P.U. 35 (2003)

IN THE MATTER OF the *Public Utilities Act*, RSN 1990, c. P-47 (the "*Act*");

and

IN THE MATTER OF capital expenditures and rate base of NP;

and

IN THE MATTER OF an application by Newfoundland Power Inc. for an Order pursuant to Sections 41 and 78 of the *Act*:

(a) approving its 2004 Capital Budget of $53,909,000; and
(b) fixing and determining its average rate base for 2002 in the amount of $573,337,000.

BEFORE:

J. William Finn, Q.C.,
Presiding Chair.

Gerard Martin, Q.C.,
Commissioner.

Don R. Powell, C.A.,
Commissioner

November 5th, 2003

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DECISION AND ORDER

I. OVERVIEW

For the year 2004 Newfoundland Power Inc. (NP) has proposed to the Board of Commissioners of Public Utilities (the "Board") a total capital budget in the amount of $53,909,000. This proposed budget is broken down into the following categories and respective budget allowances:

Energy Supply	$ 6,945,000
Substations	5,199,000
Transmission	2,315,000
Distribution	27,636,000
General Property	709,000
Transportation	3,487,000
Telecommunications	120,000
Information Systems	3,948,000
Unforeseen Items	750,000
General Expenses Capital	2,800,000
	$53,909,000

II. BACKGROUND

1. The Application

NP filed an Application (the "Application") with the Board on July 25th, 2003 requesting the Board make an Order:

(a) pursuant to section 41 of the Act, approving NP's purchase and construction in 2004 of the improvements and additions to its property in the amount of $53,909,000; and

(b) pursuant to section 78 of the Act, fixing and determining NP's average rate base for 2002 in the amount of $573,337,000.

2. Board Authority and Process

i) Legislation

The legislation requiring the Board's approval of NP's capital budget, is unchanged in recent years and is as set out in s. 41(1), 41(3) and 78 of the Act which sections prescribe in essence as follows:

1. s. 41(1) A public utility must submit an annual capital budget to the Board for the Board's approval not later than December 15th in each year for the next calendar year;

2. s. 41(3) A public utility is prohibited from proceeding without the prior approval of the Board, with construction, purchase or lease of improvements or additions to its property where (a) the cost of the construction or purchase is in excess of $50,000.00; or (b) the cost of the lease is in excess of $5,000.00 in a year;

3. s. 78 The Board has the legislative authority to fix and determine the average rate base of the utility.

(ii) Process

Notice of this Application was published by the Board in various newspapers throughout the Province of Newfoundland and Labrador. The first such Notice was published on August 5th, 2003, notifying the general public and all interested parties of the scheduled hearing date of the Application, September 10th, 2003 and inviting intervenor submissions. The Notice also advised the general public as to the procedure for filing letters of comment in the proceedings as well as the procedure for making oral presentation to the Board relevant to the proceedings.

Pursuant to the Notices the Board received one intervenor submission that being from Newfoundland and Labrador Hydro (NLH) on August 15, 2003.

Additionally a letter of comment was received from Mr. Dennis Browne, Q.C. of St. John's, Newfoundland on September 12, 2003.

NP presented pre-filed testimony and exhibits as well as the oral testimony of its witnesses. Pursuant to section 14(1) of the Board's Regulations information requests were directed to NP from the Board Hearing Counsel and NLH Counsel.

The hearing commenced on Wednesday, September 10th, 2003 with the following parties appearing:

Party	Represented by
Newfoundland Power Inc.	Brock Myles, LL.B. and Gerard Hayes, LL.B.
Newfoundland and Labrador Hydro	Geoffrey Young, LL.B.

Also participating at the hearing was Board Hearing Counsel, Mark Kennedy, LL.B.

The Board was also assisted by Board Counsel, Dwanda Newman, LL.B.

The following witnesses were called and made available for cross-examination during the hearing by NP, with no witnesses being called by either NLH or Board Hearing Counsel:

Earl Ludlow, P. Eng., Vice President, Engineering, and Production;
Phonse Delaney, P.Eng., Manager, Western Region;
Michael Mulcahy, Vice President, Customer and Corporate Services;
Peter Collins, Manager, Information Services;
Barry Perry, C.A., Vice President, Finance and Chief Financial Officer; and
Lisa Hutchens, C.A., Manager, Finance.

The evidentiary portion of the hearing took place on September 10th, 11th and 12th and final oral submissions of the parties were presented to the Board on September 19th, 2003.

iii) Guidelines

In P.U. 36(2002-2003) the Board identified the fundamental issue in the capital budget review process at page 7, where it said:

> "The fundamental issue becomes one of justification and whether or not appropriate quantitative and qualitative data is available to the Board to determine the necessity and reasonableness of capital expenditures requested by the utility in meeting its legislative imperatives."

Accordingly the Board has proceeded in the within hearing to attempt to test the necessity and reasonableness of NP's projected capital expenditures based on efficient management and operation of its assets, while providing equitable access to least cost and reliable power to ratepayers. In this way the Board maintains a balance between the competing interests of consumers and investors in the utility.

In P.U. 36(2002-2003) the Board formally set out guidelines in an effort to ensure the filing of adequate information to the Board, to facilitate review of a utility's capital budget and to effect a degree of uniformity in the filing process between different utilities. These guidelines require that NP file with its capital budget applications:

> "viii) A cost benefit analysis of all alternatives, both internal and external, that have been considered, including DSM measures that have been evaluated."

These guidelines are based on similar guidelines for NLH set forth in P.U. 7(2002-2003), schedule "3". The interpretation of these guidelines became the source of some controversy during the hearing of the Application. NP argued that there were several circumstances when cost benefit analysis was not required. A number of examples were identified by both Counsel for NLH and Board Hearing Counsel where no cost benefit analysis was undertaken as part of the justification process of the project by NP.

NP took the position that cost benefit analysis was not required where the main justification for a project is qualitative, such as customer service or safety and reliability.

NP also suggests that a cost benefit analysis is not required where the project is not of a material amount. While the guidelines that the Board established for NP in P.U. 36(2002-2003) did not specify that a cost benefit analysis was only necessary for projects of a material amount, NP argued that the guidelines stemmed from the Board's decision in P.U. 7(2002-2003) where the Board said at p. 169, para. 45:

> "The Board will require NLH, commencing with the 2003 capital budget application, to use a net present value methodology together with supporting justification to evaluate projects of a material amount." (emphasis added)

NP says that the guidelines must be read in light of these comments and that therefore a certain degree of materiality becomes relevant before an obligation is triggered to conduct a cost benefit analysis.

The Board accepts that a cost benefit analysis may not be necessary in all circumstances particularly where, for example, the estimated cost of such analysis may not be warranted given the amount of the projected capital expenditure. Accordingly the Board will modify item viii of the guidelines established by P.U. 36(2002-2003), Schedule C, to read as follows:

> " viii) For projects of a material amount, a cost benefit analysis of all alternatives, both internal and external, that have been considered, including any DSM measures that have been evaluated."

The Board acknowledges that a technical conference is planned for the purpose of exploring issues of process and filing requirements for capital budget applications (hereinafter referenced as the technical conference). Such technical conference may be an appropriate forum for the consideration of issues surrounding capital budget approval such as the definition of "materiality".

III. 2004 CAPITAL BUDGET PROJECTS

1. Energy Supply

Included in this category are projects comprising approximately 13% of the overall budget which pertain to the reliability of various hydro plant facilities, a complete refurbishment of the New Chelsea hydro plant, the purchase of a second 2.5 MW portable diesel generator and the undertaking of major electrical equipment repairs.

i) New Chelsea Hydro Plant Refurbishment - $3,973,000 (B-12)

With respect to the proposed refurbishment of the 46-year old New Chelsea plant a detailed engineering report and site assessment was filed as part of the justification for this particular project. While an economic analysis of the Plant over 25 years projected a positive net present value, the project was justified by NP not only on a cost basis but also under the heading of safety and reliability.

The Board is of the opinion that with respect to the major refurbishment of a generating facility a formal discussion between NP and NLH to ascertain and document that needless expenditure is not being caused by duplication of services or lack of sharing of resources should have been undertaken. While Mr. Perry in his evidence indicated that discussions do take place with NLH there was nothing specific that could be identified on this issue as having taken place.

The guidelines established by the Board require that the utility provide:

> "A description and related documentation outlining the results of any discussions of the project that have taken place between the utilities in an effort to reduce expenditures by avoiding duplication of services, or increased sharing of resources and expenses."

While this guideline does not expressly mandate that such discussions take place the Board finds it appropriate that a utility undertake such discussions and document the results as part of the application.

Notwithstanding the above, the evidence suggests that power produced from the New Chelsea Plan is cheaper than power provided from other major sources. A Report filed by NP, Energy Systems, Appendix 2, Appendix E, concludes that the cost of producing power at this plant is 3.17 cents per kWh compared to the incremental cost of producing energy at Holyrood of 5.53 cents per kWh.

In addition, the Board is concerned with the role of this hydro facility in the reliability of the interconnected system and is cognizant of the safety issues associated with the continued use of this plant particularly with respect to the condition of the penstocks. According to the "New Chelsea Plant Planned Refurbishment 2004 Report" (Volume II, Appendix II, Att. A) the wooden penstock has currently some 20,000 wooden plugs, as well as approximately 100 steel plates to deal with leaks, blowouts, deteriorating cradles and crushed woodstaves. The steel penstock at New Chelsea was found to have heavy pitting and serious loss of interior wall thickness.

The Board is of the opinion that the issue raised regarding duplication notwithstanding, this project should be approved at this time on the basis of cost, reliability and safety of the system.

The issue of appropriate documentation to identify and/or establish that both utilities have dealt with the issue of duplication when proposing new or refurbished energy supply can be explored at the proposed technical conference.

ii) Hydro Plant Facility Rehabilitation - $1,122,000 (B-10)

The Hydro Plant Facility Rehabilitation project contained in this category included the replacement or rehabilitation of major components at various plants one of which entailed the rewinding of one of the two generators at the Rattling Brook Plant.

While the Board accepts the justification presented for this project, the Board will make additional comments as points were raised which the Board finds pertinent to future process of capital budget justification.

In the justification process in this category NP pointed to the estimated annual average total production capability of a particular plant. Counsel for NLH queried the usefulness of such a globalized reference as opposed to looking at the average actual contribution of a particular facility to the total system production. The Board believes that this may be a more appropriate and meaningful approach which may be explored more fully at the proposed technical conference.

Additionally, while NP also justified the Rattling Brook project on the basis of maintaining access to hydroelectric generation at a cost that is lower than the cost of replacement options the issue was raised of the timing of such work as part of least cost supply of reliable power. NLH Counsel queried whether it was feasible to defer such work to another time and therefore not incur the projected expense in the current budget. On further cross-examination it became apparent that, while the Plant had continued operation without spillage in a previous year, while one of its two generators was being rewound, failure of the second generator of the same vintage during a spring runoff might result in spillage. The Board accepts NP's proposition that it would not be appropriate to run generators to failure as it would result in an unplanned rewinding of the generator, thereby incurring additional costs in the vicinity of $250,000.

The Board finds that the additional information brought to light on cross-examination with respect to Rattling Brook is the type of information which should be highlighted in the justification process, as opposed to limiting such rationale to broad generalized justifications of

the potential maximum production capability of the plant vs. the cost of a similar amount for thermal production.

The Board, however, believes that a comparison of average annual actual hydro production for a facility to the cost of equivalent thermal production is useful.

iii) Purchase 2.5 MW Standby Portable Diesel - $1,700.000 (B-14)

With respect to purchase of a second 2.5 MW portable diesel generator unit, the Board notes that NP is scheduled to take delivery of the 2.5 MW portable diesel, approved in P.U. 36(2002-2003), in December of 2003. The first portable will, in compliance with that Order, be stationed in Port-aux-Basques. This purchase was approved in light of the planned decommissioning of two smaller portables situated on the west coast of the island. The Board notes that in P.U. 36(2002-2003) the Board accepted NP's evidence that its existing portables on the west coast should be decommissioned and even if refurbished would "not add much value to the system in terms of backup or emergency generation."

In the pre-filed evidence of Earl Ludlow and Phonse Delaney it was indicated that "the 2.5 MW portable diesel generator proposed to be acquired at a cost of $1,700,000 will replace capacity that was lost when two existing portable generators and the St. John's diesel generators are decommissioned in 2003. However in his oral evidence Mr. Ludlow confirmed that the 2.5 MW portable diesel approved for purchase as part of the NP 2003 capital budget surpassed the capacity which would be lost with the decommissioning of the two existing portable generators. (Transcript, Sept 11, 2003, p. 167)

Furthermore, there was no evidence provided to the Board with respect to the actual portable capacity currently available to NP on the east coast of the island. The evidence only noted that there is portable generating capacity available to NP from NLH under an Equipment

Sharing Agreement. NP also indicated that the proposed portable diesel would be stationed at Trepassey and would serve as back up on the radial line serving Trepassey.

A report referenced in the evidence and filed with the Board as part of the 2003 NP capital budget entitled "Portable Diesel Generation: Reliability Analysis, Sizing and Unit Location Review, October, 2002" did not address the portable capacity which may currently be available to NP on the east coast of the island. In respect of the recommended acquisition of two 2.5 MW units the report concluded that "the purchase of these units may be completed over two or more years" (emphasis added). This does not appear to convey any sense of immediate urgency.

On the basis of the information before it the Board is not prepared to approve the purchase at this time of a second 2.5 MW portable diesel generator. NP may at a later date make application presenting additional information to support the purchase of further portable diesel generation.

The Board will approve the proposed improvements and additions in relation to energy supply, with the exception of the 2.5 MW portable diesel purchase, in the amount of $ 5,245,000.

2. Substations

The substation category total proposed expenditure is the sum of $5,199,000. The largest budgeted projects in this category to be undertaken include (a) rebuilding various substations to replace deteriorated and substandard substation infrastructure, (b) replacement of obsolete and unreliable electrical equipment, (c) increasing Corner Brook transfer capacity, as well as (d) replacing electromechanical feeder relays and reclosers with electronic relays and reclosers.

i) Increase Corner Brook Transformer Capacity $1,184,000 (B-30)

The largest single expenditure in the substation category is the planned increase to the transformer capacity in Corner Brook. This project would encompass installation of a new 25 MVA transformer at Walbournes substation to replace an existing 15 MVA unit which will then be relocated to the Bayview substation. The project is necessary to accommodate new growth in the Corner Brook area with current forecasts by NP indicating that current capacity will be at 100% loading in the winter of 2003/04. A "Power Transformer Study City of Corner Brook" filed by NP in the hearing indicated that the total 12.5 KV load in the City of Corner Brook will exceed the total 12.5 KV substation transformer capacity in 2004. This study projecting the electrical demands for the City of Corner Brook ranked three alternative possible situations on this proposed budget item and an economic analysis of each established the proposed budget item as the least cost alternative. The Board accepts the conclusions of the report filed.

ii) Distribution System Feeder Remote Control - $1,000,000 (B-26)

The Board notes that the replacement of the electromechanical feeder relays and oil filled reclosers is the continuation of a project commenced in 2002 for the purpose of replacing a number of aging, limited function electromechanical relays and oil filled reclosers with multifunction electronic relays and reclosers that can be remotely controlled by the System

Control Center. NP points out that the company's electromechanical relays and oil filled reclosers are, on average, twenty-five years old, nearing the end of their useful life and that all will require replacement over the next few years. The Board also acknowledges the environmental safety aspect of the reduced hazard of potential oil spill by replacement of the old oil filled reclosers with the more modern reclosers which contain no oil. Similar projects had been approved by the Board as an ongoing project in the past two capital budget applications. The Board further notes the "Distribution Feeder Remote Control and Relay/Reclosers Replacement Review" filed with the Board during the NP 2002 capital budget application justified the project on the basis of improvement in safety, operating efficiency, reliability component and as well the reduction in risk to the environment. The Board remains satisfied with the justification and prudence of this initiative.

The Board will approve the proposed improvements and additions relating to substations as proposed in the amount of $5,199,000.

3. Transmission

i) Rebuild Transmission Lines - $2,315,000 (B-32)

This category involves the replacement of poles, cross arms, conductors, insulators and miscellaneous hardware due to deficiencies identified during annual inspections, engineering reviews and/or day to day operations.

The average age of all the company's transmission lines is 34 years (PUB-37 NP). A substantial portion of the work outlined in this category includes individual items costing less than $50,000 - totalling $739,000 or approximately 32% of the total budget for the category.

The two largest items in this category involve rebuilding a 4.7 km section of transmission line 3L (Petty Harbour-Goulds) at a cost of $364,000 and rebuilding a 5.1 km section of 403L (St. George's - Lookout Brook) at a cost of $380,000. Both items are as a result of what is described by NP as significant deterioration of the poles, cross arms and other hardware. 3L was built in 1930 and 403L was built in 1958. The projects in this category have been justified by NP on the basis of necessity to ensure continuity of service and reliability of supply to customers.

The Board will approve the proposed improvements and additions in relation to this category in the budgeted amount of $2,315,000.

4. Distribution

This category involves a proposed expenditure of $27,636,000 which represents 51% of the entire NP proposed 2004 capital budget.

Overall this category includes construction of both primary and secondary distribution lines to connect new customers to the distribution system, as well as upgrades to the capacity of existing lines to accommodate customers who require an increase in their electrical load. NP points out that 50% of this budget category is attributable to providing service to new customers wishing to connect new homes and businesses to the power grid. (Transcript, Sept. 10, 2003, p. 62)

Among the largest items in this category are extensions ($4,956,000), transformers ($4,965,000), reconstruction ($2,461,000) and trunk feeders ($6,748,000). The extension and transformer items are, according to NP, primarily influenced by customer growth with budgeted expenditure levels calculated with reference to the company's growth forecast and using historical data as a guide.

i) Trunk Feeders

The proposed trunk feeder expenditures and reconstruction expenditures are focused primarily, according to NP, on reliability. The 2004 distribution reliability initiative will expend approximately $949,000 for New Wes Valley, Port de Grave and Torbay areas. The 2004 budget will also propose a further expenditure in the amount of $750,000 to complete the St. John's, Water Street underground switch replacement project.

The rebuild distribution line initiative involves approximately $4.1 million to refurbish and replace structures and equipment on approximately 20% of the company's 300 distribution feeders. NP explains that the rebuild distribution line item which is budgeted 85% higher than the previous five-year historical average, is due primarily to two factors. (PUB-54) Firstly, a number of included items, namely, replacing transformers, installing lightning arrestors, installing current limiting fuses and installing cutouts, were previously reported under other project titles; secondly, the process of prioritization by risk assessment for identified projects has resulted in the need for added work of varying degrees to 56 of the 300 distribution feeders in 2004.

In this category under the project item Rebuild Distribution Lines the proposed addition of lightning arrestors at an approximate cost of $300,000 became the subject of detailed scrutiny. Evidence of Mr. Ludlow and Mr. Delaney pertaining to the "Distribution Lightning Arrestors Report" dated June, 2003 filed under Volume III, Distribution, Appendix 2, Attachment B of the Application, confirmed the annual number of transformers that have failed due to lightning was approximately 700 in the past 5 years. The annual number of units that have failed range from a low of 22 units in 2000 to a high of 323 units in 2002 with the average over the past 5 years being 139 unit failures translating to an average annual cost in excess of $300,000 per year. NP indicated that it is aware of only two transformer failures where lightning arrestors were installed and such failures were the result of direct lightning strikes which arrestors are not designed to prevent. NP concluded that in areas where lightning arrestors have been installed the company has observed that transformer failure due to lightning strikes has been significantly reduced. This project item at this time is primarily justified by NP on the basis of economics. The referenced report and evidence concludes that the cost estimates to install arrestors as part of

planned feeder upgrade work is consistently less than the cost of such installation as a stand-alone project. A cost analysis of alternative approaches to lightning arrestor installation detailed in the report identifies the NP proposal as the most cost effective. The Board accepts the prudence of the lightning arrestor program as proposed on the basis of promoting significant improvement in reliability to the electrical system at least cost.

ii) Meters - $1,174,000 (B-36)

Another area in this category which was the subject of discussion was the issue of the proposed purchase of 3,000 AMR (Automated Meter Reader) meters at a cost of $360,000. These meters were justified by NP under the headings of employee safety and accessibility. No cost benefit analysis was offered by NP. NP justtified this lack of a cost benefit analysis on the basis that the acquisition and installation of AMR meters was primarily for safety and access reasons rather than operational efficiencies. While the Board is highly sensitive to areas of employee safety the Board is not convinced that the evidence of NP on the issue justifies a switch to AMR meters based on employee safety. The evidence of both Mr. Delaney and Mr. Ludlow was tenuous as to whether the specific safety concerns identified in NLH-67 NP would in fact be addressed by a switch to AMR meters.

On the issue of lack of access to meters, the evidence of NP again was generalized. NP offered in NLH-68 NP a number of areas where, in its opinion, a reduction in the number of inaccessible meters and a resulting reduction in the number of billing estimates would have a positive impact on operating costs. There was no evidence from NP indicating that a cost benefit analysis could not have been completed on this aspect and the Board is of the opinion that such an analysis would have been useful in evaluating the justification of the project.

Notwithstanding the above the Board notes Mr. Delaney's evidence that this project is not forecast to continue in future budgets. The project involves 3000 meters out of approximately 212,000 used by Newfoundland customers. The Board does accept that there are throughout the NP system as a whole, difficulties associated with accessibility to meters at one level or another. The Board notes as well Mr. Ludlow's comments that there is a trend toward AMR meter installation. This may be an indication of where the industry is headed in this regard although there was little evidence on this point.

The Board is of the opinion that, given the very limited nature of this project at this time, it may afford an appropriate basis to help gauge any future expansion which, while not forecast at this time, may develop. The Board would emphasize at this time that any future expansion of this program should identify or detail more explicitly the correlation with safety issues and accessibility as well as indicate a cost benefit analysis of the operational efficiencies.

The Board will approve the proposed improvements and additions in relation to Distribution in an amount of $27,636,000.

5. General Property

This category with a budgeted expenditure of $709,000 comprises a $535,000 allotment for tools and equipment utilized by line staff and office furniture and equipment. The balance of the budget allotment in the amount of $174,000 concerns company buildings and property that are not part of the electrical supply to customers.

i) Tools and Equipment - $535,000 (B-59)

The tools and equipment project sub category is directed to the replacement of tools and equipment used by line and support staff, such as hot line equipment, which must meet rigorous safety requirements. Also included in this sub category are both engineering equipment and tools typically used by electrical maintenance personnel. Such engineering equipment is utilized in verifying the operation of the protection and remote control of the power system as well as verifying data communication systems for wireless and serial communication.

Such additions and replacements stem both from innovation in tools and test equipment, as well as normal deterioration and inability to maintain obsolete test equipment. The Board accepts the justification of such tools and equipment as necessary for the safety of workers and maintenance of the reliability of the electrical system and SCADA communication network.

ii) Real Property - $174,000 (B61)

A $50,000 expenditure is directed to replacement of office chairs and furniture, which NP, with approximately 660 full time employees, proposes is necessary as a result of normal wear and tear.

The additions and renovations to company building and property include replacing the roof of the Stephenville office building at a cost of $65,000 as well as four project items totalling $109,000 with each particular expenditure item being less than $50,000.

The Board is satisfied that the expenditures in this project heading are prudent and reasonable.

The Board will approve the proposed improvements in relation to General Property in the amount of $709,000.

6. Transportation

Purchase Vehicles and Aerial Devices - $3,487,000 (B-62)

This project involves the replacement of passenger vehicles and line trucks which the company has determined to have reached the end of useful life by 2004. NP proposes to acquire a total of 36 replacement vehicles made up of 15 passenger vehicles including light duty trucks, 12 heavy fleet vehicles and 9 off road vehicles including snowmobiles, ATV's and trailers.

In P.U. 36(2002-2003) the Board noted that there was insufficient evidence at the time to indicate if NP's replacement criteria was itself encouraging early or unnecessary replacement of vehicles and noted that according to NP the average life span of its passenger vehicles was 5 years or 150,000 km and for heavy fleet vehicles the average life span was 10 years or 200,000 km. NP in this application has indicated that its current guidelines for vehicle replacement are for passenger vehicles 5 years or 150,000 km and for heavy fleet 10 years or 250,000 km. Mr. Delaney noted in evidence that these guidelines once reached only serve to initiate a review of a particular vehicle's maintenance cost, operating history and condition of the vehicle before a decision is made to replace. A review of the details of the proposed replacement program for 2004 filed in Volume 111, Transportation, Appendix 1, Attachment A of the Application indicates for the heavy fleet an average life of approximately 13 years together with an average odometer reading in excess of 216,000 km with a low of $8,862.11 in maintenance cost for the period May, 2002 - April, 2003 to a maximum of $31,141.01 for the same period. The same analysis for the passenger fleet would indicate an average life span of 6 years and in excess of 158,000 km with a maintenance low for the same period of $1,637.06 to a high of $9,117.05.

The Board noted in P.U. 36(2002-2003) that NP since 1997 has decreased its overall fleet by 23% from 536 to 414 units. The 2004 proposed budget involves only replacement with no increase in the vehicle fleet.

The Board concludes that the replacement policy of NP is prudent and reasonable.

The Board will approve the proposed improvements and additions in relation to transportation in the amount of $3,487,000.

7. Telecommunications

Replace Upgrade Communications Equipment - $70,000 (B-64)

Substation Telephone Circuit Protection - $50,000 (B-66)

This category totalling $120,000 consists of an expenditure of $70,000 to replace or upgrade communication equipment including the replacement of approximately 20 mobile radios out of some 340 units in service. An additional $50,000 is directed at installation of upgrades to teleline isolation installations at five of the company's substations.

In P.U. 36(2002-2003) the Board noted the issue of the development and sharing of a VHF Mobile Radio System between NP and NLH. The Board in P.U. 29(2003) indicated various directives which will be made by the Board to both NP and NLH with respect to further investigation of the feasibility of a common shared VHF system.

The planned expenditure for 2004 is substantially less than the budgeted amount in 2003 and the Board does not consider the planned expenditures to be unreasonable. The Board continues to be cognizant of the safety issues raised in the area of communication by NP personnel and the importance to the system of a reliable communication system.

The Board will approve the proposed improvements and additions related to telecommunications in the amount of $120,000.

8. Information Systems

In 2004 the company proposes an expenditure of $3,948,000 which comprises approximately 7.3% of the total 2004 budget. The Board notes this budgeted expenditure is approximately 32% less than NP's forecast expenditure in this category to December 31st, 2003. This category comprises projects related to NP's information systems and computer technology software and hardware infrastructures.

NP filed as part of this Application, as ordered by the Board in P.U. 36(2002-2003), an updated Information Technology Strategy Report for the period 2004 - 2008. This report outlines that NP's IT strategy during this time frame will remain essentially unchanged from the last five year period, that being to invest in technology to improve customer service or enable improved operating efficiency. The report highlights that over the next five years NP will concentrate on obtaining further value out of its existing technology investment and less on the implementation of new application.

The IT category is essentially divided into two areas 1) applications and 2) improvements and addition to infrastructure.

Under the applications category NP seeks to implement enhancements to existing applications, upgrade old technology and as well address reliance of the Customer Service System (CSS) on the Open VMS Operating System. The Open VMS System, according to NP, has recently received renewed system commitment from Hewlett Packard to at least the year 2011 which will now allow NP to defer its plan and associated cost to switch to a new operating system. This decision will be re-assessed in 2006 by NP when it will re-evaluate the actual level of commitment by Hewlett Packard and software suppliers to this operating system.

The infrastructure portion of this category would see NP replace network components that no longer support the business needs of the company and provide additional network capacity and performance needed to deliver its business applications. Additionally NP seeks to replace 109 computers.

Issues were raised by Board Hearing Counsel on the level of detail offered by NP in respect of its IT budget overall, particularly from the perspective of provision of quantitative and qualitative data to determine both (a) whether a particular project is necessary, as well as (b) whether the proposed level of expenditure is necessary and reasonable. Another issue raised by Board Hearing Counsel related to the absence of cost benefit analysis with respect to the projects proposed in this category. NP's justification of these projects invariably pointed to what is termed a large customer service and/or reliability component in addition to benefits of operational efficiency. NP's position was generally that, where a project in this area contained a significant customer service component, cost benefit analysis was not appropriate as significant qualitative components or benefits were not easily or always capable of economic analysis.

The Board acknowledges the importance of NP maintaining an information system which will enable it to adequately service its customers needs, including its essential task of providing to its customers equitable access to least cost and reliable power. However, the Board is of the opinion that some appropriate objective means of justification of projects which entail, as NP would contend, a significant customer service and/or reliability component needs to be achieved.

The Board recognizes the difficulty in justifying what are primarily regarded as qualitative aspects of a capital budget project but again notes that this issue may be explored during the upcoming technical conference.

Taking note of NP's newly stated focus on an overall philosophy geared to extending the asset life of the technology and given the Board's regard for the fundamental importance of the Information System to the efficient, reliable and safe operation of the company the Board will on the basis of the justification provided in this application approve the category budget as proposed.

The Board will approve the proposed improvements and additions in relation to Information Systems in the amount of $3,948,000.

9. Unforeseen Items

The amount allocated to this budget item is the sum of $750,000. The unforeseen item category is an allowance sought by NP and described in the pre-filed evidence of Ludlow and Delaney as an amount "required to permit the Company to act expeditiously to deal with unexpected events affecting the electrical system for which funds have not been specifically budgeted".

In prior capital budgets the allowance for unforeseen items was incorporated under the General Property Category. In P.U. 36(2002-2003) the Board ordered NP to separate the allowance for Unforeseen Items and to report budgeted, actual and forecast expenditures and variances separate from General Property. As indicated in P.U. 36(2002-2003) this method is consistent with NLH reporting.

No issue was taken by any party at the hearing with respect to the amount allowed for unexpected items which may fall into this category such as replacement of facilities and repair to equipment caused by unforeseen major storm damage or unforeseen equipment failure.

The amount of $750,000 has been the stated amount in recent budgets and given no evidence to suggest this amount does not remain prudent for such eventualities the Board considers it prudent and appropriate to approve this allowance.

The Board will approve an unforeseen item allowance in the amount of $750,000.

10. General Expense Capital

The 2004 capital budget includes an amount of $2,800,000 for General Expense Capital (GEC). The GEC is the amount of the company's administration expenses that are charged to capital, calculated in accordance with P.U. 3(1995-1996). The GEC is consistent with previous years and has trended a decline from a level of $10,000,000 in 1993 as a result of P.U. 3(1995-1996) which directed a change in the method of allocating GEC by moving from a full cost method to an incremental cost method.

The Board is satisfied that the calculation of the amount to be allocated to GEC is in accordance with P.U. 3 (1995-1996) and will approve the $2,800,000 included in the 2004 capital budget.

IV. 2004 Capital Budget

In P.U. 36(2002-2003) the Board highlighted a number of items raised by the parties which the Board termed as significant. Two of these items which the Board would like to emphasize again are:

1. The need for more focus on enhanced project definition, format and justification to streamline future capital budget applications; and

2. The adequacy of existing tests and measures justifying to the Board the necessity and reasonableness of capital expenditures such as reliability measures, requirements for NPV analysis and enhanced project justification.

While the Board noted in P.U. 36(2002-2003) that there was insufficient evidence at that hearing to render decisions on such highlighted items, it did indicate that such items may be explored at a technical conference.

Notwithstanding the lack of evidence to fully render a decision on such issues the Board did order compliance with certain guidelines in an effort to streamline the budget process and to focus project definition and justification, pending further review of same, particularly following a complete and full discussion of such issues at the proposed technical conference.

The Board in the present hearing has proceeded on the basis that such guidelines are merely guidelines and to some extent remain open at this time to a certain degree of interpretation as raised by NP. The Board acknowledges that NP has made a legitimate effort to comply with its interpretation of the letter and spirit of such guidelines.

The Board further noted in P.U. 36(2002-2003) the escalation of the NP capital budget over the past number of years. In its decision, P.U. 36(2002-2003), the Board concluded that it was desirable to achieve stable and predictable year over year capital budgets and accordingly NP was ordered to file, as part of the 2004 capital budget application, a Capital Budget Plan to include, inter alia:

1. Its plan to maintain stability in its budget process over the next 5 years; and

2. Explanation of patterns of expenditures for each budget category and for the overall budget along with reasons for changes in expenditure patterns.

The plan was filed in the application and entitled "2004 Capital Budget Plan, July 25th, 2003".

This plan establishes that NP will propose to invest approximately $260 million in plant and equipment between 2004 and 2008 inclusive. During the same period capital expenditures are forecast to remain relatively stable with a $53 million annual average for a low of $49 million in 2008 to a high of $56 million in 2006.

In an effort to maintain the stability and predictability of such year over year capital budgets the Board will require NP to file with future annual capital budget applications, unless otherwise directed by the Board, a similar capital budget plan, which should include:

(a) An updated five (5) year plan for maintaining the stability of the capital budget and the capital works program, including an amount of maximum budget growth and a contingency for unexpected or unusual events during the period.

(b) An identification of any change or anticipated change in expenditure patterns and full explanation of reasons therefore.

The Board after consideration of the application and evidence as a whole filed herein will accept NP's proposed 2004 capital budget, excluding the proposed purchase of the 2.5 MW portable diesel.

The Board will approve a 2004 capital budget in the amount of $52,209,000 for improvements and additions to NP's property pursuant to s. 41(1) of the Act.

V. 2002 Rate Base

The average rate base for 2002 as calculated by the company is $573,337,000 as set forth in Schedule "D" of the Application.

The rate base consists mainly of fixed assets upon which the company is allowed to claim a return pursuant to the Act. Changes to the rate base are primarily a function of two factors 1) capital expenditures and 2) depreciation. Capital expenditures increase the rate base and depreciation serves to decrease the rate base.

NP's rate base grew by 5.17% in 2002 from $545,162,000 in 2001. According to NP this growth is primarily due to increases in plant investment. The depreciation rates in effect and utilized by the company in calculation of 2002 average rate base were those approved by the Board in P.U. 7(1996-1997).

The Board in P.U. 19(2003) ordered certain changes to the manner in which average rate base for the company is to be determined. These changes included a move toward the adoption of the asset rate base method for such determination and beginning in 2003 the incorporation by NP therein of the company's average deferred charges. This Order of the Board further required NP to file annually with its capital budget application, unless otherwise ordered by the Board, 1) evidence relating to changes in deferred charges, including pension costs and 2) a reconciliation of average rate base to average invested capital.

A report (Information 1) filed with the Board in this hearing by Grant Thornton included a review by Grant Thornton pertaining to the calculation by NP of the 2002 actual average rate base, the calculations for 2003 and 2004 of the forecast average rate base and the addition of deferred charges to the average rate base calculations commencing in 2003. The report concluded:

1. That the 2002 average rate base included in Schedule "D" of the Application is accurate and in accordance with P.U. 36(1998-1999);

2. That the company's forecast average rate base for 2003 and 2004 are calculated correctly and in accordance with P.U. 36(1998-1999) and P.U. 19(2003);

3. That the company has included average deferred charges in rate base commencing with the year 2003, and

4. That the company in compliance with P.U. 19(2003) has filed evidence with the Board related to its forecast deferred charges, including pension costs, to be included in the calculation of the forecast average rate base for 2003 and 2004.

The Board finds that the average rate base included in Schedule "D" is accurate and in accordance with applicable Board Orders as verified by Grant Thornton in its review filed herein.

The Board wishes to note issues raised during the hearing concerning the Mercer Human Resource Consulting Report on the Actuarial Valuation for Funding Purposes as at December 31, 2000 dated July 2002 with particular reference to the $27,919,000 unfunded pension liability identified in the report of December 31st, 2000, filed in response to PUB 193 NP. Particular issues were raised by the Board Hearing Counsel with respect to how the consultant determined an amortization period of 5 years to be appropriate in respect of the unfunded liability in light of the fact that the *Pension Benefits Act, 1997, SNL 1996, c. P-4-01* allowed an amortization period up to 15 years. The Board is concerned with the effect this may have on rate base. Mr. Perry in his evidence indicated that NP accepted the recommendation of the report and, it is clear from the evidence, did not question in any way the recommended amortization period. NP will be required to file a report from its actuaries giving specific reasons for the amortization period recommended in the Mercer report, together with reasons mitigating against use of a longer amortization period. Such information should also be included with future actuarial reports.

This may then also be reviewed by the Board as part of its annual review of 2003 and in future years where appropriate.

The Board pursuant to s.78 of the Act will fix and determine NP's average rate base for 2002 at $573,337,000. Unless otherwise ordered by the Board, NP will be required to file a report addressing the amortization period in respect of the unfunded pension liability in advance of or coincident with the filing of its application for approval of its 2003 rate base.

VI. ORDER

IT IS THEREFORE ORDERED THAT:

1. **Pursuant to section 41 (3) of the Act, improvement and additions to NP's property are approved as follows:**

   Construction and purchases in excess of $50,000, as set out in Schedule B attached to this Order.

2. **The amended 2004 Capital Budget for improvement and additions to NP's property in an amount of $52,209,000 is approved pursuant to section 41(1) of the Act.**

3. **Unless otherwise directed by the Board, NP shall follow the guidelines as set out in Schedule A attached to this Order, which may be amended from time to time by the Board.**

4. **Unless otherwise directed by the Board, NP shall provide in conjunction with the 2005 Capital Budget Application, a status report on the 2004 capital budget expenditures showing for each project:**

   (i) the approved budget for 2004
   (ii) the expenditures prior to 2004;
   (iii) the 2004 expenditures to the date of the application;
   (iv) the remaining projected expenditures for 2004;
   (v) the variance between the projected total expenditures and the approved budget; and
   (vi) an explanation of the variance.

5. Unless otherwise directed by the Board, NP shall file a "Capital Budget Plan" as part of its 2005 and future Capital Budget Applications and should include:

(a) An updated five (5) year plan for maintaining the stability of the capital budget and the capital works program, including an amount of maximum budget growth and a contingency for unexpected or unusual events during the period; and

(b) Identification of any change or anticipated change in expenditure patterns and full explanation of reasons therefore.

6. Unless otherwise directed by the Board, NP shall file an annual report to the Board on its capital expenditures within sixty (60) days of the end of the year 2004.

7. The rate base for the year ending December 31, 2002 is hereby fixed and determined at $573,337,000, pursuant to section 78 of the Act.

8. Unless otherwise directed by the Board, NP shall file a report with the Board addressing the amortization period in respect of the unfunded pension liability on or before the filing of an application for approval of its 2003 rate base.

9. NP shall pay all costs and expenses of the Board incurred in connection with the Application.

DATED at St. John's, Newfoundland and Labrador, this 5th day of November, 2003.

J. William Finn, Q.C.,
Presiding Chair.

Gerard Martin, Q.C.,
Commissioner.

Don R. Powell, C.A.,
Commissioner.

G. Cheryl Blundon,
Board Secretary.

Conditions for Future Filings

NP shall file future capital budget applications in accordance with the following guidelines and conditions:

i) A concise description of the project, including classification and location.
ii) The projected cost of the project in the budget year, showing a breakdown of material costs, labour costs (internal and external), engineering costs, and other associated costs where appropriate.
iii) The anticipated future expenditures; shown by year, of the project.
iv) The current age of any plant being replaced or overhauled.
v) The measurable usage to date of any plant being replaced or overhauled.
vi) The date and cost of the most recent overhaul, repair, or replacement.
vii) Copies of any engineering studies, consultants' reports, environmental studies, or dealer documentation outlining the current condition and future requirements of the plant. If these documents are already on file with the Board, reference may be made to these documents
viii) For projects of a material amount, a cost benefit analysis of all alternatives, both internal and external, that have been considered, including any DSM measures that have been evaluated.
ix) A description and related documentation outlining the results of any discussions of the project that have taken place between the utilities in an effort to reduce expenditures by avoiding duplication of services, or increased sharing of resources and expenses.
x) Documentation of any safety or reliability issues that have arisen, in this jurisdiction or elsewhere, indicating a need for the project at the time. (Describe any efforts that have already been made to deal with these issues, and outline any related costs that have been incurred.)
xi) Documentation, including maintenance records and reports of outages, that indicate whether this project is remedial or preventative, and that support the current undertaking of the project.
xii) A general description of any major replacements, upgrades, or repairs to this plant that are expected to be undertaken within the next three years.

Newfoundland Power Inc.
2004 Capital Budget

ENERGY SUPPLY

	(000s)	Details on Page
HYDRO PLANTS - FACILITY REHABILITATION	$1,122	10
NEW CHELSEA – HYDRO PLANT REFURBISHMENT	3,973	12
MAJOR ELECTRICAL EQUIPMENT REPAIRS	150	14
TOTAL - ENERGY SUPPLY	**$5,245**	

Newfoundland Power Inc.
2004 Capital Budget

SUBSTATIONS

	(000s)	Details on Page
REBUILD SUBSTATIONS	$1,023	16
REPLACEMENT & STANDBY SUBSTATION EQUIPMENT	1,314	18
TRANSFORMER COOLING REFURBISHMENT	398	20
PROTECTION & MONITORING IMPROVEMENTS	80	22
DISTRIBUTION SYSTEM FEEDER REMOTE CONTROL	1,000	24
FEEDER ADDITIONS DUE TO LOAD GROWTH AND RELIABILITY	200	26
INCREASE CORNER BROOK TRANSFORMER CAPACITY	1,184	28
TOTAL - SUBSTATIONS	$5,199	

Newfoundland Power Inc.
2004 Capital Budget

TRANSMISSION

	(000s)	Details on Page
REBUILD TRANSMISSION LINES	$2,315	30
TOTAL - TRANSMISSION	**$2,315**	

Newfoundland Power Inc.
2004 Capital Budget

DISTRIBUTION

	(000s)	Details on Page
EXTENSIONS	$4,956	32
METERS	1,174	34
SERVICES	1,946	36
STREET LIGHTING	1,242	38
TRANSFORMERS	4,965	40
RECONSTRUCTION	2,461	42
ALIANT POLE PURCHASE	4,044	44
TRUNK FEEDERS		
Rebuild Distribution Lines	4,137	45
Relocate/Replace Distribution Lines For Third Parties	235	48
Distribution Reliability Initiative	949	50
Feeder Additions and Upgrades to Accommodate Growth	677	52
Switch Replacement & Upgrade Underground Distribution – Water Street, St. John's	750	54
INTEREST DURING CONSTRUCTION	100	56
TOTAL - DISTRIBUTION	**$27,636**	

Newfoundland Power Inc.
2004 Capital Budget

GENERAL PROPERTY

	(000s)	Details on Page
TOOLS AND EQUIPMENT	535	57
ADDITIONS TO REAL PROPERTY	174	59
TOTAL - GENERAL PROPERTY	**$709**	

Newfoundland Power Inc.
2004 Capital Budget

TRANSPORTATION

	(000s)	Details on Page
PURCHASE VEHICLES AND AERIAL DEVICES	**$3,487**	60
TOTAL - TRANSPORTATION	**$3,487**	

Newfoundland Power Inc.
2004 Capital Budget

TELECOMMUNICATIONS

	(000s)	Details on Page
REPLACE/UPGRADE COMMUNICATIONS EQUIPMENT	$70	62
SUBSTATION TELEPHONE CIRCUIT PROTECTION	50	64
TOTAL - TELECOMMUNCIATIONS	**$120**	

Newfoundland Power Inc.
2004 Capital Budget

INFORMATION SYSTEMS

	(000s)	Details on Page
APPLICATION ENHANCEMENTS	$1,355	66
APPLICATION ENVIRONMENT	791	68
CUSTOMER SYSTEMS REPLACEMENT	226	70
NETWORK INFRASTRUCTURE	393	72
PERSONAL COMPUTER INFRASTRUCTURE	539	74
SHARED SERVER INFRASTRUCTURE	644	76
TOTAL – INFORMATION SYSTEMS	**$3,948**	

Newfoundland Power Inc.
2004 Capital Budget

UNFORESEEN ITEMS

	(000s)	Details on Page
ALLOWANCE FOR UNFORESEEN ITEMS	$750	78
TOTAL – UNFORESEEN ITEMS	**$750**	

ENERGY SUPPLY

Project Title: **Hydro Plants Facility Rehabilitation**

Location: **Various**

Classification: **Energy Supply**

Project Cost: **$1,122,000**

Project Description

This project is necessary for the replacement or rehabilitation of deteriorated hydro plant components that have been identified through routine inspections.

The work includes the replacement or rehabilitation of major components at the following plants: Pierres Brook, Topsail, Morris, Rattling Brook, Heart's Content and Victoria.

The project also includes expenditures necessary to improve the efficiency and reliability of various hydro plants or to maintain environmental compliance. Details on various items are included in Volume II, Energy Supply, Appendix 1.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$655	-	-	-
Labour – Internal	277	-	-	-
Labour – Contract	76	-	-	-
Engineering	114	-	-	-
Other	-	-	-	-
Total	**$1,122**	**$3,013**	**$8,438**	**$12,573**

Operating Experience

The following table gives the expenditures for the past five years for work falling within this project.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$707	$1,670	$1,482	$2,031	$2,778

These facilities provide energy to the Island Interconnected electrical system. Maintaining these generating facilities and infrastructure reduces the need for additional, more expensive, generation capacity.

Project Justification

The Company's 23 hydroelectric plants range in age from the 103 year old Petty Harbour Plant to the 5 year old Rose Blanche Plant. The average age is 59 years.

Projects involving replacement and rehabilitation work, which are identified during ongoing inspections and maintenance activities, are necessary to the continued operation of hydroelectric generation facilities in a safe, reliable and environmentally compliant manner. The alternative to maintaining these facilities would be to retire them. These facilities produce a combined average annual production of 426 GWh. Replacing only the energy produced by these facilities by increasing production at the Holyrood generation facility would require approximately 700,000 barrels of fuel annually. At oil prices of $28 per barrel, this translates into approximately $20 million in annual fuel savings. Maintaining these generating facilities also contributes to system stability and, in many cases, provides local backup generation.

All significant expenditures on individual hydroelectric plants, such as the replacement of penstocks, surge tanks, runners, or forebays, are justified on the basis of maintaining access to hydroelectric generation at a cost that is lower than the cost of replacement options.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **New Chelsea Hydro Plant Refurbishment**

Location: **New Chelsea, Trinity Bay**

Classification: **Energy Supply**

Project Cost: **$3,973,000**

Project Description

This project involves the complete refurbishment of the New Chelsea hydroelectric generating station. Included in the scope of work is the replacement of the woodstave penstock with a steel pipeline, the replacement of a generator breaker, the rewind of the generator, the replacement of the protection and control systems, the replacement of the governor system and miscellaneous electrical and mechanical work associated with these larger systems.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$3,462	-	-	$3,462
Labour – Internal	260	-	-	260
Labour – Contract	-	-	-	-
Engineering	251	-	-	251
Other	-	-	-	-
Total	**$3,973**	**$0**	**$0**	**$3,973**

Operating Experience

The New Chelsea plant went into service in January 1957. The system has operated continuously since that time and provides normal production of 15.5 GWh of energy on an annual basis. In 1986 remote control through the SCADA system at the System Control Centre was added to the plant. With the exception of that upgrade there has been minimal other capital investment in this facility.

The woodstave penstock has reached a state where significant work is required to patch leaks that develop regularly. The water leaking from the penstock is cause for concern as it undermines the supporting structure of the penstock.

Project Justification

A detailed report, including site assessments completed by Professional Engineers, is included in Volume II, Energy Supply, Appendix 2.

New Chelsea generating station is one of the largest energy producers in Newfoundland Power's group of hydroelectric plants. The original equipment that comprises the plant is forty-eight years old and requires considerable effort to repair and replace components that fail in service, as replacement parts are generally not readily available. The equipment has exceeded its expected life and replacement must be addressed at this time.

The woodstave penstock has experienced failures in recent years that have allowed water to escape. As determined by a recent inspection, in various areas of the steel portion of the penstock the thickness of the wall is below the design parameters as a result of corrosion. The potential exists for damage to property and risk to employee and public safety if a catastrophic failure were to occur.

Concern also exists for the condition of the generator windings, which have exceeded their estimated life expectancy as established by the Institute of Electrical and Electronic Engineers (IEEE). As a result the project will include funds to allow for the rewind of the generator.

Due to age, the protection and control equipment, governor and AC station service equipment is obsolete. Technical support for the original electromechanical devices is very limited, and as a result the current equipment is a mix of technologies created by temporary repairs completed over the years.

The alternative to replacing the penstock and refurbishing this plant would be to retire it. This facility provides normal annual production of approximately 15.5 GWh. Replacing only the energy produced by this facility by increasing production at the Holyrood generation facility would require approximately 25,000 barrels of fuel annually. At a cost of $28 per barrel, this translates into a fuel saving of approximately $700,000 annually.

An economic analysis of the New Chelsea Hydroelectric system, considering this project and the expected capital and operating expenditures required over the next 25 years, indicates a positive net present value.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Major Electrical Equipment Repairs**

Location: **Various**

Classification: **Energy Supply**

Project Cost: **$150,000**

Project Description

This project is necessary to provide for the unanticipated cost of major equipment replacement or rehabilitation occasioned by deterioration or catastrophic failure. Major equipment includes transformers, generators and turbines.

Project Cost ($000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$145	-	-	-
Labour – Internal	5	-	-	-
Labour – Contract	-	-	-	-
Engineering	-	-	-	-
Other	-	-	-	-
Total	**$150**	**$150**	**$450**	**$750**

Operating Experience

The project cost is based on an assessment of historical expenditures. For comparison purposes, the following table gives the expenditures for this project for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$465	$51	$137	$707	$150

Project Justification

Past experience indicates that unforeseen equipment failures will occur. Projects covered by this budget item in the past include generator rewinding, power transformer rehabilitation, replacement of power connection cables and refurbishment of surge tank components.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

SUBSTATIONS

Project Title: **Rebuild Substations**

Location: **Grand Bay, Trepassey, Indian Cove, Port Blandford, Wheelers, Stamps Lane, Bay Roberts and Laurentian**

Classification: **Substations**

Project Cost: **$1,023,000**

Project Description

This project is necessary for the replacement of deteriorated and substandard substation infrastructure, such as bus structures, poles and support structures, equipment foundations, switches and fencing.

Replacement work will take place primarily at the 8 substations noted above, with additional minor work at 5 other substations.

Details are contained in Volume II, Substations, Appendix 1.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$600	-	-	-
Labour – Internal	242	-	-	-
Labour – Contract	3	-	-	-
Engineering	178	-	-	-
Other	-	-	-	-
Total	**$1,023**	**$550**	**$3,616**	**$5,189**

Operating Experience

The following table gives the expenditures for the past five years for this project.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$201	$426	$1,191	$687	$452

Project Justification

The Company has 137 substations varying in age from 2 years to greater than 100 years. The book value of these substations is in excess of $100 million. Infrastructure to be replaced was identified as a result of monthly inspections and engineering studies. These expenditures will ensure reliable service and address safety concerns.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Replacement & Standby Substation Equipment**

Location: **Pepperell, Summerford, Milton, Bonavista, Glenwood, Boyd's Cove, Glovertown, Gambo, Laurentian, Gillams, Dunville, Cape Broyle, Greenhill and Mobile Substation P-435.**

Classification: **Substations**

Project Cost: **$1,314,000**

Project Description

This project is necessary for the replacement of obsolete and/or unreliable electrical equipment and the maintenance of appropriate levels of spare equipment for use during emergencies.

The locations where the work will be undertaken in 2004 are noted above. Details are contained in Volume II, Substations, Appendix 2.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$963	-	-	-
Labour – Internal	241	-	-	-
Labour – Contract	-	-	-	-
Engineering	110	-	-	-
Other	-	-	-	-
Total	**$1,314**	**$2,146**	**$8,065**	**$11,525**

Operating Experience

The following table gives the expenditures for the past five years for this project.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$384	$313	$232	$2,716	$1,206

Project Justification

The Company has 137 substations. The major equipment items comprising a substation include power transformers, circuit breakers, reclosers, potential transformers and battery banks. In total the Company has approximately 190 power transformers, 400 circuit breakers, 200 reclosers, 340 voltage regulators, 220 potential transformers and 140 battery banks.

The need to replace equipment is determined on the basis of tests, inspections and the operational history of the equipment. The provision of adequate levels of spare equipment is based on past experience and engineering judgement, as well as a consideration of the impact the loss of a particular apparatus would have on the electrical system.

This project is justified based on the need to replace equipment to restore and maintain service. The budget estimate is based on equipment inspections and historical replacement requirements, as well as on assessments of the current stock of spare equipment

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Transformer Cooling Refurbishment**

Location: **Greenspond, Bishops Falls, Cobbs Pond and Humber**

Classification: **Substations**

Project Cost: **$398,000**

Project Description

This project occurs at the substations identified above and involves the replacement of power transformer cooling radiators that have begun to leak oil as a result of corrosion. This will also address environmental concerns of oil spills due to leaking equipment.

In 2004, radiators will be replaced on the following units:

Greenspond T1	Bishops Falls T1
Cobbs Pond T1	Humber T3

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$222	-	-	-
Labour – Internal	152	-	-	-
Labour – Contract	-	-	-	-
Engineering	24	-	-	-
Other		-	-	-
Total	**$398**	**$250**	**$750**	**$1,398**

Operating Experience

The original radiators supplied with the transformers when they were purchased were coated with primer and enamel based paint for protection from the elements. Exposure to our environment causes the radiators to rust and blister. Eventually the radiators begin to leak at the welded seams and through the thinner cooling panel surfaces.

The original radiators are being replaced with galvanized units, which provide enhanced rust resistance. The new radiators have a life expectancy in the range of 40 years.

The following table gives the expenditures for the past five years for this project.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$15	$206	$0	$0	$0

Project Justification

The cost of this project is justified based on the need to replace equipment to maintain reliable service. Oil is used in a transformer as part of its electrical insulation system. An uncontrolled loss of oil would compromise that system with the resulting failure of the transformer and the interruption of service to customers.

The amounts budgeted are based on equipment inspections and historical replacement requirements, as well as the current inventory of backup equipment.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Protection & Monitoring Improvements**

Location: **Goulds, Gander and Cobbs**

Classification: **Substations**

Project Cost: **$80,000**

Project Description

This project is necessary for the replacement and/or addition of protective relaying equipment required to maintain system protection and increase operating reliability.

In 2004 work will take place at Goulds involving the installation of a synchro check relay and at the Gander and Cobb's substations as a part of the Tap Changer Control Program.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$25	-	-	
Labour – Internal	25	-	-	
Labour – Contract	-	-	-	
Engineering	30	-	-	
Other	-	-	-	
Total	**$80**	**$45**	**$135**	**$260**

Operating Experience

The following table gives the expenditures for the past five years for this project.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$196	$92	$283	$116	$430

Project Justification

This project will make improvements to the protection and monitoring systems of the selected substations to allow for the safe and reliable operation of these substations.

The project is justified on the basis of maintaining the reliability and safe operation of the electrical system

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Distribution System Feeder Remote Control**

Location: **Chamberlains, Pepperrell, Blaketown, Humber, Ridge Road, Bay Roberts, Bayview and Kelligrews substations.**

Classification: **Substations**

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

Project Description

This is a continuation of a project initiated in 2002. It involves replacing a number of aging, limited function, electromechanical feeder relays and oil-filled reclosers with modern multi-function electronic relays and reclosers that can be remotely controlled from the System Control Centre (SCC).

By the end of 2003, the System Control Centre (SCC) will have remote control over 40 feeders through new electronic feeder relays and over 30 feeders through reclosers.

In 2004, 25 feeder relays will be replaced at Chamberlains, Pepperrell, Blaketown, Humber, Ridge Road and Bay Roberts. There will be 6 reclosers replaced in Bayview and Kelligrews substations.

While expenditures are forecasted from 2005 to 2008, beyond 2004, specific locations have not been identified as future maintenance history and operating issues would need to be considered in deciding the actual locations.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$701	-	-	-
Labour – Internal	153	-	-	-
Labour – Contract	-	-	-	-
Engineering	146	-	-	-
Other	-	-	-	-
Total	**$1,000**	**$1,000**	**$4,500**	**$6,500**

Operating Experience

The Company's electromechanical feeder relays and oil-filled reclosers are, on average, 25 years old and are nearing the end of their useful life. All will require replacement over the next few years.

The following table gives the expenditures for the past five years for this project.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$0	$0	$0	$1,092	$1,200

Project Justification

This project is justified on the basis of improvements in safety, operating efficiencies, power system reliability improvements and a reduction in risk to the environment. The report which supports this project, *"Distribution Feeder Remote Control and Relay/Recloser Replacement Review",* was previously filed in response to Request for Information PUB-9.3, in the Newfoundland Power 2002 Capital Budget Application.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Feeder Additions Due To Load Growth and Reliability**

Location: **Chamberlains and Pulpit Rock Substations**

Classification: **Substations**

Project Cost: **$200,000**

Project Description

This project is necessary for the addition of new equipment and/or upgrades in two substations to provide for increased loads due to customer growth.

This project includes the installation of a third 25 kV feeder at the Chamberlains substation and a third 12.5 kV feeder at the Pulpit Rock substation in order to accommodate growth, and reliability issues in the areas served by each substation.

Details are contained in Volume II, Substations, Appendix 3.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$128	-	-	-
Labour – Internal	43	-	-	-
Labour – Contract	-	-	-	-
Engineering	29	-	-	-
Other	-	-	-	-
Total	**$200**	**$344**	**$80**	**$624**

Operating Experience

The following table gives the expenditures for the past five years for this project.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$159	$64	$282	$0	$0

Project Justification

The project is justified on the basis of accommodating customer load growth. The proper sizing of equipment is necessary to avoid overloading conductors and equipment and to maintain system reliability.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: Increase Corner Brook Transformer Capacity

Location: **Walbournes and Bayview Substations**

Classification: **Substations**

Project Cost: **$1,184,000**

Project Description

This project includes the installation of a new 66/12.5 kV 25 MVA substation transformer at Walbournes substation as a replacement for the existing 66/12.5 kV 15 MVA transformer, and then moving the existing Walbournes transformer to the Bayview substation.

Details are contained in Volume II, Substations, Appendix 4, Attachment A.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$913	-	-	$913
Labour – Internal	174	-	-	174
Labour – Contract	-	-	-	
Engineering	97	-	-	97
Other	-	-	-	-
Total	**$1,184**	**$0**	**$0**	**$1,184**

Operating Experience

The overall substation transformer loading in the City of Corner Brook is forecasted to exceed 100% capacity in the 2003 / 2004 winter season. This is based on a total substation transformer capacity of 68.3 MVA compared to a projected load of 68.4 MVA.

Project Justification

Load forecasts for the City of Corner Brook substations indicate that the combined load will exceed the combined capacity of the substation transformers. The addition of another transformer in the system will accommodate this increased load and represents the least cost solution to meeting the forecast load requirements for the city of Corner Brook substations.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

TRANSMISSION

Project Title: **Rebuild Transmission Lines**

Location: **Various**

Classification: **Transmission**

Project Cost: **$2,315,000**

Project Description

This project involves the replacement of poles, crossarms, conductors, insulators and miscellaneous hardware due to deficiencies identified during annual inspections, engineering reviews and/or day to day operations.

The work includes major upgrades on transmission lines number 3L, 16L, 38L, 116L, 123L, 124L, 132L and 403L. Expenditures estimated at less than $50,000 for any one line will also take place on approximately 50 other lines.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$1,015	-	-	-
Labour – Internal	492	-	-	-
Labour – Contract	741	-	-	-
Engineering	67	-	-	-
Other	-	-	-	-
Total	**$2,315**	**$3,101**	**$18,018**	**$23,434**

Operating Experience

Many of the Company's older transmission lines are experiencing pole, crossarm, conductor, insulator and hardware deterioration and replacement is required to maintain the strength and integrity of the line. Thirty per cent of the Company's 110 transmission lines are in excess of forty years of age. As well, inspections and testing activities have revealed significant increases in the quantities of corroded conductors in some locations. This is causing upward pressure on transmission line rebuild requirements.

The following table gives the expenditures for the past five years for this project.

Year	1999	2000	2001	2002	2003F
$000s	$1,509	$727	$2,289	$2,976	$4,241

Project Justification

This project is necessary to replace poles, crossarms, conductors, insulators and miscellaneous hardware due to deficiencies identified during annual inspections in order to ensure that such lines provide reliable service to customers and are safe for both the public and line workers.

Detailed information on the projects is outlined in Volume II, Transmission, Appendix 1.

Future Commitments

None.

DISTRIBUTION

Project Title: **Extensions**

Location: **Various**

Classification: **Distribution**

Project Cost: **$4,956,000**

Project Description

This project involves the construction of both primary and secondary distribution lines to connect new customers to the electrical distribution system. The project also includes upgrades to the capacity of existing lines to accommodate customers who increase their electrical load. The project includes labour, materials, and other costs to install poles, wires and related hardware.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$1,660	-	-	-
Labour – Internal	1,491	-	-	-
Labour – Contract	1,148	-	-	-
Engineering	558	-	-	-
Other	99	-	-	-
Total	**$4,956**	**$4,680**	**$11,215**	**$20,851**

Operating Experience

The project cost for the connection of new customers is calculated on the basis of historical data for specific operating areas. Historical annual expenditures are adjusted for inflation and divided by the number of new customers in each year to derive an average extension cost per customer. Unusually high and low data is excluded from the average. This historical average is then modified by the GDP Deflator for Canada before being multiplied by the forecast number of new customers to determine the budget estimate. The forecast number of new customers is derived from economic projections provided by the Conference Board of Canada.

The following table shows the annual expenditure for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$2,800	$3,981	$5,404	$5,717	$5,184

Project Justification

This project is justified on the basis of customer requirements.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Meters**

Location: **Various**

Classification: **Distribution**

Project Cost: **$1,174,000**

Project Description

This project includes the purchase and installation of meters for new customers and replacement meters for existing customers. The Company has previously purchased two types of meters, those that must be read manually and those that are capable of being read automatically, commonly referred to as AMR meters. In 2004 the Company proposes the purchase and installation of meters, as noted in the table below.

Program	Number of Meters
Regular Domestic Meters	8,000
AMR Meters	3,000

Project Cost

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$1,000	-	-	-
Labour – Internal	105	-	-	-
Labour – Contract	69	-	-	-
Engineering	-	-	-	-
Other	-	-	-	-
Total	**$1,174**	**$699**	**$1,989**	**$3,862**

Operating Experience

The purchase of new meters is necessary to accommodate customer growth and to replace deteriorated meters. The quantity of meters for new customers is based on the Company's forecast of customer growth. The quantity for replacement purposes is determined using historical data for damaged meters and sampling results from previous years. Sampling is done in accordance with regulations under the Electricity and Gas Inspection Act.

The number of AMR meters required for safety and access issues is based on the Company's assessment of locations where these issues exist. See Volume III, Distribution, Appendix 1, for details.

The following table shows the expenditures for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$560	$564	$569	$674	$674

Project Justification:

The requirement for regular domestic meters is based on customer requirements and Industry Canada regulations. The requirements for AMR meters are based on improving safety for employees, improving accuracy of reads and improving efficiency of operations.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Services**

Location: **Various**

Classification: **Distribution**

Project Cost: **$1,946,000**

Project Description

This project involves the installation of service wires to connect new customers to the electrical distribution system. Service wires are low voltage wires that connect the customer's electrical service equipment to the utility's transformers. Also included in this category is the replacement of existing service wires due to deterioration, failure or damage, as well as the installation of larger wires to accommodate customers' additional load.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$601	-	-	-
Labour – Internal	990	-	-	-
Labour – Contract	56	-	-	-
Engineering	280	-	-	-
Other	19	-	-	-
Total	**$1,946**	**$2,099**	**$5,233**	**$9,278**

Operating Experience

The project cost for the connection of new customers is calculated on the basis of historical data. For new services, historical annual expenditures are adjusted for inflation and divided by the number of new customers in each year to derive an average new service cost per customer. Unusually high and low data is excluded from the average. This historical average is then modified by the GDP Deflator for Canada before being multiplied by the forecast number of new customers to determine the budget estimate. A similar process is following for replacement services using historical actual expenditures to replace damaged or deteriorated service wires. Street light customers are excluded for the purpose of this calculation.

The following table shows the expenditures for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$1,419	$1,532	$1,838	$1,843	$1,841

Project Justification

These projects are justified on the basis of customer requirements.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Street Lighting**

Location: **Various**

Classification: **Distribution**

Project Cost: **$1,242,000**

Project Description

This project involves the installation of new lighting fixtures, replacement of existing street light fixtures, and the provision of associated overhead and underground wiring. A street light fixture includes the light head complete with bulb, photocell and starter as well as the pole mounting bracket and other hardware. The project is driven by customer requests and historical levels of lighting fixture failures requiring replacement.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$695	-	-	-
Labour – Internal	345	-	-	-
Labour – Contract	144	-	-	-
Engineering	50	-	-	-
Other	8	-	-	-
Total	**$1,242**	**$1,091**	**$3,197**	**$5,530**

Operating Experience

The project cost is calculated on the basis of historical data. For new street lights, historical annual expenditures are adjusted for inflation and divided by the number of new customers in each year to derive an average cost per new customer. This historical average is then modified by the GDP Deflator for Canada before being multiplied by the forecast number of new customers to determine the budget estimate.

For replacement street lights, historical annual expenditures for replacement of damaged, deteriorated or failed street lights are adjusted for inflation and divided by the total number of customers served in each year to derive an average replacement street light cost per customer. This historical average is then modified by the GDP Deflator for Canada before being multiplied by the forecast of the total number of customers served to determine the budget estimate.

The following table shows the expenditures for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$800	$911	$935	$1,199	$1,233

Project Justification

These projects are justified on the basis of customer requirements.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Transformers**

Location: **Various**

Classification: **Distribution**

Project Cost: **$4,965,000**

Project Description

This project includes the cost of purchasing transformers for customer growth and the replacement or refurbishment of units that have deteriorated or failed.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$4,965	-	-	-
Labour – Internal	-	-	-	-
Labour – Contract	-	-	-	-
Engineering	-	-	-	-
Other	-	-	-	-
Total	**$4,965**	**$4,600**	**$12,760**	**$22,325**

Operating Experience

The project requirements can be divided into three categories as follows:

a) The number of transformers required for new customers is based on estimates for each of the Company's operating areas. The estimate is created by regional engineering personnel based upon the forecast number of new residential customers for each area and their judgement as to the additional number of transformers required for new general service customers based on a combination of historical experience and specific knowledge.

b) Replacement transformers are based on field surveys of rusty or deteriorated transformers.

c) The "other" category is for transformers required for conversions and upgrades, plus an allowance for contingency (burnouts and storm damage, etc.). This category is estimated on the basis of planned projects and historical data.

The following table shows the expenditures for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$3,190	$4,243	$4,550	$5,194	$4,895

Project Justification

This project is required to provide and maintain service to new customers.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Reconstruction**

Location: **Various**

Classification: **Distribution**

Project Cost: **$2,461,000**

Project Description

This project involves the replacement of deteriorated or storm damaged distribution structures and electrical equipment. This project is generally comprised of a number of smaller projects that are identified during line inspections or recognized following operational problems. By their nature these are high priority projects that normally cannot be deferred to the next budget year. This project differs from the Rebuild Distribution Lines project which involves rebuilding sections of lines that are identified and planned in advance of budget preparation.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$526	-	-	-
Labour – Internal	1,098	-	-	-
Labour – Contract	510	-	-	-
Engineering	272	-	-	-
Other	55	-	-	-
Total	**$2,461**	**$2,644**	**$7,535**	**$12,640**

Operating Experience

The project cost is estimated on the basis of average historical expenditures related to unplanned repairs to distribution feeders.

The following table shows the expenditures for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$2,222	$1,888	$2,547	$2,878	$2,745

Project Justification

These projects are justified on the basis of reliability and the need to replace damaged electrical equipment.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Aliant Pole Purchase**

Location: **Corporate**

Classification: **Distribution**

Project Cost: **$4,044,000**

Project Description

This project covers the 2004 installment associated with the Support Structures Purchase Agreement entered into with Aliant Telecom Inc. in 2001.

Operating Experience

Not Applicable.

Project Justification

This project is necessary to comply with the terms of the Support Structures Purchase Agreement entered into by Newfoundland Power Inc. with Aliant Telecom Inc. covering the purchase of all joint-use poles within Newfoundland Power's service territory over a five year period.

Future Commitments

In accordance with the terms of the Support Structures Purchase Agreement, the final amount of $4,044,000 required to complete the purchase of all joint-use poles within Newfoundland Power's service territory from Aliant Telecom Inc. will be paid in 2005.

Project Title: **Rebuild Distribution Lines**

Location: **Various**

Classification: **Distribution**

Project Cost: **$4,137,000**

Project Description

This 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. The total budget estimate for this category is based on individual estimates.

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

The work for 2004 includes feeder improvements on approximately 56 of the Company's 300 feeders, upgrades to feeders KBR-05 and SLA-06 in St. John's, replacement of deteriorated padmount transformers and underground services, installation of support for cable termination on Bell Island, upgrades to secondary circuits in Grand Bank/Fortune and work estimated to cost less than $50,000 at a number of other locations. Details are contained in Volume III, Distribution, Appendix 2.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$1,696	-	-	-
Labour – Internal	1,512	-	-	-
Labour – Contract	492	-	-	-
Engineering	103	-	-	-
Other	334	-	-	-
Total	**$4,137**	**$4,051**	**$15,246**	**$23,434**

The following table shows the expenditures for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$1,598	$755	$2,223	$3,210	$3,449

Operating Experience

Distribution feeders are inspected in accordance with Newfoundland Power's distribution inspection standards on a five-year rotation to identify:

a) Deficiencies with plant that are a risk to Public Safety, Employee Safety, or are likely to result in Imminent Failure of a structure or hardware.
b) Transformers containing PCB that need to be replaced.
c) Transformers that must be replaced due to rust.
d) Locations where lightning arrestors are required as per the 2003 Lightning Arrestor Review. See Volume III, Distribution, Appendix 2, Attachment B.
e) Locations where CP8080 and 2-piece insulators still exist. These insulators have a history of failure. See Volume III, Distribution, Appendix 2, Attachment C.
f) Locations where current limiting fuses are required in accordance with the internal memo dated January 11, 2000. See Volume III, Distribution, Appendix 2, Attachment D.
g) Hardware that has high risk of failure, such as automatic sleeves and porcelain cutouts. See Volume III, Distribution, Appendix 2, Attachment E and Attachment F.

In addition to items identified during regularly scheduled inspections noted above, specific engineering reviews and the day to day operations of the Company also identify plant deficiencies that need to be addressed within the capital expenditure program.

Project Justification

The Company has over 8,000 kilometers 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 part of meeting this obligation.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Relocate/Replace Distribution Lines for Third Parties**

Location: **Various**

Classification: **Distribution**

Project Cost: **$235,000**

Project Description

This project is necessary to accommodate third party requests for the relocation or replacement of distribution lines. The relocation or replacement of distribution lines results from (1) work initiated by municipal, provincial and federal governments, (2) work initiated by other utilities such as Aliant Telecom and Rogers Cable, (3) requests from customers or (4) vehicle accident damage.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$78	-	-	-
Labour – Internal	86	-	-	-
Labour – Contract	60	-	-	-
Engineering	8	-	-	-
Other	3	-	-	-
Total	**$235**	**$235**	**$705**	**$1,175**

Operating Experience

The cost estimate is based on historical expenditures and some individual project estimates. Generally these expenditures are associated with a number of small projects that are not specifically identified at the time the budget is prepared.

The following table shows the annual expenditures for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$596	$769	$585	$390	$293

Project Justification

The Company must respond to requests for relocation and replacement of distribution facilities under the provisions of agreements in place with the requesting parties.

Estimated contributions from customers and requesting parties associated with this project have been included in the $1.5 million contribution in aid of construction amount referred to in the Application.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Distribution Reliability Initiative**

Location: **Various**

Classification: **Distribution**

Project Cost: **$949,000**

Project Description

The project involves the upgrading or addition of trunk feeder structures and equipment to reduce both the frequency and duration of power interruptions to the customers served by the distribution line. The nature of the upgrading work follows from a detailed assessment of past 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. Project plans are subsequently developed from an engineering analysis and options are evaluated that improve reliability performance.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$423	-	-	-
Labour – Internal	338	-	-	-
Labour – Contract	98	-	-	-
Engineering	12	-	-	-
Other	78	-	-	-
Total	**$949**	**$1,315**	**$2,400**	**$4,664**

Operating Experience

The following table identifies the feeders selected for upgrading in 2004 and indicates the number of customers affected, and the average unscheduled yearly interruption statistics for the five-year period ending December 31, 2002. The SAIFI and SAIDI statistics exclude planned power interruptions and interruptions due to loss of supply from Hydro. See Volume III, Distribution, Appendix 3, Attachment A for an analysis of WES-02 and Appendix 3, Attachment B for an analysis of BRB-04 and Appendix 3, Attachment C for an analysis of PUL-01 and PUL-02.

Feeder	Number of Customers	SAIFI[1] Interruptions Per Year	SAIDI[2] Hours Per Year
Lumsden/Cape Freels (WES-02)	766	3.7	6.3
Bay Roberts/Port Au Grave (BRB-04)	1,013	1.5	5.5
Torbay (PUL-01)	1,935	1.8	3.8
Flatrock/Pouch Cove (PUL-02)	1,427	2.8	5.0
Company Average		1.8	2.9

Notes:

[1] System Average Interruption Frequency Index (SAIFI) is the average number of interruptions per customer. It is calculated by dividing the number of customers that have experienced an outage by the total number of customers in an area.

[2] System Average Interruption Duration Index (SAIDI) is the average interruption duration per customer. It 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.

The following table shows the expenditures for this project for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$2,870	$1,776	$3,422	$1,092	$1,247

Project Justification

These projects are justified on the basis of reliability improvement. Customers currently 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.

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

The total WES-02 project is estimated at $1,099,000, of which $699,000 will be expended in 2004, and will require approximately $400,000 in 2005 to complete that item.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Feeder Additions and Upgrades to Accommodate Growth**

Location: **Chamberlains, Glendale and Springfield**

Classification: **Distribution**

Project Cost: **$677,000**

Project Description

This project consists of the construction of a new feeder, equipment or conductor upgrades on existing feeders and/or installation of sections of feeders to accommodate energy sales growth.

The work for 2004 includes the construction of a new feeder at Chamberlains, reconductoring a section of Glendale-01 feeder and the installation of voltage regulators on Springfield-01 feeder.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$216	-	-	-
Labour – Internal	204	-	-	-
Labour – Contract	213	-	-	-
Engineering	25	-	-	-
Other	19	-	-	-
Total	**$677**	**$230**	**$700**	**$1,607**

Operating Experience

Forecast and actual peak load conditions and customer growth indicate that these projects are warranted in order to maintain the electrical system within recommended guidelines. See Volume III, Distribution, Appendix 4 for more details.

The following table shows the expenditures for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$37	$262	$0	$0	$0

Project Justification

This project is required to maintain substation transformer loading, voltage regulation and/or customer loading density within recommended guidelines.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Switch Replacement and Upgrade Underground Distribution Water St., St. John's**

Location: **St. John's**

Classification: **Distribution**

Project Cost: **$750,000**

Project Description

This project is the completion of a project started in 2000. It involves the replacement and upgrade of high voltage oil-filled switches, platform-mounted transformers and high voltage distribution vaults that form part of the Water Street underground distribution system. The project will require the installation of pad-mount switches and pad-mount transformers, as well as the establishment of loop feeds for sections of the underground distribution system at various locations along Water Street, St. John's.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$361	-	-	$361
Labour – Internal	288	-	-	288
Labour – Contract	90	-	-	90
Engineering	9	-	-	9
Other	2	-	-	2
Total	**$750**	**$0**	**$0**	**$750**

Operating Experience

Commercial properties in the Water Street area of the downtown core of St. John's are served by an underground distribution system installed in the mid-1960s. The plant and equipment that form this system have reached the end of their expected lives. In addition, the underground switches that permit sectionalizing and isolation of various portions of this system are a recognized safety hazard and are no longer supported by the manufacturer. There are several locations where 30-year-old aerial transformer bank structures are located next to buildings resulting in safety clearance problems for workers maintaining these buildings. There are also a number of high voltage electrical vaults that require attention to barricade bare conductors and equipment to protect persons entering these locations.

In 2000, a program of replacement or elimination of the thirteen underground switches was initated. To the end of 2002, seven of these switches had been replaced or eliminated. An additional 5 switches will be replaced or eliminated as part of the 2003 capital project. In 2004, the last remaining oil-filled switch (in manhole #6) will be replaced and upgrading of 6 underground vaults will be completed to address safety concerns.

The following table shows the expenditures for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$0	$77	$279	$469	$765

Project Justification

The remaining high voltage oil-filled switch is over 30 years old and the manufacturer states that they cannot guarantee that the switch has load break capability. The manufacturer no longer supplies replacement parts for this switch. As well, there are safety issues associated with certain operations of the existing switch. For example, the switch relies on manual operation, and internal arcing and deterioration of contacts may occur. New switches have technology that eliminates these safety concerns.

In conjunction with the switch replacement, there are other areas along the Water Street distribution system that require attention. For example, there are several locations where transformers are located on platforms that are 30 years old and are located next to buildings, resulting in clearance problems for workers engaged in maintaining the exterior of these buildings.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitments

None.

Project Title: **Interest During Construction**

Location: **N/A**

Classification: **Distribution**

Project Cost: **$100,000**

Project Description

This is an estimate of the interest during construction that will be charged on distribution work orders with an estimated expenditure of less than $50,000 and a construction period in excess of three months.

Operating Experience

This calculation is based on an estimated monthly average of total distribution work in progress of $1.0 million. The interest rate which is applied each month is dependent on the source of funds to finance the capital expenditure and is calculated in accordance with Order No. P.U. 37 (1981).

The following table shows the expenditures for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$93	$83	$78	$80	$100

Project Justification

These costs are justified on the same basis as the distribution work orders to which they are charged.

Future Commitments

None.

GENERAL PROPERTY

Project Title: **Tools & Equipment**

Location: **Company offices, service buildings and vehicles**

Classification: **General Property**

Project Cost: **$535,000**

Project Description

This project is the addition or replacement of tools and equipment utilized by line and support staff in the day-to-day operations of the Company, as well as the replacement or addition of office furniture and equipment. Details of equipment to be acquired in 2004 are contained in Volume III, General Property, Appendix 1.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$535	-	-	-
Labour – Internal	-	-	-	-
Labour – Contract	-	-	-	-
Engineering	-	-	-	-
Other	-	-	-	-
Total	**$535**	**$518**	**$1,125**	**$2,178**

Operating Experience

The following table gives the expenditures for the past five years for this project.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$798	$427	$537	$378	$827

Project Justification

This equipment enables staff to perform work in a safe, effective and efficient manner.

The project cost is based on historical costs for the replacement of tools and equipment that become broken or worn out. Additional or replacement tools are purchased to increase employee productivity, quality of work and overall operational efficiency.

Future Commitments

None.

Project Title: **Real Property**

Location: **Electrical Maintenance Facility, Salt Pond Service Building, Corner Brook Service Building, Gander Office and Stephenville Office**

Classification: **General Property**

Project Cost: **$174,000**

Project Description

This project is the addition to, or renovation of, Company buildings and property that are not part of the electrical supply to customers. Details of work associated with each location noted above are contained in Volume III, General Property, Appendix 2.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$169	-	-	-
Labour – Internal	2	-	-	-
Labour – Contract	-	-	-	-
Engineering	3	-	-	-
Other	-	-	-	-
Total	**$174**	**$662**	**$1,848**	**$2,684**

Operating Experience

The following table gives the expenditures for the past five years for this project.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$1,500	$503	$407	$337	$220

Project Justification

The project is necessary to maintain buildings and support facilities and to operate them in an efficient manner

Future Commitments

None.

TRANSPORTATION

Project Title: **Purchase Vehicles and Aerial Devices**

Location: **Various**

Classification: **Transportation**

Project Cost: **$3,487,000**

Project Description

This project involves the necessary replacement of passenger vehicles and aerial devices (line trucks). The Company has determined that the units to be replaced have reached the end of their useful lives.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$3,433	-	-	-
Labour – Internal	45	-	-	-
Labour – Contract		-	-	-
Engineering	9	-	-	-
Other		-	-	-
Total	**$3,487**	**$2,831**	**$7,045**	**$13,363**

The following table lists units to be acquired in 2004.

Category	**No. of Units**
Passenger/off-road vehicles [1]	15
Heavy fleet vehicles [2]	12
Off –road vehicles [3]	9
Total	**36**

Notes:

[1] The Passenger/Off-Road Vehicles category includes the purchase of cars and light duty trucks.
[2] The Heavy Fleet Vehicles category includes the purchase of replacement line trucks.
[3] The off-road category includes snowmobiles, ATVs and trailers.

Operating Experience

Volume III, Transportation, Appendix 1 provides information with respect to age, odometer reading and maintenance cost for each vehicle selected for replacement.

The following table gives the expenditures for the past five years for this project.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$1,797	$2,276	$2,061	$1,609	$3,076

Project Justification

The company has a guideline that initiates the replacement of vehicles. For passenger vehicles the guideline is age of five years or 150,000 kilometers. For heavy fleet vehicles the guideline is age of 10 years or 250,000 kilometers.

All units to be replaced have been evaluated for factors such as overall condition, maintenance history and immediate repair requirements. Based on this evaluation, it has been determined that each unit has reached the end of its useful life.

New vehicles are acquired through competitive tendering and lease/buy analyses are prepared to ensure the lowest possible cost consistent with reliable service.

Future Commitments

None.

TELECOMMUNICATIONS

Project Title: **Replace/Upgrade Communication Equipment**

Location: **Various**

Classification: **Telecommunications**

Project Cost: **$70,000**

Project Description

This project involves the replacement and/or upgrade of equipment identified during inspections or during day to day operations.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$59	-	-	-
Labour – Internal	7	-	-	-
Labour – Contract	-	-	-	-
Engineering	4	-	-	-
Other	-	-	-	-
Total	**$70**	**$70**	**$281**	**$421**

Operating Experience

Older vintage radio equipment and towers are susceptible to breakdown and other deficiencies. Where practical, equipment is repaired and deficiencies rectified, however, where it is not feasible to repair the equipment or correct the deficiencies, new units are acquired.

The following table gives the expenditures for the past five years for this project.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$113	$125	$94	$105	$205

Project Justification

Newfoundland Power engages an engineering consultant to inspect radio towers. Deficiencies identified through these inspections are addressed through this project. The Company has

approximately 340 mobile radios in service. Each year approximately 20 units that show a high frequency of breakdown and repair are identified and replaced with more reliable units.
The Company will ensure this project is completed at the lowest possible cost consistent with reliable service.

Future Commitments

None.

Project Title: **Substation Telephone Circuit Protection**

Location: **Deer Lake, Riverhead, Tors Cove, Salt Pond and Trepassey**

Classification: **Telecommunications**

Project Cost: **$50,000**

Project Description

This project involves upgrades to teleline isolation installations at Deer Lake, Riverhead, Tors Cove, Salt Pond and Trepassey substations.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$18	-	-	-
Labour – Internal	17	-	-	-
Labour – Contract	-	-	-	-
Engineering	15	-	-	-
Other	-	-	-	-
Total	**$50**	**$90**	**$297**	**$437**

Operating Experience

This work will assist in ensuring all personnel using or working on the communication equipment at each of these substations, and at the telephone exchanges serving the substations, will be protected from electrical shock caused by excessive ground potential rise. It will also eliminate the possibility that ground potential rise may damage communications equipment of third parties sharing cable plant with Newfoundland Power equipment.

The following table gives the expenditures for the past five years for this project.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$167	$208	$25	$0	$89

Project Justification

This project is justified on the basis of safety and reliability. Teleline isolation equipment will ensure that Aliant Telecom equipment remote from each substation will also be protected from any ground potential rise. The use of teleline isolation also ensures that the Company's SCADA communications circuits remain available to control and monitor the electrical system. This communication is necessary to ensure the safe and reliable management of power system devices.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering, except in the case of teleline isolation equipment where Aliant Telecom Inc. is the sole supplier.

Future Commitments

None.

INFORMATION SYSTEMS

Project Title: **Application Enhancements**

Location: **All Service Areas**

Classification: **Information Systems**

Project Cost: **$1,355,000**

Project Description

The Company has software applications that are custom developed, such as the Customer Service System ("CSS"), and others that are vendor provided such as Microsoft Great Plains. This project is necessary to enhance these software applications to support changing business requirements and to take advantage of new development and product improvements. For details, see Volume IV, Information Systems, Appendix 1.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$ 23	-	-	-
Labour – Internal	735	-	-	-
Labour – Contract		-	-	-
Engineering		-	-	-
Other	597	-	-	-
Total	**$1,355**	**$1,390**	**$3,400**	**$6,145**

Operating Experience

The project cost is based on an assessment of historical expenditures. For comparison purposes, the following table gives the expenditures for this project for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$555	$906	$619	$726	$836

Project Justification

This project is justified on the basis of improvements in customer service and increased operational efficiencies.

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

None.

Project Title: **Application Environment**

Location: **All Service Areas**

Classification: **Information Systems**

Project Cost: **$791,000**

Project Description

This project involves the necessary upgrading of technology products and related processes required to support the implementation, upgrading, and enhancement of the Company's computer applications. It includes upgrades to current software tools, processes and applications as well as the acquisition of new software licences. For details see Volume IV, Information Systems, Appendix 2.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	< >	-	-	-
Labour – Internal	$346	-	-	-
Labour – Contract		-	-	-
Engineering		-	-	-
Other	445	-	-	-
Total	**$791**	**$410**	**$2,620**	**$3,821**

Operating Experience

The project cost is based on an assessment of historical expenditures. For comparison purposes, the following table gives the expenditures for this project for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$1,724	$587	$560	$724	$846

Project Justification

This project is justified on the basis of improvements in customer service and increased operational efficiencies.

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

None.

Project Title: **Customer Systems Replacement**

Location: **All Service Areas**

Classification: **Information Systems**

Project Cost: **$226,000**

Project Description

This project involves customer service and efficiency enhancements to the Customer Service System which also will reduce reliance on the OpenVMS operating system. This includes improvements to the customer bill formatting and printing procedure which currently is a difficult and costly process. For details see Volume IV, Information Systems, Appendix 3.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$15	-	-	-
Labour – Internal	166	-	-	-
Labour – Contract		-	-	-
Engineering		-	-	-
Other	45	-	-	-
Total	**$226**	**$250**	**$520**	**$996**

Operating Experience

The following table gives the expenditures for this project for the past year.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$0	$0	$0	$0	$170

Project Justification

This project is justified on the basis of improvements in customer service and increased operational efficiencies.

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

None.

Project Title: **Network Infrastructure**

Location: **All Service Areas**

Classification: **Information Systems**

Project Cost: **$393,000**

Project Description

This is the second year of a two-year project involving the replacement of aging network components that no longer support the business needs of the Company or are no longer supported by the vendor. For details see Volume IV, Information Systems, Appendix 4.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$341	-	-	-
Labour – Internal	36	-	-	-
Labour – Contract	-	-	-	-
Engineering	-	-	-	-
Other	16	-	-	-
Total	**$393**	**$250**	**$150**	**$793**

Operating Experience
The project cost is based on an assessment of historical expenditures. For comparison purposes, the following table gives the expenditures for this project for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$237	$205	$0	$0	$547

Project Justification

This project is justified on the basis of improvements in customer service and increased operational efficiencies.

A stable and effective network is critical to ensuring the availability of the Company's business applications to enable employees to be more responsive to customers. The network components

being replaced connect the Company's offices across the province to the St. John's offices and is used by employees to access applications like the Customer Service System, Problem Call Logging System, Safety applications, engineering design applications, email, Business Support Systems, Intranet, etc. The new network components will provide the additional network capacity and performance required for the delivery of these business applications. As well, it will reduce the Company's reliance on technology that is no longer manufactured.

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

None.

Project Title: **Personal Computer Infrastructure**

Location: **All Service Areas**

Classification: **Information Systems**

Project Cost: **$539,000**

Project Description

This project is necessary for the replacement or upgrade of personal computers, printers and associated assets that have reached the end of their useful life. The Company currently has an expectation of a four to five year life cycle for personal computers. In 2004 109 PCs will be replaced (74 desktop computers and 35 laptop computers). This project also covers the purchase of 4 printers to replace existing printers that have reached the end of their useful life and additional peripheral equipment such as monitors.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$368	-	-	-
Labour – Internal	72	-	-	-
Labour – Contract	-	-	-	-
Engineering	-	-	-	-
Other	99	-	-	-
Total	**$539**	**$550**	**$1,655**	**$2,744**

Operating Experience

The project cost is based on an assessment of historical expenditures. For comparison purposes, the following table gives the expenditures for this project for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$1,242	$784	$405	$635	$564

Project Justification

This project is justified on the basis of improvements in customer service and increased operational efficiencies.

The Company annually reviews its personal computing requirements in detail as a part of its capital budgeting process to ensure that each employee has the computing power necessary to perform their job effectively. The objective of this project is to accommodate application enhancements and new applications while maintaining current performance standards and customer service levels. As well, the replacement of personal computer infrastructure and the reassignment of older, less powerful personal computers to users with lesser capacity requirements will extend the useful life of personal computers.

All materials and services for this project will be purchased after examining the competitive bids of prospective suppliers.

Future Commitments

None.

Project Title: **Shared Server Infrastructure**

Location: **All Service Areas**

Classification: **Information Systems**

Project Cost: **$644,000**

Project Description

The Shared Server Infrastructure project includes the procurement, implementation, and management of the hardware and software relating to the operation of shared servers. Shared servers are computers that support applications used by multiple employees. Management of these shared servers, and their components, is critical to ensuring that these applications operate effectively at all times.

This project is necessary to maintain current performance on the Company's shared servers and to provide the additional infrastructure needed to accommodate new and existing applications. This involves the replacement and upgrade of disks, processors, and memory, as well as security and monitoring software. For details see Volume IV, Information Systems, Appendix 5.

Project Cost (000s)				
Cost Category	**2004**	**2005**	**2006 - 2008**	**Total**
Material	$414	-	-	-
Labour – Internal	145	-	-	-
Labour – Contract	-	-	-	-
Engineering	-	-	-	-
Other	85	-	-	-
Total	**$644**	**$900**	**$2,350**	**$3894**

Operating Experience

The project cost is based on an assessment of historical expenditures. For comparison purposes, the following table gives the expenditures for this project for the past five years.

Project Cost					
Year	**1999**	**2000**	**2001**	**2002**	**2003F**
($000s)	$160	$286	$625	$705	$1,561

Project Justification

This project is justified on the basis of improvements in customer service and increased operational efficiencies.

This project is justified on the basis of the need to provide additional capacity to support new applications and to maintain the performance of the Company's servers. Some of the Company's major shared servers are used by as many as 400 employees at one time. Degradation of server performance can have a negative impact on employee productivity, customer service, and the integrity of stored corporate data.

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

None.

UNFORESEEN ITEMS

Project Title: **Allowance for Unforeseen Items**

Location: **Various**

Classification: **Unforeseen Items**

Project Cost: **$750,000**

Project Description

This allowance is necessary to cover any unforeseen capital expenditures which have not been budgeted elsewhere. The purpose of the account is to permit the Company to act expeditiously to deal with events affecting the electrical system in advance of seeking specific approval of the Board. Examples of such expenditures are the replacement of facilities and equipment due to major storm damages or equipment failure.

Operating Experience

This project provides funds for timely service restoration.

Project Justification

Projects for which these funds are intended are justified on the basis of reliability, or on the need to immediately replace deteriorated or damaged equipment.

The Company will ensure this project is completed at the lowest possible cost consistent with reliable service. All material and contract labour will be obtained through competitive tendering.

Future Commitment

None.