



2003 GENERAL RATE APPLICATION

An application to the Board of Commissioners of Public Utilities

Proposed Power Rates
To be charged by
Newfoundland & Labrador
Hydro
To
Newfoundland Power,
Island Industrial Customers
and
Rural Customers



May 2003

Volume I



Newfoundland and Labrador Hydro 2003 General Rate Application

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IN THE MATTER OF the *Public Utilities Act*, (R.S.N. 1990, Chapter P-47 (the “Act”), and

IN THE MATTER OF a General Rate Application (the “Application”) by Newfoundland and Labrador Hydro for approvals of, under Section 70 of the Act, changes in the rates to be charged for the supply of power and energy to Newfoundland Power, Rural Customers and Industrial Customers; and under Section 71 of the Act, changes in the Rules and Regulations applicable to the supply of electricity to Rural Customers.

TO: The Board of Commissioners of Public Utilities (the “Board”)

THE AMENDED APPLICATION of Newfoundland and Labrador Hydro (“Newfoundland Hydro”)

STATES that: -

1. Newfoundland Hydro is a corporation continued and existing under the Hydro Corporation Act, is a public utility within the meaning of the Act and is subject to the provisions of the *Electrical Power Control Act, 1994* (“EPCA, 1994”).
2. The last general rate application by Newfoundland Hydro to the Board was filed on May 31, 2001. By Order No. P.U. 7 (2002-03) the Board gave direction on a number of matters as more particularly set out in that Order, including that Newfoundland Hydro file its next general rate application no later than December 31, 2003.

3. On August 16, 2002, Newfoundland Hydro filed a revised total 2002 Revenue Requirement, Rate Base, Return on Rate Base, Schedule of Rates and 2002 Cost of Service Study, all in accordance with Order No. P.U. 7 (2002-2003).
4. By Order No. P.U. 21 (2002-2003), the Board approved the rates currently charged by Newfoundland Hydro to its customers, which became effective September 1, 2002; fixed the forecast 2002 test year Rate Base at \$1,359,570,000; allowed a Return on Rate Base, based on the 2002 test year of 7.081% and approved the Rules and Regulations, currently in effect, for Rural Customers.
5. By Order No. P.U. 10 (2003) the Board approved changes to the Rules and Regulations for Rural Customers.
6. The Applicant proposes:
 - (1) that the rate charged Newfoundland Power be increased, no later than January 1, 2004 to 54.45 mills per kWh;
 - (2) that the rate charged Newfoundland Power as of January 1, 2004, for firming up secondary energy purchased from Corner Brook Pulp and Paper Limited and re-sold to Newfoundland Power as firm energy be decreased to 6.41 mills per kWh;

- (3) that the rates charged to Industrial Customers for firm service be increased, no later than January 1, 2004, to a demand charge of \$6.49 per kW per month, an energy charge of 27.55 mills per kWh and the relevant annual specifically assigned charges;
- (4) that the rates charged to Industrial Customers for non-firm service be, as of January 1, 2004, \$1.50 per kW per month and a variable energy charge based on the calculation on Page 3 of the Rates Schedules attached to this Application;
- (5) that the rate for wheeling energy for Abitibi-Consolidated Company of Canada be decreased to 4.49 mills per kWh as of January 1, 2004;
- (6) that the existing policy be continued of allowing the Applicant, as Newfoundland Power changes its rates, to automatically adjust the rates which it charges its Island Interconnected Rural Customers, its customers served from the L'Anse au Loup System, and its non-Government Isolated Domestic Rural Customers for the first 700 kWh per month of consumption, so that such rates are the same as the rates charged by Newfoundland Power to its customers;
- (7) that the existing policy be continued of allowing the Applicant to change the rates charged for consumption over 700 kWh per month of electricity sold to non-Government Isolated Domestic Rural Customers (the "lifeline block"), by the average rate of change (i.e. increase or decrease) granted to Newfoundland Power from time to time;

(8) < >

(9) that the policy, outlined in Order No. P.U. 7 (2002-2003) of charging rates based on full cost recovery for Government departments < >, excluding hospitals and schools in Isolated Rural Systems, be continued;

(10) < >

(11) that the lifeline block be phased out for Isolated General Service Customers and that a demand energy rate structure be implemented for these customers as directed by Order No. P.U. 7 (2002-2003) and as outlined in the Rates and Customer Services Evidence filed with this Application;

(12) that the rates for Labrador Interconnected Customers be based on a uniform Rate Structure as approved in Order No. P.U. 7 (2002-2003) and phased in over a five-year period as outlined in the Rates and Customer Service Evidence filed with this Application;

(13) that the following financial targets be approved by the Board as appropriate for Hydro:

| | |
|---------------------------|---------|
| Return on Equity (ROE) | - 9.75% |
| Debt to Capital Structure | - 80% |
| Return on Rate Base | - 8.15% |

- (14) that the estimated 2004 average Rate Base be \$1,485,468,000;
- (15) that the just and reasonable Rate of Return on the estimated average Rate Base for 2004 be 8.15% ;
- (16) certain minor amendments to the Rules and Regulations which govern the provision of service to Rural Customers be made to eliminate the statement preparation fee; to reduce the fee applicable for customer name changes from \$14 to \$8; and to extend the application of the reconnection fee to circumstances where customers request reconnection of service following a request for a landlord to disconnect;

7. The Applicant requests that the Board make an Order as follows:

- (1) fixing and determining the 2004 Rate Base of the Applicant at \$1,485,468,000;
- (2) determining a just and reasonable rate of return for 2004 on average Rate Base of 8.15%;
- (3) Approving, pursuant to Section 70 of the Act, the rate of 54.45 mills per kWh to be charged Newfoundland Power as set out in the Rates Schedules 2004 p. 1 of 32 attached to this Application;

- (4) Approving, pursuant to Section 70 of the Act, the firming up charge of 6.41 mills per kWh for secondary energy supplied by Corner Brook Pulp and Paper Limited to the Applicant and delivered as firm power and energy to Newfoundland Power as set out in the Rates Schedules 2004 p. 1 of 32 attached to this Application;
- (5) Approving, pursuant to Section 70 of the Act, the rate of \$6.49 per kW per month demand charge and an energy charge of 27.55 mills per kWh to be charged Island Industrial Customers for firm power and energy, plus the annual specifically assigned charge as follows;

| | |
|--|----------|
| Abitibi-Consolidated Company of Canada -Grand Falls | \$ 2,043 |
| Abitibi-Consolidated Company of Canada –Stephenville | 110,666 |
| Corner Brook Pulp and Paper Limited | 177,184 |
| North Atlantic Refining Limited | 183,497 |

as set out in the Rates Schedules 2004 p. 2 of 32 attached to this Application;

- (6) Approving, pursuant to Section 70 of the Act, the rate for non-firm service to Industrial Customers as set out in the Rates Schedules 2004, p. 3 attached to this Application;
- (7) Approving, pursuant to Section 70 of the Act, the rate of 4.49 mills per kWh as a wheeling fee to be charged Abitibi-Consolidated Company of Canada as set out in the Rates Schedules 2004, p. 4 of 32 attached to this Application;

- (8) Approving, pursuant to Section 70 of the Act, the rates for 2004 to 2008 for Rural Customers set out in the Rates Schedules attached to this Application;
 - (9) Approving, pursuant to Section 70 of the Act, changes to the Rules and Regulations applicable to providing service to Rural Customers outlined in paragraph 6 (16) hereof;
 - (10) Granting such alternative, additional or further relief as the Board shall consider fit and proper in the circumstances.
8. Communications with respect to this Application should be forwarded to Counsel for the Applicant, Maureen P. Greene, Q.C., Vice-President and General Counsel, Newfoundland and Labrador Hydro, P.O. Box 12400, St. John's, Newfoundland, A1B 4K7, phone 737-1465, fax 737-1782.

DATED at St. John's, Newfoundland this day of August 2003.

NEWFOUNDLAND AND LABRADOR HYDRO

William E. Wells
President and Chief Executive Officer
Newfoundland & Labrador Hydro
Hydro Place, Columbus Drive
P.O. Box 12400
St. John's, Newfoundland
A1B 4K7

IN THE MATTER OF the *Public Utilities Act*, (R.S.N. 1990, Chapter P-47 (the “Act”); *and*

IN THE MATTER OF a General Rate Application (the “Application”) by Newfoundland and Labrador Hydro for approvals of under Section 70 of the Act, changes in the rates to be charged for the supply of power and energy to Newfoundland Power, Rural Customers and Industrial Customers; and Under Section 71 of the Act, changes in the Rules and Regulations applicable to the supply of electricity to Rural Customers.

AFFIDAVIT

I, William E. Wells of St. John’s in the Province of Newfoundland, make oath and say as follows:

1. I am President and Chief Executive Officer of Newfoundland and Labrador Hydro, the Applicant named in the attached Amended Application.
2. To the best of my knowledge, information and belief, all matters, facts and things set out in the attached Amended Application are true.

SWORN at St. John’s in the Province)
of Newfoundland and Labrador)
this day of August 2003,)
before me:)

Barrister (NL)

William E. Wells

NEWFOUNDLAND AND LABRADOR HYDRO

UTILITY

Availability:

Newfoundland Power

Rate:

Base Rate*@ 5.445 ¢ per kWh

Firming-up Charge:

To be applied to secondary energy supplied by Corner Brook Pulp and Paper Limited.

Firming-Up Charge*@ 0.641 ¢ per kWh

***Subject to RSP Adjustment:**

RSP Adjustment refers to all applicable adjustments arising from the operation of Hydro's Rate Stabilization Plan, which levelizes variations in hydraulic production, fuel cost, load and rural rates.

Adjustment for Losses:

If the metering point is on the load side of the transformer, either owned by the customer or specifically assigned to the customer, an adjustment for losses as determined in consultation with the customer prior to January 31 of each year, shall be applied.

General:

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO
INDUSTRIAL -FIRM

Availability:

Any person purchasing power, other than a retailer, supplied from the Interconnected Island bulk transmission grid at voltages of 66 kV or greater on the primary side of any transformation equipment directly supplying the person and who has entered into a contract with Hydro for the purchase of firm power and energy.

Rate:

Demand Charge:

The rate for Firm Power, as defined and set out in the Industrial Service Agreements, shall be \$6.49 per month per kilowatt of billing demand.

Firm Energy Charge:

Base Rate*@ 2.755 ¢ per kWh

***Subject to RSP Adjustment:**

RSP Adjustment refers to all applicable adjustments arising from the operation of Hydro's Rate Stabilization Plan, which levelizes variations in hydraulic production, fuel cost, load and rural rates.

Specifically Assigned Charges:

The table below contains the additional specifically assigned charges for customer plant in service that is specifically assigned to the Customer.

| | Annual Amount |
|-------------------------------------|----------------------|
| Abitibi-Consolidated (Grand Falls) | \$ 2,043 |
| Abitibi-Consolidated (Stephenville) | \$ 110,666 |
| Corner Brook Pulp and Paper Limited | \$ 177,184 |
| North Atlantic Refining Limited | \$ 183,497 |

Adjustment for Losses:

If the metering point is on the load side of the transformer, either owned by the customer or specifically assigned to the customer, an adjustment for losses as determined in consultation with the customer prior to January 31 of each year, shall be applied.

General:

Details regarding the conditions of Service are outlined in the Industrial Service Agreements. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO**INDUSTRIAL – NON-FIRM****Availability:**

Any person purchasing power, other than a retailer, supplied from the Interconnected Island bulk transmission grid at voltages of 66 kV or greater on the primary side of any transformation equipment directly supplying the person and who has entered into a contract with Hydro for the purchase of firm power and energy.

Rate:**Non-Firm Demand Charge:**

The rate for Non-Firm Power, as defined and set out in the Industrial Service Agreements, shall be \$1.50 per month per kilowatt of billing demand.

Non-Firm Energy Charge (¢ per kWh):

Non-Firm Energy is deemed to be supplied from thermal sources. The following formula shall apply to calculate the Non-Firm Energy rate:

$$\{(A \div B) \times (1 + C)\} \times 100$$

A = the monthly average cost of fuel per barrel for the energy source in the current month or, in the month the source was last used

B = the conversion factor for the source used (kWh/bbl)

C = the administrative and variable operating and maintenance charge (10%)

The energy sources and associated conversion factors are:

1. Holyrood, using No. 6 fuel with a conversion factor of 624 kWh/bbl
2. Gas turbines using No. 2 fuel with a conversion factor of 475 kWh/bbl
3. Diesels using No. 2 fuel with a conversion factor of 556 kWh/bbl.

Adjustment for Losses:

If the metering point is on the load side of the transformer, either owned by the customer or specifically assigned to the customer, an adjustment for losses as determined in consultation with the customer prior to January 31 of each year, shall be applied.

General:

Details regarding the conditions of Service are outlined in the Industrial Service Agreements. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

INDUSTRIAL - WHEELING

Availability:

Any person purchasing power, other than a retailer, supplied from the Interconnected Island bulk transmission grid at voltages of 66 kV or greater on the primary side of any transformation equipment directly supplying the person and who has entered into a contract with Hydro for the purchase of firm power and energy and whose Industrial Service Agreement so provides.

Rate:

Energy Charge:

All kWh (Net of losses)*@ 0.449 ¢ per kWh

* For the purpose of this Rate, losses shall be 3.21%, the average system losses on the Island Interconnected Grid for the last five years ending in 2002.

General:

Details regarding the conditions of Service are outlined in the Industrial Service Agreements.
This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO**RATE STABILIZATION PLAN**

The Rate Stabilization Plan of Newfoundland and Labrador Hydro (Hydro) is established for Hydro's Utility (Newfoundland Power) and Island Industrial customers to smooth rate impacts for variations between actual results and Test Year Cost of Service estimates for:

- hydraulic production;
- No. 6 fuel cost used at Hydro's Holyrood generating station;
- customer load (Utility and Island Industrial); and
- rural rates.

The formulae used to calculate the Plan's activity are outlined below. Positive values denote amounts owing from customers to Hydro whereas negative values denote amounts owing from Hydro to customers.

Section A: Components**1. Hydraulic Production Variations**

Actual monthly production is compared with the Test Year Cost of Service Study in accordance with the following formula:

$$\{(A - B) \div C\} \times D$$

Where:

A = Test Year Cost of Service Net Hydraulic Production (kWh)

B = Actual Net Hydraulic Production (kWh)

C = Test Year Cost of Service Holyrood Net Conversion Factor (kWh /bbl.)

D = Monthly Test Year Cost of Service No. 6 Fuel Cost (\$/bbl.)

2. Load Variation**2.1 Fuel Component**

To determine the fuel variation, actual monthly Utility Firm and Industrial Firm sales are compared with the Test Year Cost of Service Study in accordance with the following formula:

$$\{(E - F) \times (D \div C)\}$$

Where:

E = Actual Sales (kWh)

F = Test Year Cost of Service Sales (kWh)

C = Test Year Cost of Service Holyrood Net Conversion Factor (kWh /bbl.)

D = Test Year Monthly Cost of Service No. 6 Fuel Cost (\$/bbl.)

NEWFOUNDLAND AND LABRADOR HYDRO
RATE STABILIZATION PLAN (continued)

2.1 Revenue Component

To determine the revenue variation, actual monthly sales for Utility Firm and Firmed-Up Secondary energy and Island Industrial Firm energy are compared with the Test Year Cost of Service Study in accordance with the following formula:

$$(F - E) \times G$$

Where:

E = Actual Sales (kWh)

F = Test Year Cost of Service Sales (kWh)

G = Energy rate or Firmed-Up charge (\$/kWh)

3. Fuel Cost Variations

This is based on the consumption of No. 6 Fuel at the Holyrood Generation Station:

$$(H - D) \times I$$

Where:

D = Monthly Test Year Cost of Service No. 6 Fuel Cost (\$/bbl.)

H = Monthly Actual Average No. 6 Fuel Cost (\$/bbl.)

I = Monthly Actual Quantity of No. 6 Fuel consumed for firm sales (bbl.)

4. Rural Rate Alteration

This component is calculated for Hydro's rural customers whose rates are directly or indirectly impacted by Newfoundland Power's rate changes, with the following formula:

$$(J - K) \times L$$

Where:

J = Cost of Service rate ¹

K = Existing rate

L = Actual Units (kWh, bills, billing demand)

¹ Hydro's schedule of rates for its rural customers impacted by Newfoundland Power's rate changes as a result of the pass-through of Hydro's rate changes associated with the Test Year Cost of Service Study.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE STABILIZATION PLAN (continued)

Section B: Monthly Customer Allocation

1. Hydraulic, Load and Fuel Activity

Each month, the revenue component of the load variation will be assigned to the customer class for which the load variation occurred.

Each month, the year-to-date totals for hydraulic variation, fuel price variation and the fuel component of the load variation will be allocated among the Island Interconnected customer groups of (1) Newfoundland Power; (2) Island Industrial Firm; and (3) Rural Island Interconnected. The allocation will be based on percentages derived from 12 months-to-date kWh for: Utility Firm and Firmed-Up Secondary invoiced energy, Industrial Firm invoiced energy, and Rural Island Interconnected bulk transmission energy.

The year-to-date portion of hydraulic variation, fuel price variation and the fuel component of the load variation which is initially allocated to Rural Island Interconnected will be re-allocated between Newfoundland Power and Rural Labrador Interconnected customers in the same proportion which the Rural Deficit was shared in the approved Test Year Cost of Service Study.

The current month's activity for Newfoundland Power, Island Industrials and Rural Labrador Interconnected customers will be calculated by subtracting year-to-date activity for the prior month from year-to-date activity for the current month. The current month's activity allocated to Rural Labrador Interconnected customers will be removed from the Plan and written off to Hydro's net income (loss).

2. Rural Rate Alteration Activity

Each month, the rural rate alteration will be allocated between Newfoundland Power and Rural Labrador Interconnected customers in the same proportion which the Rural Deficit was shared in the approved Test Year Cost of Service Study. The portion allocated to Rural Labrador Interconnected will be removed from the Plan and written off to Hydro's net income (loss).

Section C: Plan Balances

A separate plan balance for Newfoundland Power and for Island Industrial customers will be established annually, to be recovered over a two-year period, the "adjustment period". Monthly activity for 2002 after September 1, 2002 will be included with the 2003 annual plan balance, pursuant to the Public Utilities Board Order No. P.U. 7 (2002-2003). Financing charges on the plan balance will be calculated monthly using Hydro's annual weighted average cost of capital.

Section D: Adjustment

1. Newfoundland Power

For each plan balance, commencing with the December 31, 2003 balance, the adjustment rate for each year of the adjustment period is determined as follows:

NEWFOUNDLAND AND LABRADOR HYDRO
RATE STABILIZATION PLAN (continued)

$$A = (B - C + D) \div E \div F$$

where

- A = adjustment rate (\$ per kWh) for the 12-month period commencing the following July 1.
- B = Balance December 31
- C = projected recovery / repayment to the following June 30 (if any), estimated using the most recent energy sales (kWh) for the period January to June.
- D = projected financing charges to the following June 30
- E = number of years remaining in the adjustment period
- F = energy sales (kWh) (firm and firm-up secondary) to Newfoundland Power for the most recent 12 months ended December 31

Recovery or repayment and financing will be applied to the balance each month. At the end of the two-year adjustment period, any remaining balance will be added to the plan then in effect.

2. Island Industrial Customers

For each plan balance, commencing with the December 31, 2003 balance, the adjustment rate for each year of the adjustment period is determined as follows:

$$G = H \div I \div J$$

where

- G = adjustment rate (\$ per kWh) for the 12-month period commencing the following January 1.
- H = Balance December 31
- I = number of years remaining in the adjustment period
- J = firm energy sales (kWh) to Industrial Customers for the most recent 12 months ended December 31

Recovery or repayment and financing will be applied to the balance each month. At the end of the two-year adjustment period, any remaining balance will be added to the plan then in effect.

Section E: Plan Balance August 31, 2002:

Newfoundland Power and Island Industrial customer balances accumulated in the Plan as at August 31, 2002 will be recovered over a 5-year collection period, with adjustment rates established each December 31, commencing December 31, 2002. Financing charges on the plan balances will be calculated monthly using Hydro's annual weighted average cost of capital.

1. Newfoundland Power

The December balance for the first year will be determined as follows:

NEWFOUNDLAND AND LABRADOR HYDRO
RATE STABILIZATION PLAN (continued)

$$K = L - M + N$$

where

K = Balance December 31
L = Balance, August 31, 2002
M = actual recoveries to December 31, 2002 at \$0.00177 / kWh
N = financing charges to December 31, 2002

The adjustment rate for each year of the five-year adjustment period will be determined in the same manner as described in Section D for Newfoundland Power.

Recovery and financing will be applied to the balance each month. At the end of the five-year recovery period, any remaining balance will be added to the plan then in effect.

2. Island Industrial Customers

The December balance for the first year will be determined as follows:

$$O = P - Q + R$$

where

O = Balance December 31
P = Balance, August 31, 2002
Q = actual recoveries to December 31, 2002 at \$0.00280 / kWh
R = financing charges to December 31, 2002

The adjustment rate for each year of the five-year adjustment period will be determined in the same manner as described in Section D for Island Industrial customers.

Recovery and financing will be applied to the balance each month. At the end of the five-year recovery period, any remaining balance will be added to the plan then in effect.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE 2.1D

GENERAL SERVICE DIESEL 0-10 kW

Availability:

For Service throughout the Island and Labrador diesel service areas of Hydro (excluding Government Departments) for non-domestic services where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge:\$19.45 per month

Energy Charge:

First 700 kilowatt-hours per month.....@11.740 ¢ per kWh

All kWh over 700 kilowatt-hours per month..... @20.000 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$19.45

Three Phase \$33.81

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE 2.2D

GENERAL SERVICE DIESEL OVER 10 kW

Availability:

For Service throughout the Island and Labrador diesel service areas of Hydro (excluding Government Departments) for non-domestic services where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater.

Rate:

Basic Customer Charge:\$25.96 per month

Demand Charge:

The maximum demand registered on the meter in the current month@ \$8.10 per kW

Energy Charge:

First 150 kilowatt-hours per kW of billing demand..... @11.840 ¢ per kWh

All excess kilowatt-hours..... @23.360 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$25.96

Three Phase \$57.27

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 1.2G

DOMESTIC DIESEL

GOVERNMENT DEPARTMENTS

Availability:

For Service to Government Departments throughout the Island and Labrador diesel service areas of Hydro, to a Domestic Unit or to buildings or facilities which are on the same Serviced Premises as a Domestic Unit and used by the same Customer exclusively for domestic or household purposes, whether such buildings or facilities are included on the same meter as the Domestic Unit or metered separately.

Rate:

Basic Customer Charge.....\$29.83 per month

Energy Charge:

All kilowatt-hours@ 60.112 ¢ per kWh

Minimum Monthly Charge \$29.83

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.1G

GENERAL SERVICE DIESEL 0-10 kW

GOVERNMENT DEPARTMENTS

Availability:

For Service (excluding Domestic Service) to Government Departments throughout the Island and Labrador diesel service areas of Hydro where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge.....\$34.11 per month

Energy Charge:

All kilowatt-hours@ 52.68 ¢ per kWh

Minimum Monthly Charge \$34.11

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST), which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE 2.2G

GENERAL SERVICE DIESEL OVER 10 KW

GOVERNMENT DEPARTMENTS

Availability:

For Service (excluding Domestic Service) to Government Departments throughout the Island and Labrador diesel service areas of Hydro where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater.

Rate:

Basic Customer Charge:\$57.84 per month

Demand Charge:

The maximum demand registered on the meter in the current month@ \$28.01 per kW

Energy Charge:

All kilowatt-hours @ 35.83 ¢ per kWh

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO
RATE No. 4.1G
STREET AND AREA LIGHTING SERVICE DIESEL
GOVERNMENT DEPARTMENTS

Availability:

For Street and Area Lighting Service to Government Departments throughout the Island and Labrador Diesel service areas of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro.

Monthly Rate:

| | SENTINEL / STANDARD |
|--|------------------------|
| MERCURY VAPOUR | |
| 250W (9,400 lumens) | \$57.42 |
| HIGH PRESSURE SODIUM ¹ | |
| 100W (8,600 lumens) | 46.51 |
| 150W (14,400 lumens) | 57.42 |

¹ Only High Pressure Sodium fixtures are available for all new installations and replacements.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST), which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 1.1 HV

GENERAL SERVICE 0 - 10 kW

Availability:

For Service throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, to a Domestic Unit or to buildings or facilities which are on the same Served Premises as a Domestic Unit and used by the same Customer exclusively for domestic or household purposes, whether such buildings or facilities are included on the same meter as the Domestic Unit or metered separately.

Rate:

Basic Customer Charge:\$7.00 per month

Energy Charge:

All kilowatt-hours@ 3.25 ¢ per kWh

Minimum Monthly Charge\$7.00

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.1HV

GENERAL SERVICE 0 - 10 kW

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge:\$9.10 per month

Energy Charge:

All kilowatt-hours@ 4.032 ¢ per kWh

Minimum Monthly Charge: Single Phase.....\$9.10

Three Phase.....\$20.00

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.2HV

GENERAL SERVICE 10 - 100 kW (110 kVA)

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater but less than 100 kilowatts (110 kilovolt-amperes).

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$2.00 per kW

Energy Charge:

All kilowatt-hours@ 3.00 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kW of maximum demand occurring in the 12 months ending with the current month, but not less than \$20.00 for a three phase service.

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.3HV

GENERAL SERVICE 110 kVA (100 kW) - 1000 kVA

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 110 kilovolt-amperes (100 kilowatts) or greater but less than 1000 kilovolt-amperes.

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.85 per kVA

Energy Charge:

All kilowatt-hours@ 2.95 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.4HV

GENERAL SERVICE 1000 kVA AND OVER

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 month period ending with the current month is 1000 kilovolt-amperes or greater.

Rate:

Billing Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.70 per kVA

Energy Charge:

All kilowatt-hours@ 2.50 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 3.1 HV

ELECTRIC HEATING GENERAL SERVICE

Availability:

Throughout the Happy Valley/Goose Bay and North West River interconnected service areas of Hydro, for electric space heating, or for electric space heating combined with air conditioning of the electrically heated area, or for water heating purposes, in non-domestic establishments which, in the past, did not qualify for the all-electric General Service Rate.

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$2.00 per kW

Energy Charge:

All kilowatt-hours@ 2.50 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kW of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.1HV

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro.

Monthly Rate:

| | SENTINEL / STANDARD |
|---|------------------------|
| MERCURY VAPOUR | |
| 250W (9,400 lumens) | \$ 12.10 |
| HIGH PRESSURE SODIUM¹ | |
| 100W (8,600 lumens) | 10.07 |
| 150W (14,400 lumens) | 12.10 |
| 250W (23,200 lumens) | 15.95 |
| 400W (45,000 lumens) | 20.10 |

¹ Only High Pressure Sodium fixtures are available for all new installations and replacements.

Special poles used exclusively for lighting service

Wood..... \$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 5.1HV

SECONDARY ENERGY

Availability:

For Service to Customers on the Labrador Interconnected grid engaged in fuel switching who purchase a minimum of 1 MW load and a maximum of 24 MW, who provide their own transformer and, who are delivered power at primary voltages. Hydro shall supply Secondary Energy to the Customer at such times and to the extent that Hydro has Churchill Falls electricity available in excess of the amount it requires for its own use, and to meet its commitments and sales opportunities, present and future, for firm energy. Moreover, Hydro may interrupt or reduce the supply of Secondary Energy at its sole discretion for any cause whatsoever. The energy delivered shall be used solely for the operation of the equipment engaged in fuel switching.

Energy Charge:

The energy charge shall be calculated monthly based on:

EITHER:

- A. The Customer's cost of fuel (cents per litre) most recently delivered to the Customer including fuel additives, if any, in accordance with the following formula:

Secondary Energy Rate = Constant Factor x Fuel Cost/Litre x 90%

$$\text{Constant Factor} = \frac{3413 \text{ BTU/kWh} \times A \times B}{C \times D}$$

Where:

- A = Customer's Electric Boiler Efficiency
B = Transformer and Losses Adjustment Factor
C = BTU/Litre of the Customer's fuel
D = Customer's Oil-fired Boiler Efficiency

OR:

- B. The price equivalent to that negotiated for the sale of energy to non-regulated customers, as adjusted for losses.

WHICHEVER IS GREATER.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 5.1HV (continued)

SECONDARY ENERGY

Prior to the commencement of service, the Customer will provide to Hydro the rate component values for insertion in the pricing formula for Secondary Energy. If subsequent changes to any of these rate components are required, the Customer will provide them to Hydro as soon as practicable. Hydro may require that these rate component values be verified.

Communications

The Customer and Hydro shall each designate a position within their respective staffs to be responsible for communications as to changes in the cost of the fuel delivered to the Customer. Hydro will contact the Customer's designate on or before the second working day of each month at which time the Customer's designate will inform Hydro of the fuel cost. If this information is unavailable to Hydro for any reason, Hydro will use the previous month's fuel cost and make the adjustment to the correct cost in the following month's billing.

Power Factor

If the Customer's power factor is lower than 90%, the Customer shall upon written notice by Hydro provide, at the Customer's expense, power factor corrective equipment to ensure that a power factor of not less than 90% is maintained.

General:

Insofar as they are not inconsistent with the forgoing, the conditions of service provided in the Rules and Regulations shall apply to Customers in this rate class.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 1.1W

DOMESTIC

Availability:

For Service throughout the Labrador City and Wabush Interconnected service area of Hydro, to a Domestic Unit or to buildings or facilities which are on the same Served Premises as a Domestic Unit and used by the same Customer exclusively for domestic or household purposes, whether such buildings or facilities are included on the same meter as the Domestic Unit or metered separately.

Rate:

Basic Customer Charge:\$4.45 per month

Energy Charge:

All kilowatt-hours@ 1.601 ¢ per kWh

Minimum Monthly Charge\$4.45

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.1W

GENERAL SERVICE 0 - 10 kW

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge:\$9.10 per month

Energy Charge:

All kilowatt-hours@ 2.832 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$9.10

Three Phase..... \$20.00

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.2W

GENERAL SERVICE 10 - 100 kW (110 kVA)

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater but less than 100 kilowatts (110 kilovolt-amperes).

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$2.00 per kW

Energy Charge:

All kilowatt-hours@ 2.056 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 cents per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kW of maximum demand occurring in the 12 months ending with the current month, but not less than \$20.00 for a three phase service.

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.3W

GENERAL SERVICE 110 kVA (100 kW) - 1000 kVA

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 110 kilovolt-amperes (100 kilowatts) or greater but less than 1000 kilovolt-amperes.

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.85 per kVA

Energy Charge:

All kilowatt-hours@ 1.882 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 cents per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.4W

GENERAL SERVICE 1000 kVA AND OVER

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 month period ending with the current month is 1000 kilovolt-amperes or greater.

Rate:

Billing Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.70 per kVA

Energy Charge:

All kilowatt-hours@ 1.731 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 cents per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.1W

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Labrador City and Wabush Interconnected service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro.

Monthly Rate:

| | SENTINEL / STANDARD |
|---|------------------------|
| MERCURY VAPOUR¹ | |
| 250W (9,400 lumens) | \$ 5.80 |
| HIGH PRESSURE SODIUM² | |
| 100W (8,600 lumens) | 7.11 |
| 150W (14,400 lumens) | 12.10 |
| 250W (23,200 lumens) | 15.95 |
| 400W (45,000 lumens) | 20.10 |

¹ Fixtures previously owned by the Town of Wabush as of September 1, 1985, and transferred to Hydro in 1987.

² Only High Pressure Sodium fixtures are available for all new installations and replacements installed after September 1, 2002.

Special poles used exclusively for lighting service

Wood\$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.
This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.11W

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Labrador City service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro existing as of September 1, 2002.

Monthly Rate:

| | |
|-----------------------------------|-------------------------|
| | SENITIZED / STANDARD |
| HIGH PRESSURE SODIUM ¹ | |
| 100W (8,600 lumens) | \$ 4.15 |

¹ Any new fixtures added will be at the rates set out in Rate 4.1W.

Special poles used exclusively for lighting service

Wood\$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.
This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.12W

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Labrador City service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by the customer.

Monthly Rate:

| | SENTINEL / STANDARD |
|-----------------------------|------------------------|
| HIGH PRESSURE SODIUM | |
| 100W (8,600 lumens) | \$ 3.12 |

Special poles used exclusively for lighting service

Wood\$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.
This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE 2.1D

GENERAL SERVICE DIESEL 0-10 kW

Availability:

For all the Island and Labrador diesel service areas of Hydro (excluding Government Departments) for non-domestic services where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge:\$19.45 per month

Energy Charge:

First 700 kilowatt-hours per month.....@13.92 ¢ per kWh

All kWh over 700 kilowatt-hours per month..... @18.00 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$19.45

Three Phase \$33.81

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE 2.2D

GENERAL SERVICE DIESEL OVER 10 kW

Availability:

For all the Island and Labrador diesel service areas of Hydro (excluding Government Departments) for non-domestic services where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater.

Rate:

Basic Customer Charge:\$25.96 per month

Demand Charge:

The maximum demand registered on the meter in the current month@ \$10.38 per kW

Energy Charge:

First 150 kilowatt-hours per kW of billing demand..... @13.61 ¢ per kWh

All excess kilowatt-hours..... @20.10 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$25.96

Three Phase \$57.27

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 1.2G

DOMESTIC DIESEL

GOVERNMENT DEPARTMENTS

Availability:

For Service to Government Departments throughout the Island and Labrador diesel service areas of Hydro, to a Domestic Unit or to buildings or facilities which are on the same Serviced Premises as a Domestic Unit and used by the same Customer exclusively for domestic or household purposes, whether such buildings or facilities are included on the same meter as the Domestic Unit or metered separately.

Rate:

Basic Customer Charge.....\$29.83 per month

Energy Charge:

All kilowatt-hours@ 60.112 ¢ per kWh

Minimum Monthly Charge \$29.83

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.1G

GENERAL SERVICE DIESEL 0-10 kW

GOVERNMENT DEPARTMENTS

Availability:

For Service (excluding Domestic Service) to Government Departments throughout the Island and Labrador diesel service areas of Hydro where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge.....\$34.11 per month

Energy Charge:

All kilowatt-hours@ 52.68 ¢ per kWh

Minimum Monthly Charge \$34.11

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST), which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE 2.2G

GENERAL SERVICE DIESEL OVER 10 KW

GOVERNMENT DEPARTMENTS

Availability:

For Service (excluding Domestic Service) to Government Departments throughout the Island and Labrador diesel service areas of Hydro where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater.

Rate:

Basic Customer Charge:\$57.84 per month

Demand Charge:

The maximum demand registered on the meter in the current month@ \$28.01 per kW

Energy Charge:

All kilowatt-hours @ 35.83 ¢ per kWh

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO
RATE No. 4.1G
STREET AND AREA LIGHTING SERVICE DIESEL
GOVERNMENT DEPARTMENTS

Availability:

For Street and Area Lighting Service to Government Departments throughout the Island and Labrador Diesel service areas of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro.

Monthly Rate:

| | SENTINEL / STANDARD |
|--|------------------------|
| MERCURY VAPOUR | |
| 250W (9,400 lumens) | \$57.42 |
| HIGH PRESSURE SODIUM ¹ | |
| 100W (8,600 lumens) | 46.51 |
| 150W (14,400 lumens) | 57.42 |

¹ Only High Pressure Sodium fixtures are available for all new installations and replacements.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST), which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 1.1HV

DOMESTIC

Availability:

For Service throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, to a Domestic Unit or to buildings or facilities which are on the same Serviced Premises as a Domestic Unit and used by the same Customer exclusively for domestic or household purposes, whether such buildings or facilities are included on the same meter as the Domestic Unit or metered separately.

Rate:

Basic Customer Charge:\$7.00 per month

Energy Charge:

All kilowatt-hours@ 3.25 ¢ per kWh

Minimum Monthly Charge\$7.00

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.1HV

GENERAL SERVICE 0 - 10 kW

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge:\$9.10 per month

Energy Charge:

All kilowatt-hours@ 5.050 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$9.10

Three Phase..... \$20.00

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.2HV

GENERAL SERVICE 10 - 100 kW (110 kVA)

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater but less than 100 kilowatts (110 kilovolt-amperes).

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$2.00 per kW

Energy Charge:

All kilowatt-hours@ 2.684 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kW of maximum demand occurring in the 12 months ending with the current month, but not less than \$20.00 for a three phase service.

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.3HV

GENERAL SERVICE 110 kVA (100 kW) - 1000 kVA

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 110 kilovolt-amperes (100 kilowatts) or greater but less than 1000 kilovolt-amperes.

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.85 per kVA

Energy Charge:

All kilowatt-hours@ 2.402 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.4HV

GENERAL SERVICE 1000 kVA AND OVER

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 month period ending with the current month is 1000 kilovolt-amperes or greater.

Rate:

Billing Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.70 per kVA

Energy Charge:

All kilowatt-hours@ 2.144 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.1HV

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro.

Monthly Rate:

| | SENTINEL / STANDARD |
|--|------------------------|
| MERCURY VAPOUR | |
| 250W (9,400 lumens) | \$ 12.10 |
| HIGH PRESSURE SODIUM ¹ | |
| 100W (8,600 lumens) | 10.07 |
| 150W (14,400 lumens) | 12.10 |
| 250W (23,200 lumens) | 15.95 |
| 400W (45,000 lumens) | 20.10 |

¹ Only High Pressure Sodium fixtures are available for all new installations and replacements.

Special poles used exclusively for lighting service

Wood..... \$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 1.1W

DOMESTIC

Availability:

For Service throughout the Labrador City and Wabush Interconnected service area of Hydro, to a Domestic Unit or to buildings or facilities which are on the same Served Premises as a Domestic Unit and used by the same Customer exclusively for domestic or household purposes, whether such buildings or facilities are included on the same meter as the Domestic Unit or metered separately.

Rate:

Basic Customer Charge:\$5.50 per month

Energy Charge:

All kilowatt-hours@ 1.921 ¢ per kWh

Minimum Monthly Charge\$5.50

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.1W

GENERAL SERVICE 0 - 10 kW

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge:\$9.10 per month

Energy Charge:

All kilowatt-hours@ 3.582 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$9.10

Three Phase..... \$20.00

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.2W

GENERAL SERVICE 10 - 100 kW (110 kVA)

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater but less than 100 kilowatts (110 kilovolt-amperes).

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$2.00 per kW

Energy Charge:

All kilowatt-hours@ 2.386 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 cents per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kW of maximum demand occurring in the 12 months ending with the current month, but not less than \$20.00 for a three phase service.

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.3W

GENERAL SERVICE 110 kVA (100 kW) - 1000 kVA

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 110 kilovolt-amperes (100 kilowatts) or greater but less than 1000 kilovolt-amperes.

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.85 per kVA

Energy Charge:

All kilowatt-hours@ 2.039 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 cents per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.4W

GENERAL SERVICE 1000 kVA AND OVER

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 month period ending with the current month is 1000 kilovolt-amperes or greater.

Rate:

Billing Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.70 per kVA

Energy Charge:

All kilowatt-hours@ 1.802 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 cents per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.1W

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Labrador City and Wabush Interconnected service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro.

Monthly Rate:

| | SENTINEL / STANDARD |
|---|------------------------|
| MERCURY VAPOUR¹ | |
| 250W (9,400 lumens) | \$ 7.30 |
| HIGH PRESSURE SODIUM² | |
| 100W (8,600 lumens) | 7.54 |
| 150W (14,400 lumens) | 12.10 |
| 250W (23,200 lumens) | 15.95 |
| 400W (45,000 lumens) | 20.10 |

¹ Fixtures previously owned by the Town of Wabush as of September 1, 1985, and transferred to Hydro in 1987.

² Only High Pressure Sodium fixtures are available for all new installations and replacements installed after September 1, 2002.

Special poles used exclusively for lighting service

Wood\$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.
This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.11W

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Labrador City service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro existing as of September 1, 2002.

Monthly Rate:

| | SENTINEL / STANDARD |
|--|------------------------|
| HIGH PRESSURE SODIUM ¹ | |
| 100W (8,600 lumens) | \$ 5.65 |

¹ Any new fixtures added will be at the rates set out in Rate 4.1W.

Special poles used exclusively for lighting service

Wood\$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.
This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.12W

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Labrador City service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by the customer.

Monthly Rate:

| | |
|-----------------------------|--------------------------------|
| | SENTINEL / STANDARD |
| HIGH PRESSURE SODIUM | |
| 100W (8,600 lumens) | \$ 3.59 |

Special poles used exclusively for lighting service

Wood\$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO**RATE 2.1D****GENERAL SERVICE DIESEL 0-10 kW****Availability:**

For all the Island and Labrador diesel service areas of Hydro (excluding Government Departments) for non-domestic services where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge:\$19.45 per month

Energy Charge:

All kilowatt-hours @16.05 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$19.45

Three Phase \$33.81

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO**RATE 2.2D****GENERAL SERVICE DIESEL OVER 10 kW****Availability:**

For all the Island and Labrador diesel service areas of Hydro (excluding Government Departments) for non-domestic services where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater.

Rate:

Basic Customer Charge:\$25.96 per month

Demand Charge:

The maximum demand registered on the meter in the current month@ \$12.70 per kW

Energy Charge:

All kilowatt-hours @16.110 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$25.96

Three Phase \$57.27

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 1.2G

DOMESTIC DIESEL

GOVERNMENT DEPARTMENTS

Availability:

For Service to Government Departments throughout the Island and Labrador diesel service areas of Hydro, to a Domestic Unit or to buildings or facilities which are on the same Serviced Premises as a Domestic Unit and used by the same Customer exclusively for domestic or household purposes, whether such buildings or facilities are included on the same meter as the Domestic Unit or metered separately.

Rate:

Basic Customer Charge.....\$29.83 per month

Energy Charge:

All kilowatt-hours@ 60.112 ¢ per kWh

Minimum Monthly Charge \$29.83

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.1G

GENERAL SERVICE DIESEL 0-10 kW

GOVERNMENT DEPARTMENTS

Availability:

For Service (excluding Domestic Service) to Government Departments throughout the Island and Labrador diesel service areas of Hydro where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge.....\$34.11 per month

Energy Charge:

All kilowatt-hours@ 52.68 ¢ per kWh

Minimum Monthly Charge \$34.11

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST), which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE 2.2G

GENERAL SERVICE DIESEL OVER 10 KW

GOVERNMENT DEPARTMENTS

Availability:

For Service (excluding Domestic Service) to Government Departments throughout the Island and Labrador diesel service areas of Hydro where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater.

Rate:

Basic Customer Charge:\$57.84 per month

Demand Charge:

The maximum demand registered on the meter in the current month@ \$28.01 per kW

Energy Charge:

All kilowatt-hours @ 35.83 ¢ per kWh

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO
RATE No. 4.1G
STREET AND AREA LIGHTING SERVICE DIESEL
GOVERNMENT DEPARTMENTS

Availability:

For Street and Area Lighting Service to Government Departments throughout the Island and Labrador Diesel service areas of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro.

Monthly Rate:

| | SENTINEL / STANDARD |
|--|------------------------|
| MERCURY VAPOUR | |
| 250W (9,400 lumens) | \$57.42 |
| HIGH PRESSURE SODIUM ¹ | |
| 100W (8,600 lumens) | 46.51 |
| 150W (14,400 lumens) | 57.42 |

¹ Only High Pressure Sodium fixtures are available for all new installations and replacements.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST), which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO
RATE No. 1.1HV

DOMESTIC

Availability:

For Service throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, to a Domestic Unit or to buildings or facilities which are on the same Served Premises as a Domestic Unit and used by the same Customer exclusively for domestic or household purposes, whether such buildings or facilities are included on the same meter as the Domestic Unit or metered separately.

Rate:

Basic Customer Charge:\$7.00 per month

Energy Charge:

All kilowatt-hours@ 3.25 ¢ per kWh

Minimum Monthly Charge\$7.00

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.1HV

GENERAL SERVICE 0 - 10 kW

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge:\$10.10 per month

Energy Charge:

All kilowatt-hours@ 5.610 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$10.10

Three Phase..... \$20.00

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.2HV

GENERAL SERVICE 10 - 100 kW (110 kVA)

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater but less than 100 kilowatts (110 kilovolt-amperes).

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$2.00 per kW

Energy Charge:

All kilowatt-hours@ 2.386 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kW of maximum demand occurring in the 12 months ending with the current month, but not less than \$20.00 for a three phase service.

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.3HV

GENERAL SERVICE 110 kVA (100 kW) - 1000 kVA

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 110 kilovolt-amperes (100 kilowatts) or greater but less than 1000 kilovolt-amperes.

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.85 per kVA

Energy Charge:

All kilowatt-hours@ 2.039 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.4HV

GENERAL SERVICE 1000 kVA AND OVER

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 month period ending with the current month is 1000 kilovolt-amperes or greater.

Rate:

Billing Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.70 per kVA

Energy Charge:

All kilowatt-hours@ 1.802 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.1HV

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro.

Monthly Rate:

| | SENTINEL / STANDARD |
|--|------------------------|
| MERCURY VAPOUR | |
| 250W (9,400 lumens) | \$ 12.10 |
| HIGH PRESSURE SODIUM ¹ | |
| 100W (8,600 lumens) | 10.07 |
| 150W (14,400 lumens) | 12.10 |
| 250W (23,200 lumens) | 15.95 |
| 400W (45,000 lumens) | 20.10 |

¹ Only High Pressure Sodium fixtures are available for all new installations and replacements.

Special poles used exclusively for lighting service

Wood..... \$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 1.1W

DOMESTIC

Availability:

For Service throughout the Labrador City and Wabush Interconnected service area of Hydro, to a Domestic Unit or to buildings or facilities which are on the same Served Premises as a Domestic Unit and used by the same Customer exclusively for domestic or household purposes, whether such buildings or facilities are included on the same meter as the Domestic Unit or metered separately.

Rate:

Basic Customer Charge:\$6.25 per month

Energy Charge:

All kilowatt-hours@ 2.322 ¢ per kWh

Minimum Monthly Charge\$6.25

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.1W

GENERAL SERVICE 0 - 10 kW

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge:\$9.10 per month

Energy Charge:

All kilowatt-hours@ 4.466 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$9.10

Three Phase..... \$20.00

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.2W

GENERAL SERVICE 10 - 100 kW (110 kVA)

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater but less than 100 kilowatts (110 kilovolt-amperes).

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$2.00 per kW

Energy Charge:

All kilowatt-hours@ 2.386 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 cents per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kW of maximum demand occurring in the 12 months ending with the current month, but not less than \$20.00 for a three phase service.

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.3W

GENERAL SERVICE 110 kVA (100 kW) - 1000 kVA

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 110 kilovolt-amperes (100 kilowatts) or greater but less than 1000 kilovolt-amperes.

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.85 per kVA

Energy Charge:

All kilowatt-hours@ 2.039 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 cents per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.4W

GENERAL SERVICE 1000 kVA AND OVER

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 month period ending with the current month is 1000 kilovolt-amperes or greater.

Rate:

Billing Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.70 per kVA

Energy Charge:

All kilowatt-hours@ 1.802 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 cents per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.1W

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Labrador City and Wabush Interconnected service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro.

Monthly Rate:

| | SENTINEL / STANDARD |
|---|------------------------|
| MERCURY VAPOUR¹ | |
| 250W (9,400 lumens) | \$ 9.00 |
| HIGH PRESSURE SODIUM² | |
| 100W (8,600 lumens) | 8.27 |
| 150W (14,400 lumens) | 12.10 |
| 250W (23,200 lumens) | 15.95 |
| 400W (45,000 lumens) | 20.10 |

¹ Fixtures previously owned by the Town of Wabush as of September 1, 1985, and transferred to Hydro in 1987.

² Only High Pressure Sodium fixtures are available for all new installations and replacements installed after September 1, 2002.

Special poles used exclusively for lighting service

Wood\$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.
This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.11W

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Labrador City service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro existing as of September 1, 2002.

Monthly Rate:

| | SENTINEL / STANDARD |
|--|------------------------|
| HIGH PRESSURE SODIUM ¹ | |
| 100W (8,600 lumens) | \$ 7.15 |

¹ Any new fixtures added will be at the rates set out in Rate 4.1W.

Special poles used exclusively for lighting service

Wood\$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.
This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.12W

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Labrador City service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by the customer.

Monthly Rate:

| | SENTINEL / STANDARD |
|-----------------------------|------------------------|
| HIGH PRESSURE SODIUM | |
| 100W (8,600 lumens) | \$ 4.06 |

Special poles used exclusively for lighting service

Wood\$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.
This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE 2.1D

GENERAL SERVICE DIESEL 0-10 kW

Availability:

For all the Island and Labrador diesel service areas of Hydro (excluding Government Departments) for non-domestic services where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge:\$19.45 per month

Energy Charge:

All kilowatt-hours @16.050 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$19.45

Three Phase \$33.81

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO**RATE 2.2D****GENERAL SERVICE DIESEL OVER 10 kW****Availability:**

For all the Island and Labrador diesel service areas of Hydro (excluding Government Departments) for non-domestic services where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater.

Rate:

Basic Customer Charge:\$25.96 per month

Demand Charge:

The maximum demand registered on the meter in the current month@ \$12.70 per kW

Energy Charge:

All kilowatt-hours @16.110 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$25.96

Three Phase \$57.27

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 1.2G

DOMESTIC DIESEL

GOVERNMENT DEPARTMENTS

Availability:

For Service to Government Departments throughout the Island and Labrador diesel service areas of Hydro, to a Domestic Unit or to buildings or facilities which are on the same Serviced Premises as a Domestic Unit and used by the same Customer exclusively for domestic or household purposes, whether such buildings or facilities are included on the same meter as the Domestic Unit or metered separately.

Rate:

Basic Customer Charge.....\$29.83 per month

Energy Charge:

All kilowatt-hours@ 60.112 ¢ per kWh

Minimum Monthly Charge \$29.83

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.1G

GENERAL SERVICE DIESEL 0-10 kW

GOVERNMENT DEPARTMENTS

Availability:

For Service (excluding Domestic Service) to Government Departments throughout the Island and Labrador diesel service areas of Hydro where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge.....\$34.11 per month

Energy Charge:

All kilowatt-hours@ 52.68 ¢ per kWh

Minimum Monthly Charge \$34.11

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST), which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE 2.2G

GENERAL SERVICE DIESEL OVER 10 KW

GOVERNMENT DEPARTMENTS

Availability:

For Service (excluding Domestic Service) to Government Departments throughout the Island and Labrador diesel service areas of Hydro where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater.

Rate:

Basic Customer Charge:\$57.84 per month

Demand Charge:

The maximum demand registered on the meter in the current month@ \$28.01 per kW

Energy Charge:

All kilowatt-hours @ 35.83 ¢ per kWh

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO
RATE No. 4.1G
STREET AND AREA LIGHTING SERVICE DIESEL
GOVERNMENT DEPARTMENTS

Availability:

For Street and Area Lighting Service to Government Departments throughout the Island and Labrador Diesel service areas of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro.

Monthly Rate:

| | SENTINEL / STANDARD |
|--|------------------------|
| MERCURY VAPOUR | |
| 250W (9,400 lumens) | \$57.42 |
| HIGH PRESSURE SODIUM ¹ | |
| 100W (8,600 lumens) | 46.51 |
| 150W (14,400 lumens) | 57.42 |

¹ Only High Pressure Sodium fixtures are available for all new installations and replacements.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST), which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 1.1HV

DOMESTIC

Availability:

For Service throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, to a Domestic Unit or to buildings or facilities which are on the same Serviced Premises as a Domestic Unit and used by the same Customer exclusively for domestic or household purposes, whether such buildings or facilities are included on the same meter as the Domestic Unit or metered separately.

Rate:

Basic Customer Charge:\$7.00 per month

Energy Charge:

All kilowatt-hours@ 3.25 ¢ per kWh

Minimum Monthly Charge\$7.00

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.1HV

GENERAL SERVICE 0 - 10 kW

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge:\$10.10 per month

Energy Charge:

All kilowatt-hours@ 5.610 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$10.10

Three Phase..... \$20.00

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.2HV

GENERAL SERVICE 10 - 100 kW (110 kVA)

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater but less than 100 kilowatts (110 kilovolt-amperes).

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$2.00 per kW

Energy Charge:

All kilowatt-hours@ 2.386 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kW of maximum demand occurring in the 12 months ending with the current month, but not less than \$20.00 for a three phase service.

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.3HV

GENERAL SERVICE 110 kVA (100 kW) - 1000 kVA

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 110 kilovolt-amperes (100 kilowatts) or greater but less than 1000 kilovolt-amperes.

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.85 per kVA

Energy Charge:

All kilowatt-hours@ 2.039 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.4HV

GENERAL SERVICE 1000 kVA AND OVER

Availability:

For Service (excluding Domestic Service) throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the maximum demand occurring in the 12 month period ending with the current month is 1000 kilovolt-amperes or greater.

Rate:

Billing Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.70 per kVA

Energy Charge:

All kilowatt-hours@ 1.802 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.1HV

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Happy Valley-Goose Bay Interconnected service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro.

Monthly Rate:

| | SENTINEL / STANDARD |
|--|------------------------|
| MERCURY VAPOUR | |
| 250W (9,400 lumens) | \$ 12.10 |
| HIGH PRESSURE SODIUM ¹ | |
| 100W (8,600 lumens) | 10.07 |
| 150W (14,400 lumens) | 12.10 |
| 250W (23,200 lumens) | 15.95 |
| 400W (45,000 lumens) | 20.10 |

¹ Only High Pressure Sodium fixtures are available for all new installations and replacements.

Special poles used exclusively for lighting service

Wood..... \$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 1.1W

DOMESTIC

Availability:

For Service throughout the Labrador City and Wabush Interconnected service area of Hydro, to a Domestic Unit or to buildings or facilities which are on the same Served Premises as a Domestic Unit and used by the same Customer exclusively for domestic or household purposes, whether such buildings or facilities are included on the same meter as the Domestic Unit or metered separately.

Rate:

Basic Customer Charge:\$7.15 per month

Energy Charge:

All kilowatt-hours@ 2.788 ¢ per kWh

Minimum Monthly Charge\$7.15

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.1W

GENERAL SERVICE 0 - 10 kW

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge:\$9.10 per month

Energy Charge:

All kilowatt-hours@ 5.504 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$9.10

Three Phase..... \$20.00

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.2W

GENERAL SERVICE 10 - 100 kW (110 kVA)

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater but less than 100 kilowatts (110 kilovolt-amperes).

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$2.00 per kW

Energy Charge:

All kilowatt-hours@ 2.386 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 cents per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kW of maximum demand occurring in the 12 months ending with the current month, but not less than \$20.00 for a three phase service.

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.3W

GENERAL SERVICE 110 kVA (100 kW) - 1000 kVA

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 110 kilovolt-amperes (100 kilowatts) or greater but less than 1000 kilovolt-amperes.

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.85 per kVA

Energy Charge:

All kilowatt-hours@ 2.039 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 cents per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.4W

GENERAL SERVICE 1000 kVA AND OVER

Availability:

For Service (excluding Domestic Service) throughout the Labrador City and Wabush Interconnected service area of Hydro, where the maximum demand occurring in the 12 month period ending with the current month is 1000 kilovolt-amperes or greater.

Rate:

Billing Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.70 per kVA

Energy Charge:

All kilowatt-hours@ 1.802 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 cents per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.1W

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Labrador City and Wabush Interconnected service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro.

Monthly Rate:

| | SENTINEL / STANDARD |
|---|------------------------|
| MERCURY VAPOUR¹ | |
| 250W (9,400 lumens) | \$ 11.36 |
| HIGH PRESSURE SODIUM² | |
| 100W (8,600 lumens) | 9.00 |
| 150W (14,400 lumens) | 12.10 |
| 250W (23,200 lumens) | 15.95 |
| 400W (45,000 lumens) | 20.10 |

¹ Fixtures previously owned by the Town of Wabush as of September 1, 1985, and transferred to Hydro in 1987.

² Only High Pressure Sodium fixtures are available for all new installations and replacements installed after September 1, 2002.

Special poles used exclusively for lighting service

Wood\$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.
This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.11W

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Labrador City service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro existing as of September 1, 2002.

Monthly Rate:

| | SENTINEL / STANDARD |
|--|------------------------|
| HIGH PRESSURE SODIUM ¹ | |
| 100W (8,600 lumens) | \$ 9.00 |

¹ Any new fixtures added will be at the rates set out in Rate 4.1W.

Special poles used exclusively for lighting service

Wood\$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.
This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.12W

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Labrador City service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by the customer.

Monthly Rate:

| | SENTINEL / STANDARD |
|-----------------------------|------------------------|
| HIGH PRESSURE SODIUM | |
| 100W (8,600 lumens) | \$ 4.53 |

Special poles used exclusively for lighting service

Wood\$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.
This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE 2.1D

GENERAL SERVICE DIESEL 0-10 kW

Availability:

For all the Island and Labrador diesel service areas of Hydro (excluding Government Departments) for non-domestic services where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge:\$19.45 per month

Energy Charge:

All kilowatt-hours @16.050 ¢ per kWh

Minimum Monthly Charge: Single Phase..... \$19.45

Three Phase \$33.81

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE 2.2D

GENERAL SERVICE DIESEL OVER 10 kW

Availability:

For all the Island and Labrador diesel service areas of Hydro (excluding Government Departments) for non-domestic services where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater.

Rate:

Basic Customer Charge: \$25.96 per month

Demand Charge:

The maximum demand registered on the meter in the current month @ \$12.70 per kW

Energy Charge:

All kilowatt-hours @ 16.110 ¢ per kWh

Minimum Monthly Charge: Single Phase \$25.96
Three Phase \$57.27

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 1.2G

DOMESTIC DIESEL

GOVERNMENT DEPARTMENTS

Availability:

For Service to Government Departments throughout the Island and Labrador diesel service areas of Hydro, to a Domestic Unit or to buildings or facilities which are on the same Serviced Premises as a Domestic Unit and used by the same Customer exclusively for domestic or household purposes, whether such buildings or facilities are included on the same meter as the Domestic Unit or metered separately.

Rate:

Basic Customer Charge.....\$29.83 per month

Energy Charge:

All kilowatt-hours@ 60.112 ¢ per kWh

Minimum Monthly Charge \$29.83

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.1G

GENERAL SERVICE DIESEL 0-10 kW

GOVERNMENT DEPARTMENTS

Availability:

For Service (excluding Domestic Service) to Government Departments throughout the Island and Labrador diesel service areas of Hydro where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge.....\$34.11 per month

Energy Charge:

All kilowatt-hours@ 52.68 ¢ per kWh

Minimum Monthly Charge \$34.11

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST), which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE 2.2G

GENERAL SERVICE DIESEL OVER 10 KW

GOVERNMENT DEPARTMENTS

Availability:

For Service (excluding Domestic Service) to Government Departments throughout the Island and Labrador diesel service areas of Hydro where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater.

Rate:

Basic Customer Charge:\$57.84 per month

Demand Charge:

The maximum demand registered on the meter in the current month@ \$28.01 per kW

Energy Charge:

All kilowatt-hours @ 35.83 ¢ per kWh

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00 or more than \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate does not include the Harmonized Sales tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO
RATE No. 4.1G
STREET AND AREA LIGHTING SERVICE DIESEL
GOVERNMENT DEPARTMENTS

Availability:

For Street and Area Lighting Service to Government Departments throughout the Island and Labrador Diesel service areas of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro.

Monthly Rate:

| | SENTINEL / STANDARD |
|--|------------------------|
| MERCURY VAPOUR | |
| 250W (9,400 lumens) | \$57.42 |
| HIGH PRESSURE SODIUM ¹ | |
| 100W (8,600 lumens) | 46.51 |
| 150W (14,400 lumens) | 57.42 |

¹ Only High Pressure Sodium fixtures are available for all new installations and replacements.

Special poles used exclusively for lighting service

Wood..... \$ 19.04

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST), which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 1.1L

DOMESTIC

Availability:

For Service throughout the Labrador Interconnected service area of Hydro, to a Domestic Unit or to buildings or facilities which are on the same Serviced Premises as a Domestic Unit and used by the same Customer exclusively for domestic or household purposes, whether such buildings or facilities are included on the same meter as the Domestic Unit or metered separately.

Rate:

Basic Customer Charge:\$8.00 per month

Energy Charge:

All kilowatt-hours@ 3.255 ¢ per kWh

Minimum Monthly Charge\$8.00

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.1L

GENERAL SERVICE 0 - 10 kW

Availability:

For Service (excluding Domestic Service) throughout the Labrador Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is less than 10 kilowatts.

Rate:

Basic Customer Charge:\$10.10 per month

Energy Charge:

All kilowatt-hours@ 5.610 ¢ per kWh

Minimum Monthly Charge: Single Phase.....\$10.10

Three Phase.....\$20.00

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.2L

GENERAL SERVICE 10 - 100 kW (110 kVA)

Availability:

For Service (excluding Domestic Service) throughout the Labrador Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 10 kilowatts or greater but less than 100 kilowatts (110 kilovolt-amperes).

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$2.00 per kW

Energy Charge:

All kilowatt-hours@ 2.386 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kW of maximum demand occurring in the 12 months ending with the current month, but not less than \$20.00 for a three phase service.

Discount:

A discount of 1.5% of the amount of the current month's bill, but not less than \$1.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO
RATE No. 2.3L
GENERAL SERVICE 110 kVA (100 kW) - 1000 kVA

Availability:

For Service (excluding Domestic Service) throughout the Labrador Interconnected service area of Hydro, where the maximum demand occurring in the 12 months ending with the current month is 110 kilovolt-amperes (100 kilowatts) or greater but less than 1000 kilovolt-amperes.

Rate:

Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.85 per kVA

Energy Charge:

All kilowatt-hours@ 2.039 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 2.4L

GENERAL SERVICE 1000 kVA AND OVER

Availability:

For Service (excluding Domestic Service) throughout the Labrador Interconnected service area of Hydro, where the maximum demand occurring in the 12 month period ending with the current month is 1000 kilovolt-amperes or greater.

Rate:

Billing Demand Charge:

The maximum demand registered on the meter in the current month@ \$1.70 per kVA

Energy Charge:

All kilowatt-hours@ 1.802 ¢ per kWh

Maximum Monthly Charge:

The Maximum Monthly Charge shall be 6.8 ¢ per kWh, but not less than the Minimum Monthly Charge.

Minimum Monthly Charge:

An amount equal to \$1.05 per kVA of maximum demand occurring in the 12 months ending with the current month.

Discount:

A discount of 1.5% of the amount of the current month's bill, up to a maximum of \$500.00, will be allowed if the bill is paid within 10 days after it is issued.

General:

Details regarding metering [in particular Regulation 7 (n)], transformation [in particular Regulation 9(k)], and other conditions of service are provided in the Rules and Regulations. **This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.1L

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Labrador Interconnected service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by Hydro.

Monthly Rate:

| | SENTINEL / STANDARD |
|--|------------------------|
| MERCURY VAPOUR | |
| 250W (9,400 lumens) | \$ 12.10 |
| HIGH PRESSURE SODIUM ¹ | |
| 100W (8,600 lumens) | 10.07 |
| 150W (14,400 lumens) | 12.10 |
| 250W (23,200 lumens) | 15.95 |
| 400W (45,000 lumens) | 20.10 |

¹ Only High Pressure Sodium fixtures are available for all new installations and replacements.

Special poles used exclusively for lighting service

Wood..... \$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.

This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

NEWFOUNDLAND AND LABRADOR HYDRO

RATE No. 4.12L

STREET AND AREA LIGHTING SERVICE

Availability:

For Street and Area Lighting Service throughout the Labrador Interconnected service area of Hydro, where the electricity is supplied by Hydro and all fixtures, wiring and controls are provided, owned and maintained by the customer.

Monthly Rate:

| | |
|-----------------------------|--------------------------------|
| | SENTINEL / STANDARD |
| HIGH PRESSURE SODIUM | |
| 100W (8,600 lumens) | \$ 5.02 |

Special poles used exclusively for lighting service

Wood\$ 3.00

General:

Details regarding conditions of service are provided in the Rules and Regulations.
This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.

William E. Wells
President and Chief Executive Officer
Newfoundland and Labrador Hydro

At the hearing into Newfoundland and Labrador Hydro's 2003 General Rate Application, the Corporate Overview Evidence will be adopted by William E. Wells, President and Chief Executive Officer for Newfoundland and Labrador Hydro.

A witness profile for Mr. Wells is as follows:

- Mr. Wells has served as President and Chief Executive Officer of Hydro since 1996.
- From 1985 to 1996 Mr. Wells was an Executive Vice-President of Fishery Products International. Previously, Mr. Wells was President of the Canadian Salt Fish Corporation, President of the Fisheries Association of Newfoundland and Labrador Limited and practiced law for eleven years from 1968.
- Mr. Wells is currently a Member of the Board of Directors of the Canadian Electricity Association and the Energy Council of Canada. He had been a Director for many years and Past Chair of the Fisheries Council of Canada and the Fisheries Association of Newfoundland and Labrador Limited.
- Mr. Wells is a graduate of the University of King's College and Dalhousie University with degrees in Political Science and Law and is currently a Member of the Law Society of Newfoundland and Labrador and the Canadian Bar Association.

- Mr. Wells has testified before the Board of Commissioners of Public Utilities of Newfoundland and Labrador as President and Chief Executive Officer of Newfoundland and Labrador Hydro.

**Corporate Overview
Evidence Outline**

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CORPORATE OVERVIEW

1. INTRODUCTION

Newfoundland and Labrador Hydro's ("Hydro") 2003 General Rate Application ("GRA") is required to address the issues of Hydro's revenue requirement to cover the cost of providing service to customers, and specific rates and regulatory issues that arise from the Public Utilities Board ("the Board") Order No. P.U. 7 (2002-2003) ("P.U. 7"). Hydro has filed the Application at this time to ensure consideration of these matters in a time frame that permits the implementation of new rates, not later than January 1, 2004.

Hydro indicated to the Board during its 2001 GRA that new sources of supply to meet capacity and energy requirements for the Island Interconnected System would be coming in service in 2003. Hydro further advised the Board that it would, therefore, need to seek an adjustment in rates to recover the additional costs arising from these new sources. This current Application is primarily driven by this requirement.

The Board in P.U. 7 gave direction on a number of issues such as the phasing-out of preferential rates for Rural Customers and the phasing-in of uniform rates for the Labrador Interconnected Rural Customers. The Board also requested that reports be filed on a number of operational and financial matters, including No. 6 fuel management, the methodology for forecasting hydraulic production, and the assignment of the Great Northern Peninsula ("GNP") assets for rate setting purposes. Finally, the Board suggested that there be consultation with the Government of Newfoundland and Labrador (the "Government") on the payment of dividends and directed that consultation take place with Government on the rural deficit. This Application addresses the matters raised by the Board in P.U. 7.

1 Attention will be focused in this GRA on Hydro's costs of meeting the electrical
2 energy requirements within the Province, particularly on the Island
3 Interconnected System and the Isolated Rural Systems on the Island and in
4 Labrador.

5
6 The costs associated with three new sources of supply to meet forecast
7 requirements for the Island Interconnected System must now be incorporated
8 into Hydro's rates. This will have the largest single impact on rates for Hydro's
9 customers arising from this Application. Power purchase costs will increase in
10 2004 by \$18 million over the 2002 test year as a result of purchases from Corner
11 Brook Pulp and Paper Limited ("CBPP") and the Exploits River Hydro
12 Partnership. Additional financing charges associated with the development at
13 Granite Canal are approximately \$11 million. Together, the three new sources of
14 generation add 87.3 MW of capacity and 461.2 GWh of average annual energy.
15 No additional requirements for capacity and energy are forecast prior to 2010.

16
17 The recovery of the outstanding balances in the Rate Stabilization Plans ("RSP")
18 will also significantly affect customers' rates.

19
20 The Board in P.U. 7 set the cost of No. 6 fuel in Hydro's rates at \$26 per barrel,
21 an adjustment from the previous \$12.50 per barrel. It was expected, as a result
22 of that decision, that the new RSP balance would remain within acceptable
23 parameters, based on then forecast prices. Also, the setting of the price of No. 6
24 fuel at forecast 2002 prices, rather than at a lower price, provided for more
25 appropriate price signals for customers in their rates with respect to the real cost
26 of electricity.

27
28 Unfortunately, the expected results were not achieved. The price of No. 6 fuel
29 has been around \$40 per barrel for a substantial period since September 1,
30 2002, the date when the new rates became effective. As a result, the
31 outstanding balance in the new RSP is now forecast to be in excess of \$60

1 million at the end of 2003. The Board in P.U. 7 directed that the outstanding
2 balance would be recovered from Hydro's customers over a two-year period
3 commencing in 2004. The balance in the old RSP as of August 31, 2002, was
4 capped by the Board and is to be recovered over a five-year period. The
5 recovery of the outstanding balances in the old and the new RSPs will have a
6 significant impact on rates in 2004.

7
8 Also, the costs related to the consumption of No. 6 fuel have been exacerbated
9 by lower inflows to Hydro's reservoirs and increased demand related to more
10 harsh winter conditions in 2002/03. In fact, electricity consumption throughout
11 the Province has increased accordingly.

12
13 Consequently, the two factors that will most influence the rates are:

- 14
- 15 • The costs incurred for new sources of supply; and
 - 16 • The costs incurred for No. 6 fuel, being recovered in the RSP automatic
17 adjustments.

18
19 Other factors, such as the return on equity and increases in interest costs and
20 operating costs, which are outlined in the evidence filed with this Application, will
21 also impact the adjustment in rates that will flow from this GRA.

22
23 A review of Hydro's financial performance in 2002 and forecast for 2003 and
24 2004 for its regulated activities are outlined in the Finance and Corporate
25 Services Evidence.

26
27 A loss of approximately \$8 million is forecast for 2003. The principal factors
28 related to this forecast loss are the additional expenses for power purchases
29 from the two new non-utility generators ("NUGs") and the financing costs related
30 to Granite Canal, which are included in Hydro's proposed 2004 revenue
31 requirements for rate setting purposes.

1 The financial results for 2003, assuming no change in electrical rates, indicates
2 that the rate of return on rate base and rate of return on equity will be 6.2% and a
3 negative (3.8%) respectively, with a projected debt to capital structure of 86%.
4 These 2003 levels of return are insufficient to maintain the financial integrity of
5 the company. Hydro's rates require adjustment so that the revenue requirement
6 collected in rates allows Hydro the opportunity to recover all costs associated
7 with providing service and a reasonable return.

8
9
10 Hydro has filed a revised Application dated August 12, 2003 to reflect the
11 directive to the Board by the Government with respect to the continuation of
12 preferential rates for Rural Customers; the Board's approval of a 9.75% Return
13 on Equity for Newfoundland Power, (Order No. P.U. 19 (2003)) and the changes
14 in rates for Newfoundland Power's customers as approved by the Board by
15 Order No. P.U.23 (2003).

2. ECONOMIC OUTLOOK

Hydro's financial performance is predicated on a number of market factors and assumptions that affect its operating environment through the forecast period. General levels of economic activity in the Province, including the operating levels of its Industrial Customers competing in international markets, directly impact the electricity market.

Hydro obtains historical and forecast economic data for the Province from the Government and, in addition, consults directly with its industrial and utility customers.

Recently, the Province has recorded strong growth in GDP and employment driven, in the case of GDP, mainly by offshore oil production. Hydro adjusts for this significant factor in analyzing the impact on local economic growth.

Personal income growth has been sustained in recent years, which when combined with low interest rates and employment gains, has resulted in strong consumer spending. The recent surge in housing starts has increased short-term load growth, due to the overwhelming preference for electricity as the energy source of choice for space heating in new construction. This preference also applies to non-residential construction.

Hydro's wholesale and retail sales have increased over the past two years as a result of a combination of the preference for electricity space heating and a return to more normal (colder) weather cycles, and a generally favorable economic environment. Hydro's sales to its Industrial Customers in recent years have remained steady overall, despite cyclical weakness in the iron ore and newsprint markets.

1 The outlook in the near term is relatively positive. Resource developments,
2 notably Voisey's Bay and White Rose, are prominent sources of economic
3 growth. An expansion in offshore oil production for Terra Nova has also been
4 announced. However, the prospects within the fishing industry are somewhat
5 guarded, related to stock declines and market uncertainties. Prospects for the
6 longer term are presently forecast as a period of sustained modest economic
7 growth for the Province. Confidence in economic forecasts must be tempered by
8 consideration of geopolitical events and risks.
9
10 Hydro's financial and operating environment is influenced by local factors, and
11 also international uncertainties. Direct international risks include pricing in capital
12 and oil markets.
13
14 Hydro's projections for load growth for 2003 and 2004 are presented in the
15 Production Evidence.

1 **3. MANAGING COSTS/OPERATIONAL EFFICIENCIES**

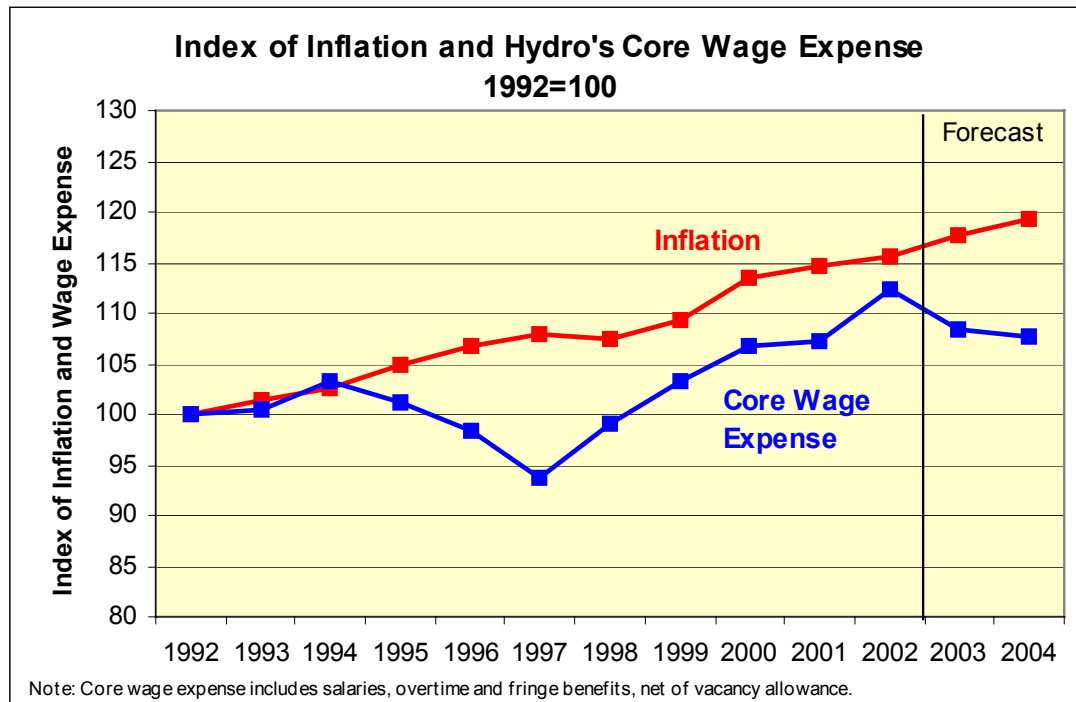
2
3 **3.1 General**

4 Since 1992 there has been a consistent and demonstrable approach to ensure
5 that Hydro's costs, over which it has control, have been kept to a minimum and
6 there has been a continuing focus on improving operational and organizational
7 efficiencies. Approximately 80% of Hydro's controllable costs forecast for 2004
8 consist of salaries and system equipment maintenance, with the remaining 20%
9 covering all other expenses such as professional services, insurance, travel and
10 office supplies.

11
12 **3.2 Employee Costs**

13 Fully 63% of Hydro's controllable costs for 2004 are in salaries and fringe
14 benefits. Hydro was subject to the wage freeze imposed by Government from
15 1992 to 1995, inclusive. Since the end of the wage freeze, Hydro has moved to
16 ensure that the wages and salaries paid to employees are relatively comparable
17 to that paid by other utilities in the Atlantic region. Necessarily, there has been a
18 period of catch-up in wage adjustments, particularly in the last few years. For the
19 period 1992 to 2004, the total cost in wages and salaries, excluding employee
20 future benefit costs ("Core Wage Expense"), in absolute terms will have
21 increased by approximately 7.5%. Inflation during the same period will be
22 approximately 19%, as illustrated in Chart 1.

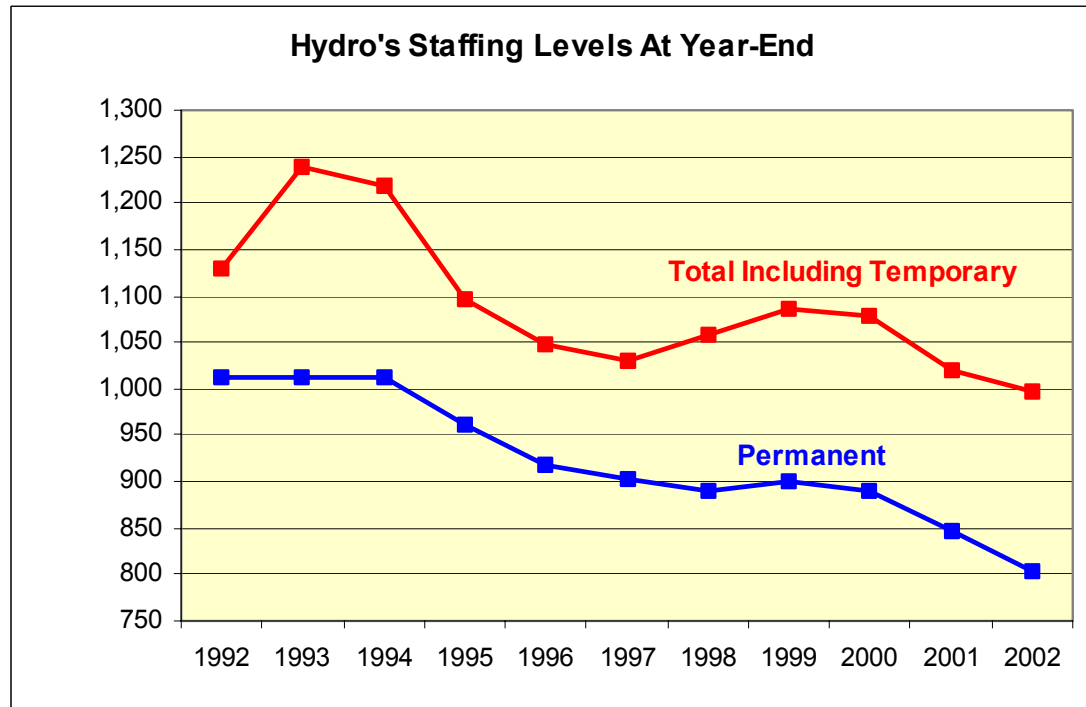
Chart 1



Hydro has been able to reduce its workforce since 1992 as a result of changes in organizational structure and business processes, technological improvements and efficiency enhancements. In total, 211 permanent positions have been eliminated, representing approximately a 21% reduction of Hydro's permanent complement as outlined in Chart 2. For the period 2000 to 2002, the reduction in permanent complement is approximately 10%.

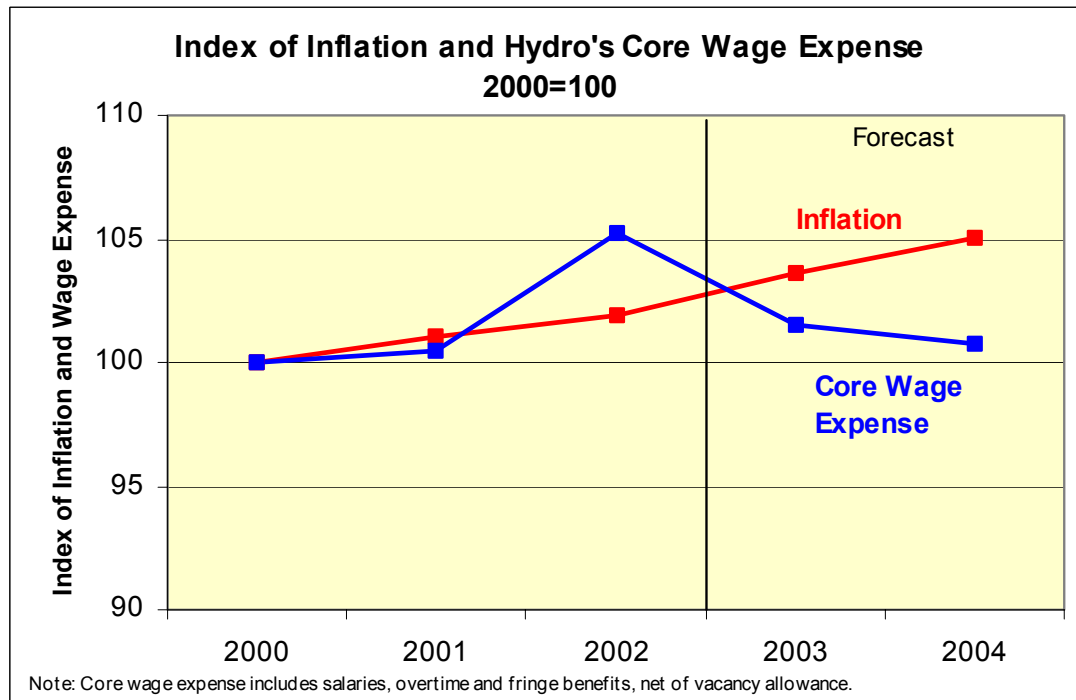
While Hydro did not record its labour requirements on a full-time equivalent basis until 2003, it has determined on an actual basis its total staffing levels at year-end since 1992 as illustrated in Chart 2. Staffing levels at year-end (including temporaries) have decreased from a high of 1238 positions in 1993 to 995 in 2002, a decrease of 243 or 19%.

Chart 2



Focusing on the period 2000 to 2004, Core Wage Expense will track below inflation overall, as illustrated in Chart 3.

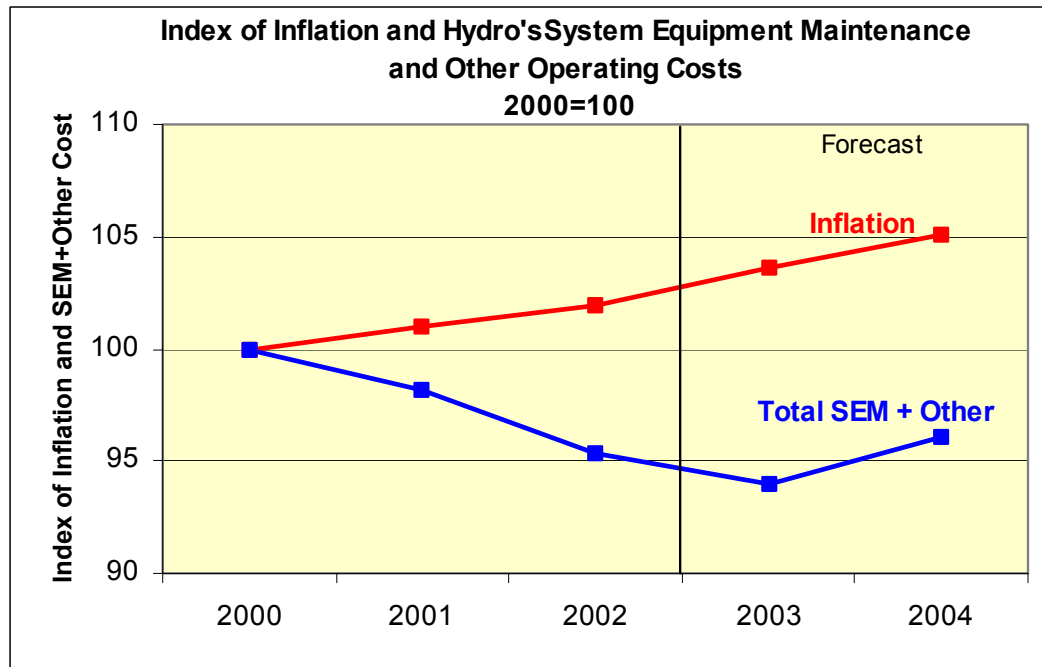
Chart 3



3.3 System Equipment Maintenance and Other Costs

System Equipment Maintenance (“SEM”) is forecast to be approximately 17% of Hydro’s controllable costs for 2004, while all other costs, excluding salaries, are forecast to be approximately 20%. Chart 4 shows an index of these expenditures for the period 2000 to 2004, along with the inflation index.

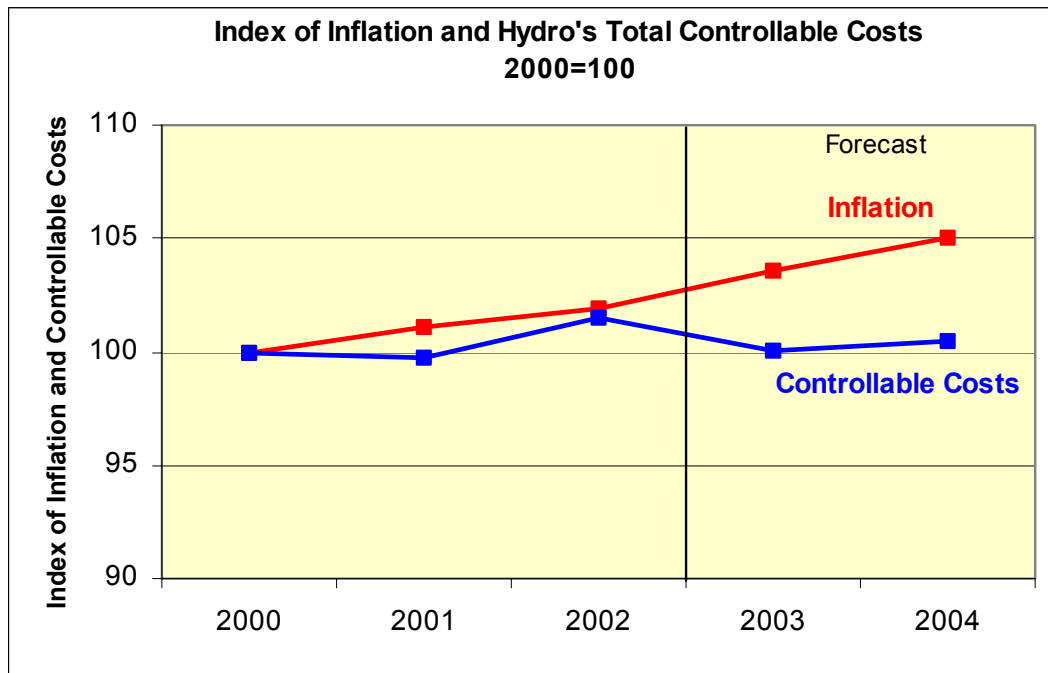
Chart 4



The Production and Transmission and Rural Operations Evidence review the issues of properly maintaining, in a harsh operating environment, aging plant and equipment to ensure availability and reliability. Much of Hydro's plant and equipment dates back to the 1960's and 1970's, consistent with the fact that the thrust to electrification in the Province had its impetus in that period. Replacement costs of original equipment are normally multiples of the cost of the original equipment. Hydro balances consideration of cost containment with the responsibility to maintain critical components essential to meet its provincial energy requirements in developing system equipment operating and capital budgets.

1 An index of Hydro's total controllable operating costs for the period 2000-2004
2 compared to the inflation index is illustrated in Chart 5. The chart demonstrates
3 that Hydro has achieved performance gains since total costs are tracking below
4 overall inflation across the period.

6 **Chart 5**



21 **3.4 Summary**

22 It is evident from the preceding information that Hydro is continuing to effectively
23 manage its controllable costs.

24

25 This can be further demonstrated with a comparison to Hydro's peers in the
26 Canadian electric utility business. Hydro is a vertically integrated utility with
27 significant generation and transmission assets in addition to distribution assets.
28 An appropriate comparison on controllable costs, if one were to be made, would
29 be to the relative performance of other integrated utilities. Hydro's experience is
30 similar to that of other Canadian utilities with significant generation, transmission
31 and distribution assets, as illustrated in Schedule I attached.

1 **4. OVERVIEW OF STRATEGIC ISSUES AND DIRECTIONS**

2
3 **4.1 General**

4 Hydro is committed to providing power to its customers at the lowest possible
5 cost consistent with reliable service.

6
7 Hydro continually reviews its performance in five strategic areas to assist in
8 meeting this commitment. The five areas are: operations; financial performance;
9 human resources and safety; customer services and the environment. Measures
10 are in place to evaluate performance in each of these areas.

11
12 **4.2 Operations/System Reliability**

13 In the Operations area, measures of performance and system reliability have
14 been in place for some time, primarily, in the context of the Canadian utility
15 industry, through a program of the Canadian Electricity Association (“CEA”).
16 There are various parameters of performance that are measured and reported,
17 all of which are intended to provide information in a standardized format, on
18 equipment performance from year to year. Performance is continuously
19 monitored to determine trends in Hydro’s performance over time and, where
20 appropriate to compare to the performance of other utilities, and determine
21 corrective action. The measures influence Hydro’s actions in balancing its
22 maintenance program and capital asset replacement in support of increased
23 reliability and operational efficiency with cost control considerations. The details
24 with respect to Hydro’s performance in the application of these measurements
25 are provided in the Production and Transmission and Rural Operations Evidence.

26
27 Hydro’s approach to operational and maintenance activities is becoming more
28 strategic with the application of the accumulation of professional experience and
29 knowledge combined with and supported by advances in technology, in equipment
30 and systems support. System reliability and performance are enhanced by a focus

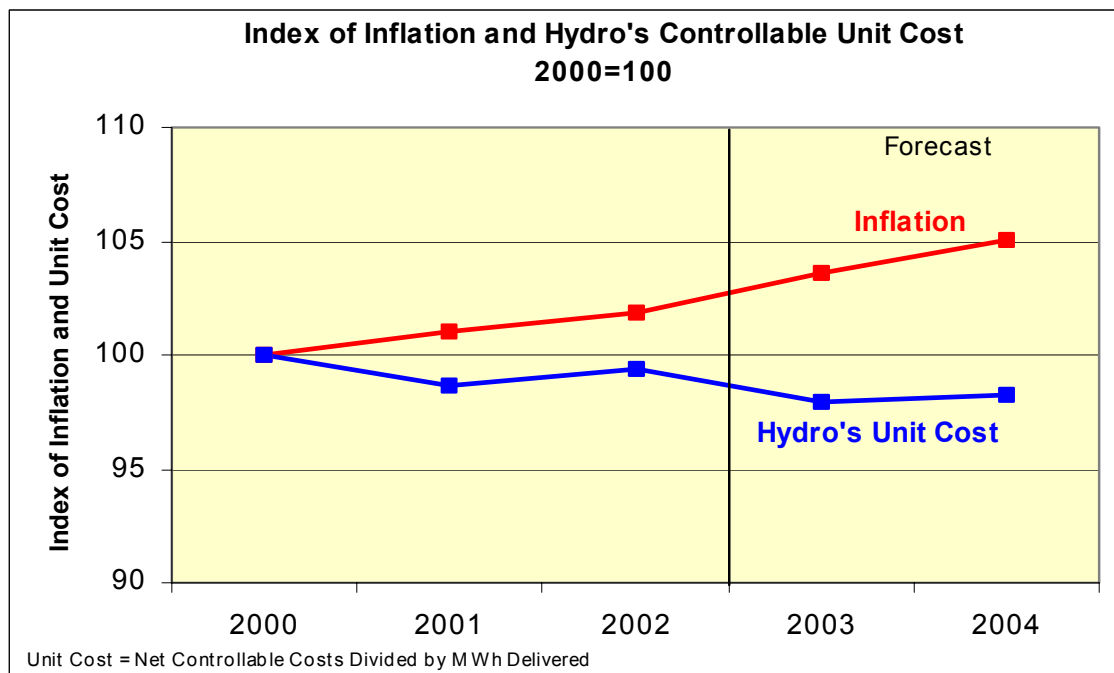
on predictable failure, availability and capability, enabling judgments to be made on the timely replacement and refurbishment of plant and equipment.

4.3 Corporate Performance

Hydro continually reviews its financial performance utilizing traditional measures such as return on equity, debt to capital structure and interest coverage ratio. Hydro's performance in 2002 and forecast for 2003 and 2004 is outlined in the Finance and Corporate Services Evidence. As these indicators demonstrate, an appropriate financial performance will not be achieved in 2003 or 2004 without an adjustment in rates to permit Hydro to recover its newly incurred costs of providing service and a reasonable return.

One indicator applied by Hydro to monitor both its operational and financial performance is the controllable cost per MWh delivered. Chart 6 below indicates that across the period 2000 to the test year 2004, the unit costs per MWh delivered is declining overall relative to the current rate of inflation.

Chart 6



4.4 Human Resources and Safety

Human Resources is a primary area of focus for Hydro. As outlined earlier, Hydro has reduced its workforce by approximately 21% since 1992 as a result of organizational changes, process improvements and technological changes. This type of change requires a focus on the skills required in meeting changing work environments. In addition, Hydro has a mature workforce, with the average age of employees being 45 years in 2002. Approximately 25% of employees will be eligible for retirement over the next five years. Human resource management is thus critical for Hydro in key areas of recruitment of necessary skilled workers and training and skill development.

The nature of Hydro's operations inherently makes it hazardous for employees and the public. The creation and maintenance of a safe working environment is of critical concern for Hydro. Hydro has implemented a comprehensive Safety and Health Program which focuses on the risks faced by our workers and the appropriate training and education required to properly assess and minimize these risks. A comprehensive wellness program complements the safety program and includes programs such as ergonomic assessments, back care programs, education and wellness issues. Safety is measured using traditional indicators of All Injury Frequency Rate, Disabling Injury Rate and Severity Rate. Table 1 outlines Hydro's performance since 2000 and the average performance of peer CEA utilities.

Table 1

| Newfoundland and Labrador Hydro CEA Accident Statistics | | | |
|--|-------------|-------------|-------------|
| | <u>2000</u> | <u>2001</u> | <u>2002</u> |
| All Injury Frequency | | | |
| CEA Average | 4.69 | 4.60 | 4.00 |
| Hydro | 3.70 | 2.17 | 1.98 |
| Disabling Frequency | | | |
| CEA Average | 1.48 | 1.32 | 1.15 |
| Hydro | 1.85 | 0.65 | 1.10 |
| Severity Rating | | | |
| CEA Average | 81.39 | 99.76 | 64.04 |
| Hydro | 681.00 | 19.87 | 24.90 |
| * Note: Fatality in year 2000 | | | |

Hydro's goal is to have an exemplary safety record.

4.5 Customer Services

Hydro, as part of its focus on performance, also evaluates the service provided to its Rural Customers.

Hydro, over the past seven years, has taken specific actions to improve service to its Rural Customers, beyond the actual supply of reliable and safe energy. These improvements have been made in conjunction with corporate upgrades in technology, and include the establishment of a call centre providing customers with direct access through toll-free numbers for account and general enquiries or for power outages and emergencies. Also, a new customer information system was implemented in 1999 in combination with electronic meter reading units, which reduces the time between the read date and the receipt of bills by customers.

1 In 1999, Hydro introduced customer satisfaction research with a residential
2 benchmark survey. General Service ("G.S.") customers were added in 2001 and
3 each year a tracking study has been done to monitor change in customer
4 satisfaction. The overall customer satisfaction index was 7.9 in 2001, which
5 improved to 8.1 in 2002. This measure is a key indicator used by Hydro to
6 determine issues of concern to customers and to respond to them.

7
8 Other customer service initiatives introduced since the 2001 GRA include an
9 equal payment plan and a pre-authorized payment plan, both of which were
10 introduced in 2002 for all Rural Domestic Customers. As well, in 2002 Hydro
11 began a multi-year conservation initiative to promote energy efficiency by making
12 information available to educate customers about the wise use of electricity.

13
14 As of April 2003, Hydro's customers have telephone and Internet access to their
15 account information and power outage information on a 24-hour basis.

16
17 The relationship with Hydro's Industrial Customers is governed by individual
18 contracts and reflects close operational working arrangements requiring regular
19 contact at various levels within the respective organization.

20
21 Hydro also has a close working relationship with its largest customer,
22 Newfoundland Power. Both utilities participate in working committees and
23 cooperate closely on operational issues related to the services provided on the
24 Island Interconnected System.

25 26 **4.6 Environment**

27 There is greater public awareness and increased expectations with respect to
28 environmental practices. As Hydro's activities in providing an essential service,
29 including hydraulic and thermal production, transmitting and distributing power,
30 and operating Isolated Diesel Systems, of necessity impact the environment,
31 environmental issues are of increasing importance to Hydro's customers. As

1 well, more stringent environmental standards and regulations, both federally and
2 provincially, are coming into force and affecting the costs of Hydro's operations.
3 Hydro is committed to meeting the requirements of its operations while having
4 the least negative impact on the environment. This is expressed through a
5 proactive approach to environmental issues.

6
7 Good environmental stewardship does not come without a concentrated effort
8 and at a cost. An Environmental Management System has been carefully and
9 professionally developed to ensure that it provides the framework by which to
10 achieve the objectives of Hydro's Environmental Policy and Guiding Principles.

11
12 In 1997, the ISO 14001 Environmental Management System standard was
13 adopted to manage Hydro's environmental affairs. Hydro was also a founding
14 member of the CEA Environmental Commitment and Responsibility Program
15 and, among the first group subjected to external review as part of the CEA
16 program.

17
18 In 2003, all Hydro Group management areas will have ISO 14001 registration.
19 Registration requires three essential commitments:

- 20
21 • Prevention of pollution;
22 • Continual improvement of environmental performance; and
23 • Compliance with legal and other requirements.

24
25 Environmental activities of the Hydro Group have been the subject of an annual
26 Environmental Performance Report since 2000. These reports document the
27 specific achievements of employees within the Hydro Group, reflecting changed
28 attitudes towards environmental issues and the impact that our activities can
29 have on the environment. The commitment to good environmental stewardship
30 also includes an open, transparent approach to the issues with the public.

1 Some of the notable achievements and issues for the environmental program
2 include:

- 3
- 4 • An environmental site assessment program, a multi-year program that
5 guides the implementation of environmental site assessments on all
6 properties owned or occupied by Hydro and provides for remediation as
7 required;
 - 8 • A focus on air emissions, especially at the thermal generating plant at
9 Holyrood;
 - 10 • A multi-phase program to model emissions from all diesel generating
11 facilities; and
 - 12 • A specific focus on waste management to reduce the use of the
13 equipment and processes that produce potentially hazardous materials,
14 and reuse and recycle as appropriate.
- 15

16 Hydro's commitment to the environmental issues respecting its operations is
17 clear and demonstrable.

18

19 **4.7 Strategic Direction**

20 To assist in meeting its commitment to providing power at the lowest possible
21 cost consistent with reliable service, in January of 2000, Hydro initiated a process
22 of incorporating strategic planning in all aspects of its business operations and
23 throughout all levels of the Corporation. One of the first strategic issues
24 identified was that of performance and one of the goals emerging from the
25 strategic planning exercise, which is ongoing, was to optimize performance in all
26 activities throughout the corporation.

27

28 A formal and systematic approach towards the achievement of this goal relating
29 to improved business processes and operational efficiencies was set out as a
30 corporate objective in 2002. Corporate performance is to be optimized through
31 an assessment of business processes and the identification of changes

1 necessary to improve performance as measured through the development of
2 process metrics and implementation of key performance indicators (“KPIs”).

3
4 The program to optimize corporate performance was initiated early in 2002 by
5 the retention of consultants to provide an initial impetus and expertise on
6 methods employed to review business processes. Internal process improvement
7 teams led by an Executive Director, were formed to ensure that the review of
8 business processes would be successfully initiated within Hydro on the
9 termination of the services of the consultant. Committees were also formed to
10 review and identify KPIs, which is an essential part of the strategy to ensure that
11 performance at every level throughout the Corporation can be measured.

12
13 The business improvement process is focused on changing work methods,
14 practices and procedures, eliminating any non-value added work and promoting
15 efficiencies. The initial focus was on accounts payable and supply chain
16 management processes. Operational efficiencies were identified for these
17 processes and the implementation of the process improvements is taking place
18 in 2003. Further details of these initiatives are in the Finance and Corporate
19 Services Evidence.

20
21 Two other major initiatives in their early stages are the review of capital and
22 operating management and asset management. This includes initiatives related
23 to work identification, prioritization and execution.

24
25 Hydro’s objective is to eliminate all non-value added work in these processes and
26 to leverage the functionality of its integrated software suite to support business
27 process improvement and deliver more effective work management and
28 budgeting tools.

29
30 Equally as important is the ability to measure performance and performance
31 achievements. Performance measures include traditional ones already used

1 such as the reliability measures, financial indicators, and safety statistics.
2 Others, such as the unit cost measure are new and incorporated as part of the
3 key measures used by Hydro to measure performance. An interactive interface
4 tool was developed which allows employees to assess the company's
5 performance in these major areas and ensure that corrective action can be
6 initiated quickly when required.

5. FINANCIAL OBJECTIVES AND TARGETS

5.1 General

The Electrical Power Control Act, 1994 states that rates should be set to enable Hydro to earn a just and reasonable return permitting it to achieve and maintain a sound credit rating in the world financial markets. While the Board regulates Hydro on the basis of a return on rate base, the determination of an appropriate return on equity is a critical component for rate-setting purposes.

5.2 Return on Equity

The Board in Order P.U. 7 stated at page 16: “In January 1996 the EPCA was proclaimed...the rates were to be set so as to allow Hydro a just and reasonable return comparable to other utilities”. In this Application, Hydro is requesting a return on equity of 9.75%. While the determination of an appropriate return on equity is the subject matter of expert evidence, it cannot be reduced to a mathematical formula. Having considered relevant factors, including the recommendation of Hydro’s financial expert, Ms. McShane, who concluded that Hydro faces no less business risk than the typical investor-owned electric utility in Canada, including Newfoundland Power, the other regulated utility in this jurisdiction for which the Board recently approved a 9.75% return on equity, and to expedite this issue, Hydro is prepared to accept the same rate of return on equity of 9.75% for this Application.

During its 2001 GRA, Hydro proposed a 3% return on equity to “assist in offsetting the rate impacts resulting from increased fuel costs.” The proposal was: “intended to apply for a limited time only”. (W. E. Wells’ evidence – page 15, 2001 GRA) and to address what was thought to be a temporary issue of adjusting base rates to reflect higher fuel costs. The issue of high fuel prices, however, remains. Hydro cannot compromise its financial integrity by continuing at a return on equity that was recognized by all parties in the 2001 GRA to be clearly inadequate.

1 A reasonable return on equity is required, and essential to maintain Hydro's
2 financial integrity. Such a return is part of the normal cost for any utility providing
3 a similar service whether it is regulated or not.

5 **5.3 Capital Structure**

6 As early as 1992, the Board reaffirmed that a reasonable target for the capital
7 structure of Hydro was a debt/equity ratio of 80/20. During Hydro's last Rate
8 Application, the Board reaffirmed that a reasonable capital structure for Hydro
9 would be an 80% debt to capital. Ms. McShane, in her evidence, concludes that
10 this target should be viewed as the upper end of the reasonable range for Hydro.
11 The percentage of debt is currently above that level and Hydro considers it
12 prudent to move towards the target of 80% debt, as outlined in the Finance and
13 Corporate Services Evidence.

14
15 The payment of dividends may affect a company's capital structure. As outlined
16 in the Finance and Corporate Services Evidence, modification of Hydro's current
17 dividend policy of payment of up to 75% of net income, following consideration of
18 its impact on the capital structure, will be required to ensure progress is made
19 towards the target of 80% debt within a reasonable time frame. Discussions
20 have been initiated with the Government on this issue. It should be noted that
21 Government in its 2003/2004 budget did not anticipate taking any dividends from
22 Hydro's regulated operations.

23
24 Following receipt of P.U. 7, Hydro in July of 2002 briefed the Minister of Mines
25 and Energy and his officials with respect to the Board's decision, including the
26 impact of the payment of dividends on Hydro's capital structure. Subsequently, a
27 briefing was provided to the Policy and Priority Committee of the Provincial
28 cabinet.

29
30 This issue was again discussed with the Minister of Mines and Energy in
31 February 2003, and on March 25, 2003, the correspondence attached in

Schedule II was forwarded to the Department of Mines and Energy outlining the issues relating to Hydro's financial objectives and the implications with respect to the payment of dividends. No response has been received from the Government up to the time of filing this Application.

5.4 Summary

Hydro believes that the following targets for 2004 are essential for it to achieve and maintain a sound financial position:

- Return on equity of 9.75%;
- A target of 80% debt to capital structure; and
- Return on rate base of 8.15%.

6. RURAL DEFICIT

The Board in P.U. 7 directed Hydro to develop an evidentiary record of the issue of the rural deficit. The record was to document appropriate consultation with Government, address the magnitude of the rural subsidy and comparative practices elsewhere, as well as future funding options.

Hydro owns and operates 24 isolated diesel generating plants serving 4,400 customers throughout the Province. Hydro also serves approximately 21,800 Rural Customers on the Island Interconnected System in 181 communities.

The cost of providing service to these Rural Customers exceeds the revenues collected which results in the “rural deficit”. Until 1989 the rural deficit was funded directly by government; subsequently, as a result of a change in government policy, the rural deficit is now funded by a cross-subsidy from other ratepayers; i.e., Newfoundland Power and Labrador Interconnected Rural Customers.

The rural deficit in 2004 is forecast to be \$41.6 million, with \$22.2 million attributable to Isolated Rural Customers and \$19.4 million attributable to Island Interconnected Customers. The average subsidy in 2004 is forecast to be \$4,700 for each Isolated Rural Customer and \$800 for each Island Interconnected Customer.

In providing service to its Interconnected and Isolated Rural Customers, Hydro has worked diligently to maintain a reliable service, while minimizing costs to the extent possible. With the current policies for rural rates, efforts can only assist in minimizing costs; Hydro cannot eliminate the rural deficit.

The initiatives that Hydro has taken to reduce costs in providing the service include:

- 1 • The interconnection of isolated systems to the main grid - since 1992 the
- 2 communities of Westport, Southeast Bight, Petite Forte, Mud Lake and
- 3 Lapoile have been interconnected;
- 4 • In 1995 Hydro contracted with Hydro Québec for the purchase of
- 5 secondary energy on the system from L'Anse au Loup to Red Bay;
- 6 • In 1996 Hydro reduced the number of diesel communities by
- 7 interconnecting the communities on the Great Northern Peninsula
- 8 ("GNP");
- 9 • Reduction in the number of operating and support personnel and the
- 10 multi-skilling of plant operators, classified as Diesel System
- 11 Representatives ("DSRs") who perform limited line maintenance and plant
- 12 maintenance as well as perform the functions of plant operator, and part-
- 13 time meter readers;
- 14 • Adopting industry-recognized practices for the maintenance of isolated
- 15 systems; and,
- 16 • Targeting small, high cost diesel systems for electricity conservation
- 17 initiatives.

18

19 < >

20

21 Full cost recovery, as directed by the Board in P.U. 7 from federal and provincial

22 government departments, resulted in an estimated reduction in costs in the rural

23 deficit of approximately \$1 million. However, in the absence of a significant

24 change in the policies for establishing rural rates, it is unlikely that there will be

25 further opportunities for significant reduction in the rural deficit.

26

27 The Island Isolated System has virtually no load growth while the load growth on

28 the Labrador Isolated System continues to increase substantially, currently at an

29 annual average rate of 7.2%, since 1998. At the present time, for each isolated

1 system, Hydro has not been able to determine a more cost-effective means of
2 supplying the service to date other than by diesel generation.

3
4 Hydro has, at various times prior to its 2001 GRA, and in conjunction with that
5 Application, discussed the issue of the rural subsidy with government at the
6 departmental level, the Department of Mines and Energy, and at the Cabinet
7 Committee level.

8
9 Following P.U. 7, in July of 2002 Hydro briefed the Minister of Mines and Energy
10 and his officials with respect to the Board's decision and in particular the
11 references to the rural deficit. Subsequently, a briefing was provided to the
12 Policy and Priority Committee of the Provincial Cabinet.

13
14 In addition the correspondence, Schedule II attached, has been directed to the
15 Minister and officials of the Department of Mines and Energy. This includes the
16 direction of the Board arising from P.U. 7, as well as a summary of the facts and
17 issues related to isolated systems and the quantum of the deficit, and the other
18 related items as defined by the Board. The issues were reviewed with the
19 Minister of Mines and Energy who, with his officials and representatives of
20 Hydro's Board of Directors, was provided with a briefing on February 28, 2003.

21
22 In July 2003, the Government gave direction that the preferential rates paid by
23 Rural Customers are to continue and the rural deficit is to continue to be funded
24 by Newfoundland Power and Labrador Interconnected Rural customers.

7. CONCLUSION

Hydro recognizes the ever-increasing public demand for reliability in the supply of electricity and is committed to providing reliable power at the lowest possible cost. Focused capital and maintenance programs, enhanced energy management systems, new business processes and customer services are all directed to that objective.

Hydro's performance must be assessed against the backdrop of its obligation to service a declining rural population in an already sparsely populated, large service territory, a fact, which will provide upward pressures on Hydro's cost of providing service. As well, the Province as a whole has a small population base from which to collect the total costs of all the services provided, and in this respect does not experience more favourable economies of scale.

Further, the lack of interconnections to adjacent systems, for supply and support, and the heavy dependence on No. 6 fuel for thermal generation, all combine to create higher unit costs than would otherwise be the case. Notwithstanding these facts, the current industrial and residential rates compare favourably with those in the other Atlantic Provinces.

Hydro's proposed increase in its revenue requirement for the 2004 test year over 2002 is approximately \$55 million, which results in an increase in base rates, of 13.7% for Newfoundland Power and 13.5% for Industrial Customers. Of the \$55 million, approximately \$33 million results from new sources of supply to meet increased load requirements and increased costs for No. 6 fuel, both of which are essential to ensure a reliable supply of electricity to Hydro's customers. Increases in depreciation and financing charges, excluding those applicable to Granite Canal, amount to \$18 million. The balance is related to Hydro's controllable costs. The details with respect to the components of Hydro's

1 controllable costs are outlined in the evidence filed with this Application, including
2 the results of Hydro's initiatives to keep the costs as low as reasonably possible.
3 It is Hydro's position that the costs proposed for 2004 are the minimum required
4 to provide reliable service to customers.

5
6 The incorporation of these costs into Hydro's proposed rates for 2004 for its
7 industrial and utility customers results in rates that are still comparable to the
8 jurisdictions in Atlantic Canada, reflecting the fact that over the past decade
9 Hydro's industrial and utility customers have benefited from lower cost electrical
10 services.

11
12 There remains one other factor that will substantially impact rates in 2004, the
13 outstanding amounts to December 31, 2003 for No. 6 fuel in the RSPs.
14 Recovery of the forecast balance of the RSP adds 16% to rates paid by Industrial
15 Customers and 10% to rates paid by Newfoundland Power, as of January 1,
16 2004 and July 1, 2004, respectively.

17
18 Should current forecast prices for No. 6 fuel reflect future costs, the outstanding
19 balances in the RSP for Hydro customers should not be a significant factor
20 impacting rates after 2004, and the rate impact resulting from the current
21 outstanding balance will eventually be removed.

22
23 Other rate impacts as a result of this GRA that are of particular note arise from
24 Hydro's last GRA and the decisions of the Board in P.U. 7. Hydro committed and
25 was directed by the Board to submit in this GRA, for the review and approval by
26 the Board, a rate plan outlining a phasing in of new rates through rate
27 adjustments over a maximum of five years, in order to complete the
28 implementation of a more equitable rate structure on the Labrador
29 Interconnected System. < > Hydro, in proposing rates in this Application
30 for these customers, has followed the direction of the Board to ensure that
31 customers in each class are not

1 unduly affected by the percentage of any increase or the dollar cost adjustment
2 in a specific year.

3

4 In summary, the principal increases in Hydro's proposed 2004 revenue
5 requirement arise from new sources of supply required to meet increased
6 customer load. The resultant costs are an integral part of meeting system
7 requirements and must now be incorporated into consumer rates.

CORPORATE OVERVIEW
LIST OF SCHEDULES

- I Canadian Utilities' Comparison
- II Correspondence to the Department of Mines & Energy on Hydro
Dividends and Rural Deficit Issues

Canadian Utilities' Comparison

Utility Operating, Maintenance, and Administration Expense (\$ Millions)¹

| | BC Hydro | Hydro Québec | NS Power | NB Power | Manitoba Hydro | Sask Power | NLHydro | Inflation Index ² |
|------|--------------------|--------------|----------|----------|----------------|------------|---------|------------------------------|
| 1992 | \$373 | \$1,770 | \$156 | \$265 | \$219 | \$191 | \$79 | 100 |
| 1993 | \$406 | \$1,800 | \$151 | \$268 | \$217 | \$223 | \$80 | 101 |
| 1994 | \$425 | \$1,766 | \$151 | \$268 | \$215 | \$224 | \$80 | 103 |
| 1995 | \$409 | \$1,686 | \$148 | \$270 | \$222 | \$233 | \$78 | 105 |
| 1996 | \$398 | \$1,542 | \$158 | \$262 | \$224 | \$195 | \$79 | 107 |
| 1997 | \$415 | \$1,606 | \$139 | \$262 | \$226 | \$214 | \$75 | 108 |
| 1998 | \$385 | \$1,563 | \$143 | \$283 | \$214 | \$238 | \$81 | 107 |
| 1999 | \$408 | \$1,912 | \$144 | \$320 | \$226 | \$281 | \$85 | 109 |
| 2000 | \$475 | \$2,135 | \$157 | \$325 | \$235 | \$264 | \$93 | 114 |
| 2001 | \$525 ³ | \$2,134 | \$157 | \$344 | \$246 | \$254 | \$91 | 115 |
| 2002 | \$550 | \$2,225 | \$176 | na | \$258 | \$286 | \$94 | 116 |

Percentage Change in Utility Operating, Maintenance, and Administration Expense

| | BC Hydro | Hydro Québec | NS Power | NB Power | Manitoba Hydro | Sask Power | NL Hydro | Inflation |
|---------------------------|----------|--------------|----------|----------|----------------|------------|----------|-----------|
| 1992 to 2002 ⁴ | 47% | 26% | 13% | 30% | 18% | 50% | 19% | 16% |
| 1998 to 2002 ⁴ | 43% | 42% | 23% | 22% | 21% | 20% | 16% | 8% |

1. Source: Various Utility Annual Reports for electricity segmented data where applicable (except for Hydro-Québec which is consolidated from 1999 to 2002).

2. Canadian GDP Deflator.

3. Excludes one time California market charge.

4. For NB Power the percentage change is to 2001 due to unavailability of 2002 data at time of schedule preparation.



File No. _____

NEWFOUNDLAND AND LABRADOR HYDRO

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March 25, 2003

Mr. Brian Maynard
Deputy Minister, Mines & Energy
Department of Mines & Energy

Dear Mr. Maynard:

Re: Hydro's General Rate Application

This note is a follow-up to our recent discussions and my letter to Minister Matthews dated January 23rd, 2003. As well, the issues were reviewed with Minister Noel during the initial briefing of the Minister, attended by representatives of the Hydro Board, on February 28th, 2003.

The Public Utilities Board ("Board") ordered that Hydro file its next General Rate Application prior to the end of 2003. The Board was prompted to make that decision by the fact that there were a number of ongoing issues that require attention as a result of the last rate application. Specifically, Hydro was directed to prepare a schedule for the phase-in of uniform rates on the Labrador Interconnected system. Rates were to be phased in over a five-year period as of 2004. As well, the elimination of preferential rural rates over a five-year period must be submitted as part of Hydro's next rate application.

In its 2002 Order, the Board found preferential rates to be discriminatory and accepted Hydro's proposal to present to the Board, at its next rate application, a plan to phase-out preferential rural rates. Essentially, these rates apply to certain fish plants, churches and community halls in rural areas of the Province.

Hydro had also advised the Board that the costs for new sources of generation, including the development of Granite Canal, and purchase contracts with Corner Brook Pulp and Paper and Abitibi Consolidated Inc. to meet the

power and energy requirements for the Island Interconnected system, would come on stream in 2003. Until the Board incorporates these costs in Hydro rates, there are no offsetting revenues.

In order to ensure that these new costs are added to our revenue requirement, and prevent a continuing loss on regulated activities in 2004, it is important that new rates are set by the Board for the beginning of 2004. Any delay in having these costs incorporated into Hydro rates will continue the losses on regulated activity, projected to be \$8 million in 2003.

The issues that require consultation between Hydro and Government are outlined below:

Hydro's Capital Structure – Dividend Policy

As outlined in the letter to the Minister dated January 23rd, the issue of Hydro's capital structure will be an important consideration at this hearing, as Hydro will be proposing a normal return on equity equivalent to that earned by Newfoundland Power. The Board expressed its concern that in the absence of a predictable and stable dividend policy, it would be difficult for either Hydro or the Board to target an appropriate capital structure, or achieve it within a predictable timeframe.

As you know, the Hydro Board has a dividend policy of up to 75% of net income as a payment of dividends providing due consideration has been given to the impact of the payment on the capital structure. This is exclusive of pass-through payments for monies related to unregulated activity such as CF(L)Co income, and recall revenues from Hydro-Québec.

Hydro, in consultation with its financial consultant, will be proposing a Debt/Equity ratio of 80/20, as its financial target. The Hydro Board had earlier confirmed that 80/20 was an appropriate Debt/Equity ratio for Hydro in 1996. If dividend payments remain at 75% of net income, Hydro would not be able to reach that target. In fact, it will require dividend payment of not more than 50% of net income for Hydro to achieve an 80/20 Debt/Equity ratio by 2010.

The Board, while accepting the fact that it has no jurisdiction with respect to the payment of dividends and the requirement of dividends by the shareholder of the Corporation, had suggested that there be consultation between Hydro and the Government. It was anticipated that as a result of the consultation, a reasonably clear picture would emerge at our next hearing with respect to the policies of Government and the Corporation, on the achievement of an appropriate capital structure. Clarity on this point is essential if Hydro is to achieve the objective set by the Board of Directors that the return on equity for regulated activities should be equivalent to that achieved by Newfoundland Power, and that progress be made towards achieving the targeted capital structure of 80/20 Debt/Equity ratio. During its current rate application, Newfoundland Power is seeking a return on equity of 10.75% and Hydro will be targeting that level in its 2003 rate application.

Should Hydro not achieve that level of return on equity, it will inevitably result in a lesser income or profit, which will diminish its opportunities to pay dividends or make any progress in reducing the percentage of debt to 80%.

A discussion paper on this issue is attached and reviews the information outlined during the briefing of the Minister on February 28th.

Rural Subsidy

The second issue is that of the rural subsidy and the concern of the Board with respect to the magnitude of the subsidy and its affect on other ratepayers who have no control of the situation. I outlined the pertinent segments of the Board's decision with respect to that issue in the January 23rd memo to Minister Matthews. The Board directed Hydro to assume the responsibility for the development of an evidentiary record with respect to the rural deficit. The record is to involve appropriate consultation with Government, address the magnitude of the rural subsidy, and deal with comparative practices elsewhere, as well as future funding options for the rural deficit. To that end, attached to this letter is a discussion paper for the Minister of Mines and Energy with respect to the rural deficit, which covers all of the points that were addressed by the Board. The paper is intended to summarize the issues related to the rural deficit for

Government, through the Minister and his officials, to allow further consultations to take place between Hydro and Government.

Rate Increases

In Hydro's 2003 General Rate Application, the principle driver for rate increases is the fact that three (3) new sources of generation have been brought on stream to meet the Island Interconnected capacity and energy requirements. The three projects are positive and will result in a long-term, cost-effective supply to the Island Interconnected system. The fact is that consumers have to pay for the cost associated in providing the service. In that sense, the whole issue is not a matter of choice but a matter of necessity to maintain an essential service, as the demand for electricity increases.

Hydro's return on equity and operations and administration costs also have an impact on rates, but to a lesser degree. Government and taxpayers should have a return on equity on their investment in providing electrical service and any payments by Hydro back to Government should reflect the taxpayers investment. With respect to operation and maintenance costs, Hydro has worked diligently over the past number of years to reduce costs through productivity improvements and streamlining of operations. The process is continuing and we should be able to demonstrate to the Board and interveners that Hydro's controllable costs are well managed.

Another major factor, which will substantially affect rates paid by consumers for their electricity results from the outstanding balance in the accounts of the Rate Stabilization Plan. This was detailed in our ministerial briefing of February 28th. The Board capped the outstanding balances for industrial customers and Newfoundland Power as of August 31st, 2002. The balance is to be recovered over a five-year period commencing January 1st for industrial customers and July 1st, 2003 for Newfoundland Power. For residential consumers this will mean approximately 1.7% increase on July 1, 2003. The problem or issue is the outstanding balance in the new account effective as of September 1st, 2002. Due to conflict in the Middle East, oil prices have risen precipitously and as of the end of February 2003 the outstanding balance in the new plan totals \$39 million. It is projected that the outstanding balance at the

end of 2003 will be between \$65 and \$70 million. The Board has already ordered that the new plan balance would have to be collected over a two-year period from consumers. This will result in significant increases to our industrial customers and to Newfoundland Power and residential customers. These details were included in the ministerial briefing of February 28th.

For Hydro to receive an Order from the Board for January 2004 implementation, it will have to file in the early spring of this year. It takes approximately three (3) months from the time of filing until all the necessary information requests and evidence has been filed with the Board prior to the start of the hearing. At the very best it will take us approximately three and a half to four months from the start of the hearing to the receipt of a new Order from the Board. As I mentioned earlier, any delay beyond the end of the year in the implementation of new rates to cover revenue requirements, will result in continued losses in 2004 on Hydro's regulated activities.

To facilitate the filing of a timely application we need to deal with the issues outlined in this letter and previous correspondence and briefings.

Yours truly,

William E. Wells,
President & Chief Executive Officer.

WEW:bal

Attachments 2

DISCUSSION PAPER

SUBJECT: HYDRO DIVIDENDS, CAPITAL STRUCTURE AND RETURN ON EQUITY

PURPOSE

The purpose of this discussion paper is to provide an update with respect to the payment of dividends by Hydro to the Province and the resulting impact on capital structure and return on equity that became an issue during Hydro's 2001 General Rate Application.

BACKGROUND

In the 1995/96 Provincial Budget, Government announced that it would be seeking an annual dividend from Hydro as a return on the public investment in the electrical industry.

In November 1995 Hydro's Board of Directors approved a dividend policy to ensure there would be clear guidelines for the payment of any future dividends and also to ensure that Hydro's future financial position would not be adversely impacted. The dividend policy that the Board approved stated that dividends of up to 75% of Hydro's net operating income for that year could be paid as dividends provided that such payment did not cause a deterioration in Hydro's debt equity ratio at December 1995 of 82:18. This policy applied to Hydro's earnings only and excluded any earnings that accrue to Hydro from Churchill Falls (Labrador) Corporation Limited ("CF(L)Co").

A separate Resolution was approved by Hydro's Board for the payment of dividends to the Province based on Hydro's share of earnings it receives on an annual basis from CF(L)Co. However, the payment of dividends related to earnings received from CF(L)Co is not an issue related to this paper.

In May 2000 Hydro's Board approved a change in the dividend policy so that dividends of up to 75% of Hydro's net operating income before net recall revenue for the year plus 100% of net recall revenues received could be paid as a dividend provided that such payment shall only be made after due consideration has been given by the Board of the impact of such payment on the debt/equity ratio of Hydro. Net recall revenue commenced in 1998 when Hydro began selling power recalled under the CF(L)Co Power Contract to Hydro-Quebec.

The dividends paid by Hydro to the Province since 1995 in relation to net regulated operating income and projections for 2003 are as follows:

| Year | Dividends Paid During Year – ex Recall and CF(L)Co | Net Regulated Operating Income | As a % of Net Regulated Operating Income |
|-------------|---|---|---|
| | (\$000) | | (%) |
| 1995 | 14,500 | 22,829 | 64 |
| 1996 | 9,688 | 20,693 | 47 |
| 1997 | 12,357 | 31,351 | 39 |
| 1998 | 10,489 | 24,847 | 42 |
| 1999 | 1,309 | 13,015 | 10 |
| 2000 | 10,026 | 5,829 | 172 |
| 2001 | 9,773 | 11,918 | 82 |
| 2002 | <u>65,723</u> | <u>9,743</u> | 675 |
| Total | 133,865 | 140,225 | 95 |
| 2003(F) | <u>0</u> | <u>(8,000)</u> | |

Hydro's regulated capital structure at the end of 1995 and for the period 1998 to 2002 with a preliminary forecast for 2003 is as follows:

| | 1995 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003(F) |
|--------------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| | (%) | | | | | | |
| Debt | 82.0 | 79.3 | 79.0 | 79.2 | 80.0 | 84.6 | 86.8 |
| Employee Future Benefits | 0.0 | 0.0 | 0.0 | 0.8 | 1.6 | 1.6 | 1.6 |
| Equity | <u>18.0</u> | <u>20.7</u> | <u>21.0</u> | <u>20.0</u> | <u>18.4</u> | <u>13.8</u> | <u>11.6</u> |
| Total | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.0</u> | <u>100.00</u> |

During the period 1995 to 1999 Hydro's dividend payout ratio was less than the 75% that the Board of Directors had approved. Commencing in 2000, dividend payments to the Province have been in excess of the dividend payout ratio and the amount for 2002 was 675% more than the net regulated operating income. During the eight year period 1995 to 2002 total dividends paid was 95% of net regulated income.

Hydro is presently forecasting a loss from its regulated operations in 2003 of \$8 million and consequently there will be no dividend payments in 2003 from this area of operations. Unless there is a rate increase approved by the PUB, there will also be significant losses in 2004. The payment of dividends does impact Hydro's capital structure and as shown in the above noted table on capital structure the payment of a large dividend in 2002 has a very significant impact on Hydro's debt to capital structure.

The Public Utilities Board and the intervenors all agreed that the dividend policy is a matter between Hydro and its shareholder. The issue was a substantial dividend payment made in the test year and the impact that such a substantial dividend would have on the requested revenue requirement.

The Board also ruled that the interest expense and return on equity in the 2002 test year revenue requirement be based on Hydro's dividend policy providing for dividends of up to 75% of its net operating income. The interest cost for the 2002 test year was also required to be reduced using the embedded cost of debt to reflect the cost of financing the dividend in excess of Hydro's dividend policy. The corresponding increase in return on equity or net earnings reflecting the requested 3% return on the notional increase in equity was partially allowed to offset the interest reduction.

The dividend in excess of 75% of net operating income was calculated to be approximately \$60 million and the ultimate revenue impact of the Board's decision to disallow it was \$1.5 million less revenue to Hydro every year until a new rate application is approved. The burden of this revenue shortfall is borne entirely by the shareholder. The Public Utilities Board recommended improved co-ordination and consultation between Hydro and Government on establishing a mutually appropriate and predictable dividend arrangement on a go forward basis. The Public Utilities Board feels that rate stability and predictability serves the interests of customers and therefore a dividend policy that produces a predictable and stable outcome on rates is preferable to the experience since 2000.

In the 2001 rate application Hydro's regulated return on equity and capital structure were reviewed. Hydro had requested a return on equity of only 3% because of the projected significant increase in rates primarily due to rising fuel costs and a short-term debt to capital structure of 80:20. Hydro did state that in the long term it should have the same capital structure as an investor owned

utility which at the time as recommended by Hydro's financial advisors was 60:40. The Board approved Hydro's requested rate of return on equity of 3% and stated that at this time it was not prepared to deal with the issue of a long-term capital structure. However it did agree to a target short-term debt to capital structure of 80:20 and a test year ratio of 83:17. The test year ratio of 83:17 reflects the treatment of the excess dividends as equity rather than debt.

CURRENT ANALYSIS

Hydro is presently in the process of preparing for a 2003 General Rate Application and the questions of an appropriate dividend policy, rate of return on equity and capital structure will once again be an issue. These three items are inter-related and a change in one will impact the other two. Hydro's financial advisors believe that its rate of return on equity should be no less than an investor owned utility which has the same regulatory, financial and business risks as Hydro. Based on a current application by Newfoundland Power to the Board, this requested return on equity would be around 10.75%. The Board has also accepted a target short-term capital structure of 80:20.

Hydro has used its long-term financial model to complete some capital structure analysis and the results are indicative of what may happen over the five-year period 2004-2008 based on certain criteria. A key assumption used in the model that is applied to all cases is that rates would be set annually to recover each year's costs. Three cases were completed using a return on equity of 3%, 8% and 10.75% respectively and the dividend payout ratios were also altered.

The results are as follows:

| <u>Series</u> | <u>75% Payout</u> | <u>50% Payout</u> | <u>25% Payout</u> |
|---|--------------------------|--------------------------|--------------------------|
| <u>Case 1 – 3% return</u> | | | |
| Total net income for the period 2004-2008 (\$ millions) | 77 | 78 | 79 |
| Total dividends for the period 2004-2008 (\$ millions) | 58 | 39 | 20 |
| Debt to capital ratio in 2008 | 84:16 | 83:17 | 82:18 |
| <u>Case 2 – 8% return</u> | | | |
| Total net income for the period 2004-2008 (\$ millions) | 113 | 117 | 122 |
| Total dividends for the period 2004-2008 (\$ millions) | 85 | 59 | 30 |
| Debt to capital ratio in 2008 | 84:16 | 82:18 | 80:20 |
| <u>Case 3 – 10.75% return</u> | | | |
| Total net income for the period 2004-2008 (\$ millions) | 134 | 141 | 148 |
| Total dividends for the period 2004-2008 (\$ millions) | 100 | 70 | 37 |
| Debt to capital ratio in 2008 | 84:16 | 81:19 | 79:21 |

Our current return on equity is 3% and the first case depicts what the results may be if this return is kept in place over the next five years. The second case uses Hydro's embedded cost of debt of 8% as the return on equity while the third case of a 10.75% return on equity is the rate currently being proposed by Hydro.

This analysis shows that irrespective of a change in return on equity with a dividend payout ratio of 75% the debt to capital ratio in 2008 for all cases will be the same. An increase in the return on equity together with a reduction in the dividend payout ratio is the only way that Hydro's debt to capital structure can show some improvement. With a lower dividend payout, total dividends paid to the Province would be equivalent to the projection based on existing levels if the PUB approves a higher return of 8%.

CONCLUSION

Everyone who participated in Hydro's 2001 rate application acknowledged that a 3% return on equity was unrealistic but understood why Hydro requested such a low rate of return. As it is not financially prudent to continue at a 3% ROE for the future Hydro must request a market rate of return in this application.

Hydro is suggesting that the current dividend payout policy of 75% would be replaced by a dividend policy of paying out 50% of net operating income. This policy would be fixed for the next five years and facilitates movement to the proposed debt to capital structure. It would also contribute to rate stability and predictability. Failure to adhere to such a policy could result in similar disallowances by the Board, thereby adversely impacting on shareholder returns.

DISCUSSION PAPER FOR MINISTER OF MINES AND ENERGY

SUBJECT: RURAL DEFICIT ISSUE

INTRODUCTION

The Board of Commissioners of Public Utilities (Board) directed Newfoundland and Labrador Hydro (Hydro) in its Order No. P.U. 7 (2002-2003) dated June 7, 2002 (the Board's 2002 Order) to develop an evidentiary record on the rural deficit issue. The Board stated that this record is to document appropriate consultation with Government and is to address the magnitude of the rural subsidy, comparative practices elsewhere, as well as future funding options for the rural deficit. The Board further stated that this record should also contain a concise statement of other public policy initiatives being implemented by Hydro on behalf of Government and their associated costs. This evidentiary record must be filed at Hydro's next rate hearing, which is scheduled for 2003.

To assist in the development of the evidentiary record, this paper outlines the history and magnitude of the rural deficit, rural rates policies, cost control initiatives on isolated systems, comparative practices in other Canadian jurisdictions and future funding options.

HISTORY OF THE RURAL DEFICIT

Hydro owns and operates 24 isolated diesel generating plants serving approximately 4,500 customers throughout Newfoundland and Labrador. Hydro also serves rural customers on the island interconnected system and has approximately 21,800 customers in 180 communities on the south coast, northeast coast and along the Great Northern Peninsula. The cost of providing service to these approximated 26,300 rural customers exceeds the revenues collected, resulting in a deficit which is commonly referred to as the "rural deficit". Until 1989 the rural deficit was funded directly by Government, however today the rural deficit is funded by means of a cross-subsidy from other ratepayers as a

result of a change in policy by Government in 1989. The rural deficit adds to the costs of electricity for Newfoundland Power and for Labrador Interconnected customers. Industrial customers have not contributed to the rural deficit since 1999.

Over the past several years the rural deficit has been as follows:

| Rural Deficit <i>(\$millions)</i> | | | |
|---|------------------------------------|---------------------------------------|--------------|
| Year¹ | Rural Island Interconnected | Labrador & Island Isolated | Total |
| 2002 | 17.6 | 21.2 | 38.8 |
| 2001 | 12.1 | 22.0 | 34.1 |
| 2000 | 6.8 | 20.0 | 26.8 |
| 1999 | 5.8 | 16.3 | 22.1 |
| 1997 | 7.5 | 16.4 | 23.9 |
| 1995 | 4.4 | 24.9 | 29.3 |
| 1994 | 3.2 | 24.5 | 27.7 |
| 1993 | 4.0 | 24.0 | 28.0 |
| 1992 | 4.2 | 24.7 | 28.9 |

¹ 2002 data is based on the final forecast Test Year Cost of Service Study filed with the Board during the 2001-2002 rate hearing and reflects the costing methodology approved by the Board resulting from that hearing. Data for the remaining years is based on the "Interim" methodology approved as a result of the 1992 generic methodology hearing. Data for 1996 and 1998 is unavailable.

The amount of the rural deficit is affected by the costing methods used by the Board to set electricity rates for Hydro's customers, and, as well, by interconnections of isolated systems to the main electric grid, in particular the interconnection of the St. Anthony system in 1996. Based on the data shown the rural deficit has been trending upward over the past decade. In general, the rural deficit will tend to further increase as an equal annual inflationary adjustment, similarly applied to both revenues (which are low) and costs (which are high) will cause an ever-widening gap, resulting in an increasing deficit.

It is currently projected that the rural deficit will exceed \$40 million in 2004. The Board in its 2002 Report:

“acknowledges the burden the rural deficit places on subsidizing ratepayers and is concerned with the potential for increasing levels of subsidization”.

MAGNITUDE OF THE SUBSIDY PAID BY OTHER RATE PAYERS

As shown above, the 2002 total deficit for all rural customers is \$38.8 million with \$21.2 million attributable to isolated rural customers and \$17.6 attributable to island interconnected customers. The average subsidy in 2002 is \$4,600 for each isolated rural customer and \$800 for each island interconnected customer. On the isolated systems, an estimated 26 cents for each dollar spent is recovered from customers, whereas on the interconnected system 64 cents on the dollar is recovered. Newfoundland Power pays Hydro approximately 19% more than the cost of service as a cross-subsidy to fund the rural deficit. Customers on the Labrador interconnected system pay 49% more than their cost of service as their share of the rural deficit. The Board noted in its 2002 Report:

“While cross-subsidization among ratepayers is a common practice, witnesses noted the magnitude of the subsidy is of fundamental importance. The Board acknowledges the burden the rural deficit places on subsidizing ratepayers and is concerned with the potential for increasing levels of subsidization. The Board notes that rising costs, and hence higher subsidies, may place an even greater burden on ratepayers who have no ability to control these costs but are responsible for paying them.”

RURAL RATES POLICIES – LIFELINE BLOCK

Electrically interconnected rural customers on the Island and in the Labrador Straits area pay the same rates as those charged by Newfoundland Power to its customers. These rates automatically change as Newfoundland Power alters its rates. In the case of isolated systems customers, the rates charged by Newfoundland Power apply to the first 700 kWh of monthly consumption or the “lifeline block”, however, rates beyond this level of consumption are higher. The generally accepted purpose of the lifeline block is to provide domestic

households located on diesel systems with access to electricity at non-discriminatory prices for essential, non-substitutable end-use requirements. The initial Order in Council 184-'74 set the lifeline block at 500 kWh per month effective March 1, 1974. Effective on April 1, 1987, Order in Council 520-'87 increased the lifeline block from 500 to 600 kWh per month. Order in Council 810-'89 further increased the lifeline block from 600 to 700 kWh per month on July 1, 1989, where it now stands. In 1989, the concept of a lifeline block was also extended to general service customers when they were provided 700 kWh per month consumption at island interconnected rates. Current rates for domestic and general service customers on the island interconnected and isolated systems are as follows:

| Comparison of Rates | | |
|------------------------------------|------------------------------|---------------------------------------|
| | Island Interconnected | Labrador & Island Isolated |
| Domestic | | |
| Basic Customer Charge | \$16.81 | \$16.81 |
| First 700 kWh | 6.951 ¢ | 6.951 ¢ |
| Next 300 kWh | 6.951 ¢ | 9.864 ¢ |
| All kWh over 1000 kWh | 6.951 ¢ | 13.372 ¢ |
| General Service¹ | | |
| Basic Customer Charge | \$19.13 | \$19.13 |
| First 700 kWh | 9.097 ¢ | 9.097 ¢ |
| All kWh over 700 kWh | 9.097 ¢ | 20.065 ¢ |

¹ Island Interconnected Rate Class 2.1 is compared with Diesel Rate Class 2.5

The Board's 2002 Order directed Hydro to file a report with the Board in respect of the "lifeline block" for domestic isolated rural customers to assess its adequacy. In preparing this report, a review of diesel household survey and consumption data indicates that there may be merit in considering a change in the existing lifeline block owing to the continued rise in the market share for

electric hot water heating, seasonal electricity use patterns, and the prominence of diesel customers located on Labrador diesel systems. Changes in the lifeline block will impact the rural deficit. For example, an alternative domestic lifeline averaging 850 kWh per month will result in an increase in the rural deficit of \$66,000 per year.

Providing a lifeline block of energy for domestic customers however, limits the cost recovery achievable from isolated systems as a whole. The current 700 kWh lifeline block captures approximately 75% of domestic consumption therefore further increases in rates over this consumption level only have marginal effect in reducing the rural deficit.

The Board's 2002 Order directed Hydro to file as part of its next general rate application, a plan to eliminate the "lifeline block" for general service customers on isolated systems. Hydro estimates that this will reduce the rural deficit by approximately \$275,000.

RURAL RATES POLICIES – PREFERENTIAL RATES

A number of rural customers also enjoy "preferential" rates further reducing the percent of their costs that they pay compared to other rural customers with the same usage. These preferential rates have been in place for a number of years and have been reviewed by the Board on a number of occasions. Most recently, in its 2002 Order, the Board stated:

"the Board finds no regulatory foundation for preferential rates. As outlined when considering the rural deficit, it can be argued cross-subsidization to effect equal rates among similar classes of customers is an accepted regulatory principle depending on the magnitude of the subsidy. No similar regulatory argument can be made for offering one customer a substantially better rate than another comparable customer for the identical service."

A number of general service customers benefit from preferential rates. These customers include government agencies, fish plants, churches, municipal buildings, and like facilities. The elimination of these preferential rates commenced with the Board's 2002 Order when it directed Hydro to recover, from Federal and Provincial Government departments, the full cost of providing service in rural areas. These rates were implemented on September 1, 2002 resulting in an estimated annual reduction in the rural deficit of \$1 million.

Hydro, as part of the next rate application, was ordered by the Board to file a multi-year plan to eliminate all preferential rates and in the case of government agencies, to move to a full cost recovery rate structure.

Based on the most recent estimates, the following table outlines current and target cost recovery levels to be achieved over the next five years for various customers. Hydro, in its rate application, will propose that customers' rates be phased in over that period, by means of automatic annual increases, to meet the target recovery levels.

Island Interconnected

| Customer | Current Recovery | Target Recovery ¹ | Rate Increase ² |
|----------------|------------------|------------------------------|----------------------------|
| Burgeo School | 41% | 100% | 144% |
| Burgeo Library | 50% | 100% | 100% |

¹Recovery target is the based on the appropriate island interconnected rate.

²Increases are based on preliminary estimates and are subject to change however are believed to be indicative. These increases do not include any general rate increase which would be applicable to all customers.

Isolated Systems

| Customer | Current Recovery | Target Recovery ¹ | Rate Increase ² |
|-------------------------------|------------------|------------------------------|----------------------------|
| Schools | | | |
| Rate 0-10kW | 20% | 100% | 400% |
| Rate Over 10kW | 26% | 100% | 285% |
| Health Facilities | | | |
| Rate 0-10kW | 31% | 100% | 223% |
| Rate Over 10kW | 37% | 100% | 170% |
| Fish Plants | | | |
| Rate Over 10kW | 17% | 45% | 165% |
| Churches and Community Halls | | | |
| Rate 0-10kW | 21% | 45% | 114% |
| Rate Over 10kW | 25% | 45% | 80% |
| Other General Service | | | |
| Rate 0-10kW | 31% | 45% | 45% |
| Rate Over 10kW | 40% | 45% | 13% |
| Street and Area Lighting | | | |
| Health Facilities and Schools | 32% | 100% | 213% |
| Regular | 36% | 50% | 39% |

¹Recovery target is the based on the applicable cost recovery level.

²Increases are based on preliminary estimates and are subject to change however are believed to be indicative. These increases do not include any general rate increase which would be applicable to all customers.

When fully implemented, rate initiatives outlined in the above tables are estimated to reduce the rural deficit by approximately \$2 million.

COST CONTROL INITIATIVES ON ISOLATED SYSTEMS

Hydro has identified a number of initiatives designed to reduce or control the rural deficit. These initiatives include cost reduction, conservation and other measures. Some of the initiatives implemented include interconnection of isolated systems to the main grid where economically attractive, training a multi-skilled workforce in these remote areas, adopting industry recognized best practices for maintenance of isolated systems' assets, implementing demand side management programs and seeking alternative technologies for generation supply. Where possible, Hydro is also seeking to close plants based on community relocations.

The cost savings achieved as a result of these continuing efforts are reflected in the deficit amounts quoted previously.

COMPARATIVE PRACTICES IN OTHER JURISDICTIONS

A number of other provinces in Canada provide electrical service to isolated or remote communities. In May, 2001 and November, 2002 Manitoba Hydro conducted surveys which outline a basis of comparison to Hydro's isolated systems. A summary of the cost of providing service to isolated rural customers is shown below:

| Utility ¹ | Communities Served | Number of Customers | Operating Deficit \$millions | Average Cost per kWh | Deficit per Customer |
|---|--------------------|---------------------|------------------------------|----------------------|----------------------|
| ATCO Electric | 10 | N/A | Not Tracked | 21¢ | N/A |
| BC Hydro | 9 | 9,104 | 28 | 13¢ ³ | \$3,076 |
| Hydro One | 20 | 3,691 | 18 ² | 51¢ | \$4,877 |
| Hydro Quebec | 40 | 13,797 | 106 | 45¢ | \$7,683 |
| Manitoba Hydro | 4 | 791 | 3 | 64¢ | \$3,793 |
| Newfoundland & Labrador Hydro | 25 | 4,463 | 16 ⁴ | 44¢ | \$3,585 |
| Northwest Territories Power Corporation | 51 | 15,766 | 0 | 17¢ ⁵ | 0 |
| Yukon Electrical | 10 | 1,300 | Not Tracked | N/A | N/A |

¹ Numbers based on Manitoba Hydro's May 2001 Survey.

² Subsidy amount \$17 million.

³ Based on costs as of March 2000. Does not reflect increases in diesel prices.

⁴ Based on 1999 Cost of Service Study.

⁵ Figure under review...may include non-diesel sites as well.

As can be seen from the above data, Hydro's isolated rural deficit per customer amount of \$3,585, based on 1999 data, falls within the range experienced by other utilities. A summary of rates policies for isolated systems customers across Canada is outlined in Appendix A. A review of these rates shows that other

utilities charge rates for some initial level of consumption at interconnected or grid rates, similar to the “lifeline” block feature of Hydro’s isolated rural rates.

With its small population base, however, Newfoundland and Labrador has relatively few customers over which to collect the deficit incurred to service isolated systems. In the 1995 inquiry into rural electric service conducted by the Board, Newfoundland Power pointed out in its evidence¹ that

“Hydro’s operating deficit for its diesel areas at 8.8% of revenue from electricity sales is by far the largest. Only Hydro Quebec has an operating deficit that is larger in actual dollars but represents only approximately 1% of revenue from electricity sales. B.C. Hydro’s operating deficit is also approximately 1%. Manitoba Hydro and Ontario Hydro operating deficits represent about 0.1% or less of revenue from electrical sales.”

The magnitude of the rural deficit borne by the other customers (Newfoundland Power’s customers and Labrador interconnected customers) was an issue in the 2002 Rate Hearing.

FUTURE FUNDING OPTIONS

In its October, 1995 Report² concerning rural electric service, the Board outlined the following options regarding the funding of the rural deficit:

- (i) reinstatement of the Government subsidy
- (ii) continued cross-subsidization among ratepayers
- (iii) full cost recovery from end users
- (iv) some combination of the above

In its 2002 Order the Board again reiterated these options, stating:

¹ Direct Evidence, March 17, 1995, Mr Tom Connors, p3.

² Report of the Board of Commissioners of Public Utilities to the Honorable Minister of Natural Resources, Government of Newfoundland and Labrador on a Referral by the Lieutenant-Governor in Council Concerning Rural Electric Service, October 10, 1995

“The question of who should share in this continuing liability, either rural customers, other customers, NLH and/or Government, may become a central issue for the Board in the future.”

With regard to continued increasing cross-subsidization among ratepayers, the Board highlights a concern of implementing rates which are unreasonable or discriminatory:

“The Board refers to its statutory obligations in implementing rates that are in accordance with the provincial power policy. Section 3.3 (a) (i) of the EPCA states “the rates to be charged ... should be reasonable and not unjustly discriminatory”. Depending on the level of subsidy paid by one customer to support equitable rates for another customer, rates may be judged unreasonable and discriminatory to the subsidizing customer.”

With regard to continued increasing cost recovery from end-users, the Board also points out a concern of implementing rates which are unreasonable or discriminatory:

“The alternative, commensurate with reducing this subsidy, would be to change rate design to shift additional costs to rural customers. This reallocation, it could be argued, may not provide reasonable or non-discriminatory rates to rural customers.”

It appears, from the Board’s perspective, that funding options from subsidizing ratepayers and end users are reaching or have reached maximum levels. This leaves one other alternative, namely funding from government. The Board’s Order states:

“Under these circumstances, the only effective means of implementing the provincial power policy is to transfer some or all the rural deficit to NLH or its shareholder, Government.....The Board notes that a number of witnesses supported social policies being reflected as a cost to Government with the proposed options varying from adjusting shareholder return to recovering this cost through appropriate taxation. The Board is not inclined to adjust NLH’s regulated 3% ROE in this Application and is of the view that taxation is a prerogative of Government beyond the control of this Board. The Board feels strongly, however, that discussions

involving NLH and Government around future funding options for the rural deficit should constitute part of the evidentiary record.”

EVIDENTIARY RECORD

To prepare for its upcoming rate filing, Hydro is updating its review of comparative practices in other jurisdictions and as well updating evidence on the initiatives it has implemented and continues to implement to improve operational efficiency in rural areas. Hydro is also required to seek explicit written comment from Government on the rural deficit issue which, in turn, will form part of the required evidentiary record ordered by the Board to be filed as part of its rate hearing evidence.

SUMMARY OF RATES PRACTICES IN OTHER CANADIAN REMOTE ISOLATED COMMUNITIES

- **Hydro Quebec** – residential customers receive the first 900 kWh per month at the same rates as residential customers served from the interconnected grid with the rates for consumption above this level being 26.5¢ per kWh.
- **ATCO** – customers in all isolated communities are served on the same rates as interconnected customers.
- **Manitoba Hydro** – residential customers are limited to a 60-amp service or less and pay the same rates as customers served from the interconnected grid. General service non-government customers pay interconnected rates on the first 3000 kWh per month and a full cost rate of 35.9¢ on consumption in excess of this level.
- **Northwest Territories Power** - residential customers pay the same rates as customers served from the grid for the first 700 kWh per month. Consumption above this level is charged at rates designed to recover full cost. A small number of qualified general service customers who apply for a Territorial Support Program receive up to 1000 kWh per month at the grid rates, with additional consumption being charged a rate designed to recover full costs.
- **B. C. Hydro** - residential customers pay the same rate as customers served on the interconnected grid for the first 1500 kWh per month and 9.91¢ per kWh for consumption above this level. General service customers less than 35 kW pay interconnected rates on the first 7000 kWh per month, while general service

customers greater than 35 kW pay interconnected rates for the first 200 kWh per kW per month. All consumption in excess of these levels for general service customers is billed at 10.8¢ per kWh.

- **Yukon Electrical** - residential customers pay the same rates as customers served from the interconnected grid for the first 1000 kWh per month while general service customers pay the interconnected rates for the first 2000 kWh per month. Consumption above these levels for all customers varies from 10.45¢ to 33.56¢ per kWh.

**James R. Haynes, P. Eng.
Vice-President, Production
Newfoundland and Labrador Hydro**

At the hearing into Newfoundland and Labrador Hydro's 2003 General Rate Application, the Production Division Evidence will be adopted by James R. Haynes, P. Eng., Vice-President, Production.

A witness profile for Mr. Haynes is as follows:

- Mr. Haynes graduated from Memorial University with a Bachelor of Engineering Degree in 1977 and at that time joined Newfoundland and Labrador Hydro as a graduate engineer.
- Mr. Haynes has held a number of positions with Newfoundland and Labrador 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 Newfoundland and Labrador 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 Newfoundland and Labrador Hydro and in 2001 was appointed to the position of Vice-President, Production for Newfoundland and Labrador Hydro.
- 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 has testified before the Board of Commissioners of Public Utilities during Newfoundland and Labrador Hydro's 2003 Capital Budget Hearing.

**Production
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PRODUCTION

1. RESPONSIBILITIES AND ORGANIZATIONAL STRUCTURE

1.1 Overview

Hydro's 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.

The Production Division has six departments as outlined on the organizational chart attached as Schedule I. These include:

1.2 System Planning

The System Planning department is responsible for planning all new generation, transmission, transformation and distribution facilities required to address the forecast growth in power and energy requirements on the Island and Labrador Interconnected and the Isolated Rural Systems. As well, the department prepares load forecasts and fuel price projections for each respective system, which are used for planning, operations and budgeting. The department identifies the magnitude and timing of requirements for additional capability, evaluates any technically acceptable alternatives and recommends modification or expansion to

1 the generation, transmission, terminal and distribution facilities. System Planning
2 also provides operational support such as system studies, recommendations on
3 system design capability and other technical matters.

4 5 **1.3 System Operations**

6 The System Operations department is responsible for the day-to-day continuous
7 monitoring and control of Hydro's interconnected generation and transmission
8 facilities and coordination with Newfoundland Power, Non-Utility Generators
9 ("NUGS") and Industrial Customers. These activities are performed through the
10 Energy Control Centre ("ECC"), which is located at the office in St. John's. They
11 initiate startup and shutdown of generators to meet the system power and energy
12 needs, and operate transmission lines and transformers as required for voltage
13 control or maintenance activities. The ECC also coordinates major equipment
14 outages to ensure customers are served and that a safe working environment is
15 provided for personnel through de-energizing transmission lines and other
16 equipment to facilitate work. This department ensures the efficient dispatch of
17 hydro and thermal generation, insofar as possible, while meeting security and
18 voltage constraints. One of the key functions of the ECC, besides the day-to-day
19 operation, is to return the system to normal following a service disruption or
20 equipment problem by coordinating a speedy and efficient return of supply.

21 22 **1.4 Thermal Generation**

23 The Thermal Generation department is directly responsible for the operation and
24 maintenance of the Holyrood Generating Station, which includes three steam
25 electric generating units, two of which were put into service in the early seventies,
26 and the third unit in the early eighties. There is also a 15 MW gas turbine that
27 provides emergency power to the facility and the system. They ensure efficient
28 operation at the production levels set by the ECC and that the plant and associated
29 systems are maintained effectively and efficiently with due regard for safety,
30 reliability and the environment.

1 **1.5 Hydraulic Generation**

2 The Hydraulic Generation department is responsible for the operation and
3 maintenance of Hydro's hydroelectric facilities on the Island. With the
4 commissioning of Granite Canal in June 2003, this will include six (6) major
5 plants containing thirteen (13) units and two (2) mini-hydro plants. This group is
6 also responsible for the maintenance of dams, dykes and control structures
7 associated with these facilities, which are used to impound or release water for
8 generation.

9

10 **1.6 Generation Engineering**

11 The Generation Engineering department is responsible for providing engineering
12 support to planning and operations, including capital budgeting and project
13 control for the Hydraulic and Thermal Generation departments and other
14 divisions as required. As well, the group is responsible for design, construction
15 and commissioning of new generation facilities such as Granite Canal, a 40 MW,
16 \$135 million project within the Bay d'Espoir development.

17

18 **1.7 Information Systems and Telecommunications ("IS&T")**

19 The IS&T department has two main areas of responsibility. The first is the
20 computer hardware and software infrastructure for corporate applications that are
21 distributed throughout Hydro's system. This includes software, such as the
22 Enterprise Resource Planning ("ERP") software (i.e. JDEdwards), which runs on
23 an IBM AS400, as well as other software that operate on servers and personal
24 computers. The department also maintains the Energy Management System
25 ("EMS") used by the ECC to operate and control Hydro's equipment on the Island
26 and Labrador Interconnected power systems.

27

28 The second area of responsibility is to provide network services, voice and data
29 communications, across the system. This includes the operation and
30 maintenance of the Local Area Networks ("LANs"), and Wide Area Network

1 ("WANs"), as well as microwave and VHF/UHF radio systems, internal phone
2 systems, remote terminal units and Power Line Carrier ("PLC") systems. These
3 systems are used for day-to-day corporate communications across the system,
4 signaling to provide protection for transmission equipment and to carry ECC data
5 and control instructions critical for the safe and efficient operation of the power
6 system.

1 **2. PROVINCIAL ELECTRICAL SYSTEMS**

2
3 Hydro owns and operates two interconnected power systems, one on the Island
4 and the other in Labrador. As well, Hydro owns and operates 24 isolated
5 generation and distribution systems located around coastal Newfoundland and
6 Labrador, and several interconnected distribution systems primarily on the Great
7 Northern Peninsula ("GNP"), the South Coast and in the White Bay/Baie Verte
8 area.

9
10 **2.1 Island Interconnected System**

11 On the Island Interconnected System, power and energy is provided by Hydro
12 through a mix of hydroelectric and fossil-fired generation augmented by power
13 purchases. This production, along with the transmission system connecting with
14 Hydro's customers, is managed by Hydro's ECC.

15
16 At the end of 2002, Hydro's hydroelectric production facilities consisted of eight
17 generating stations varying in size from 360 kW to 592,000 kW, with the Bay
18 d'Espoir plant being the largest. The 40 MW Granite Canal hydroelectric station
19 is scheduled to come into service in June of 2003. Hydro also owns and
20 operates one major oil-fired steam electric generating station at Holyrood with a
21 total net capacity of 466 MW, as well as three oil-fired gas turbine facilities and
22 three diesel plants at other locations on the interconnected system. The
23 capability of these plants and their locations are shown on the attached Schedule
24 II and Schedule III, respectively.

25
26 The Holyrood thermal generating station and the hydroelectric facilities are used
27 for supplying base and peak loads. The gas turbines and diesel units on the
28 interconnected system are used primarily for emergency and limited peaking
29 capacity due to their high operating cost. Hydro's hydroelectric facilities,
30 including Granite Canal, represent approximately 60% of Hydro's total capacity

1 and average annual energy production capability. The Holyrood thermal
2 generating station supplies approximately 40% of Hydro's average energy
3 capability and 31% of its capacity. In 2002, Hydro generated 78% of the total
4 energy produced on the Island Interconnected System.

5
6 The estimate of average annual energy production capability for the hydroelectric
7 facilities was reviewed at Hydro's 2001 GRA. At that time, the Public Utilities
8 Board ("Board") directed Hydro to use a rolling 30-year average inflow record to
9 estimate the average annual energy capability. As a result, Hydro has updated
10 the average annual energy capability using the latest 30 years of inflow history
11 from 1973 to 2002. These revised capabilities were used in determining Hydro's
12 forecast production costs for the 2004 test year and are presented in Schedule II
13 attached. The annual average energy capability is 67 GWh less than that used
14 in the 2001 GRA for the 2002 test year for plants in service at that time because
15 of lower inflows experienced in 2001, which continued through 2002.

16
17 Hydro operates all of its production facilities to minimize costs while ensuring
18 appropriate security of supply. A primary concern is ensuring that adequate
19 power and energy supply is available for the varying hydrological conditions that
20 can occur on the Island. A computerized decision support system is employed
21 that models the hydroelectric system and provides monthly target water levels
22 required to be maintained to secure energy supply through a repeat of the lowest
23 inflow period recorded for Hydro's reservoir systems. These minimum target
24 levels for 2003 are provided graphically in Schedule IV attached.

25
26 In order to maintain the minimum target storage levels or higher, Hydro varies the
27 production level at the Holyrood generating plant. The plant is expected to be
28 capable of producing 2996 GWh (i.e. 75% annual capacity factor) annually
29 throughout a repeat of the lowest historic inflow period.

1 Starting in 1998, Hydro began supplementing its source of supply by purchasing
2 energy under long-term contracts with NUGS. At that time, Hydro started
3 purchasing energy from the hydroelectric facilities at Star Lake and Rattle Brook
4 owned and operated by the Star Lake Hydro Partnership and Algonquin Power,
5 respectively. In January 2003, Hydro began purchasing energy from Corner Brook
6 Pulp and Paper Limited's ("CBPP") co-generation plant located at its mill. In March
7 2003, Hydro began purchasing energy produced by the Exploits River Hydro
8 Partnership at its upgraded facilities on the Exploits River. The average annual
9 energy capability expected from these agreements and their capacity are provided
10 in Schedule II attached.

11

12 **2.2 Labrador Interconnected System**

13 Virtually all power and energy made available by Hydro for the Labrador
14 Interconnected System is purchased from Churchill Falls (Labrador) Corporation
15 Ltd. Hydro has a total of 300 MW and 2,362 GWh available annually, with any
16 surplus to Hydro's needs currently being sold to Hydro-Québec. As well, on the
17 Labrador Interconnected System there is a gas turbine and a diesel plant with a
18 total capacity of 38.3 MW used primarily for back-up and limited peaking
19 capacity.

1 **3. OPERATIONS – ISSUES AND DIRECTIONS**

2
3 **3.1 Overview**

4 On the island portion of the Province, Hydro operates an isolated electrical
5 system in a harsh environment with extreme weather conditions and provides
6 approximately 80% of the total power and energy needs. It operates an aging,
7 complex thermal plant and several large hydro plants on the Island with
8 increasing challenges related to public expectations on reliability and
9 environmental practices. This overall environment provides challenges for
10 operational and cost control/efficiency issues as Hydro strives to provide power
11 and energy at the lowest possible cost consistent with reliable service.

12
13 To respond to these challenges, a number of initiatives are ongoing within the
14 Production Division to improve efficiency, control costs and maintain a reliable
15 level of service. These initiatives have focused on major system components,
16 the tools employed to operate the system and the human resources required to
17 operate and maintain the production facilities. Key Performance Indicators
18 (“KPIs”) are used to monitor productivity and reliability.

19
20 The assets used for the production of power and energy on the Island
21 Interconnected System are at various stages in their expected service lives,
22 however, generally, they have been in service for a significant period of time. A
23 list of major production equipment that has been in service in excess of 25 years
24 is set out in Table 1.

Table 1

| Units with Over 25 Years of Service | | |
|-------------------------------------|--------------------------|-------------------------|
| <u>Unit</u> | <u>Service Years</u> | <u>Installed MW</u> |
| Bay d'Espoir Units 1-4 | 36 | 300 |
| Bay d'Espoir Units 5-6 | 33 | 150 |
| Bay d'Espoir Unit 7 | 26 | 154 |
| Holyrood Units 1-2 | 32 | 340 |
| Holyrood Gas Turbine | 35 | 15 |
| Stephenville Gas Turbine | 26 | 54 |
| Hardwoods Gas Turbine | 27 | 54 |
| Total | | 1067 |

The equipment listed represents approximately 68% of Hydro's Island interconnected capacity and is critical to Hydro's ability to meet customers' requirements. These generating units are expected to be available for service when required, and operations and maintenance activities are affected by internal and external environmental factors. As they age, more maintenance and breakdown repair will be experienced which may require capital replacement of key components. This is particularly true at Holyrood where two of the generators are over thirty years old. The relatively complex high temperature and high pressure operating environment of a thermal generating plant, with its myriad inter-dependent electrical and mechanical subsystems, pose significant challenges for cost containment.

Hydro has started the process of replacing some key components of these aging systems, due to increasing breakdown and maintenance, or where vendor support of the equipment is questionable or non-existent.

There is also a changing environment with respect to legislation, guidelines and public expectations on environmental practices. While Hydro's plants were built

1 to standards in effect at the time of their construction, these requirements have
2 changed and result in upgrades often being required to meet current standards.
3 With respect to public expectations, there is no doubt that reliability of supply is
4 also of increasing importance to our customers who are more dependent on
5 technology that is sensitive to power interruptions. This can also result in
6 upgrades to critical plant components.

8 **3.2 System Equipment**

9 One of the challenges for Hydro is to operate and maintain aging facilities that
10 are critical in meeting customers' load and reliability expectations while
11 controlling costs.

12
13 Hydro has taken action to improve the reliability or prevent significant
14 deterioration of equipment. With aging equipment, there is a typical life cycle
15 operating performance that sees an increased level of failures during and
16 immediately following commissioning, followed by a lesser number of failures
17 during most of the normal expected service life followed by increased failures as
18 the end of its service life approaches. The equipment is maintained to continue
19 to be reliable as it nears the end of its service life. This can result in increasing
20 expenses through both corrective and preventive maintenance activities. This is
21 particularly so for mechanical equipment exposed to high temperatures and
22 pressures and rotating electrical equipment as exists in Hydro's generating
23 plants.

24
25 In recent years, there has been increased dependence upon electronics and
26 specifically, integrated electronic devices, which do not have long-term support
27 by the Original Equipment Manufacturer ("OEM"). This inevitable obsolescence
28 often impacts reliability of the equipment. While efforts are made to extend the
29 life of equipment as far as possible, many of today's systems will need to be
30 replaced over time as repair parts become unavailable. Engineering judgment
31 will often play a role in determining when the risk of unacceptable service failures

will occur and thus when replacement should proceed. This is particularly true of electronic systems associated with generator plant control systems for governors and exciters. The loss or malfunction of these systems is a significant event, which generally results in interrupting customer load if the generation loss is above 50 MW. As well, the time to repair is unacceptably long if the repair parts are not readily available. Hydro cannot wait for a failure and then act, as the time required to order and install a replacement is generally a year or more. Many of these components are site-specific and designed for the particular installation and are not “off the shelf” systems. Thus, Hydro has pursued a proactive maintenance approach using sound engineering judgment to ensure its equipment is available for service as required. This reality also drives the replacement of other equipment, such as computer and communications equipment.

As the system load has grown and particularly during periods of low inflow, the need for Holyrood’s capability to be available has increased. One of the major challenges is, therefore, to maintain the availability of the Holyrood plant, while carrying out time and resource consuming overhauls of the turbine and generating equipment. Incapability Factor (“ICbF”) is a key performance indicator, which indicates the period of time that a facility is not available to operate at rated output. Table 2 indicates Holyrood’s ICbF since 1990.

Table 2

| Holyrood ICbF (%) | | | | | | | | | | | | |
|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <u>1990</u> | <u>1991</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> | <u>1995</u> | <u>1996</u> | <u>1997</u> | <u>1998</u> | <u>1999</u> | <u>2000</u> | <u>2001</u> | <u>2002</u> |
| 33.80 | 48.87 | 41.26 | 47.20 | 43.80 | 43.08 | 40.54 | 37.28 | 25.37 | 30.06 | 20.19 | 21.34 | 27.14 |

1 The improving downward trend came through a concentrated effort by Hydro in
2 improving the ICbF to ensure Holyrood is available when needed. This has been
3 achieved primarily through partnering agreements with the OEMs to complete
4 overhauls. The outage time for an overhaul has been reduced to improve
5 availability.

6 7 **3.3 Process/Operating Changes**

8 Hydro has initiated a number of operating changes to enhance productivity and
9 efficiency.

10
11 At Holyrood there is a relationship between unit loading level and efficiency. This
12 relationship is shown in Schedule V attached and clearly indicates higher
13 average monthly unit loading yields a higher energy conversion rate (kWh/bbl).
14 In System Operations this is an important factor considered in the dispatch of
15 generation as high average unit loadings are targeted while addressing other
16 constraints such as the hydraulic situation, system security and voltage.

17
18 As well, the Holyrood plant staff through a review of internal plant conditions such
19 as steam use and consumption, combustion parameters, turbine parameters, fuel
20 oil and air temperature and pressure attempt to push the net energy conversion
21 rate as high as is practical. This process has been greatly improved by the use
22 of a controllable losses program (ETAPRO) installed in 1995, which provides
23 operations personnel with immediate data on the processes and thus assists in
24 efforts to improve the efficiency. Further, the Continuous Emissions Monitoring
25 system being installed in 2003 will provide more data to the operations staff and
26 allow more tuning of the combustion process through direct feedback of the exit
27 gas conditions.

1 Besides the attention to these multiple factors, specific changes were made to
2 the average cold end temperature target for the Holyrood plant, which increase
3 overall efficiency. The target was dropped from 125°C to 110°C gradually over a
4 two-year period.

5

6 The combined effort of System Operations and Holyrood plant initiatives has
7 resulted in Hydro proposing to increase the No. 6 fuel conversion factor for
8 Holyrood to 624 kWh/bbl from the 615 kWh/bbl currently in use (605 kWh/bbl
9 was in use prior to 2002). A record average of 648 kWh/bbl was achieved in
10 2002. This level, unfortunately, cannot be sustained as it was driven by high
11 production requirements in 2002, which were due primarily to the lower hydro
12 reservoir inflows. The 624 kWh/bbl, proposed by Hydro, is an average value for
13 the period 1996 to 2002 which reflects the use of the ETAPRO program and the
14 variable requirement of Holyrood through both high and low inflow periods. This
15 improvement in conversion factor results in a forecast fuel saving in the 2004 test
16 year of \$1.2 million.

17

18 Operating changes have also been introduced for hydraulic facilities. Along with
19 the optimization of the hydro thermal mix to minimize water spillage, the ECC has
20 efficiency curves for all hydro units incorporated in the EMS computers and
21 recently initiated the use of a unit commitment program by the operators in the
22 ECC. The output of this program indicates the optimum schedule and loading of
23 the Bay d'Espoir units for the best utilization of water resources. Another
24 initiative to reduce the overall operating cost of hydraulic generation was the
25 construction of a distribution line from the North Salmon dam to Ebbegunbaeg to
26 allow the diesel unit at the Ebbegunbaeg control structure to be converted to
27 standby mode rather than continually running. This will reduce fuel cost as well
28 as diesel maintenance costs. These efforts are to ensure Hydro maximizes its
29 water resource utilization and minimizes fuel use.

3.4 Human Resources

The Production Division's responsibilities are carried out through full-time and temporary employees; maintenance contracts with third parties; significant capital or operating projects with third parties; and partnering agreements with the OEM.

Through process changes, technological improvements and efficiency enhancements, Hydro has been able to change how it does work and has been able to reduce its workforce. The Production Division's permanent complement has declined by 6% since 1999 as indicated in Table 3. This reduction was achieved by various means including reviewing vacated positions and the operational needs of our plants through technological change.

Table 3

| Production Permanent Complement | | | |
|--|--------------------|--------------------|--------------------|
| <u>1999</u> | <u>2000</u> | <u>2001</u> | <u>2002</u> |
| 320 | 318 | 309 | 300 |

Granite Canal will come into service in mid-2003. This will add an eighth plant and a thirteenth unit to the hydraulic generation system. No staff will be added to meet this new operation and maintenance requirement.

4. OPERATING PERFORMANCE

4.1 Generation Reliability

As noted in the Corporate Overview, Hydro has developed a number of key indicators to measure the major areas of performance, to ensure effective monitoring and to assist in determining appropriate corrective action. Several of these indicators are used to measure the reliability of its production facilities. Examples of these measures are ICbF, Derated Adjustment Forced Outage Rate (“DAFOR”) and failure rate (Fail Rate). Hydro uses standard definitions developed by the Canadian Electricity Association (“CEA”) and used in its analysis and reporting of the performance of participating utilities. These indicators and the latest CEA five-year averages are provided in Tables 4 and 5 for the period 1998-2002.

4.1.1 Thermal Units

Table 4

| Fossil (Steam) Equipment Performance⁽¹⁾ | | | |
|---|---------------------|--------------------|-------------------------|
| <u>Year</u> | <u>DAFOR</u> | <u>ICbF</u> | <u>Fail Rate</u> |
| | (%) | (%) | |
| 1998 | 4.77 | 25.37 | 5.21 |
| 1999 | 10.11 | 30.06 | 5.08 |
| 2000 | 3.08 | 20.19 | 7.43 |
| 2001 | 3.89 | 21.34 | 8.44 |
| 2002 | 12.34 | 27.14 | 11.99 |
| NLH 5 Yr Avg. | 7.15 | 24.82 | 7.97 |
| CEA 5 Yr Avg. ^{(2), (3)} | 13.05 | 25.87 | 9.90 |

⁽¹⁾ External causes excluded
⁽²⁾ CEA data available for 1997-2001 only
⁽³⁾ CEA data for fossil units – oil-fired only

4.1.2 Hydraulic Units

Table 5

| Hydraulic Equipment Performance⁽¹⁾ | | |
|--|---------------------|-------------------------|
| <u>Year</u> | <u>DAFOR</u> | <u>Fail Rate</u> |
| | (%) | |
| 1998 | 1.17 | 4.99 |
| 1999 | 0.82 | 3.47 |
| 2000 | 0.43 | 2.78 |
| 2001 | 1.23 | 4.29 |
| 2002 | 1.33 | 5.21 |
| NLH 5 Yr Avg. | 0.97 | 4.09 |
| CEA 5 Yr Avg. ⁽²⁾ | 2.08 | 2.52 |
| ⁽¹⁾ External causes excluded | | |
| ⁽²⁾ CEA data available for 1997-2001 only | | |

As previously noted, the ICbF is particularly critical for the Holyrood plant as it is expected to operate at a minimum capability factor of 75% (or an ICbF of 25%) in order to meet system requirements. In 2002, the Holyrood ICbF was 27.14%. This value was influenced primarily by the duration of planned annual maintenance. However, forced outages and short duration maintenance outages also impact performance. The 2002 increase in ICbF was due to a longer than planned annual maintenance outage on Unit 2 and a number of equipment problems on Unit 3. ICbF performance has significantly improved since 1990 as shown in Table 2.

The DAFOR index is an important measure of performance for both the hydraulic and thermal units. It is an indicator of the amount of the required production time the units are forced out of service. This lost time can result in inefficient operation of the system as other less efficient units must be operated to replace the failed unit. In 2002, the DAFOR for both unit types deteriorated relative to

1 2001, but still remained better than the CEA averages. The higher DAFOR for
2 Holyrood was the result of forced draft fan and boiler tube failures on Unit 3.

3
4 The Fail Rate is a measure of the number of times a unit is forced out of service
5 during a normalized operating year. It is also an important measure of
6 performance as it is the closest standardized measure indicating the number of
7 times a unit trips. On the Island Interconnected System this is critical because a
8 generator trip can result in an Underfrequency Load Shedding (“UFLS”) event. It
9 should be noted that the Fail Rate does not give a one-to-one correlation to unit
10 trips due to the operating year normalization and some forced outages may not
11 result in a trip but in an orderly operator initiated shutdown. In 2002, the Fail
12 Rate deteriorated for all unit types. A variety of problems contributed to this
13 performance. As previously mentioned, Holyrood Unit 3 was a source of a
14 number of these problems. The hydraulic unit failure rate was primarily
15 influenced by incidents at Cat Arm, Hinds Lake and Upper Salmon.

16 17 **4.2 Underfrequency Load Shedding**

18 Another KPI used by Hydro to measure reliability performance is the number of
19 underfrequency trips. Because Hydro operates an isolated system, a sudden
20 generator trip may, depending on unit load, result in customer load being
21 interrupted at selected locations around the Island (Industrial Customer loads,
22 Newfoundland Power feeders and Hydro’s distribution lines). UFLS schemes are
23 generally used by all utilities as basic system protection; however, because of
24 Hydro’s isolation from other large systems and thus the unavailability of
25 emergency short-term power, Hydro’s UFLS scheme operates more than those
26 of utilities interconnected to the North American grid where they rely on
27 neighbouring utilities for support before resorting to UFLS. UFLS is, however,
28 absolutely essential to maintain system security and avoid the risk of total system
29 collapse. Avoiding total system collapse allows faster system restoration.
30 Typical UFLS interruptions are approximately five to ten minutes.

Table 6 below sets out Hydro's performance for underfrequency events over the past five years.

Table 6

| UFLS Events | | | | |
|--------------------|---------------------|---------------------|-----------------------|---------------------|
| <u>Year</u> | <u>Total</u> | <u>Hydro</u> | <u>Thermal</u> | <u>Other</u> |
| 1998 | 9 | 3 | 3 | 3 |
| 1999 | 18 | 6 | 7 | 5 |
| 2000 | 10 | 3 | 3 | 4 |
| 2001 | 10 | 1 | 7 | 2 |
| 2002 | 17 | 1 | 9 | 7 |
| 5 Yr. Avg. | 12.8 | 2.8 | 5.8 | 4.2 |

During 2002, the seven other events originated as follows: one in transmission, three in terminal stations, one in the ECC, one in IS&T and one initiated by a customer event.

Hydro has initiated action to reduce the number and overall impact of UFLS events. These include:

- Changing the UFLS relay scheme to respond to the rate of change of frequency as well as the current fixed frequency set points;
- Initiating a review of spinning reserve criteria;
- Reducing unit load for certain on-line maintenance items;
- Reviewing the Holyrood plant back-up system transfer schemes to ensure successful transfer when initiated;

- 1 • Changing generation dispatch insofar as possible when adverse weather
2 systems are moving through the Island to minimize impact of transmission
3 trips.

4

5 These efforts and others are intended to reduce the frequency of events as well
6 as the impact on the system and thus customers.

7

8 **4.3 Operating Costs**

9 Operating expenses for the Production Division for 2002 and forecast for 2003
10 and 2004 are outlined in Schedule VI attached.

11

12 For 2002 net operating expenses for the Production Division for the test year final
13 revenue requirement were anticipated to be \$32.6 million. Actual 2002 expenses
14 were \$33.2 million.

15

16 For 2003, net operating expenses are forecast to be \$34.6 million, a 4.2%
17 increase over 2002 actual expenses. This is largely due to an increase in
18 Holyrood maintenance costs due to a major overhaul in Unit No. 1.

19

20 For 2004 net operating costs are expected to remain flat (about 0.5% above
21 2003). Typically in a year when a major overhaul is not planned at Holyrood, the
22 overall cost would be expected to be reduced somewhat. However, in 2004
23 other operating expenses, such as enhancing the fire protection for Holyrood Unit
24 No. 1, additional work in the Holyrood Waste Treatment Plant, and salary
25 increases included in the current collective agreements, offset the fact that no
26 major overhaul is planned for 2004.

27

28 The largest component of operating costs is salaries and fringe benefits,
29 approximately 58% in 2004. As noted previously, the permanent complement in
30 the Production Division has been reduced by 6% since 1999. Additional

1 measures to control these costs have been implemented; for example, to reduce
2 the overtime costs for operators, temporary staff have been retained on a
3 seasonal basis. Also, the Holyrood plant has implemented a plant vacation
4 period when all employees (except a minimum) will take summer vacation, thus
5 reducing the need for temporary workers to replace those on vacation.

6
7 In Hydraulic Generation, steps have been taken to better utilize the hydro plant
8 operators in maintenance activities, along with traditional operating duties. This
9 will improve reliability and availability of the plant equipment, and will result in
10 some savings in travel and other costs.

11
12 The second largest component of operating costs is system equipment
13 maintenance, approximately 28% in 2004. This category of cost has increased
14 since 2002 and for the reasons set out in Sections 3.1 and 3.2, it is not possible
15 to reduce these costs further if system performance is to be maintained at
16 acceptable levels.

1 **5. FUEL**

2
3 **5.1 Fuel Management**

4 In P.U. 7 the Board directed Hydro to file, by December 31, 2002, a report
5 outlining its policies and procedures on a coordinated strategic approach to fuel
6 management, covering managerial accountability, the possibility of an oil-hedging
7 program and the adequacy of existing storage capacity. This report was filed on
8 December 23, 2002 and is attached as Exhibit JRH-1 (Fuel Oil Practices Review
9 and Policy), ("Fuel Report").

10
11 As set out in the report, the Vice-President, Production, has responsibility for the
12 control and management of all aspects of fuel, including purchasing, storage and
13 utilization.

14
15 **5.1.1 Purchasing**

16 Prior to 2002, Hydro purchased its No. 6 fuel oil requirements on a specified
17 volume basis of ten million barrels, which would last from three to five years,
18 depending on consumption. Prior to tendering in 2002, Hydro reviewed the
19 necessity for any possible changes regarding the tender. As a result of this
20 review, Hydro opted for a fixed time contract instead of a fixed volume contract,
21 included provisions to change the sulphur content of the fuel and reduced the
22 acceptable vanadium content. The new contract is for a three-year period with
23 the possibility of a two-year extension. In addition, the contract provides Hydro
24 with the flexibility to buy on the spot market up to 20% of its requirements during
25 the contract term. The contract provides that pricing is set with a discount on the
26 monthly average New York Harbour price for the month in which the fuel was
27 ordered for delivery. This itself provides some stability in fluctuating markets.

28
29 The price can be affected by the sulphur content of the fuel. Hydro has
30 committed not to exceed 25,000 tonnes of sulphur dioxide emissions a year from

1 its thermal plant during an average hydraulic production year. At forecast
2 production levels, fuel with 2.2% sulphur content will allow this level to be met.
3 The Systems Operations department evaluates this requirement in conjunction
4 with each load forecast revision and the current hydraulic situation and
5 determines the sulphur content and the amount of fuel to order.

6 7 **5.1.2 Inventory**

8 A minimum inventory is always maintained which takes into account the range of
9 demands on the plant during the year and potential shipping delays. Shipments
10 are in the range of 250,000 to 300,000 barrels and require a 28-day notice under
11 the contract. There are also strict specifications for environmental and
12 combustion requirements.

13
14 The adequacy of Hydro's storage capacity at Holyrood was reviewed in 2002 as
15 directed by P.U.7 and is dealt with in the Fuel Report. It was concluded that it is
16 not cost-effective to add additional storage capacity.

17 18 **5.1.3 Hedging**

19 The Fuel Report also includes an analysis of oil hedging practices. A consultant
20 on oil hedging practices, Risk Advisory, was retained by Hydro and a copy of
21 their report is included with the Fuel Report.

22
23 The consultant concluded that, if hedging were a suitable tactic for Hydro to
24 pursue, then an automated approach, which would adopt rules on when to hedge
25 and how much to hedge, is the preferred approach. Hydro undertook an analysis
26 of the automated approach, which is elaborated on in the Fuel Report. The
27 analysis indicates the Rate Stabilization Plan ("RSP") provides a 50% reduction
28 in volatility. The automated hedging program by itself can provide a 25%
29 reduction in volatility. If both were operated concurrently, a 60% reduction in
30 volatility is possible. It was concluded a further 10% reduction in volatility from
31 the RSP alone did not justify the additional costs of hedging as well as the

1 additional regulatory and administrative burden associated with a hedging
2 program.

3
4 **5.2 Fuel Cost**

5 Hydro uses No. 6 fuel to power the Holyrood Plant and No. 2 fuel for the isolated
6 diesel plants, the interconnected systems gas turbine and diesel plants.

7
8 Hydro's forecast fuel expense is based on forecast prices provided by an
9 external consultant. Hydro retains the services of the PIRA Energy Group of
10 New York, an internationally recognized company, for its petroleum product
11 market analysis and price forecasting. PIRA provides a monthly World Oil
12 Market Outlook, which includes any revisions to the short-term forecast and as
13 well provides a quarterly longer-term market price forecast.

14
15 The No. 6 fuel expense is the largest fuel expense. In the 2004 test year it is
16 forecast to be \$84.4 million.

17
18 A comparison of No. 6 fuel expense for the 2002 test year final Cost of Service
19 ("COS") with the actual expense and the 2003 and 2004 forecast is provided in
20 Schedule VII attached. The factors influencing these expenses are the price of
21 the fuel, the production requirement from Holyrood (system load less hydraulic
22 production, and energy purchases) and the fuel efficiency of the Holyrood plant.
23 These factors are also indicated in Schedule VII attached.

24
25 The actual No. 6 fuel cost for 2002 was \$31.3 million above forecast, due to the
26 average \$6.58 /bbl increase in price for fuel purchases and increased utilization
27 of Holyrood due to low hydro reservoir inflows which resulted in an additional
28 486,000 barrels of No. 6 fuel being consumed. The monthly forecast and actual
29 fuel prices for No. 6 fuel for 2002 to 2004 are provided in Schedule VIII attached.

1 The Fuel Report submitted to the Board also addressed the practices for the
2 purchase of No. 2 fuel for the interconnected and isolated areas. There are a
3 significant number of separate storage locations for No. 2 fuel and while
4 tendering is done for multiple systems, deliveries are independent due to the
5 diversity of the locations.

6
7 Schedule IX attached presents the energy supply budget for isolated rural
8 systems for 2002 as submitted during Hydro's 2001 GRA, comparing forecast
9 against actual results for 2002, along with Hydro's current isolated diesel fuel and
10 purchased power budget for 2003 and 2004.

11
12 The actual diesel fuel and purchased power expense for 2002 was \$7.5 million,
13 an increase of \$0.4 million over 2002 test year revenue requirement. This
14 increase is primarily related to higher than forecast customer loads and
15 associated diesel fuel consumption and purchases. A further increase in the
16 diesel fuel and purchased power expense of \$0.8 million is currently forecast for
17 2003 due to the combined effects of high short-term fuel prices and continued
18 load growth, primarily in the Labrador Isolated Systems. In 2004, forecast lower
19 fuel prices offset further isolated load growth and the diesel fuel and purchased
20 power expense is expected to drop to \$8.2 million from \$8.4 million in 2003.

21
22 In summary, Hydro strives to minimize fuel costs through seeking competitive
23 bids for its No. 6 and No. 2 fuel purchases, continuously reviewing purchasing
24 practices, minimizing consumption through proper preventative maintenance and
25 operating practices, and maximizing the use of hydraulic resources on the Island
26 Interconnected System.

27 28 **5.3 Environmental Considerations**

29 One of Hydro's environmental challenges relates to the use of No. 6 fuel oil at
30 Holyrood and the resultant air emissions. The plant is essentially a 1960's

1 design and while much has been done to contain and treat water, solid waste,
2 and noise emissions, air emissions continue to be of concern. This is a focus of
3 the Provincial Department of Environment and the surrounding communities as
4 well. Hydro has reduced the sulphur content and other trace elements in the fuel
5 from that purchased in earlier years; however, there is continuing pressure to
6 reduce emissions further, including SO₂ (sulphur dioxide) and fine particulate.

7
8 If hydraulic production improves, there will be some reduction; however, without
9 changing the specified fuel sulphur content, sulphur dioxide will increase as the
10 load grows or as low hydrology continues. Technology for capturing sulphur and
11 other emissions exists but generally results in a very significant capital and
12 operating expenditure. Buying lower sulphur fuel is also an option. Hydro
13 currently purchases 2.2% sulphur content fuel and lower sulphur content can be
14 obtained. The cost differential is typically about 1.5% increase in cost for each
15 0.1% decrease in sulphur content. If the Province enacts legislation that requires
16 the sulphur content to be, say for example, 2%, then an approximate 3%
17 increase in the cost of fuel would result. In 2004 this would result in a \$2.5
18 million increase in the revenue requirement. The federal government, as well, is
19 actively pursuing lower sulphur equivalency for both No. 6 and No. 2 fuel, which
20 would have an impact on Hydro's operating costs.

21
22 Hydro has committed to a limit for the Holyrood plant of 25,000 tonnes of sulphur
23 dioxide per year based on an average hydraulic production year. During 2002
24 Holyrood discharged 23,235 tonnes and in 2003 approximately 24,500 tonnes is
25 expected. These are based on the sulphur content in fuels burned in 2002 and
26 an assumed 2.2% sulphur content in the fuel to be burned in 2003.

27
28 Hydro is evaluating the available abatement technologies and may in future
29 propose capital projects to alleviate some of these levels. In the meantime,
30 Hydro is increasing its ground level and total stack discharge monitoring
31 capabilities to better quantify discharged and resulting ground level

1 concentrations. The Continuous Emissions Monitoring system coming into
2 service in 2003 will determine in real time exactly what is emitted into the
3 environment. Further, the establishment of a ground level monitoring station in
4 the community immediately adjacent to the plant, approved as a capital project
5 by the Board for 2003, will provide more information on the number of excursions
6 outside the generally accepted levels that actually do occur in a given time frame.
7 This data will allow an informed decision on any proposed mitigation tactics, if
8 required in the future.

6. POWER PURCHASES

Schedule X attached presents the Island Interconnected Power Purchases, which were forecasted, and the actual results for 2002 and the forecast for 2003 and 2004. The actual energy purchases in 2002 were above the forecast because of unforeseen shutdowns at the Stephenville and Grand Falls paper mills that resulted in 8.6 GWh of secondary energy being available to Hydro. Purchases from the two NUGs, (Star Lake and Rattle Brook) were also above the forecast. This resulted in an increase in power purchase expenses of \$0.8 million above the 2002 forecast. In 2003, the energy purchases are forecast to increase by 110.3 GWh due primarily to the new purchases from CBPP. There is an increase of 10.8 GWh (compared to the 2002 test year final forecast) in the forecast energy purchases from the Star Lake and Rattle Brook facilities due to a revision of the forecast energy capability to reflect the average energy purchases since they came in service in 1998. The further increase of 119.5 GWh in energy purchases in 2004 is primarily to reflect a full year of production from the Exploits River Hydro Partnership. The 2003 and 2004 forecast power purchases expense also reflects the increase in the price escalation arrangements in the power purchase agreements.

7. HYDROLOGY

7.1 Overview

Hydraulic production in 2002 was lower than the 2002 test year final because of lower inflows and the need to manage production to maintain at least the minimum reservoir storage targets. The 2003 forecast hydraulic production is higher than 2002 due to the assumption of a return to average inflows based on a 30-year average and the anticipated in service of Granite Canal in June 2003. The forecast hydraulic production for 2003 is less than the 30-year average to account for the low reservoir levels entering 2003 as indicated in Schedule IV attached. The forecast hydraulic production for 2004 is based on the 30-year average for the existing plants, and for Granite Canal, the estimate was obtained from a power and energy analysis.

7.2 Hydrology Review

An important determinant in the forecast production from the Holyrood thermal plant is the forecast hydraulic production. In accordance with P.U.7, Hydro retained SGE Acres to complete an independent study of Hydro's hydraulic production forecasting methodology, including data reliability, long-term trends, and climate change. The terms of reference for the review were approved by the Board. This report entitled Island Hydrology Review Final Report is attached as Exhibit JRH-2.

The five most significant recommendations made by SGE Acres are:

- The longest reliable reference inflow sequence (period of record) should be used for all Hydro's operation planning and rate setting purposes.
- The inflow sequences presently used by Hydro should be corrected to ensure internal consistency.

- 1 • The same estimate of average annual energy from hydroelectric
2 resources should be used for operations, planning and rate setting.
3
- 4 • Computer simulation of the operation of the hydroelectric system using the
5 reference inflow sequences should be used to estimate energy production
6 and spill from Hydro's hydraulic resources. Hydro should review its in-
7 house models and other models available and select one for these
8 purposes. The above-noted corrections to the inflow sequences should
9 be complete prior to simulating operations under this model. Since
10 system simulation models usually require a common start date for all
11 inflow sequences, data from the early years of some inflow sequences will
12 have to be cut off.
13
- 14 • Recognizing that rectification of the inflow sequences and selection of a
15 computer model will require some time, Hydro should continue to use its
16 present inflow sequences and methodology for energy estimates. The
17 present records, even with minor inconsistencies, will give better
18 estimates of expected flow than shorter records.
19
- 20 Hydro has reviewed the report and endorses the recommendations of SGE
21 Acres. In 2003, Hydro will be correcting the internal inconsistencies with the Bay
22 d'Espoir record and will also be investigating possible simulation models so that,
23 if approved by the Board, the results of the simulation will be available to be used
24 as the hydraulic production forecast in subsequent rate applications.
25
- 26 SGE Acres recommended using, in the interim, the method employed by Hydro
27 up to 2002 for the forecast of production from the hydroelectric plants. Hydro has
28 determined that this results in a hydraulic production forecast of 4,234 GWh for
29 2004. The breakdown by plant and the changes are provided in the following
30 table.

1

Table 7

| Average Hydraulic Capability (GWh) | | | |
|---|--|--------------------------------------|------------------------------|
| <u>Plant</u> | <u>Recommended Full Historic Record</u> | <u>Existing 1973-2002</u> | <u>Change (%)</u> |
| Bay d'Espoir | 2596 | 2657 | (2.6) |
| Upper Salmon | 550 | 572 | (3.8) |
| Hinds Lake | 340 | 352 | (3.4) |
| Cat Arm | 704 | 733 | (4.0) |
| Granite Canal ⁽¹⁾ | 224 | 224 | 0 |
| Paradise River | 37 | 37 | 0 |
| Mini Hydro ⁽²⁾ | 7.15 | 7.15 | 0 |
| Total | <u>4458</u> | <u>4582</u> | <u>(2.7)</u> |

⁽¹⁾ Granite Canal from a power and energy analysis.
⁽²⁾ Mini Hydro average is based on actual production records.

2

3 Applying this forecast to the 2004 test year would increase the No. 6 fuel
 4 expense by \$5.97 million, which would result in an additional rate increase of
 5 2.1% for Newfoundland Power, and 2.7% for the Industrial Customers.

8. LOAD FORECASTS

8.1 Overview

Hydro produces two types of load forecasts, operating forecasts and long-term planning forecasts.

Operating load forecasts are five-year monthly forecasts based on customer information supplied by Hydro's wholesale and industrial customers, as well as Hydro's analysis for its own service areas. These projections represent the power and energy to be supplied by Hydro to meet its customer requirements. Operating load forecasts are prepared for the Island Interconnected System, the Labrador Interconnected System, and Isolated Rural Systems and are used for generation scheduling, system planning, budgeting, rate setting and COS analysis.

The long-term planning load forecast for the Province is a 20-year forecast of annual peak and energy consumption on the Province's interconnected and isolated systems prepared using econometric and statistical modeling. The forecast is primarily used for long-term generation supply planning with particular focus on the total Island Interconnected System. It is conditioned by forecasts of provincial economic activity that Hydro receives from the Provincial Government.

Schedules XI, XII and XIII attached present the operating load forecasts for 2002 submitted during Hydro's 2001 GRA, comparing forecast against actual results for 2002, along with Hydro's current operating load forecasts for 2003 and 2004.

8.2 Island Interconnected Operating Load Forecast

The operating load forecast for the Island Interconnected System is provided in Schedule XI attached. For 2002, Hydro's overall sales and bulk deliveries were 48 GWh higher than the operating forecast. Hydro's utility sales were 107 GWh higher than forecast while sales to Industrial Customers were 59 GWh lower than

1 expected. For 2003, Hydro's current operating load forecast for the Island
2 Interconnected System projects an increase in sales and bulk delivery requirements
3 of 1.8%, decreasing in 2004 to 1.1% growth. This reflects a stable industrial sales
4 base with the increase in customer requirements largely attributable to growth in
5 Newfoundland Power's sales.

7 **8.3 Labrador Interconnected Operating Load Forecast**

8 The operating load forecast for the Labrador Interconnected System is provided in
9 Schedule XII attached. Hydro's actual sales and bulk deliveries during 2002 were
10 56 GWh lower than forecast. This is due primarily to lower requirements of the Iron
11 Ore Company of Canada. For 2003, Hydro's current operating load forecast for the
12 Labrador Interconnected System projects growth of 3.3%, declining during 2004 to
13 1.7%. This growth reflects expected stability in sales to the Iron Ore Company of
14 Canada by 2004 along with a modest increase in Hydro Rural Interconnected
15 sales.

17 **8.4 Hydro Isolated Systems Operating Load Forecast**

18 The operating load forecast and sales summary for Hydro's Isolated Rural Systems
19 is provided in Schedule XIII attached. Overall, sales on the isolated systems were
20 5,223 MWh higher in 2002 than forecast with the increase largely occurring on the
21 Labrador Isolated Systems (inclusive of L'Anse au Loup). Seafood processing
22 operations at Charlottetown and Little Bay Islands, and continued robust load
23 growth on the L'Anse au Loup system are responsible for 68% of this increase.
24 Hydro's current operating load forecast for Isolated Rural Systems projects a
25 continuation of stable customer requirements on the Island Isolated System
26 contrasted with growing requirements overall along the coast of Labrador. Overall,
27 the Isolated Rural Systems are currently projected to record 2.8% growth in sales in
28 2003 and 3.8% growth in 2004.

1 **8.5 Long-Term Planning Load Forecast**

2 Schedule XIV attached provides Hydro's current long-term planning load forecast
3 for the total Island Interconnected System with projections extending to 2012.
4 This forecast is used to evaluate the requirements for additional supply resources
5 for the Island interconnected system to ensure maintenance of capacity and
6 energy reserves for reliability. Hydro's current 10-year annual average load
7 growth projection for the Island Interconnected System is 1.3%. This growth
8 rate includes the impact of the commencement in 2012 of a hydrometallurgical
9 industrial facility on the Island associated with the Voisey's Bay mineral resource
10 development.

1 **9. NEW CAPACITY AND ENERGY SUPPLY**

2

3 In order to address forecast additional capacity and energy requirements for the

4 Island Interconnected System for 2003 and beyond, Hydro proceeded with

5 several initiatives, including the development of the Granite Canal project and

6 agreements with the Exploits River Hydro Partnership and CBPP to purchase

7 power and energy resulting from their new generation facilities. The capability of

8 each of these new generation sources are summarized in Schedule II and a brief

9 description follows.

10

11 **9.1 Granite Canal**

12 Granite Canal is a 40 MW hydroelectric development located between Granite

13 Lake and Meelpaeg Reservoir within the watershed of the Bay d'Espoir

14 development with an estimated average annual energy capability of 224 GWh.

15

16 **9.2 Exploits River Hydro Partnership**

17 The new capacity and energy results from the addition of a new 26.9 MW

18 hydroelectric unit at Abitibi-Consolidated Company of Canada's ("ACCC")

19 generation facility at Grand Falls, the Beeton unit, and an upgrade of their

20 hydroelectric facility at Bishop's Falls. The total additional capacity and average

21 annual energy available from these projects is 32.3 MW and 137 GWh

22 respectively.

23

24 **9.3 CBPP**

25 At the CBPP mill, a 15 MW cogeneration unit will utilize steam produced by

26 CBPP's No. 7 bark and oil-fired boiler with an average annual energy capability

27 of 100.2 GWh.

1 **9.4 Possible Near-Term Supply (Wind)**

2 As well, Hydro is assessing the feasibility of wind generation as a future
3 alternative for the supply of power and energy to the Island system. The
4 assessment is being carried out in a two-stage process comprised of a stage one
5 feasibility study and a potential 5 MW to 25 MW demonstration project at stage
6 two. The feasibility study was completed in September 2002. Hydro is
7 evaluating the results and a decision will be made during 2003 on whether or not
8 to proceed to a demonstration project.

1 **10. FUTURE GENERATION REQUIREMENTS**

2

3 **10.1 Island**

4 Hydro has assessed the capability of the Island Interconnected System to meet
5 future load requirements beyond the current committed additions in 2003. The
6 current capability of the system is presented in Schedule II attached. This
7 assessment utilized established generation planning criteria, which set the
8 minimum level for reserve capacity and energy, required to insure an adequate
9 supply for firm load. These criteria are:

10

11 • Energy

12 The Island Interconnected System should have sufficient generating
13 capability to supply all of its firm energy requirements with firm system
14 capability; and

15

16 • Capacity

17 The Island Interconnected System should have sufficient generating
18 capacity to satisfy a loss of load hours (“LOLH”) expectation target of not
19 more than 2.8 hours per year.

20

21 Based on this assessment, the Island system may experience energy and
22 capacity deficits in 2009 and 2011, respectively. The following table presents a
23 summary of these near term energy balances and LOLH indices.

1

Table 8

| Island Interconnected System Near Term Capability Requirements | | | | | | |
|---|----------------------|---------------|---|----------------------------|-------------|---------------------------|
| <u>Year</u> | <u>Load Forecast</u> | | <u>Existing plus Committed System</u> | | <u>LOLH</u> | <u>Energy Balance</u> |
| | <u>Peak</u> | <u>Energy</u> | <u>Net Capacity</u> | <u>Firm Capability</u> | | |
| | (MW) | (GWh) | (MW) | (GWh) | Hrs/Yr | (GWh) |
| 2003 | 1,578 | 8,441 | 1,919 | 8,706 | 0.6 | 265 |
| 2004 | 1,602 | 8,504 | 1,919 | 8,706 | 1.1 | 202 |
| 2005 | 1,607 | 8,512 | 1,919 | 8,706 | 1.2 | 194 |
| 2006 | 1,613 | 8,556 | 1,919 | 8,706 | 1.3 | 150 |
| 2007 | 1,624 | 8,606 | 1,919 | 8,706 | 1.6 | 100 |
| 2008 | 1,634 | 8,653 | 1,919 | 8,706 | 1.9 | 53 |
| 2009 | 1,643 | 8,716 | 1,919 | 8,706 | 2.3 | (10) |
| 2010 | 1,654 | 8,793 | 1,919 | 8,706 | 2.8 | (87) |
| 2011 | 1,666 | 8,865 | 1,919 | 8,706 | 3.5 | (159) |
| 2012 | 1,728 | 9,309 | 1,919 | 8,706 | 10.4 | (603) |

2

3

4 To address future supply requirements, Hydro may construct it's own supply or
 5 access resources by others, through the issue of a Request for Proposals
 6 ("RFP"). Based on the above requirement for additional generation supply,
 7 Hydro would normally plan to add capacity in 2010 as the energy deficit in 2009
 8 is not considered significant. Based on this, the process to determine the next
 9 source would have to be initiated during 2005.

1 **10.2 Labrador**

2 Hydro ensures that the forecast requirements of the Labrador Interconnected
3 System are met through purchases of recall power and energy from CF(L)Co.
4 The latest forecast would indicate that the recall capability would satisfy firm load
5 requirements well into the future.

11. ASSIGNMENT OF PLANT

Schedule XV attached is a single line diagram of the Island Interconnected System for 2004 indicating plant assignment consistent with P.U. 7. Subsequently, there have been a number of changes and additions to the Island Interconnected System. These include:

- In 2002

- Reconstruction of the 66 kV transmission line TL 262 between Daniels Harbour and Peter's Barren Terminal Stations - Specifically Assigned Hydro Rural;
- Reconstruction of the 230 kV transmission line TL 236 between Hardwoods and Oxen Pond Terminal Stations - Assigned common;
- Upgrading of transmission line TL 218 between Holyrood and Hardwoods Terminal Stations - Assigned common;
- Removal of the Grand Falls Frequency Converter from service – excluded from COS;

- In 2003

- Addition of the Granite Canal Generating Station and 230 kV transmission line TL263 from Granite Canal to Upper Salmon – Assigned common;
- Addition of new generation capacity at ACCC, Grand Falls for purchase by Hydro results in the transmission and terminal plant at the

1 Grand Falls Frequency Converter Terminal Station and TL235 to Stony
2 Brook Terminal Station - Assigned common;

3

- 4 ○ Addition of the CBPP cogeneration unit for energy purchase by Hydro.
5 There are no costs assigned in the COS due to this addition as all
6 assets are either customer-owned or fully contributed.

7

8 Schedule XVI attached is a single line diagram of the Labrador Interconnected
9 System for 2004 showing the plant assignment for that year. There has been no
10 change in plant assignment from that filed in the 2001 GRA. Hydro's plant on the
11 Labrador Interconnected System has been assigned using the same guidelines
12 as the Island Interconnected System.

13

14 In the 2001 GRA, Hydro had proposed that the 138 kV transmission systems on
15 the GNP and the Burin Peninsula and the 138/66 kV transmission system serving
16 Doyles-Port aux Basques be assigned as common plant given the presence of
17 generation on each of the radials that was of benefit to the entire grid. The
18 Board, in P.U. 7 did not confirm the assignment of the generation and
19 transmission assets on the GNP from Hydro rural to common, and did not accept
20 the proposed change in the Doyles-Port aux Basques system assignment from
21 Newfoundland Power specifically assigned to common. Further, the Board
22 ordered Hydro to file, as part of its next GRA, a detailed study, as to the proper
23 COS assignment of the GNP assets, the Doyles-Port aux Basques assets and
24 the Burin Peninsula assets.

25

26 A report entitled "Review of COS Assignment for the GNP, Doyles-Port aux
27 Basques and Burin Peninsula Assets" attached as Exhibit JRH-3 is provided in
28 response to this direction. In summary, the analysis completed demonstrates
29 that generation assets on each of the three systems under investigation provide
30 benefits to all customers of the Island Interconnected System. As a result, it is
31 appropriate that Newfoundland Power continue to receive capacity credit for its

1 generation facilities on the Doyles-Port aux Basques and Burin Peninsula radial
2 systems. Similarly, given the benefit of the GNP generation assets in deferring
3 capacity additions, Hydro proposes that the GNP generation assets be assigned
4 as common in the COS.

5
6 The appropriate assignment of the transmission assets for these three areas was
7 also addressed. Hydro proposes that factors such as historical assignment,
8 primary purpose, and quantity of generation be weighed in determining the
9 ultimate assignment of the transmission and terminal station assets connecting a
10 single customer and generation to the grid. Further, after considering the
11 planning basis and COS treatment of similar assets, Hydro concluded that
12 generation and the connecting transmission and terminal station assets can be
13 logically assigned differently in the COS.

14
15 An examination of the rationale for the interconnection of the previously isolated
16 St. Anthony/Roddickton system clearly indicated that the transmission system
17 was constructed for the benefit of the customers on these isolated systems. The
18 generation assets on the GNP, which were originally constructed to serve the
19 isolated system, as a result of the interconnection now serve as reserve capacity
20 to the Island Interconnected System. While of benefit to all customers, these
21 generation assets are not of sufficient magnitude, in Hydro's opinion, to justify
22 assignment of the GNP transmission assets as common given the dominant use
23 of the transmission system in serving a single customer. As a result, Hydro
24 recommends that the GNP transmission assets continue to be specifically
25 assigned to Hydro Rural as in P.U. 7.

26
27 The primary purpose of the Doyles-Port Aux Basques transmission assets is to
28 provide service to Newfoundland Power customers on that radial system. In all
29 prior rate hearings, these assets were specifically assigned to Newfoundland
30 Power. The generation assets located on this radial system, while of benefit to
31 all customers, are not sufficient in magnitude, in Hydro's opinion, to justify

1 assignment of the transmission assets as common given the dominant use of the
2 transmission system in serving a single customer. As a result, Hydro
3 recommends that the Doyle's-Port Aux Basques transmission system assets
4 continue to be specifically assigned to Newfoundland Power as in P.U. 7.

5
6 Prior to the construction of the Paradise River Generating Station in 1989 and
7 interconnection of Hydro Rural Customers (Monkstown in 1988, Petite Forte in
8 1993 and South East Bight in 1998) to the Burin Peninsula transmission system,
9 the transmission assets were assigned as common plant on the basis of
10 connecting significant generation on the system. At present, the Burin Peninsula
11 transmission assets serve both Newfoundland Power and Hydro Rural
12 Customers and connect generation assets of Newfoundland Power (25.6 MW)
13 and Hydro (8MW) to the grid. As a result, Hydro recommends that the Burin
14 Peninsula transmission assets continue to be assigned as common as in P.U. 7.

15
16 In light of the assessment of the transmission and generation assets of the GNP,
17 Doyle's-Port aux Basques and Burin Peninsula, Hydro proposes the following
18 guidelines for the assignment of plant:

19
20 • Guidelines for Assignment of Plant

21
22 A COS methodology requires that the cost (capital and maintenance) of
23 each component of plant be assigned to customers in a fair and equitable
24 manner. For the purpose of plant assignment, customers include
25 Newfoundland Power, individual Industrial Customers and Hydro Rural.
26 Plant is assigned as either "common" or "specifically assigned".

27
28 **Common plant** is defined as plant that is of substantial benefit to more
29 than one firm customer. Costs for common plant are assigned to all
30 customers of the system.

1 The following facilities have been assigned as common plant:

2

3 ○ All of Hydro's production facilities (hydraulic, thermal, gas turbine and
4 diesel);

5

6 ○ All of Hydro's transmission and terminal station plant, 66 kV and
7 above, that is of substantial benefit to more than one customer;

8

9 ○ All of Hydro's transmission and terminal station plant whose sole
10 purpose is the interconnection of a generating facility with the system.
11 Transmission and terminal plant in this category have their costs
12 classified on the same basis as the generation that it interconnects;
13 and

14

15 ○ All of Hydro's transmission and terminal station plant that connects a
16 single customer and generation or voltage control equipment, that is of
17 substantial benefit to more than one customer.

18

19 **Specifically Assigned plant** is defined as plant that is of benefit to only
20 one customer. Costs for specifically assigned plant are assigned directly
21 to the benefiting customer.

22

23 All of Hydro's generation and distribution facilities in the Isolated Rural Systems
24 and distribution facilities in the Interconnected Systems have been assigned to
25 Hydro Rural.

26

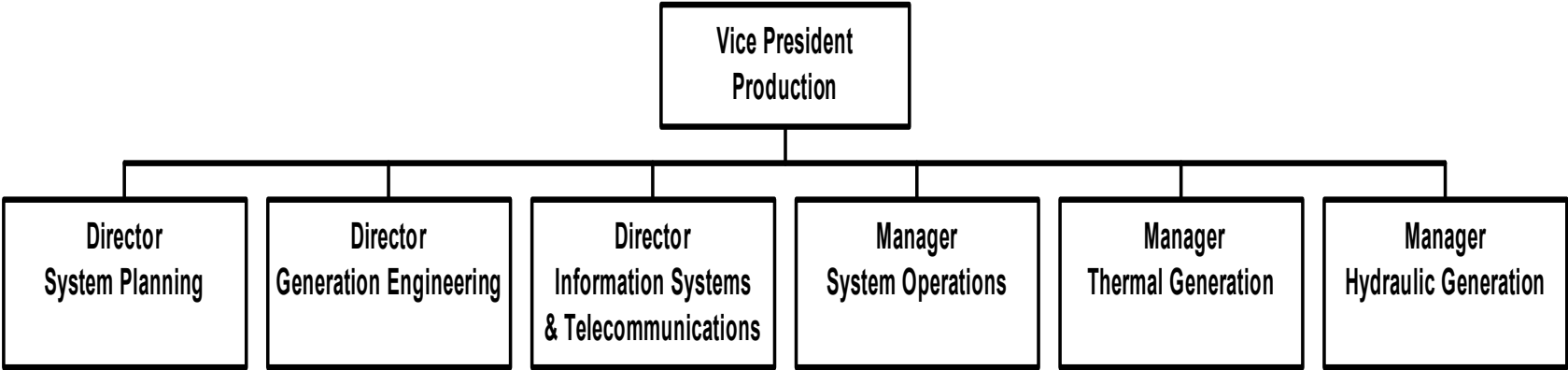
27 **Hydro Rural Sub-transmission** is defined as all transmission and terminal
28 station plant serving only Hydro Rural rate classes.

1 **NP-IC Sub-transmission** is defined as transmission and terminal station plant,
2 which serves both Newfoundland Power and an Industrial Customer but not
3 Hydro Rural and has an original capital cost of at least 2% of the total
4 transmission and terminal stations costs.
5
6 Schedule XVII attached is a single line diagram of the Island Interconnected
7 System for 2004 showing the assignment proposed by Hydro. The only
8 difference in plant assignment between Schedules XV and XVII attached is that
9 Hydro is proposing the generation and associated terminal station equipment on
10 the GNP be assigned common based upon its benefit as outlined previously.

PRODUCTION
LIST OF SCHEDULES

- I Production Division Organizational Chart
- II Generating Capability
- III Map Of Facilities
- IV Total System Energy Storage
- V Holyrood Monthly Conversion Rate vs Average Net Unit Loading
- VI Net Operating Expenses Production Division
- VII Holyrood No. 6 Fuel Expenses and Related Factors
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- IX Energy Supply Expenses - Isolated Rural Systems
- X Forecast and Actual Power Purchases – Island Interconnected System
- XI Load Forecast and Actual System Sales – Island Interconnected System
- XII Load Forecast and Actual System Sales – Labrador Interconnected System
- XIII Load Forecast and Actual System Sales – Isolated Systems
- XIV Long-term Planning Load Forecast – Total Island Interconnected System
- XV Island Interconnected System 2004 Plant Assignment (as Filed)
- XVI Labrador Interconnected System 2004 Plant Assignment (as Filed)
- XVII Island Interconnected System 2004 Plant Assignment (as Proposed)

Newfoundland and Labrador Hydro
Production Division Organizational Chart



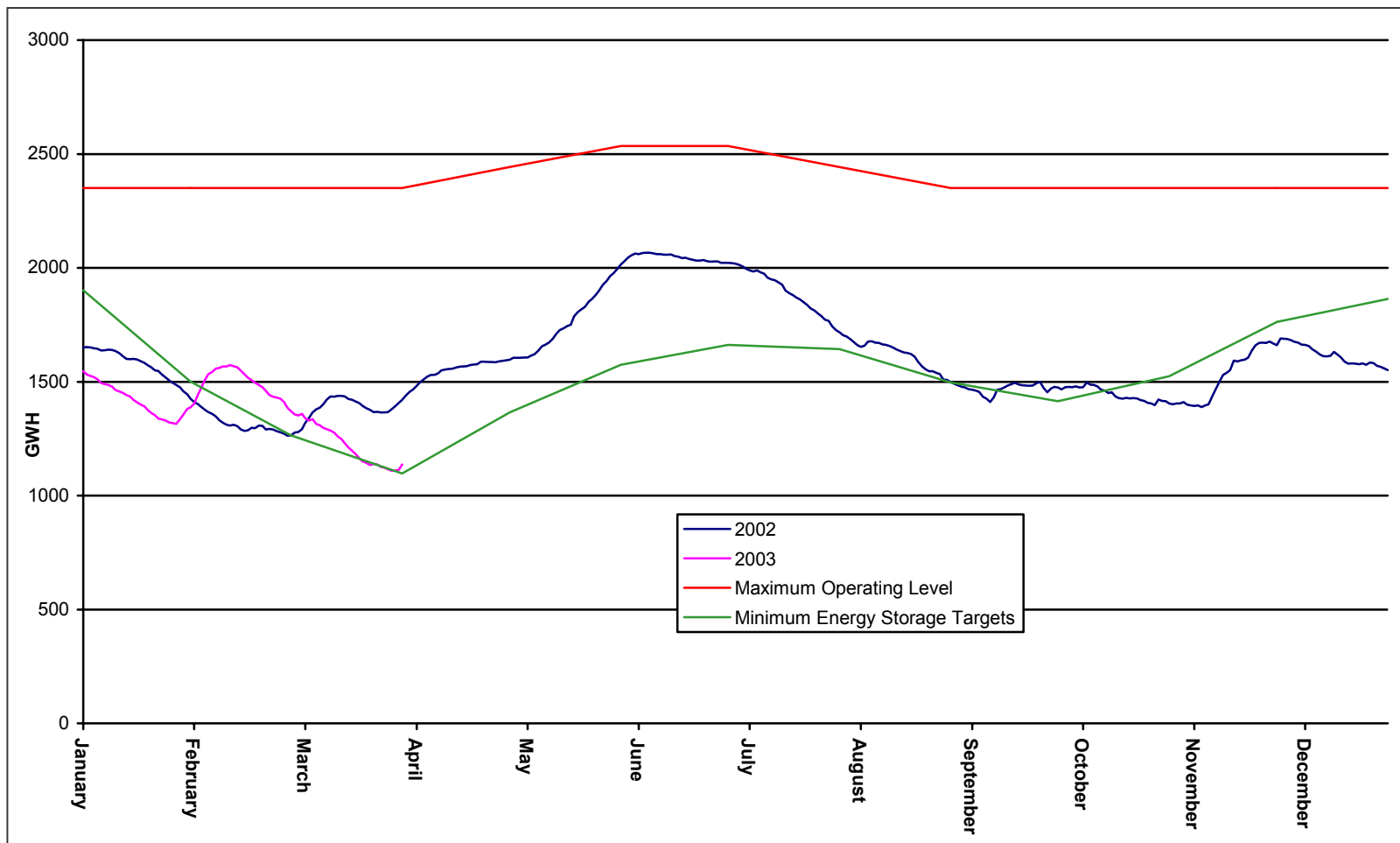
Schedule II
J. R. Haynes

| Newfoundland And Labrador Hydro Generating Capability Island Interconnected System | | | |
|---|------------------------------|---|---|
| Plant | Net Capacity (MW) | Average Annual Energy ⁽¹⁾ (GWh) | Firm Annual Energy (GWh) |
| Newfoundland and Labrador Hydro | | | |
| Hydroelectric | | | |
| Bay d'Espoir | 592.0 | 2,657.0 | 2,234.0 |
| Cat Arm | 127.0 | 733.0 | 605.0 |
| Upper Salmon | 84.0 | 572.0 | 476.0 |
| Hinds Lake | 75.0 | 352.0 | 283.0 |
| Granite Canal | 40.0 | 224.0 | 216.0 |
| Paradise River | 8.0 | 37.0 | 27.0 |
| Snook's Arm, Venam's Bight & Roddickton | <u>1.3</u> | <u>7.2</u> | <u>5.0</u> |
| Total Hydroelectric | 927.3 | 4,582.2 | 3,846.0 |
| Thermal | | | |
| Holyrood – Oil fired Steam | 465.5 | 2,996.0 | 2,996.0 |
| Hardwoods Gas Turbine | 54.0 | - | - |
| Stephenville Gas Turbine | 54.0 | - | - |
| Holyrood Gas Turbine | 10.0 | - | - |
| Hawkes Bay, St. Anthony & Roddickton Diesels | <u>14.7</u> | <u>-</u> | <u>-</u> |
| Total Thermal | 598.2 | 2,996.0 | 2,996.0 |
| Non-Utility Generators | | | |
| Star Lake | 15.0 | 141.2 | 92.5 |
| Rattle Brook | 4.0 | 15.6 | 14.0 |
| Corner Brook | 15.0 | 100.2 | 100.2 |
| Exploits River | 32.3 | 137.0 | 110.0 |
| Total Non-Utility Generation | <u>66.3</u> | <u>394.0</u> | <u>316.7</u> |
| Total Capability | 1,591.8 | 7,972.2 | 7,158.7 |
| Customer Generation | | | |
| Newfoundland Power Inc. (hydroelectric) | 93.2 | 424 | 323 |
| Newfoundland Power Inc. (thermal) | 54.2 | - | - |
| CBPP (hydroelectric) | 121.4 | 860 | 781 |
| ACCC (hydroelectric) | <u>58.5</u> | <u>470</u> | <u>443</u> |
| Total Customer Generation | 327.3 | 1754 | 1547 |
| Total Island Interconnected System | 1919.1 | 9726.2 | 8705.7 |
| Labrador Interconnected System | | | |
| Happy Valley Gas Turbine | 27.0 | - | - |
| Goose Bay North Plant | 11.3 | - | - |
| CF(L)Co Contract | <u>300.0</u> | <u>2362.0</u> | <u>2362.0</u> |
| Total | 338.3 | 2362.0 | 2362.0 |
| ⁽¹⁾ Rolling 30-year average used for Hydro's Interconnected hydroelectric plants. | | | |

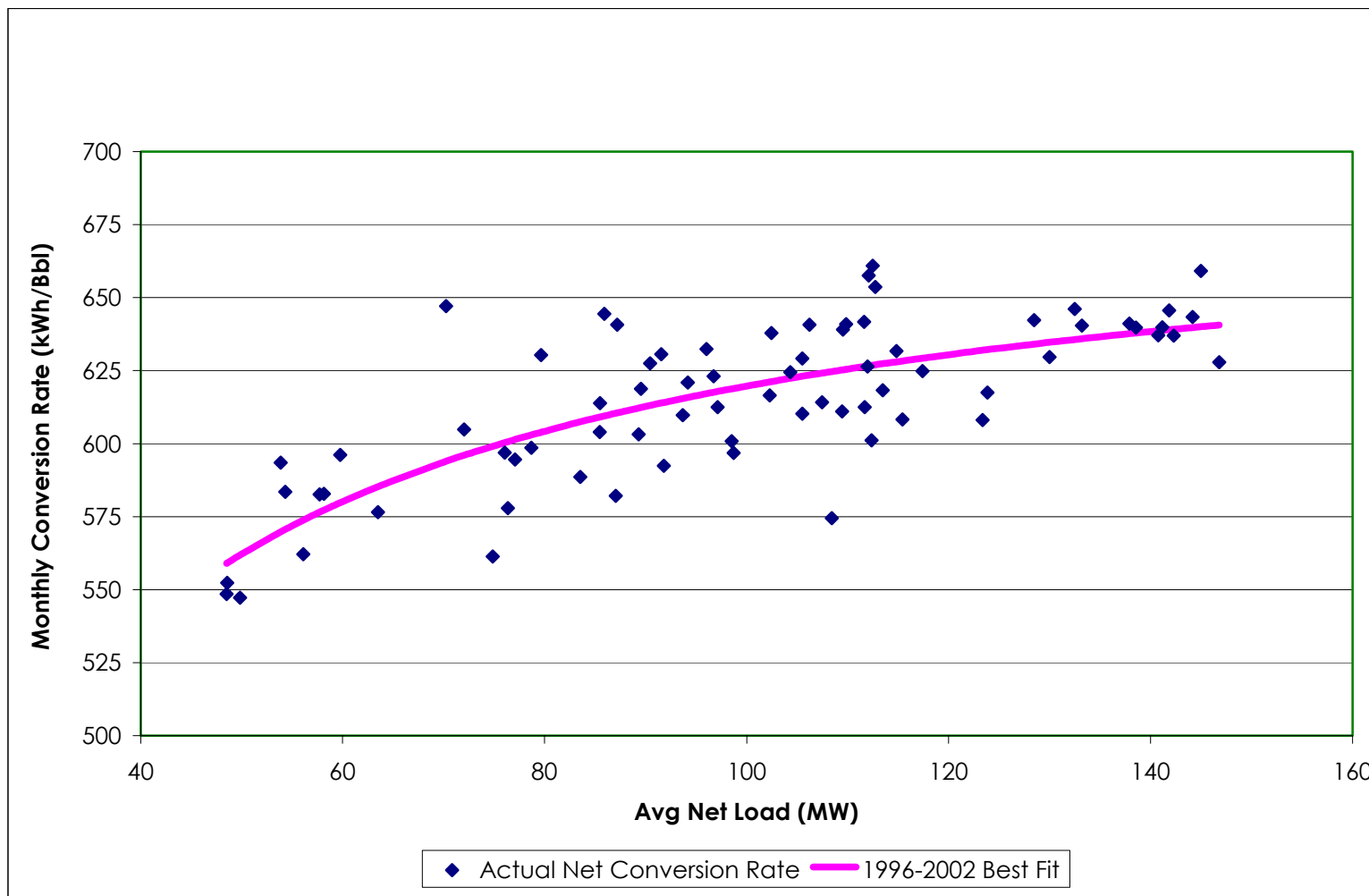
Newfoundland and Labrador Hydro
Map of Facilities



Newfoundland and Labrador Hydro
Total System Energy Storage



Newfoundland and Labrador Hydro
Holyrood Monthly Conversion Rate vs Average Net Unit Loading



Schedule VI
J. R. Haynes

NEWFOUNDLAND AND LABRADOR HYDRO
NET OPERATING EXPENSES
PRODUCTION DIVISION
(\$ thousands)

| Line No. | Description | 2002 Test Year Final Revenue Requirement | 2002 Actuals | Increase (Decrease) | 2003 Estimate | Increase (Decrease) | 2004 Forecast | Increase (Decrease) |
|----------|---------------------------------|--|---------------|---------------------|---------------|---------------------|---------------|---------------------|
| 1 | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) |
| 2 | Expense Group | | | | | | | |
| 3 | Salaries & Fringe Benefits | | | | | | | |
| 4 | Permanent Salaries | 15,883 | 16,284 | 401 | 17,941 | 1,657 | 18,471 | 530 |
| 5 | Capitalized Expenses | (1,909) | (2,083) | (174) | (1,673) | 410 | (1,447) | 226 |
| 6 | Hourly Wages | 1,679 | 1,472 | (207) | 0 | (1,472) | 0 | 0 |
| 7 | Overtime | 1,343 | 1,692 | 349 | 1,397 | (295) | 1,475 | 78 |
| 8 | Fringe Benefits | 2,245 | 2,341 | 96 | 2,512 | 171 | 2,586 | 74 |
| 9 | Vacancy Adjustment | (531) | 0 | 531 | (368) | (368) | (925) | (557) |
| 10 | Sub-Total | <u>18,710</u> | <u>19,706</u> | <u>996</u> | <u>19,809</u> | <u>103</u> | <u>20,160</u> | <u>351</u> |
| 11 | | | | | | | | |
| 12 | System Equipment Maintenance | | | | | | | |
| 13 | Maintenance Materials | 8,063 | 7,776 | (287) | 9,121 | 1,345 | 9,117 | (4) |
| 14 | Tools & Operating Supplies | 184 | 188 | 4 | 175 | (13) | 174 | (1) |
| 15 | Lubricants & Chemicals | 274 | 529 | 255 | 493 | (36) | 486 | (7) |
| 16 | Sub-Total | <u>8,521</u> | <u>8,493</u> | <u>(28)</u> | <u>9,789</u> | <u>1,296</u> | <u>9,777</u> | <u>(12)</u> |
| 17 | | | | | | | | |
| 18 | Other Expenses | | | | | | | |
| 19 | Office Supplies & Expenses | 445 | 406 | (39) | 459 | 53 | 402 | (57) |
| 20 | Professional Services | 2,657 | 2,775 | 118 | 2,512 | (263) | 2,300 | (212) |
| 21 | Equipment Rentals | 1,393 | 1,181 | (212) | 1,372 | 191 | 1,482 | 110 |
| 22 | Travel | 639 | 393 | (246) | 457 | 64 | 438 | (19) |
| 23 | Miscellaneous | 462 | 448 | (14) | 397 | (51) | 339 | (58) |
| 24 | Property Rentals | 142 | 227 | 85 | 247 | 20 | 265 | 18 |
| 25 | Transportation | 244 | 205 | (39) | 217 | 12 | 207 | (10) |
| 26 | Sub-Total | <u>5,982</u> | <u>5,635</u> | <u>(347)</u> | <u>5,661</u> | <u>26</u> | <u>5,433</u> | <u>(228)</u> |
| 27 | | | | | | | | |
| 28 | Total Operating Expenses | <u>33,213</u> | <u>33,834</u> | <u>621</u> | <u>35,259</u> | <u>1,425</u> | <u>35,370</u> | <u>111</u> |
| 29 | | | | | | | | |
| 30 | Allocations | | | | | | | |
| 31 | Recoveries | (621) | (589) | 32 | (621) | (32) | (571) | 50 |
| 32 | Net Operating Expenses | <u>32,592</u> | <u>33,245</u> | <u>653</u> | <u>34,638</u> | <u>1,393</u> | <u>34,799</u> | <u>161</u> |

Newfoundland and Labrador Hydro
Holyrood No. 6 Fuel Expenses and Related Factors

| | 2002 | | | <u>2003</u> | <u>Variance From 2002</u> | <u>2004</u> | <u>Variance From 2003</u> |
|---------------------------------|-----------------------------------|----------------------|------------------------|--------------------|--------------------------------------|--------------------|--------------------------------------|
| | <u>Test Year Final</u> | <u>Actual</u> | <u>Variance</u> | | | | |
| Fuel Expense (\$000) | \$81,237 | \$112,534 | \$31,297 | \$126,029 | \$13,474 | \$84,410 | (\$41,619) |
| Fuel Consumption (bbl) | 3,191,969 | 3,678,183 | 486,214 | 3,621,572 | (56,611) | 2,868,830 | (752,742) |
| Average Purchase Price (\$/bbl) | \$25.88 | \$32.47 | \$6.59 | \$34.03 | \$1.56 | \$29.20 | (\$4.83) |
| Net Production (GWh) | 1,963.06 | 2,385.26 | 422.20 | 2,259.86 | (125.40) | 1,790.15 | (469.71) |
| Conversion Factor (kWh/bbl) | 615 | 648 | 33 | 624 | (24) | 624 | 0 |
| Total Energy Purchases (GWh) | 146.50 | 164.22 | 17.72 | 274.47 | 110.25 | 393.98 | 119.51 |
| Net Hydraulic Production (GWh) | 4,425.00 | 3,985.79 | (439.21) | 4,157.15 | 171.36 | 4,582.15 | 425.00 |

Schedule VIII
J. R. Haynes

| Newfoundland and Labrador Hydro Monthly No. 6 Fuel Purchase Prices (\$/bbl) | | | | | |
|---|---------------------|------------------------|------------------------|---------------------------|---------------------------|
| | 2002 | | | 2003⁽¹⁾ | 2004⁽²⁾ |
| | Test Year | | | | |
| | <u>Final</u> | <u>Actual *</u> | <u>Variance</u> | <u>Forecast</u> | <u>Forecast</u> |
| January | 24.30 | 24.33 | 0.03 | 39.65 | 29.20 |
| February | 25.20 | 22.89 | (2.31) | 37.10 | 29.20 |
| March | 25.20 | 30.32 | 5.12 | 35.35 | 29.20 |
| April | 25.70 | 34.42 | 8.72 | 31.50 | 29.20 |
| May | 25.80 | | | 31.95 | 29.20 |
| June | 25.50 | 33.34 | 7.84 | 32.70 | 29.20 |
| July | 25.70 | | | 30.60 | 29.20 |
| August | 26.50 | | | 30.45 | 29.20 |
| September | 26.60 | 39.43 | 12.83 | 30.70 | 29.20 |
| October | 26.80 | 37.68 | 10.88 | 30.85 | 29.20 |
| November | 26.60 | 33.43 | 6.83 | 30.95 | 29.20 |
| December | 27.10 | 37.31 | 10.21 | 30.65 | 29.20 |
| Weighted Purchase Price | \$25.88 | \$32.47 | \$6.59 | \$34.03 | \$29.20 |
| * There were no purchases in months with a blank. (1) Forecast based on PIRA forecasts of January 8, 2003. | | | | | |

**Newfoundland and Labrador Hydro
Energy Supply Expenses - Isolated Rural Systems ⁽¹⁾**

(\$ thousands)

| | 2002 | | | | |
|-----------------|---------------------|----------------------|------------------------|--------------------|--------------------|
| | Test Year | | | | |
| | <u>Final</u> | <u>Actual</u> | <u>Variance</u> | <u>2003</u> | <u>2004</u> |
| Diesel Fuel | 6,461 | 6,706 | 245 | 7,466 | 7,307 |
| Purchased Power | 625 | 735 | 110 | 892 | 846 |
| Total | 7,086 | 7,441 | 355 | 8,358 | 8,153 |

⁽¹⁾ Energy supply budget as of January 27, 2003.

| Newfoundland and Labrador Hydro Forecast and Actual Power Purchases Island interconnected Systems | | | | | | | |
|--|-----------------------------------|----------------------|------------------------|--------------------|--|--------------------|--|
| <u>Supplier</u> | 2002 | | | <u>2003</u> | Variance From <u>2002</u> | <u>2004</u> | Variance From <u>2003</u> |
| | <u>Test Year Final</u> | <u>Actual</u> | <u>Variance</u> | | | | |
| CBPP Secondary GWh | 0.60 | 0.08 | (0.52) | 0.00 | (0.08) | 0.00 | 0.00 |
| CBPP Secondary (\$000) | \$13 | \$2 | (\$11) | \$0 | (\$2) | \$0 | \$0 |
| ACCC Grand Falls Secondary GWh | 0.00 | 8.58 | 8.58 | 0.00 | (8.58) | 0.00 | 0.00 |
| ACCC Grand Falls Secondary (\$000) | \$0 | \$155 | \$155 | \$0 | (\$155) | \$0 | \$0 |
| Star Lake GWh | 128.00 | 140.14 | 12.14 | 141.17 | 1.03 | 141.17 | 0.00 |
| Star Lake (\$000) | \$8,742 | \$9,617 | \$875 | \$9,836 | \$219 | \$9,973 | \$137 |
| Rattle Brook GWh | 17.90 | 15.42 | (2.48) | 15.57 | 0.15 | 15.57 | 0.00 |
| Rattle Brook (\$000) | \$1,270 | \$1,097 | (\$173) | \$1,144 | \$47 | \$1,161 | \$17 |
| Corner Brook Cogen GWh | - | - | - | 90.64 | 90.64 | 100.24 | 9.60 |
| Corner Brook Cogen (\$000) | - | - | - | \$7,494 | \$7,494 | \$7,817 | \$323 |
| Exploits Project GWh | - | - | - | 27.09 | 27.09 | 137.00 | 109.91 |
| Exploits Project (\$000) | - | - | - | \$2,086 | \$2,086 | \$10,550 | \$8,464 |
| Total Power Purchases GWh | <u>146.50</u> | <u>164.22</u> | <u>17.72</u> | <u>274.47</u> | <u>110.25</u> | <u>393.98</u> | <u>119.51</u> |
| Total Power Purchases (\$000) | <u>\$10,025</u> | <u>\$10,871</u> | <u>\$846</u> | <u>\$20,560</u> | <u>\$9,689</u> | <u>\$29,501</u> | <u>\$8,941</u> |

| Newfoundland and Labrador Hydro Load Forecast and Actual System Sales ⁽¹⁾ Island Interconnected System | | | | | | | | | | |
|--|-------------|--------------|-------------|--------------|-------------|---------------|-------------|--------------|-------------|--------------|
| | 2002 | | | | | | 2003 | 2004 | 2005 | 2006 |
| | Forecast | | Actual | | Variance | | | | | |
| | (MW) | (GWh) | (MW) | (GWh) | (MW) | (GWh) | | | | |
| Newfoundland Power ⁽²⁾ | 1,001.2 | 4,485.1 | 1,093.6 | 4,588.7 | 92.4 | 103.6 | 1,062.0 | 4,655.5 | 1,084.0 | 4,741.4 |
| Hydro Rural Interconnected | 91.3 | 400.1 | 82.3 | 403.4 | (9.0) | 3.3 | 88.3 | 402.4 | 88.9 | 406.3 |
| Corner Brook Pulp and Paper | 61.0 | 464.1 | 61.6 | 501.5 | 0.6 | 37.4 | 61.6 | 471.9 | 56.0 | 445.8 |
| ACCC - Grand Falls | 26.0 | 177.0 | 42.0 | 168.0 | 16.0 | (9.0) | 24.0 | 161.5 | 24.0 | 161.8 |
| ACCC - Stephenville | 69.0 | 557.1 | 71.3 | 474.8 | 2.3 | (82.3) | 70.5 | 545.8 | 71.5 | 555.8 |
| North Atlantic Refining | 30.2 | 232.8 | 31.2 | 227.3 | 1.0 | (5.5) | 30.5 | 238.2 | 30.5 | 236.2 |
| Total Sales and Bulk Deliveries ⁽³⁾ | 1,257.1 | 6,316.1 | 1,326.5 | 6,363.7 | 69.4 | 47.6 | 1,314.0 | 6,475.3 | 1,337.5 | 6,547.3 |
| Transmission Losses | <u>50.3</u> | <u>222.4</u> | <u>76.5</u> | <u>167.5</u> | <u>26.2</u> | <u>(54.9)</u> | <u>39.4</u> | <u>219.6</u> | <u>40.1</u> | <u>222.0</u> |
| Hydro Island Requirement | 1,307.4 | 6,538.5 | 1,403.0 | 6,531.2 | 95.6 | (7.3) | 1,353.4 | 6,694.9 | 1,377.6 | 6,769.3 |

⁽¹⁾ 2003 and 2004 Forecast are sourced to the November 19th, 2002 Island Operating Load Forecast.

⁽²⁾ Actual customer peaks are annual maximums. Forecast peaks are January and system peak excludes interruptible load.

⁽³⁾ Total Sales and Bulk Deliveries and Transmission Losses are coincident with system peak. Actual losses in 2002 include station service.

**Newfoundland and Labrador Hydro
Load Forecast and Actual System Sales ⁽¹⁾
Labrador Interconnected System**

| | 2002 | | | | | | 2003 | | 2004 | |
|--|-------------|--------------|-------------|--------------|------------|---------------|-------------|--------------|-------------|--------------|
| | Forecast | | Actual | | Variance | | | | | |
| | (MW) | (GWh) | (MW) | (GWh) | (MW) | (GWh) | (MW) | (GWh) | (MW) | (GWh) |
| Happy Valley Goose Bay ⁽²⁾ | 52.9 | 215.5 | 54.4 | 221.1 | 1.5 | 5.6 | 56.8 | 223.6 | 58.3 | 232.1 |
| Wabush | 14.5 | 59.7 | 14.2 | 61.4 | (0.3) | 1.7 | 14.5 | 61.5 | 14.5 | 61.8 |
| Labrador City | 49.5 | 208.3 | 50.5 | 210.7 | 1.0 | 2.4 | 49.3 | 210.1 | 50.6 | 213.9 |
| Total Hydro Rural | 116.9 | 483.5 | 119.1 | 493.2 | 2.2 | 9.7 | 120.6 | 495.2 | 123.4 | 507.8 |
| CFB Goose Bay (secondary sales) | - | 91.6 | - | 77.7 | - | (13.9) | - | 76.8 | - | 77.2 |
| Iron Ore Company of Canada | 78.0 | 277.7 | 83.4 | 226.0 | 5.4 | (51.7) | 82.0 | 250.8 | 82.0 | 251.7 |
| Total Sales and Bulk Deliveries ⁽³⁾ | 167.2 | 852.8 | 158.5 | 796.9 | (8.7) | (55.9) | 170.6 | 822.8 | 173.0 | 836.7 |
| Transmission Losses | <u>22.2</u> | <u>122.3</u> | <u>24.5</u> | <u>101.7</u> | <u>2.3</u> | <u>(20.6)</u> | <u>22.6</u> | <u>109.3</u> | <u>23.0</u> | <u>111.0</u> |
| Hydro Labrador Requirement | 189.4 | 975.1 | 183.0 | 898.6 | (6.4) | (76.5) | 193.2 | 932.1 | 196.0 | 947.7 |

⁽¹⁾ 2003 and 2004 Forecast are sourced to the November 15, 2002 Labrador Operating Load Forecast.

(2) Actual customer peaks are annual maximum while system requirement is maximum coincident peak. Forecast peaks are January.

(3) Total Sales and Bulk Deliveries and Transmission Losses are coincident with system peak.

**Newfoundland and Labrador Hydro
Load Forecast and Actual System Sales ⁽¹⁾
Isolated Systems**

| | 2002 | | | | | | 2003 | | 2004 | |
|---------------------------------|-----------|---------------|-----------|---------------|-----------|--------------|-----------|---------------|-----------|---------------|
| | Forecast | | Actual | | Variance | | | | | |
| | <u>kW</u> | <u>MWh</u> | <u>kW</u> | <u>MWh</u> | <u>kW</u> | <u>MWh</u> | <u>kW</u> | <u>MWh</u> | <u>kW</u> | <u>MWh</u> |
| Labrador Isolated | | | | | | | | | | |
| Black Tickle | 534 | 1,237 | 465 | 1,321 | (69) | 84 | 482 | 1,262 | 483 | 1,269 |
| Cartwright | 841 | 3,512 | 932 | 3,739 | 91 | 227 | 951 | 3,853 | 962 | 3,901 |
| Charlottetown | 1,330 | 3,705 | 1,338 | 4,649 | 8 | 944 | 1,346 | 4,699 | 1,361 | 4,776 |
| Davis Inlet/Natuashish | 742 | 2,562 | 705 | 2,979 | (37) | 417 | 1,284 | 3,274 | 1,308 | 4,215 |
| Hopedale | 691 | 2,563 | 680 | 2,893 | (11) | 330 | 701 | 2,985 | 757 | 3,225 |
| Makkovik | 743 | 2,729 | 691 | 2,780 | (52) | 51 | 738 | 2,813 | 752 | 2,866 |
| Mary's Harbour | 886 | 3,686 | 840 | 3,615 | (46) | (71) | 946 | 4,115 | 959 | 4,172 |
| Nain | 1,203 | 5,117 | 1,362 | 5,496 | 159 | 379 | 1,493 | 5,990 | 1,542 | 6,185 |
| Norman Bay | 53 | 123 | 50 | 121 | (3) | (2) | 54 | 125 | 56 | 129 |
| Paradise River | 31 | 98 | 42 | 107 | 11 | 9 | 49 | 109 | 40 | 89 |
| Port Hope Simpson | 617 | 2,148 | 660 | 2,329 | 43 | 181 | 688 | 2,431 | 719 | 2,539 |
| Postville | 315 | 1,141 | 321 | 1,224 | 6 | 83 | 334 | 1,293 | 360 | 1,394 |
| Rigolet | 446 | 1,658 | 464 | 1,772 | 18 | 114 | 512 | 1,804 | 526 | 1,854 |
| St. Lewis | 480 | 1,729 | 508 | 1,786 | 28 | 57 | 525 | 1,788 | 524 | 1,787 |
| William's Harbour | 90 | 317 | 85 | 317 | (5) | 0 | 86 | 298 | 87 | 300 |
| L'Anse au Loup | 3,097 | <u>11,740</u> | 3,667 | <u>13,673</u> | 570 | <u>1,933</u> | 3,666 | <u>14,347</u> | 3,807 | <u>14,899</u> |
| Total Labrador Sales | | 44,065 | | 48,801 | | 4,736 | | 51,186 | | 53,599 |
| Island Isolated | | | | | | | | | | |
| Francois | 252 | 681 | 292 | 748 | 40 | 67 | 276 | 747 | 275 | 745 |
| Grey River | 209 | 541 | 221 | 553 | 12 | 12 | 226 | 571 | 226 | 571 |
| Harbour Deep | 274 | 730 | 285 | 515 | 11 | (215) | 0 | 0 | 0 | 0 |
| Little Bay Islands | 537 | 1,282 | 639 | 1,971 | 102 | 689 | 780 | 1,728 | 780 | 1,728 |
| McCallum | 220 | 549 | 239 | 568 | 19 | 19 | 244 | 590 | 245 | 593 |
| Petites | 50 | 117 | 55 | 130 | 5 | 13 | 55 | 128 | 53 | 125 |
| Ramea | 1,310 | 4,348 | 1,285 | 4,314 | (25) | (34) | 1,296 | 4,320 | 1,289 | 4,298 |
| Rencontre East | 304 | 913 | 279 | 887 | (25) | (26) | 305 | 890 | 308 | 899 |
| St. Brendans | 403 | <u>993</u> | 397 | <u>955</u> | (6) | <u>(38)</u> | 406 | <u>952</u> | 404 | <u>949</u> |
| Total Island Sales | | 10,154 | | 10,641 | | 487 | | 9,926 | | 9,908 |
| Total Sales | - | 54,219 | - | 59,442 | - | 5,223 | - | 61,112 | - | 63,507 |
| Distribution Losses/Company Use | - | <u>4,160</u> | - | <u>4,659</u> | - | <u>499</u> | - | <u>4,823</u> | - | <u>4,815</u> |
| Net Production (2) | - | <u>58,379</u> | - | <u>64,101</u> | - | <u>5,722</u> | - | <u>65,935</u> | - | <u>68,322</u> |
| Diesel Production | - | 45,229 | - | 49,135 | - | 3,906 | - | 49,880 | - | 51,664 |
| Purchased Power | - | <u>13,150</u> | - | <u>14,966</u> | - | <u>1,816</u> | - | <u>16,055</u> | - | <u>16,658</u> |
| Net Production (2) | - | <u>58,379</u> | - | <u>64,101</u> | - | <u>5,722</u> | - | <u>65,935</u> | - | <u>68,322</u> |

⁽¹⁾ 2003 and 2004 Forecast are sourced to the December 2002 Rural Operating Load Forecast. Peaks are annual maximums.

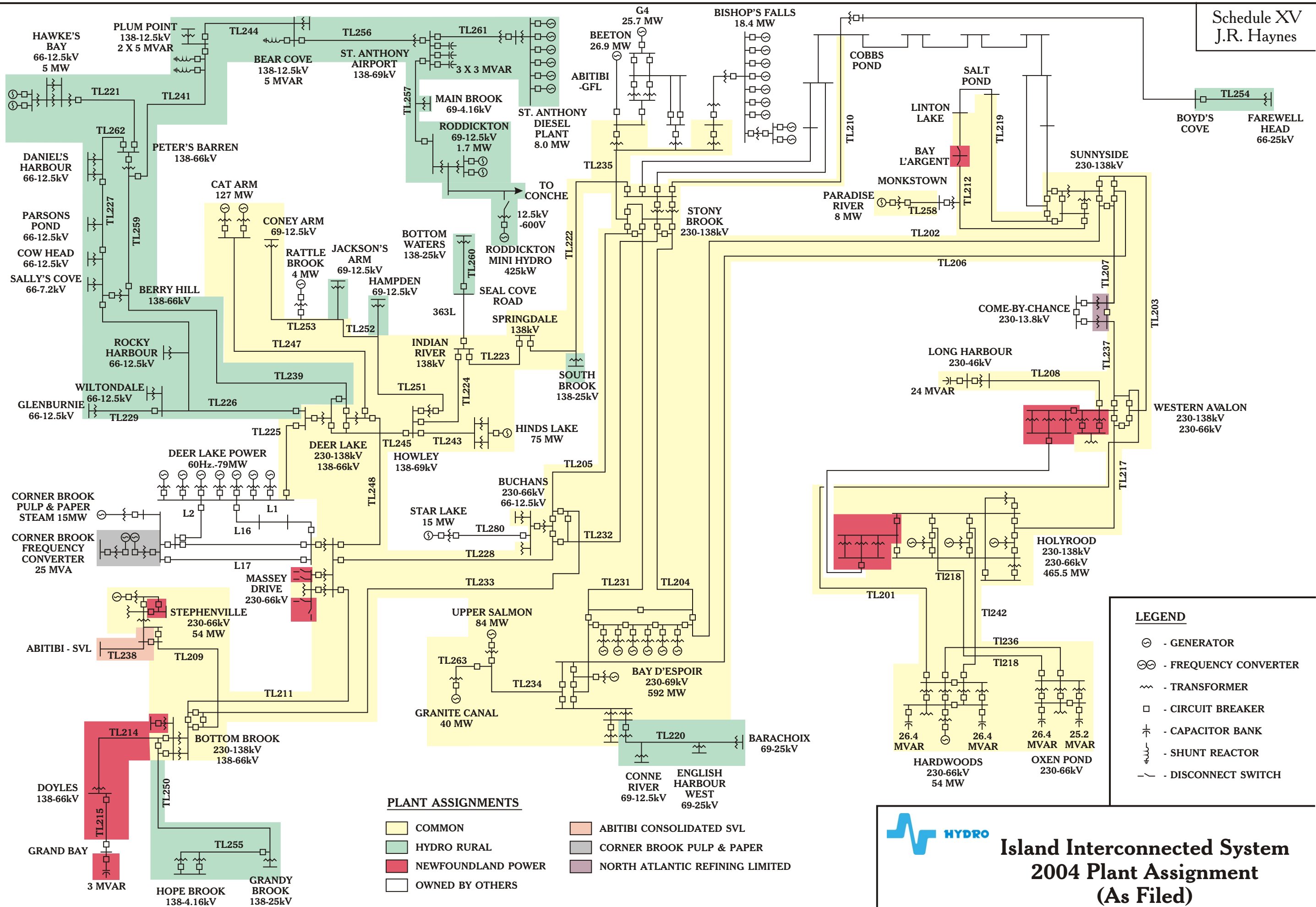
⁽²⁾ Net production excludes station service.

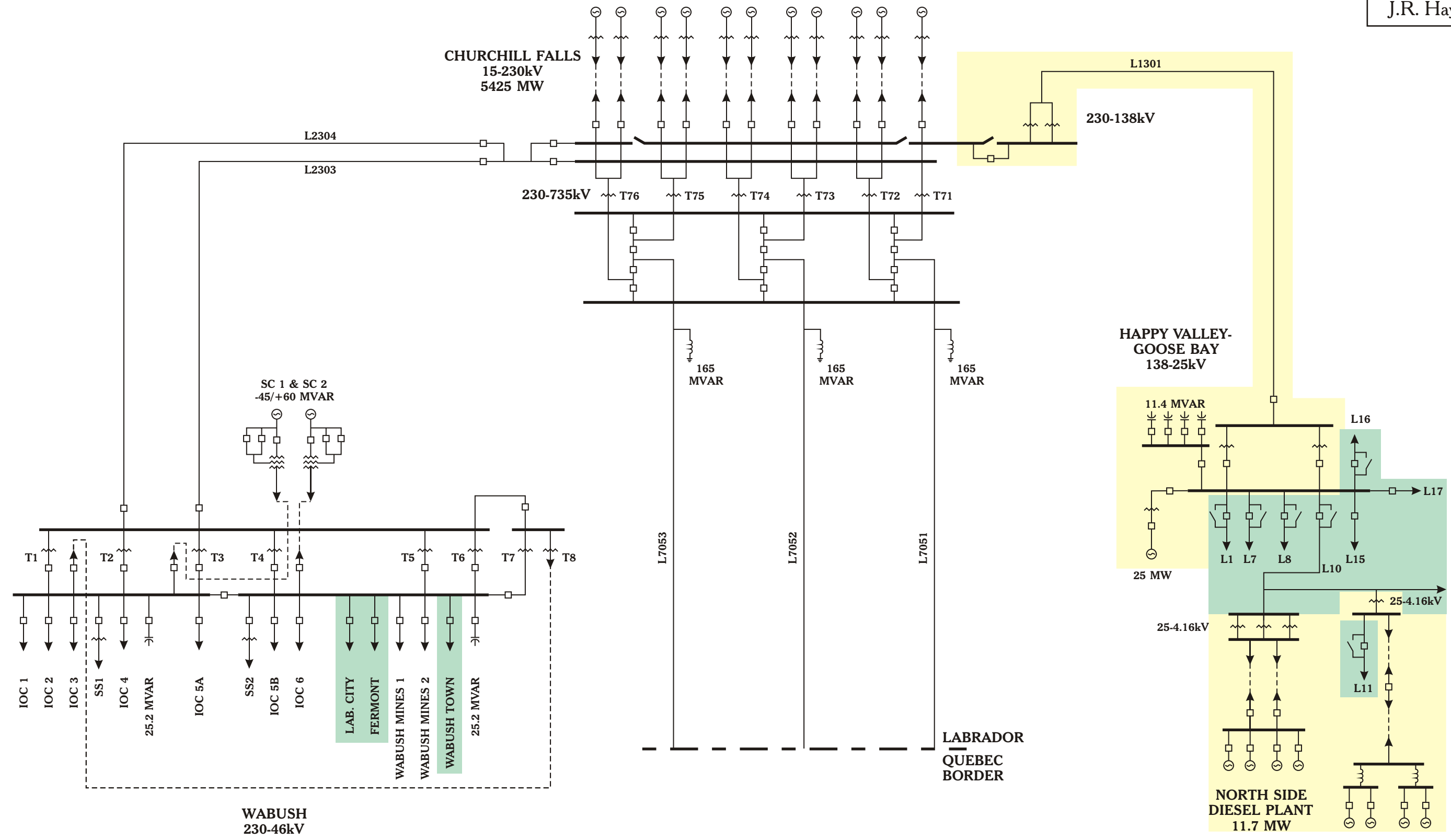
**Newfoundland And Labrador Hydro
Long-term Planning Load Forecast
Demand and Energy Requirements
Total Island Interconnected System**

| <u>Year</u> | <u>MW</u> | <u>GWh</u> |
|------------------------------|------------------|-------------------|
| 2001 Forecast ⁽¹⁾ | 1,576 | 8,240 |
| 2001 Actual | 1,435 | 7,939 |
| 2002 Forecast ⁽¹⁾ | 1,602 | 8,316 |
| 2002 Actual | 1,592 | 8,221 |
| 2003 ⁽²⁾ | 1,578 | 8,441 |
| 2004 | 1,602 | 8,504 |
| 2005 | 1,607 | 8,512 |
| 2006 | 1,613 | 8,556 |
| 2007 | 1,624 | 8,606 |
| 2008 | 1,634 | 8,653 |
| 2009 | 1,643 | 8,716 |
| 2010 | 1,654 | 8,793 |
| 2011 | 1,666 | 8,865 |
| 2012 | 1,728 | 9,309 |

⁽¹⁾ Source: Long Term Planning Load Forecast 2001. Filed 2001.

⁽²⁾ Source: Long Term Planning Load Forecast 2003.





LEGEND

- | | |
|-----------------------|--------------------|
| ☉ - GENERATOR | ☐ - RECLOSER |
| ⚡ - TRANSFORMER | ⚡ - CAPACITOR BANK |
| ☐ - CIRCUIT BREAKER | ⚡ - SHUNT REACTOR |
| — - DISCONNECT SWITCH | — - CABLE |

PLANT ASSIGNMENTS

- | | |
|---|-----------------|
| ☐ | COMMON |
| ☐ | HYDRO RURAL |
| ☐ | OWNED BY OTHERS |



**Labrador Interconnected System
2004 Plant Assignment
(As Filed)**

