NEWFOUNDLAND AND LABRADOR HYDRO

2004 CAPITAL BUDGET

PRE-FILED EVIDENCE

HYDRO
THE POWER OF COMMITMENT

John C. Roberts, C.A.
Vice-President, Finance and Chief Financial Officer
Newfoundland and Labrador Hydro

At the hearing into Newfoundland and Labrador Hydro's 2004 Capital Budget Application, the Finance Evidence will be adopted by John C. Roberts, C.A., Vice-President, Finance and Chief Financial Officer for the Hydro Group of Companies.

A witness profile for John Roberts is as follows:

- Mr. Roberts obtained his C.A. designation in 1973 and is a member of the Institute of Chartered Accountants of Newfoundland.

- Mr. Roberts worked in private industry and with a national accounting firm before joining Newfoundland Hydro in 1983 as Accounting Manager. He was appointed Corporate Controller in 1985.

- In 2003 Mr. Roberts was appointed Vice-President, Finance and Chief Financial Officer.

- Mr. Roberts has testified before the Board of Commissioners of Public Utilities on several occasions, the first in 1985 and most recently in 2001.

- Mr. Roberts is responsible for general accounting functions for Newfoundland Hydro including budgeting and all financial reporting, treasury activities of cash management and financing activities, administration of the corporate insurance program, customer services, financial planning and rates and regulatory matters.

FINANCE EVIDENCE

Introduction

The purpose of this evidence is to provide a brief overview of Newfoundland and Labrador Hydro's ("Hydro") 2004 capital program, including a discussion of the 2003 capital budget variances, as well as its impact on ratebase and the financing plans for 2004.

Overview

The primary objective of the capital program is to maintain the integrity and reliability of the electrical system – while minimizing both capital and operating costs.

The 2004 capital budget is forecast to be $34.5 million and a breakdown by major category is shown on page A-1 of Section A to the Application. Approximately $5.1 million or 15% of the total budget is planned for generation projects for replacements and upgrades at Hydro's hydro and thermal plants. Transmission and Rural Operations ("TRO") projects account for $12.2 million or 35% of the budget and cover such areas as transmission, terminals and distribution. The general properties category is $16.2 million of which $2.4 million is primarily related to the replacement of vehicles. The remaining $13.8 million in this category is for Information Systems and Telecommunications ("IS & T") and is primarily related to the replacement of the energy management system, computer replacements and replacement of the VHF mobile radio system.

The Administration projects shown on page A-10 of Section A to the Application fall within the Finance area of responsibility for this Application.

2003 Capital budget

Hydro is currently forecasting 2003 capital expenditures to be $35.3 million. Details are included in Section F to the Application.

Variances from the approved capital budget can occur for a number of reasons including: changes in work related to field conditions or third party requirements; changes in priorities due to new events; changes in engineering or cost estimates; delays in the delivery of material and equipment; and other unforeseen circumstances which could not be reasonably anticipated during the preparation of the capital budget.

2004 Capital budget

The 2004 capital budget, submitted to the Board for approval, totals $34.5 million and excludes capital expenditures associated with the Granite Canal project, which are exempted from the Board's jurisdiction. The average capital budget of the preceding 6 years has been $38.3 million. Section E to the Application provides an overview of Capital Expenditures/Budgets for the years 1998 through 2007. Amounts shown for the years 2005 to 2007 are preliminary estimates only and have not been subjected to a detailed review and approval process. The detail, explanations and justifications of individual capital proposals in excess of $50,000 for 2004 are contained in Sections B and C to the Application.

Capital Budget Process

The Capital budgeting process within Hydro is very intensive and involves the input of supervisory personnel with budgetary responsibility all the way through each level of Management until finally approved by Hydro's Board of Directors before being forwarded to the Public Utilities Board for review and approval. This process spans several months, from start to finish and involves the review and evaluation of every capital budget proposal that is prepared, to determine if it should move forward for approval to the next level of supervision.

All proposed projects are screened using four broad evaluation criteria. The first is safety. If the proposed project is required for public safety or the safety of our employees, it is considered a priority. The second is compliance with environmental regulations which would include legislation, as well as commitments and agreements with Provincial and Federal regulatory authorities. The third criteria is to maintain or to improve reliability and availability of an acceptable level of service to our customers. The fourth criteria is to reduce costs or improve efficiencies. Projects that meet one or more of these criteria will receive approval by Hydro.

The budget process starts with the issuance of budget instructions and a timetable and the commencement of an update to the long term planning load forecast in order to determine the requirement for new generation projects.

Supervisory personnel review their requirements with the regional managers and plant managers to identify potential projects that meet the above noted criteria. Once these requirements are identified, capital budget proposal forms are completed for each project containing project descriptions, justification and cost estimates. The various directors undertake a review of the individual proposals taking into account the criteria and the dollar estimates.

These capital plans are prepared to cover the budget year in question as well as estimates for four subsequent years. After the directors finish their review and revisions are made, the proposals are further reviewed by the Vice-President of each Division. Then, Executive Management does its review and reassesses each proposal according to the criteria listed above, as well as the total amount of the proposed capital budget.

The guideline that has been used for several years is that the capital program should not normally exceed cash flow from operations that consists primarily of net income, depreciation and some other non-cash items. The target for the last couple of years has been to keep our capital expenditures to the level of depreciation, which is approximately $34 million for 2004.

Executive Management refers to the four subsequent year estimates as an indicator of future dollars to be spent and considers this information in assessing the current capital budget year dollars under review. After Executive Management has reviewed and approved the proposed capital budget, it is then submitted to the Hydro Board of Directors for their review and approval. After Board approval is received, the capital budget is then forwarded to the Public Utilities Board for public review and approval.

Ratebase

Hydro's ratebase is composed primarily of net capital assets, in addition to working capital allowance, inventories and deferred expenses.

Changes to the ratebase arise primarily from the offsetting impact of the Capital Budget and depreciation expense. Capital expenditures increase the ratebase, while depreciation reduces it. Depreciation is projected to be $33.9 million for 2004, which is slightly less than the proposed capital budget. There is approximately $10.0 million of capital expenditures for 2004 related to projects that will not be completed until a future date and therefore are not included in the ratebase for 2004.

Rate Base ($ thousands)	2002 [(1)] Final COS	2002 Actual	2003 Forecast	2004 Forecast
Capital Assets	1,765,804	1,757,726	1,924,780	1,947,670
Less:				
CIAC	87,272	87,569	86,668	86,397
Acc. Depreciation	439,076	433,572	465,334	497,452
Net Assets not in Service	117	115	79	74
Muskrat Falls	2,010	2,010	2,010	2,010
Net Capital Assets	1,237,329	1,234,420	1,370,689	1,361,737
Balance previous year	1,234,447	1,224,068	1,234,420	1,370,689
Average Capital Assets	1,235,888	1,229,244	1,302,555	1,366,213

(1) As approved by the Board, P.U. 21 (2002-2003)

As Hydro does not have an Automatic Adjustment Formula to change rates between public hearings, this change in ratebase will not have any impact on rates charged to customers until such time as the Board rules on a subsequent general rate application. Until that time, rates will be in accordance with those prescribed in P.U. 21 (2002-2003), which were based on the 2002 test year.

Financing Plans for 2004

Hydro's 2004 capital program will be financed by a combination of internally generated cash flow and external financing in the form of promissory notes. At this time Hydro does not anticipate that any long-term debt issue will be required during 2004.

At the hearing into Newfoundland and Labrador Hydro's ("Hydro") 2004 Capital Budget Application, a panel of witnesses will speak to the Production Evidence. The panel will be composed of James R. Haynes, P. Eng., Vice-President, Production, Eric W. Downton, P. Eng., Director, Information Systems & Telecommunications and Kenneth McDonald, Labour Manager, Transmission and Rural Operations ("TRO"), Central. Mr. Haynes has responsibility for all projects in the Production Division as outlined in the Production Evidence. Mr. Downton has responsibility for Information System & Telecommunications projects. Mr. McDonald's role is with respect to operational aspects of the VHF communications from a field perspective.

A Witness profile for Mr. Haynes is as follows:

<u>Mr. Haynes</u>

- Mr. Haynes graduated from Memorial University with a Bachelor of Engineering Degree in 1977 and at that time joined Hydro as a graduate engineer.

- Mr. Haynes has held a number of positions with Hydro, including Instrumentation Engineer on the construction of Holyrood No. 3 Generating Unit, Transmission Planning Engineer and Manager of Transmission Planning in the System Planning Department.

- In 1989 Mr. Haynes joined Hydro's subsidiary, Churchill Falls (Labrador) Corporation, as Director of Plant Operations and Maintenance and later was appointed to the position of General Manager.

- In 1999 Mr. Haynes transferred back to Hydro and in 2001 was appointed to the position of Vice-President, Production.

- Mr. Haynes is a member of the Association of Professional Engineers and Geoscientists of Newfoundland and is, as well, a member of the Institute of Electrical and Electronic Engineers and a member of the Canadian Electricity Association where he serves as a member of the Generation Council. Mr. Haynes also serves on the Board of Directors of the Canadian Hydropower Association.

- Mr. Haynes testified before the Board of Commissioners of Public Utilities during Hydro's 2003 Capital Budget Hearing.

A Witness profile for Mr. Downton is as follows:

<u>Mr. Downton</u>

- Mr. Downton graduated from Memorial University with a Bachelor of Engineering Degree in 1979 and joined Hydro at that time.

- Mr. Downton has held a number of positions with Hydro in the telecontrol area and as Plant Electrical Engineer at the Holyrood Generating Station.

- In 1990 Mr. Downton was appointed Project Manager for the Energy Management System and in 1995 was appointed Manager, Telecontrol.

- In 2000 Mr. Downton was appointed Director of Information Systems and Telecommunications, which was a merger of the former Management Information Systems Department and the Telecontrol Department.

- Mr. Downton is a member of the Association of Professional Engineers and Geoscientists of Newfoundland.

- Mr. Downton testified before the Board of Commissioners of Public Utilities during Hydro's 2003 Capital Budget Hearing.

A Witness profile for Mr. McDonald is as follows:

Mr. McDonald

- Mr. McDonald joined Hydro in 1968 as a Lineworker Apprentice, attained his journeyperson certificate in 1972 and worked as a lineworker until 1979.

- Mr. McDonald has held a number of supervisory positions with Hydro including Transmission Supervisor, Senior Supervisor Transmission and Distribution Western Region and then Superintendent Western Area.

- In 1999 Mr. McDonald was promoted to his current position, Labour Manager, TRO Central, where he is responsible for in excess of 130 employees who use the VHF communications system to fulfill their roles and responsibilities for both regular and emergency work.

- In these positions Mr. McDonald has been involved in transmission and distribution work across the island, including major projects and emergency repairs such as sleet storm damage.

PRODUCTION EVIDENCE

Introduction

Newfoundland & Labrador Hydro's ("Hydro") Production Division is responsible for:

- Planning future generation, transmission and distribution facilities to address forecast system load requirements;
- Operating and maintaining Hydro's oil-fired steam electric and hydroelectric generating plants and related systems;
- Operating the interconnected power systems, including generation dispatch and directing the operations of the transmission facilities to meet anticipated load;
- Providing engineering services to support existing hydroelectric and thermal generation facilities and the construction of new facilities; and
- Planning, maintaining and operating the corporation's telecommunications and computing facilities to support business requirements.

This evidence concerns Hydro's capital expenditures for 2004 in the areas of responsibility of the Production Division.

Capital Budget Process

There are four primary areas of focus in identifying capital projects. The first is safety. A project is considered a priority if the proposed project is required for public safety or the safety of our employees. The second is compliance with environmental regulations which would include legislation, as well as commitments and agreements with regulatory authorities. The third criteria is to

maintain or to improve reliability and availability of equipment including meeting load growth. The fourth criteria is to reduce costs or improve efficiencies.

Within the Production Division, capital projects can arise in several ways. Analyses carried out in the System Planning section focus on additions or modifications to generation, transmission and distribution facilities required to address system load requirements. Any projects thus identified are included within the respective budget category. Another way in which projects arise is through review of existing plant equipment or processes by plant personnel and/or Generation Engineering. Operating performance or excessive maintenance of specific plant equipment may indicate that it is nearing or beyond it's useful life. The lack of spare parts or support from the equipment manufacturer signals obsolescence requiring a decision on whether to invest in newer technology to improve reliability, reduce operating costs and in some cases lessen environmental risks. Similar issues arise in the Information Systems and Telecommunication area where systems that support both our business and operating processes are maintained in an environment affected significantly by technological changes both in software and hardware. It is extremely important that Hydro be able to acquire information on system status at any instant and be able to operate and control the electrical system, while maintaining communications with and between field personnel, thus ensuring a safe working environment. This can be achieved only through acquiring and maintaining secure and reliable infrastructure.

As well, capital projects are sometimes identified through regular environmental audits that may indicate investment are needed to meet regulations or conditions set in approval processes for various projects. There are also increased public expectations in the environmental area and the potential of increased legislative oversight in the area of environmental performance that did not exist when the original production plant equipment was installed.

Budget proposals however originated are reviewed within the individual departments by the supervisory personnel and at the Divisional level by the Vice-President before submission to Executive Management for review and approval. Following this approval, the proposed capital budget is submitted to the Board of Directors for approval and then to the Public Utilities Board.

2004 Capital Budget Overview

The portion of Hydro's 2004 Capital Budget for which the Production Division is responsible amounts to approximately $18.9 million and is outlined in Section A to the Application under the categories of Generation (pages A-4 to A-5) and Information Systems & Telecommunications (pages A-8 to A9).

Under Generation, approval is sought for projects totaling approximately $2.7 million for hydro plant projects and $2.4 million for thermal plant projects. Projects under Information Systems & Telecommunications total approximately $13.8 million.

Some of the projects are multi-year projects for which the Board had previously approved funds totaling $2.3 million. As well, a number of new proposals are expected to go beyond 2004, thus requiring future expenditures beyond 2004 of approximately $16.9 million.

2004 Capital Budget Summary

This section of the evidence outlines the major 2004 proposed capital expenditures under three categories: Hydro Generation, Thermal Generation and Information Systems & Telecommunications. Detailed project justifications are contained in Section B to the Application for each project over $50,000.

The overall budget proposed for 2004 for Generation is $5.1 million. A number are multi-year projects requiring expenditures in future years of $3.0 million.

There are two categories under this heading: Hydro Generation Plant and Thermal Generation Plant.

Hydro Generation Plant

The projects proposed for Hydro Plants are listed on page A-4 of Section A to the Application. In the Hydro Generation area an approximate $2.7 million budget is proposed for 2004, which is generally for replacement of key components of hydro plant equipment such as exciters and governors. While some of these projects had expenditures in 2003 as approved during Hydro's 2002 Capital Hearing, none are expected to have cash requirements beyond 2004. These projects were identified through an engineering review and concern critical components of the plant which are not "off the shelf" items. Thus, significant engineering and project lead time is required to complete these types of projects.

Thermal Generation Plant

The projects proposed for Thermal Plants are listed on page A-5 of Section A to the Application. In the Thermal Generation area expenditures of $2.4 million are proposed. Certain new projects commencing in 2004 will require expenditures in future years of approximately $3.0 million. One of the more significant projects planned is the replacement / upgrade of the plant computerized control system which is essential for control of the complex process of converting the energy in oil to steam and then to electricity. This project has a total forecast cost of $2.6 million of which $1.6 million is required in 2004. As well, there are further enhancements proposed for monitoring the environmental aspects of the Holyrood Plant at an estimated cost of $0.7 million. During 2001, and again in 2002 the Holyrood Generating Station was the leading emitter of sulfur dioxide in the Province. The proposed 2004 capital expenditure will provide us with ground level monitoring capability of fine particulate and nitrogen oxide. Finally, as was previously approved for Unit No. 1 in 2003, funding is now proposed to start the engineering work for the replacement of the stack liner and cooling water screen

structure on Unit No. 2 during 2004 ($0.1 million) with the major work planned for 2005 ($2.0 million) to coincide with the major overhaul of the unit.

Information Systems And Telecommunications

The projects proposed for IS&T are listed on pages A-8 to A-9 of Section A to the Application. The overall budget proposed for 2004 in the IS&T area is $13.8 million. Several are multiyear projects with previously approved expenditures of $2.3 million, and a number will continue beyond 2004 with expected costs of $13.9 million required in future years.

In the Software Applications category, the most significant project is the Energy Management System replacement, which had funds approved in 2003. This project includes both the software and hardware for the new system and has a total cost estimate of $12.3 million with $1.2 million approved for 2003 and a 2004 requirement of $4.3 million. The remaining $6.7 million will be required through 2005 and 2006. A further $1.2 million is required for other non-related software enhancements and upgrades necessary to allow vendor support of installed software.

In the Computer Operations category, a total of $3.1million is proposed. The most significant project is the End User and Server Evergreen Program at $2.8 million. The various computers, servers and software in use generally have a 3-5 year life cycle. Keeping this infrastructure current is accomplished through an evergreen program. Hydro employ desktop, laptop, “thin clients” and servers throughout the system as necessary. Thin clients are effectively a replacement for personal computers where applications are done on the servers. Hydro is moving to thin client to the extent possible, as it has a longer life and lower overall operating cost.

The final category in the IS&T area is Network Services where projects totaling $5.2 million are proposed. One of the proposals is for Power Line Carrier

Equipment which had approval of $1.0 million for 2003 and now requires $0.4 million to be spent in 2004 to complete the project. A further $7.0million will be required in future years to complete the other projects proposed in this category. Also included in this category for Network Services are funds to start the replacement of Hydro's VHF mobile radio system. This project was originally proposed to start in 2002 but was not approved at that time as the Board required additional justification. Since that time Hydro has re-evaluated the need, as well as the options available and is resubmitting the proposal as it is imperative that action be taken to replace this essential system. The system is required for the day-to-day operation of the system and the safety of employees and contractors. The loss of this system would extend outages of equipment, as workers must know the status of such equipment before commencing work and it is imperative that such equipment not be energized without knowing with certainty that workers or the general public are not at risk. As well, without an effective VHF mobile radio system considerable delays would be experienced in doing even routine work such as equipment inspection and minor repairs. The VHF system is used daily by our employees to carry out their work in a safe environment and it's reliability cannot be compromised or left in doubt.

Conclusion

The overall capital budget proposals put forward in the Production Division areas of responsibility are intended to ensure system reliability, security of supply, a safe working environment for our employees and contractors, appropriate control of all equipment under our jurisdiction and to provide communications and computing infrastructure so that employees may be effective and productive in carrying out their duties. These projects are considered essential for Hydro to continue to provide its customers with reliable service in a safe and environmentally appropriate fashion and at least cost to meet its mandate. The individual proposals, which are explained in the justifications included with the

Application, are required to ensure continued reliable service to customers, both industrial and residential, across the province.

At the hearing into Newfoundland and Labrador Hydro's 2004 Capital Budget Application a panel of witnesses will speak to the Transmission and Rural Operations Evidence. The panel will be composed of David W. Reeves, P. Eng., Vice-President, Transmission and Rural Operations and Fred Martin, P. Eng., Director, Engineering – Transmission and Rural Operations.

A witness profile for David Reeves is as follows:

- Mr. Reeves graduated from the Technical University of Nova Scotia, Dalhousie University in 1972 (B. Eng. - Electrical) and is a member of the Association of Professional Engineers and Geoscientists of Newfoundland and Labrador.

- Mr. Reeves joined Newfoundland and Labrador Hydro ("Hydro") in 1972 as an Electrical Engineer. In 1975, he became responsible for Hydro's hydraulic generation, a position he held until 1985 when he became the Vice-President of Operations and Engineering for Churchill Falls (Labrador) Corporation Limited.

- In 1991 Mr. Reeves became Vice-President of Engineering and Construction for Hydro and in 1995 became Vice-President of Transmission and Rural Operations, the position he currently holds.

- Mr. Reeves is responsible for Hydro's transmission, distribution and isolated rural systems and the organizational structure in place to manage these assets for the delivery of service to Hydro's customers.

- Mr. Reeves is currently a member of the Canadian Electricity Association (CEA) Transmission Council and is also a member of the Institute of Electrical and Electronic Engineers (IEEE).

- Mr. Reeves has testified before the Board of Commissioners of Public Utilities on several occasions, including hearings related to capital expenditures and in the 2001 General Rate Application.

A witness profile for Fred Martin is as follows:

- Mr. Martin graduated from the Technical University of Nova Scotia, Dalhousie University in 1971 (B. Eng. – Electrical) and is a member of the Association of Professional Engineers and Geoscientists of Newfoundland and Labrador.

- Mr. Martin joined Hydro in 1971 as Plant Engineer at Bay D'Espoir. He has held several supervisory and managerial positions throughout his career including that of Manager, Telecontrol from 1988-1996.

- In 1996, Mr. Martin became Director, Engineering – Transmission and Rural Operations, the position he currently holds.

- Mr. Martin is responsible for the design, construction and on-going technical support of Hydro's transmission, distribution and isolated diesel systems.

- Mr. Martin is a member of the Canadian Electricity Association Transmission Council and its Policy and Regulatory Development Task Group.

TRANSMISSION AND RURAL OPERATIONS EVIDENCE

Introduction

This evidence concerns Newfoundland and Labrador Hydro's ("Hydro") capital expenditures in the Transmission and Rural Operations ("TRO") categories for 2004.

Capital Budget Process

TRO is responsible for Hydro's high voltage transmission lines, terminal stations and associated equipment, and rural operations, which involves both the interconnected and isolated diesel systems. Consequently, TRO has responsibility for the engineering and construction of projects for these areas included in the 2004 Capital Budget.

The capital process in TRO starts at the regional level and in the Engineering Department. Each region develops proposals to address safety and reliability, environment and productivity requirements, and the regional managers along with their senior staff, decide which proposals will be submitted for consideration. The Engineering Department initiates proposals that relate to overall system reliability, performance and protection and metering. The Engineering Department also prepares project cost estimates and schedules for those proposals identified by the regions. The Vice-President and Director of Engineering, in conjunction with the regional managers, review all projects and decide which projects will be submitted to Executive Management for consideration.

Following approval by Executive Management, the Board of Directors and the Public Utilities Board, TRO has responsibility for the full implementation (engineering, construction, etc.) of the approved projects.

2004 Capital Budget Overview

The TRO capital budget is comprised of projects which are designed to address customer load growth, safety, reliability, environmental and cost effectiveness requirements.

With respect to the 2004 capital budget Application, TRO is responsible for the projects listed on pages A-6 and A-7 of Section A to the Application totaling $12,177,000 and the section of vehicles under the heading “Administrative” on page A-10 of the General Properties section totaling $2,223,000.

Projects listed on page A-6 are associated with the main interconnected transmission grid and are comprised of projects associated with transmission, system performance and protection and terminals. Projects listed on page A-7 are comprised of projects associated with the rural systems as detailed in the headings “Distribution” and “Generation”. Also on page A-7 are items which are common to both the interconnected transmission system and the rural systems and are included in the metering, properties and tools and equipment sections. Page A-10 lists the projects associated with the replacement of vehicles.

The detailed justifications for the TRO 2004 capital proposals over $50,000 are found in Section B to the Application.

Section C to the Application includes projects which meet the minimum filing requirement set by the Board. Minimum filing is applicable to any capital work on transmission or generation on the interconnected system which is either a new addition or a capacity upgrade. There is one project which meets the criteria and it is “Purchase and Install Transformer Addition – Happy Valley Terminal Station” starting on page C-2. This project is to address load growth on the Happy Valley/Goose Bay system.

2004 Capital Budget Summary

This section of the evidence outlines the major 2004 proposed capital expenditures for TRO under seven categories: Transmission, System Performance and Protection, Terminals, Distribution, Generation, General and Vehicles.

The total capital expenditures for TRO in 2004 are estimated to be $14,400,000. As noted earlier, detailed projected justifications are included in Section B to the Application.

Transmission

Proposed Transmission expenditures in the 2004 capital budget are shown on page A-6 of Section A to the Application and total $4,216,000.

The most significant project in this category is the continuation of a major upgrade to TL 214, a 138 kV line from Bottom Brook to Doyles. The Board approved $110,700 for this project in 2003 to cover detailed engineering work. Equipment purchases and construction are scheduled for 2004 at an estimated cost of $2,836,200. The project involves the addition of structures, installation of counterweights and replacement of insulators. It was initiated following a condition assessment of the line. A report titled “TL 214 Condition Assessment and Recommendations for Upgrading” was submitted to the Board as part of Hydro’s 2003 Capital Budget Application.

The second significant project in this category is the replacement of all remaining Canadian Ohio Brass insulators on TL 233, a 230 kV line from Buchans to Bottom Brook at an estimated cost of $1,054,600. This is the continuation of a program to replace pre-1974 insulators manufactured by COB. These insulators have experienced industry-wide failures due to a cement growth problem.

The third significant project in this category is the replacement of wood poles on the bulk transmission system at a forecast cost of $325,900. Through the 2003 preventative maintenance programs, a number of deteriorated poles will be identified as requiring replacement in 2004. The amount has been determined based on past experience.

System Performance and Protection

Approximately $303,000 is forecast for 2004 relating to performance and protection improvements across Hydro's system as outlined on page A-6 of Section A to the Application.

The largest project in this category involves the upgrading of protection on the 138kV and 66kV lines at Deer Lake and Sunnyside at a forecast cost of $150,200. Existing electromechanical relays, which are difficult to maintain and calibrate, will be replaced with microprocessor-based units having enhanced capabilities. This is part of an on-going initiative to improve protective relaying schemes on the bulk transmission system.

Terminals

Proposed capital expenditures in this category for 2004 are estimated at $1,656,000 as outlined on page A-6 of Section A to the Application.

The largest project in this category is the replacement of a transformer at the Happy Valley terminal station. Forecast load growth in the Happy Valley-Goose Bay area requires additional transformer capacity to meet the 2004 peak. To satisfy this requirement, $1,251,600 is estimated for the purchase and installation of a 30/40/50 MVA, 138/25kV power transformer and associated equipment. This transformer will replace one of the existing 15/20/25/28 MVA units. To ensure timely completion of the project and to meet the 2004 forecast load, the new transformer must be delivered by July 2004. This requires that tenders for the unit be issued in the spring of 2003 and an order placed by July 2003.

Commitments for the purchase of any equipment for this project will not be made prior to the approval of this project by the Board.

The second largest project in this category at an estimated cost of $207,300 is the installation of motor drive mechanisms on the 230 kV disconnect switches at Stephenville, Massey Drive and Bottom Brook terminal stations. This is the second year of a three-year program to install motor operators on all manual 230kV disconnect switches across the system, thereby eliminating the risks associated with manual switching.

Distribution

Proposed capital expenditures in the Distribution category total $5,153,000 for 2004 as outlined on page A-7 of Section A to this Application.

The two largest projects in this category are for service extensions ($1,558,000) and distribution upgrades ($1,471,000). These are annual allotments with estimates based on actual expenditures incurred during the five-year period 1998-2002. Service extensions provide for new electrical connections to customers, including street lights. Distribution upgrades provide for the replacement of deteriorated poles, damaged conductors, overloaded or damaged transformers and other distribution equipment.

The third largest project in this category is the replacement of poles at a forecast of $993,200. Through regular inspections of its distribution lines, Hydro identifies wood poles that have deteriorated to the point that they must be replaced. In 2004, Hydro plans to replace 168 deteriorated poles on the St. Anthony system and 75 deteriorated poles on the Bottom Waters system. Replacement of these poles is essential to maintaining satisfactory reliability.

The last remaining significant project in this category is the replacement of defective Canadian Ohio Brass (COB) and Canadian Porcelain (CP) insulators

on lines in the Bottom Waters, Fleur de Lys and South Brook systems at a forecast cost of $944,500 in 2004. This project is the continuation of an initiative to replace pre-1974 insulators that have experienced industry-wide failures due to a cement growth problem. Between January 1996 and February 2003, seventy-five (75) major outages on the lines on these systems have been caused by defective insulators.

Generation

TRO's proposed 2004 capital budget for Generation projects are outlined on page A-7 of Section A to the Application and total $205,000.

The most significant project in this category is the purchase and installation of new generator relaying equipment for the eight stand-by diesels at the Happy Valley North Diesel Plant at an estimated cost of $170,000. The existing relays have been in service for 30 to 50 years. Spare parts and technical manuals are not available. The new protection equipment will continue to ensure the service reliability of the North Diesel Plant.

General

Proposed capital expenditures in this category for 2004 are outlined on page A-7 of Section A to the Application and are estimated at $644,000.

An estimated $104,000 is forecast for the purchase of revenue meters, instrument transformers and associated equipment. These are required each year for new customers and as replacements for damaged equipment. The estimate is based on historical data.

Another $102,000 is proposed for the purchase of new and replacement tools with an individual value of less than $50,000 including portable generators, compression tooling and hydraulic cutters.

The last significant project in this category is the replacement of light duty mobile equipment each with a value less than $50,000 at an estimated total cost of $389,000. This includes snowmobiles, all-terrain vehicles, pole trailers and backhoe attachments.

Vehicles

Proposed vehicle expenditures in the 2004 capital budget are shown on page A-10 of Section A to the Application and total $2,223,000.

This is comprised of $1,142,200 for the purchase of medium/heavy trucks which are part of the 2003 capital budget, however, due to long delivery, these vehicles will not be available until 2004. This project is entitled “Replace Vehicles – Hydro System – 2003” on page A-10 in Section A to the Application.

Also, the project entitled “Replace Vehicles – Hydro System – 2004” on page A-10 in Section A to the Application is comprised of two parts. The first part in 2004, estimated at $1,081,000 is for vehicles which are planned to be tendered and delivered in 2004. The second part, estimated at $1,181,200 is for larger vehicles which will be tendered in 2004, but will not be able to be delivered until 2005.

Conclusion

The overall 2004 capital expenditures within the TRO areas of responsibilities are proposed to ensure the reliable supply of electricity to customers within a safe working environment for employees and the public at the least cost and in an environmentally acceptable manner.