,015		3,379	
2003 Projects																					
Rebuild Distribution Lines		-		3,504		-		3,504		-		3,351		222		424		3,997		493	30
Total - Distribution	\$		\$	3,504	\$	27,636	\$ .	31,140	\$		\$	3,351	\$	30,762	\$	899	\$	35,012	\$	3,872	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2002
Column B	Approved Capital Budget for 2003
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#### Category: General Property

				Capita	Bud	get		_											
<b>Project</b>	2002 A		2003 B			2004 C	 Total D		2002 E		2	003 F	 2004 G	 errals H		Fotal I	Va	riance J	Notes*
2004 Projects Tools and Equipment Additions to Real Property	\$	-	\$	- -	\$	535 174	\$ 535 174	\$		-	\$	-	\$ 570 336	\$ - -	\$	570 336	\$	35 162	31
Total - General Property	\$		\$		\$	709	\$ 709	\$		_	\$	_	\$ 906	\$ 	\$	906	\$	197	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2002
Column B	Approved Capital Budget for 2003
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Column G	Actual Capital Expenditures for 2004
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Column J	Column I Less Column D

#### Category: Transportation

				Capital	Budg	get														
<b>Project</b>	2002 A	2002 2003 A B		2004 C		 Total D	_	2002 E		2003 F	_	2004 G	De	eferrals H		Total I	Va	riance J	Notes*	
2004 Projects Purchase Vehicles and Aerial Devices	\$	-	\$	-	\$	3,487	\$ 3,487	\$	-	\$	-	\$	2,660	\$	600	\$	3,260	\$	(227)	32
Total - Transportation	\$	_	\$		\$	3,487	\$ 3,487	\$	_	\$	_	\$	2,660	\$	600	\$	3,260	\$	(227)	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2002
Column B	Approved Capital Budget for 2003
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Column G	Actual Capital Expenditures for 2004
Column H	Capital Projects Deferred to 2005
Column I	Total of Columns E, F, G and H
Column J	Column I Less Column D

#### Category: Telecommunications

				Capital	Budg	et													
<b>Project</b>	2002 A		2003 B		2	2004 C	<u>T</u>	otal D	 2002 E		2003 F	2	004 G	 errals H	T	otal	Vai	riance J	Notes*
2004 Projects Replace/Upgrade Communications Equipment Substation Telephone Circuit Protection	\$	- - -	\$	- - -	\$	70 50 120	\$	70 50 120	\$ - - -	\$	- - -	\$	60 27 87	\$ <u>-</u>	\$	60 27 87	\$	(10) (23) (33)	33 34
<b>2003 Projects</b> Replace/Upgrade Communications Equipment		-		242		-		242	-		41		90	-		131		(111)	35
Total - Telecommunications	\$		\$	242	\$	120	\$	362	\$ 	\$	41	\$	177	\$ 	\$	218	\$	(144)	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Approved Capital Budget for 2002
Approved Capital Budget for 2003
Approved Capital Budget for 2004
Total of Columns A, B and C
Actual Capital Expenditures for 2002
Actual Capital Expenditures for 2003
Actual Capital Expenditures for 2004
Capital Projects Deferred to 2005
Total of Columns E, F, G and H
Column I Less Column D

#### **Category: Information Systems**

		Capital	Bud	get													
<b>Project</b>	2002		 2003		2004	 Total	 2002		2003	 2004	De	ferrals		Total	Va	riance	Notes*
	A		В		C	D	E		F	G		Н		I		J	
2004 Projects																	
Application Enhancements	\$	-	\$ -	\$	1,355	\$ 1,355	\$ -	\$	-	\$ 1,313	\$	-	\$	1,313	\$	(42)	
Application Environment		-	-		791	791	-		-	861		-		861		70	36
Customer Service System Replacement		-	-		226	226	-		-	238		-		238		12	
Network Infrastructure		-	-		393	393	-		-	433		-		433		40	37
Personal Computer Infastructure		-	-		539	539	-		-	424		-		424		(115)	38
Shared Server Infastructure		-	-		644	644	-		-	699		-		699		55	39
Total - Information Systems	\$		\$ 	\$	3,948	\$ 3,948	\$ 	\$		\$ 3,968	\$		\$	3,968	\$	20	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2002
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#### Category: Unforeseen Items

				Capital	Budg	et														
<b>Project</b>	A		2003 B		2004 C		<u>T</u>	Total D	 2002 E	2	003 F	_	04 G	-	rrals H	T	otal I	Va	riance J	Notes*
2004 Projects Allowance for Unforeseen Items	\$ - \$		\$	-	- \$ 750		\$ 750		\$ -	\$	-	\$	-	\$	-	\$	-	\$	(750)	40
Total - Unforeseen Items	\$	<u> </u>	\$		\$	750	\$	750	\$ 	\$		\$		\$		\$		\$	(750)	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2002
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#### Category: General Expenses Capital

			Capital	Budg	get														
<u>Project</u>	2002 2003 A B		2004 Total C D			2002 E			2003 F	 2004 G	Def	ferrals H		Total I	Va	riance J	Notes*		
2004 Projects Allowance for General Expenses Capital	\$	-	\$ -	\$	2,800	\$	2,800	\$	-	\$	-	\$ 3,161	\$	-	\$	3,161	\$	361	41
Total - General Expenses Capital	\$		\$ 	\$	2,800	\$	2,800	\$		\$	-	\$ 3,161	\$		_	3,161	\$	361	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2002
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### **Energy Supply**

1. *Hydro Plants - Facility Rehabilitation:* 

Budget: \$1,222,000 Actual: \$1,599,000 Variance: \$377,000

The variance is primarily the result of higher than anticipated costs for refurbishment projects at the Pierre's Brook (\$73,000) Topsail (\$215,000) and Tors Cove (\$40,000) hydroelectric plants. The increase in the Pierre's Brook project is related to the increased cost of the replacement of the headgate for the penstock. The increase in the Topsail plant refurbishment project is related to increased cost associated with installing the computerized control system for the generator. The increase in the Tors Cove project is related to an unexpected communication cable replacement and increased cost of governor replacement.

In addition, a total of \$49,000 was expended under this project to provide fire and intruder alarm systems at 22 hydro plants.

2. New Chelsea - Hydro Plant Refurbishment:

Budget: \$3,973,000 Actual: \$4,625,000 Variance: \$652,000

An increase in steel prices for the penstock pipe increased the cost of the project by \$180,000.

During detailed engineering, a number of additional requirements were identified to complete the project. First, it was necessary to engage external expertise to assist with the development of new standards and specifications for the advanced relaying and high voltage switchgear at an additional cost of \$150,000. Unanticipated modifications to the building were necessary to comply with building code requirements at a cost of \$130,000. Additional costs associated with the installation and commissioning of electrical and mechanical equipment totalled \$150,000. The additional project cost, and the associated lengthening of the construction schedule, increased interest during construction by \$40,000.

3. *Major Electrical Equipment Repairs:* 

Budget: \$150,000 Actual: \$281,000 Variance: \$131,000

The contractor performing the Rattling Brook generator rewind project identified a number of deficiencies following disassembly of the unit. The contractor notified the Company that, if unaddressed, the deficiencies would void any warranty on the rewind.

### **Energy Supply**

The required work included the replacement of the braking mechanism (\$30,000), the removal of asbestos from the unit (\$40,000), and the correction of vibration damage and alignment problems (\$20,000).

An inspection in 2004 identified an inoperable outlet gate structure in a storage facility for the Rattling Brook Hydro Plant. Correction of the problem cost \$40,000.

4. Hydro Plants - Facility Rehabilitation (2003 Project):

Budget: \$2,345,000 Actual: \$2,581,000 Variance: \$236,000

The replacement of the generator control unit and replacement of the governor at the Tors Cove Plant were carried out by different contractors. Unanticipated difficulties in the integration and commissioning of the generator control unit and the governor increased the cost of the project by \$186,000. In addition, during detailed engineering it was determined that the existing synchronizing controls had to be replaced at a cost of \$25,000. Deficiencies were also identified in the heating and ventilation controls, necessitating the replacement of the unit at a cost of \$25,000.

5. Purchase Portable Diesel Generation (2003 Project):

Budget: \$1,500,000 Actual: \$1,818,000 Variance: \$318,000

The requirement that the 2.5 MW diesel generator unit be accommodated on a single trailer chassis resulted in a higher than anticipated price for the unit. The lowest competitive tender for the purchase of the unit was \$130,000 higher than the budgeted figure.

During detailed engineering, it became apparent that it was necessary to engage outside engineering expertise (\$13,000) to assist in the evaluation of contractor proposals and the modification of detailed specifications. Following review of the contractor's detailed proposal for the generator, the Company required modifications to eliminate a complex set-up procedure for the exhaust stack at a cost of an additional \$71,000. In addition, the lengthy involvement of Company personnel in the acceptance and commissioning of the unit, which increased the cost of the project by \$88,000, was not anticipated.

Interest during construction accounted for a further increase of \$16,000.

6. *Mobile Gas Turbine - Replace Governor and Control Logic (2003 Project)*Budget: \$975,000 Actual: \$1,576,000 Variance: \$601,000

The original project for the mobile gas turbine at Port aux Basques involved refurbishment of the protection, controls and housing. However, detailed engineering analysis identified the need to also refurbish the gas generator. This necessitated an

# **Energy Supply**

additional expenditure of \$459,000 (as reported in the 2003 Capital Expenditure Summary Report filed with the Board on February 27, 2004).

However, the total work was not fully completed in 2003 and required a carryover of a portion of the project to 2004. In 2004, an additional amount of \$142,000 associated with higher than anticipated costs necessary to complete the project was incurred.

Due to oversight, this carryover was not included in capital expenditure reporting to the Board in 2004.

7. Wesleyville Gas Turbine Relocation (2002 Project):

Budget: \$1,674,000 Actual: \$3,284,000 Variance: \$1,610,000

The variance is the result of several factors relating to delays in completing the project and additional necessary work identified prior to installation of the equipment at Wesleyville. The budget was based on a contract labour cost of \$350,000 consistent with bids received in early 2002. Following the decision to postpone relocation and retendering in 2003 the contract cost to relocate the gas turbine increased by \$470,000 to \$820,000. The postponement of the project also resulted in additional IDC charges of \$96,000. Assessment of equipment during dismantling identified several items requiring replacement or refurbishment as recommended by the contractor and original equipment manufacturer resulting in additional work costing \$580,000. This included replacement of the alternator air cooling system, exhaust volute, speed switches, fuel pumping system, installation of a fuel leak detection system and refurbishment of the power turbine inlet cone, exhaust stack structure, lube oil cooling system and other items as well as resolving problems with the gear box. This additional work along with delays in completing the project resulted in additional engineering and project management and supervision costs totaling \$460,000.

The gas turbine was relocated and commissioned for operation at the end of the 4th quarter of 2003. The work associated with upgrading the lube oil cooling system and fuel system, and providing remote control was completed in the 2nd quarter of 2004, thus completing the Wesleyville Gas Turbine Relocation Project.

For additional information regarding this project, please refer to the testimony of Mr. Phonse Delaney, P.Eng., September 20, 2004 at pp. 61-63 and pp. 94-107 at Newfoundland Power's 2005 Capital Budget Application.

#### **Substations**

8. Distribution System Feeder Remote Control (2005 Project):

Budget: \$0 Actual: \$116,000 Variance: \$116,000

Engineering design work related to the relay installation program was completed in late 2004 so as to allow construction work to begin earlier in the new year and balance resource requirements for 2005.

9. Replacement and Standby Substation Equipment:

Budget: \$1,314,000 Actual: \$1,258,000 Variance: (\$56,000)

The reduction reflects reduced 2004 substation equipment replacement resulting from extension of the proposed PCB phase out.

10. Transformer Cooling Refurbishment:

Budget: \$398,000 Actual: \$255,000 Variance: (\$143,000)

This variance stems from the Company's detailed engineering review of required transformer radiator refurbishment for 2004. The reduced cost reflects a decision to repair, rather than replace, Greenspond T1 transformer radiators and defer Humber T3 transformer radiator replacement to coincide with Humber T2 transformer replacement. As well, the replacement of radiators at the Cobb's Pond and Bishop Falls Substations was accomplished without the installation of the portable substation, therefore reducing project costs.

11. Protection and Monitoring Improvements:

Budget: \$80,000 Actual: \$57,000 Variance: (\$23,000)

In late 2003, the new 24L transmission line from Goulds to Big Pond substations was terminated on 17L breaker at Goulds rather than 24L breaker as was originally planned. Following detailed project engineering, it was determined that the existing synchronizing on 17L could be used on 24L resulting in the \$23,000 saving.

12. Distribution System Feeder Remote Control:

Budget: \$1,000,000 Actual: \$1,063,000 Variance: \$63,000

This variance reflects higher than anticipated costs to develop the control software and associated hardware related to the installation of electronic relays.

#### **Substations**

13. Feeder Additions Due to Load Growth and Reliability:

Budget: \$200,000 Actual: \$300,000 Variance: \$100,000

Detailed engineering design work for the construction of a third feeder at both the Chamberlains and Pulpit Rock substations resulted in additional project costs due to design requirements; minimization of customer outages; and installation of remote control on existing feeders.

14. Increase Corner Brook Transformer Capacity:

Budget: \$1,184,000 Actual: \$1,304,000 Variance: \$120,000

The variance in this project reflects higher than expected civil engineering costs and substation grounding costs.

15. Reliability and Power Quality Improvements (2003 Project):

Budget: \$198,000 Actual: \$220,000 Variance: \$22,000

The increase in costs reflect higher than expected labour costs to complete the work (\$15,000) and material costs (\$7,000) to install a second feeder at Colliers substation.

16. Chamberlains - Add 66/25kV Transformer (2003 Project):

Budget: \$1,250,000 Actual: \$1,126,000 Variance: (\$124,000)

The variance is the result of lower than anticipated pricing for the power transformer following a competitive bidding process.

17. Virginia Waters - Add 66/12.5kV Transformer (2003 Project):

Budget: \$1,150,000 Actual: \$1,058,000 Variance: (\$92,000)

The variance is the result of lower than anticipated pricing for the power transformer following a competitive bidding process.

#### Transmission

18. Rebuild Transmission Lines:

Budget: \$2,315,000 Actual: \$1,881,000 Variance: (\$434,000)

The variance reflects a reduction in the number of transmission projects undertaken. A reduction of \$197,000 resulted from the cancellation of rebuilding transmission line 16L, Kings Bridge to Pepperell in St. John's. Detailed engineering determined that the work required could not be completed within that budget due to land and guying constraints along The Boulevard.

A further \$237,000 reduction resulted when less replacement of transmission line structures were required after detailed inspections were conducted of the lines, principally in Eastern region.

19. Relocation of Transmission Lines for Third Parties:

Budget: \$0 Actual: \$102,000 Variance: \$102,000

The variance is the result of 5 transmission line relocations in the St. John's area as a result of development. These costs are offset, in part, by charges to developers under the Company's CIAC policy.

#### Distribution

20. Extensions:

Budget: \$4,956,000 Actual: \$8,406,000 Variance: \$3,450,000

The increase in the capital cost of Extensions over the 2004 capital budget is primarily the result of increased customer growth.

Please refer to An Analysis of 2004 Distribution Capital Expenditure Variances Affected by Customer Growth.

21. Meters:

Budget: \$1,174,000 Actual: \$1,297,000 Variance: \$123,000

The increase in the capital cost of Meters over the 2004 capital budget is primarily the result of increased customer growth.

Please refer to An Analysis of 2004 Distribution Capital Expenditure Variances Affected by Customer Growth.

22. Services:

Budget: \$1,946,000 Actual: \$2,008,000 Variance: \$62,000

The increase in the capital cost of Services over the 2004 capital budget is primarily the result of increased customer growth.

Please refer to An Analysis of 2004 Distribution Capital Expenditure Variances Affected by Customer Growth.

23. Street Lighting:

Budget: \$1,242,000 Actual: \$1,499,000 Variance: \$257,000

The increase in the capital cost of Street Lighting over the 2004 capital budget is primarily the result of increased customer growth.

Please refer to An Analysis of 2004 Distribution Capital Expenditure Variances Affected by Customer Growth.

#### Distribution

24. Transformers:

Budget: \$4,965,000 Actual: \$5,449,000 Variance: \$484,000

The increase in the capital cost of Transformers over the 2004 capital budget is primarily the result of increased customer growth.

Please refer to An Analysis of 2004 Distribution Capital Expenditure Variances Affected by Customer Growth.

25. Rebuild Distribution Lines:

Budget: \$4,137,000 Actual: \$3,305,000 Variance: (\$832,000)

The variance reflects a reduction in the scope of rebuild projects undertaken following detailed engineering assessment. In addition, a total of \$145,000 associated with a project to upgrade feeder KBR-05 in St. John's (\$85,000) and the upgrade of Bay Roberts-04 (\$60,000) were deferred to 2005.

26. Relocate/Replace Distribution Lines For Third Parties:

Budget: \$235,000 Actual: \$440,000 Variance: \$205,000

The variance is principally the result of a higher level of work associated with third party requests to relocate distribution lines. The relocations relate to road realignment work being completed by the Department of Transportation and Works, as well as replacements required by cable television companies.

Capital contributions related to these expenditures are recovered in the normal course.

27. Feeder Additions and Upgrades to Accommodate Growth:

Budget: \$677,000 Actual: \$782,000 Variance: \$105,000

Following detailed engineering assessment, line rerouting of a new feeder from Chamberlains substation increased the cost of this project.

28. Switch Replacement and Upgrade Underground Distribution - Water Street, St. Johns: Budget: \$750,000 Actual: \$386,000 Variance: (\$364,000)

As a result of detailed engineering assessment, it was determined that a fewer than anticipated distribution vaults will require upgrading.

#### Distribution

29. Interest During Construction:

Budget: \$100,000 Actual: \$66,000 Variance: (\$34,000)

Interest during construction costs were lower in 2004 due to lower than anticipated interest rates.

30. Rebuild Distribution Lines (2003 Project):

Budget: \$3,504,000 Actual: \$3,997,000 Variance: \$493,000

The current variance over budget principally reflects the planned completion of the extension of feeder GLV-02 to Charlottetown. The forecasted increase is largely due to the cost of addressing environmental issues on the portion of GLV-02 that runs through Terra Nova National Park, which will be completed in 2005.

# **General Property**

31. Additions to Real Property:

Budget: \$174,000 Actual: \$336,000 Variance: \$162,000

This variance is the result of unbudgeted work amounting to \$48,000 on the Mechanical Maintenance Shop at Duffy Place and \$39,000 on the Electrical Maintenance Centre on Topsail Road. This work was required to accommodate changes in their operations. \$24,000 was required to address the badly deteriorated front steps at Kenmount Road office building. In addition, there were 12 unbudgeted smaller projects which ranged from \$3,000 to \$12,000.

# **Transportation**

32. Purchase Vehicles and Aerial Devices:

Budget: \$3,487,000 Actual: \$3,260,000 Variance: (\$227,000)

The variance reflects reduced costs associated with purchasing lighter duty aerial devices than originally planned.

#### **Telecommunications**

*Replace/Upgrade Communications Equipment:* 

Budget: \$70,000 Actual: \$60,000 Variance: (\$10,000)

Mobile radio units are replaced upon failure. Fewer units failed in 2004 than expected.

34. Substation Telephone Circuit Protection:

Budget: \$50,000 Actual: \$27,000 Variance: (\$23,000)

This variance is the result of lower than expected costs to complete the installation of telephone circuit protection equipment.

35. Replace/Upgrade Communications Equipment (2003 Project):

Budget: \$242,000 Actual: \$131,000 Variance: (\$111,000)

The variance is due in part to the replacement of the UHF radio system in central Newfoundland with a lower cost fibre optic cable solution from Aliant Communications. In addition, the costs incurred in addressing deficiencies on the substation protection equipment were less than anticipated due to better than expected equipment inspection results.

### **Information Systems**

*36. Application Environment:* 

Budget: \$791,000 Actual: \$861,000 Variance: \$70,000

The increase in cost for this project primarily reflects the additional cost to perform upgrades to several of the Company's Oracle databases. These upgrades were required to ensure data, including customer data, remained secure from external threats such as computer hackers.

*Network Infrastructure:* 

Budget: \$393,000 Actual: \$433,000 Variance: \$40,000

The increase in this category reflects higher than anticipated costs to purchase and install communications equipment in conjunction with the replacement of the Motorola 6520 routers project. This communications equipment is necessary to preserve the integrity of SCADA availability across the island by ensuring problems with one SCADA site will no longer affect any other SCADA site.

38. Personal Computer Infrastructure:

Budget: \$539,000 Actual: \$424,000 Variance: (\$115,000)

The reduction in this project reflects lower than anticipated costs for the purchase of personal computers (\$65,000) and a lower number of PC purchases overall (\$50,000). The reduction in purchase costs reflects a somewhat general downward trend in PC pricing.

39. Shared Server Infrastructure:

Budget: \$644,000 Actual: \$699,000 Variance: \$55,000

The increase in this project is primarily the result of greater than anticipated external labour costs. The additional costs were required to complete planned improvements to the recovery capabilities of corporate applications related to electronic file storage, document printing and email services.

### **Unforeseen Items**

40. Allowance for Unforeseen Items:

Budget: \$750,000 Actual: \$0 Variance: (\$750,000)

The allowance for unforeseen items account was not required for expenditures in 2004. All unforeseen items are accounted for in the appropriate budget categories.

### **General Expenses Capital**

41. Allowance for General Expenses Capital:

Budget: \$2,800,000 Actual: \$3,161,000 Variance: \$361,000

General expenses capital (GEC) is comprised of direct charges (consisting of labour and material expended on the overall capital program and not directly connected to a specific capital project) and indirect charges (which represent an allocation, based on predetermined percentages, of a portion of the balance of various operating accounts).

The variance in GEC for 2004 is the result of an increase in direct charges to GEC attributable to the adjustment of year-end balances in clearing accounts for vacation, payroll and materials.

During the year, actual costs related to vacation, payroll overheads and materials overheads are charged to clearing accounts. These charges are allocated to capital and operating costs based on predetermined percentages. For example, in 2004, payroll overheads were charged as 16% of labour charges. So, if one hour of labour at \$10.00 per hour is charged to an expense account, an overhead charge of \$1.60 would also be charged to the same expense account.

The year-end balances in the clearing accounts represent the difference between actual costs incurred and the amounts charged on the basis of the pre-determined percentages. The balances in the overhead accounts are reviewed on an annual basis and a judgment is made. If the judgment is that the balance will clear itself, no year end adjustment is made. If the judgment is that the balance will not clear itself, a year end adjustment is made.

Based on the assessment at the end of 2004, it was determined that the vacation, payroll overhead and materials accounts would not clear by themselves. The balance was split between operating and capital in approximately the same proportions as the charges to the underlying labour and materials accounts. The portion applicable to capital is charged to GEC as this is an appropriate cost accounting mechanism to allocate the amount over asset categories in the plant records. The amount charged to GEC in 2004 was approximately \$330,000.

An Analysis of 2004 Distribution Capital Expenditure Variances Affected by Customer Growth



Ralph Mugford, P.Eng Senior Engineer

#### 1. Introduction

Newfoundland Power's actual 2004 capital expenditures in the Distribution class were approximately \$3.4 million over budget. The primary cause of actual expenditures exceeding budget was the increase in actual capital expenditure required to serve new customers.

This Report analyzes variances between budgeted and actual 2004 capital expenditures for each of the Distribution projects which are materially impacted by the capital cost of serving an increased number of customers.

The analyses contained in this Report clearly support the conclusion that increased 2004 capital expenditures were the result of the unexpected increase in the number of new customers. The analyses do not, however, reconcile budgeted and actual 2004 capital expenditure for the Distribution classes reviewed. Such a reconciliation is practically impossible.

#### 2. Overview

A comparison of budgeted and actual capital expenditures in those Distribution projects affected by customer growth is set out in Table 1 below.

Table 1
2004 Capital Expenditures
in Distribution Projects Affected by Customer Growth
(\$000s)

Project	Budget	Actual	Variance
Extensions	4,956	8,406	3,450
Meters	1,174	1,297	123
Services	1,946	2,008	62
Street Lighting	1,242	1,499	257
Transformers	4,965	5,449	484
Total	14,283	18,659	4,376

Newfoundland Power forecast an additional 2,313 gross domestic customer connections in 2004. Actual gross domestic customer connections in 2004 were 3,632, or 57% more than forecast. Details on the forecast and actual 2004 gross customer connections are set out in Table 2 below.

Table 2 2004 Gross Domestic Customer Connections

Area 1	STJ	AVA	BUR	BON	GAN	<b>GFW</b>	CBK	STV	Total
Forecast	1,188	344	72	156	144	130	154	125	2,313
Actual	2,128	384	154	79	213	205	319	150	3,632
Difference	940	40	82	(77)	69	75	165	25	1,319

#### 3. Extensions

Actual 2004 capital expenditures on Distribution Extensions were \$3,450,000 more than the 2004 capital budget.

For 2004, Newfoundland Power forecast a unit cost per new customer for Distribution Extensions of \$2,143.<sup>2</sup> The 2004 Distribution Extensions budget of \$4,956,000 explicitly reflected this unit cost and the 2004 forecast gross domestic customer connections of 2,313 as set out in Table 3 below.

Table 3
Distribution Extensions
2004 Capital Budget

Forecast GDCC <sup>3</sup>	Unit Cost (\$)	<b>Budget (\$000s)</b>
2,313	2,143	4,956

Actual 2004 gross domestic customer connections were 3,632. Application of the 2004 forecast unit cost to actual gross domestic connections indicates that the increased number of connections was the primary cause of increased Distribution Extensions capital expenditures. This is reflected in Table 4 below.

2

STJ = St. John's Area; AVA = Avalon Area; BUR = Burin Area; BON = Bonavista Area; GAN = Gander Area; GFW = Grand Falls Area; CBK = Corner Brook Area; STV = Stephenville Area.

See Response to Information Request PUB 27.3, Page 1 of 5 filed in Newfoundland Power's 2005 Capital Budget Application.

Forecast gross domestic customer connections.

# Table 4 Distribution Extensions 2004 Capital Budget

Forecast GDCC <sup>3</sup>	<b>Unit Cost (\$)</b>	<b>Budget (\$000s)</b>
3,632	2,143	7,783

The difference between the 2004 capital expenditure based upon unit costs and indicated in Table 4 above and the total Distribution Extensions capital expenditure of \$8,406,000 is \$623,000. This difference is explained by 2004 capital expenditures associated with the Humber Valley Report (the "HVR").

Due to the special circumstances associated with extending service to HVR, the costs associated with the extension were not reflected in Newfoundland Power's 2004 unit cost budgeting.<sup>4</sup>

#### 4. Meters

Actual 2004 capital expenditures for Meters totaled \$123,000 more than the 2004 capital budget.

This increased expenditure broadly reflects the increased number of gross domestic customer connections in 2004 as indicated in Table 5 below.

Table 5 Meters 2004 Capital Expenditures

		<b>Expenditure Inc</b>	crease (\$000s)
Increased GDCC <sup>5</sup>	Unit Cost (\$) <sup>6</sup>	<b>Indicated</b>	<b>Actual</b>
1,319	102	135	123

#### 5. Services

Actual 2004 capital expenditures on Services were \$62,000 more than the 2004 capital budget. This was principally the result of two of factors.

In 2004, the Board approved contributions in aid of construction relating to approximately \$400,000 in main line distribution extensions related to HVR (see Order Nos. P.U. 15 and 29 (2004)).

<sup>&</sup>lt;sup>5</sup> Increased gross domestic customer connections over forecast.

See Response to Information Request PUB 27.3, Page 1 of 5 filed in Newfoundland Power's 2005 Capital Budget Application.

In 2004, the total cost of replacement Services was lower than anticipated in the 2004 capital budget. The 2004 capital budget contained \$494,000 for replacement Services. In 2004, actual expenditures on replacement Services was \$349,000. The fact that actual 2004 replacement Services capital expenditures were lower than budget tends to mask the overall impact of increased new Services costs on total Services capital expenditures. When the decreased capital expenditures associated with replacement Services is considered, the total variance over budget for capital expenditure for new Services is approximately \$207,000.

The \$207,000 increased capital expenditure on new Services in 2004 appears disproportionately low when compared to the increases in the other Distribution projects affected by customer growth. The likely cause of this is the fact that the bulk of additional customer connections in 2004 (more than 70%) was experienced in new residential subdivisions in the St. John's area. The connection of new Services in new subdivisions tends to be low-cost. Part of this is due to the close proximity of a relatively large number of new connections. Part of it is due to the low requirement for service poles. Typically, an installed service pole will add approximately \$1,000 to the capital cost of a new Service.

#### 6. Street Lighting

Actual 2004 capital expenditures on Street Lighting were \$257,000 more than 2004 capital budget.

The only material variance between actual 2004 Street Lighting capital expenditures and the 2004 Street Lighting capital budget occurred in the St. John's area. The variance was \$270,000.

The bulk of additional customer connections was in St. John's in 2004 and was associated with new residential subdivisions. In 2004, Newfoundland Power extended distribution service to 59 subdivisions in the St. John's area. This compares to 33 subdivisions in 2003. Actual Street Lighting installations in 2004 were 57% higher than in 2003. This corresponds to the increased 2004 customer growth over forecast.

#### 7. Transformers

Actual 2004 capital expenditures on Transformers were \$484,000 more than the 2004 capital budget.

In 2004 general service growth, in the St. John's area in particular, required a larger number of padmount transformers be installed. Total padmount installations in 2004 were 52 compared to 19 in 2003.

The cost of padmount transformers is in the order of \$20,000. Approximately 20 padmount transformers were included in the 2004 capital budget. The actual installation of 52 padmount units in 2004 largely explains the increased transformer expenditures.

**Annual Capital Summary Report 2005** 

March 1, 2006

Board of Commissioners of Public Utilities P.O. Box 21040 120 Torbay Road St. John's, NF A1A 5B2

Attention: G. Cheryl Blundon

Director of Corporate Services and Board Secretary

Ladies & Gentlemen:

#### Re: 2005 Capital Expenditure Report

Enclosed are fifteen (15) copies of Newfoundland Power Inc.'s 2005 Capital Expenditure Summary Report (the "Report"). The Report is presented in compliance with the directive of the Board of Commissioners of Public Utilities contained in paragraph 5 of Order No. P.U. 43 (2004).

The Report provides the Capital Budget as approved by Order Nos. P.U. 43 (2004), P.U. 26 (2005) and P.U. 33 (2005); the Actual Expenditures to December 31<sup>st</sup>, 2005; and the Variance between Actual Expenditures and the Capital Budget by individual project.

Variances of more than 10% of approved expenditure and \$100,000 or greater are explained in the Notes contained in Appendix A to the Report.

The only 2005 capital project not completed by year end, and scheduled to be completed in 2006, involves a portion of the Rattling Brook Hydro Plant refurbishment. The Company is projecting a capital expenditure of \$94,000 for this project in 2006.

The Company's 2005 actual expenditures exceeded the capital budget by approximately \$1.9 million. The increased actual expenditures were principally the result of increased Distribution capital expenditures related to Extensions, Meters, Services, Street Lighting and Transformers projects. These, in turn, were principally the result of increased customer growth. To assist the Board in understanding these increased expenditures, we have also included *An Analysis of 2005 Distribution Capital Expenditure Variances Affected by Customer Growth*.

Tower Join us in the fight against cancer.

Board of Commissioners of Public Utilities March 1, 2006 Page 2 of 2

If you have any questions on the enclosed, please contact the undersigned at your convenience.

Yours very truly,

Gerard M. Hayes Senior Counsel

Enclosures

c: Geoffrey P. Young Newfoundland and Labrador Hydro





#### **NEWFOUNDLAND POWER INC.**

### 2005 Capital Expenditure Summary Report

#### **Explanatory Note**

This report is presented in compliance with the directive of the Board of Commissioners of Public Utilities (the "Board") contained in paragraph 5 of Order No. P.U. 43 (2004).

Page 1 of the 2005 Capital Expenditure Summary Report outlines the forecast variances from budget of the capital expenditures approved by the Board in Order Nos. P.U. 43 (2004), P.U. 26 (2005) and P.U. 33 (2005). The detailed tables on pages 2 to 12 provide additional detail on capital expenditures in 2005, and also include information on those capital projects approved for 2002, 2003 and 2004 that were not completed prior to 2005.

Variances of more than 10% of approved expenditure and \$100,000 or greater are explained in the Notes contained in Appendix A, which immediately follows the blue page at the end of the 2005 Capital Expenditure Summary Report. The variance criteria are as outlined in the *Provisional Capital Budget Application Guidelines* established by the Board on June 2, 2005.

#### **Newfoundland Power Inc.**

### 2005 Capital Budget Variances (000s)

	Approved by Order Nos. <u>P.U. 43 (2004), P.U. 26</u> (2005) and P.U. 33 (2005)	<u>Actual</u>	<u>Variance</u>
Energy Supply (Notes 1,2)	\$3,861	\$4,202	\$341
Substations (Notes 3,4)	3,437	3,552	115
Transmission	2,597	2,651	54
Distribution	28,635	30,741	2,106
General Property (Note 5)	1,126	1,126	0
Transportation	2,642	2,168	(474)
Telecommunications	60	102	42
Information Systems	3,243	3,408	165
Unforeseen Items	750	0	(750)
General Expenses Capital		3,125	325
Total	<u>\$49,151</u>	<u>\$51,075</u>	<u>\$1,924</u>
Projects carried forward from 2002, 2003 & 2004		2,115	

<sup>(1)</sup> Budget includes \$500,000 for Rocky Pond switchgear replacement approved in Order No. P.U. 33 (2005).

<sup>(2)</sup> Actual Includes \$94,000 carryover for Rattling Brook – Hydro Plant Refurbishment.

<sup>(3)</sup> Budget Includes \$400,000 for portable transformer P-435 repair approved in Order No. P.U. 33 (2005).

<sup>(4)</sup> Actual Includes \$116,000 spent in 2004 on Distribution System Feeder Remote Control.

<sup>(5)</sup> Budget Includes \$110,000 for Kenmount Road UPS replacement approved in Order No. P.U. 26 (2005).

				Capi	ital Budget					Actual Ex	pend	itures					
	2	2002	 2003		2004	2005	Total	2002	 2003	2004		2005	Carr	yover	Total	Va	riance
		A	В		С	D	E	F	G	Н		I		J	K		L
2005 Projects	\$	-	\$ -	\$	-	\$ 49,151	\$ 49,151	\$ -	\$ -	\$ 116	\$	50,865	\$	94	\$ 51,075	\$	1,924
2004 Projects		-	-		16,105	-	16,105	-	-	14,157		1,783		-	15,940		(165)
2003 Projects		-	3,702		-	-	3,702	-	3,427	265		151		-	3,843		141
2002 Projects		2,000	-		-	-	2,000	48	1,353	335		181		-	1,917		(83)
Grand Total	\$	2,000	\$ 3,702	\$	16,105	\$ 49,151	\$ 70,958	\$ 48	\$ 4,780	\$ 14,873	\$	52,980	\$	94	\$ 72,775	\$	1,817

Column A	Approved Capital Budget for 2002
Column B	Approved Capital Budget for 2003
Column C	Approved Capital Budget for 2004
Column D	Approved Capital Budget for 2005
Column E	Total of Columns A, B, C and D
Column F	Actual Capital Expenditures for 2002
Column G	Actual Capital Expenditures for 2003
Column H	Actual Capital Expenditures for 2004
Column I	Actual Capital Expenditures for 2005
Column J	Capital Projects Carried Forward to 2006
Column K	Total of Column F,G,H,I and J
Column L	Column K less Column E

Category: Energy Supply

	Capital Budget							Actual Expenditures									
<u>Project</u>		2004		2005		Total		2004		2005	Car	ryover	Total		Variance		Notes*
		A	В		С		D		Е		F		G		Н		
2005 Projects																	
Hydro Plants - Facility Rehabilitation	\$	-	\$	1,887	\$	1,887	\$	-	\$	2,201	\$	-	\$	2,201	\$	314	1
Wesleyville Gas Turbine Overhaul		-		1,124		1,124		-		1,139		-		1,139		15	
Rattling Brook - Hydro Plant Refurbishment		-		350		350		-		256		94		350		-	
Rocky Pond Switchgear Replacement		-		500		500		-		512		-		512		12	
		-		3,861		3,861		-		4,108		94		4,202		341	
2004 Projects																	
Hydro Plants - Facility Rehabilitation		1,222		_		1,222		1,356		82		_		1,438		216	2
New Chelsea - Hydro Plant Refurbishment		3,973		-		3,973		4,395		388		_		4,783		810	3
•		5,195		-		5,195		5,751		470		-		6,221		1,026	
Total - Energy Supply	\$	5,195	\$	3,861	\$	9,056	\$	5,751	\$	4,578	\$	94	\$	10,423	\$	1,367	

Column A	Approved Capital Budget for 2004
Column B	Approved Capital Budget for 2005
Column C	Total of Columns A and B
Column D	Actual Capital Expenditures for 2004
Column E	Actual Capital Expenditures for 2005
Column F	Capital Projects Carried Forward to 2006
Column G	Total of Column D,E and F
Column H	Column G less Column C

<sup>\*</sup> See Appendix A for notes containing variance explanations.

#### Category: Substations

		(	Capital Budget										
Project Project	2002	2003	2004	2005	Total	2002	2003	2004	2005	Carryover	Total	Variance	Notes*
	A	В	С	D	E	F	G	Н	I	J	K	L	
2005 Projects													
Rebuild Substations	\$ - \$	-	\$ - \$	351	\$ 351	\$ -	\$ -	\$ -	\$ 417	\$ -	\$ 417	\$ 66	
Replacement and Standby Substation Equipment	-	-	-	1,052	1,052	-	-	-	1,141	-	1,141	89	
Transformer Cooling Refurbishment	-	-	-	174	174	-	-	-	144	-	144	(30)	
Protection and Monitoring Improvements	-	-	-	78	78	-	-	-	80	-	80	2	
Distribution System Feeder Remote Control	-	-	-	1,114	1,114	-	-	116	1,025	-	1,141	27	
Feeder Additions Due to Load Growth and													
Reliability	-	-	-	268	268	-	-	-	235	-	235	(33)	
P-435 Refurbishment	-	-	-	400	400	-	-	-	394	-	394	(6)	
	-	-		3,437	3,437			116	3,436	-	3,552	115	
2004 Projects													
Rebuild Substations		_	1,023	_	1,023			634	305	_	939	(84)	
Replacement and Spare Substation Equipment	-	-	1,314	-	1,314	-	-	1,189	53	-	1,242	(72)	
Replacement and Spare Substation Equipment	<del></del>	<del></del>	2,337		2,337			1,823	358		2,181	(156)	
	-	-	2,337	-	2,331	-	-	1,623	336	-	2,101	(150)	
2003 Projects													
Reliability and Power Quality Improvements	_	198	_	_	198	_	76	43	101	_	220	22	
rememby and rower quanty improvements		1,0			1,0		, ,	.5	101		220	22	
2002 Projects													
Purchase Power Transformer	2,000	-	-	-	2,000	48	1,353	335	181	-	1,917	(83)	
Total - Substations	\$ 2,000 \$	198	\$ 2,337 \$	3,437	\$ 7,972	\$ 48	\$ 1,429	\$ 2,317	\$ 4,076	\$ -	\$ 7,870	\$ (102)	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2002
Column B	Approved Capital Budget for 2003
Column C	Approved Capital Budget for 2004
Column D	Approved Capital Budget for 2005
Column E	Total of Columns A, B ,C and D
Column F	Actual Capital Expenditures for 2002
Column G	Actual Capital Expenditures for 2003
Column H	Actual Capital Expenditures for 2004
Column I	Actual Capital Expenditures for 2005
Column J	Capital Projects Carried Forward to 2006
Column K	Total of Column F,G,H,I and J
Column L	Column K less Column E

**Category: Transmission** 

		Capital	Budg	get		A	ctual Ex						
<b>Project</b>		2005	Total		2005		Carryover		Total		Variance		Notes*
	$\mathbf{A}$		В		C		D		${f E}$		${f F}$		
2005 Projects Rebuild Transmission Lines	\$	2,597	\$	2,597	\$	2,651	\$	-	\$	2,651	\$	54	
Total - Transmission	\$	2,597	\$	2,597	\$	2,651	\$		\$	2,651	\$	54	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2005
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2005
Column D	Capital Projects Carried Forward to 2006
Column E	Total of Column C and D
Column F	Column E less Column B

Category: Distribution

		Capit	al Budget			A	ctual Expenditui	res			
<u>Project</u>	2003	2004	2005	Total	2003	2004	2005	Carryover	Total	Variance	Notes*
	A	В	С	D	E	F	G	Н	I	J	
2005 Projects											
Extensions	\$ -	\$ -	\$ 6,374	\$ 6,374	\$ -	\$ -	\$ 7,962	\$ - :	\$ 7,962	\$ 1,588	4
Meters	· -	_	965	965	· ·		1,342	· ·	1,342	377	5
Services	-	-	1,895	1,895	-	-	2,232	-	2,232	337	6
Street Lighting	-	-	1,254	1,254	-	-	1,852	-	1,852	598	7
Transformers	-	-	5,189	5,189	_	_	4,976	-	4,976	(213)	
Reconstruction	-	-	2,825	2,825	-	-	2,898	_	2,898	73	
Aliant Pole Purchase	-	-	4,044	4,044	_	_	4,044	-	4,044	-	
Trunk Feeders									_		
Rebuild Distribution Lines	-	-	4,210	4,210	-	-	3,405	-	3,405	(805)	8
Relocate/Replace Distribution Lines For Third Parties	-	-	734	734	-	-	630	-	630	(104)	9
Distribution Reliability Initiative	-	-	872	872	-	-	1,065	-	1,065	193	10
Feeder Additions and Upgrades to Accommodate Growth	-	-	173	173	-	-	262	-	262	89	
Interest During Construction	-	-	100	100	-	-	73	-	73	(27)	
-	-	-	28,635	28,635		-	30,741	-	30,741	2,106	
2004 Projects											
Rebuild Distribution Lines	_	4,137	_	4,137	_	3,160	90	_	3,250	(887)	11
Distribution Reliability Initiative	-	949	-	949	-	763	195	-	958	9	
2003 Projects											
Rebuild Distribution Lines	3,504	-	-	3,504	3,351	222	50	-	3,623	119	
Total - Distribution	\$ 3,504	\$ 5,086	\$ 28,635	\$ 37,225	\$ 3,351	\$ 4,145	\$ 31,076	\$ -	\$ 38,572	\$ 1,347	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2003
Column B	Approved Capital Budget for 2004
Column C	Approved Capital Budget for 2005
Column D	Total of Columns A, B and C
Column E	Actual Capital Expenditures for 2003
Column F	Actual Capital Expenditures for 2004
Column G	Actual Capital Expenditures for 2005
Column H	Capital Projects Carried Forward to 2006
Column I	Total of Column E,F,G and H
Column J	Column I less Column D

**Category: General Property** 

		Capital	Budg	Budget		A	ctual Ex						
<u>Project</u>	2005 A		Total B		2005 C		Carryover D		Total E		Variance F		Notes*
2005 Projects													
Tools and Equipment	\$	691	\$	691	\$	693	\$	-	\$	693	\$	2	
Additions to Real Property		325		325		334		-		334		9	
Replace UPS Kenmount Rd		110		110		99		-		99		(11)	
<b>Total - General Property</b>	\$	1,126	\$	1,126	\$	1,126	\$		\$	1,126	\$		

Column A	Approved Capital Budget for 2005
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2005
Column D	Capital Projects Carried Forward to 2006
Column E	Total of Column C and D
Column F	Column E less Column B

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Category: Transportation

	Capital Budget							Actual Expenditures									
<b>Project</b>		2004		2005		Total		2004		2005	Car	ryover		Γotal	Va	riance	Notes*
		A		В		C		D		E		F		G		H	
2005 Projects Purchase Vehicles and Aerial Devices	\$	-	\$	2,642	\$	2,642	\$	-	\$	2,168	\$	-	\$	2,168	\$	(474)	12
2004 Projects Purchase Vehicles and Aerial Devices		3,487		-		3,487		2,660		670		-		3,330		(157)	
Total - Transportation	\$	3,487	\$	2,642	\$	6,129	\$	2,660	\$	2,838	\$		\$	5,498	\$	(631)	

Column A	Approved Capital Budget for 2004
Column B	Approved Capital Budget for 2005
Column C	Total of Columns A and B
Column D	Actual Capital Expenditures for 2004
Column E	Actual Capital Expenditures for 2005
Column F	Capital Projects Carried Forward to 2006
Column G	Total of Column D, E and F
Column H	Column G less Column C

<sup>\*</sup> See Appendix A for notes containing variance explanations.

**Category: Telecommunications** 

		Capital	Budge	t		Ac	tual Ex						
<b>Project</b>	2005 A		Total B		2005 C		Carryover D		Total E		Variance F		Notes*
2005 Projects Replace/Upgrade Communications Equipment	\$	60	\$	60	\$	102	\$	-	\$	102	\$	42	
<b>Total - Telecommunications</b>	\$	60	\$	60	\$	102	\$		\$	102	\$	42	

Column A	Approved Capital Budget for 2005
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2005
Column D	Capital Projects Carried Forward to 2006
Column E	Total of Column C and D
Column F	Column E less Column B

<sup>\*</sup> See Appendix A for notes containing variance explanations.

**Category: Information Systems** 

		Capital	Budg	et		A	ctual l						
Project	2005 A		Total B		2005 C		Carryover D		Total E		Variance F		Notes*
2005 Projects													
Application Enhancements	\$	1,087	\$	1,087	\$	1,185	\$	-	\$	1,185	\$	98	
Application Environment		710		710		779		-		779		69	
Customer Systems Replacement		144		144		153		-		153		9	
Network Infrastructure		276		276		286		-		286		10	
Personal Computer Infastructure		455		455		412		-		412		(43)	
Shared Server Infastructure		571		571		593		-		593		22	
<b>Total - Information Systems</b>	\$	3,243	\$	3,243	\$	3,408	\$	-	\$	3,408	\$	165	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2005
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2005
Column D	Capital Projects Carried Forward to 2006
Column E	Total of Column C and D
Column F	Column E less Column B

**Category: Unforeseen Items** 

	Capital Budget						tual Ex						
<b>Project</b>	2005 A		Total B		2005 C		Carryover D		Total E		Variance F		Notes*
2005 Projects Allowance for Unforeseen Items	\$	750	\$	750	\$	-	\$	-	\$	-	\$	(750)	13
Total - Unforeseen Items	\$	750	\$	750	\$		\$	-	\$		\$	(750)	

Column A	Approved Capital Budget for 2005
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2005
Column D	Capital Projects Carried Forward to 2006
Column E	Total of Column C and D
Column F	Column E less Column B

<sup>\*</sup> See Appendix A for notes containing variance explanations.

**Category: General Expenses Capital** 

	Capital Budget			Actual Expenditures								
<b>Project</b>		2005		Total		2005	Car	ryover	Total	Va	riance	Notes*
		A		В		C		D	E		F	
2005 Projects Allowance for General Expenses Capital	\$	2,800	\$	2,800	\$	3,125	\$	-	\$ 3,125	\$	325	14
<b>Total - General Expenses Capital</b>	\$	2,800	\$	2,800	\$	3,125	\$		\$ 3,125	\$	325	

Column A	Approved Capital Budget for 2005
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2005
Column D	Capital Projects Carried Forward to 2006
Column E	Total of Column C and D
Column F	Column E less Column B

<sup>\*</sup> See Appendix A for notes containing variance explanations.

#### **Energy Supply**

1. Hydro Plants - Facility Rehabilitation:

Budget: \$1,887,000 Actual: \$2,201,000 Variance: \$314,000

This variance is primarily the result of the higher than anticipated material costs on two budgeted items and expenditures required on four items not anticipated at the time of the budget.

Valve replacements at the Cape Broyle and Mobile hydro plants were budgeted in the 2005 budget. The cost of material purchases associated with these projects was higher than expected (Cape Broyle \$69,000 and Mobile \$65,000).

During 2005, expenditure was required on four items that were not anticipated in the capital budget:

The lube oil cooler on the Greenhill gas turbine was replaced due to glycol leaks (\$33,000). The leaks presented an environmental hazard and prevented the turbine from being operated at full load.

The roof on the Petty Harbour hydro plant developed leaks and required replacement. This was completed at a cost of \$41,000.

The wicket gate bushings at the Horsechops hydro plant were replaced. This was necessary to protect the integrity of the turbine and to ensure that the unit would shut down in emergency situations (\$21,000).

Heat exchangers and associated valves were found to have a high risk of failure at four hydro plants and an expenditure totalling \$34,000 was required to replace these units to prevent a potential environmental hazard.

#### **Energy Supply (cont'd)**

2. Hydro Plants - Facility Rehabilitation (2004 Project):

Budget: \$1,222,000 Actual: \$1,438,000 Variance: \$216,000

The variance is primarily the result of higher than anticipated costs for refurbishment projects at the Pierre's Brook (\$73,000) Topsail (\$59,000) and Tors Cove (\$40,000) hydroelectric plants. The increase in the Pierre's Brook project is related to the increased cost to replace the headgate for the penstock. The increase in the Topsail plant refurbishment project is related to increased cost associated with installing the computerized control system for the generator. The increase in the Tors Cove project is related to an unexpected communications cable replacement and increased cost of governor replacement.

In addition, a total of \$49,000 was expended under this project to provide fire and intruder alarm systems at 22 hydro plants.

3. New Chelsea - Hydro Plant Refurbishment (2004 Project):

Budget: \$3,973,000 Actual: \$4,783,000 Variance: \$810,000

An increase in steel prices for the penstock pipe increased the cost of the project by \$180,000.

During detailed engineering, a number of additional requirements were identified to complete the project. First, it was necessary to engage external expertise to assist with the development of new standards and specifications for the advanced relaying and high voltage switchgear at an additional cost of \$150,000. Unanticipated modifications to the building were necessary to comply with building code requirements at a cost of \$130,000. Additional costs associated with the installation and commissioning of electrical and mechanical equipment totalled \$250,000. The additional project cost, and associated lengthening of the construction schedule, increased interest during construction by \$54,000.

#### **Distribution**

4. Extensions:

Budget: \$6,374,000 Actual: \$7,962,000 Variance: \$1,588,000

The increase in the capital cost of Extensions over the 2005 capital budget is primarily the result of increased customer growth. Further information is provided in the report *An Analysis of 2005 Distribution Capital Expenditure Variances Affected by Customer Growth* (Attachment A).

5. Meters:

Budget: \$965,000 Actual: \$1,342,000 Variance: \$377,000

The increase in the capital cost of Meters over the 2005 capital budget is primarily the result of increased customer growth and unexpected meter replacement following meter testing as required under the *Electricity and Gas Inspection Act (Canada)*. Further information is provided in the report *An Analysis of 2005 Distribution Capital Expenditure Variances Affected by Customer Growth* (Attachment A).

6. Services:

Budget: \$1,895,000 Actual: \$2,232,000 Variance: \$337,000

The increase in the capital cost of Services over the 2005 capital budget is primarily the result of increased customer growth. Further information is provided in the report *An Analysis of 2005 Distribution Capital Expenditure Variances Affected by Customer Growth* (Attachment A).

7. Street Lighting:

Budget: \$1,254,000 Actual: \$1,852,000 Variance: \$598,000

The increase in the capital cost of Street Lighting over the 2005 capital budget is primarily the result of increased customer growth. Further information is provided in the report *An Analysis of 2005 Distribution Capital Expenditure Variances Affected by Customer Growth* (Attachment A).

#### **Distribution (cont'd)**

8. Rebuild Distribution Lines:

Budget: \$4,210,000 Actual: \$3,405,000 Variance: \$(805,000)

In each of 2004 and 2005, Newfoundland Power budgeted funds to rebuild 52 distribution feeders. The amount of customer driven work completed in both 2004 and 2005 was higher than anticipated <sup>1</sup>. Consequently, resource availability resulted in only 45 feeders being completed in 2004 and 44 feeders being completed in 2005.

9. Relocate/Replace Distribution Lines for Third Parties:

Budget: \$734,000 Actual: \$630,000 Variance: \$(104,000)

Relocation or replacement of distribution lines for third parties is driven by customer requests or through work initiated by the various telecommunication companies. The budgeted expenditure is based on average historical expenditure adjusted, if required, to accommodate additional anticipated work requirements.

In 2005, additional work associated with telecommunication company upgrades had been expected. Expenditure, while above normal, was less than budgeted because of delays by the telecommunications companies in starting some of their planned work.

10. Distribution Reliability Initiative:

Budget: \$872,000 Actual: \$1,065,000 Variance: \$193,000

The upgrade of a section of GBY-02, which was originally planned for 2006, was completed in 2005. The project was advanced to address poor reliability.

11. Rebuild Distribution Lines (2004 Project):

Budget: \$4,137,000 Actual: \$3,250,000 Variance: \$(887,000)

As explained in Item 8 above, the increased level of customer driven work and resource availability resulted in only 45 feeders being completed in 2004 instead of the planned 52 feeders.

Refer to An Analysis of 2005 Distribution Capital Expenditure Variances Affected by Customer Growth (Attachment A) and An Analysis of 2004 Distribution Capital Expenditure Variances Affected by Customer Growth (Filed with the 2004 Capital Expenditure Status Report).

### **Transportation**

12. Purchase Vehicles and Aerial Devices:

Budget: \$2,642,000 Actual: \$2,168,000 Variance: (\$474,000)

In 2005, the Company offered an enhanced early retirement program to its employees. This resulted in a reduction in the number of line crews. Consequently, two line trucks were not replaced in 2005 as originally budgeted.

#### **Unforeseen Items**

13. Allowance for Unforeseen Items:

Budget: \$750,000 Actual: \$0 Variance: (\$750,000)

The allowance for unforeseen items account was not required for expenditures in 2005. All unforeseen items are accounted for in the appropriate budget categories.

#### **General Expenses Capital**

14. General Expenses Capital

Budget: \$2,800,000 Actual: \$3,125,000 Variance: \$325,000

General expenses capital (GEC) is comprised of direct charges (i.e. labour and material expended in relation to the overall capital program and not directly attributable to a specific capital project) and indirect charges (which represent an allocation, based on predetermined percentages, of a portion of the amount charged to specific operating accounts).

The variance in GEC for 2005 is the result of an increase in direct charges to GEC. The increase in direct charges to GEC is attributable to the adjustment of year-end balances in clearing accounts for vacation, payroll and materials overheads, and to an increase in pre-issue materials. Following is a further explanation of each item.

#### Clearing Account Adjustment

During the year, actual costs related to vacation, payroll overheads and materials overheads are charged to clearing accounts. These costs are then charged to capital and operating accounts based on predetermined percentages. For example, in 2005, payroll overheads were charged as 16% of labour charges. So, if one hour of labour at \$10.00 per hour is charged to an operating account, a payroll overhead charge of \$1.60 would also be charged to the same operating account.

The year-end balances in the clearing accounts represent the difference between actual costs incurred and amounts charged to operating and capital accounts on the basis of the pre-determined percentages. The balances in the clearing accounts are reviewed and assessed on an annual basis. If the review indicates that the balance in the clearing accounts will not clear itself in the normal course, an adjustment is made to charge the un-cleared balances to operating and capital based on the proportion of operating and capital charges to the underlying labour and materials accounts. If the review indicates that the balance in the clearing accounts will clear itself in the normal course, no year end adjustment is made.

Based on the assessment at the end of 2005, it was determined that the vacation, payroll and materials overhead accounts would not clear by themselves. The balance was then charged to operating and capital in the manner described above. The portion applicable to capital is charged to GEC as this is an appropriate cost accounting mechanism to allocate the amount over asset categories in the plant records. The amount charged to GEC in 2005 was approximately \$205,000.

#### Pre-Issue Materials

To facilitate the prompt and efficient issue of materials from stores, some of the more frequently used low value items are stored in a common area and are readily available for

use by line crews or maintenance staff without having to be specifically issued by a Storekeeper. These materials are referred to as pre-issued materials. The cost of these pre-issued materials is charged to an operating account, with a percentage based on historical usage being transferred to GEC. In 2005, several warehouses were combined under one storekeeper. Gander and Grand Falls warehouses were combined, as were the Burin, Carbonear and Clarenville warehouses. As part of this process, the pre-issue materials list was reviewed and additional items were added. As a consequence of the increase in the amount of pre-issued materials, the portion charged to GEC also increased. The additional amount of pre-issued materials charged to GEC in 2005 was \$102,000.

	Attachment	Α
An Analysis of 2005 Distribution Capital Expend Variances Affected by Customer Growth	iture	

Ralph Mugford, P.Eng Senior Engineer

#### 1. Introduction

Newfoundland Power's actual 2005 capital expenditures in the Distribution class were approximately \$2.1 million over budget. The primary cause of expenditures exceeding budget was the increase in capital expenditure required to serve new customers.

This Report analyzes variances between budgeted and actual 2005 capital expenditures for each of the Distribution projects which are materially impacted by the capital cost of serving an increased number of customers.

The analyses contained in this Report clearly support the conclusion that increased 2005 capital expenditures were the result of the unexpected increase in the number of new customers. The analyses do not, however, reconcile budgeted and actual 2005 capital expenditure for the Distribution classes reviewed. Such a reconciliation is practically impossible.

#### 2. Overview

A comparison of budgeted and actual capital expenditures in those Distribution projects affected by customer growth is set out in Table 1 below.

Table 1
2005 Capital Expenditures
in Distribution Projects Affected by Customer Growth
(\$000s)

Project	Budget	Actual	Variance
Extensions	6,374	7,962	1,588
Meters	965	1,342	377
Services	1,895	2,232	337
Street Lighting	1,254	1,852	598
Transformers	5,189	4,976	(213)
Total	15,677	18,363	2,687

Newfoundland Power forecast 2,461 gross domestic customer connections in 2005. Actual gross domestic customer connections in 2005 were 3,356 or 36% more than forecast. Details on the forecast and actual 2005 gross customer connections are set out in Table 2 below.

Table 2 2005 Gross Domestic Customer Connections

Area <sup>1</sup>	STJ	AVA	BUR	BON	GAN	<b>GFW</b>	CBK	STV	Total
Forecast	1369	367	69	143	116	159	125	113	2,461
Actual	1928	404	56	152	174	181	332	129	3,356
Difference	559	37	-13	9	58	22	207	16	895

#### 3. Extensions

Actual 2005 capital expenditures on Distribution Extensions were \$1,588,000 more than the 2005 capital budget.

For 2005, Newfoundland Power forecast a unit cost per new customer for Distribution Extensions of \$2,590.<sup>2</sup> The 2005 Distribution Extensions budget of \$6,374,000 explicitly reflected this unit cost and the 2005 forecast gross domestic customer connections of 2,461 as set out in Table 3 below.

Table 3
Distribution Extensions
2005 Capital Budget

Forecast GDCC	Unit Cost (\$)	<b>Budget</b> (\$000s)
2,461	2,590	6,374

Actual 2005 gross domestic customer connections were 3,356 or 36% above forecast. Actual expenditure for 2005 was \$7,962,000 or 25% above budget. The increased expenditure resulting from the increased number of customer connections was offset somewhat by a lower than expected unit cost of \$2,372 per new domestic customer connection (8% below budget).

2

STJ = St. John's Area; AVA = Avalon Area; BUR = Burin Area; BON = Bonavista Area; GAN = Gander Area; GFW = Grand Falls Area; CBK = Corner Brook Area; STV = Stephenville Area..

See Response to Information Request PUB 27.2, Page 1 of 1 filed in Newfoundland Power's 2005 Capital Budget Application.

<sup>&</sup>lt;sup>3</sup> Forecast gross domestic customer connections.

#### 4. **Meters**

Actual 2005 capital expenditures for Meters totaled \$377,000 more than the 2005 capital budget. The increased expenditure was principally due to (1) the increase in customer connections, and (2) the outcome of meter testing required by the *Electricity and Gas Inspection Act (Canada)*, which necessitated the replacement of two complete groups of meters.

The increased expenditure due to the increased number of gross domestic customer connections in 2005 is indicated in Table 4 below.

### Table 4 **Meters 2005 Capital Expenditures**

<b>Increased GDCC<sup>4</sup></b>	Unit Cost (\$) <sup>5</sup>	Expenditure Increase (\$000s)
895	79	71

In addition to the additional expenditure of \$71,000 required due to increased customer growth, meter testing conducted as required under the *Electricity and Gas Inspection Act (Canada)* resulted in the unexpected replacement of 7,563 meters at an estimated replacement cost of \$318,000. Two groups of meters that were purchased in 1993 had to be replaced as a result of the Compliance Sample testing.

#### 5. Services

Budget Application.

Actual 2005 capital expenditures on Services were \$337,000 more than the 2005 capital budget. The increased expenditure was principally due to the increase in customer connections.

In 2005, actual capital expenditure on new Services was \$1,894,000. The 2005 capital budget expenditure was \$1,421,000. The increased expenditure of \$473,000 represents a 33% increase over the 2005 budget. The 33% increase in expenditure on new Services is in line with the 36% actual increase in new customer connections.

In 2005, the total cost of replacement Services was lower than anticipated in the 2005 capital budget. The 2005 capital budget contained \$473,000 for replacement Services. Actual expenditure on replacement Services was \$339,000.

3

Increased gross domestic customer connections over forecast.

See Response to Information Request PUB 27.2, Page 1 of 1 filed in Newfoundland Power's 2005 Capital

The decreased expenditure on replacement Services is primarily attributed to a reduction in the number of problem calls. The number of recorded problem calls dropped from 7,877 in 2004 to 6,626 in 2005, a decrease of 16 %.

#### 6. Street Lighting

Actual 2005 capital expenditure on Street Lighting was \$598,000 more than the 2005 capital budget.

The increased expenditure was principally due to (1) the increase in new customer connections, and (2) a higher than normal requirement for additional street lights in the city of St. John's.

Increased expenditure attributed to higher than expected customer growth is detailed in Table 5.

#### Table 5 Street Lights 2005 Capital Expenditures

<b>Increased GDCC<sup>6</sup></b>	Unit Cost (\$) <sup>7</sup>	<b>Expenditure Increase (\$000s)</b>
895	291	260

In addition to the increased expenditure of \$260,000 required due to increased customer growth, there was an initiative by the City of St. John's to bring outlying and recently amalgamated sections of the city up to the same street lighting standard as the rest of the city. This resulted in a significant number of additional street lights being installed in St. John's. Because this requirement by the City of St. John's was not anticipated, it was not accommodated in the 2005 budget. It is estimated that the additional installations resulted in an expenditure of \$380,000.

In 2005, the total cost of replacement Street Lights was slightly lower than anticipated in the 2005 capital budget. The 2005 capital budget allocated \$538,000 for replacement Street Lights. In 2005, the actual expenditure on replacement Street Lights was \$489,000, a reduction of \$49,000. This reduction partially offset the above noted increase in costs due to the increase in new street light installations.

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<sup>&</sup>lt;sup>6</sup> Increased gross domestic customer connections over forecast.

See Response to Information Request PUB 27.2, Page 1 of 1 filed in Newfoundland Power's 2005 Capital Budget Application.

#### 7. Transformers

Actual 2005 capital expenditure on Transformers was \$213,000 less than the 2005 capital budget.

Although total transformer expenditures in 2005 were lower than budget, the aforementioned increase in new customer connections in 2005 did have an impact on the transformer expenditures during the year. As shown in the details in Table 6 below, the increase in transformer expenditures attributed to higher than expected customer growth was approximately \$906,000.

### Table 6 Transformers 2005 Capital Expenditures

Increased GDCC <sup>8</sup>	Unit Cost (\$) <sup>9</sup>	<b>Expenditure Increase (\$000s)</b>
895	1,012	906

However, this increase was more than offset by reduced expenditures related to an initiative undertaken by the Company to reduce transformer inventory levels. At the end of 2004, there were 2,551 units in inventory. This was reduced to 1,977 units by the end of 2005. The reduction in inventory resulted in 574 fewer units being purchased in 2005. At the 2005 average unit cost of \$2,034, this resulted in a reduction of \$1,168,000 in transformer purchases.

The net effect of these two factors was an overall reduction in transformer expenditures relative to the original budget.

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<sup>&</sup>lt;sup>8</sup> Increased gross domestic customer connections over forecast.

<sup>&</sup>lt;sup>9</sup> See Response to Information Request PUB 27.2, Page 1 of 1 filed in Newfoundland Power's 2005 Capital Budget Application.

**Annual Capital Summary Report 2006** 



Newfoundland Power Inc.

55 Kenmount Road PO Box 8910 St. John's, Newfoundland A1B 3P6 Business: (709) 737-5600 Facsimile: (709) 737-2974

www.newfoundlandpower.com

March 1, 2007

Board of Commissioners of Public Utilities P.O. Box 21040 120 Torbay Road St. John's, NF A1A 5B2

Attention:

G. Cheryl Blundon

Director of Corporate Services and Board Secretary

Ladies & Gentlemen:

Re: 2006 Capital Expenditure Report

Enclosed are fifteen (15) copies of Newfoundland Power Inc.'s 2006 Capital Expenditure Report (the "Report"). The Report is presented in compliance with the directive of the Board of Commissioners of Public Utilities contained in paragraph 5 of Order No. P.U. 30 (2005).

The Report provides the Capital Budget as approved by Order Nos. P.U. 30 (2005), P.U. 34 (2005), P.U. 13 (2006) and P.U. 17 (2006); the Actual Expenditures to December 31<sup>st</sup>, 2006; and the Variance between Actual Expenditures and the Capital Budget by individual project.

Variances of more than 10% of approved expenditure and \$100,000 or greater are explained in the Notes contained in Appendix A to the Report.

Two 2006 capital projects scheduled to be completed in 2006 were not completed by year end. The remaining capital expenditures associated with the two projects, which were completed in January, are carried forward into 2007 as follows:

- 1. \$105,000 associated with renovations to the Grand Falls Windsor service building; and
- 2. \$70,000 associated with the rehabilitation of the Cape Broyle Hydroelectric Plant.

The Company's 2006 actual expenditures exceeded the capital budget by approximately \$6.4 million. The principal contributor to the increased actual expenditures was increased Distribution capital expenditure related to Extensions, Meters, Services, Street Lighting and Transformers projects. These, in turn, were principally the result of unanticipated customer growth and increases in material and contractor costs. To assist the Board in understanding these increased expenditures, we have also included *An Analysis of 2006 Distribution Capital Expenditure Variances Affected by Customer Growth*.

This je Join us in the fight against cancer.

Email: palteen@newfoundlandpower.com

Fax: (709) 737-2974

.Board of Commissioners of Public Utilities March 1, 2007 Page 2 of 2

If you have any questions on the enclosed, please contact the undersigned at your convenience.

Yours very truly,

Gerard M. Hayes Senior Counsel

Enclosures

c: Geoffrey P. Young Newfoundland and Labrador Hydro

Join us in the fight against cancer.

Fax: (709) 737-2974



#### **NEWFOUNDLAND POWER INC.**

2006 Capital Expenditure Report

## **Explanatory Note**

This report is presented in compliance with the directive of the Board of Commissioners of Public Utilities (the "Board") contained in paragraph 5 of Order No. P.U. 30 (2005).

Page 1 of the 2006 Capital Expenditure Report outlines the forecast variances from budget of the capital expenditures approved by the Board in Order Nos. P.U. 30 (2005), P.U. 34 (2005), P.U. 13 (2006) and P.U. 17 (2006). The detailed tables on pages 2 to 13 provide additional detail on capital expenditures in 2006, and also include information on those capital projects approved for 2005 that were not completed prior to 2006.

Variances of more than 10% of approved expenditure and \$100,000 or greater are explained in the Notes contained in Appendix A, which immediately follows the blue page at the end of the 2006 Capital Expenditure Report. The variance criteria are as outlined in the *Provisional Capital Budget Application Guidelines* established by the Board on June 2, 2005.

### Newfoundland Power Inc.

## 2006 Capital Expenditure Report (000s)

Approved by Order Nos. P.U. 30 (2005), P.U. 34 (2005), P.U. 13 (2006) and

	(2005), P.U. 13 (2006) and <u>P.U. 17 (2006)</u>	<b>Actual</b>	<b>Variance</b>
Generation Hydro <sup>1</sup>	\$3,788	\$3,956	\$168
Generation Thermal	120	90	(30)
Substations <sup>2</sup>	4,120	4,435	315
Transmission	4,054	4,456	402
Distribution <sup>3</sup>	28,023	33,375	5,352
General Property <sup>4</sup>	2,232	2,349	117
Transportation	2,755	2,751	(4)
Telecommunications	78	173	95
Information Systems	3,500	3,430	(70)
Unforeseen Items	750	894 <sup>5</sup>	144
General Expenses Capital	2,800	2,748	(52)
Total	<u>\$52,220</u>	<u>\$58,657</u>	<u>\$6,437</u>
Projects carried forward from 2005		\$147	

<sup>&</sup>lt;sup>1</sup> Budget includes \$963,200 for Rocky Pond Switchgear approved in Order No. P.U. 34 (2005).

Budget includes \$80,000 for Howley Cabin Area approved in Order No. P.U. 17 (2006).

<sup>&</sup>lt;sup>3</sup> Budget includes \$1,214,000 for Howley Cabin Area approved in Order No. P.U. 17 (2006).

Budget includes \$705,000 for Grand Falls-Windsor Service Building approved in Order No. P.U. 13 (2006).

An application seeking specific approval of capital expenditures of \$875,000 for the rehabilitation of the Cape Broyle Hydroelectric Plant was submitted to the Board on December 21, 2006.

		(	Capit	al Budget			A	Actual Ex	pend	itures						
		2005		2006		Total	2005		2006		Carryovers		Total		Va	ariance
	· ·	A		В	<u> </u>	С	·	D	<u> </u>	E		F	·-	G	· <u></u>	Н
2006 Projects	\$	-	\$	52,220	\$	52,220	\$	-	\$	58,482	\$	175	\$	58,657	\$	6,437
2005 Projects		350		-		350		256		147		-		403		53
Grand Total	\$	350	\$	52,220	\$	52,570	\$	256	\$	58,629	\$	175	\$	59,060	\$	6,490

Column A	Approved Capital Budget for 2005
Column B	Approved Capital Budget for 2006
Column C	Total of Columns A and B
Column D	Actual Capital Expenditures for 2005
Column E	Actual Capital Expenditures for 2006
Column F	Capital Projects Carried Forward to 2007
Column G	Total of Column D, E and F
Column H	Column G less Column C

Category: Generation Hydro

		al Budget				Actual Expenditures											
<u>Project</u>	2	005		2006		<u> Fotal</u>	2	005		2006	Carı	ryovers		Total	Va	riance	Notes*
	A		В		C		D		E		$\mathbf{F}$		G		H		
2006 Projects																	
Hydro Plants - Facility Rehabilitation	\$	_	\$	996	\$	996	\$	-	\$	1,234	\$	_	\$	1,234	\$	238	1
Plant Refurbishment - Petty Harbour		_		1,829		1,829		-		1,925		_		1,925		96	
Rocky Pond - Switchgear Replacement		_		963		963		-		797		_		797		(166)	2
Total - 2006 Projects	\$	-	\$	3,788	\$	3,788	\$		\$	3,956	\$		\$	3,956	\$	168	
2005 Projects																	
Plant Refurbishment - Rattling Brook		350		_		350		256		147		_	\$	403	\$	53	
Total - 2005 Projects	\$	350	\$		\$	350	\$	256	\$	147	\$	-	\$	403	\$	53	
Total - Generation htdro	\$	350	\$	3,788	\$	4,138	\$	256	\$	4,103	\$	-	\$	4,359	\$	221	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2005
Column B	Approved Capital Budget for 2006
Column C	Total of Columns A and B
Column D	Actual Capital Expenditures for 2005
Column E	Actual Capital Expenditures for 2006
Column F	Capital Projects Carried Forward to 2007
Column G	Total of Column D, E and F
Column H	Column G less Column C

**Category: Generation Thermal** 

		Capital	Budge	et	Expo	<u>enditure</u>							
<b>Project</b>		2006 T		TotalB		2006 C		yovers	T	otal	Var	riance	Notes*
								D		E		F	
2006 Projects													
Port Aux Basques Fuel Tank Replacement		120		120		90		-		90		(30)	
<b>Total - Generation Thermal</b>	\$	120	\$	120	\$	90	\$	-	\$	90	\$	(30)	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2006
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2006
Column D	Capital Projects Carried Forward to 2007
Column E	Total of Column C and D
Column F	Column E less Column B

Category: Transmission

		Capital	l Budg	get	Exp								
<b>Project</b>			Total B		2006	Carry	overs	Total		Variance		Notes*	
		A			C	D		E		F			
2006 Projects Rebuild Transmission Lines	\$	4,054	\$	4,054	\$	4,456	\$ -		\$	4,456	\$	402	
Total - Transmission	\$	4,054	\$	4,054	\$	4,456	\$		\$	4,456	\$	402	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Approved Capital Budget for 2006
Total of Columns A
Actual Capital Expenditures for 2006
Capital Projects Carried Forward to 2007
Total of Column C and D
Column E less Column B

**Category: Substations** 

		Comital	l DJ.	4		Actual							
<u>Project</u>	Capital 1 2006			get Total	EX	oenditure 2006	Car	ryovers	2006	Variance		Notes*	
<u> </u>	<u> </u>		В		C			D	 E	F		110005	
2006 Projects													
Rebuild Substations	\$	710	\$	710	\$	788	\$	-	\$ 788	\$	78		
Replacement and Standby Substation Equipment		1,918		1,918		2,056		-	2,056		138		
Protection and Monitoring Improvements		423		423		500		-	500		77		
Distribution System Feeder Remote Control		779		779		819		-	819		40		
Feeder Additions Due to Load Growth		210		210		150		-	150		(60)		
Upgrade Howley Substation		80		80		122		-	122		42		
<b>Total - Substations</b>	\$	4,120	\$	4,120	\$	4,435	\$		\$ 4,435	\$	315		

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2006
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2006
Column D	Capital Projects Carried Forward to 2007
Column E	Total of Column C and D
Column F	Column E less Column B

Category: Distribution

	G 4 1										
Project	 Capital 2006	 get Total	Expenditure 2006		Carryovers		Total		Variance		Notes*
	 A	В		C		D		E		F	
2006 Projects											
Extensions	\$ 7,980	\$ 7,980	\$	11,136	\$	-	\$	11,136	\$	3,156	3
Meters	1,192	1,192		1,463		-		1,463		271	4
Services	1,851	1,851		2,262		-		2,262		411	5
Street Lighting	1,272	1,272		1,582		-		1,582		310	6
Transformers	5,540	5,540		5,643		-		5,643		103	
Reconstruction	2,849	2,849		2,989		-		2,989		140	
Trunk Feeders											
Rebuild Distribution Lines	3,190	3,190		2,811		-		2,811		(379)	7
Relocate/Replace Distribution Lines For Third Parties	685	685		1,801		-		1,801		1,116	8
Distribution Reliability Initiative	3,114	3,114		3,365		-		3,365		251	
Feeder Additions and Upgrades to Accommodate Growth	266	266		255		-		255		(11)	
Interest During Construction	84	84		68		-		68		(16)	
Total - Distribution	\$ 28,023	\$ 28,023	\$	33,375	\$		\$	33,375	\$	5,352	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2006
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2006
Column D	Capital Projects Carried Forward to 2007
Column E	Total of Column C and D
Column F	Column E less Column B

**Category: Transportation** 

		Capita	l Budg	get		Actual enditure							
<u>Project</u>	2006 A			Total B		2006 C		Carryovers D		Total E		riance F	Notes*
2006 Projects Purchase Vehicles and Aerial Devices	\$	2,755	\$	2,755	\$	2,751	\$	-	\$	2,751	\$	(4)	
Total - Transportation	\$	2,755	\$	2,755	\$	2,751	\$		\$	2,751	\$	(4)	

Column A	Approved Capital Budget for 2006
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2006
Column D	Capital Projects Carried Forward to 2007
Column E	Total of Column C and D
Column F	Column E less Column B

<sup>\*</sup> See Appendix A for notes containing variance explanations.

**Category: General Property** 

	Capital	Budg	get									
2006			Total		2006	Carryovers		Total		Variance		Notes*
	A		В		C		D		E	·	F	
\$	587	\$	587	\$	659	\$	-	\$	659	\$	72	
	132		132		150		-		150		18	
	665		665		653		-		653		(12)	
	143		143		135		-		135		(8)	
	705		705		647		105		752		47	
\$	2,232	\$	2,232	\$	2,244	\$	105	\$	2,349	\$	117	
	¢	\$ 587 132 665 143 705	\$ 587 \$ 132 665 143 705	\$ 587 \$ 587 132 132 665 665 143 143 705 705	Capital Budget       2006     Total       A     B       \$ 587     \$ 587       \$ 132     132       665     665       143     143       705     705	2006         Total         2006           A         B         C           \$ 587         \$ 587         \$ 659           132         132         150           665         665         653           143         143         135           705         705         647	Capital Budget         Expenditure           2006         Total         2006         Car           A         B         C           \$ 587         \$ 587         \$ 659         \$           132         132         150         665         653           143         143         135         135         705         647	Capital Budget         Expenditure           2006         Total         2006         Carryovers           A         B         C         D           \$ 587         \$ 587         \$ 659         \$ -           132         132         150         -           665         665         653         -           143         143         135         -           705         705         647         105	Capital Budget         Expenditure           2006         Total         2006         Carryovers           A         B         C         D           \$ 587         \$ 587         \$ 659         \$ -         \$ 132           \$ 132         \$ 132         \$ 150         -         665         665         653         -           \$ 143         \$ 143         \$ 135         -         -         705         647         \$ 105	Capital Budget         Expenditure           2006         Total         2006         Carryovers         Total           A         B         C         D         E           \$ 587         \$ 587         \$ 659         \$ -         \$ 659           132         132         150         -         150           665         665         653         -         653           143         143         135         -         135           705         705         647         105         752	Capital Budget         Expenditure         Carryovers         Total         Value           A         B         C         D         E           \$ 587         \$ 587         \$ 659         \$ -         \$ 659         \$ 132           \$ 132         132         150         -         150         -         653           \$ 665         665         663         -         653         -         653           \$ 143         143         135         -         135         -         135           705         705         647         105         752         -	Capital Budget         Expenditure           2006         Total         2006         Carryovers         Total         Variance           A         B         C         D         E         F           \$ 587         \$ 587         \$ 659         \$ -         \$ 659         \$ 72           132         132         150         -         150         18           665         665         653         -         653         (12)           143         143         135         -         135         (8)           705         705         647         105         752         47

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2006
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2006
Column D	Capital Projects Carried Forward to 2007
Column E	Total of Column C and D
Column F	Column E less Column B

**Category: Telecommunications** 

		Capital	Budge	t		ctual enditure							
<u>Project</u>	2006 A		Total B		2006 C		Carryovers D		Total E		Variance F		Notes*
2006 Projects Replace/Upgrade Communications Equipment	\$	78	\$	\$ 78		\$ 173		\$ -		173	\$ 95		
<b>Total - Telecommunications</b>	\$	78	\$	78	\$	173	\$	_	\$	173	\$	95	

Column A	Approved Capital Budget for 2006
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2006
Column D	Capital Projects Carried Forward to 2007
Column E	Total of Column C and D
Column F	Column E less Column B

<sup>\*</sup> See Appendix A for notes containing variance explanations.

**Category: Information Systems** 

	Capital Budget					Actual <u>enditure</u>							
<b>Project</b>	2006 A		Total B		2006 C		Carryovers D		Total E		Variance F		Notes*
2006 Projects													
Application Enhancements	\$	1,589	\$	1,589	\$	1,540	\$	-	\$	1,540	\$	(49)	
System Upgrades		1,076		1,076		1,017		-		1,017		(59)	
Personal Computer Infastructure		327		327		380		-		380		53	
Shared Server Infastructure		508		508		493		-		493		(15)	
<b>Total - Information Systems</b>	\$	3,500	\$	3,500	\$	3,430	\$		\$	3,430	\$	(70)	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2006
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2006
Column D	Capital Projects Carried Forward to 2007
Column E	Total of Column C and D
Column F	Column E less Column B

Category: Unforeseen Items

		Capital	l Budge	et		ctual enditure							
<b>Project</b>	2006 A		Total B		2006 C		Carryovers D		Total E		Variance F		Notes*
2006 Projects Allowance for Unforeseen Items	\$	750	\$	750	\$ 824		\$	70	\$	894	\$ 144		9
Total - Unforeseen Items	\$	750	\$	750	\$	824	\$	70	\$	894	\$	144	

Column A	Approved Capital Budget for 2006
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2006
Column D	Capital Projects Carried Forward to 2007
Column E	Total of Column C and D
Column F	Column E less Column B

<sup>\*</sup> See Appendix A for notes containing variance explanations.

**Category: General Expenses Capital** 

		Capital	Budg	get		Actual <u>enditure</u>							
<b>Project</b>	2006 A \$ 2,800			Total B		2006 C		<u>Carryovers</u> D		<u>Fotal</u> E	Variance F		Notes*
2006 Projects Allowance for General Expenses Capital			\$ 2,800		\$ 2,748		\$ -		\$ 2,748		\$ (52)		
Total - General Expenses Capital	\$	2,800	\$	2,800	\$	2,748	\$		\$	2,748	\$	(52)	

Column A	Approved Capital Budget for 2006
Column B	Total of Columns A
Column C	Actual Capital Expenditures for 2006
Column D	Capital Projects Carried Forward to 2007
Column E	Total of Column C and D
Column F	Column E less Column B

<sup>\*</sup> See Appendix A for notes containing variance explanations.

## **Generation - Hydro**

1. Hydro Plants – Facility Rehabilitation

Budget: \$996,000 Actual: \$1,234,000 Variance: \$238,000

The wicket gate bushings and the main valve at the Pierre's Brook hydro plant were replaced. This was necessary to protect the integrity of the turbine and to ensure that the unit would shut down in emergency situations (\$234,000).

2. Rocky Pond – Switchgear Replacement:

Budget: \$963,000 Actual: \$797,000 Variance: (\$166,000)

The original cost estimate was based on an engineering assessment completed prior to the unit being disassembled. Once the turbine was disassembled, it was determined that the extent of the mechanical repairs required was less than expected, resulting in a cost reduction of about \$48,000.

The cost of generator cleaning and parts fabrication was also less than expected, resulting in a further cost reduction of \$48,000.

Lower than expected tender prices resulted in a further reduction of \$70,000.

### **Distribution**

3. Extensions:

Budget: \$7,980,000 Actual: \$11,136,000 Variance: \$3,156,000

The increase in the capital cost of Extensions over the 2006 capital budget is primarily the result of increased customer growth and increased material and contract labour costs. Further information is provided in the report *An Analysis of 2006 Distribution Capital Expenditure Variances Affected by Customer Growth* (Attachment A).

4. Meters:

Budget: \$1,192,000 Actual: \$1,463,000 Variance: \$271,000

The increase in the capital cost of Meters over the 2006 capital budget is primarily the result of increased customer growth and unexpected meter replacement following meter testing as required under the *Electricity and Gas Inspection Act (Canada)*. Further information is provided in the report *An Analysis of 2006 Distribution Capital Expenditure Variances Affected by Customer Growth* (Attachment A).

5. Services:

Budget: \$1,851,000 Actual: \$2,262,000 Variance: \$411,000

The increase in the capital cost of Services over the 2006 capital budget is primarily the result of increased customer growth and increased material costs. Further information is provided in the report *An Analysis of 2006 Distribution Capital Expenditure Variances Affected by Customer Growth* (Attachment A).

6. Street Lighting:

Budget: \$1,272,000 Actual: \$1,582,000 Variance: \$310,000

The increase in the capital cost of Street Lighting over the 2006 capital budget is primarily the result of increased customer growth and increased material costs. Further information is provided in the report *An Analysis of 2006 Distribution Capital Expenditure Variances Affected by Customer Growth* (Attachment A).

### **Distribution**

7. Rebuild Distribution Lines:

Budget: \$3,190,000 Actual: \$2,811,000 Variance: (\$379,000)

In 2006, Newfoundland Power budgeted funds to rebuild 47 distribution feeders. The amount of customer driven work completed in 2006 was higher than anticipated; and the impact of this additional work on resource availability resulted in work being completed on only 42 feeders.

8. Relocate/Replace Distribution Lines for Third Parties:

Budget: \$685,000 Actual: \$1,801,000 Variance: \$1,116,000

The original budget estimate was calculated based on the average expenditure over the previous 5 years. Actual expenditures in this category, however, are driven by customer requests and can vary substantially from year to year. The increased expenditure in 2006 was principally due to increased pole attachment requirements of telecommunications service providers.

In 2006, actual expenditures required to accommodate telecommunications service providers was \$1,365,632. This amount was offset by Contributions in Aid of Construction totalling \$943,486, or 69% of the actual expenditure.

### **Unforeseen Items**

9. Allowance for Unforeseen Items:

Budget: \$750,000 Actual: \$894,000 Variance: \$144,000

In June 2006, plant operators at the Cape Broyle hydro plant reported excessive leakage at the downstream toe of the plant's main dam. Further investigation revealed extensive damage to the furthest downstream 10-metre long section of the tunnel that carries water through the dam from the forebay to the penstock. It was determined that it was not safe to operate the Plant, and that the tunnel would require rehabilitation before the Plant could be safely returned to service.

Further detailed examination resulted in the identification of additional expenditure requirements for upgrades to the turbine.

In order to minimize lost production at this low-cost hydroelectric generating facility (levelized cost of 1.1 cents per kwh), it was necessary to commence the work on an expedited basis and in advance of receiving specific capital expenditure approval from the Board.

An application for specific approval of capital expenditures of \$875,000 for the Cape Broyle Tunnel Rehabilitation was submitted to the Board in December 2006. Subsequent to the filing of the application for specific approval, an additional expenditure of \$19,000 was required due to the failure of a bearing during commissioning.

## Attachment A

## An Analysis of 2006 Distribution Capital Expenditure Variances Affected by Customer Growth



Ralph Mugford, P.Eng Senior Engineer

March 1, 2007

#### 1. Introduction

Newfoundland Power's actual 2006 capital expenditures in the Distribution class were approximately \$5.4 million over budget. Approximately \$1.1 million of the variance over budget is attributed to increased requirements for the upgrade of plant to accommodate the placement of cables by telecommunications service providers. The other principal contributor to the variance was unanticipated capital expenditure required to serve new customers.

This Report analyzes variances between budgeted and actual 2006 capital expenditures for each of the Distribution projects which are driven by customer growth.

The analyses contained in this Report clearly support the conclusion that increased 2006 capital expenditures were the result of the unexpected increase in the number of new customers and an increase in material and contract labour costs associated with Distribution projects that are driven by customer growth. The analyses do not, however, reconcile budgeted and actual 2006 capital expenditure for the Distribution classes reviewed. Such reconciliation is practically impossible.

### 2. Overview

A comparison of budgeted and actual capital expenditures in those Distribution projects affected by customer growth is set out in Table 1 below.

Table 1
2006 Capital Expenditures
in Distribution Projects Affected by Customer Growth
(\$000s)

Project	Budget	Actual	Variance
Extensions	7,980	11,136	3,156
Meters	1,192	1,463	271
Services	1,851	2,262	411
Street Lighting	1,272	1,582	310
Transformers	5,540	5,643	103
Total	17,835	22,086	4,251

Newfoundland Power forecast 3,402 gross customer connections for 2006. Actual gross customer connections in 2006 were 3,952, or 16% more than forecast. Of the new customer connections, 456 were in cottage areas.

### 3. Extensions

The original budget for Extensions was calculated based on the historical five-year average unit cost of connecting a customer multiplied by the expected number of new customers for 2006.

Actual capital expenditure in 2006 was \$3,156,000 over budget, principally due to an increase in contractor and materials prices and the addition of several large projects to provide service to cottage areas. The respective contribution attributable to each is:

Additional Cottage Areas	\$ 1,939,794
Increased Contractor & Material Cost	\$ 1.227.096

Additional Cottage Areas – In calculating the Extensions budget, Newfoundland Power makes adjustments to account for known major expenditure requirements, such as those required to service large cottage areas. In the original 2006 budget no such adjustments were made, since cottage area requirements were uncertain at the time the budget was prepared. In total, \$3,153,794 was spent in 2006 to extend service to 10 cottage areas for which contributions in aid of construction were approved by the Board. Newfoundland Power obtained approval of supplemental capital expenditures of \$1,214,000 associated with the Howley Cottage Area. In total, 456 customers were connected in cottage areas in 2006.

Increased Contractor & Material Cost - In 2006, contracted pole installation costs and materials costs increased significantly. Pole installation contracts with a five-year term ended in late 2005. When the contracts were re-tendered, there were significant increases in pole installation prices. The cost of materials, most notably poles and conductor, also increased significantly in 2006. The cost increases are summarized in Table 2.

Table 2

Cost Increases - Contract Labour and Materials

			Customer	Ţ	Jnit
	<u>Year</u>	Cost	<b>Connections</b>	(	Cost
<b>Contract Labour</b>	2001-2005	\$5,960,623	17,990	\$	331
	2006	2,098,075	3,952		531
	Unit Cost I	ncrease		\$	200
Materials	2001-2005	\$5,461,892	17,990	\$	304
	2006	1,796,444	3,952		455
	<b>Unit Cost I</b>	ncrease		\$	151

These external price increases resulted in a unit cost increase of \$351 per customer. For the 3,496 customers connected outside cottage areas this resulted in a variance of \$1,227,096.

### 4. Meters

The variance over budget in capital expenditure for Meters is due to an increase in the number of meters requiring replacement as a result of meter testing conducted under the *Electricity and Gas Inspection Act (Canada)*. In 2006, Newfoundland Power was required to replace 7,486 meters more than forecast. The unexpected requirement arose as a result of the failure of three groups of meters purchased and installed in 1971, 1988 and 1993, respectively. The increase in meter replacements was largely related to a single manufacturer and model of meter. The failure of these meter models is also being experienced by other Canadian utilities.

### 5. Services

The budget for Services consisted of two components: (1) expenditure required to connect new services, and (2) expenditure required to replace existing services.

Expenditure for *new* services was \$1,862,631, or \$395,631 over budget. The additional expenditure was principally due to higher than expected customer connections and increased materials costs.

The major contributors to the additional cost were:

Additional Customer Connections	\$ 237,050
Increased Material Costs	\$ 162,032

Additional Customer Connections - New customer connections were budgeted based on 3,402 new connections at \$431 per customer. Actual connections for 2006 were 3,952, resulting in an additional expenditure of \$237,050.

*Increased Material Cost* - Increased material prices, due largely to increases in conductor prices, increased the average material cost of a service by \$41, and accounted for additional expenditure of \$162,032. The cost increases are summarized in Table 3.

Table 3

Material Cost - New Services

<u>Year</u>	<b>Connections</b>	<b>Expenditure</b>	<u>Unit Cost</u>
2001-2005	17,990	\$2,589,253	\$144
2006	3,952	\$729,608	\$185
Unit Cost In		\$ 41	

The cost of *replacement* services was budgeted at the historical five-year average of \$384,000. Actual expenditure was \$399,369.

## 6. Street Lighting

The budget for Street Lighting consisted of two components: (1) expenditure required to install new street lights, and (2) expenditure required to replace existing street lights. The budget for *new* street lights was based on the number of new customer connections; the budget for *replacement* street lights is based on average historical expenditure.

Expenditure for *new* street lights was \$1,131,340, or \$260,340 over budget. The additional expenditure was principally due to higher than expected customer connections and increased materials costs.

The major contributors to the additional cost were:

Additional Customer Connections	\$ 140,800
Increased Material Cost	\$ 86,944

Additional Customer Connections - New customer connections were budgeted based on 3,402 new connections at \$256 per customer. Actual connections for 2006 were 3,952, resulting in an additional expenditure of \$140,800.

*Increased Material Cost* – Increased material prices, due largely to increases in conductor prices, increased the average material cost of a street light by \$22, and accounted for additional expenditure of \$86,944. The cost increases are summarized in Table 4.

Table 4

Material Cost New Street Lights

<u>Year</u>	<b>Connections</b>	<b>Material Cost</b>	<b>Unit Cost</b>
2001-2005	17,990	\$2,534,097	\$141
2006	3,952	\$643,010	\$163
Unit Cost In	icrease		\$ 22

The cost of *replacement* street lights was budgeted at the historical five-year average of \$401,000. Actual expenditure was \$450,588. The increase in cost, as with new street lights, is largely due to increases in material cost.

### 7. Transformers

Actual 2006 capital expenditure on Transformers was \$103,000, or 1.9% more than the 2006 capital budget allottment. The increased expenditure was principally due the increase in customer connections.

**Annual Capital Summary Report 2007** 



#### Newfoundland Power Inc.

55 Kenmount Road PO Box 8910 St. John's, Newfoundland A1B 3P6

Business: (709) 737-5600 Facsimile: (709) 737-2974 www.newfoundlandpower.com

February 29, 2008

Board of Commissioners of Public Utilities P.O. Box 21040 120 Torbay Road St, John's, NF A1A 5B2

Attention:

G. Cheryl Blundon

Director of Corporate Services and Board Secretary

Ladies & Gentlemen:

## Re: 2007 Capital Expenditure Report

Enclosed are the original and eight copies of Newfoundland Power Inc.'s 2007 Capital Expenditure Report (the "Report"). The Report is presented in compliance with the directive of the Board of Commissioners of Public Utilities contained in paragraph 4 of Order No. P.U. 30 (2006).

The Report provides the Capital Budget as approved by Order Nos. P.U. 30 (2006) and P.U. 34 (2006); the Actual Expenditures to December 31<sup>st</sup>, 2007; and the Variance between Actual Expenditures and the Capital Budget by individual project.

Variances of more than 10% of approved expenditure and \$100,000 or greater are explained in the Notes contained in Appendix A to the Report.

Two 2007 capital projects scheduled to be completed in 2007 were not completed by year end. The remaining capital expenditures associated with the two projects are carried forward into 2008 as follows:

- 1. \$579,000 associated with the replacement of the HVAC system in the Kenmount Road building; and,
- 2. \$185,000 associated with the refurbishment of the Rattling Brook Hydroelectric Plant.

The Company's 2007 actual expenditures exceeded the capital budget by approximately \$6.2 million. The principal contributor to the increased actual expenditures was increased Distribution capital expenditure related to Extensions, Meters, Services, Street Lighting and Transformers projects. These, in turn, were principally the result of unanticipated customer

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Board of Commissioners of Public Utilities February 29, 2008 Page 2 of 2

growth and increases in material and contractor costs. To assist the Board in understanding these increased expenditures, we have also included *An Analysis of 2007 Distribution Capital Expenditure Variances Affected by Customer Growth*.

If you have any questions on the enclosed, please contact the undersigned at your convenience.

Yours very truly,

Gerard M. Hayes Senior Counsel

Enclosures

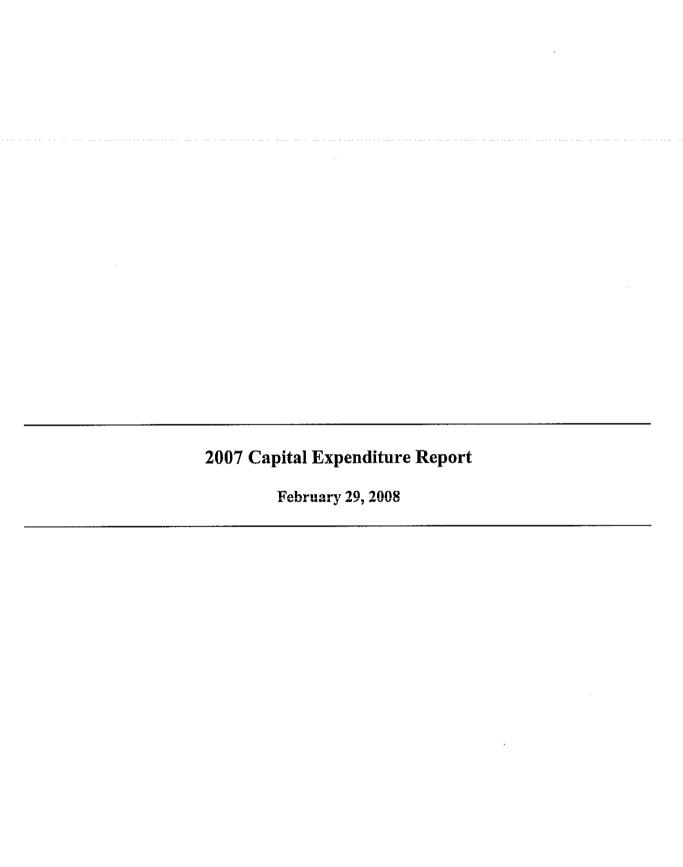
c: Geoffrey P. Young

Newfoundland and Labrador Hydro

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### NEWFOUNDLAND POWER INC.

2007 Capital Expenditure Report

## **Explanatory Note**

This report is presented in compliance with the directive of the Board of Commissioners of Public Utilities (the "Board") contained in paragraph 4 of Order No. P.U. 30 (2006).

Page 1 of the 2007 Capital Expenditure Report outlines the forecast variances from budget of the capital expenditures approved by the Board in Order Nos. P.U. 30 (2006) and P.U. 34 (2006). The detailed tables on pages 2 to 13 provide additional detail on capital expenditures in 2007, and also include information on those capital projects approved for 2006 that were not completed prior to 2007.

Variances of more than 10% of approved expenditure and \$100,000 or greater are explained in the Notes contained in Appendix A, which immediately follows the blue page at the end of the 2007 Capital Expenditure Report. The variance criteria are as outlined in the *Capital Budget Application Guidelines*.

## Newfoundland Power Inc.

## 2007 Capital Expenditure Report (000s)

	Approved by Order Nos P.U. 30 (2006) P.U. 34 (2006)	Actual	Variance
Generation – Hydro <sup>1</sup>	\$19,188	\$18,169	(\$1,019)
Generation – Thermal	0	37	37
Substations	3,968	5,077	1,109
Transmission	4,283	4,440	157
Distribution	24,103	30,429	6,326
General Property <sup>2</sup>	1,995	2,153	158
Transportation	2,206	2,231	25
Telecommunications	101	110	9
Information Systems	3,457	3,523	66
Unforeseen Allowance	750	0	(750)
General Expenses Capitalized	2,800	2,850	50
Total	\$62,851	\$69,019	\$6,168
Projects carried forward from 20	06	\$230	

Actual Generation – Hydro includes a carryover of \$185,000 to be expended in 2008 for the Rattling Brook Hydro Plant Refurbishment.

<sup>&</sup>lt;sup>2</sup> Actual General Property includes a carryover of \$579,000 to be expended in 2008 for the Kenmount Road building HVAC system.

Capital Budget								pend							
									Carryover				Va	riance H	
					_		-		-		•				
\$	-	\$	62,851	\$	62,851	\$	-	\$	68,255	\$	764	\$	69,019	\$	6,168
	1,455		_		1,455		1,471		230		-	\$	1,701	\$	246
\$	1,455	\$	62,851	\$	64,306	\$	1,471	\$	68,485	\$	764	\$	70,720	\$	6,414
	d,	1,455	2006 A \$ - \$ 1,455	2006 2007 A B \$ - \$ 62,851 1,455 -	2006 2007 A B \$ - \$ 62,851 \$ 1,455 -	2006         2007         Total           A         B         C           \$ -         \$ 62,851         \$ 62,851           1,455         -         1,455	2006         2007         Total           A         B         C           \$ -         \$ 62,851         \$ 62,851         \$           I,455         -         1,455	2006         2007         Total         2006           A         B         C         D           \$         -         \$ 62,851         \$ -           1,455         -         1,455         1,471	2006         2007         Total         2006           A         B         C         D           \$         -         \$ 62,851         \$ -         \$           1,455         -         1,455         1,471	2006         2007         Total         2006         2007           A         B         C         D         E           \$ -         \$ 62,851         \$ 62,851         \$ -         \$ 68,255           1,455         -         1,455         1,471         230	2006         2007         Total         2006         2007         Car           A         B         C         D         E           \$         -         \$ 62,851         \$ 62,851         \$ -         \$ 68,255         \$           1,455         -         1,455         1,471         230	2006         2007         Total         2006         2007         Carryover           A         B         C         D         E         F           \$ -         \$ 62,851         \$ 62,851         \$ -         \$ 68,255         \$ 764           1,455         -         1,471         230         -	2006         2007         Total         2006         2007         Carryover           A         B         C         D         E         F           \$         -         \$ 62,851         \$ 62,851         \$ -         \$ 68,255         \$ 764         \$           1,455         -         1,471         230         -         \$	2006         2007         Total         2006         2007         Carryover         Total           A         B         C         D         E         F         G           \$ -         \$ 62,851         \$ 62,851         \$ -         \$ 68,255         \$ 764         \$ 69,019           1,455         -         1,471         230         -         \$ 1,701	2006         2007         Total         2006         2007         Carryover         Total         Vz           A         B         C         D         E         F         G           \$ -         \$ 62,851         \$ 62,851         \$ -         \$ 68,255         \$ 764         \$ 69,019         \$           1,455         -         1,471         230         -         \$ 1,701         \$

Column A	Approved Capital Budget for 2006
Column B	Approved Capital Budget for 2007
Column C	Total of Columns A and B
Column D	Actual Capital Expenditures for 2006
Column E	Actual Capital Expenditures for 2007
Column F	Capital Projects Carried Forward to 2008
Column G	Total of Columns D, E and F
Column H	Column G less Column C

Category: Generation - Hydro

	Actual Capital Budget Expenditure															
Project	2007		7 Total		2007		Car	ryover	Total		Variance		Notes*			
		A		В		С		D		E		F				
2007 Projects																
Facility Rehabilitation	\$	946	\$	946	\$	780	\$	-	\$	780	\$	(166)	1			
Rattling Brook Hydro Plant Refurbishment		18,242		18,242		17,204		185		17,389	\$	(853)	2			
Total - Generation - Hydro	\$	19,188	\$	19,188	\$	17,984	\$	185	<u>\$</u>	18,169	\$	(1,019)				

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2007
Column B	Total of Column A
Column C	Actual Capital Expenditures for 2007
Column D	Capital Projects Carried Forward to 2008
Column E	Total of Columns C and D
Column F	Column E less Column B

Category: Generation - Thermal

	Actual  Capital Budget Expenditure														
Project	2007		Total B			007 C	<u>Carryover</u>		<u>Total</u>		Variance		Notes*		
	A		В	•		L	I	D		r.		r			
2007 Projects Facility Rehabilitation	\$	-	\$	-	\$	37	\$	-	\$	37	\$	37			
Total - Generation - Thermal	\$		\$		\$	37	S		\$	37	\$	37			

Column A Approved Capital Budget for 2007

Column B Total of Column A

Column C Actual Capital Expenditures for 2007

Column D Capital Projects Carried Forward to 2008

Column E Total of Columns C and D

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Category: Substations

		Capital	l Budg	get		Actual enditure							
<u>Project</u>	2007		Total		2007		Carryover		Total		Variance		Notes*
		A		В		С		D		E		F	
2007 Projects													
Substation Refurbishment and Modernization	\$	2,190	\$	2,190	\$	2,364	\$	-	\$	2,364	\$	174	
Replacement Due to In-Service Failures		1,200		1,200		2,134		-		2,134		934	3
Rattling Brook Substation Refurbishment		578		578		579		-		579		1	
Total - Substations	\$	3,968	\$	3,968	\$	5,077	\$	_	<u>s</u>	5,077	\$	1,109	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2007
Column B	Total of Column A
Column C	Actual Capital Expenditures for 2007
Column D	Capital Projects Carried Forward to 2008
Column E	Total of Columns C and D
Column F	Column E less Column B

Category: Transmission

	Actual Capital Budget Expenditure													
Project	2007 A		Total B		2007 C		Carryover		<u>Total</u> E		Variance F		Notes*	
2007 Projects														
Rebuild Transmission Lines	\$	4,283	\$	4,283	\$	4,440	\$	-	\$	4,440	\$	157		
Total - Transmission	\$	4,283	S	4,283	\$	4,440	\$	<u> </u>	\$	4,440	\$	157		

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2007
Column B	Total of Column A
Column C	Actual Capital Expenditures for 2007
Column D	Capital Projects Carried Forward to 2008
Column E	Total of Columns C and D
Column F	Column E less Column B

Category: Distribution

				A	Actual						
	Capital	Budg	get	Exp	enditure						
<u>Project</u>	2007	-	Total		2007	Car	ryover	Total	Va	riance	Notes*
	A		В		С		D	Е		F	
2007 Projects											
Extensions	\$ 6,815	\$	6,815	\$	9,285	\$	-	\$ 9,285	\$	2,470	4
Meters	1,100		1,100		1,154		-	1,154		54	
Services	1,848		1,848		2,421		-	2,421		573	5
Street Lighting	1,288		1,288		2,089		-	2,089		801	6
Transformers	5,728		5,728		6,992		-	6,992		1,264	7
Reconstruction	3,077		3,077		3,563		_	3,563		486	8
Rebuild Distribution Lines	3,625		3,625		3,249		-	3,249		(376)	9
Relocate/Replace Distribution Lines For Third Parties	541		541		1,604		-	1,604		1,063	10
Interest During Construction	81		81		72		-	72		(9)	
Total - Distribution	\$ 24,103	S	24,103	\$	30,429	<u>\$</u>	_	\$ 30,429	\$	6,326	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2007
Column B	Total of Column A
Column C	Actual Capital Expenditures for 2007
Column D	Capital Projects Carried Forward to 2008
Column E	Total of Columns C and D
Column F	Column E less Column B

Category: General Property

			Zapital	Capital Budget			Ā	Actual Expenditure	senditu	ıre							
Project	2006	96	20	2007	Ţ	Total	20	2005	7(	700	Carr	Carryover	T	Total	Val	Variance	Notes*
	V		_	_		נ				i i		Įσ.		ט		H	
2007 Projects																	
Tools and Equipment	6-9	ı	69	009	6-9	900	<del>6/3</del>	•	<b>⊊</b> 9	617	6-5	1	6/9	617	<del>69</del>	11	
Additions to Real Property		•		100		100		٠		165		•		165		92	
Energy Efficient HVAC System		ı		610		910		1		31		579		019		ı	
Renovate Corner Brook Service Building		1		685		685		•		19/		1		761		9/	
Total 2006 Cananal Bearings.	5		£	1 005	5	200	6		í.	1574	ē	023	ú	51.0	 6	031	
total 2000 Cellelal Hopelty	9	1	9	(664)	9	1,55,1	9		9	÷	5	2 (3	<del>-</del>	2,133	 <del>1</del> 3	170	
2006 Projects Grand Falls Windsor Building Renovations	6-3	705	€9	ι	c <sub>2</sub> 3	705	649	647	<b>6</b> 9	101	<b>€</b> 9	ı	64	748	64	43	
,																	
Total - General Property	SS	705	649	1,995	649	2,700	<del>6</del> 2	647	59	1,675	S	579	5-9	2,901	<del>57</del>	201	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A Approved Capital Budget for 2006
Column B Approved Capital Budget for 2007
Column C Total of Columns A and B
Column D Actual Capital Expenditures for 2006
Column E Actual Capital Expenditures for 2007
Column F Capital Projects Carried Forward to 2008
Column G Total of Columns D, E and F
Column G Less Column C

Category: Transportation

		Capital	Budg	ret	Actual enditure							
<b>Project</b>		2007		Total	 2007	_Carı	yover	 Total	Va	riance	Notes*	
		A		В	С		D	Е		F:		
2007 Projects Purchase Vehicles and Aerial Devices	\$	2,206	\$	2,206	\$ 2,231	\$	-	\$ 2,231	\$	25		
Total - Transportation	<u>\$</u>	2,206	\$	2,206	\$ 2,231	\$		\$ 2,231	\$	25		

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2007
Column B	Total of Column A
Column C	Actual Capital Expenditures for 2007
Column D	Capital Projects Carried Forward to 2008
Column E	Total of Columns C and D
Column F	Column E less Column B

**Category: Telecommunications** 

	Capital	l Budge	et		ctual enditure				:	
<u>Project</u>	 007 A	T	otal B		2007 C	 yover D	 Cotal E	_Vai	riance	Notes*
2007 Projects Replace/Upgrade Communications Equipment	\$ 101	\$	101	\$	110	\$ _	\$ 110	\$	9	
Total - Telecommunications	\$ 101	S	101	S	110	\$ -	\$ 110	\$	9	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2007
Column B	Total of Column A
Column C	Actual Capital Expenditures for 2007
Column D	Capital Projects Carried Forward to 2008
Column E	Total of Columns C and D
Column F	Column E less Column B

Category: Information Systems

				F	Actual							
	 Capital	Budg	et	Exp	enditure						:	
<u>Project</u>	 2007		Total		2007	Carı	ryover		Total	Va	riance	Notes*
	A		В		С		D		E	-	F	
2007 Projects												
Application Enhancements	\$ 1,281	\$	1,281	\$	1,353	\$	_	\$	1,353	\$	72	
System Upgrades	689		689		679		_		679		(10)	
Personal Computer Infrastructure	400		400		409		-		409		9	
Shared Server Infrastructure	877		877		883		-		883		6	
Microsoft Enterprise Agreement	210		210		199		-		199		(11)	
Total - Information Systems	\$ 3,457	\$	3,457	S	3,523	\$	-	S	3,523	\$	66	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Approved Capital Budget for 2007
Total of Column A
Actual Capital Expenditures for 2007
Capital Projects Carried Forward to 2008
Total of Columns C and D
Column E less Column B

### Category: Unforeseen Allowance

			Capi	tal Budget	:			Actual Ex	pendit	ures							
<u>Project</u>	2	006		2007		<u> </u>		2006	2	2007	Car	ryover		<u> Fotal</u>	Va	riance	Notes*
		A		В		C		D		E		F		G		H	
2007 Projects Allowance for Unforescen Items	\$		\$	750	\$	750	\$	-	\$	-	\$	-	S	-	S	(750)	
2006 Projects Allowance for Unforeseen Items	s	750	\$	•	\$	750	\$	824	\$	129	\$	-	\$	953	\$	203	11
Total - Unforeseen Allowance	\$	750	\$	750	\$	1,500	<u>s</u>	824	\$	129	\$		\$	953	\$	(547)	

\* See Appendix A for notes containing variance explanations.

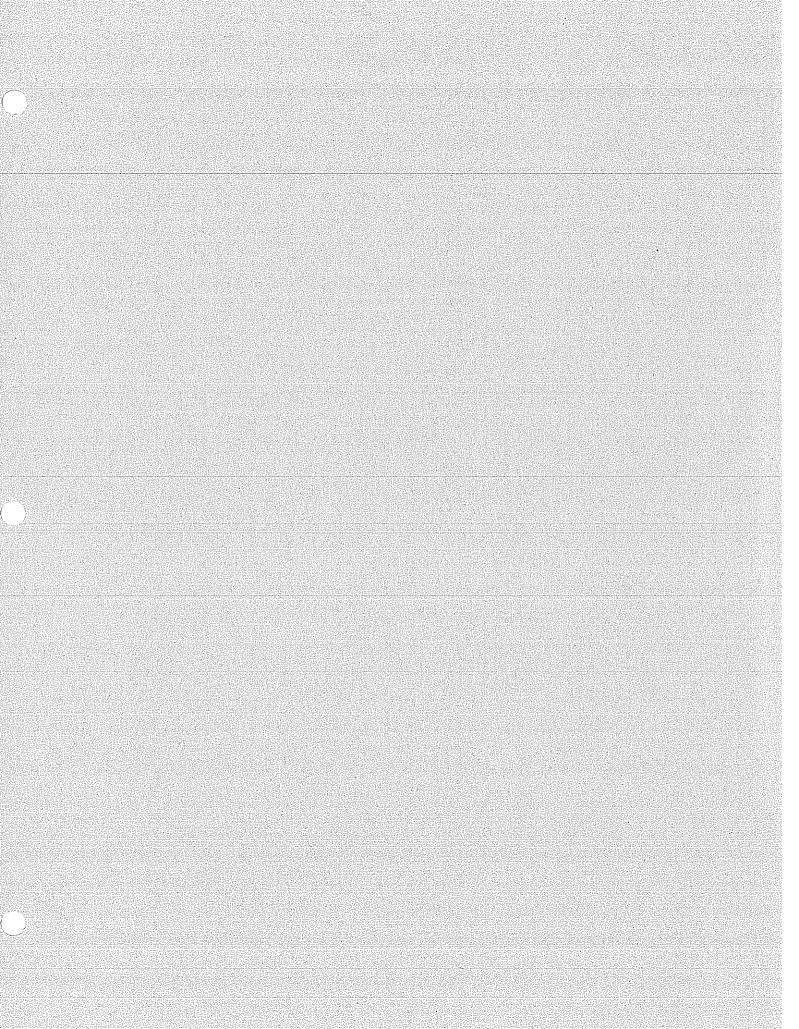
Column A	Approved Capital Budget for 2006
Column B	Approved Capital Budget for 2007
Column C	Total of Columns A and B
Column D	Actual Capital Expenditures for 2006
Column E	Actual Capital Expenditures for 2007
Column F	Capital Projects Carried Forward to 2008
Column G	Total of Columns D, E and F
Column H	Column G less Column C

Category: General Expenses Capitalized

		Capital	Budg	<u>et</u>	Actual enditure								
<b>Project</b>		2007		Total	2007	_Carry		 Total		ance_	Notes*		
2007 Projects General Expenses Capitalized	\$	2,800	\$	в 2,800	\$ C 2,850	s	, -	\$ e 2,850	\$	50			
Total - General Expenses Capitalized	S	2,800	\$	2,800	\$ 2,850	\$	-	\$ 2,850	\$	50			

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2007
Column B	Total of Column A
Column C	Actual Capital Expenditures for 2007
Column D	Capital Projects Carried Forward to 2008
Column E	Total of Columns C and D
Column F	Column E less Column B



### Generation - Hydro

1. Facility Rehabilitation:

Budget: \$946,000

Actual: \$780,000

Variance: (\$166,000)

The budget variance was principally due to a decision to not proceed with two planned projects under the Hydro Dam Rehabilitation project. Engineering carried out on the Petty Harbour Forebay Dam project and the Bay Bulls Big Pond riprap project revealed that the rehabilitation work identified in the initial inspection assessments was not necessary at this time. From the total budget of \$126,000 (\$50,000 and \$76,000, respectively) approximately \$7,000 was spent on engineering, resulting in a reduced expenditure of approximately \$119,000.

2. Rattling Brook Hydro Plant Refurbishment:

Budget: \$18,242,000

Actual: \$17,389,000

Variance: (\$853,000)

Actual cost for the project was \$853,000 below budget. The reduction is due to a lower than estimated cost for the field installation (principally the cost of welding and concrete work) of the steel penstock.

### **Substations**

3. Replacement Due to In-Service Failures:

Budget: \$1,200,000

Actual: \$2,134,000

Variance: \$934,000

The budget for Replacements Due to In-Service Failures is based on an assessment of historical expenditures. The 2007 variance is principally due to the in-service failure of the following four power transformers:

- Lockston Plant power transformer (\$253,000)
- Broad Cove power transformer (\$244,000)
- Morris Power Plant transformer (\$126,000)
- Pierre's Brook Plant power transformer (\$191,000)

### Distribution

4. Extensions:

Budget: \$6,815,000

Actual: \$9,285,000

Variance: \$2,470,000

The increase in the capital cost of Extensions over the 2007 capital budget is primarily the result of increased customer growth. Further information is provided in the report *An Analysis of 2007 Distribution Capital Expenditure Variances Affected by Customer Growth* (Attachment A).

5. Services:

Budget: \$1,848,000

Actual: \$2,421,000

Variance: \$573,000

The increase in the capital cost of Services over the 2007 capital budget is primarily the result of increased customer growth and increased material costs. Further information is provided in the report *An Analysis of 2007 Distribution Capital Expenditure Variances Affected by Customer Growth* (Attachment A).

6. Street Lighting:

Budget: \$1,288,000

Actual: \$2,089,000

Variance: \$801,000

The increase in the capital cost of Street Lighting over the 2007 capital budget is primarily the result of increased customer growth and the need to accelerate street light replacement based on inspection results. Further information is provided in the report *An Analysis of 2007 Distribution Capital Expenditure Variances Affected by Customer Growth* (Attachment A).

7. Transformers:

Budget: \$5,728,000

Actual: \$6,992,000

Variance: \$1,264,000

The increase in the capital cost of Transformers over the 2007 capital budget is primarily the result of increased customer growth. Further information is provided in the report *An Analysis of 2007 Distribution Capital Expenditure Variances Affected by Customer Growth* (Attachment A).

8. Reconstruction:

Budget: \$3,077,000 Actual: \$3,563,000 Variance: \$486,000

Reconstruction expenditure in 2007 was \$486,000 over the original budget. A principal contributor to the variance was the December sleet storm that affected the Eastern half of the island. The storm resulted in the expenditure of \$754,000 to reconstruct damaged distribution lines.

9. Rebuild Distribution Lines:

Budget: \$3,625,000 Actual: \$3,249,000 Variance: \$(376,000)

A portion of the planned work related to rebuilding distribution lines was not completed due to a sleet storm in early December on the east coast of the island. The storm resulted in all available construction and technical staff being diverted to help with the restoration effort and subsequent cleanup.

10. Relocate/Replace Distribution Lines for Third Parties:

Budget: \$541,000 Actual: \$1,604,000 Variance: \$1,063,000

The increase in expenditure in 2007 was driven by higher than normal system upgrade activity by telecommunications service providers. Approximately \$1,033,000 was spent upgrading distribution lines to accommodate third party attachments. Approximately 83%, or \$858,000, of this was recovered through Contributions in Aid of Construction.

Variance: \$203,000

### 2007 Capital Expenditure Report Notes

### Unforeseen Allowance

11. Allowance for Unforeseen Items (2006 Project):

Budget: \$750,000 Actual: \$953,000

The unforeseen expenditure was required to rehabilitate the tunnel that carries water under the Southern Shore highway to the Cape Broyle hydroelectric plant. The initial detailed engineering inspection revealed the magnitude of the failure and determined the scope of the required repairs. The cost to repair the tunnel was initially estimated at \$510,000, and work proceeded under the authority of the Allowance for Unforeseen Items. However, as the inspection and assessment process moved forward, the need for significant expenditures on the turbine became apparent. Ultimately, the turbine upgrade work added more than \$300,000 to the total required expenditure. Further costs arose due to equipment failure during commissioning of the plant following completion of the rehabilitation project.

## An Analysis of 2007 Distribution Capital Expenditure Variances Affected by Customer Growth

February 29, 2008



Ralph Mugford, P.Eng Senior Engineer

### **Table of Contents**

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1.0	Introduction	1
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### 1.0 Introduction

Newfoundland Power's actual 2007 capital expenditures in the Distribution class were approximately \$6.3 million over budget. Approximately \$1.0 million of the variance over budget is attributed to increased requirements for the upgrade of plant to accommodate the placement of cables by telecommunications service providers. The other principal contributor to the variance was unanticipated capital expenditure required to serve new customers.

This Report analyzes variances between budgeted and actual 2007 capital expenditures for each of the Distribution projects which are driven by customer growth.

The analyses contained in this Report clearly support the conclusion that increased 2007 capital expenditures were the result of the unexpected increase in the number of new customers. The analyses do not, however, reconcile budgeted and actual 2007 capital expenditure for the Distribution classes reviewed. Such reconciliation is practically impossible.

### 2.0 Overview

A comparison of budgeted and actual capital expenditures in those Distribution projects affected by customer growth is set out in Table 1 below.

Table 1
2007 Capital Expenditures in
Distribution Projects
Affected by Customer Growth
(\$000s)

Project	Budget	Actual	Variance
Extensions	6,815	9,285	2,470
Meters	1,100	1,154	54
Services	1,848	2,421	573
Street Lighting	1,288	2,089	801
Transformers	5,728	6,992	1,264
Total	16,779	21,941	5,162

Newfoundland Power forecast 3,307 gross customer connections for 2007. Actual gross customer connections in 2007 were 3,941 or 19% more than forecast.

### 3.0 Extensions

The original budget for Extensions was calculated based on the historical five-year average unit cost of connecting a customer multiplied by the expected number of new customers for 2007.

Actual capital expenditure in 2007 was \$2,470,000 over budget, principally due to an unanticipated number of new customer connections, the addition of several large projects to provide service to cottage areas and a minor variance in unit cost. The respective contribution attributable to each is:

Additional Cottage Areas	\$ 1	,036,000
Unanticipated Customer Connections	\$ 1	,327,000
Unit cost Variance	\$	107,000

Additional Cottage Areas – In calculating the Extensions budget, Newfoundland Power makes adjustments to account for known major expenditure requirements, such as those required to service large cottage areas. In the original 2007 budget, no such adjustments were made, since cottage area requirements were uncertain at the time the budget was prepared. In total, \$1,036,000 was spent in 2007 to extend service to 7 cottage areas for which contributions in aid of construction were approved by the Board. Table 2 identifies the 7 projects, the associated Board Order, and the amount of the expenditure.

Table 2 2007 Cottage Area Projects

Project	<b>Board Order</b>	Amount
Nine Mile Road	P.U. 37 (2006)	\$ 354,000
The Pond that Feeds the Brook	P.U. 33 (2006)	136,000
Nine Island Pond	P.U. 2 (2007)	137,000
Witless Bay Line	P.U. 6 (2007)	11,000
Placentia Junction	P.U. 8 (2006)	212,000
Snows Pond	P.U. 23 (2007)	77,000
Howley Extension	P. U.24 (2006)	109,000
		\$ 1,036,000

Unanticipated Customer Connections - Expenditure associated with customer growth is budgeted based on the estimated number of new customer connections multiplied by the most recent 5 year average historical unit cost. The 2007 budget was based on 3,307 new customer connections at a unit cost of \$2,061. The actual number of new customer connections was 3,941, or 634 more than budget. The additional customer connections resulted in an additional expenditure of \$1,327,000.

Unit Cost Variance - Budgeted and actual unit costs are detailed in Table 3.

Table 3
Unit Cost of Extensions

	Budget	Actual
Extensions Expenditure (\$000)	6,815	8,249
Customer Connections	3,307	<u>3,941</u>
Unit Cost	<u>\$2,061</u>	<u>\$2,093</u>

The actual unit cost of \$2,093 was \$32, or 1.6%, above the budget unit cost of \$2,061. However, based on 3,941 new customer connections, this unit cost variance resulted in an additional expenditure of \$107,000.

### 4.0 Meters

The variance over budget in capital expenditure for Meters is due to an increase in the number of meters required to connect new customers. The variance of \$54,000, or 5%, is principally due to connecting 634 unanticipated customers.

### 5.0 Services

The budget for Services consisted of two components: (1) expenditures required to connect new services, and (2) expenditures required to replace existing services.

Services expenditure for 2007 is detailed in Table 4.

Table 4
Service Expenditure – 2007
(\$000)

	Budget	Actual	Variance
Connect New Services	1,455	1,949	494
Replace Existing Services	<u>393</u>	<u>472</u>	<u>79</u>
Total	<u>1,848</u>	<u>2,421</u>	<u>573</u>

Expenditure for *new* services was \$1,949,000 or \$494,000 over budget. The additional expenditure was principally due to a higher than expected number of customer connections and a variance in unit cost due to materials costs exceeding forecast.

Unanticipated Customer Connections - Expenditure associated with customer growth is budgeted based on the estimated number of new customer connections multiplied by the most recent 5 year average historical unit cost. In 2007, there were 3,941 new customers connected, compared to the budget estimate of 3,307. The 634 unanticipated customer connections resulted in an additional expenditure of \$314,000.

Unit Cost Variance - Details of the budgeted and actual 2007 unit cost are detailed in Table 5.

Table 5
Unit Cost of Services

	Budget	Actual	Change
Service Expenditure (\$000)	1,455	1,949	34%
Customer Connections	<u>3,307</u>	<u>3,941</u>	<u> 19%</u>
Unit Cost	<u>\$440</u>	<u>\$495</u>	<u>13%</u>

The budgeted unit cost of \$440 was calculated as the average of the 2002 - 2005 actual costs and the 2006 forecast cost. The actual unit cost was 13% above the budgeted cost. However, as Table 6 shows, the 2007 unit cost is in line with the previous 2 years.

Table 6
Historical Unit Cost of Services
(in 2007 dollars)

	2002	2003	2004	2005	2006	2007
Unit Cost	\$424	\$418	\$421	\$483	\$484	\$495

Unit costs subsequent to 2004 have increased by approximately 15%. The increased unit cost is principally due to increased conductor prices.

Expenditure for *replacement* services was \$472,000, or \$79,000 over budget. Replacing a service involves the removal of an existing service and the installation of a new service. The capital cost of replacing a service is, on average, similar to that of installing a new service. Similar to new services, the unit cost increase is principally due to increased conductor prices.

### 6.0 Street Lighting

The budget for Street Lighting consists of two components: (1) expenditure required to install new street lights, and (2) expenditure required to replace existing street lights. The budget for *new* street lights is based on the number of new customer connections. The budget for *replacement* street lights is based on average historical expenditure.

Street Lighting expenditure for 2007 is detailed in Table 7.

Table 7
Street Lighting Expenditure – 2007
(\$000)

	Budget	Actual	Variance
New Street Lights	861	977	116
Replace Existing Street Lights	<u>427</u>	<u>1,112</u>	<u>685</u>
Total	<u>1,288</u>	<u>2,089</u>	<u>801</u>

Expenditure for *new* street lights was \$977,000, or \$116,000 over budget. The additional expenditure was principally due to a higher than expected number of customer connections.

Increased Customer Connections - Expenditure associated with customer growth is budgeted based on the estimated number of new customer connections multiplied by the most recent 5-year average historical unit cost. The 2007 budget for new Street Light installations was based on 3,307 new customer connections, at an average unit cost of \$260. Actual expenditure reflects 3,941 new connections at an average unit cost of \$249. The difference between budgeted and actual unit costs was not material. However, the need to connect 634 more customers than projected resulted in an additional expenditure of \$116,000.

The cost of *replacement* street lights was budgeted at the historical five-year average of \$427,000. Actual expenditure was \$1,112,000 or \$685,000 over budget. The variance was principally the result of a response to a significant public safety incident that occurred in September. Following an incident in which a street light cover fell to the ground, narrowly missing a nearby child, the Company decided to initiate a program to identify and replace deficient street lights.

### 7.0 Transformers

Actual 2007 capital expenditure on Transformers was \$1,264,000, or 22% more than the 2007 capital budget allotment. The increased expenditure is principally due to a 19% increase in new customer connections.

**Annual Capital Summary Report 2008** 



### Newfoundland Power Inc.

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Business: (709) 737-5600 Facsimile: (709) 737-2974 www.newfoundlandpower.com

February 27, 2009

Board of Commissioners of Public Utilities P.O. Box 21040 120 Torbay Road St. John's, NF A1A 5B2

Attention: G. Cheryl Blundon

Director of Corporate Services and Board Secretary

Ladies & Gentlemen:

### Re: 2008 Capital Expenditure Report

Enclosed are the original and eight copies of Newfoundland Power Inc.'s 2008 Capital Expenditure Report (the "Report"). The Report is presented in compliance with the directive of the Board of Commissioners of Public Utilities contained in paragraph 4 of Order No. P.U. 27 (2007).

The Report provides capital expenditures as approved by Order Nos. P.U. 27 (2007), P.U. 3 (2008), P.U. 18 (2008), P.U. 19 (2008) and P.U. 24 (2008) (the "Capital Budget"); the Actual Expenditures to December 31<sup>st</sup>, 2008; and the Variance between Actual Expenditures and the Capital Budget by individual project.

Variances of more than 10% of approved expenditure and \$100,000 or greater are explained in the Notes contained in Appendix A to the Report.

Capital expenditures associated with two 2008 projects that were not completed by year end and are carried forward into 2009 are as follows:

- 1. \$1,568,000 associated with the Upgrade of the Water Street Underground Civil Infrastructure; and,
- 2. \$32,000 associated with the Interconnection of the Wind Turbine at Fermeuse Substation.

The Company's 2008 actual expenditures exceeded the capital budget by approximately \$7.2 million. The principal contributor to the increased actual expenditures was increased Distribution capital expenditure related to Extensions, Meters, Services, Street Lighting and Transformers projects. These, in turn, were principally the result of unanticipated customer

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Board of Commissioners of Public Utilities February 27, 2009 Page 2 of 2

growth and increases in material costs. To assist the Board in understanding these increased expenditures, we have also included the report An Analysis of 2008 Distribution Capital Expenditure Variances Affected by Customer Growth.

If you have any questions on the enclosed, please contact the undersigned at your convenience.

Yours very truly,

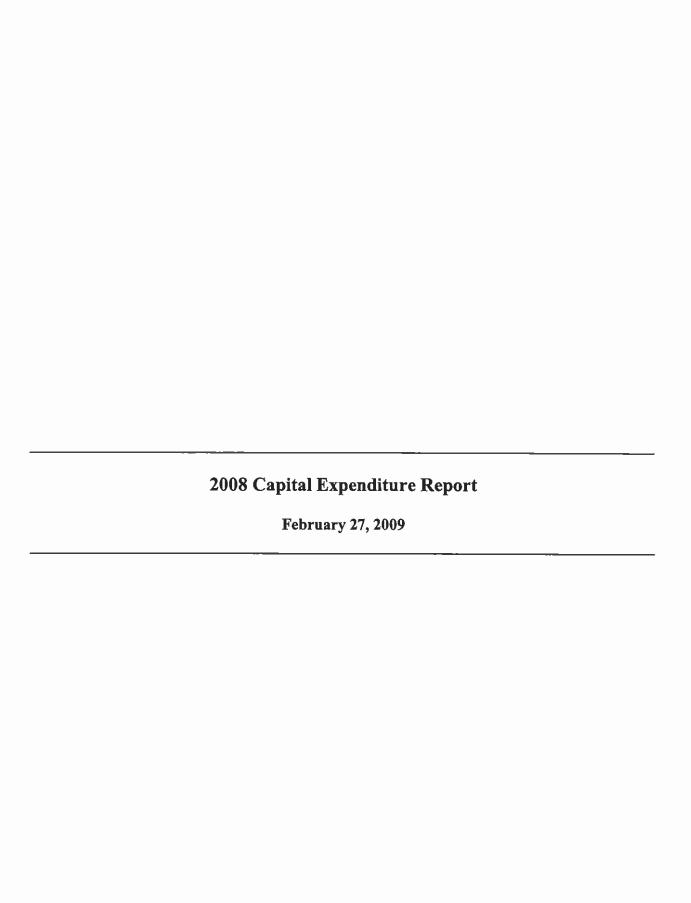
Gerard M. Hayes Senior Counsel

**Enclosures** 

c: Geoffrey P. Young

Newfoundland and Labrador Hydro

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### NEWFOUNDLAND POWER INC.

2008 Capital Expenditure Report

### **Explanatory Note**

This report is presented in compliance with the directive of the Board of Commissioners of Public Utilities (the "Board") contained in paragraph 4 of Order No. P.U. 27 (2007).

Page 1 of the 2008 Capital Expenditure Report outlines the forecast variances from budget of the capital expenditures approved by the Board in Order Nos. P.U. 27 (2007), P.U. 3 (2008), P.U. 18 (2008), P.U. 19 (2008) and P.U. 24 (2008). The tables on pages 2 to 13 provide additional detail on capital expenditures in 2008, and also include information on those capital projects approved for 2007 that were not completed prior to 2008.

Variances of more than 10% of approved expenditure and \$100,000 or greater are explained in the Notes contained in Appendix A, which immediately follows the blue page at the end of the 2008 Capital Expenditure Report. The variance criteria are as outlined in the Capital Budget Application Guidelines.

### Newfoundland Power Inc.

# 2008 Capital Expenditure Report (000s)

	Approved 1	Actual	Variance
Generation – Hydro	\$3,385	\$3,619	\$234
Generation – Thermal	100	301	201
Substations	7,177	7,095	(82)
Transmission	4,978	5,316	338
Distribution	28,566	37,053	8,487
General Property	977	1,073	96
Transportation	2,214	2,384	170
Telecommunications	224	266	42
Information Systems	3,607	3,734	127
Unforeseen Allowance	1,150	400	(750)
General Expenses Capitalized	2,800	2,765	(35)
Total	\$55,178	\$64,006	\$8,828

Projects carried forward from 2007 <sup>2</sup>

\$764

Approved by Order Nos. P.U. 27(2007), P.U. 3(2008), P.U. 18(2008), P.U. 19(2008) and P.U. 24(2008).

The projects carried forward from 2007 include \$221,000 from the Rattling Brook Refurbishment Project and \$543,000 from the General Properties project to install an Energy Efficient HVAC System for the Kenmount Road building.

	Capital Budget			Actual Expenditures				
	2007	2008	Total	2007	2008	Carryover	Total	<u>Variance</u>
	A	В	С	D	E	F	G	Н
2008 Projects	\$ -	\$ 55,178	\$ 55,178	\$ -	\$ 62,406	\$ 1,600	\$ 64,006	\$ 8,828
2007 Projects	19,462	-	19,462	17,235	764	-	\$ 17,999	\$ (1,463)
Grand Total	\$ 19,462	\$ 55,178	\$ 74,640	<b>\$</b> 17,235	\$ 63,170	\$ 1,600	\$ 82,005	\$ 7,365

Column A	Approved Capital Budget for 2007
Column B	Approved Capital Budget for 2008
Column C	Total of Columns A and B
Column D	Actual Capital Expenditures for 2007
Column E	Actual Capital Expenditures for 2008
Column F	Capital Projects Carried Forward to 2009
Column G	Total of Columns D, E and F
Column H	Column G less Column C

Category: Generation - Hydro

<u>Project</u>	2007 A	Capital Budge 2008 B	Total C	Actual Expenditure  2007 2008  D E	<u>Carryover</u>	Total	Variance Notes*
2008 Projects Facility Rehabilitation Engineering to Increase Plant Production Total 2008 Generation Hydro	\$ - -	\$ 3,260 125 3,385	\$ 3,260 125 3,385	\$ - \$ 3,551 - 68	\$ - -	\$ 3,551 68	\$ 291 (57)
2007 Projects Rattling Brook Hydro Plant Refurbishment	18,242	•	18,242	17,204 221	-	17,425	(817)
Total - Generation - Hydro	\$ 18,242	\$ 3,385	\$ 21,627	\$ 17,204 \$ 3,840	<u>s</u> -	\$ 21,044	\$ (583)

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2007
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Category: Generation - Thermal

		Capital	Budge	et		nditure								
Project	2008			Total		2008		yover	Total E		Variance F		Notes*	
	A		В		С		D							
2008 Projects Facility Rehabilitation	\$	100	\$	100	\$	301	\$	-	\$	301	\$	201	1	
Total - Generation - Thermal	\$	100	\$	100	\$	301	S		S	301	\$	201		

Column A Approved Capital Budget for 2008

Column B Total of Column A

Column C Actual Capital Expenditures for 2008

Column D Capital Projects Carried Forward to 2009

Column E Total of Columns C and D

Column F Column E less Column B

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Category: Substations

						Actual							
		Capital	Budg	get	Exp	enditure							
<u>Project</u>	2008 A		2008 Total		2008		Car	ryover		Total	V	ariance	Notes*
			_	В		С		D		E		F	
2008 Projects													
Substation Refurbishment and Modernization	\$	3,703	\$	3,703	\$	2,508	\$	_	\$	2,508	\$	(1,195)	2
Replacement Due to In-Service Failures		1,340		1,340		2,357		-		2,357		1,017	3
Convert 403L to 66Kv to Reduce Losses		233		233		328		-		328		95	
Interconnection Wind Turbine - Laurentians Substation		487		487		511		-		511		24	
Interconnection Wind Turbine - Fermeuse Substation		928		928		910		32		942		14	
Pierre's Brook Transformer Replacement		486		486		449		-		449		(37)	
Total - Substations	\$	7,177	\$	7,177	\$	7,063	\$	32	\$	7,095	\$	(82)	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2008
Column B	Total of Column A
Column C	Actual Capital Expenditures for 2008
Column D	Capital Projects Carried Forward to 2009
Column E	Total of Columns C and D
Column F	Column E less Column B

Category: Transmission

		Capital	Budg	et		Actual enditure						
<u>Project</u>	2008		Total		2008		Carryover		 Total	<u>Variance</u>		Notes*
		A		В		С		D	E		F	
2008 Projects Rebuild Transmission Lines	\$	4,890	\$	4,890	\$	5,236	\$	-	\$ 5,236	\$	346	
Reroute 305L for Wind Turbine Interconnection		88		88		80		-	\$ 80	\$	(8)	
Total - Transmission	\$	4,978	\$	4,978	\$	5,316	S		\$ 5,316	\$	338	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2008
Column B	Total of Column A
Column C	Actual Capital Expenditures for 2008
Column D	Capital Projects Carried Forward to 2009
Column E	Total of Columns C and D
Column F	Column E less Column B

Category: Distribution

						Actual							
		Capital	Budg	get	Ex	oenditure							
<u>Project</u>	2008		Total		2008		Carryover		Total		Vi	ariance	Notes*
		A	В		С		D		E		F		
2008 Projects													
Extensions	\$	7,791	\$	7,791	\$	10,592	\$	-	\$	10,592	\$	2,801	4
Meters		986		986		1,474		-		1,474		488	5
Services		2,004		2,004		2,538		-		2,538		534	6
Street Lighting		1,361		1,361		2,007		-		2,007		646	7
Transformers		5,811		5,811		8,545		-		8,545		2,734	8
Reconstruction		3,129		3,129		3,193		-		3,193		64	
Rebuild Distribution Lines		3,385		3,385		3,566		-		3,566		181	
Relocate/Replace Distribution Lines For Third Parties		606		606		1,585		-		1,585		979	9
Distribution Reliability Initiative		1,286		1,286		1,411		-		1,411		125	
Install Capacitors to Reduce Losses		200		200		41		-		41		(159)	10
Water St. Underground Civil Infrastructure		1,930		1,930		362		1,568		1,930		-	
Interest During Construction		77		77		171		-		171		94	
Total - Distribution	\$	28,566	\$	28,566	\$	35,485	S	1,568	S	37,053	\$	8,487	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2008
Column B	Total of Column A
Column C	Actual Capital Expenditures for 2008
Column D	Capital Projects Carried Forward to 2009
Column E	Total of Columns C and D
Column F	Column E less Column B

### Category: General Property

			Capit	al Budget				Actual Ex	rpendi	iture							
Project	20	007		2008	1	rotal	2	007		2008	Car	ryover		Total	Va	riance	Notes*
		A		В		С		D		E		F		G		Н	
2008 Projects Tools and Equipment Additions to Real Property Standby Diesel Generators	\$	-	\$	690 122 165	S	690 122 165	\$	- - -	\$	673 244 156	s	-	\$	673 244 156	S	(17) 122 (9)	11
Total 2008 General Property	\$	-	\$	977	\$	977	\$		\$	1,073	\$	_	\$	1,073	3	96	
2007 Projects Energy Efficient HVAC System	\$	610	\$	~	S	610	\$	31	S	543	\$	-	S	574	\$	(36)	
Total - General Property	5	610	\$	977	<u>s</u>	1,587	\$	31	5	1,616	S		<u>s</u>	1,647	\$	60	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2007
Column B	Approved Capital Budget for 2008
Column C	Total of Columns A and B
Column D	Actual Capital Expenditures for 2007
Column E	Actual Capital Expenditures for 2008
Column F	Capital Projects Carried Forward to 2009
Column G	Total of Columns D, E and F
Column H	Column G less Column C

Category: Transportation

	Actual  Capital Budget Expenditure												
<u>Project</u>	2008 A		Total B		2008 C		<u>Carryover</u> D		Total E		Variance F		Notes*
2008 Projects Purchase Vehicles and Aerial Devices	\$	2,214	\$	2,214	\$	2,384	\$	-	\$	2,384	\$	170	
Total - Transportation	\$	2,214	<u>s</u>	2,214	\$	2,384	\$		S	2,384	\$	170	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2008
Column B	Total of Column A
Column C	Actual Capital Expenditures for 2008
Column D	Capital Projects Carried Forward to 2009
Column E	Total of Columns C and D
Column F	Column E less Column B
Column C Column D Column E	Actual Capital Expenditures for 2008 Capital Projects Carried Forward to 2009 Total of Columns C and D

Category: Telecommunications

				A.	ctuai							
	Capital	Budge	et	Expe	nditure							
2008 A		Total B		2008 C		<u>Carryover</u> D		Total E		Variance F		Notes*
\$	104	\$	104	\$	96	\$	-	\$	96	\$	(8)	
\$	120	\$	120	\$	170	\$	-	\$	170	\$	50	
\$	224	\$	224	\$	266	\$		S	266	\$	42	
	\$ \$ \$	2008 A \$ 104 \$ 120	2008 T A  \$ 104 \$ \$ 120 \$	A B \$ 104 \$ 104 \$ 120 \$ 120	Capital Budget         Experimental           2008         Total         2           A         B           \$ 104         \$ 104         \$ \$ 120           \$ 120         \$ 120         \$ \$ 120	2008         Total         2008           A         B         C           \$ 104         \$ 104         \$ 96           \$ 120         \$ 120         \$ 170	Capital Budget         Expenditure           2008         Total         2008         Carr           A         B         C           \$ 104         \$ 104         \$ 96         \$           \$ 120         \$ 120         \$ 170         \$	Capital Budget         Expenditure           2008         Total         2008         Carryover           A         B         C         D           \$ 104         \$ 104         \$ 96         \$ -           \$ 120         \$ 120         \$ 170         \$ -	Capital Budget         Expenditure           2008         Total         2008         Carryover         T           A         B         C         D           \$ 104         \$ 104         \$ 96         \$ -         \$           \$ 120         \$ 120         \$ 170         \$ -         \$	Capital Budget         Expenditure           2008         Total         2008         Carryover         Total           A         B         C         D         E           \$ 104         \$ 104         \$ 96         \$ -         \$ 96           \$ 120         \$ 120         \$ 170         \$ -         \$ 170	Capital Budget         Expenditure           2008         Total         2008         Carryover         Total         Var           A         B         C         D         E           \$ 104         \$ 104         \$ 96         \$ -         \$ 96         \$ \$ 170         \$ 170<	Capital Budget         Expenditure           2008         Total         2008         Carryover         Total         Variance           A         B         C         D         E         F           \$ 104         \$ 104         \$ 96         \$ -         \$ 96         \$ (8)           \$ 120         \$ 120         \$ 170         \$ -         \$ 170         \$ 50

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2008
Column B	Total of Column A
Column C	Actual Capital Expenditures for 2008
Column D	Capital Projects Carried Forward to 2009
Column E	Total of Columns C and D
Column F	Column E less Column B

Category: Information Systems

					E	Actual							
		Capital	Budg	et	Exp	enditure							
Project	2008 A		Total B		2008 C		Carryover D		Total E		Variance		Notes*
2008 Projects													
Application Enhancements	\$	1,389	\$	1,389	\$	1,485	\$	-	\$	1,485	\$	96	
System Upgrades		487		487		474		-		474		(13)	
Personal Computer Infrastructure		408		408		415		-		415		7	
Shared Server Infrastructure		889		889		903		-		903		14	
Network Infrastructure		119		119		162		-		162		43	
Microsoft Enterprise Agreement		210		210		194		-		194		(16)	
Purchase Photocopiers		105		105		101		-		101		(4)	
Total - Information Systems	\$	3,607	\$	3,607	\$	3,734	\$		\$	3,734	\$	127	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

C-1 A	Approved Capital Budget for 2008
Column A	
Column B	Total of Column A
Column C	Actual Capital Expenditures for 2008
Column D	Capital Projects Carried Forward to 2009
Column E	Total of Columns C and D
Column F	Column E less Column B

# 2008 Capital Expenditure Report (000s)

Category: Unforeseen Allowance

					A	ctual							
	_	Capital	Budg	et	Expe	enditure							
<u>Project</u>		2008	ַ 	Cotal	2	2008	Car	ryover	1	otal	Va	riance	Notes*
		A		В		С		D		E		F	
2008 Projects Allowance for Unforeseen Items	4	750	\$	750	\$	_	\$	-	s	_	s	(750)	
Allowance for Unforeseen Items - Pierre's Brook	ъ	400	J	400	Ψ	400	Ψ	-	*	400	•	-	
Total - Unforeseen Allowance	S	1,150	\$	1,150	S	400	S		S	400_	\$	(750)	12

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Approved Capital Budget for 2008
Total of Column A
Actual Capital Expenditures for 2008
Capital Projects Carried Forward to 2009
Total of Columns C and D
Column E less Column B

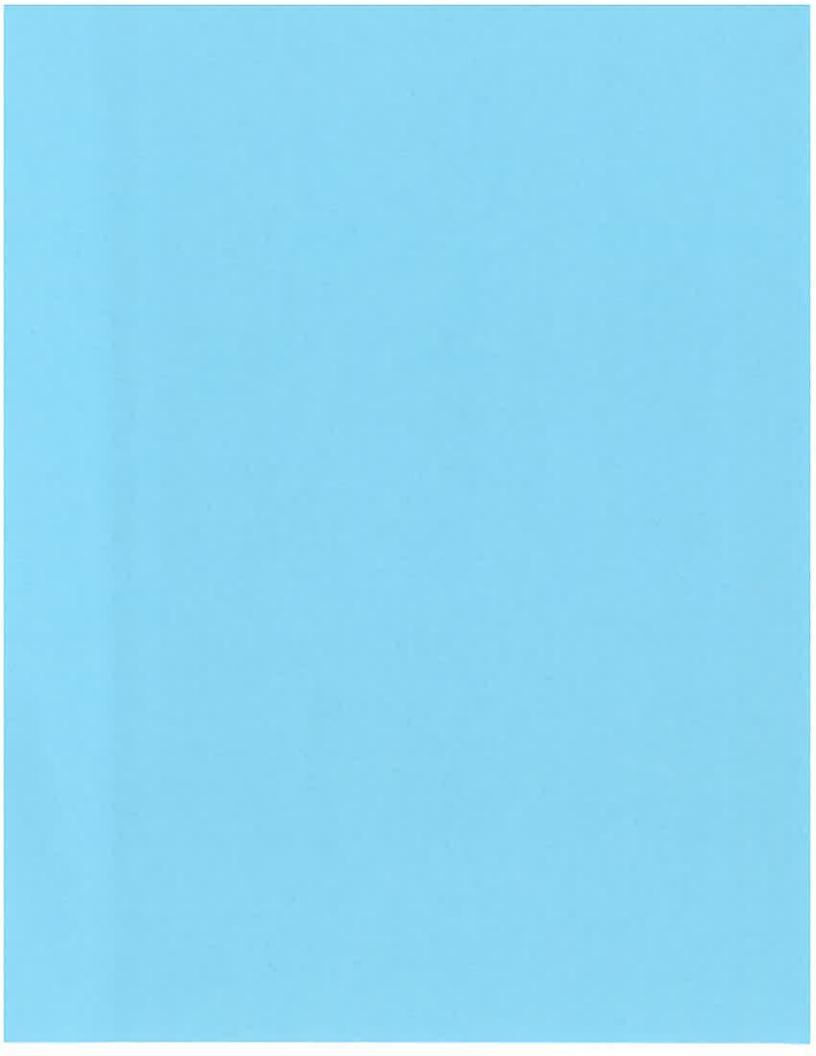
# 2008 Capital Expenditure Report (000s)

Category: General Expenses Capitalized

	Capital	Budg	get	Actual enditure						
<u>Project</u>	2008 A		Total B	 2008 C	Cai	ryover D	 Total E	Var	riance F	Notes*
2008 Projects General Expenses Capitalized	\$ 2,800	\$	2,800	\$ 2,765	\$	-	\$ 2,765	\$	(35)	
Total - General Expenses Capitalized	\$ 2,800	\$_	2,800	\$ 2,765	\$		\$ 2,765	\$	(35)	

<sup>\*</sup> See Appendix A for notes containing variance explanations.

Column A	Approved Capital Budget for 2008
Column B	Total of Column A
Column C	Actual Capital Expenditures for 2008
Column D	Capital Projects Carried Forward to 2009
Column E	Total of Columns C and D
Column F	Column E less Column B



## Generation - Thermal

1. Facility Rehabilitation:

Budget: \$100,000 Actual: \$301,000 Variance: \$201,000

In the Fall of 2007, an inspection of the New-Wes-Valley gas turbine uncovered certain deficiencies that required repairs to ensure continued reliability of the unit. As reported to the Board at the time, the unit was taken out of service and shipped out of province to the vendor's facility for a detailed examination. It was Newfoundland Power's expectation that the identified deficiencies would be covered under the vendor's warranty. However, the vendor ultimately denied coverage under the warranty for the required repair work, and invoiced Newfoundland Power in October 2008 in the amount of \$212,000. The 2008 variance in this category is a result of the vendor's refusal to cover under warranty the remedial work required to return the gas turbine to service.

#### **Substations**

2. Substation Refurbishment and Modernization

Budget: \$3,703,000 Actual: \$2,508,000 Variance: (\$1,195,000)

The lower than expected expenditure in this category resulted from a need to re-assign resources to deal with higher than expected work requirements related to In-Service Failures (see Note 3 below), the unforeseen replacement of the power transformer at the Pierre's Brook substation (see Note 12 below), and work required by Newfoundland and Labrador Hydro at the Laurentian and Fermeuse substations to interconnect two new wind turbine installations to the electrical grid.

3. Replacement Due to In-Service Failures:

Budget: \$1,340,000 Actual: \$2,357,000 Variance: \$1,017,000

The budget for the Replacement Due to In-Service Failures project is based on an assessment of historical expenditures. The 2008 variance is principally due to extraordinary requirements for the replacement of major substation equipment that either failed in service or was identified as being in danger of imminent failure. The following lists examples of the larger items that required replacement in 2008 and the related expenditures:

- Rewind and installation of power transformer at Morris plant \$146,000
- Replacement of transmission line relaying for 69L and 136L \$104,000
- Radiator replacement on four power transformers \$230,000
- Replacement of 138kV breaker at Salt Pond \$110,000
- Replacement of five 66 kV SF6 transmission line breakers \$300,000
- Replacement of four distribution line breakers \$100,000

#### Distribution

4. Extensions:

Budget: \$7,791,000 Actual: \$10,592,000 Variance: \$2,801,000

Actual capital expenditures in the Extensions category exceeded the 2008 capital budget amount primarily as a result of unanticipated customer growth. Further information is provided in the report An Analysis of 2008 Distribution Capital Expenditure Variances Affected by Customer Growth (Attachment A).

5. Meters:

Budget: \$986,000 Actual: \$1,474,000 Variance: \$488,000

Actual capital expenditures in the Meters category exceeded the 2008 capital budget amount primarily as a result of a higher than budgeted requirement for meter replacement based on the results of meter testing required under the *Electricity and Gas Inspection Act (Canada)*. Further information is provided in the report *An Analysis of 2008 Distribution Capital Expenditure Variances Affected by Customer Growth* (Attachment A).

6. Services:

Budget: \$2,004,000 Actual: \$2,538,000 Variance: \$534,000

Actual capital expenditures in the Services category exceeded the 2008 capital budget amount primarily as a result of higher than anticipated customer growth. Further information is provided in the report *An Analysis of 2008 Distribution Capital Expenditure Variances Affected by Customer Growth* (Attachment A).

7. Street Lighting:

Budget: \$1,361,000 Actual: \$2,007,000 Variance: \$646,000

Actual capital expenditures in the Street Lighting category exceeded the 2008 capital budget amount primarily as a result of higher than anticipated customer growth, and as a result of an accelerated inspection-based program of street light replacement that commenced in late 2007 and continued into 2008. Further information is provided in the report An Analysis of 2008 Distribution Capital Expenditure Variances Affected by Customer Growth (Attachment A).

8. Transformers:

Budget: \$5,811,000 Actual: \$8,545,000 Variance: \$2,734,000

Actual capital expenditures in the Transformers category exceeded the 2008 capital budget amount primarily as a result of increased material costs and higher than anticipated customer growth. Further information is provided in the report An Analysis of 2008 Distribution Capital Expenditure Variances Affected by Customer Growth (Attachment A)

9. Relocate/Replace Distribution Lines for Third Parties:

Budget: \$606,000 Actual: \$1,585,000 Variance: \$979,000

The variance over the 2008 budget amount in this category was driven by higher than normal system upgrade activity by telecommunications service providers. Approximately \$1,152,000 was spent upgrading distribution lines to accommodate third party attachments. Approximately 40%, or \$457,000, of this amount was recovered through Contributions in Aid of Construction.

10. Install Capacitors to Reduce Losses:

Budget: \$200,000 Actual: \$41,000 Variance: (\$159,000)

Capacitors for this project were ordered in early 2008. However, due to late delivery by the manufacturer, the capacitors did not arrive in time to have all units installed in 2008. Installation of the remaining capacitors will be undertaken in 2009 together with other planned distribution work.

## General Property

11. Additions to Real Property:

Budget: \$122,000 Actual: \$244,000 Variance: \$122,000

This project consists of miscellaneous capital additions or upgrades required to ensure the continued safe operation of Company facilities and workplaces. Individual projects typically cost less than \$50,000, and the budget is based on average historical expenditure.

In 2008, there was an extraordinary and unanticipated requirement for office renovations at the Kenmount Road, Grand Falls-Windsor and Duffy Place facilities. The cost of these individual renovation projects, which contributed to the extraordinary level of expenditure in this category in 2008, was \$33,000, \$31,000 and \$31,000, respectively. A further \$38,000 was required to replace deteriorated shelving at the Company's Central Stores.

#### Unforeseen Allowance

12. Allowance for Unforeseen Items:

Budget: \$1,150,000 Actual: \$400,000 Variance: (\$750,000)

The expenditure of \$400,000 under authority of the Allowance for Unforeseen Items was required early in 2008 to place an emergency order for a replacement power transformer for the Pierre's Brook substation. Routine analysis of the insulating oil indicated the existing transformer was in danger of imminent failure. The Board subsequently approved an additional \$400,000 Allowance for Unforeseen Items in Order No. P.U. 3 (2008), restoring the approved balance to the original amount of \$750,000.

# An Analysis of 2008 Distribution Capital Expenditure Variances Affected by Customer Growth

February 27, 2009



Ralph Mugford, P.Eng Senior Engineer

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#### 1.0 Introduction

Newfoundland Power's actual 2008 capital expenditures in the Distribution class were approximately \$8.5 million over budget. Approximately \$1.0 million of the variance over budget is attributed to increased requirements for the upgrade of plant to accommodate the placement of cables by telecommunications service providers. Approximately \$1.6 million of the variance over budget is attributed to the increased purchase cost of transformers, which was driven by increases in steel prices.

The other principal contributor to the variance was the fact that the actual number of new customer connections in 2008 significantly exceeded the forecast upon which the capital budget was based.

This Report analyzes variances between budgeted and actual 2008 capital expenditures for each of the Distribution projects that are driven by customer growth. The analysis in this Report clearly supports the conclusion that increased 2008 capital expenditures were principally attributable to the unanticipated number of new customer connections in the year.

#### 2.0 Overview

A comparison of budgeted and actual capital expenditures in those Distribution projects affected by customer growth is set out in Table 1 below.

Table 1
2008 Capital Expenditures in
Distribution Projects
Affected by Customer Growth
(\$000s)

Project	Budget	Actual	Variance
Extensions	7,791	10,592	2,801
Meters	986	1,474	488
Services	2,004	2,538	534
Street Lighting	1,361	2,007	646
Transformers	5,811	8,545	2,734
Total	17,953	25,156	7,203

Newfoundland Power forecasted 3,453 gross customer connections for 2008. Actual gross customer connections in 2008 were 4,625 or 34% more than forecast.

#### 3.0 Extensions

The original budget for Extensions was calculated based on the historical five-year average unit cost of connecting a customer multiplied by the expected number of new customers for 2008.

The 2008 variance over budget of \$2,801,000 was principally the result of an unanticipated number of new customer connections, together with a minor variance in unit cost. The respective contribution attributable to each of these is:

Unanticipated Customer Connections	\$ 2	2,644,000
Unit Cost Variance	\$	157,000

Unanticipated Customer Connections - Expenditure associated with customer growth is budgeted based on the estimated number of new customer connections multiplied by the most recent 5-year average historical unit cost. The 2008 budget was based on 3,453 new customer connections at a unit cost of \$2,256. The actual number of new customer connections was 4,625, or 1,172 more than budget. The additional customer connections resulted in an additional expenditure of \$2,644,000.

Unit Cost Variance - Budgeted and actual unit costs are detailed in Table 2.

Table 2
Unit Cost of Extensions

	Budget	Actual
Extensions Expenditure (\$000)	7,791	10,592
Customer Connections	<u>3,453</u>	<u>4,625</u>
Unit Cost	<u>\$2,256</u>	<u>\$2,290</u>

The actual unit cost of \$2,290 was \$34, or 1.5%, above the budget unit cost of \$2,256. Based on 4,625 new customer connections, this unit cost variance resulted in an additional Extensions expenditure of \$157,000.

### 4.0 Meters

The variance over budget in capital expenditure for Meters is due to a higher than normal number of meters requiring replacement as a result of meter testing conducted under the *Electricity and Gas Inspection Act (Canada)*. In 2008, Newfoundland Power was required to replace 8,958 meters more than forecast. The unexpected requirement arose as a result of the failure of two groups of meters purchased and installed in 1974 and 1996, respectively. The increase in meter replacements was largely related to a single manufacturer and model of meter. The failure of these particular meter models accords with the experience of other Canadian utilities.

While the unanticipated number of new customer connections resulted in a higher than budgeted requirement for new meters, thereby contributing in some measure to the budget variance, the cost associated with the additional meters is immaterial.

#### 5.0 Services

The budget for Services consisted of two components: (1) expenditures required to connect new services, and (2) expenditures required to replace existing services.

Services expenditure for 2008 is detailed in Table 3.

Table 3
Service Expenditure – 2008
(\$000)

	Budget	Actual	Variance
Connect New Services	1,602	2,111	509
Replace Existing Services	<u>402</u>	<u>427</u>	<u>25</u>
Total	<u>2,004</u>	<u>2,538</u>	<u>534</u>

Expenditure for *new* services was \$2,111,000 or \$509,000 over budget. The additional expenditure was principally due to the higher than expected number of customer connections, offset by a slight decline in unit cost.

Unanticipated Customer Connections - Expenditure associated with customer growth is budgeted based on the estimated number of new customer connections multiplied by the most recent 5-year average historical unit cost. In 2008, there were 4,625 new customers connected, compared to the budget estimate of 3,453. The 1,172 unanticipated customer connections resulted in an additional expenditure of \$509,000.

Unit Cost Variance - Details of the budgeted and actual 2008 unit cost are provided in Table 4.

Table 4
Unit Cost of Services

	Budget	Actual	Change
Service Expenditure (\$000)	1,602	2,111	32%
Customer Connections	<u>3,453</u>	<u>4,625</u>	<u>34%</u>
Unit Cost	<u>\$464</u>	<u>\$456</u>	<u>(2)%</u>

Expenditure for replacement services was \$427,000 or \$25,000 over budget.

# 6.0 Street Lighting

The budget for Street Lighting consists of two components: (1) expenditure required for installation of new street lights, and (2) expenditure required to replace existing street lights. The budget for *new* street lights is based on the forecast number of new customer connections. The budget for *replacement* street lights is based on average historical expenditure.

Street Lighting expenditure for 2008 is detailed in Table 5.

Table 5 Street Lighting Expenditure – 2008 (\$000)

	Budget	Actual	Variance
New Street Lights	915	1,315	400
Replace Existing Street Lights	<u>446</u>	<u>692</u>	<u>246</u>
Total	<u>1,361</u>	2,007	<u>646</u>

New Street Lights - Expenditure for new street lights was \$1,315,000, or \$400,000 over budget. The additional expenditure was principally due to the higher than expected number of customer connections noted previously in this Report.

Expenditure associated with customer growth is budgeted based on the estimated number of new customer connections multiplied by the most recent 5-year average historical unit cost. The 2008 budget for new Street Light installations was based on 3,453 new customer connections, at an average unit cost of \$265. Actual expenditure reflects 4,625 new connections, at an average unit cost of \$284. While the difference between budgeted and actual unit costs was only 7%, the need to connect 1,172 more customers than projected resulted in an additional expenditure of \$311,000.

Replacement Street Lights - The cost of replacement street lights was budgeted at the historical five-year average of \$446,000. Actual expenditure was \$692,000, or \$246,000 over budget. The variance was principally a result of the Company's response to a significant public safety incident that occurred in September of 2007. Following an incident in which a street light cover fell to the ground, in close proximity to children playing in the street, the Company decided to initiate a program to identify and replace deficient street lights. This work commenced in the 4<sup>th</sup> quarter of 2007 and continued into 2008.

#### 7.0 Transformers

Actual 2008 capital expenditure on Transformers was \$2,734,000, or 47% more than the 2008 capital budget allotment. The increased expenditure resulted from the unanticipated variance in customer growth and an increase in unit cost.

As summarized in Table 6, the 34% variance above forecast in new customer connections resulted in a 25% increase in the number of transformer units purchased. The additional 560 units, at a budgeted unit cost of \$2,581, accounted for \$1,444,000 of the total additional expenditure.

Table 6
Additional Units

	Budget	Actual	Difference	Change
Units	2,251	2,811	560	25%
Customer Connections	3,453	4,625	1,172	34%

As shown in Table 7, increased steel prices resulted in the actual unit cost being 18% higher than the budgeted unit cost. The \$459 increase in the unit cost, for the actual 2,811 units purchased, accounted for \$1,290,000 of the total additional expenditure in the category.

Table 7
Average Unit Cost

	Budget	Actual	Difference	Change
Expenditure (\$000's)	5,811	8,545	2,734	
Units	<u>2,251</u>	2,811	560	
Unit Cost	\$2,581	\$3,040	\$459	18%