IN THE MATTER OF the *Public Utilities Ac*t, (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.

Prefiled Evidence and Exhibit of
Barry Perry and Lorne Henderson

NEWFOUNDLAND POWER
A FORTIS COMPANY

At the hearing into Newfoundland and Labrador Hydro's 2003 General Rate Application, Newfoundland Power's wholesale rate structure evidence will be adopted by Barry Perry, C.A., Vice President, Finance and Chief Financial Officer, Newfoundland Power Inc.; and Lorne Henderson, P. Eng., Superintendent, Rates & Operations, Newfoundland Power Inc.

Witness profiles for Barry Perry and Lorne Henderson follow.

Barry Perry, C.A.
Vice President, Finance & Chief Financial Officer
Newfoundland Power Inc.

Barry Perry joined Newfoundland Power in 2000 as Vice President, Finance and Chief Financial Officer.

Prior to 2000, Mr. Perry was Vice President-Treasurer with Abitibi-Consolidated Inc. (Abitibi), Quebec. Mr. Perry commenced employment with Abitibi as Chief Financial Officer of the Company's International Business Unit which included the two newsprint mills and woodland operations located in Newfoundland. Mr. Perry has also served as Director, Financial Reporting for Abitibi.

Prior to joining Abitibi-Consolidated Inc., Mr. Perry was Corporate Controller of Newfoundland Processing Inc., the owner/operator of the Come by Chance Oil Refinery.

Mr. Perry obtained his Chartered Accountant designation while working with Ernst & Young Chartered Accountants in St. John's, Newfoundland.

Mr. Perry is a graduate of Memorial University of Newfoundland (Bachelor of Commerce (Honours), 1986) and is a member of the Institute of Chartered Accountants of Newfoundland.

Lorne Henderson, P. Eng.
Superintendent, Rates & Operations
Newfoundland Power Inc.

Lorne Henderson joined Newfoundland Power in 1985 as an Electrical Engineer and has served in progressively more senior positions within the corporation since that time.

Mr. Henderson is a senior member of the team responsible for operational planning and co-ordination across the Company. His responsibilities include cost of service and rate design.

Previously, he was responsible for all aspects of engineering in Newfoundland Power's St. John's Region, which at the time delivered over 45 per cent of the electrical energy sold by the Company. Mr. Henderson has served Newfoundland Power in electrical system planning for 8 years, specializing in the economic and engineering analysis of capital expenditures and system operations; and in regulatory affairs for 3 years, specializing in cost of service analysis.

Mr. Henderson has testified before the Board of Commissioners of Public Utilities of Newfoundland and Labrador on matters relating to financial analysis and consumer rates.

Mr. Henderson is a graduate of Memorial University (B.Eng. (Elec.) 1985) and is a member of the Association of Professional Engineers and Geoscientists of Newfoundland.

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SUMMARY OF EVIDENCE

The rate design method followed by Newfoundland Power:

- appropriately focuses on the Island Interconnected System costs as opposed to the wholesale power rate used by Hydro to recover its costs from Newfoundland Power;

- balances the need to ensure that prices reasonably reflect a fair allocation of Island Interconnected System costs with the need to ensure overall efficient use of the Island Interconnected System, and

- results in rate stability and predictability for customers.

The proposed demand/energy rate (the "Sample Rate") creates an incentive for Newfoundland Power to modify its seasonal storage patterns to minimize purchased power expense. This change in seasonal storage pattern would increase the likelihood of spillage and increase the overall cost of providing service to the Island Interconnected System. A rate that promotes inefficient use of resources should not be implemented.

The Sample Rate significantly increases the potential financial impact of forecast variances. The energy forecast variance could potentially result in $3.3 million of reduced contribution. The demand forecast variance could potentially result in $5.0 million of additional purchased power expense. Consequently, there is a combined risk that forecast variances under the Sample Rate could result in an $8.3 million decrease in pre-tax earnings. Forecast variances under the existing energy-only rate potentially have a negative effect on pre-tax earnings of $0.9 million, compared with $8.3 million under the Sample Rate.

The Sample Rate significantly increases volatility in Newfoundland Power's rate of return on rate base. Forecast variations under the Sample Rate could negatively impact after tax earnings to Newfoundland Power by $5.4 million. The rate of return on rate base could be affected by +47 basis points to –77 basis points. This exceeds the ± 18 basis point range allowed by the Board. Returns above the allowed range would result in excess earnings being credited to the Excess Earnings Account. Returns below the range would precipitate an Application for rate relief. Rate instability would result. This is inconsistent with the principles of rate stability and predictability.

There should be no change in the wholesale rate structure that creates additional earnings volatility and rate instability in the absence of material customer benefits.

The Sample Rate will not benefit customers. The Sample Rate will not influence retail rate design, promotes less efficient use of generation resources, is not expected to promote cost effective demand management, and reduces rate stability.

Newfoundland Power does not support the Sample Rate outlined in Hydro's 2004 General Rate Application and believes that continuation of the existing energy-only rate structure to Newfoundland Power is most appropriate.

1. RETAIL ELECTRICITY PRICING

The rate design method followed by Newfoundland Power:

- ***appropriately focuses on the Island Interconnected System costs as opposed to the wholesale power rate used by Hydro to recover its costs from Newfoundland Power;***
- ***balances the need to ensure that prices reasonably reflect a fair allocation of Island Interconnected System costs with the need to ensure overall efficient use of the Island Interconnected System, and***
- ***results in rate stability and predictability for customers.***

1.1 General

1.1.1 The Customers Served

Newfoundland Power is the largest distributor of electricity on the Island Interconnected System and is responsible for retail pricing to its approximately 220,000 customers. Hydro's approximately 22,000 rural customers on the Island Interconnected System are served by rates which are the same as those of Newfoundland Power's customers.

Newfoundland Power is predominantly a retailer and distributor of electricity. The customers served by Newfoundland Power are predominantly residential in nature. Table 1 indicates the composition of Newfoundland Power's customer base.

Table 1
Newfoundland Power Customer Base
2004 Forecast

Rate Class	Type of Service	No. of Customers	% of Total Customers
1.1	Domestic	192,050	86.3 %
2.1	General Service 0-10 kW	11,889	5.3 %
2.2	General Service 10-100 kW (110 kVA)	7,954	3.6 %
2.3	General Service 110- 1000 kVA	1,016	0.5 %
2.4	General Service 1000 kVA and Over	53	- %
4.1	Street and Area Lighting Service	9,546	4.3 %
Total Customers		**222,508**	**100.0 %**

Table 2 below illustrates the proportion of Newfoundland Power's forecast energy sales for 2004 by customer rate class.

Table 2
Energy Sales by Customer Rate Class
2004 Forecast

Rate Class	Type of Service	Energy Sales (GWh)	% of Total Energy Sales
1.1	Domestic	2,917.2	59.2 %
2.1	General Service 0-10 kW	99.2	2.0 %
2.2	General Service 10-100 kW (110 kVA)	599.4	12.2 %
2.3	General Service 110- 1000 kVA	866.0	17.6 %
2.4	General Service 1000 kVA and Over	409.7	8.3 %
4.1	Street and Area Lighting Service	35.5	0.7 %
Total Energy Sales		**4,927.0**	**100.0 %**

Table 2 shows that Domestic customers account for approximately 60% of Newfoundland Power's annual energy requirements. Approximately half of Newfoundland Power's Domestic customers use electric heat as their primary heating system.

1.1.2 Rate Structures

Domestic customers are served by a rate design that includes both a basic customer charge and a single energy charge (referred to as an energy-only rate).

General Service customers with monthly demand less than 10 kW are also served by a rate design that includes both a basic customer charge and a single energy charge. The use of an energy-only rate for Domestic customers and small General Service customers is a common billing practice among Canadian utilities.

General Service customers with demands of 10 kW or greater are served by rates that include a basic customer charge, a demand charge and an energy charge (referred to as a demand/energy rate). Approximately 25% of the revenue from these customers comes directly from demand charges. A breakdown of Newfoundland Power customers served by each rate (exclusive of Street and Area Lighting Service) is shown in Table 3.

Table 3
Customers Served by Rate Structure
2004 Forecast

Rate Design	No. of Customers	% of Total Customers
Energy-Only (Rates 1.1 and 2.1)	203,939	95.8%
Demand/Energy (Rates 2.2, 2.3 and 2.4)	9,023	4.2%

The distribution of Newfoundland Power's revenue by type of charge is provided in Table 4.

Table 4
Revenue by Type of Charge
2004 Forecast

Type of Charge	Revenue ($000)	% of Total Revenue
Energy Charges	294,916	77.3%
Demand Charges	34,753	9.1%
Customer Charges	38,693	10.1%
Street and Area Lighting	11,121	2.9%
Forfeited Discounts	2,205	0.6%
Total Customers	**381,688**	**100.0%**

Newfoundland Power recovers approximately 77% of its cost of service through energy charges. Consequently, Newfoundland Power's revenue pattern follows very closely the energy usage pattern of its customers.

Hydro currently charges Newfoundland Power an energy-only rate for purchased power. As a result, Newfoundland Power's purchased power expense also tracks the energy usage pattern of its customers.

1.2 Retail Rates on the Island Interconnected System

Newfoundland Power's retail rates are applied to all retail customers on the Island Interconnected System other than Industrial Customers. Newfoundland Power's rate design focuses on total system costs including both Hydro's costs and Newfoundland Power's costs.

A description of Newfoundland Power's current rate classes is found in Exhibit LCH-1**.**

Two of the main inputs in developing rates for Newfoundland Power's customers are embedded costs, as reflected in the Cost of Service Study, and the electrical system's short-run marginal cost.

1.2.1 Embedded Cost of Service

Embedded costs are used to ensure the fairness of the rate designs and to ensure that sufficient revenue is collected to achieve an appropriate return on investment. Rates should be fair in the apportionment of the total cost of service among customer classes and should avoid undue discrimination (see Mr. Brockman's Evidence at page 4).

An embedded Cost of Service Study apportions the utility's total revenue requirement among the customer classes. Fairness is determined by comparing the cost allocated to each customer class with the revenue collected from each class. The principles and practices associated with cost of service studies are provided in Mr. Brockman's Exhibit LBB-2.

Hydro's Cost of Service Study properly accounts for the demand and energy of all Hydro's customers and allocates the amount of demand related costs, energy related costs, specifically assigned costs and rural deficit to Newfoundland Power. These costs are then used by Newfoundland Power as an input into its Cost of Service Study. Using Hydro's breakdown of costs ensures fairness in allocating Newfoundland Power's purchased power expense to its customers.

1.2.2 Short-Run Marginal Costs

Newfoundland Power purchases approximately 90% of its electricity requirements from Hydro. Newfoundland Power's remaining electricity requirement primarily comes from its hydraulic sources that are operated to maximize annual production[1]. As a consequence, Newfoundland Power will need to purchase more or less energy from Hydro as its customers' energy requirements change. Increasing or decreasing energy purchases requires Hydro to increase or decrease its production at the Holyrood Generating Plant. This means that the short-run marginal cost of the next kWh of consumption by Newfoundland Power's customers is the variable cost of production at Holyrood. The current estimated variable cost of production at Holyrood is 5.13 ¢/kWh[2].

The Island Interconnected System's short-run marginal cost is used to review the efficiency of Newfoundland Power's rate designs. Consistent with the efficiency principle, Newfoundland Power believes that it is important to price the tail block[3] energy rates to reflect the short-run marginal cost. Customers will then pay a price for energy that reflects the short-run marginal cost of producing that energy.

1.2.3 Rate Stability and Predictability

The Board has traditionally stressed stability, fairness and the absolute level of customer rates in its decisions. In addition, mechanisms such as Newfoundland Power's Weather Normalization

[1] The only exception is when Newfoundland Power's diesels or gas turbines are used to mitigate the impact on customers of outages on the transmission or distribution system, or used at the request of Hydro.
[2] See response to Request for Information NP-130 NLH.
[3] The tail block charge is the price for the last kWh of energy in a rate class. For example, the tail block rate for Newfoundland Power's current General Service Rate 2.2 is 4.675¢/kWh (includes RSA and MTA amounts) for all energy usage in excess of the first 150 kWh/kW of billing demand.

Reserve and Hydro's Rate Stabilization Plan ("RSP") have been established by the Board to provide rate stability and predictability to retail customers. The existence of these mechanisms also provides revenue stability to Newfoundland Power and Hydro. These mechanisms also benefit customers by avoiding costly regulatory proceedings due to events beyond the control of either Newfoundland Power or Hydro.

1.2.4 Summary

Newfoundland Power's retail rates are developed based on the overall costs on the Island Interconnected System. This ensures that prices reasonably reflect a fair allocation of the costs of the Island Interconnected System. It also strikes a reasonable balance between fairness and the need to ensure overall efficient use of the Island Interconnected System.

Newfoundland Power's current retail rate design, along with the operation of reserves (e.g., RSP, and the Weather Normalization Reserve), has resulted in rate stability and predictability for customers on the Island Interconnected System.

2. EFFICIENT USE OF HYDRAULIC RESOURCES

The proposed Sample Rate creates an incentive for Newfoundland Power to modify its seasonal storage patterns to minimize purchased power expense. This change in seasonal storage pattern would increase the likelihood of spillage and increase the overall cost of providing service to the Island Interconnected System. A rate that promotes inefficient use of resources should not be implemented.

2.1 General

Operational coordination between Hydro and Newfoundland Power is intended to ensure that hydraulic generation is optimized and to avoid spillage in order to minimize thermal production.

Hydro directs the operation of Newfoundland Power's generating plants when required to ensure sufficient on-line generation on the Island Interconnected System. This maximizes the efficient use of generation on the system. Operational coordination results in Newfoundland Power not producing electricity from its diesel and gas turbine generation when there is lower cost production available elsewhere on the system. The coordination of generation is being achieved without any price incentives from Hydro to Newfoundland Power.

2.2 Impact of Sample Rate

The Cost of Service Evidence presented by Robert Greneman discusses the treatment of Newfoundland Power Generation. The Evidence at page 17, beginning at line 2 states:

"Under the current energy-only rate form, Newfoundland Power can dispatch its hydraulic and thermal units in the most efficient manner with virtually no consequence with respect to billing from Hydro. However, the establishment of a demand component in the rate may steer Newfoundland Power to operating its units in a less energy efficient fashion…"

In Section 2.2.3 of his Evidence, Mr. Greneman recommends an option where the wholesale rate is designed to be "generation-independent". This option determines Newfoundland Power's billing demand based on its peak native load less a credit for its generation. However, the recommended option will not make the rate design "generation-independent" if the energy pricing signal encourages Newfoundland Power to change the management of its hydraulic resources.

In Stone and Webster's report, the Sample Rate proposed contains a two block energy charge as follows:

Energy Charge for the first 420,000,000 kWh................$0.0344/kWh

Energy Charge for all usage over 420,000,000 kWh.......$0.0470/kWh

In response to NP-128 NLH, Hydro indicates that during the months of April to November Newfoundland Power has historically had no energy purchases that exceeded the level of energy in the first block of the Sample Rate. Newfoundland Power's hydraulic generation during those months would reduce purchased power costs by $0.0344/kWh, while in the months of December to March, Newfoundland Power's production would reduce purchased power costs by $0.0470/kWh. As a result, Newfoundland Power could potentially reduce annual purchased power expense by shifting production from the April - November period to the December – March period. This would require storage of additional water in the months prior to December. Additional storage of water increases the risk of spill. Any increase in spill as a result of shifting production wastes energy by reducing Newfoundland Power's annual hydraulic production. The result would be an increase in annual overall system costs by increasing energy purchases and consequently increasing production at the Holyrood Generating Station.

Rates should promote efficiency in the operation of the Island Interconnected System. A rate structure which creates a disincentive for the efficient operation of the system generally, or for the efficient use of hydraulic resources in particular, is inappropriate.

3. NEWFOUNDLAND POWER'S PURCHASED POWER EXPENSE

The Sample Rate significantly increases the potential financial impact of forecast variances. The energy forecast variance could potentially result in $3.3 million of reduced contribution. The demand forecast variance could potentially result in $5.0 million of additional purchased power expense. Consequently, there is a combined risk that forecast variances under the Sample Rate could result in an $8.3 million decrease in pre-tax earnings. Forecast variances under the existing energy-only rate potentially have a negative effect on pre-tax earnings of $0.9 million, compared with $8.3 million under the Sample Rate.

3.1 General

Newfoundland Power purchases from Hydro approximately 90 per cent of the energy it sells to its customers. Newfoundland Power's purchased power expense is currently determined based on the amount of energy purchased and accounts for approximately 60 per cent of the Company's cost of service. For electrical distribution companies, changes in purchased power expense are typically passed on to customers through an adjustment to retail rates.

The existing energy-only purchased power rate to Newfoundland Power allows Hydro to recover its cost of serving Newfoundland Power and provides a high degree of certainty with respect to Newfoundland Power's purchased power expense.

3.2 Purchased Power Expense Based on an Energy-Only Wholesale Rate

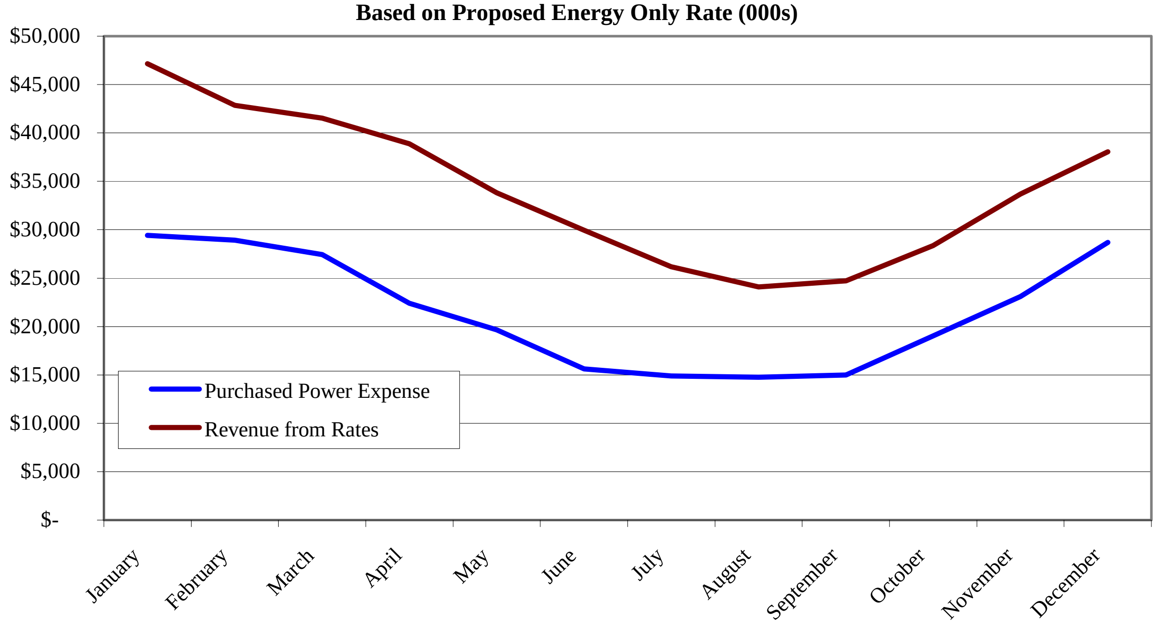
3.2.1 The Energy-Only Wholesale Rate

Newfoundland Power is currently billed by Hydro using an energy-only rate. Through its cost of service study, Hydro uses Newfoundland Power's forecast peak demand and energy requirements to determine the annual costs (i.e., demand, energy and specifically assigned costs) to be recovered from Newfoundland Power. The test year cost of serving Newfoundland Power combined with the portion of the test year rural deficit allocated to Newfoundland Power determines Hydro's total revenue requirement from Newfoundland Power. The total revenue requirement from Newfoundland Power is then divided by the test year forecast energy sales to Newfoundland Power to determine the energy-only wholesale rate.

The energy-only wholesale rate from Hydro combined with the high percentage of Newfoundland Power's revenue recovered through energy charges results in a strong relationship between revenue and purchased power expense[4].

This relationship is shown in Chart 1 below.

Chart 1
2004 Forecast Revenue and Purchased Power Expense
Based on Proposed Energy Only Rate (000s)



[4] Because the Sample Rate provided by Mr. Greneman was based on a comparable energy-only rate of 54.60 mills, which Hydro estimated would result in a 7.6% increase in retail rates, the Evidence of Newfoundland Power has not been changed to reflect the revised proposed mill rate of 54.45 mills.

This strong relationship reduces the impact of forecast variances. If Newfoundland Power's energy sales exceed forecast, then purchased power expense will also exceed forecast. Similarly, if Newfoundland Power's energy sales are lower than forecast, then purchased power expense will also be lower than forecast.

3.2.2 Contribution Margin: Energy-Only Wholesale Rate

The difference between the revenue derived from the sale of purchased power and the cost of that power is referred to as contribution. Variances from forecast electricity sales impact the contribution. The degree of impact depends upon the rate class or classes which experience the variance. Contribution when expressed in terms of ¢/kWh is referred to as contribution margin. The contribution margin for each rate class is calculated by subtracting the purchased power cost per kWh from the kWh revenue.

The difference between the projected tail block energy rate[5] for each of Newfoundland Power's customer classes and the filed energy-only wholesale rate[6] from Hydro as expressed in ¢ per kWh is shown in Table 5 below.

[5] The tail-block energy rates assume Hydro's original estimated increase of 7.6% is applied to all customer classes and all rate components. Excludes adjustments for Municipal Taxes and Rate Stabilization.
[6] The energy-only rate as per Hydro's original filing.

Table 5
Newfoundland Power
Contribution Margin by Customer Class
(¢ per kWh)

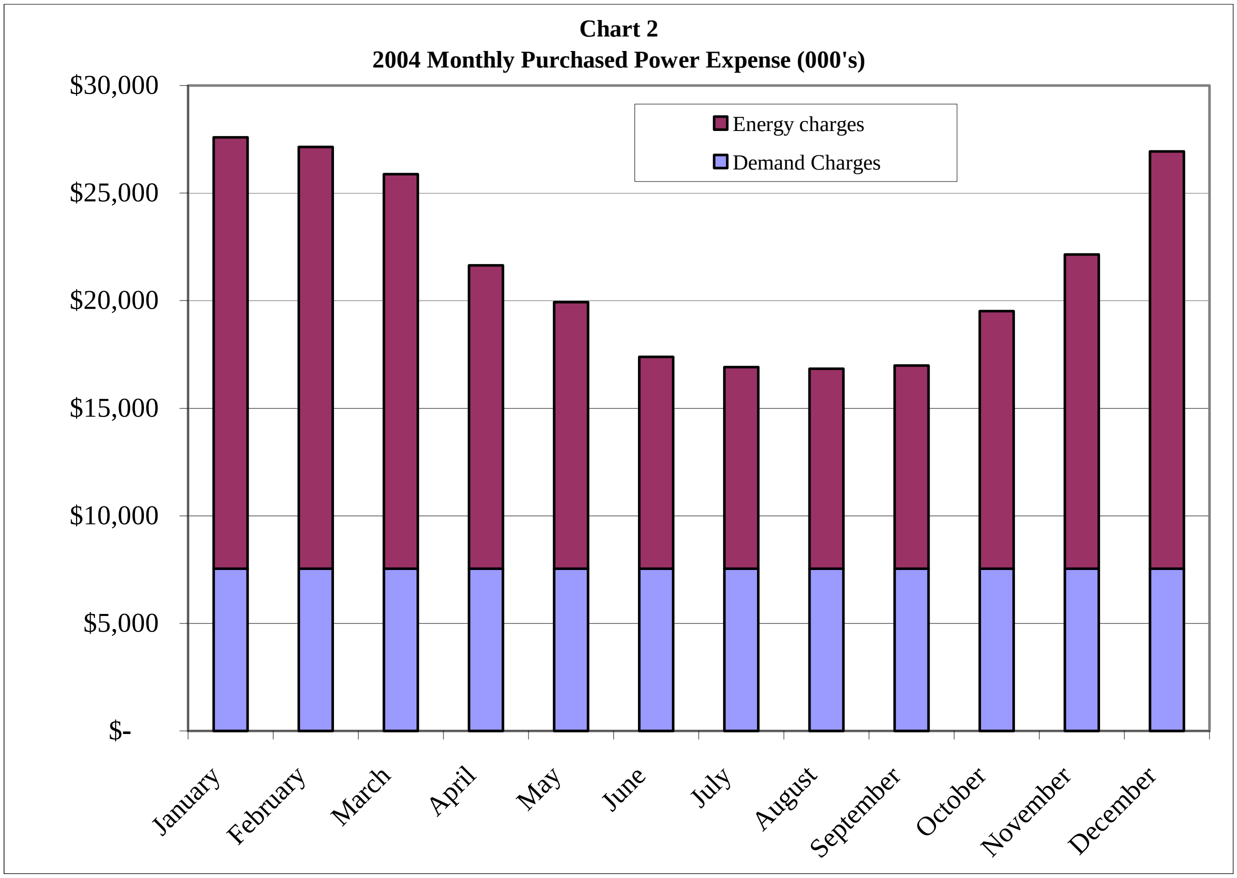
Rate Class	Tail Block Energy Rate	Energy-Only Wholesale Rate	Contribution Margin
Rate 1.1 Domestic	7.191	5.460	1.731
Rate 2.1 General Service 0-10 kW	9.506	5.460	4.046
Rate 2.2 General Service 10-100 kW	4.555	5.460	-0.905
Rate 2.3 General Service 110-1000 kVA	4.437	5.460	-1.023
Rate 2.4 General Service 1000 kVA and Over	4.332	5.460	-1.128
Weighted Average (based on energy sales)	6.188	5.460	0.728

Table 5 indicates that when Newfoundland Power's energy sales vary from forecast, Newfoundland Power's contribution will, on average, vary by 0.728 cents for each kWh variance from forecast.

3.3 Purchased Power Expense on the Sample Rate

The Sample Rate proposes to introduce a demand component to Newfoundland Power's purchased power expense in addition to the current energy component.

Chart 2 below provides Newfoundland Power's monthly forecast of purchased power expense for 2004 based on the Sample Rate.



3.3.1 Contribution Margin: The Sample Rate

The Sample Rate contains a two-block energy charge, each component of which is less than the current energy-only rate. The average energy charge in the Sample Rate is 3.55 ¢ per kWh (see response to Request for Information NP 129 NLH).

Table 6 indicates the contribution margin for each customer class and the weighted average contribution margin using a projection of the tail block rates compared to the average energy charge in Hydro's Sample Rate.

Table 6
Newfoundland Power
Contribution Margin By Customer Class
(¢ per kWh)

Rate Class	Tail Block Energy Rate	Sample Rate Average Energy Charge	Contribution Margin
Rate 1.1 Domestic	7.191	3.550	3.641
Rate 2.1 General Service 0-10 kW	9.506	3.550	5.956
Rate 2.2 General Service 10-100 kW	4.555	3.550	1.005
Rate 2.3 General Service 110-1000 kVA	4.437	3.550	0.887
Rate 2.4 General Service 1000 kVA and Over	4.332	3.550	0.782
Weighted Average (based on energy sales)	6.188	3.550	2.638

Table 6 indicates that when Newfoundland Power's energy sales vary from forecast, Newfoundland Power's contribution will vary, on average, by 2.638 cents for each kWh variance from forecast. The average variation in contribution under the Sample Rate is approximately 3.6 times as much as under the existing energy-only rate structure.

As explained further in sections 4.2 and 4.3, the change in the contribution margin from 0.728 ¢/kWh to 2.638 ¢/kWh increases the potential variation in forecast contribution from $0.9 million under the energy-only rate to $3.3 million under the Sample Rate.

3.3.2 Relationship of Demand Revenue to Potential Demand Cost

The Sample Rate proposes to recover embedded demand costs of approximately $90 million, which are derived from Hydro's cost of service study, through a demand charge to Newfoundland Power. Hydro has taken the $90 million and divided it by the Sample Rate forecast billing demand assigned to Newfoundland Power (based on a single peak) to arrive at an annual demand charge of $84 per kW, or $7.00 per kW per month ($84/12).

As indicated in Table 4 of this evidence, approximately $35 million or 9% of Newfoundland Power's revenue from electrical rates is collected through demand charges to its General Service customers.

Chart 3 shows that, for the period 1993 to 2002, the annual percentage change in the billing demands for Newfoundland Power customers served under demand energy rates exhibited no relationship to the annual percentage change in Newfoundland Power's normalized native peak demand.

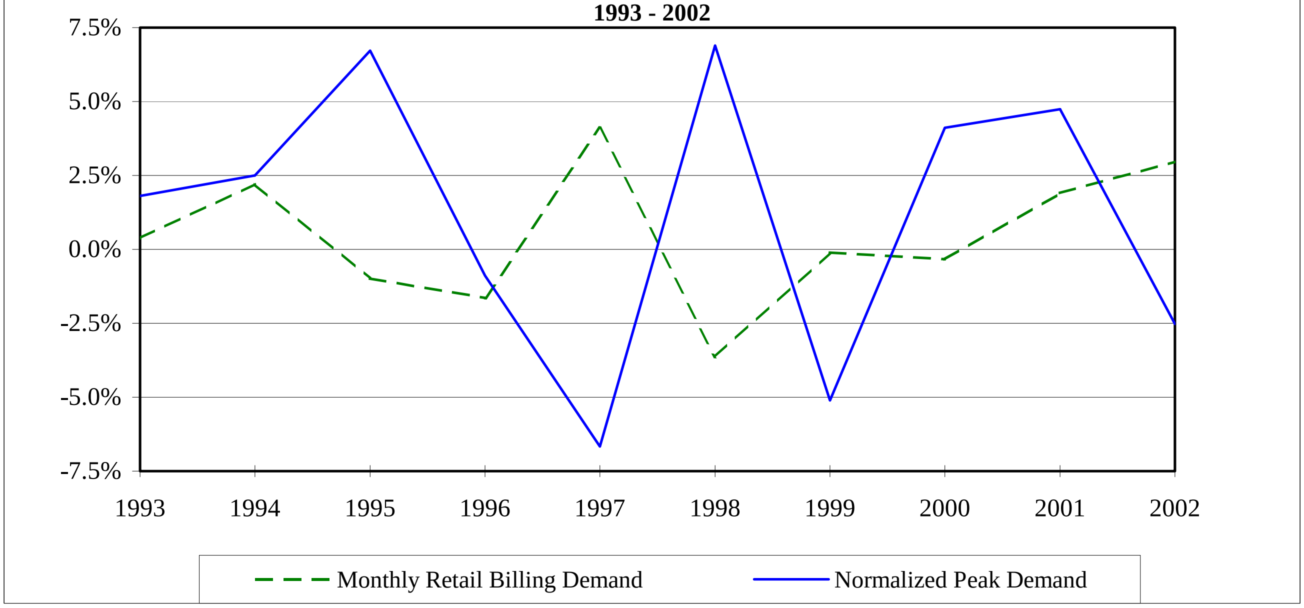


Chart 3
Annual Changes in Billing Demand and Normalized Peak Demand
1993 - 2002

Chart 3 indicates that a change in purchased power expense as a result of the normalized peak demand requirement (Newfoundland Power's normalized native peak demand[7]) differing from

[7] Maximum native load adjusted for weather according to Hydro's weather adjustment model. See NP-117 NLH. Native load is the load supplied by Hydro to Newfoundland Power in any hour plus the total generation by Newfoundland Power during that hour.

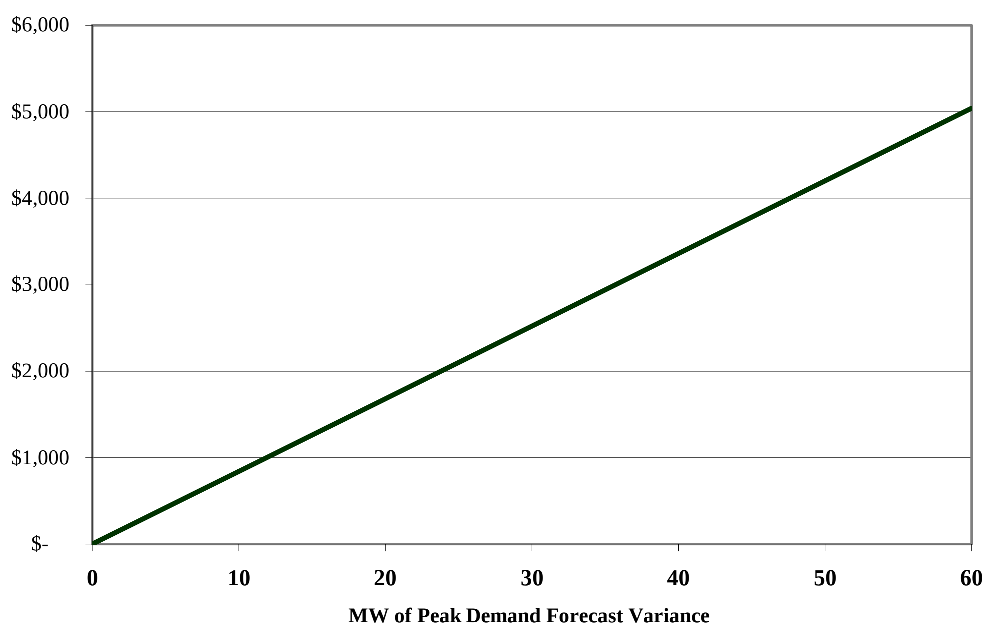
forecast will not be offset by a corresponding change in demand revenue from Newfoundland Power's customers.

3.3.3 Impact of Demand Forecast Variances on Purchased Power Expense

With an energy-only rate, Newfoundland Power's purchased power expense is not subject to volatility as a result of peak demand forecast variances. The introduction of an $84 per kW annual demand charge based on a single peak creates a significant degree of uncertainty in forecasting purchased power expense. Chart 4 illustrates the potential impact of peak demand forecast variances on annual purchased power expense.

Under the Sample Rate, if Newfoundland Power's normalized peak demand exceeds forecast by only 1% (11.8 MW), the Company will incur approximately $1 million in additional purchased power expense.

Chart 4
Impact of Peak Demand Forecast Variance on Purchased Power Expense ($000's)



Experience has shown that Newfoundland Power's peak demand is more difficult to forecast than Newfoundland Power's energy requirements. As indicated in response to PUB-151 NLH, there is a potential forecast variance of ±5% in Newfoundland Power's normalized peak demand. If Newfoundland Power's normalized peak demand exceeds forecast by 5% in a single year, the Company's purchased power expense under the Sample Rate will exceed forecast in that year by approximately $5 million. This additional cost of providing service would not be reflected in Newfoundland Power's customer rates unless customer rates are modified upon Application to the Board.

On the other hand, Hydro has proposed a minimum billing demand to Newfoundland Power of 98% of the test year forecast which reduces Hydro's revenue risk should Newfoundland Power's normalized peak demand in a year be below forecast by more than 2%. Therefore, if Newfoundland Power's normalized peak demand is 5% below forecast, its purchased power expense will be reduced by only $1.8 million (NP-152 NLH) and not $5 million as would otherwise be the case if this minimum billing demand did not exist.

The lack of an historical relationship between Newfoundland Power's energy requirements and its system peak also highlights another element of risk associated with the Sample Rate.

Chart 5 illustrates that there is no true relationship between the annual percentage change in Newfoundland Power's normalized peak demand and the annual change in Newfoundland Power's normalized energy requirements[8].

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[8] Includes energy purchased from Hydro and energy produced by Newfoundland Power.

Chart 5
Annual % Change in Newfoundland Power's Peak Demand and Energy Requirements

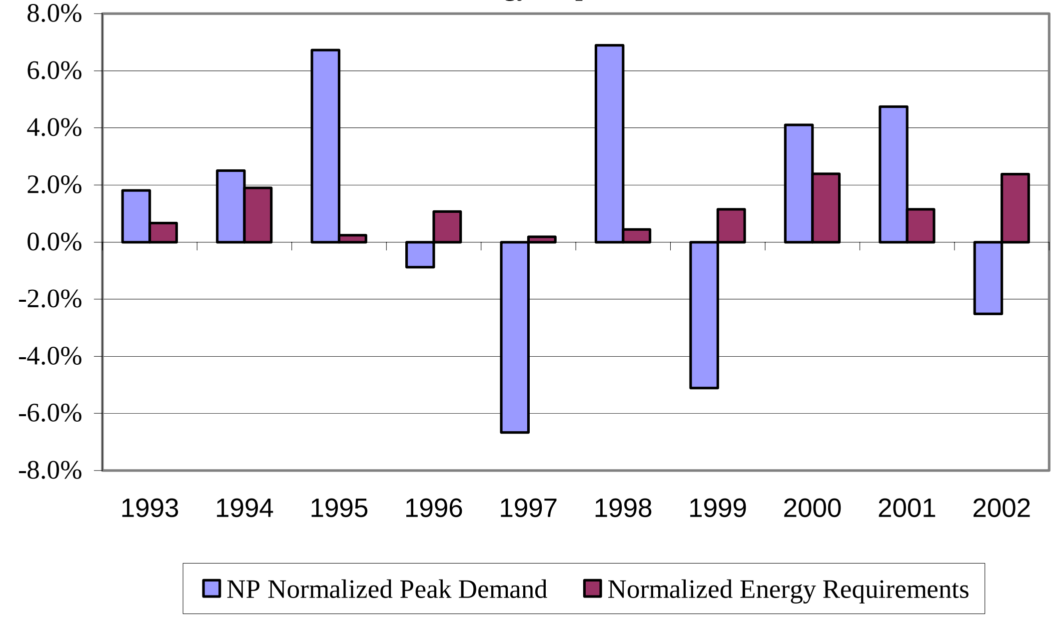


Chart 5 indicates that in 4 of the last 10 years, changes in normalized peak demand and changes in normalized energy requirements moved in opposite directions. This type of experience indicates the potential for additive effects. In other words, there is a risk that in the same year, energy sales could be below forecast and normalized peak demand could be above forecast.

As explained further in section 4, the energy forecast variance under the Sample Rate could potentially result in $3.3 million of reduced contribution. The demand forecast variance under the Sample Rate could potentially result in $5.0 million of additional purchased power expense. Consequently, there is a combined risk that forecast variances under the Sample Rate could result in an $8.3 million decrease in pre-tax earnings. Forecast variances under the existing energy-only rate potentially have a negative effect on pre-tax earnings of $0.9 million, compared with $8.3 million under the Sample Rate.

4. VOLATILTY OF RETURN ON RATE BASE

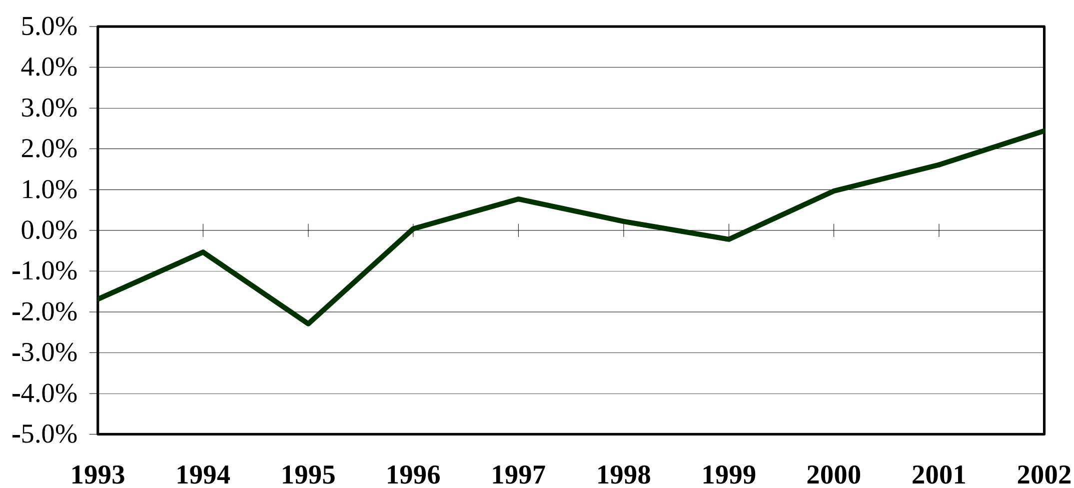
The Sample Rate significantly increases volatility in Newfoundland Power's rate of return on rate base. Forecast variations under the Sample Rate could negatively impact after tax earnings to Newfoundland Power by $5.4 million. The rate of return on rate base could be affected by +47 basis points to –77 basis points. This exceeds the ±18 basis point range allowed by the Board. Returns above the allowed range would result in excess earnings being credited to the Excess Earnings Account. Returns below the range would precipitate an application for rate relief. Rate instability would result. This is inconsistent with the principles of rate stability and predictability.

There should be no change in the wholesale rate structure that creates additional earnings volatility and rate instability in the absence of material customer benefits.

4.1 Historical Energy Forecast Variances

Chart 6 indicates the historical forecast variances in energy requirements experienced by Newfoundland Power from 1993 to 2002.

Chart 6
Annual Forecast Variance in Energy Requirements
1993 - 2002



As shown in Chart 6, Newfoundland Power's energy requirement forecast variances from 1993 to 2002 have been within the range of ±2.4%. Given Newfoundland Power's 2004 energy requirement forecast of 5,198.6 GWh, the potential energy forecast variance could be as much as ±125 GWh.

As discussed in Sections 3.2.2 and 3.3.1 of this Evidence, energy requirement forecast variances impact Newfoundland Power's contribution. Volatility in contribution in turn impacts earnings.

4.2 Earnings Volatility: Energy-Only Wholesale Rate

As discussed in Section 3.2.2 of this Evidence, energy forecast variances under an energy-only rate result in estimated variability in Newfoundland Power's 2004 contribution by an average of 0.728 cents for each kWh variance.

Assuming a potential energy forecast variance of ±125 GWh for 2004, a potential change in contribution exists under the energy-only rate of ±$0.9 million. This in turn translates into a potential after tax earnings impact of ±$0.6 million.

4.3 Earnings Volatility: Sample Rate

4.3.1 Earnings Volatility due to Energy Forecast Variances: Sample Rate

As discussed in Section 3.3.1 of this Evidence, energy forecast variances under the Sample Rate would affect Newfoundland Power's 2004 earnings based on an average contribution margin of 2.638 cents for each kWh variance.

Assuming a potential energy forecast variance of ±125 GWh for 2004, a potential change in contribution exists under the Sample Rate of ±$3.3 million. This in turn translates into a potential after tax earnings impact of ±$2.1 million.

4.3.2 Earnings Volatility due to Peak Demand Forecast Variances: Sample Rate

Section 3.3.3 of this Evidence discusses the impact of demand forecast variances on purchased power expense. The peak demand forecast variance under the Sample Rate introduces purchased power expense volatility ranging from a potential $1.8 million reduction in purchased power expense to a potential $5 million increase in purchased power expense. A $1.8 million reduction in purchased power expense translates into an after tax earnings increase of $1.2 million while a $5.0 million increase in purchased power expense translates to an after tax earnings decrease of $3.3 million.

4.3.3 Total Earnings Volatility: Sample Rate

As indicated in Section 3.3.3 of this Evidence, purchased power expense volatility based on a demand-energy rate can be additive. Therefore, there is a risk that in the same year energy sales could be below forecast and billing demand could be above forecast. Under the Sample Rate, this could potentially increase earnings volatility from ±$0.6 million under the Energy-Only Rate to a range of +$3.3 million to -$5.4 million.

The elements of the change in potential risk are provided in Table 7.

Table 7
Newfoundland Power
Summary of Potential Change in Earnings
(In millions)

	Energy-Only Rate	Sample Rate	
	Earnings Gain/Loss	**Earnings Gain**	**Earnings Loss**
Energy Forecast Variance	±$0.6	$2.1	$2.1
Peak Demand Forecast Variance	$0.0	$1.2	$3.3
Total	**±$0.6**	**$3.3**	**$5.4**

4.4 Return on Rate Base

Newfoundland Power is regulated based on an allowed range of rate of return on rate base. Newfoundland Power's 2004 rates are currently set based on a rate of return on rate base of 8.91%, within an allowed range of ±18 basis points (8.73% to 9.09%).

A $70,000 change in after-tax earnings equates to approximately 1 basis point change in the rate of return on rate base. Consequently, under the Sample Rate earnings volatility of +$3.3 million to -$5.4 million results in volatility in the rate of return on rate base from +47 basis points to –77 basis points, as shown in Table 8.

Table 8
Newfoundland Power
Summary of Potential Change in Rate of Return on Rate Base
(Basis Points)

	Energy-Only Rate	Sample Rate	
	Increase/Decrease	**Increase**	**Decrease**
Energy Forecast Variance	±9	+30	-30
Peak Demand Forecast Variance	±0	+17	-47
Total	**±9**	**+47**	**-77**

Volatility in the rate of return on rate base ranging from +47 basis points to –77 basis points would drive the rate of return on rate base outside the allowed range. This level of volatility would reduce the level of rate stability that customers have experienced under the energy-only rate structure.

4.5 Conclusion

Newfoundland Power's customer rates for 2004 are set to provide a revenue requirement which includes a 8.91% rate of return on rate base. The range of rate of return on rate base is ±18 basis points (or 8.73% to 9.09%).

Energy sales forecast variances under the existing energy-only rate structure result in volatility of approximately ±9 basis points in the rate of return on rate base, and therefore alone would not result in Newfoundland Power going outside the allowed range. There is no earnings volatility or uncertainty under the existing energy-only rate structure related to Newfoundland Power's peak demand forecast.

The Sample Rate structure introduces increased earnings volatility and uncertainty for Newfoundland Power. Under the Sample Rate, the potential for volatility in the rate of return on rate base related to Newfoundland Power's energy sales forecast variances increases from ±9 to ±30 basis points. In addition, the introduction of the proposed demand charge in the Sample Rate to Newfoundland Power increases the potential variance in the rate of return on rate base by a further +17 basis points to –47 basis points. The combined effect is a potential variation in the rate of return on rate base from basis +47 points to –77 basis points. Under the Sample Rate, forecast variances in one or both of peak demand or energy sales can result in Newfoundland Power's rate of return on rate base being above or below the approved range.

Newfoundland Power cannot exceed the maximum allowed rate of return on rate base since all excess earnings must be credited to the Excess Earnings Account and dealt with as directed by the Board. However, Newfoundland Power is not guaranteed a minimum rate of return on rate base.

The Sample Rate results in additional rate instability. Under the Sample Rate, Newfoundland Power would have to apply for rate relief if either:

(i) the peak demand experienced by Newfoundland Power in the five month period beginning in November of the preceding year and ending in March of the current year materially exceeds the forecast peak demand; or,

(ii) energy sales for the year are projected to be materially below forecast.

In addition, if Newfoundland Power's peak demand were to decline in a subsequent year, Newfoundland Power may then find itself in an excess earnings position. This would result in a rebate to customers and may suggest the need for a rate decrease. In the next following year, the situation could once again reverse and the Company may be forced to request another adjustment to customer rates.

Consequently, the results of implementing the Sample Rate are inconsistent with the principles of rate stability and predictability. In Newfoundland Power's opinion, the increased earnings volatility associated with the Sample Rate put forth in the Stone & Webster report is unacceptable.

Newfoundland Power's position is that there should be no change in the wholesale rate structure that creates additional earnings volatility and rate instability in the absence of material customer benefits.

5. IMPACTS ON CUSTOMERS OF IMPLEMENTING THE SAMPLE RATE

The Sample Rate will not benefit customers. The Sample Rate will not influence retail rate design, promotes less efficient use of generation resources, is not expected to promote cost effective demand management, and reduces rate stability.

Newfoundland Power does not support the Sample Rate outlined in Hydro's 2004 General Rate Application and believes that continuation of the existing energy-only rate structure to Newfoundland Power is most appropriate.

5.1 General

Newfoundland Power, with the assistance of Larry Brockman, has reviewed the potential customer impacts related to implementing the Sample Rate presented by Hydro. Newfoundland Power has concluded that the Sample Rate will not benefit customers.

5.2 Newfoundland Power's Retail Rates

Customers on the Island Interconnected System would benefit from a change to the Sample Rate if the change results in improved retail rate designs. As discussed in Section 1.2.5 of this Evidence, Newfoundland Power's retail rates are designed based on overall system costs. This ensures that rates fairly recover costs and reasonably promote the efficient use of electricity. Designing retail rates based on the purchased power rate is inappropriate. Retail rates are designed to reflect the Island Interconnected System costs. Therefore, the Sample Rate will not benefit customers because it will have no influence on retail rate design.

5.3 Efficient Operation of Newfoundland Power's Generation

Currently, under the energy-only rate and through coordination with Hydro, Newfoundland Power operates its generation in a manner that achieves a high degree of efficiency on the overall Island Interconnected system. The Sample Rate includes a recommendation to ensure Newfoundland Power's generation will be used efficiently in meeting system peak. However, the pricing signal provided by the Sample Rate creates a disincentive for the optimal use of Newfoundland Power's generation resources. Therefore, the Sample Rate will not benefit customers since it will not promote efficiency in the use of generation resources.

5.4 Improving Efficiency through Demand Management

Hydro has indicated that a reduction in system peak demand would not alter the timing for the next new generating plant addition. The Sample Rate provides a savings to Newfoundland Power of $84 per kW for its interruptible load at the same time that Hydro has discontinued paying $28.20 a kW for "Interruptible B" load from an Industrial customer. Mr. Brockman comments on the inconsistency of the price signal that can result when the embedded cost of demand is used in a rate to promote demand management. Hydro has agreed that DSM programs should be evaluated on a marginal cost basis[9]. No evidence has been submitted that there are any cost effective demand management programs that Newfoundland Power should pursue at this time. The Sample Rate is not expected to promote cost effective demand management programs.

[9] NP-167 NLH.

5.5 Rate Stability

As described in Section 4 of this Evidence, the earnings volatility introduced with the Sample Rate will result in increased rate instability for customers. This runs counter to the principles of rate stability and predictability.

5.6 Summary

The implementation of the Sample Rate will not benefit customers. The Sample Rate:

(1) will not influence retail rate design;

(2) promotes less efficient use of generation resources;

(3) is not expected to promote cost effective demand management; and

(4) reduces rate stability.

As a result, Newfoundland Power does not support the Sample Rate outlined in Hydro's 2004 General Rate Application and believes that continuation of the existing energy-only rate structure to Newfoundland Power is most appropriate.

Newfoundland Power Inc.
2003 NLH General Rate Application

Description of the Rate Structures Used by Newfoundland Power

The Company charges different rates to different customers depending on the customer class (class of service) to which each customer belongs. Customer classes are generally determined by grouping customers with similar load characteristics[1]. The Company has divided its service into six classes: Domestic; General Service 0–10 kW; General Service 10-100 kW (110 kVA); General Service 110 kVA (100 kW) - 1000 kVA; General Service 1000 kVA and over; and the Street and Area Lighting Class. The Company's classes are typical of other electric utilities where it is common to have domestic separate from general service and to have general service classes based on usage requirements (i.e., small, medium and large).

The development of Newfoundland Power's rate structures for each class of service is described in this Exhibit.

Domestic (Rate 1.1)

The Domestic rate includes a basic customer charge per month and a single energy charge that applies to all kWh usage for the month. The single charge for energy consumption has existed since 1983. The declining block rate previously used was eliminated in 1983 as it was viewed as promotional. The use of an energy-only rate for domestic customers is common throughout Canada.

[1] *The Art of Rate Design*, Walters, Frank S., Edison Electric Institute, 1984, Page 19.

Customers that do not qualify for the Domestic rate are billed on one of the general service rates. The rate that applies depends on the demand requirements of the customer.

General Service 0 – 10 kW (Rate 2.1)

Rate 2.1 applies to services that generally require small amounts of demand and energy. The average kWh usage for customers on Rate 2.1 is slightly less than 700 kWh per month. This is slightly lower usage than that of a domestic customer without electric heat. The rate structure is similar to the Domestic rate structure in that it includes a basic customer charge per month and a single energy charge that applies to all kWh usage for the month. However, this rate also includes a minimum charge that applies to customers that require three-phase service.

The three-phase minimum charge reflects the higher costs incurred to provide three-phase service compared to single-phase service. The three-phase minimum charge has historically been set to equal two times the basic customer charge for Rate 2.1.

The current rate structure has existed since the rate class was created in 1968. The use of a basic customer charge per month and an energy charge that applies to all kWh for small general service customers is a common billing practice among Canadian utilities.

General Service 10 – 100 kW (110 kVA) (Rate 2.2)

Rate 2.2 includes a basic customer charge, a demand charge, and energy charges set at different levels for two blocks of energy. The rate also includes a maximum monthly charge and a three-phase minimum charge.

The demand and energy charges are of a form referred to as a Wright-Hopkinson Rate Structure (sometimes referred to as the Modified Hopkinson Rate Structure). This rate structure includes an explicit demand charge and energy block sizes that depend on the customer's demand requirements.

In Rate 2.2, the higher priced energy charge applies to kWh consumption up to 150 kWh / kW of billing demand. For example, if a customer has a billing demand of 20 kW, the first block size is 3,000 kWh (150 kWh/kW x 20 kW). If a customer has a 30 kW billing demand, the first block size is 4,500 kWh.

The first block energy price is higher than the second block to encourage the customer to improve their load factor, promoting efficiency (i.e., better utilization of the capacity available within the power system). If a customer has a load factor that is less than 20%[2], all the energy usage will be normally billed on the more expensive first block. Customers with monthly load factors higher than 20% are billed the higher priced rate for the first 150 kWh/kW and the lower priced rate for the remainder of the kWh usage.

[2] A 20% load factor is roughly equivalent to using 150 kWh with a 1 kW maximum demand during a month. The equivalent load factor is determined as the average consumption (150 kWh divided by 730 hours per month) divided by the maximum demand (1 kW) which equals approximately 0.2 or 20%.

The current rate structure allows customers to pay a lower unit price per kWh by being efficient and minimizing their peak demand relative to their energy requirement (i.e., maintaining a high load factor). The Wright-Hopkinson Rate Structure for Rate 2.2 has been used since 1978. This type of structure is used elsewhere in Canada. However, a Hopkinson Rate Structure is more prevalent (which includes a demand charge and energy charge but does not have the energy blocking related to demand usage).

Rate 2.2 also has a maximum monthly charge to protect low load factor customers from being over charged. The maximum charge includes a cents per kWh charge plus the basic customer charge and is set at a level to recognize that customers with very low load factors also have on average a much less likelihood of a high demand when the system peaks.

The minimum monthly charge for customers with single-phase service on Rate 2.2 is the Basic Customer Charge. The three-phase minimum charge reflects the higher costs incurred to provide three-phase service compared to single-phase service. The three-phase minimum charge has historically been set to equal two times the basic customer charge for Rate 2.1.

General Service 110 kVA – 1000 kVA (Rate 2.3)

Rate 2.3 has the same rate structure as Rate 2.2 with the exception of a maximum kWh limit on the size of the higher priced first block of kWh usage. The maximum first block size of 30,000 kWh only affects customers with demands greater than 200 kVA (i.e., 200 kVA x 150 kWh / kVA =30,000 kWh).

The maximum first block size has changed over the years. Historically, the first block size has been set to ensure larger customers in the class were not paying more than their cost of service. The block size has decreased over the years and in 1987 the maximum first block size was set at 30,000 kWh, the same time when Rate 2.4 was created. The justification for creating Rate 2.4 was to ensure that larger general service customers paid a rate that better reflected the cost of service. The principal difference between Rate 2.3 and Rate 2.4 customers was load factor. Analysis conducted in 1986 showed that customers above the 1000 kVA level exhibited consistently higher load factors on both a monthly and an annual basis.

General Service 1000 kVA and Over (Rate 2.4)

Rate 2.4 includes a basic customer charge, a demand charge, and energy charges set at different levels for two blocks of energy. The rate also includes the maximum monthly charge.

The demand and energy components for Rate 2.4 are based on the Hopkinson rate form. This rate structure includes an explicit demand charge and energy charge(s). However, unlike Rate 2.2 and Rate 2.3, the size of the first block of energy does not vary by demand usage. The first and higher energy charge applies to energy consumption up to 100,000 kWh per month.

The Hopkinson Rate Structure has been used for Rate 2.4 since the rate was first introduced in 1987. Rate 2.4 was created to ensure that larger general service customers paid a rate that better reflected the cost of service. This structure is commonly used by utilities in Canada in billing large customers.

Street and Area Lighting (Rate 4.1)

The Company offers individual customers and municipalities a Street and Area Lighting Service that is based on the Company installing, owning and maintaining Street and Area Lighting. The price for this service includes fixed monthly rates for lighting fixtures, poles (used exclusively for lighting) and for underground servicing. These rates are designed based on five cost components.

- Equipment Costs – This is the carrying cost associated with the installed cost for each type of lighting fixture, pole and underground wiring run. This includes depreciation, return and taxes.
- Maintenance costs – average annual labour and material costs including overheads.
- Other System Costs – includes energy, demand and customer related costs allocated to each type of lighting based on their estimated annual electricity use.
- Rural Deficit Adjustment – A percentage is applied to each rate based on the portion of the rural deficit allocated to the Street and Area Lighting class in the cost of service study.
- Revenue Requirement Adjustment. An adjustment factor is applied to ensure the Street and Area Lighting rates obtain the proposed test year revenue for the Street and Area Lighting Class. The percentage is determined by dividing the proposed test year revenue for the class by the total revenue that would be derived if no revenue requirement adjustment was applied.