

2008 Capital Budget Summary**Schedule A**  
NP 2008 CBA**2008 CAPITAL BUDGET SUMMARY**

<u>Asset Class</u>	<u>Budget (000s)</u>
1. Generation - Hydro	\$ 3,385
2. Generation - Thermal	100
3. Substations	5,276
4. Transmission	4,890
5. Distribution	26,636
6. General Property	977
7. Transportation	2,214
8. Telecommunications	224
9. Information Systems	3,502
10. Unforeseen Allowance	750
11. General Expenses Capitalized	2,800
<b>Total</b>	<b><u>\$ 50,754</u></b>

**2008 CAPITAL PROJECTS (BY ASSET CLASS)**

<b><u>Capital Projects</u></b>	<b><u>Budget (000s)</u></b>	<b><u>Description<sup>1</sup></u></b>
<b>1. Generation - Hydro</b>		
Hydro Plant Facility Rehabilitation	3,260	2
Engineering to Increase Plant Production	125	4
<b><i>Total – Generation - Hydro</i></b>	<b>\$ 3,385</b>	
<b>2. Generation - Thermal</b>		
Thermal Plant Facility Rehabilitation	100	7
<b><i>Total – Generation – Thermal</i></b>	<b>\$100</b>	
<b>3. Substations</b>		
Substation Refurbishment and Modernization	\$ 3,703	10
Replacements Due to In-Service Failures	1,340	12
Convert 403L to 66KV to Reduce Losses	233	15
<b><i>Total - Substations</i></b>	<b>\$ 5,276</b>	
<b>4. Transmission</b>		
Transmission Line Rebuild	\$ 4,890	18
<b><i>Total - Transmission</i></b>	<b>\$ 4,890</b>	

<sup>1</sup> Project descriptions can be found in Schedule B at the page indicated.

## 2008 CAPITAL PROJECTS (BY ASSET CLASS)

<u>Capital Projects</u>	<u>Budget (000s)</u>	<u>Description<sup>1</sup></u>
<b>5. Distribution</b>		
Extensions	\$ 7,791	21
Meters	986	23
Services	2,004	26
Street Lighting	1,361	29
Transformers	5,811	32
Reconstruction	3,129	34
Rebuild Distribution Lines	3,385	36
Relocate/Replace Distribution Lines for Third Parties	606	39
Distribution Reliability Initiative	1,286	41
Install Capacitors to Reduce Losses	200	44
Interest During Construction	77	46
<b>Total - Distribution</b>	<b>\$ 26,636</b>	
<b>6. General Property</b>		
Tools and Equipment	\$ 690	49
Additions to Real Property	122	51
Standby Diesel generators	165	53
<b>Total - General Property</b>	<b>\$ 977</b>	
<b>7. Transportation</b>		
Purchase Vehicles and Aerial Devices	\$ 2,214	56
<b>Total - Transportation</b>	<b>\$ 2,214</b>	

<sup>1</sup> Project descriptions can be found in Schedule B at the page indicated.

**2008 CAPITAL PROJECTS (BY ASSET CLASS)**

<b><u>Capital Projects</u></b>	<b><u>Budget (000s)</u></b>	<b><u>Description<sup>1</sup></u></b>
<b>8. Telecommunications</b>		
Replace/Upgrade Communications Equipment	\$ 104	59
Fibre Optic Circuit Replacement	\$ 120	61
<b><i>Total - Telecommunications</i></b>	<b>\$ 224</b>	
<b>9. Information Systems</b>		
Application Enhancements	\$ 1,389	64
System Upgrades	487	66
Personal Computer Infrastructure	408	68
Shared Server Infrastructure	889	71
Network Infrastructure	119	73
Microsoft Enterprise Agreement <sup>2</sup>	210	
<b><i>Total - Information Systems</i></b>	<b>\$ 3,502</b>	
<b>10. Unforeseen Allowance</b>		
Allowance for Unforeseen Items	\$ 750	76
<b><i>Total - Unforeseen Allowance</i></b>	<b>\$ 750</b>	
<b>11. General Expenses Capitalized</b>		
General Expenses Capitalized	\$ 2,800	78
<b><i>Total - General Expenses Capitalized</i></b>	<b>\$ 2,800</b>	

<sup>1</sup> Project descriptions can be found in Schedule B at the page indicated.

<sup>2</sup> This is a multi-year project approved with the 2006 Capital Budget Application. Details found in Schedule A page 5 of 5, and in Schedule D.

**2008 CAPITAL PROJECTS: MULTI-YEAR**

<u>Capital Project</u>	<u>Approved</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>
Microsoft Enterprise Agreement <sup>3</sup>	Order No. P.U. 30 (2005)	\$210,000	\$210,000	\$210,000

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<sup>3</sup> The scope, nature, and amount of this expenditure are consistent with the original approval.

**Project Title:** Reconstruction (Pooled)

**Project Cost:** \$3,129,000

**Project Description**

This Distribution project involves the replacement of deteriorated or damaged distribution structures and electrical equipment. This project is comprised of smaller unplanned projects that are identified during the budget year as a result of line inspections, or recognized during follow-up on operational problems, including power interruptions and customer trouble calls. This project consists of high priority projects that cannot be deferred to the next budget year.

Distribution Reconstruction requirements are similar in nature and justification. The expenditures are therefore pooled for consideration as a single capital project.

This project differs from the Rebuild Distribution Lines project, which involves rebuilding sections of lines that are identified and planned in advance of the annual capital budget preparation.

**Justification**

This project is justified on the basis of the need to replace defective or deteriorated electrical equipment in order to maintain a safe, reliable electrical system.

**Projected Expenditures**

Table 1 provides a breakdown of the proposed expenditures for 2008 and a projection of expenditures through 2012.

<b>Table 1</b>				
<b>Project Expenditures</b>				
<b>(000s)</b>				
<b>Cost Category</b>	<b>2008</b>	<b>2009</b>	<b>2010 – 2012</b>	<b>Total</b>
Material	\$ 740	-	-	-
Labour – Internal	1,260	-	-	-
Labour – Contract	706	-	-	-
Engineering	316	-	-	-
Other	107	-	-	-
<b>Total</b>	<b>\$3,129</b>	<b>\$3,213</b>	<b>\$10,155</b>	<b>\$16,497</b>

**Costing Methodology**

Table 2 shows the annual expenditures and costs in current dollars for the most recent five-year period, as well as the projected expenditure for 2008.

<p align="center"><b>Table 2</b> <b>Expenditure History and Budget Estimate</b> <b>(000s)</b></p>						
<b>Year</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007F</b>	<b>2008B</b>
<b>Total</b>	<b>\$2,846</b>	<b>\$2,420</b>	<b>\$2,898</b>	<b>\$2,989</b>	<b>\$3,239</b>	<b>\$3,129</b>
<b>Adjusted Cost<sup>1</sup></b>	<b>\$3,213</b>	<b>\$2,636</b>	<b>\$3,065</b>	<b>\$3,065</b>	<b>\$3,159</b>	<b>-</b>

<sup>1</sup> 2007 dollars.

The process of estimating the budget requirement for Reconstruction is based on a historical average. Historical annual expenditures related to unplanned repairs to distribution feeders over the most recent five-year period, including the current year, expressed in current-year dollars (“Adjusted Cost”) are modified by the GDP Deflator for Canada for the budget year to determine the budget estimate.

To ensure this project is completed at the lowest possible cost consistent with safe and reliable service, all material and contract labour will be obtained through competitive tendering.

**Future Commitments**

This is not a multi-year project.

**Project Title:** Rebuild Distribution Lines (Pooled)

**Project Cost:** \$3,385,000

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### **Project Description**

This Distribution project involves the replacement of deteriorated distribution structures and electrical equipment that have been previously identified through ongoing line inspections, engineering reviews, or day to day operations.

Distribution rebuild projects are preventative capital maintenance projects which are either the complete rebuilding of deteriorated distribution lines or the selective replacement of various line components based on inspections or engineering reviews. These typically include the replacement of poles, crossarms, conductor, cutouts, surge/lightning arrestors, insulators and transformers.

The work for 2008 includes feeder improvements on 42 of the Company's 303 feeders, as well as the replacement of deteriorated padmount transformers.

While the various components of the project are not inter-dependent, they are similar in nature and justification. The expenditures are therefore pooled for consideration as a single capital project.

### **Justification**

This project is justified on the basis of maintaining a safe, reliable electrical system.

The Company has over 8,600 kilometres of distribution lines in service and has an obligation to maintain this plant in good condition to safeguard the public and its employees and to maintain reliable electrical service. The replacement of deteriorated distribution structures and equipment is an important element of this obligation.

### **Projected Expenditures**

Table 1 provides a breakdown of the proposed expenditures for 2008 and a projection of expenditures through 2012.



<b>Table 1</b>				
<b>Project Expenditures</b>				
<b>(000s)</b>				
<b>Cost Category</b>	<b>2008</b>	<b>2009</b>	<b>2010 - 2012</b>	<b>Total</b>
Material	\$1,635	-	-	-
Labour – Internal	1,371	-	-	-
Labour – Contract	194	-	-	-
Engineering	25	-	-	-
Other	160	-	-	-
<b>Total</b>	<b>\$3,385</b>	<b>\$3,670</b>	<b>\$11,521</b>	<b>\$18,576</b>

**Costing Methodology**

Table 2 shows the annual expenditures for this project for the most recent five-year period.

<b>Table 2</b>					
<b>Expenditure History</b>					
<b>(000s)</b>					
<b>Year</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007F</b>
<b>Total</b>	<b>\$3,351</b>	<b>\$3,382</b>	<b>\$3,545</b>	<b>\$2,811</b>	<b>\$3,625</b>

Distribution feeders are inspected in accordance with Newfoundland Power’s distribution inspection standards to identify:

- a) Deficiencies that are a risk to public or employee safety, or that are likely to result in imminent failure of a structure or hardware;
- b) Locations where lightning arrestors are required as observed in the *2003 Lightning Arrestor Review*;<sup>1</sup>
- c) Locations where CP8080 and 2-piece insulators still exist. These insulators have a history of failure;<sup>2</sup>
- d) Locations where current limiting fuses are required in accordance with the internal memo dated January 11, 2000;<sup>3</sup> and

<sup>1</sup> See the 2004 Capital Budget Application, Volume III, Distribution, Appendix 2, Attachment B for further detail on lightning arrestor requirements.

<sup>2</sup> See the 2004 Capital Budget Application, Volume III, Distribution, Appendix 2, Attachment C for further detail on problem insulators.

<sup>3</sup> See the 2004 Capital Budget Application, Volume III, Distribution, Appendix 2, Attachment D for further detail on current limiting fuse requirements.

- e) Hardware for which a high risk of failure has been identified, such as automatic sleeves and porcelain cutouts.<sup>4</sup>

The budget estimate is based on engineering estimates of individual rebuild requirements.

To ensure this project is completed at the lowest possible cost consistent with safe and reliable service, all material and contract labour will be obtained through competitive tendering.

#### **Future Commitments**

This is not a multi-year project.

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<sup>4</sup> See the 2004 Capital Budget Application, Volume III, Distribution, Appendix 2, Attachment E and Attachment F for further detail on automatic sleeves and porcelain cutouts.

**Project Title: Distribution Reliability Initiative (Pooled)**

**Project Cost: \$1,286,000**

**Project Description**

This Distribution project involves the replacement of deteriorated poles, conductor and hardware to reduce both the frequency and duration of power interruptions to the customers served by specific distribution lines. The nature of the upgrading work follows from a detailed assessment of past service problems, knowledge of local environmental conditions (such as salt contamination and wind and ice loading), and engineering knowledge to apply location specific design and construction standards. Options are evaluated to improve reliability performance and project plans are subsequently developed from an engineering analysis.

This project is a continuation of the Distribution Reliability Initiative project from 2006 that was postponed in 2007. Three projects were undertaken in 2006 that were planned to be completed over three years. The second year of these projects was postponed from 2007 to 2008 to accommodate the Rattling Brook Refurbishment project.

Table 1 identifies the feeders where upgrading will continue in 2008. It shows the number of customers affected, and the average unscheduled distribution yearly interruption statistics for the five-year period ending December 31, 2006. These SAIFI<sup>1</sup> and SAIDI<sup>2</sup> statistics exclude planned power interruptions and interruptions due to all causes other than distribution system failure. An analysis of each feeder to be upgraded is contained in report *4.1 Distribution Reliability Initiative*.

<b>Table 1</b>			
<b>Distribution Interruption Statistics</b>			
<b>5-Years to December 31, 2006</b>			
<b>Feeder</b>	<b>Number of Customers</b>	<b>Distribution SAIFI</b>	<b>Distribution SAIDI</b>
Botwood (BOT-01)	1,625	3.11	7.07
Lewisporte (LEW-02)	1,384	3.82	9.74
Glovertown (GLV-02)	1,251	3.19	7.36
<b>Company Average</b>	-	<b>1.45</b>	<b>2.03</b>

<sup>1</sup> System Average Interruption Frequency Index (SAIFI) calculated by dividing the number of customers that have experienced an outage by the total number of customers in an area. Distribution SAIFI records the average number of outages related to distribution system failure.

<sup>2</sup> System Average Interruption Duration Index (SAIDI) is calculated by dividing the number of customer-outage-hours (e.g., a two hour outage affecting 50 customers equals 100 customer-outage-hours) by the total number of customers in an area. Distribution SAIDI records the average hours of outage related to distribution system failure.

While the work on different feeders is not inter-dependent, the various components of this project are similar in nature and justification. The expenditures are therefore pooled for consideration as a single capital project.

**Justification**

This project is justified on the basis of the obligation to provide reliable electrical service. Customers supplied by these feeders experience power interruptions more often, or of longer duration, than the Company average. Individual feeder projects have been prioritized based on their historic SAIFI and SAIDI statistics.

The distribution reliability initiative project has had a positive impact on the reliability performance of the feeders that have been upgraded.

**Projected Expenditures**

Table 2 provides a breakdown of the proposed expenditures for 2008 and a projection of expenditures through 2012.

<b>Table 2</b>				
<b>Project Expenditures</b>				
<b>(000s)</b>				
<b>Cost Category</b>	<b>2008</b>	<b>2009</b>	<b>2010 - 2012</b>	<b>Total</b>
Material	\$ 621	-	-	-
Labour – Internal	521	-	-	-
Labour – Contract	74	-	-	-
Engineering	10	-	-	-
Other	60	-	-	-
<b>Total</b>	<b>\$1,286</b>	<b>\$1,489</b>	<b>\$4,673</b>	<b>\$7,448</b>

**Cost Methodology**

Table 3 shows the annual expenditures for this project for the most recent five-year period.

<b>Table 3</b>					
<b>Expenditure History</b>					
<b>(000s)</b>					
<b>Year</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007F<sup>1</sup></b>
<b>Total</b>	<b>\$1,546</b>	<b>\$763</b>	<b>\$1,065</b>	<b>\$3,365</b>	<b>\$0</b>

<sup>1</sup>The Distribution Reliability Initiative was suspended in 2007 to accommodate the Rattling Brook project.

The budget estimate is based on detailed engineering estimates of individual feeder upgrade requirements.

To ensure this project is completed at the lowest possible cost consistent with safe and reliable service, all material and contract labour will be obtained through competitive tendering.

**Future Commitments**

This is not a multi-year project.

**Project Title:** Application Enhancements (Pooled)

**Project Cost:** \$1,389,000

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### **Project Description**

This Information Systems project is necessary to enhance the functionality of software applications. The Company's software applications are used to support all aspects of business operations including provision of service to customers, ensuring the reliability of the electrical system and compliance with regulatory and financial reporting requirements.

Of the software applications proposed to be enhanced in 2008, some, such as the Customer Service System, are custom-developed while others, such as the Asset Management System, are vendor-provided.

The application enhancements proposed for 2008 are not inter-dependent. But, they are similar in nature and justification and are therefore pooled for consideration as a single capital project.

Details on proposed expenditures are included in *6.1 2008 Application Enhancements*.

### **Justification**

Some of the proposed enhancements included in this project are justified on the basis of improving customer service. Some will result in increased operational efficiencies. Some projects will have a positive impact on both customer service and operational efficiency.

Cost benefit analyses, where appropriate, are provided in *6.1 2008 Application Enhancements*.

### **Projected Expenditures**

Table 1 provides a breakdown of the proposed expenditures for 2008 and a projection of expenditures through 2012.

<b>Table 1</b>				
<b>Project Expenditures</b>				
<b>(000s)</b>				
<b>Cost Category</b>	<b>2008</b>	<b>2009</b>	<b>2010 - 2012</b>	<b>Total</b>
Material	\$ 95	-	-	-
Labour – Internal	922	-	-	-
Labour – Contract	-	-	-	-
Engineering	42	-	-	-
Other	330	-	-	-
<b>Total</b>	<b>\$1,389</b>	<b>\$1,325</b>	<b>\$4,220</b>	<b>\$6,934</b>

### Costing Methodology

Table 2 shows the annual expenditures for this project for the most recent five-year period.

<b>Table 2</b>					
<b>Expenditure History</b>					
<b>(000s)</b>					
<b>Year</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007F</b>
<b>Total</b>	<b>\$920</b>	<b>\$1,313</b>	<b>\$1,185</b>	<b>\$1,540</b>	<b>\$1,281</b>

The budget for this project is based on cost estimates for the individual budget items.

All materials and services for this project will be purchased after examining the competitive bids of prospective suppliers. Where alternative suppliers do not exist, all materials and services will be negotiated with a sole-source supplier to ensure least cost.

### Future Commitments

This is not a multi-year project.