

1 Q. Please provide details of any interruptible load offerings Hydro is aware of
2 available from other Canadian utilities, including the rate paid per MW, the
3 terms and conditions of the offering, the total number of customers
4 participating, and the total number of MW participating. Also, please provide
5 a copy of the rate schedule or contract used by each utility for their
6 interruptible rate offering.

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9 A. The attached table summarizes some details of Interruptible load offerings
10 that Hydro is aware of available from other Canadian utilities. Also attached
11 is the Rate schedules and Terms and Conditions of those offerings.

**Canadian Electrical Utilities
Interruptible Power**

Company	Contact Name Contact Title	Interruptible Rates (per MW)	Terms and Conditions	Number of Customers Participating	Number of MW Participating
Nova Scotia Power	Patty Sollows Regulatory Analyst	Vary according to availability. (See attached.)	(1). Interruptible Rider to Large Industrial Rate - (See attached.) (2). Industrial Expansion Interruptible Rate - (See attached.) (3). Extra Large Industrial Interruptible Rate - (See attached.)	(1). 25 (2). 1 (3). Not effective until Jan. 1, 2004.	Actuals not available. See attached Response to Information Request 17(a) by Nova Scotia Power for an approximate.
New Brunswick Power	Mike Gardner Manager Industry and Interconnected Services	On peak and off peak rates. Will vary with changes in fuel prices. Referred to as Surplus Energy Charge. (See attached.)	As per pages N-12 and N-13 of NB Power Rate Schedule - (See attached.)	4	Approximately 100 MW.
Maritime Electric (P.E.I.)	Personnel not available.				
Hydro Quebec	Julie Doonan Rate Analyst	None currently being offered.	N/A	N/A	N/A
Hydro One	Michelle Customer Services Agent - (Commercial Customers)	None currently being offered.	N/A	N/A	N/A
Manitoba Hydro	Shannon Ryan Rate Program Administrator	Several options per Surplus Energy Program and Curtailable Rate Program. (Both programs are attached.)	(See attached.)	37	226.5 on Curtailable Rates Program. MWs are not applicable to Surplus Energy Program.
SaskPower	Vern Nelson Senior Analyst - (Load and Revenue Forecasting)	Only one customer participating and information is confidential.	Confidential.	1	Confidential.
Atco Electric (Alberta)	Derrick Ploof Supervisor of Rate Design	None currently being offered.	N/A	N/A	N/A
B.C. Hydro	Fred James Senior Policy Advisor - Regulatory Affairs	\$4.411 per MW and 2.599¢ per kW.h	(As per attached.)	Not available.	Not available.

N/A - Not Applicable

LARGE INDUSTRIAL RATE
(2 000 kV.A or 1 800 kW, and Over)
Rate Code 23

INTERRUPTIBLE RIDER TO THE LARGE INDUSTRIAL RATE (Rate Code 25)

Customers who qualify for interruptible service will receive a \$3.43 per month per kilovolt ampere reduction in demand charge for billed interruptible demand. The billed interruptible demand is defined as the difference between any contracted firm demand requirements and the total billing demand. Where the billing demand is less than the contracted firm demand, no interruptible credit shall apply.

AVAILABILITY:

This rider will be available to a minimum regular billing demand of 2 000 kV.A at 90% Power Factor, under the following terms and conditions:

- (1) The customer has provided written notice of his desire to take service under this option, identifying that portion of the load that is to be firm and that portion that is to be interruptible.
- (2) The customers will reduce their available interruptible system load by the amount requested by NSPI within ten (10) minutes of such request by the Company.
- (3) Following interruption, service may only be restored by the customer with approval of the Company.
- (4) Failure to comply in whole or in part with a request to interrupt load will result in penalty charges. The penalty charge shall be twice the cost of the appropriate firm billing effective at that time for the consumption used in that billing period.
- (5) Should any customer under this rider desire to be served under any appropriate firm service rate, a five (5) year advance written notice must be given to the Company so as to ensure adequate capacity availability. Requests for conversion to firm service will be treated in the same manner as all other requests for firm service received by the Company. The Company may, however, permit an earlier conversion. In the event that the Customer desires to return to interruptible service in the future, the Customer may convert to interruptible service following two (2) years of service under the firm rate schedule. The Company may permit an earlier conversion from firm to interruptible service.
- (6) Interruption is limited to 16 hours per day and 5 days per week to a maximum of 30% of the hours per month and 15% of the hours in a year.

EFFECTIVE: NOVEMBER 1, 2002

LARGE INDUSTRIAL RATE
(2 000 kV.A or 1 800 kW, and Over)
Rate Code 23

- (7) Customers who have experienced a delay in the phase-in of the Interruptible Rider credit as a result of NSUARB Order NSPI-868-2 dated July 26, 1996, will have their phase-in credit eliminated in two equal installments. The first will be effective November 1, 2002 and the second will be effective November 1, 2003. Effective November 1, 2003, these customers will receive the same Interruptible Rider credit as other customers on this rider.

SPECIAL CONDITIONS:

- (1) The Company reserves the right to have a separate service agreement if in the opinion of the Company, issues not specifically set out herein must be addressed for the ongoing benefit of the Company and its customers.
- (2) The customer will make all necessary arrangements to ensure that its load does not unduly deteriorate the integrity of the power supply system, either by its design and/or operation. Specific requirements shall be stipulated by way of a written operating agreement.
- (3) In assessing issues which might unduly affect the integrity of the power supply system the following would be considered: reliability, harmonic voltage and current levels, voltage flicker, unbalance, rate of change in load levels, stability, fault levels and other related conditions.
- (4) At the option of the Company, supply may be at distribution voltage. Meter readings shall be increased by 1.75% for each transformation between the meter and the low voltage side of the bulk power supply transformer to adjust for transformer losses. Also, meter readings shall be reduced when metering is at transmission voltage.

INDUSTRIAL EXPANSION INTERRUPTIBLE RATE

Rate Code 18

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DEMAND CHARGE

NIL

ENERGY CHARGE

The energy rate, in cents per kWh, will be calculated annually based on NSPI's budgets. The calculation will utilize the following formula and will be consistent with approved accounting and costing procedures.

$$\left(\frac{\text{Energy Portion of Base Load Fixed Costs}}{\text{Base Load Net Operating Capability} \times .85 \times 8,760} + \frac{\text{System Variable Costs}}{\text{System Energy Requirement}} \right) (1.03) + .12$$

This price will be 5.13 cents per kW.h for the period January 1, 2002 to December 31, 2002.

Energy Portion of Base Load Fixed Costs:

The annual energy related portion of fixed costs as determined based on the annual energy portion of depreciation, return, interest, taxes and grants, and fixed O & M on NSPI base load units (currently Tufts Cove, Lingan, Point Aconi, Point Tupper and Trenton 5 & 6; plus new base load units which would be added as applicable including transmission facilities necessary to incorporate the new units into the grid), and the 138 kV and above portion of the existing transmission network and any new transmission rated at 138 kV and above. All of this is to be approved annually based on regular accounting and costing procedures using a normalized system net firm load factor to derive the energy component. Costs associated with non-standard accounting treatment, (recovery of deferrals for example) where the initial action did not benefit this rate, are excluded from the rate determination.

Annual Base Load Energy:

This is the energy capability of the base load units at an 85% annual capacity factor as determined by the Net Operating Capability. Net Operating Capability is the maximum 2 hour (or better) electrical output of the base load units, determined by tests, which the generator and its prime mover are capable of producing at normal operating conditions. This is the net output after deducting the station service requirement and after taking into account any derating factors which are likely to exist for an extended period of time.

System Variable Costs:

This is equal to the sum of total annual fuel costs plus purchases plus total variable system generation O & M.

System Energy Requirement:

NSPI kW.h net production plus purchases for the year.

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Adjustments for Losses and Administration Charge:

A 3% adjustment is added to account for system losses and .12¢/kW.h is added for administration, general and customer costs.

Minimum Rate

The overall minimum unit price per kW.h, in any month, will be that evidenced by the GRLF rate, or its equivalent, for the current period unless it exceeds the maximum rate referenced below; in which case there is no minimum.

Maximum Rate

The maximum overall unit price per kW.h, in any month, will be that evidenced by the Large Industrial Rate less the Interruptible Credit for similar requirements.

Approval

The rate will be developed annually based on budgeted levels and submitted to the Nova Scotia Utility and Review Board for approval in December of each year for the succeeding year.

Sole Supplier

NSPI will be the sole supplier of all power requirements for customers taking service under this rate with the exception of existing customer owned generation which is not to increase during service under this rate.

AVAILABILITY

- (1) The customer must provide written notice of his desire to take service under this rate.
- (2) This rate shall be available to separately metered, new industrial loads or expanding industrial loads (defined as additional kW.h consumed at the existing customer site) which, for any customer, equal or exceed 5 MVA maximum demand, or maximum coincident demand in case of multiple metering points for the total application.
- (3) The rate will be granted only in circumstances where it can be shown that in the absence of this rate the load would not materialize. Analysis in this regard must be provided to NSPI at the time of application, and will be subject to approval by the Nova Scotia Utility and Review Board prior to the acceptance of each application.
- (4) The rate will be granted only in circumstances where projected revenues exceed on a net present value basis, projected incremental costs as determined by the system expansion method over a ten year period. Accordingly, the rate will be granted for a ten year term.

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Should the rate be withdrawn, any existing approved customers at that time will be permitted to continue to receive service under the pricing formula of the rate for ten years from their initial start date.

- (5) One-quarter of a customer's total commitment under the rate must be realized prior to December 31, 1998.
- (6) NSPI reserves the right to limit participation. The initial offering for new load on the Industrial Expansion Interruptible, Time-of-Day Expansion Interruptible and Surplus Power Interruptible rates is limited to an accumulated total of 180,000 kW on average, or 1,340 million kWh per year.
- (7) Participation will be on a first requested, first served, basis.
- (8) The service voltage shall be not less than 138 kilovolts (kV), line to line, at each delivery point.

SPECIAL CONDITIONS

- (1) **Interruptibility for System Integrity:**
The customer must reduce its load by the amount requested by NSPI within ten (10) minutes of any request. Industrial Expansion Interruptible customers will be interrupted on a rotational basis and grouped with customers of the Large Industrial Class receiving the Interruptible Credit for this purpose. Failure to comply in whole or in part with a request to interrupt load will result in penalty charges. The penalty charge shall be twice the cost of the appropriate Large Industrial Rate effective at that time for the consumption used in that billing period.
- (2) Following interruption, service may be restored by the customer only with approval of the Company.
- (3) The Company reserves the right to have a separate service agreement if, in the opinion of the Company, issues not specifically set out herein must be addressed for the ongoing benefit of the Company and its customers.
- (4) The customer shall make all necessary arrangements to ensure that its load does not unduly deteriorate the integrity of the power supply system, either by its design and/or operation. Specific requirements shall be stipulated by way of a written operating agreement.

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- (5) In assessing issues which might unduly affect the integrity of the power supply system the following may be considered: reliability, harmonic voltage and current levels, voltage flicker, unbalance, rate of change in load levels, stability, fault levels and other related conditions.
- (6) Metering will normally be at the low side of the 138 kV supply level. Metering at any other point will result in adjustments to the kW.h to the extent of 1.75% times the number of transformations.
- (7) Where the bulk power transformer is owned by the customer, the company will provide a credit of 32 cents per kV.A based on the monthly kV.A demand, to the limit of the actual energy costs for that billing.
- (8) Should any customer under this rate schedule desire to be served under any appropriate firm service rate, a five (5) year advance written notice must be given to the Company so as to ensure adequate capacity availability. Requests for conversion to firm service will be treated in the same manner as all other requests for firm service received by the Company. The Company may, however, permit an earlier conversion.
- (9) Under normal operating conditions, an average power factor over the entire billing period, calculated from kW.h consumed and lagging kVAR.h, as recorded, of not less than 85% lagging at each metering point shall be maintained, or the following adjustment factors (constant) will be applied to the billed consumption.

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POWER FACTOR	CONSTANT	POWER FACTOR	CONSTANT
85-100%	1.0000	65-70%	1.1255
80-85%	1.0230	60-65%	1.1785
75-80%	1.0500	55-60%	1.2455
70-75%	1.0835	50-55%	1.3335

- (10) Prior to irrevocable commitment by NSPI to proceed with construction of new generation and transmission facilities necessary to continue to serve this load, the customer shall elect whether it wishes to take energy under the rate to the expiry of the ten year service term. If the customer elects to take energy under the rate to the expiry of the ten year service term and thereafter decides to shorten the term as a result of expanded self-generation or contracts with a third party to deliver over NSPI transmission lines any of the load served under this rate, the customer shall pay a penalty equal to the difference between the Interruptible Rider to the Large Industrial Rate and the Industrial Expansion Rate, which penalty shall be calculated from the date of such election to the date it goes off the rate. If the customer elects not to take energy under the rate to the expiry of the ten year service term (i.e. elects "no"), and accordingly the facilities are not built, the rate would be available to the customer without penalty up to the planned in-service date of the foregone new generation or transmission facilities, or the expiry of the ten year service term, whichever comes sooner. The election under this special condition shall be irrevocable.
- (11) Customers purchasing power under several rate options will be billed for power (up to the amount contracted under each) in the following order:
- 1) Large Industrial Rate
 - 2) Large Industrial Rate less the Interruptible Credit
 - 3) Industrial Expansion Interruptible Rate
 - 4) Interruptible Time-Of-Day Expansion Rate
 - 5) Interruptible Surplus Power Rate
- (12) For purposes of this rate, the term "force majeure" shall mean unforeseeable causes beyond the reasonable control and without the fault or negligence of the customer including, but not limited to, acts of God, labour disputes, sudden actions of the elements and actions by federal, provincial and municipal agencies (except the Nova Scotia Utility and Review Board).

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If the customer shall be unable by reason of "force majeure" to carry out its obligations under this rate, either in whole or in part, the customer shall be excused for whatever performance is affected by the "force majeure" event to the extent so affected provided the customer shall,

1. Give prompt notice to NSPI of the occurrence of the "force majeure" giving an estimation of the expected duration probable impact and submitting good and satisfactory evidence of the existence of "force majeure";
2. Exercise all reasonable efforts to continue performance of its obligations hereunder;
3. Expeditiously take action to correct or cure the "force majeure" and submit good and satisfactory evidence that it is making all reasonable efforts to correct or cure the "force majeure".

There shall be no extension of the term of the rate for a "force majeure" event.

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CUSTOMER CHARGE:

The Customer Charge will be set annually based on NSPI's budgeted customer costs, and will be limited to \$ 50,000 per month.

DEMAND CHARGE

NIL.

ENERGY CHARGE

The energy rate, in cents per kWh, will be calculated annually based on NSPI's budgets. The calculation will utilize the following formula and will be consistent with approved accounting and costing procedures.

$$\left[\left(\frac{A}{B} \times \text{LFA} \right) + \frac{C}{D} \right] \times (1 + \text{Loss Adjustment}) - \text{Export Benefits Credit}$$

Where:

- A = Energy Portion of Base Load Fixed Costs
- B = Annual Base Load Energy at 85% Capacity Factor
- C = Base Load Variable Costs
- D = Base Load Energy Production

Load Factor Adjustment (LFA):

The Energy Charge will be adjusted for varying Customer Load Factors in accordance with the following schedule:

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Customer Load Factor In Billing Period	Load Factor Adjustment (LFA)	Customer Load Factor In Billing Period	Load Factor Adjustment (LFA)
(Below 69% Customer will be billed under the Interruptible Rider)			
69%	1.49403	85%	1.00000
70%	1.45305	86%	0.98837
71%	1.41342	87%	0.97701
72%	1.37513	88%	0.96591
73%	1.33820	89%	0.95506
74%	1.30261	90%	0.94444
75%	1.26836	91%	0.93407
76%	1.23546	92%	0.92391
77%	1.20391	93%	0.91398
78%	1.17371	94%	0.90426
79%	1.14485	95%	0.89474
80%	1.11734	96%	0.88542
81%	1.09118	97%	0.87629
82%	1.06637	98%	0.86735
83%	1.04290	99%	0.85859
84%	1.02078	100%	0.85000

The factors in this table are determined in a five step process:

- Determine the expected system load factor for the year for which the ELIIR is being calculated.
- Apply this system load factor to the Large Industrial Interruptible Rider to determine a cost per kWh.
- Determine the ELIIR in cents per kWh assuming an LFA = 1.0.
- Fit a polynomial curve through the two points determined in b) and c).

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- e) Calculate the LFA's required to produce an ELIIR which matches the curve produced in d).

This process will be applied annually to adjust the LFA's in the foregoing table.

Customer Load Factor (CLF) (%):

$$\text{CLF} = \frac{\text{kWh consumed during billing period under this rate} + \text{kWh actually interrupted}}{(\text{Tariff Demand (TD)} \times \text{hours in month})}$$

In the above formula, kWh actually interrupted will be calculated as the kW curtailed multiplied by the hours curtailed, summed over the billing period.

The Customer Load Factor will be calculated for each billing period, accounting for any changes made to the Tariff Demand during the month, in accordance with this rate.

For months when pre-arranged down time is scheduled, the billing hours and energy will be:

$$\text{TD}_{\text{normal}} \times \text{hours at TD}_{\text{normal value}} + \text{TD}_{\text{lower value}} \times \text{hours at TD}_{\text{lower value}}$$

Calculation of CLF During Planned Shutdown Periods:

The Company will allow the customer to lower the TD value for bona fide maintenance periods, limited to two (2) events per year, unless otherwise agreed to with the Company during the course of the year, to accommodate major maintenance and repairs to production equipment without negatively affecting CLF values, provided that:

1. The company is notified of the customer's intent to shut down for maintenance purposes for a continuous period not shorter than 72 hours and;
2. Notice is given three (3) weeks in advance of taking such down time. Shorter notice of intention to take maintenance or repair downtime will be considered by the Company upon request.
3. Notice of intent should clearly indicate the date and time of intended lowering of TD and the date and time of resumption of normal production and the TD for the duration of the down time.

Tariff Demand:

The customer will notify the Company of the value of the Tariff Demand in kW for the forthcoming year on or before November 1. The TD represents the total amount of load subscribed to this rate. The Company will permit deviation from these values at other times during the year if such requests are based on load management initiatives (with a total impact of 2 MW or greater), undertaken by the customer, or for permanent alteration of production

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capacity. The customer will also be permitted an annual adjustment to the Tariff Demand for market reasons up to a maximum of 10 % of the value of the existing Tariff Demand upon notice to the Company by February 28th of the applicable rate year.

With the exception of Planned Shutdown-Periods, the annual market adjustment, load management initiatives and permanent alterations to production capacity, no changes will be permitted except for *force majeure* reasons, without the express permission of the Company, which shall not be unreasonably withheld. The Company will allow forward looking monthly adjustments to the TD for the first three (3) months after initial subscription to this rate or after each deviation previously described, with the exception of the market adjustment and Planned Shutdown Periods.

Loss Adjustment:

A 2% adjustment is included in the Energy Charge to account for system losses. The Loss Adjustment will be calculated annually.

Energy Portion of Base Load Fixed Costs:

The annual energy related portion of fixed costs as determined based on the total of the following:

1. The annual energy portion of depreciation, return, interest, taxes, grants and fixed O&M on NSPI base load units (currently Tuft's Cove, Lingan, Point Aconi, Point Tupper, and Trenton 5 & 6; plus new base load units that would be added as applicable including transmission facilities necessary to incorporate the new units into the grid).
2. The annual energy portion of the 138 kV and above portion of the existing transmission network, and any new transmission facilities rated at 138 kV and above.

All of this is to be approved annually based on regular accounting and costing procedures using a forecast system load factor to derive the energy component.

At the time each new customer subscribes to this rate, the then current forecast system load factor will be used in setting this rate for that customer for that year and all subsequent years in which that customer remains subscribed to this rate.

Costs associated with non-standard accounting treatment, (recovery of deferrals, for example) where the initial action did not benefit this rate, are excluded from the rate determination, provided the Board may direct otherwise when approving future deferrals.

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Annual Base Load Energy at 85% Capacity Factor:

Annual Base Load Energy at 85% Capacity Factor = Net Operating Capability of Base Load Units x 0.85 x 8,760 hours

Net Operating Capability of Base Load Units:

The maximum 2-hour (or more) electrical output of the base load units, determined by tests, that the generator is capable of producing, at normal operating conditions. This is the net output after deducting the station service requirements and after taking into account any de-rating factors that are likely to exist for an extended period of time.

Base Load Variable Costs:

The forecast total fuel cost and variable O&M costs for NSPI's base load plant.

Base Load Energy Production:

The total annual energy, in kWh, forecast to be produced by NSPI's base load plant.

Export Benefits Credit (EBC) (\$/MWh):

The Export Benefits Credit is the expected customer energy requirement under this rate divided by the adjusted Company energy requirement, multiplied by the total margin on export sales divided by the expected sales (MWh) to the customer under this rate.

$$\text{EBC} = \frac{\text{Expected customer energy requirement}}{\text{Adjusted Company Energy Requirement}} \times \frac{\text{Total margin on export sales}}{\text{Expected sales (MWh) to the customer under this rate}}$$

Where:

Adjusted Company Energy Requirement = The expected Company energy requirement less the total energy requirement of Exports, the Generation Replacement and Load Following, Mersey System, Industrial Expansion Interruptible and Real Time Pricing classes.

The EBC will be calculated annually in advance.

Minimum Energy Charge:

If the Customer Load Factor is below the minimum specified in the Load Factor Adjustment table in a given billing period, the customer will be billed under the Interruptible Rider to the Large Industrial Rate.

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AVAILABILITY:

1. The customer must commit to making no less than 20 MW available for interruption, per the Terms and Conditions of this rate.
2. The customer must commit to taking service under this rate for a minimum of twelve months.
3. The customer must provide written notice of its intention to modify the Tariff Demand or to cease taking service under this rate, by no later than November 1st of each year.
4. If the customer ceases taking service under this rate, they may return to this rate after a minimum of twelve (12) months from the effective date that service under this rate was cancelled.
5. The service Voltage shall be not less than 138 kV, line to line, at each delivery point. Service is provided at the supply side of the customer's transformation equipment. The customer must own the transformation facilities.
6. The maximum service (aggregated across all customers) offered under this rate shall be limited to 275 MW.
7. The customer will be required to provide credible evidence that a significant portion of their anticipated usage on the ELIIR is at risk.

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TERMS AND CONDITIONS:

1. **Priority of Interruptions:**

In the event of an interruption for reasons of supply integrity, rate classes will be called upon to provide capacity to NSPI in the following order:

1. Generation Replacement and Load Following (GRLF) Rate;
2. Extra Large Industrial Interruptible Rate;
3. Interruptible Rider to the Large Industrial Rate and Industrial Expansion Interruptible Rate.

The Extra Large Industrial Interruptible Rate also permits interruptions for economic reasons. Load subscribed to this rate will be the only capacity requested if the interruption is for economic reasons.

Supply and Economic Interruption calls will be made to all customers taking energy under this rate, on an equitable and transparent basis.

2. **Causes for Interruption:**

Interruptions to supply under this rate will be for either Supply or Economic reasons, as defined below. Calls will be made using the process defined in the Terms and Conditions of this rate.

Supply Interruptions:

A Supply Interruption is defined as: A request by the Company for the customer to reduce load, when deemed necessary by the Company, in order to avoid shortfalls in electricity supply.

Economic Interruptions:

An Economic Interruption is defined as a request by the Company for the customer to reduce load in order for the Company to avoid unnecessarily high costs of electricity supply. For the purposes of Economic Interruptions, the electricity supply cost is considered unnecessarily high when the Company must dispatch peaking power combustion turbines or purchase import energy to displace peaking power combustion turbines.

3. **Interruption Notification Procedure:**

The customer will make available suitable contact telephone numbers of a person or persons who are able to reduce the required load within the time requested by NSPI during the Interruption call. These calls may be made at any time the customer is subscribed to this rate. Notification times will be at the sole discretion of the Company.

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The Company will specify the amount of capacity required for each System or Economic Interruption. This may be any amount up to and including the entire subscribed load. For reasons related to its own process requirements, the customer will nominate blocks of minimum interruptible load consistent with the practical interruptibility of production equipment at the customer's site, and the amount so nominated will be deemed to be the amount of interruption requested by the Company.

For Economic Interruptions, a faxed copy of the request will be sent to the customer at a suitable time following the Interruption. NSPI will indicate on the facsimile the date, start time, finish time, capacity (MW) requested, and Buy-Through-Rate (\$/MWh) for the specific Interruption.

4. **Advance Notice for Supply Interruptions:**

Notification will be given at no less than 10 minutes prior to the starting time of a Supply Interruption of the entire subscribed load or any portion thereof.

5. **Advance Notice for Economic Interruptions:**

In the event of an Economic Interruption, the Company may request a minimum of 20 MW or the greater value stipulated in the prior agreement, (see section 7 below), to be interrupted with a minimum 30-minute advance notification. The Company may request that any remaining subscribed load (or a portion thereof) be interrupted with a minimum of 120 minutes advance notification. The Company will forewarn the customer on a best efforts basis should it become apparent that an interruption will be required.

6. **Frequency and Duration of Supply Interruptions:**

Supply Interruptions will be limited to 16 hours per day and 5 days per week to a maximum of 30% of the hours per month and 15% of the hours per year.

7. **Frequency and Duration of Economic Interruptions:**

The annual maximum energy that may be called for interruption or buy through under Economic Interruption will be 0.31 GWh per MW of Tariff Demand subscribed under this rate. The frequency and duration of the potential periods to be interrupted will be mutually agreed upon with details under a separate agreement.

Interruption periods will not be less than three (3) hours per event.

Should the Company require additional energy to be interrupted after exhausting the customer's portion of the energy indicated above as apportioned, the Company will invite the customer to participate in mutually beneficial economic interruption opportunities.

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8. Penalties for Failure to Interrupt for Supply Reasons:

Failure of the customer to comply in whole or in part with any Supply Interruption request will result in penalty charges. The penalty charge for each failure shall be twice the cost of the appropriate billing as per this rate, for the total load subscribed under this rate and energy used for the specific billing month. Should the customer fail to respond during subsequent calls within the same month, the same penalties will apply for each failure to interrupt.

9. Buy-Through Option for Economic Interruptions:

If the customer is unable to comply with any Economic Interruption request, the energy that is not interrupted as requested by the Company shall be billed at a Buy-Through Rate.

The buy through rate will be set each month in advance and will be the estimated cost (in \$/MMBTU) of the fuel expected to be used during that month in peaking combustion turbines, times a heat rate of 15000 BTU/kWh, plus \$5 per MWh.

Eg: If the expected fuel to be consumed is No. 2 fuel at \$5/MMBTU, the cost of buy through energy would be \$75/MWh, plus \$5/MWh, for a total price of \$80/MWh.

In requesting economic interruption, NSPI will, to the extent possible, seek to balance the number of hours that each customer taking service under this rate is asked to interrupt or buy through.

If the customer elects the Buy-Through Option, the customer will be billed for the energy requested on a take-or-pay basis at the buy-through rate.

If a Supply Interruption is requested while the customer is taking energy at the Buy-Through-Rate during an Economic Interruption, the Buy-Through option will no longer apply and the processes and penalties associated with a Supply Interruption will take effect.

10. Verification of Interruption:

For each Interruption event, the Company shall, using meter data collected at designated metering points, confirm the response time, duration and amount of load Interrupted by the customer. For the purposes of this determination, the customer load at the time of the call shall be calculated as the average of the applicable metered loads in the two fifteen-minute billing intervals immediately prior to the Interruption call. The Customer shall be deemed to have met the conditions of this rate if at least 95% of the requested load was interrupted for the requested duration.

EXTRA LARGE INDUSTRIAL INTERRUPTIBLE RATE

Page 47

11. Verification of Ability to Interrupt:

Unless, within the most recent 12-month period, the customer has demonstrated the ability to interrupt load, either by a test or for economic or system reasons, the Company may at its sole discretion, conduct periodic tests. The test will take the form of an Interruption call and subsequent service Interruption per the terms of this rate. Test Interruptions shall have a maximum duration of one hour. In the event that the customer does not interrupt the requested load for the requested period, penalties for failure to interrupt shall apply as described in this rate. Additional tests may be executed if the customer has not demonstrated the ability to interrupt through this verification process.

12. Billing Order for Multiple-Rate Customers:

All energy taken by the customer at or above the upper limit of the Tariff Demand level shall be billed under the applicable Real Time Pricing rate.

The customer will set an upper and lower threshold value, in kW, between which energy will be taken under this rate. Energy taken below the lower threshold may be taken on any NSPI rate that the customer may qualify to be billed under. Energy taken above the upper threshold will be billed at the RTP rate.

13. Approval:

This rate will be developed annually based on budgeted levels and submitted to the Nova Scotia Utility and Review Board for approval by November 1st of each year for the succeeding year.

14. Sole Supplier:

NSPI will be the sole supplier of all external power requirements (i.e.: excluding self-generation) for customers taking service under this rate.

15. Power Factor:

Under normal operating conditions, an average power factor over the entire billing period, calculated for kWh consumed and lagging kVAr-h, as recorded, of not less than 90% lagging for the total customer load (under all rates) shall be maintained, or the following adjustment factors (Constant) will be applied to the Energy Charge in effect:

Power Factor	Constant	Power Factor	Constant
90-100%	1.0000	65-70%	1.1255
80-90%	1.0230	60-65%	1.1785
75-80%	1.0500	55-60%	1.2455
70-75%	1.0835	50-55%	1.3335

EXTRA LARGE INDUSTRIAL INTERRUPTIBLE RATE

Page 48

16. **Restoration of Service:**
Following Interruption, service may only be restored to the customer with approval of the Company.
17. **Conversion of Interruptible Load to Firm:**
Should any customer under this rate desire to be served under any applicable firm service rate, a five (5) year advance written notice must be given to the company so as to ensure adequate capacity availability. Requests for a conversion to firm service will be treated in the same manner as all other requests for firm service received by the Company. The Company may, however, permit an earlier conversion. In the event that the Customer desires to return to Interruptible service in the future, the customer may convert to interruptible service following two (2) years service under the firm rate schedule. The Company may permit an earlier conversion from firm to interruptible service.
18. **Metering Costs:**
Metering will normally be at the low side of the transformer and meter readings will be increased by 1.75%. Should the customer's requirements make it necessary for the Company to provide primary metering, the customer will be required to make a capital contribution equal to the additional cost of primary metering as opposed to the cost of secondary metering. The costs of any special metering or communication systems required by the customer to take service under this rate shall be paid for by the customer as a capital contribution.
19. **Billing:**
Applicable Energy Charges, penalties, Buy-Through costs and adjustments will be calculated by the Company and indicated on the customer's monthly bill.
20. **Annual Customer Review:**
Customers who elect to be on the rate will have an opportunity to independently verify the calculations and input data underlying the development of this rate, at a mutually agreeable time during normal business hours at the Company offices in Halifax.

Special Conditions

1. The Company reserves the right to have a separate service agreement if in the opinion of the Company, issues not specifically set out herein must be addressed for the ongoing benefit of the Company and its customers.
2. The customer will make all necessary arrangements to ensure that its load does not unduly deteriorate the integrity of the power supply system, either by its design and/or operation. Specific requirements shall be stipulated by way of a separate operating agreement.

EXTRA LARGE INDUSTRIAL INTERRUPTIBLE RATE

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3. In assessing issues that might unduly affect the integrity of the power supply system, the following would be considered: reliability, harmonic Voltage and current levels, Voltage flicker, unbalance, rate of change in load levels, stability, fault levels and other related conditions.
4. The customer shall have the option from time to time, in concert with NSPI's procurement schedule to have NSPI make special purchase arrangements for fuel to supply all or part of the customer's forecast energy under this rate, which will be used in determining the variable energy cost for that customer, in the rate formula. Such arrangements will fall under separate agreement and will be subject to UARB approval.

2003

NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF: The *Public Utilities Act*, R.S.N.S. 1989, c.380 as amended

IN THE MATTER OF: A Generic Rate Design Hearing for Nova Scotia Power Incorporated

RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: Stora/Bowater (Technical Conference)

Question IR-17(a): Reference: NSUARB IR-14. Please provide a breakout of the interruptible load shown in the table (in part (b)) by class.

Response IR-17(a):

Coincident Interruptible Loads by Class

Month	System Peak (MW)	Total Interruptible	Interruptible Rider	GRLF	Industrial Expansion	RTP
Dec-2000	2009	412	197	63	152	0
Jan-2001	1879	386	173	51	162	0
Feb-2001	1988	371	174	37	160	0
Dec-2001	1895	352	152	45	155	0
Jan-2002	1871	335	138	44	153	0
Feb-2002	1877	317	131	34	152	0
Dec-2002	2078	348	159	36	153	0
Jan-2003	1953	165	138	22	5	0
Feb-2003	2074	292	149	24	119	1

2003

NSPI-878

NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF: The *Public Utilities Act*, R.S.N.S. 1989, c.380 as amended

IN THE MATTER OF: A Generic Rate Design Hearing for Nova Scotia Power Incorporated

RESPONSE TO INFORMATION REQUEST

TO: NSPI

FROM: Stora/Bowater (Technical Conference)

Question IR-17(b): Reference: NSUARB IR-14. Please provide the amount of exports included in the loads shown in the table in part (b).

Response IR-17(b): In the peak hour shown for December, 2001, NSPI exported 3 MWh. In the peak hour shown for January, 2002, NSPI exported 30 MWh. For all other hours shown in NSUARB IR-14(b), NSPI did not export.

Large Industrial Rate Schedule cont'd

Surplus
Energy
Charge

To qualify for new Surplus Energy or to continue to purchase Surplus Energy after April 1, 2001, the Customer must sign a minimum three-year contract with NB Power as its sole electricity supplier. Surplus Energy is supplied only if it can be provided with available NB Power Facilities over and above the requirement of other firm commitments of NB Power. The Customer must interrupt Surplus Energy use within ten (10) minutes of a request from NB Power. Customers can purchase Surplus Energy for load additions of 2000 kilowatts or more.

Customers who currently purchase Surplus Energy above a defined load level can continue to do so for that load and any additional load that is interruptible by signing a minimum three-year contract. NB Power may also convert all or part of a Customer's existing load to Surplus Energy if the customer has a self-generation option which it agrees to defer by at least three years.

Customers are required to interrupt Surplus Energy to meet NB Power's financially firm export obligations. When Surplus Energy is interrupted to meet financially firm export obligations, the Customer is reimbursed 50 percent of the cost of the replacement energy that NB Power would have otherwise incurred to supply the export sales.

Customers who fail to interrupt will be billed an additional charge which is the higher of:

- (i) two times the monthly demand charge per kilowatt for the Large Industrial rate classification multiplied by the kilowatts that were not interrupted plus any incremental cost of supplying the energy, or
- (ii) the costs incurred by NB Power for replacement energy to supply financially firm export obligations.

Large Industrial Rate Schedule cont'd

The price is based on NB Power's incremental cost of providing such energy. Incremental cost is defined as NB Power's incremental generation or purchased power cost after supplying in-province firm load and other firm supply commitments.

Pricing of
Interruptible
and Surplus
Energy

Interruptible and Surplus Energy prices are:

On peak price = incremental cost during on peak hours + 0.9¢/kWh.

Off peak price = incremental cost during off peak hours + 0.3¢/kWh.

The on peak period is defined as 0800 to 2400 hours Atlantic Prevailing Time on all weekdays, except statutory holidays in New Brunswick. All other hours are considered to be off peak.

NB Power will provide a week ahead forecast and day ahead firm quotes of the on and off peak prices to be paid by the customer.

To qualify for Schedulable Energy, the Customer must sign a minimum five-year contract with NB Power as its sole electricity supplier. Schedulable Energy is supplied only if it can be provided with available NB Power Facilities over and above the requirement of other firm commitments, including financially firm export obligations, of NB Power. The Customer must interrupt Schedulable Energy use within ten (10) minutes of a request from NB Power, or arrange a third party supply.

Schedulable
Energy

Customers, who are served directly from NB Power's transmission system, can purchase Schedulable Energy for load additions of 10,000 kilowatts or more after December 01, 2000 and up to March 31, 2008.

SURPLUS ENERGY PROGRAM

TERMS AND CONDITIONS

IN ACCORDANCE WITH
PUB ORDER NOS. 90/00, 132/00 AND 143/01
EFFECTIVE DECEMBER 4, 2000 - MARCH 31, 2004
UNLESS SUPERCEDED BY FURTHER ORDER OF THE PUBLIC
UTILITIES BOARD



SEPTEMBER 2001

**SURPLUS ENERGY PROGRAM
INDUSTRIAL LOAD - OPTION 1
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**SURPLUS ENERGY PROGRAM
INDUSTRIAL LOAD - OPTION 1
TERMS AND CONDITIONS**

PROGRAM DURATION

1. The Surplus Energy Program (SEP) is effective as of December 4, 2000 through to March 31, 2004.

ELIGIBILITY

2. SEP - Option 1 is available to industrial loads which meet the following qualifications:
 - a) Total Demand must be 1 000 kV.A or greater. Total Demand is defined as the Reference Level of Demand (as described in Section 3 below) plus the level of Demand associated with SEP; and
 - b) Demand associated with SEP does not exceed 50 MV.A **except** where the load factor of such load is guaranteed by the customer, in writing, to exceed 25% on a weekly basis; and
 - c) Are not being served under the Curtailable Service Program; and
 - d) Manitoba Hydro may require a customer to maintain a minimum Power Factor of 90% as a condition of participation.

REFERENCE DEMAND

3. A customer shall designate a Reference Level of Demand (both in kV.A and kW) for each calendar month of the year, subject to the following:
 - a) The designation must be made prior to participation in SEP; and
 - b) The Reference Level of Demand must equal at least 75% of Total Demand
 - *Exception:* Manitoba Hydro may allow exceptions to the 75% qualification, where a customer can demonstrate, to the satisfaction of Manitoba Hydro, that it has on-site back-up capability in the form of a generating facility or alternative equipment capable of supporting the process to which SEP is applied and, that, the back-up capability together with the Reference Level of Demand can supply 75% or more of the Total Demand; and
 - c) The same Reference Level of Demand must be designated for all daily Time-of-Use (TOU) periods.

4. Subject to Subsections 3 b) and c), a customer may increase its designated Reference Level of Demand or may convert part or all of the load served under SEP to firm service by providing Manitoba Hydro with advance written notice based on the following notice period options, of which, must be determined and designated on Schedule 'A' of the customer's SEP contract prior to participation in SEP. In all cases Manitoba Hydro may reduce the notice period if, in its sole discretion such reduction can be accomplished without adverse impact to the operations or revenues of the corporation.
- a) A 12 month notice period with an option of:
 - i) the customer will pay a premium of 1.0¢ per kW.h for energy purchased during the summer peak hours; or
 - ii) the customer will agree that load converted on 12 months notice shall be subject to curtailment under the provisions of Option "A" or "C" of the Curtailable Service Program for the first four months following the conversion; or
 - b) A notice period dependent on when the said notice is provided, as follows:
 - i) where notice is provided between September 1 up to and including January 31, a 12 month notice period shall apply; or
 - ii) where notice is provided between February 1 up to and including April 30, a 16 month notice period shall apply. Where the customer provides notice between February 1 and April 30, the customer may elect at the time notice is given, to convert to the notice provisions outlined in Subsection 4 a) ii) above; or
 - iii) where notice is provided between May 1 up to and including August 31, the notice period shall not expire prior to August 31 of the following year such that notice will be not greater than 16 months or less than 12 months. Where the customer provides notice between May 1 and August 1, the customer may elect, at the time notice is given, to convert to the notice provisions outlined in Subsection 4 a) ii) above.

BILLING

5. Energy Charges:

SEP energy is energy associated with the demand taken by a customer in excess of the monthly Reference Level of Demand (in kW). Measurement of SEP energy will be based on each 15-minute interval reading of kW during a billing month.

Rates to SEP - Option 1 customers will be set as follows. The rates which will be charged are set out in Schedule SEP-1 (attached) and are subject to weekly approval by the PUB as per Schedule SEP-2 (attached).

- a)
 - i) a Basic Charge of \$100.00 per month to cover administration and metering costs;
 - ii) an Energy Charge per kW.h which will be set for three Time-of-Use periods on a weekly basis; that is, one for each of the peak, shoulder, and off-peak periods. The periods are defined below:

	Summer (May 1 - October 31)	Winter (November 1 - April 30)
Peak	Monday through Friday except Statutory Holidays from: 12:01 hours - 20:00 hours	Monday through Friday except Statutory Holidays from: 07:01 hours - 11:00 hours; and 16:01 hours - 20:00 hours
Shoulder	All hours except Peak, every day from: 07:01 hours - 23:00 hours	
Off-Peak	All night time hours from 23:01 hours - 07:00 hours	

The Weekly Energy Charge will be determined as per Schedule SEP-3 (attached).

- iii) a Distribution Charge per kW.h intended to collect approximately one-third of the embedded cost of distribution, subtransmission, and regional transmission.
- b) All non-SEP energy will be billed at the appropriate standard General Service Large or Medium rate.

6. Demand Charge:

- a) In general, all demand taken by a customer up to a maximum of the monthly Reference Level of Demand in kV.A will be billed at the at the appropriate standard General Service Large or Medium rate, subject to Monthly Billing Demand criteria as set out in Subsection 6 b).
- b) The Monthly Billing Demand in kV.A for a customer participating in SEP is the greatest of the following:
 - i) measured demand up to a maximum of the monthly Reference Level of Demand in kV.A; or
 - ii) 80% of the highest measured demand in the Billing Year for the months of December, January, February up to a maximum of 80% of the highest Reference Level of Demand in kV.A in those months; or

- iii) 25% of the highest annual Reference Level of Demand in kV.A

- *Exception:* In the event that a customer's demand exceeds Total Demand as defined in Subsection 2 a), the appropriate standard General Service Large or Medium Demand Charge will apply to all kV.A in excess of Total Demand. The Reference Level of Demand plus the demand in excess of Total Demand will be used in determining the Monthly Billing Demand and will also serve as the basis for determining 80% of demand in the months of December, January and February. Manitoba Hydro does not guarantee the supply of firm capacity in excess of the Reference Level of Demand.

INTERRUPTIONS

7. On notice by fax or phone from Manitoba Hydro, a customer will be required to reduce its load within 36 hours to its Reference Level of Demand (kW) in one or more of the TOU periods as specified in the notice, and to maintain its load at or below its Reference Level of Demand in the specified period(s) until notified by Hydro by fax or phone that the interruption is ended.

Where the SEP load is separately metered, the customer will be required to interrupt supply to the SEP load.

8. Failure to reduce load to or below the Reference Level of Demand (kW) during an interruption can result in additional charges based on the actual costs Manitoba Hydro incurs to supply any load above the Reference Level of Demand. The maximum additional charge is \$150.00 per kW of Demand and \$1.00 per kW.h of associated energy.
9. A customer will be subject to unplanned interruptions such as those due to under frequency relay operation during power system emergencies. Manitoba Hydro cannot guarantee continuous service to any class of service in Manitoba or extra-provincially.

METERING AND ELECTRIC SERVICE FACILITIES

10. Manitoba Hydro will supply the appropriate metering for a SEP customer.
11. The customer shall be responsible for all costs of building or upgrading regional transmission, subtransmission, distribution and/or dedicated services which may be required to serve SEP load.

CONTRACT REQUIREMENTS

12. A customer will be required to enter into a formal agreement with Manitoba Hydro. The agreement will document the above Terms and Conditions as well as any others considered necessary due to the nature of a specific service.

CUSTOMER WAIVER - NO BACK-UP FACILITIES REQUIRED

13. Where no back-up facilities are required as per Subsection 3 b), a customer will be required to sign a waiver stating that:
- a) The customer has included in its Reference Level of Demand sufficient kV.A/kW for all essential load within its operation.
 - b) The customer understands that the Terms and Conditions of SEP provide for:
 - i) SEP energy prices-per-kW.h which can be volatile from week-to-week, and can be extremely high during periods of scarcity in interconnected markets; and
 - ii) interruption in the supply of SEP energy can be initiated by Manitoba Hydro on 36 hours notice to the customer for any reason; and
 - iii) possible lengthy periods of interruption.
 - c) The customer has considered the implications of the foregoing and will comply without objection to interruptions made in accordance with the Terms and Conditions of SEP.

CUSTOMER WAIVER - BACK-UP FACILITIES REQUIRED

14. Where back-up facilities are required as per Subsection 3 b):
- a) A customer will be required to sign a waiver as per Subsections 13 b) and c).
 - b) The customer must provide certification in writing to Manitoba Hydro that:
 - i) the back-up facility is adequate to serve that portion of SEP load in excess of 25% of Total Demand, given the type of load and possibly lengthy interruption of SEP supply; and
 - ii) the installation and operation of the back-up facility complies with all government regulations including all municipal and provincial zoning and environmental regulations.
 - c) Certification of back-up as described in Subsections 14 b) i) and ii) must be provided in writing to Manitoba Hydro when the customer first accepts SEP service and by no later than October 1, of every year thereafter that the customer is accepting SEP service.

- d) If a customer ceases, or is unable to maintain an adequate back-up facility:
- i) the customer must notify Manitoba Hydro in writing of the situation immediately; and
 - ii) the customer must reduce its Total Demand to the Reference Level of Demand; and
 - iii) should the customer continue to use SEP, Manitoba Hydro may bill the customer for Demand (kV.A) associated with SEP energy use at the applicable General Service Large or Medium Demand Charge for the period of time the back-up facility is considered to be, or to have been, inadequate; and
 - iv) notice to convert load served under SEP to firm service will be as set out in Section 4.

OPTION 1
SCHEDULE SEP-1

GENERAL SERVICE ALTERNATIVE RATES
SURPLUS ENERGY PROGRAM RATE

General Service-Medium (Utility-Owned Transformer)

Tariff No. 50-19:

Basic Monthly Charge: \$100.00
PLUS
Distribution Charge: 0.62¢/kW.h
PLUS
Energy Charge:
Peak Hours _____
Shoulder Hours _____
Off-Peak Hours _____

General Service-Large 750 V to Not Exceeding 30 kV

Tariff No. 50-20:

Basic Monthly Charge: \$100.00
PLUS
Distribution Charge: 0.33¢/kW.h
PLUS
Energy Charge:
Peak Hours _____
Shoulder Hours _____
Off-Peak Hours _____

General Service-Large 30 kV to Not Exceeding 100 kV

Tariff No. 50-21:

Basic Monthly Charge: \$100.00
PLUS
Distribution Charge: 0.14¢/kW.h
PLUS
Energy Charge:
Peak Hours _____
Shoulder Hours _____
Off-Peak Hours _____

General Service-Large Exceeding 100 kV

Tariff No. 50-22:

Basic Monthly Charge: \$100.00
PLUS
Distribution Charge: 0.06¢/kW.h
PLUS
Energy Charge:
Peak Hours _____
Shoulder Hours _____
Off-Peak Hours _____

Hours	Summer (May 1 - October 31)	Winter (November 1 - April 30)
Peak	Monday through Friday except Statutory Holidays from: 12:01 hours - 20:00 hours	Monday through Friday except Statutory Holidays from: 07:01 hours - 11:00 hours; and 16:01 hours - 20:00 hours
Shoulder	All hours except Peak, every day from: 07:01 hours - 23:00 hours	
Off-Peak	All night time hours from 23:01 hours - 07:00 hours	

OPTION 1
SCHEDULE SEP-2

**SURPLUS ENERGY PROGRAM
PROCEDURE FOR INTERIM EX PARTE
PUBLIC UTILITIES BOARD (PUB) APPROVAL OF SEP RATE**

1. Each Wednesday by 9:00 AM Central Time (CT), Manitoba Hydro shall:
 - i) fax to the Board a copy of Schedule SEP-1 which shall include the Energy Charge for the Time-of-Use periods for all General Service Medium and Large classes of service;
 - ii) indicate the expected source of SEP energy (i.e. from displaced exports, Manitoba Hydro generation, or imports); and
 - iii) warrant that the price has been estimated using approved methodology as set out in Schedule SEP-3.

The "Message Confirmation" sheet for the fax will serve as confirmation that the PUB has received the schedule.

2. If Schedule SEP-1 is acceptable, the PUB will provide interim *ex parte* approval of the rates and fax the Interim *Ex Parte* Order to Manitoba Hydro by 2:00 PM CT the same day. If the proposed Schedule, for any reason, is not acceptable, the PUB will contact Manitoba Hydro as soon as possible and attempt to resolve any concerns. If these concerns cannot be resolved by Wednesday at 3:00 PM CT, Manitoba Hydro will then forthwith contact customers to inform them that SEP energy is not available for the following week.
3. If the PUB faxes an Interim *Ex Parte* Order to Manitoba Hydro by 2:00 PM CT on Wednesday, Manitoba Hydro shall fax the approved rate schedule to the SEP customers by 3:00 PM CT the same day.
4. Steps 1 through 3 shall be repeated each Wednesday that SEP energy is available.

**SURPLUS ENERGY PROGRAM
PROCEDURE FOR DETERMINATION OF
WEEKLY ENERGY CHARGE**

The SEP Energy Charge for each of the three Time-of-Use (TOU) periods shall be determined by Manitoba Hydro weekly, on a forecast basis for the following week (Monday through Sunday), as follows:

If SEP energy displaces extra-provincial sales, the Energy Charge shall be such as to collect the revenue that would have been received from the foregone energy sales from the week to which the Energy Charge applies.

If SEP energy is provided from purchased power, the Energy Charge shall be the amount necessary to recover the cost of the purchased power, including Transmission Service Charges, Administration Fees and Losses, plus 10% as a contribution to reserves.

If SEP energy is provided from Manitoba Hydro generation, the Energy Charge shall be the amount necessary to collect the incremental cost of generation including Transmission Losses, plus 10% as a contribution to reserves. The latter is to administer energy and to cover a small share of fixed cost or contribution to reserves.

In forecasting the weekly energy prices, Manitoba Hydro will consider what price experience has been under similar conditions of seasonality, expected demand and supply in the Mid-Continent Area Power Pool (MAPP) region. An adder will be applied to each of the three TOU periods to account for market volatility or unforeseen supply costs. The adders will be adjusted as required to ensure a balance is maintained over the long-term between actual energy costs and revenues from SEP energy.

**SURPLUS ENERGY PROGRAM
HEATING LOAD - OPTION 2
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**SURPLUS ENERGY PROGRAM
HEATING LOAD - OPTION 2
TERMS AND CONDITIONS**

PROGRAM DURATION

1. The Surplus Energy Program (SEP) is effective as of December 4, 2000 through to March 31, 2004.

ELIGIBILITY

2. SEP - Option 2 is available to heating loads which meet the following qualifications:
 - a) Demand must be 200 kW or greater; and
 - b) The electricity is to be used for space and/or water heating only; and
 - c) The load must be metered separately from the customer's firm load; and
 - d) The customer has an alternate energy source as a back-up facility for the entire SEP load; and
 - e) Demand associated with SEP does not exceed 50 MV.A **except** where the load factor of such load is guaranteed by the customer, in writing, to exceed 25% on a weekly basis; and
 - f) The load is not being served under the Curtailable Service Program.

CONVERSION TO FIRM SERVICE

3. A customer may convert part or all of the load served under SEP to firm service by providing Manitoba Hydro with advance written notice based on the following notice period options, of which, must be determined and designated on Schedule 'A' of the customer's SEP contract prior to participation in SEP. In all cases Manitoba Hydro may reduce the notice period if, in its sole discretion such reduction can be accomplished without adverse impact to the operations or revenues of the corporation.
 - a) A 12 month notice period with an option of:
 - i) the customer will pay a premium of 1.0¢ per kW.h for energy purchased during the summer peak hours; or
 - ii) the customer will agree that load converted on 12 months notice shall be subject to curtailment under the provisions of Option "A" or "C" of the Curtailable Service Program for the first four months following the conversion; or

- b) A notice period dependent on when the said notice is provided, as follows:
- i) where notice is provided between September 1 up to and including January 31, a 12 month notice period shall apply; or
 - ii) where notice is provided between February 1 up to and including April 30, a 16 month notice period shall apply. Where the customer provides notice between February 1 and April 30, the customer may elect at the time notice is given, to convert to the notice provisions outlined in Subsection 3 a) ii) above; or
 - iii) where notice is provided between May 1 up to and including August 31, the notice period shall not expire prior to August 31 of the following year such that notice will be not greater than 16 months or less than 12 months. Where the customer provides notice between May 1 and August 1, the customer may elect, at the time notice is given, to convert to the notice provisions outlined in Subsection 3 a) ii) above.

BILLING

4. Rates to SEP - Option 2 customers will be set as follows. The rates which will be charged are set out in Schedule SEP-1 (attached) and are subject to weekly approval by the PUB as per Schedule SEP-2 (attached).

- a) i) a Basic Charge to cover administration and metering costs as follows:
- For loads of 1 000 kV.A or greater \$100.00 per month
 - For loads of less than 1 000 kV.A \$50.00 per month
- ii) An Energy Charge per kW.h which will be set for three Time-of-Use periods on a weekly basis; that is, one for each of the peak, shoulder, and off-peak periods. The periods are defined below:

	Summer (May 1 - October 31)	Winter (November 1 - April 30)
Peak	Monday through Friday except Statutory Holidays from: 12:01 hours - 20:00 hours	Monday through Friday except Statutory Holidays from: 07:01 hours - 11:00 hours; and 16:01 hours - 20:00 hours
Shoulder	All hours except Peak, every day from: 07:01 hours - 23:00 hours	
Off-Peak	All night time hours from 23:01 hours - 07:00 hours	

The Weekly Energy Charge will be determined as per Schedule SEP-3 (attached).

- iii) a Distribution Charge per kW.h intended to collect approximately one-third of the embedded cost of distribution, subtransmission, and regional transmission.

INTERRUPTIONS

- 5. On notice by fax or phone from Manitoba Hydro, a customer will be required to interrupt electricity supply to the SEP load within 36 hours in one or more of the TOU periods as specified in the notice, and may not resume use of SEP in the specified period(s) until notified by Hydro by fax or phone that the interruption is ended.
- 6. Failure to interrupt SEP load during an interruption can result in additional charges based on the actual costs Manitoba Hydro incurs to supply SEP load during an interruption. The maximum additional charge is \$150.00 per kW of Demand and \$1.00 per kW.h of associated energy.
- 7. A customer will be subject to unplanned interruptions such as those due to under frequency relay operation during power system emergencies. Manitoba Hydro cannot guarantee continuous service to any class of service in Manitoba or extra-provincially.

METERING AND ELECTRIC SERVICE FACILITIES

- 8. Manitoba Hydro will supply the appropriate metering for a SEP customer.
- 9. The customer shall be responsible for all costs of building or upgrading regional transmission, subtransmission, distribution and/or dedicated services which may be required to serve SEP load.

CONTRACT REQUIREMENTS

- 10. A customer will be required to enter into a formal agreement with Manitoba Hydro. The agreement will document the above Terms and Conditions as well as any others considered necessary due to the nature of a specific service.

CUSTOMER WAIVER

- 11. a) A customer will be required to sign a waiver stating that the customer understands that the Terms and Conditions of SEP provide for:
 - i) SEP energy prices-per-kW.h which can be volatile from week-to-week, and can be extremely high during periods of scarcity in interconnected markets; and
 - ii) interruption in the supply of SEP energy can be initiated by Manitoba Hydro on 36 hours notice to the customer for any reason; and
 - iii) possible lengthy periods of interruption.

- b) The customer has considered the implications of the foregoing and will comply without objection to interruptions made in accordance with the Terms and Conditions of SEP.
- c) The customer must provide certification in writing to Manitoba Hydro that:
 - i) the back-up facility is adequate to serve the entire SEP load given the type of load and possibly lengthy interruption of SEP supply; and
 - ii) the installation and operation of the back-up facility complies with all government regulations including all municipal and provincial zoning and environmental regulations.
- d) Certification of back-up as described in Subsections 11 c) i) and ii) must be provided in writing to Manitoba Hydro when the customer first accepts SEP service and by no later than October 1, of every year thereafter that the customer is accepting SEP service.
- e) If a customer ceases, or is unable to maintain an adequate back-up facility:
 - i) the customer must notify Manitoba Hydro in writing of the situation immediately; and
 - ii) should the customer continue to use SEP, Manitoba Hydro may bill the customer for Demand (kW.A) associated with SEP energy use at the applicable General Service Large or Medium Demand Charge for the period of time the back-up facility is considered to be, or to have been, inadequate. The appropriate SEP Energy and Distribution Charges will continue to be applied to all energy use; and
 - iii) Notice to convert load served under SEP to firm service will be as set out in Section 3.

OPTION 2
SCHEDULE SEP-1

GENERAL SERVICE ALTERNATIVE RATES
SURPLUS ENERGY PROGRAM RATE

General Service-Medium (Utility-Owned Transformer)

Tariff No. 50-19:

Basic Monthly Charge:
SEP Load 1 000 kV.A \$ 50.00
SEP Load > 1 000 kV.A \$100.00
PLUS
Distribution Charge: 0.62¢/kW.h
PLUS
Energy Charge:
Peak Hours _____
Shoulder Hours _____
Off-Peak Hours _____

General Service-Large 750 V to Not Exceeding 30 kV

Tariff No. 50-20:

Basic Monthly Charge:
SEP Load 1 000 kV.A \$ 50.00
SEP Load > 1 000 kV.A \$100.00
PLUS
Distribution Charge: 0.33¢/kW.h
PLUS
Energy Charge:
Peak Hours _____
Shoulder Hours _____
Off-Peak Hours _____

General Service-Large 30 kV to Not Exceeding 100 kV

Tariff No. 50-21:

Basic Monthly Charge:
SEP Load 1 000 kV.A \$ 50.00
SEP Load > 1 000 kV.A \$100.00
PLUS
Distribution Charge: 0.14¢/kW.h
PLUS
Energy Charge:
Peak Hours _____
Shoulder Hours _____
Off-Peak Hours _____

General Service-Large Exceeding 100 kV

Tariff No. 50-22:

Basic Monthly Charge:
SEP Load 1 000 kV.A \$ 50.00
SEP Load > 1 000 kV.A \$100.00
PLUS
Distribution Charge: 0.06¢/kW.h
PLUS
Energy Charge:
Peak Hours _____
Shoulder Hours _____
Off-Peak Hours _____

Hours	Summer (May 1 - October 31)	Winter (November 1 - April 30)
Peak	Monday through Friday except Statutory Holidays from: 12:01 hours - 20:00 hours	Monday through Friday except Statutory Holidays from: 07:01 hours - 11:00 hours; and 16:01 hours - 20:00 hours
Shoulder	All hours except Peak, every day from: 07:01 hours - 23:00 hours	
Off-Peak	All night time hours from 23:01 hours - 07:00 hours	

OPTION 2
SCHEDULE SEP-2

**SURPLUS ENERGY PROGRAM
PROCEDURE FOR INTERIM EX PARTE
PUBLIC UTILITIES BOARD (PUB) APPROVAL OF SEP RATE**

1. Each Wednesday by 9:00 AM Central Time (CT), Manitoba Hydro shall:
 - i) fax to the Board a copy of Schedule SEP-1 which shall include the Energy Charge for the Time-of-Use periods for all General Service Medium and Large classes of service;
 - ii) indicate the expected source of SEP energy (i.e. from displaced exports, Manitoba Hydro generation, or imports); and
 - iii) warrant that the price has been estimated using approved methodology as set out in Schedule SEP-3.

The "Message Confirmation" sheet for the fax will serve as confirmation that the PUB has received the schedule.

2. If Schedule SEP-1 is acceptable, the PUB will provide interim *ex parte* approval of the rates and fax the Interim *Ex Parte* Order to Manitoba Hydro by 2:00 PM CT the same day. If the proposed Schedule, for any reason, is not acceptable, the PUB will contact Manitoba Hydro as soon as possible and attempt to resolve any concerns. If these concerns cannot be resolved by Wednesday at 3:00 PM CT, Manitoba Hydro will then forthwith contact customers to inform them that SEP energy is not available for the following week.
3. If the PUB faxes an Interim *Ex Parte* Order to Manitoba Hydro by 2:00 PM CT on Wednesday, Manitoba Hydro shall fax the approved rate schedule to the SEP customers by 3:00 PM CT the same day.
4. Steps 1 through 3 shall be repeated each Wednesday that SEP energy is available.

OPTION 2
SCHEDULE SEP-3

**SURPLUS ENERGY PROGRAM
PROCEDURE FOR DETERMINATION OF
WEEKLY ENERGY CHARGE**

The SEP Energy Charge for each of the three Time-of-Use (TOU) periods shall be determined by Manitoba Hydro weekly, on a forecast basis for the following week (Monday through Sunday), as follows:

If SEP energy displaces extra-provincial sales, the Energy Charge shall be such as to collect the revenue that would have been received from the foregone energy sales from the week to which the Energy Charge applies.

If SEP energy is provided from purchased power, the Energy Charge shall be the amount necessary to recover the cost of the purchased power, including Transmission Service Charges, Administration Fees and Losses, plus 10% as a contribution to reserves.

If SEP energy is provided from Manitoba Hydro generation, the Energy Charge shall be the amount necessary to collect the incremental cost of generation including Transmission Losses, plus 10% as a contribution to reserves. The latter is to administer energy and to cover a small share of fixed cost or contribution to reserves.

In forecasting the weekly energy prices, Manitoba Hydro will consider what price experience has been under similar conditions of seasonality, expected demand and supply in the Mid-Continent Area Power Pool (MAPP) region. An adder will be applied to each of the three TOU periods to account for market volatility or unforeseen supply costs. The adders will be adjusted as required to ensure a balance is maintained over the long-term between actual energy costs and revenues from SEP energy.

**SURPLUS ENERGY PROGRAM
SELF-GENERATION DISPLACEMENT - OPTION 3
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**SURPLUS ENERGY PROGRAM
SELF-GENERATION DISPLACEMENT - OPTION 3
TERMS AND CONDITIONS**

PROGRAM DURATION

1. The Surplus Energy Program (SEP) is effective as of December 4, 2000 through to March 31, 2004.

ELIGIBILITY

2. SEP - Option 3 is available to electric loads which meet the following qualifications:
 - a) Demand must be between 200 kW and 50 000 kW; and
 - b) The load must be fully backed up by generating equipment which is leased or owned by the customer and is located on the premises of the SEP load; and
 - c) The load is intermittent and for industrial use which can be deferred, for several days, if necessary, should maintenance of back-up generation be required during a period of interruption of SEP energy supply.

Load would not be considered intermittent if the average monthly load factor exceeds 25%; and
 - d) The load must be metered separately from the customer's firm load; and
 - e) The load is not being served under the Curtailable Service Program; and
 - f) Manitoba Hydro may require a customer to maintain a minimum Power Factor of 90% as a condition of participation.

CONVERSION TO FIRM SERVICE

3. A customer may convert part or all of the load served under SEP to firm service by providing Manitoba Hydro with advance written notice based on the following notice period options, of which, must be determined and designated on Schedule 'A' of the customer's SEP contract prior to participation in SEP. In all cases Manitoba Hydro may reduce the notice period if, in its sole discretion such reduction can be accomplished without adverse impact to the operations or revenues of the corporation.
 - a) A 12 month notice period with an option of:
 - i) the customer will pay a premium of 1.0¢ per kW.h for energy purchased during the summer peak hours; or

- ii) the customer will agree that load converted on 12 months notice shall be subject to curtailment under the provisions of Option "A" or "C" of the Curtailable Service Program for the first four months following the conversion; or
- b) A notice period dependent on when the said notice is provided, as follows:
 - i) where notice is provided between September 1 up to and including January 31, a 12 month notice period shall apply; or
 - ii) where notice is provided between February 1 up to and including April 30, a 16 month notice period shall apply. Where the customer provides notice between February 1 and April 30, the customer may elect at the time notice is given, to convert to the notice provisions outlined in Subsection 3 a) ii) above; or
 - iii) where notice is provided between May 1 up to and including August 31, the notice period shall not expire prior to August 31 of the following year such that notice will be not greater than 16 months or less than 12 months. Where the customer provides notice between May 1 and August 1, the customer may elect, at the time notice is given, to convert to the notice provisions outlined in Subsection 3 a) ii) above.

BILLING

- 4. Rates to SEP - Option 3 customers will be set as follows. The rates which will be charged are set out in Schedule SEP-1 (attached) and are subject to weekly approval by the PUB as per Schedule SEP-2 (attached).

- a) i) a Basic Charge to cover administration and metering costs as follows:
 - For loads of 1 000 kV.A or greater \$100.00 per month
 - For loads of less than 1 000 kV.A \$50.00 per month
- ii) an Energy Charge per kW.h which will be set for three Time-of-Use periods on a weekly basis; that is, one for each of the peak, shoulder, and off-peak periods. The periods are defined below:

	Summer (May 1 - October 31)	Winter (November 1 - April 30)
Peak	Monday through Friday except Statutory Holidays from: 12:01 hours - 20:00 hours	Monday through Friday except Statutory Holidays from: 07:01 hours - 11:00 hours; and 16:01 hours - 20:00 hours
Shoulder	All hours except Peak, every day from: 07:01 hours - 23:00 hours	
Off-Peak	All night time hours from 23:01 hours - 07:00 hours	

The Weekly Energy Charge will be determined as per Schedule SEP-3 (attached).

- iii) a Distribution Charge per kW.h intended to collect approximately one-third of the embedded cost of distribution, subtransmission, and regional transmission.

INTERRUPTIONS

- 5. On notice by fax or phone from Manitoba Hydro, a customer will be required to interrupt electricity supply to the SEP load within 36 hours in one or more of the TOU periods as specified in the notice, and may not resume use of SEP in the specified period(s) until notified by Hydro by fax or phone that the interruption is ended.
- 6. Failure to interrupt SEP load during an interruption can result in additional charges based on the actual costs Manitoba Hydro incurs to supply SEP load during an interruption. The maximum additional charge is \$150.00 per kW of Demand and \$1.00 per kW.h of associated energy.
- 7. A customer will be subject to unplanned interruptions such as those due to under frequency relay operation during power system emergencies. Manitoba Hydro cannot guarantee continuous service to any class of service in Manitoba or extra-provincially.

METERING AND ELECTRIC SERVICE FACILITIES

- 8. Manitoba Hydro will supply the appropriate metering for a SEP customer.
- 9. The customer shall be responsible for all costs of building or upgrading regional transmission, subtransmission, distribution and/or dedicated services which may be required to serve SEP load.

CONTRACT REQUIREMENTS

- 10. A customer will be required to enter into a formal agreement with Manitoba Hydro. The agreement will document the above Terms and Conditions as well as any others considered necessary due to the nature of a specific service.

CUSTOMER WAIVER

- 11. a) A customer will be required to sign a waiver stating that the customer understands that the Terms and Conditions of SEP provide for:
 - i) SEP energy prices-per-kW.h which can be volatile from week-to-week, and can be extremely high during periods of scarcity in interconnected markets; and

- ii) interruption in the supply of SEP energy can be initiated by Manitoba Hydro on 36 hours notice to the customer for any reason; and
 - iii) possible lengthy periods of interruption.
- b) The customer has considered the implications of the foregoing and will comply without objection to interruptions made in accordance with the Terms and Conditions of SEP.
- c) The customer must provide certification in writing to Manitoba Hydro that:
 - i) the back-up facility is adequate to serve the entire SEP load given the type of load and possibly lengthy interruption of SEP supply; and
 - ii) the installation and operation of the back-up facility complies with all government regulations including all municipal and provincial zoning and environmental regulations.
- d) Certification of back-up as described in Subsections 11 c) i) and ii) must be provided in writing to Manitoba Hydro when the customer first accepts SEP service and by no later than October 1, of every year thereafter that the customer is accepting SEP service.
- e) If a customer ceases, or is unable to maintain an adequate back-up facility:
 - i) the customer must notify Manitoba Hydro in writing of the situation immediately; and
 - ii) should the customer continue to use SEP, Manitoba Hydro may bill the customer for Demand (kV.A) associated with SEP energy use at the applicable General Service Large or Medium Demand Charge for the period of time the back-up facility is considered to be, or to have been, inadequate. The appropriate SEP Energy and Distribution Charges will continue to be applied to all energy use; and
 - iii) notice to convert load served under SEP to firm service will be as set out in Section 3.

GENERAL SERVICE ALTERNATIVE RATES
SURPLUS ENERGY PROGRAM RATE

General Service-Medium (Utility-Owned Transformer)

Tariff No. 50-19:

Basic Monthly Charge:
SEP Load 1 000 kV.A \$ 50.00
SEP Load > 1 000 kV.A \$100.00
PLUS
Distribution Charge: 0.62¢/kW.h
PLUS
Energy Charge:
Peak Hours _____
Shoulder Hours _____
Off-Peak Hours _____

General Service-Large 750 V to Not Exceeding 30 kV

Tariff No. 50-20:

Basic Monthly Charge:
SEP Load 1 000 kV.A \$ 50.00
SEP Load > 1 000 kV.A \$100.00
PLUS
Distribution Charge: 0.33¢/kW.h
PLUS
Energy Charge:
Peak Hours _____
Shoulder Hours _____
Off-Peak Hours _____

General Service-Large 30 kV to Not Exceeding 100 kV

Tariff No. 50-21:

Basic Monthly Charge:
SEP Load 1 000 kV.A \$ 50.00
SEP Load > 1 000 kV.A \$100.00
PLUS
Distribution Charge: 0.14¢/kW.h
PLUS
Energy Charge:
Peak Hours _____
Shoulder Hours _____
Off-Peak Hours _____

General Service-Large Exceeding 100 kV

Tariff No. 50-22:

Basic Monthly Charge:
SEP Load 1 000 kV.A \$ 50.00
SEP Load > 1 000 kV.A \$100.00
PLUS
Distribution Charge: 0.06¢/kW.h
PLUS
Energy Charge:
Peak Hours _____
Shoulder Hours _____
Off-Peak Hours _____

Hours	Summer (May 1 - October 31)	Winter (November 1 - April 30)
Peak	Monday through Friday except Statutory Holidays from: 12:01 hours - 20:00 hours	Monday through Friday except Statutory Holidays from: 07:01 hours - 11:00 hours; and 16:01 hours - 20:00 hours
Shoulder	All hours except Peak, every day from: 07:01 hours - 23:00 hours	
Off-Peak	All night time hours from 23:01 hours - 07:00 hours	

OPTION 3
SCHEDULE SEP-2

**SURPLUS ENERGY PROGRAM
PROCEDURE FOR INTERIM EX PARTE
PUBLIC UTILITIES BOARD (PUB) APPROVAL OF SEP RATE**

1. Each Wednesday by 9:00 AM Central Time (CT), Manitoba Hydro shall:
 - i) fax to the Board a copy of Schedule SEP-1 which shall include the Energy Charge for the Time-of-Use periods for all General Service Medium and Large classes of service;
 - ii) indicate the expected source of SEP energy (i.e. from displaced exports, Manitoba Hydro generation, or imports); and
 - iii) warrant that the price has been estimated using approved methodology as set out in Schedule SEP-3.

The "Message Confirmation" sheet for the fax will serve as confirmation that the PUB has received the schedule.

2. If Schedule SEP-1 is acceptable, the PUB will provide interim *ex parte* approval of the rates and fax the Interim *Ex Parte* Order to Manitoba Hydro by 2:00 PM CT the same day. If the proposed Schedule, for any reason, is not acceptable, the PUB will contact Manitoba Hydro as soon as possible and attempt to resolve any concerns. If these concerns cannot be resolved by Wednesday at 3:00 PM CT, Manitoba Hydro will then forthwith contact customers to inform them that SEP energy is not available for the following week.
3. If the PUB faxes an Interim *Ex Parte* Order to Manitoba Hydro by 2:00 PM CT on Wednesday, Manitoba Hydro shall fax the approved rate schedule to the SEP customers by 3:00 PM CT the same day.
4. Steps 1 through 3 shall be repeated each Wednesday that SEP energy is available.

OPTION 3
SCHEDULE SEP-3

**SURPLUS ENERGY PROGRAM
PROCEDURE FOR DETERMINATION OF
WEEKLY ENERGY CHARGE**

The SEP Energy Charge for each of the three Time-of-Use (TOU) periods shall be determined by Manitoba Hydro weekly, on a forecast basis for the following week (Monday through Sunday), as follows:

If SEP energy displaces extra-provincial sales, the Energy Charge shall be such as to collect the revenue that would have been received from the foregone energy sales from the week to which the Energy Charge applies.

If SEP energy is provided from purchased power, the Energy Charge shall be the amount necessary to recover the cost of the purchased power, including Transmission Service Charges, Administration Fees and Losses, plus 10% as a contribution to reserves.

If SEP energy is provided from Manitoba Hydro generation, the Energy Charge shall be the amount necessary to collect the incremental cost of generation including Transmission Losses, plus 10% as a contribution to reserves. The latter is to administer energy and to cover a small share of fixed cost or contribution to reserves.

In forecasting the weekly energy prices, Manitoba Hydro will consider what price experience has been under similar conditions of seasonality, expected demand and supply in the Mid-Continent Area Power Pool (MAPP) region. An adder will be applied to each of the three TOU periods to account for market volatility or unforeseen supply costs. The adders will be adjusted as required to ensure a balance is maintained over the long-term between actual energy costs and revenues from SEP energy.

CURTAILABLE RATE PROGRAM

EFFECTIVE APRIL 1, 2003

**TERMS AND CONDITIONS
IN ACCORDANCE WITH
PUB ORDER 7/03**



MARCH 2003

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**CURTAILABLE RATE PROGRAM
TERMS AND CONDITIONS**

1. DEFINITIONS

The following expressions when used in these Terms and Conditions shall have the following meanings:

- a) "Billing Month": the period of time, generally 30 days, in which Energy and/or Demand is consumed and thereafter billed to the Customer;
- b) "Curtailment": a reduction in the use of Energy by the customer, as initiated by Hydro, for reliability reasons.
- c) "Demand": the maximum use of power within a specified period;
- d) "Guaranteed Make-Up": that quantity of energy consumed during the Off-Peak period (without incurring additional Demand Charges) which exactly compensates the customer for the energy use curtailed during the period of curtailment;
- e) "Energy": power integrated with time and measured or expressed in kilowatt-hours (kW.h).
- f) "Firm": load that is not considered interruptible (curtailable);
- g) "Interruption": a discontinuance in the supply of Energy;
- h) "Load Factor": the ratio of a customer's average Demand over a designated period of time to the Customer's maximum Demand occurring in that period. Monthly Load Factor is found by calculating the ratio of Energy use (kW.h) to highest Demand (kW) multiplied by time (usually measured at 730 hours);

$$LF = \frac{\text{Energy (kW.h per month)}}{\text{Peak Demand (kW) x hours per month}}$$

- i) "Power Factor": is the ratio of real power in watts of an alternating current circuit to the apparent power in volt-amperes, expressed as $\frac{\text{kW}}{\text{kV.A}}$;
- j) "Protected Firm Load (PFL)": the amount of load (expressed in kW) that the customer wishes to protect from being curtailed.
- k) "Peak": defined as all hours from 7:01 hours through 23:00 hours Monday through Sunday inclusive.
- l) "Off-Peak": all night time hours from 23:01 hours through 07:00 hours. Monday through Sunday inclusive.

2. CURTAILABLE RATE DISCOUNT

A Curtailable customer's bill is reduced by the Curtailable Load Discount, calculated in accordance with the discount appropriate to the curtailment option selected by the customer and the formula for determining curtailable load.

3. CURTAILABLE LOAD OPTIONS

Available curtailable load options are:

Option 'A': Curtail within five minutes of notice for up to four hours and 15 minutes per curtailment

Option 'C': Curtail within one hour of notice for up to four hours per curtailment

Option 'E': Curtail within 48 hours of notice for up to 10 days per curtailment

Additional description of limits on curtailments (e.g. maximum curtailments per year) is provided on Page 10.

Options 'A' or 'C' can be combined with Option 'E' to increase the discount. Options 'A' and 'C' cannot be combined with each other.

The terms and conditions of combined Options 'AE' and 'CE' are combinations of the

individual options (e.g. notice to curtail for 'AE' would be five minutes for Option 'A' curtailments and 48 hours for Option 'E' curtailments).

4. USE OF CURTAILABLE LOAD

Manitoba Hydro maintains generation reserves in order to minimize disruption to firm customers in the event of loss of generation or transmission reserves or unexpected increases in firm load. Manitoba Hydro is also committed to maintain minimum reserves as part of its reliability obligations with the Mid Continent Area Power Pool (MAPP) or successor organization's region.

Manitoba Hydro will use curtailable load resources to meet reliability obligations only. These include:

- to reestablish Manitoba Hydro's MAPP or successor organization's contingency reserves. If Manitoba Hydro's reserves are committed to a MAPP or successor organization's contingency for more than 30 minutes, a curtailment would be called; and
- to maintain Manitoba Hydro's MAPP or successor organization's planning reserve obligations. A curtailment would be called if Manitoba Hydro were in immediate danger of failing to meet its MAPP or successor organization's reserve obligations and thereby be subjected to costly penalties.
- to protect firm Manitoba load when MAPP or successor organization's reserves are insufficient to avoid curtailing firm load (i.e. curtailable load would be curtailed first prior to firm load).

Manitoba Hydro will make firm sales to export customers to the extent that its reserve obligation allows while domestic curtailable customers will be requested to curtail in order to maintain a firm export sale. They will not be requested to curtail in order to facilitate a high value opportunity sale.

5. CONTRACTS AND TERMINATION NOTICE

- (i) Discounts or credits offered by the program, as well as all other terms and conditions, are fixed from the date of approval by the Public Utilities Board, unless superseded by a further order of the Public Utilities Board or unless the program is withdrawn by Manitoba Hydro.

- (ii) Customers selecting the Curtailable Rate Program will be required to contract for the service. In the event that the Public Utilities Board mandates changes to the program, which in Manitoba Hydro's opinion are material, Manitoba Hydro and the customer will agree to amend the contract to incorporate the changes, failing which the contract shall terminate immediately.
- (iii) Customers accepting Curtailable service for the first time may switch curtailment options or switch to Firm service entirely within the first six months, unless they have entered into the Curtailable Service Program from another interruptible rate program.
- (iv) Customers who have participated in the program for a period in excess of six months may:
 - a) re-contract for another Curtailable Rate Option for the following changes by providing two months' written notice to Manitoba Hydro.
 - switch from Option 'C' to Option 'A';
 - add Option 'E' to any other Option.
 - b) switch from Curtailable to Firm service by providing one year's written notice to Manitoba Hydro in which case Manitoba Hydro may convert the load from Curtailable to Firm service at any time during the one year notice period. The one-year notice will not apply when the customer's decision to withdraw from the program is a result of material changes mandated by the Public Utilities Board as outlined in Section 4(ii). Customers who have switched from Curtailable to Firm service may not be permitted to switch back to Curtailable service.
- (v) Customers may re-designate their monthly Protected Firm Loads by providing 12 months' written notice to Manitoba Hydro. Decreases to Protected Firm Load may be subject to capacity limitations and will be at the discretion of Manitoba Hydro. Customers increasing their Protected Firm Load must maintain a minimum curtailable load of 5 MW per month.

6. NOMINATION OF CURTAILABLE LOAD

A customer must have a minimum, nominal curtailable load of 5 MW. Customers may have two options to nominating eligible load.

(i) Guaranteed Curtailment

The customer nominates curtailable load equal to the amount of which is guaranteed to be reduced at the time requested. For example, a customer with a 100 MW load may nominate 10 MW and guarantee that whenever requested that 10 MW of load will be shed. In order to honour this guarantee, the customer will be required to ensure that its load prior to curtailment would be such that it never falls below 10 MW plus whatever firm load the customer wishes to protect.

This customer would receive the full discount for the option chosen for the nominated curtailable load.

(ii) Curtail to Protected Firm Load

The customer nominates a firm load below which curtailment will not occur. The curtailable portion of the customer load will be the load available above the protected firm load at the time of curtailment request. With this type of nomination, there is a risk to Manitoba Hydro that there will be little or no load to curtail when a request is made: i.e. that the customer is operating at or below protected firm level when curtailment request is made.

For this customer, the discount is determined in accordance with the following formula:

Monthly Credit = (PD-FL) x LF x \$/kW Credit for Selected Option where,

PD = the customer's highest demand (kW) in the peak billing period in the billing month.

FL = protected firm load of the customer in kW.

LF = is the customer's overall load factor during the peak billing period in the billing month and excluding any periods during which the customer complied with a curtailment request.

At Manitoba Hydro's discretion customers with load factors less than 50% during peak periods on the curtailable portion of the load may be required to guarantee curtailable load, i.e. to take up Option 6(i).

7. **MANNER OF NOTICE TO CURTAIL**

(i) **Option 'A' and 'C' Customers**

For Option 'A', the Notice to Curtail of five minutes means that the customer must reduce the load by the contracted amount or to the contracted firm amount within five minutes of the initiation from Manitoba Hydro. For Option 'C', the Notice to Curtail of one hour means that the customer must reduce the load within one hour. Initiation will be by telephone or by an electronic signal sent to the customer by the Manitoba Hydro System Control Centre. Both the initiation signal and the load response will be recorded by Manitoba Hydro.

(ii) **Option 'E' Customers**

Manitoba Hydro will give Option 'E' customers notice in writing that their load may be curtailed when Manitoba Hydro expects to be short of firm energy supplies. Manitoba Hydro will provide not less than 30 days notice. Notice will be deemed received three days from the date of mailing; or if faxed or sent by electronic mail, on the date that it was sent.

After the notice period has been met, Option 'E' customers will be on standby and curtailable on 48 hours notice by fax or electronic mail. Manitoba Hydro will give Option 'E' customers notice in writing whenever their standby status is withdrawn.

8. **GUARANTEED MAKE-UP OF CURTAILED ENERGY**

(i) **Option 'A' and 'C' Customers**

When curtailments occur, customers will forego use of energy that would otherwise have been used in production. To assist Option 'A' and 'C' customers in maintaining production, Manitoba Hydro will guarantee that all kW.h lost during the

curtailment can be made up within 30 days from completion of the curtailment, provided such make-up is accomplished except under circumstances described below. In order to make up the energy foregone during a curtailment, Curtable Service customers will be allowed to exceed, during Off-Peak periods in the 30-day period, the On-Peak Demand established during the billing month without attracting further Demand Charges. Normal Energy Charges will apply to make-up energy immediately following the completion of a curtailment.

Guaranteed Make-Up will be determined by subtracting the customer's maximum allowed load during curtailments from the maximum demand established during the previous 30 days and by multiplying that amount by the duration of the curtailment (or by some other mutually agreed upon formula). Where the maximum demand in the previous 30 days is not representative, the calculation of make-up will be made on a mutually agreed upon basis.

Guaranteed Make-Up quantities will be provided as soon as possible subsequent to a curtailment and Manitoba Hydro will delay Guaranteed Make-Up only in the event that an actual capacity shortage occurs. Under normal circumstances, customers curtailed under Options 'A' and 'C' should be able to complete Guaranteed Make-Up within a few days. Except as noted below, however, make-up is not guaranteed beyond 30 days from the curtailment.

In the event that a curtailment occurs within 30 days of the previous curtailment, the make-up period will be extended such that the customer receives its full 30-day make-up period in respect of each curtailment.

(ii) Option 'E' Customers

Customers curtailed under Option 'E' may be required to wait several weeks before beginning Guaranteed Make-Up (because of system conditions) and may require several months to complete it. If Guaranteed Make-Up becomes unavailable, Manitoba Hydro will notify customers using the same means as employed to notify them of actual curtailments. Because of the difficulty Option 'E' customers may have in completing Guaranteed Make-Up, an additional offset is also provided. For Option 'E' customers only, Manitoba Hydro will also prorate Demand Charges on the curtable portion of load to exclude the period during which an Option 'E' curtailment was in effect. For example, if the load were curtailed for ten days in December, the Demand Charge would be reduced by 10/31 or 32% and, as well, the curtable credit would be applied. This additional discount would apply only

during months of curtailment and only to that portion of load which is curtailable. This provision will not reduce the maximum demand established for the purposes of computing the winter ratchet.

9. **ADDITIONAL CHARGES FOR FAILURE TO CURTAIL**

(i) **Option 'A' and 'C' Customers**

The first failure to curtail load on request in any contract period will not attract additional charges, but the customer will forego the discount for that month.

After the first failure in a contract period, the following additional charges will apply. First subsequent failure in any 12-month period: loss of monthly discount plus additional charge equal to discount. Second and subsequent failure in any 12-month period: loss of discount and additional charge equal to 3 X discount.

If a customer reaches a point at which cumulative additional charges during any contract period equal or exceed cumulative discounts, Manitoba Hydro will have the right to exclude the customer from further participation in the program.

(ii) **Option 'E' Customers**

If the customer has elected to participate in Option 'E', in the event of a single failure to curtail load, Manitoba Hydro may in its own discretion exercise one of the following remedies:

- a) the normal additional charges, as described in 9(i); or
- b) twenty-four hours after the time curtailment was to have started, Manitoba Hydro may cause electricity service to the Point of Delivery to be restricted to achieve the maximum load that should have been achieved by curtailment; or
- c) if load limitation as described in 9(ii)b) above is, in Manitoba Hydro's opinion, not practical or reasonable, 24 hours after the time curtailment was to have started, Manitoba Hydro may cause electricity service to the Point of Delivery to be disconnected for the remainder of the period. Disconnection shall only take place after explicit written communication with the customer and only if, otherwise, firm load customers would be impacted.

10. **MONTHLY VARIATION**

Customers may nominate different quantities of curtailable or firm load for each month provided that a minimum of 5 MW of curtailable load is available in each month. Customers must specify the 12 months Protected Firm Load or 12 months' curtailable load prior to participation in the program and must provide 12 months' written notice to Manitoba Hydro should they wish to increase or decrease their load in any month. Decreases to Protected Firm Load may be subject to capacity limitations and will be at the discretion of Manitoba Hydro.

11. **DURATION OF CURTAILMENTS**

Notwithstanding the maximum single curtailment duration provisions of each of the options, Manitoba Hydro will attempt to minimize the duration.

12. **UNPLANNED INTERRUPTIONS**

In addition to program curtailments for which notice is provided, customers will continue to be subject to unplanned interruptions such as those due to under frequency relay operation during power system emergencies. Manitoba Hydro cannot guarantee continuous service to any class of service in Manitoba or extra provincially.

**CURTAILABLE RATE PROGRAM OPTIONS
FOR APPLICATION AS OF APRIL 1, 2003
UNLESS SUPERCEDED BY FURTHER ORDER OF THE PUB**

Discount to Demand Charge Expressed as Percentage of Reference Discount per kW/month.

OPTIONS	TERMS AND CONDITIONS					
	Minimum Notice to Curtail	Maximum Duration Per Curtailment	Maximum Daily Hours of Curtailment	Maximum Number Curtailments Per Year	Maximum Annual Hours of Curtailment	Discount as Percentage of Reference Discount
A	5 minutes	4-1/4 Hours	6 Hours (Oct. 1 - April 30) 10 Hours (May 1 - Sept. 30)	15 Curtailments	63.75 Hours	70%
C	1 Hour	4 Hours	8 Hours	15 Curtailments	60.00 Hours	40%
E	48 Hours	10 Days	24 Hours	3 Curtailments	720.00 Hours	35%
A&E	Combination	Combination	Combination	18 Curtailments	783.75 Hours	100%
C&E	Combination	Combination	Combination	18 Curtailments	780.00 Hours	70%

The Monthly Reference Discount shall equal A, adjusted by the annual inflation factor as of April 1st of each fiscal year, where:

A = the amount of the Reference Discount which is related to Generation Deferral benefits, expressed in Canadian Dollars; after April 1, 2003, this amount shall be adjusted at the start of each fiscal year of Manitoba Hydro by the Inflation Factor;

Inflation Factor = at the end of each fiscal year of Manitoba Hydro, the percentage change since 2003 in the Consumer Price Index for Manitoba as recorded for the most recent set of 12 month periods for which data are available.

Prior to the yearly adjustment for inflation, the Reference Discount, shall be \$2.75 per kW/month.

British Columbia Hydro and Power Authority
Electric Tariff
Thirteenth Revision of Page C-64
Effective: 30 November 2001

SCHEDULE 1880

TRANSMISSION SERVICE - EMERGENCY, MAINTENANCE
AND SPECIAL SUPPLY

Availability: For Customers supplied with Electricity under Schedules 1821, 1848, 1852 and 1854 subject to the Special Conditions below.

Applicable in: Rate Zone I excluding the Districts of Kingsgate-Yahk and Lardeau-Shutty Bench.

Rate: The Rate per Period of Use shall be the sum of:

Demand Charge: $H \times \$0.00665$ per kV.A of Schedule 1880 Billing Demand, where H = the number of hours in the Period of Use; for Customers taking Electricity under Schedule 1852, H = the number of hours between 06:00 and 22:00 of each day from Monday to Friday for the months of November to February and the number of hours between 06:00 and 20:00 of each day from Monday to Friday for the months of March to October (HLH) in the Period of Use

Energy Charge: plus
First 250 kW.h per kV.A of Schedule 1880
Billing Demand @ 2.859¢ per kW.h
All additional kW.h @ 2.599¢ per kW.h.

Minimum Charge: The Minimum Charge in any Period of Use shall be \$0.479 per kV.A of the Schedule 1880 Billing Demand in the Billing Period that the Period of Use terminates. The Minimum Charge shall not apply when the Period of Use is greater than 72 hours.

Period of Use: A period of consecutive hours during which Electricity is taken under this Schedule which may extend into subsequent Billing Periods. For Customers taking Electricity under Schedule 1852, Electricity taken under this Schedule applies only during the HLH.

Schedule 1880 Billing Demand: For each Billing Period the Schedule 1880 Billing Demand for each Period of Use, or portion thereof occurring within the Billing Period, shall be determined as follows:

a) For Customers taking Electricity under Schedule 1821:

the difference between the highest kV.A Demand during the Period of Use, or portion thereof, and the Billing Demand under Schedule 1821 less any other Schedule 1880 Billing Demand for other concurrent Periods of Use that commenced earlier. If the Period of Use extends over an entire Billing Period, the Schedule 1821 Demand from the prior Billing Period will be used in determining the Schedule 1880 Billing Demand.

British Columbia Hydro and Power Authority
Electric Tariff
Ninth Revision of Page C-65
Effective: 30 November 2001

SCHEDULE 1880

TRANSMISSION SERVICE - EMERGENCY, MAINTENANCE
AND SPECIAL SUPPLY (Cont'd)

Schedule 1880
Billing Demand:
(Cont'd)

- b) For Customers taking Electricity under Schedules 1848 or 1854:

the difference between the highest kV.A Demand during the Period of Use, or portion thereof and the highest kV.A Demand prior to the Period of Use in the Billing Period in which the Periods of Use commenced. In determining the Schedule 1880 Billing Demand, the highest kV.A Demand prior to the Period of Use shall not be less than the Customer's CBL Demand.

- c) For Customers taking Electricity under Schedule 1852:

the difference between the highest kV.A Demand during the HLH of the Period of Use, or portion thereof, and the Billing Demand under Schedule 1852 less any other Schedule 1880 Billing Demand for other concurrent Periods of Use that commenced earlier. If the Period of Use extends over an entire Billing Period, the Schedule 1852 Demand from the prior Billing Period will be used in determining the Schedule 1880 Billing Demand.

Schedule 1880
Energy
Determination:

The kW.h supplied under this Schedule in a Billing Period during a particular Period of Use or portion thereof shall be the total kW.h supplied during the Period of Use or portion thereof, less:

- a) For Customers on Schedule 1821:

the kW.h determined from the product of the average Power Factor during the Period of Use or portion thereof and Schedule 1821 Billing Demand and the hours in the Period of Use. Energy shall be allocated to concurrent Periods of Use in proportion to the respective Billing Demands.

- b) For Customers on Schedules 1848 or 1854:

the Kw.h determined from the following:

$$\text{kW.h} =$$

$$\text{Avg PF} \times (\text{High kV.A} - 1880 \text{ Billing Demand}) \times \text{Period of Use}$$

Where:

British Columbia Hydro and Power Authority
Electric Tariff
Ninth Revision of Page C-66
Effective: 30 November 2001

SCHEDULE 1880

TRANSMISSION SERVICE - EMERGENCY, MAINTENANCE
AND SPECIAL SUPPLY (Cont'd)

Schedule 1880
Energy
Determination:
(Cont'd)

Avg PF is the average Power Factor during the Period of Use or portion thereof,

High KVA is the highest measured KVA Demand in the Period of Use or portion thereof, and

1880 Billing Demand is the Schedule 1880 Billing Demand(s) for this and any concurrent Period(s) of Use.

Energy shall be allocated to concurrent Periods of Use in proportion to the respective Billing Demands.

c) For Customers on Schedule 1852:

the kW.h determined from the following:

1. the kW.h during the LLH (all hours outside of HLH) of the Period of Use, and
2. the kW.h determined from the product of:
 - a. the average Power Factor during the HLH of the Period of Use, or portion thereof,
 - b. the Schedule 1852 Billing Demand, and
 - c. the number of HLH hours in the Period of Use, or portion thereof.

Energy shall be allocated to concurrent Periods of Use in proportion to the respective Billing Demands.

Taxes:

The Rates, Minimum Charge and Penalty Charge contained herein are exclusive of the Goods and Services Tax and the Social Services Tax.

Note:

The terms and conditions under which transmission service is supplied are contained in Electric Tariff Supplements Nos. 5, 6, 54 and 59.

Special
Conditions:

1. B.C. Hydro agrees to provide Electricity under this Schedule to the extent that it has energy and capacity to do so.

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Electric Tariff
Fifth Revision of Page C-66-1
Effective: 30 November 2001

SCHEDULE 1880

TRANSMISSION SERVICE – EMERGENCY, MAINTENANCE
AND SPECIAL SUPPLY (Cont'd)

Special
Conditions:
(Cont'd)

2. B.C. Hydro may, without notice to the Customer, terminate the supply of Electricity under this Schedule if at any time during the Period of Use B.C. Hydro does not have sufficient energy or capacity.

3. This Schedule is only for the following purposes:

- (a) to provide Electricity which the Customer would otherwise generate when all or part of the Customer's electrical generating plant is curtailed.

Electricity used for this purpose may be taken on an instantaneous basis when the impact of the instantaneous pickup of loads normally provided by the Customer's electrical generation units does not occur after B.C. Hydro has advised the Customer that a period of system constraint or potential system constraint exists.

During periods of potential system constraints, B.C. Hydro will require Customers to arm load shedding relays to ensure that the loss of Electricity production from a Customer's electrical generation unit will not result in a demand greater than the Customer's Maximum kVA Demand on B.C. Hydro's system. B.C. Hydro may require the Customer to provide it with control of these load shedding relays. During periods of potential system constraints, upon a Customer's request, B.C. Hydro will endeavour to provide Electricity normally provided by the Customer's electrical generation unit.

British Columbia Hydro and Power Authority
Electric Tariff
Fifth Revision of Page C-88-2
Effective: 30 November 2001

SCHEDULE 1880

TRANSMISSION SERVICE - EMERGENCY, MAINTENANCE
AND SPECIAL SUPPLY (Cont'd)

Special
Conditions:
(Cont'd)

The Customer is required to advise B.C. Hydro within 30 minutes of taking energy under this schedule for this purpose. If the Customer fails to advise B.C. Hydro the subsequent measured demand and energy will be billed under Rate Schedule 1821, 1848, 1852 or 1854, whichever is applicable.

- (b) to provide Electricity so that the Customer may make an unanticipated short-term sale in the spot market for the Customer's product; or
- (c) to provide Electricity so that the Customer may make up production after an abnormal operating condition in the Customer's Plant, a Force Majeure event or a discontinuance or reduction in the supply of Electricity by B.C. Hydro.

The Customer is required to obtain B.C. Hydro's prior approval before taking energy under this schedule for the purposes described in item (b) or (c) above.

- 4. Electricity taken under this Schedule shall not displace Electricity otherwise to be taken by this Customer under Schedule 1821, Schedule 1848, Schedule 1852 or Schedule 1854.

- 5. When a Period of Use extends into subsequent Billing Periods:

- (a) interim bills for Schedule 1880 Electricity will be included with the bill for Schedule 1821, Schedule 1848, Schedule 1852 or Schedule 1854 Electricity;
- (b) in calculating the Energy Charge component of the Rate, the kW.h shall be calculated for the portion of the Period of Use in each Billing Period and shall be cumulative;
- (c) any adjustment in the Energy Charges will be made at the billing date following termination of the Period of Use.

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Electric Tariff
Original Page C-66-3
Effective: 30 November 2001

SCHEDULE 1880

TRANSMISSION SERVICE - EMERGENCY, MAINTENANCE
AND SPECIAL SUPPLY (Cont'd)

Special
Conditions:
(Cont'd)

6. In addition to the charges specifically set out in this Schedule, the Customer shall pay for any additional facilities required to deliver Electricity under this Schedule provided that B.C. Hydro obtains the prior consent of the Customer for construction of the additional facilities.
7. A Customer may be required to allow B.C. Hydro to install metering to measure the electricity output of the Customer's self-generation unit.
8. B.C. Hydro will bill for Electricity taken under Schedule 1880 at the same time it bills for Electricity taken under Schedule 1821, 1848, 1852 or 1854, whichever is applicable. Any necessary adjustments will be made on subsequent bills.

B.C. HYDRO
Electric Tariff Supplement No. 5

1

First Revision of Page 1
Effective: 7 October 1998

AGREEMENT FOR CUSTOMERS TAKING ELECTRICITY UNDER SCHEDULE 1821

THIS ELECTRICITY SUPPLY AGREEMENT, made as of

the _____ day of _____, 19____

for _____.

BETWEEN:

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY,
having its head office at 333 Dunsmuir Street, |c
Vancouver, British Columbia

(herein called "B.C. Hydro")

OF THE FIRST PART

AND:


having an office in British Columbia at

(herein called the "Customer")

OF THE SECOND PART

WITNESSES THAT the parties declare and agree as follows:

Accepted for filing: **NOV 27 1998**
Effective: **OCT 07 1998**
Order No.: **G-89-1998**



SECRETARY
B.C. UTILITIES COMMISSION

First Revision of Page 2
Effective: 7 October 1998

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Accepted for filing: NOV 27 1998
Effective: OCT 07 1998
Order No.: G-89-1998


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B.C. UTILITIES COMMISSION

GENERAL DEFINITIONS

1. In this Agreement:

- (a) "Billing Demand" means the kV.A Demand used for billing purposes, all in accordance with the provisions of Schedule 1821;
- (b) "Billing Period" means a period of from 27 to 35 consecutive days between two regular meter readings and there shall be not less than 12 Billing Periods in any period of 52 consecutive weeks. Following the installation of suitable metering, the Billing Period will be a calendar month Billing Period from 0800 hours local time, at the Customer's Plant, on the first day of the calendar month to 0800 hours on the first day of the following calendar month, provided that the Billing Period may be varied by agreement between B.C. Hydro and the Customer;
- (c) "B.C. Hydro's Guide" means the guide prepared by B.C. Hydro and titled "Guide & Requirements for Service at 69,000 to 287,000 volts", as amended or replaced from time to time;
- (d) "Contract Demand" is the kV.A Demand which B.C. Hydro is obligated to supply under this Agreement as specified in clause 6;
- (e) "Customer's Plant" means _____;
- (f) "Electricity" means electrical power and electrical energy. Power is measured and expressed in kilowatts (kW) or kilovolt-amperes (kV.A) and energy is measured and expressed in kilowatt-hours (kW.h);
- (g) "Endangerment or Interference" has the meaning set out in clause 19.
- (h) "Force Majeure" has the meaning set out in clause 16.

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Effective: JAN 21 1991

Order No: 15-491

[Signature]

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B.C. UTILITIES COMMISSION

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Effective: 7 October 1998

- (i) "kV.A Demand" means the power demand of the Customer's Plant, determined over a time interval of 30 consecutive minutes and reduced to the next lowest whole number of kV.A;
- (j) "Maximum kV.A Demand" means the kV.A Demand which is the greater of:
- (i) 85 percent of the Contract Demand as set out in subclause 6(a); or
 - (ii) the highest kV.A Demand previously established at the Customer's Plant during the 47 Billing Periods immediately preceding, or the lesser number that the Customer's Plant has been in operation excluding the initial 4 Billing Periods immediately following the Customer's Plant start-up date;
- (k) "Point of Delivery" means _____
- (l) "Point of Metering" means _____
- (m) "Power Factor" means the ratio, expressed as a percentage, of kW to kV.A when both are measured simultaneously over a specified time interval;
- (n) "Schedule 1821" means Schedule 1821, General Service - Transmission of the B.C. Hydro Electric Tariff as amended or replaced from time to time, filed as required by the Utilities Commission Act, S.B.C. 1980, c. 60; c
- (o) "Schedule 1880" means Schedule 1880, General Service - Transmission - Emergency, Maintenance and Special Supply of the B.C. Hydro Electric Tariff as amended or replaced from time to time, filed as required by the Utilities Commission Act, S.B.C. 1980, c. 60; c
- (p) "Strike" means a strike as defined in the Industrial Relations Act, R.S.B.C. 1979, c. 212; and

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B.C. UTILITIES COMMISSION

- (g) "Unlawful Industrial Action" means an unlawful industrial action as defined in the Industrial Relations Act, R.S.B.C. 1979, c. 212.

BASIC OBLIGATIONS

2. (a) B.C. Hydro will supply Electricity to the Customer up to the Contract Demand at the Point of Delivery and the Customer will pay for Electricity, all in accordance with the provisions of this Agreement which incorporates, by reference, Schedule 1821 and the Appendix containing provisions respecting transmission extensions and the site specific matters.
- (b) B.C. Hydro may also supply additional Electricity for emergency, maintenance and special supply purposes to the Customer at the Point of Delivery and the Customer will pay for such Electricity, all in accordance with the provisions of this Agreement which incorporates, by reference, Schedule 1880.
- (c) Schedule 1821 and Schedule 1880 are attached as Schedules to this Agreement and B.C. Hydro will provide to the Customer a copy of all amendments or replacements to such schedules.

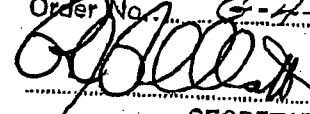
COMMENCEMENT DATE

3. (a) The "Commencement Date" is the date upon which B.C. Hydro will be willing and able to supply Electricity to the Customer, for the Customer's Plant, at the Point of Delivery. It is also the date upon which the Billing Periods for the Customer will commence and upon which the obligation to pay for Electricity will commence.
- (b) The Commencement Date shall be _____ unless otherwise agreed or suspended by Force Majeure.

Accepted for filing: APR 11 1991

Effective: JAN 21 1991

Order No. G-4-91



SECRETARY

B.C. UTILITIES COMMISSION

TERM OF AGREEMENT

4. (a) Unless otherwise provided for by this Agreement, this Agreement shall be in force for an initial term of _____ from the Commencement Date and, unless terminated at the end of the initial term, shall extend until terminated in accordance with this Agreement.
- (b) Either party shall give the other party not less than 6 months notice if it intends to terminate the Agreement at the end of the initial term or thereafter and upon expiration of the notice period, this Agreement shall terminate.

FREQUENCY, VOLTAGE

5. (a) The Electricity to be supplied by B.C. Hydro at the Point of Delivery shall be three phase alternating current, at a frequency of 60 Hz +/- 0.1 Hz.
- (b) If and when the Customer is maintaining the Power Factor required by this Agreement and the Customer's Plant is operating at or above 75 percent of Contract Demand then the service voltage shall be within +/- _____ percent of _____ volts under B.C. Hydro system normal operating conditions. Short term variations of the service voltage may occur due to sudden load changes or as a result of system contingency or emergency situations.
- (c) If and when the frequency and voltage at the Point of Delivery are within the limits set out in subclauses (a) and (b) then B.C. Hydro shall be deemed to be willing and able to supply Electricity to the Customer's Plant.

In the event that the service voltage is normally at or near the lower or upper limits of the range set out in subclause (b) and is impairing the operations of the Customer, B.C. Hydro and the Customer agree to take such action as may reasonably be required to relieve the impairment.

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SECRETARY

B.C. UTILITIES COMMISSION

- (d) If and when the frequency or voltage, or both, are outside the above limits then such occurrences shall be deemed to be a suspension in the supply of Electricity to the Customer's Plant unless the Customer continues to take Electricity.

CONTRACT DEMAND, INCREASES IN KV.A DEMAND

6. (a) The Contract Demand under this Agreement is _____ KV.A. The Customer shall not exceed the Contract Demand without the prior approval of B.C. Hydro.

The Customer may nominate an increase in the Contract Demand and, subject always to B.C. Hydro's ability to supply, B.C. Hydro shall not unreasonably refuse to permit the nominated increase provided that any such increase is subject to Appendix 1 of Electric Tariff Supplement No. 6 Provisions Respecting System Reinforcement and Transmission Extension Policies for Permanent Service.

- (b) The Customer may increase its Maximum KV.A Demand within the limit of the Contract Demand, over any period of 12 consecutive months by the amounts hereinafter set forth:

- (i) For an amount less than _____ KV.A no notice is required; and

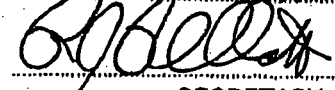
- (ii) For an amount greater than _____ KV.A notice from the Customer to B.C. Hydro is required and B.C. Hydro shall identify the date when such an increase can commence, which will depend on work that may be required on the B.C. Hydro electrical system to facilitate the supply of the increase requested.

- (c) Subject to B.C. Hydro being willing and able to supply the increased Maximum KV.A Demand, the minimum Billing Demand during the 12 Billing Periods immediately following the effective date identified by B.C. Hydro pursuant to subclause 6(b) shall be 75 percent of the sum of:

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SECRETARY
B.C. UTILITIES COMMISSION

- (i) the increase specified in the request; and
- (ii) the highest Billing Demand for the Customer's Plant in the immediately preceding period of November to February, both months included.

CUSTOMER'S PROTECTIVE AND CONTROL EQUIPMENT AND OTHER DEVICES

7. (a) In accordance with the technical requirements set out in B.C. Hydro's Guide, the Customer, at its cost, will supply, install, operate and maintain in good working order all protective and control equipment to isolate the Customer's Plant and to interrupt fault current from the B.C. Hydro electrical system and, when applicable, fault current from the Customer's Plant. B.C. Hydro may refuse to supply Electricity to the Customer or suspend the same at any time if, in B.C. Hydro's judgment, the equipment is not compatible with or not suitable for the B.C. Hydro electrical system.
- (b) B.C. Hydro may from time to time make tests of such protective and control equipment at the Customer's Plant.
- (c) The Customer shall inform B.C. Hydro of the type, ratings or settings of such protective and control equipment at the Customer's Plant and B.C. Hydro shall have the right to accept or reject such type, ratings or settings. The Customer shall not change the type, ratings or settings without obtaining, in advance, the acceptance, in writing, of B.C. Hydro and in the event that the settings are changed the Customer shall promptly advise B.C. Hydro in writing of the change.
- (d) Any judgment by B.C. Hydro, its servants or agents in connection with the protective and control equipment at the Customer's Plant shall not be interpreted by the Customer or others as an endorsement of the design or as a warranty by B.C. Hydro, its servants or agents of the safety, durability or reliability of the devices.

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JAN 21 1991

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- (e) The initial three-phase symmetrical fault contribution at _____ kV from the B.C. Hydro electrical system, when operating normally, at the Point of Delivery shall be not less than _____ MV.A. The ultimate three-phase symmetrical fault contribution from the B.C. Hydro electrical system shall not exceed _____ MV.A.
- (f) Unless otherwise agreed, the Customer shall not install any equipment or device whatsoever on the B.C. Hydro electrical system.

POWER FACTOR

8. (a) If and when the kV.A Demand of the Customer's Plant is greater than 75 percent of the Maximum kV.A Demand, the Customer shall make all reasonable efforts to ensure that the Power Factor at the Point of Delivery measured over an interval of 5 minutes is not:

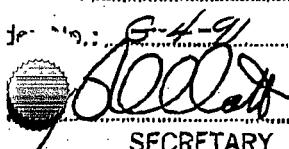
- [- "less than _____ percent lagging"; or
- "lagging"; or
- "lagging or more than _____ percent leading"; or
- "less than _____ percent lagging or more than _____ percent leading".]

(one only of the above on a site specific basis)

- (b) In the event that the Customer fails to maintain the Power Factor specified under subclause 8(a), and such failure results in an operational problem for B.C. Hydro, then B.C. Hydro may, in addition to any other remedies it has under subclause 8(c) or any other provision of this Agreement, require the Customer to reduce load if necessary to maintain the integrity of its system or portions thereof.

- (c) B.C. Hydro shall advise the Customer in writing of the particulars of a specific operational problem caused by the Customer's failure to maintain the specified Power Factor and shall provide an estimate of B.C. Hydro's costs to accommodate the Power Factor deviation and provide 15 days for the Customer to initiate corrective action. If required, B.C. Hydro shall consult with the Customer

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Effective: JAN 21 1991

for: 6-4-91

SECRETARY

B.C. UTILITIES COMMISSION

to determine the cause of the failure to maintain the specified Power Factor and to discuss possible remedies. Following such advice or consultation, if the Customer does not commence to take all reasonable action to achieve the specified Power Factor within 15 days, then B.C. Hydro may initiate any necessary alterations to its system and the Customer shall pay to B.C. Hydro the cost of any such work within 15 days of receipt of the bill.

- (d) If the specified Power Factor is less than 95 percent lagging the Customer will undertake reasonable investigations and appropriate action to improve its Power Factor over time.

NOTICES

9. (a) Unless otherwise provided for by this Agreement, a notice, consent, request, demand, statement or bill that either party may be required or may desire to give to the other party shall be in writing and shall be deemed to be given to and received by the addressee on the business day next following when it is delivered by hand, by courier, by telex, or by facsimile copier, and is deemed to be given when received if delivered by prepaid mail at the address that each party shall give notice of from time to time.

- (b) The address that B.C. Hydro gives notice of is:
-
-

- (c) The address that the Customer gives notice of is:
-
-

Accepted for filing: APR 11 1991

Effective: JAN 21 1991

Order No.: G-4-91

[Signature]


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B.C. UTILITIES COMMISSION

BILLING, PAYMENT OF ACCOUNTS

10. (a) B.C. Hydro will provide bills, including advance bills at the election of the Customer, from time to time to the Customer for each Billing Period for Electricity and for any other amount as it becomes owing to B.C. Hydro under this Agreement but failure to provide a bill, or a correct bill, shall not release the Customer from liability for payment of any amount.
- (b) Each bill shall become due one business day after being delivered to the Customer and in the case of bills other than advance bills shall become overdue if it is unpaid, in whole or in part, by the Customer 15 days from the day the bill is due. Advance bills shall become overdue 55 days from the day the bill is due.
- (c) The Customer will, by electronic funds transfer or other method as agreed to in advance by B.C. Hydro, pay to B.C. Hydro's General Bank Account the amount shown on each bill, without setoff or withholding, at par in Canadian funds before such bill becomes overdue.
- (d) Any unpaid amount of any overdue bill shall be subject to interest at the rate of interest which is equal to the annual rate of interest declared from time to time by the lead chartered bank in Canada used by B.C. Hydro as the rate of interest charged by such bank to its most creditworthy commercial borrowers for loans in Canadian dollars payable on demand and commonly referred to as its "prime rate", plus:
- (i) 2 percent from the last day of the applicable Billing Period for the first 30 days that the payment remains unpaid and 5 percent thereafter until the same is paid where the Customer has not, during the immediately preceding 6 Billing Periods, failed to make any payment when due hereunder; or
- 5 percent from the last day of the applicable Billing Period until the payment is made where the Customer has, during the immediately preceding 6 Billing Periods, failed to make any payment when due hereunder.

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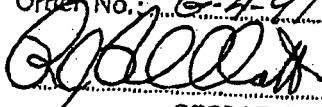
G-4-91

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B.C. UTILITIES COMMISSION

- (e) Ten days after giving the Customer notice that a bill is overdue, B.C. Hydro, in lieu of or in addition to any other remedy provided by this Agreement may suspend the supply of Electricity to the Customer until all bills are paid in full and B.C. Hydro's servants or agents may enter the Customer's Plant to undertake such suspension. No such suspension by B.C. Hydro shall relieve the Customer from any provision of this Agreement, including the payment of any amount payable, nor shall suspension be deemed to be a termination of this Agreement and the validity or duration of this Agreement shall be otherwise unaffected.
- (f) B.C. Hydro may appropriate an amount equal to any overdue amount of any bill from a security deposit established by the Customer with B.C. Hydro pursuant to clause 12 of this Agreement if and when any bill or part thereof becomes overdue.

ADVANCE BILLING

11. At any time, the Customer may provide reasonable notice to B.C. Hydro that it has elected to receive from B.C. Hydro and pay, in accordance with clause 10, advance bills for the amount, estimated by B.C. Hydro, to be owing for a future Billing Period by that Customer to B.C. Hydro. Notwithstanding subclause 10(b), any advance bill shall be due 10 days prior to the first day of the future Billing Period and is late if it is unpaid, in whole or in part, by the Customer 10 days from the day the advance bill is due. Provided that the Customer does not allow the advance bill to become late, B.C. Hydro will entitle the Customer to a discount on the amount estimated by B.C. Hydro to be owing. The discount shall be equal to the interest payable on the said amount over a 45 day period at the simple rate of interest payable on January 1, April 1, July 1 or October 1, whichever is most recent to the Billing Period, for 30-day Government of Canada Treasury Bills for the denomination of \$100,000.00. All amounts paid under the advance billing and payment plan shall be subject to adjustment in the following Billing Period to fully and properly reflect the actual amount owing for the advance Billing Period.

The Customer may, subject to clause 12, upon reasonable notice to B.C. Hydro, elect to return to B.C. Hydro for filing regular billing procedures set out in clause 10. Effective: APR 11 1991
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SECURITY DEPOSITS

12. (a) If:

- (i) the Customer has not maintained an account with B.C. Hydro for the purchase of Electricity under Schedule 1821 for the immediately preceding two years;
- (ii) the Customer, at any time, has permitted any account under this Agreement to become overdue and has not supplied information which reasonably satisfies B.C. Hydro that the Customer is creditworthy; or
- (iii) B.C. Hydro is not satisfied, on a reasonable basis, that the Customer is creditworthy;

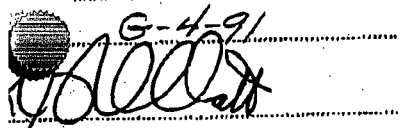
then, after B.C. Hydro has provided the Customer with a written statement, which either indicates that an account has not been maintained for two years or which sets out the reasons for not accepting that the Customer is creditworthy, the Customer shall choose one of the options set out in subclause 12(b).

(b) The three options available to a Customer in the circumstances set out in subclause 12(a) are as follows:

- (i) to commence and maintain payments on a current basis pursuant to the advance billing and payment plan established by B.C. Hydro as described in clause 11, provided that this option shall not be available if the Customer has previously participated in the said plan and, in so doing, has made a late payment to B.C. Hydro;
- (ii) to supply certified statements showing a two year projection of the Customer's operating revenues and expenses and, where applicable, certified financial statements for the three years immediately preceding including notes as to the basic assumptions used, all of which statements B.C. Hydro agrees to hold in confidence; or
- (iii) to establish and maintain with B.C. Hydro a security deposit as described in subclause 12(d).

ted for filing: APR 11 1991

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C. UTILITIES COMMISSION

(c) If, on the basis of reasonable criteria used in evaluating the certified statements referenced in subclause 12(b)(ii), B.C. Hydro is not satisfied as to the creditworthiness of the Customer, then the Customer shall either:

(i) commence and maintain payments on a current basis pursuant to the advance billing and payment plan established by B.C. Hydro as described in clause 11, provided that this option shall not be available if the Customer has previously participated in the said plan and, in so doing, has made a late payment to B.C. Hydro; or

(ii) establish and maintain with B.C. Hydro a security deposit as described in subclause 12(d).

(d) A security deposit shall be in an amount equal to two times the Customer's normal bill, as estimated by B.C. Hydro for a Billing Period, and it shall be in a form which has the prior approval of B.C. Hydro. This may include:

(i) irrevocable letter of credit;

(ii) contract bond;

(iii) guarantee by a corporation other than the Customer;

(iv) bank term deposit, to be deposited in trust for B.C. Hydro; or

(v) negotiable bearer bond, that is government guaranteed at face value.

(e) Any security deposit will be returned to the Customer, or released to the guarantor, as appropriate, when the conditions requiring security no longer exist.

(f) If all or part of any bill becomes overdue, then B.C. Hydro may appropriate all or any part of any security deposit towards payment of such bill and thereupon the Customer's right to such security, or any part of that security so appropriated, shall terminate.

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B.C. UTILITIES COMMISSION

- (g) B.C. Hydro will not pay interest on any security deposit held by it. The Customer may arrange with its bank to pay any interest earned on a bank term deposit, deposited in trust for B.C. Hydro, directly to the Customer's account.

METERING

13. (a) Determination, directly or indirectly, of the kilovolt-amperes, kilowatt-hours, or other factors or quantities shall be made by B.C. Hydro at the voltage at the Point of Delivery, unless otherwise agreed by B.C. Hydro, by means of meters owned, installed, operated and maintained by B.C. Hydro at the Point of Metering.
- (b) All meters and metering apparatus supplied by B.C. Hydro or the Customer for revenue purposes shall not be moved or removed from the Point of Metering without prior consent of B.C. Hydro.
- (c) The Customer shall act as a prudent owner would and protect the meters and metering apparatus of B.C. Hydro at the Customer's Plant, and will pay to B.C. Hydro the cost of repairing or replacing meters or metering apparatus missing or damaged except to the extent that the Customer can reasonably show that such was missing or damaged due to a defect therein or to an act or omission of B.C. Hydro, its servants or agents.
- (d) B.C. Hydro, but not the Customer, may test, calibrate, remove, install, substitute or otherwise change the revenue metering equipment from time to time at any reasonable time and the Customer may have a representative present at such time.
- (e) The Electricity and Gas Inspection Act, R.S.C. 1985, c.E-4 or re-enactment of the same shall govern metering under this Agreement.

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Notwithstanding any statutory provision to the contrary, should the revenue metering equipment fail to register correctly or for any reason meter readings be unobtainable, the amount of Electricity supplied will be estimated by B.C. Hydro from the

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best information available, including the Customer's records, if any, during the Billing Period in question and such estimate, except in the case of manifest error, shall for billing purposes have the same force and effect as an exact meter reading.

- (g) Further technical requirements in connection with metering are set out in B.C. Hydro's Guide.

B.C. HYDRO'S EQUIPMENT & DEVICES & ACCESS TO CUSTOMER'S PLANT

14. (a) B.C. Hydro may install at its cost at the Customer's Plant any equipment or device which, in B.C. Hydro's judgment, is required for B.C. Hydro use or convenience in exercising its rights, or carrying out its obligations under this Agreement and all such equipment or devices, whether affixed or otherwise, by B.C. Hydro at the Customer's Plant shall remain the property of B.C. Hydro.

- (b) To the extent that it may be necessary, the Customer hereby grants to B.C. Hydro, its servants or agents, for the initial term, any extension, and a reasonable time thereafter, the free and uninterrupted right to enter the Customer's Plant for any purpose related to this Agreement.

- (c) The rights hereby granted to B.C. Hydro shall be exercised subject to prior notification and to any reasonable requirement of the Customer necessary for the safety or security of the Customer's Plant and employees or for continuity of the Customer's operations.

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Effective:

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B.C. UTILITIES COMMISSION

- (d) Nothing contained in this clause shall impair the right of B.C. Hydro to terminate service pursuant to this Agreement.

REMOVAL OF EQUIPMENT AND DEVICES

15. Upon termination of this Agreement, each party shall remove within 90 days of receipt of a written request by the other party, all of its plant and equipment from the other's lands and premises, except those which are located by B.C. Hydro on a Right-of-Way granted by the Customer to B.C. Hydro.

FORCE MAJEURE

16. (a) In this Agreement, the term Force Majeure includes but is not limited to Strikes, legal lockouts, other labour disturbances (including exercises of non-affiliation rights but excluding illegal lockouts), fire, flood, accidents, tempest or acts of God, sabotage or acts of the Queen's enemies, acts or failure to act by lawful authority or any other cause whatsoever beyond the reasonable control of the parties, provided that in no event shall lack of finances, loss of markets or inability to perform due to the financial condition of either party constitute Force Majeure.

(b) Where expressly provided for by this Agreement, and subject to subclause 18(d), if either party is or was wholly or partly unable, because of a Force Majeure, to perform an obligation and claims that a Force Majeure is occurring or has occurred and reasonably establishes that fact, then the performance of the obligation shall be deemed to be suspended provided always that:

(i) the suspension shall be of no greater scope and no longer duration than the Force Majeure; and

(ii) the non-performing party shall use all reasonable efforts to counter the Force Majeure or to otherwise remedy its inability to perform the obligation.

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B.C. UTILITIES COMMISSION

SUSPENSION OF SUPPLY

17. (a) B.C. Hydro may, without notice to the Customer, suspend the supply of Electricity to the Customer for the purpose of protecting against harm to human life or property of any person.

(b) B.C. Hydro may, without notice to the Customer, deliberately or unintentionally suspend the supply of Electricity to the Customer in the event of a breakdown or failure of any component of B.C. Hydro's electrical system or an event for which B.C. Hydro could claim Force Majeure pursuant to clause 16.

- (c) At any time in the event of a shortage of Electricity whether actual or apprehended by B.C. Hydro, B.C. Hydro may request that the Customer suspend or reduce its taking of Electricity at the Point of Delivery but if the Customer does not so suspend or reduce then B.C. Hydro may suspend or reduce the supply of Electricity to the Customer. B.C. Hydro will make all reasonable efforts to give notice, in writing or otherwise, and to treat alike all Customers under substantially similar circumstances and conditions of service of the same description.
- (d) B.C. Hydro may, after notice to the Customer in writing or otherwise, suspend the supply of Electricity to the Customer for the purpose of maintaining and making repairs, renewals, extensions or replacements to B.C. Hydro's electrical system. All such suspensions shall be of the shortest duration reasonably possible and, whenever reasonably possible, after taking into account Customer requirements and impacts, shall be arranged to occur at a time least objectionable to the Customer.
- (e) Nothing in this clause shall restrict B.C. Hydro's right to discontinue, suspend or reduce the supply of Electricity to the Customer in accordance with other provisions of this Agreement.

BILLING ADJUSTMENTS

18. (a) If the Customer claims and reasonably establishes to B.C. Hydro that there has been a reduction in the taking of Electricity by the Customer, as a result of a cause expressly stated in this clause then B.C. Hydro shall make the adjustments, herein called the "Billing Adjustments", set out below. The Customer may elect to have Billing Adjustments based upon a lesser period than the total period during which it has been forced to reduce the taking of Electricity and, should the Customer so elect, the Billing Adjustments set out below will be calculated in accordance with the lesser period and the mean value of kV.A during that period. Billing Adjustments shall only be made in calculating a bill for the Billing Period when the reduction is occurring or has occurred.

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- (b) The kV.A Demand applicable to the time when the reduction is occurring or has occurred shall be deemed to be:

$$BD_R = \frac{K}{LF}$$

where:

BD_R = the reduced Billing Demand

K = the mean value of kV.A during such time; and

LF = the load factor at which the Customer took Electricity in the immediately prior Billing Period when the taking or supply of Electricity was not reduced.

- (c) If the time over which the reduction is occurring or has occurred is less than the whole of the Billing Period, then:

- (i) the Demand Charge applicable to such time shall be:

$$\text{Demand Charge} = BD_R \times R \times \frac{H}{H_{BP}}$$


where:

BD_R = the reduced Billing Demand as above;

R = the Demand Charge set out in Schedule 1821;

Accepted for filing: APR 11 1991 = the number of half-hour intervals during such time; and

Effective: JAN 21 1991

By:  H_{BP} = the number of half-hour intervals during the Billing Period; and

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- (ii) the Demand Charge applicable to the balance of the Billing Period shall be:

$$\text{Demand Charge} = \text{BD}_N \times R \times \frac{(\text{H}_{\text{BP}} - \text{H})}{\text{H}_{\text{BP}}}$$

where BD_N = the Billing Demand and

R, H and H_{BP} have the meanings given above.

- (d) A suspension, pursuant to clause 16, for more than 4 consecutive hours shall be cause for Billing Adjustments to be made by B.C. Hydro, except that in the case of the Strikes, legal lockouts, and other labour disturbances (including exercises of non-affiliation rights but excluding illegal lockouts); Billing Adjustments for both causes shall be limited to a collective maximum of 1440 hours in any calendar year. Further, Billing Adjustments for each occurrence of an Unlawful Industrial Action shall not be made if the suspension is for less than twelve (12) consecutive hours and, in any event, the Billing Adjustments for any such occurrence shall be limited to a maximum of five (5) days.
- (e) Unless the Customer continues to take Electricity, a frequency or voltage, or both, for more than 1 hour outside the limits established in clause 5 shall be cause for Billing Adjustments to be made by B.C. Hydro.
- (f) A suspension or reduction, pursuant to clause 17, for more than 1 hour shall be cause for Billing Adjustments to be made by B.C. Hydro.
- (g) A suspension or discontinuance pursuant to clause 10 or suspension pursuant to clause 19 shall not be cause for Billing Adjustments to be made by B.C. Hydro.

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In addition to the Billing Adjustments set out above, B.C. Hydro may, in its judgment, make other Billing Adjustments from time to time so as to decrease the bills for the Customer's Plant to reflect unusual or unanticipated conditions or events in such plant.

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C. UTILITIES COMMISSION

ENDANGERMENT, INTERFERENCE

19. (a) "Endangerment or Interference" includes:

- (i) the introduction of harmonics into B.C. Hydro's electrical system;
- (ii) the creation of undue and abnormal voltage fluctuations on B.C. Hydro's system;
- (iii) the depression or elevation of the voltage level on B.C. Hydro's system below or above the voltage range provided by B.C. Hydro to the Customer for Electricity supplied under normal operating conditions; and
- (iv) the creation of an undue voltage imbalance between phases.

Normal standards for subclauses (i) to (iv) are provided in B.C. Hydro's Guide.

(b) The Customer shall make its best efforts to take or use Electricity so as not to cause an Endangerment or Interference with the B.C. Hydro electrical system, or in connection with Electricity supplied to any other Customer of B.C. Hydro, but if such occurs then:

- (i) B.C. Hydro may require the Customer, at the Customer's cost, to take corrective action including the provision of corrective equipment; or

if, in the judgment of B.C. Hydro, the Endangerment or Interference is critical then B.C. Hydro may, without notice to the Customer, suspend the supply of Electricity until the Customer takes corrective action.

Accepted for filing: APR 11 1991

Effective: JAN 21 1991 (ii)

No. G-4-91

[Signature]

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B.C. UTILITIES COMMISSION

PARALLEL OPERATION

20. The Customer may operate an electrical generating plant, at the Customer's Plant, connected to the B.C. Hydro electrical system, provided always that the Customer provides notice to B.C. Hydro reasonably in advance of

parallel operation of such plant, and provide that:

- (a) the Customer shall install in advance, at its cost, on its electrical system the protective and control equipment required, including that required in the judgment of B.C. Hydro;
- (b) the Customer shall pay in advance to B.C. Hydro the cost of the protective and control equipment required, in the judgment of B.C. Hydro, on the B.C. Hydro electrical system and this equipment shall be the property of B.C. Hydro and shall remain so upon termination of this Agreement unless the Customer pays to B.C. Hydro the costs of adapting the system to operate without that equipment; and
- (c) the Customer shall follow operating orders or guidelines established by B.C. Hydro and provided to the Customer from time to time for parallel operation.

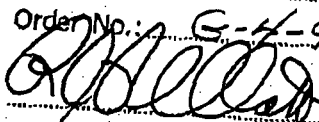
CONNECTIONS

21. Except as provided for by local operating order or by operation of a switching device, connections to or disconnections from B.C. Hydro's electrical system shall be made only by B.C. Hydro's servants or agents or such other persons as B.C. Hydro may specifically authorize or permit.

NON-WAIVER

22. No failure by B.C. Hydro or the Customer at any time or from time to time to enforce or require a strict observance or performance of any of the provisions of this Agreement shall constitute a waiver of such provisions or affect or impair such provisions or the right of B.C. Hydro or the Customer at any time to enforce such provisions or to avail itself of any remedy it may have.

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Effective: JAN 21 1991

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B.C. UTILITIES COMMISSION

LIABILITY, INDEMNITY, LIMITATIONS AND REQUIREMENTS FOR NOTICE

23. (a) B.C. Hydro does not warrant a continuous supply of Electricity or the maintenance of unvaried frequency or voltage and B.C. Hydro, its servants or agents, shall not be liable to the Customer for any loss, injury, damage or expense of the Customer caused by or resulting from any suspension, discontinuance or defect in the supply of Electricity, alleged or caused by an act or omission of B.C. Hydro, its servants or agents, except for direct loss or damage to the physical property of the Customer resulting from wilful misconduct or negligent acts or omissions by B.C. Hydro, its servants or agents.

For greater certainty, it is agreed that "direct loss or damage to the physical property of the Customer" shall not include inconvenience, mental anguish, loss of profits, loss of earnings or any other indirect or consequential loss. It is further agreed that the duty of care imposed upon B.C. Hydro will be the common law duty of care imposed upon a municipality or other government agency. It is also further agreed that B.C. Hydro shall not be liable for direct loss or damage which could have been prevented, in whole or in part, if the Customer had taken reasonable protective measures.

It is also further agreed that B.C. Hydro shall not be liable under this subclause unless the Customer has given notice to B.C. Hydro of a potential claim within 7 days of when the Customer knew or ought to have known of the alleged direct loss or damage.

- (b) The liability of B.C. Hydro under subclause 23(a) applies only when the direct loss or damage to the Customer arising from a single occurrence exceeds the sum of \$10,000.00. In no event shall the liability of B.C. Hydro exceed the sum of \$1,000,000.00 for any single occurrence.

(c) B.C. Hydro shall indemnify the Customer from all liabilities for claims, demands, suits, losses or damages brought against the Customer arising out of damage to property or injury to persons resulting from wilful misconduct or negligent acts or omissions by B.C. Hydro, its servants or agents, if and when they enter the Customer's Plant.

Accepted for filing:

Active: JAN 21 1991

G-4-91


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B.C. UTILITIES COMMISSION

RESALE OF ELECTRICITY

24. The Customer shall not sell, or otherwise dispose of for compensation, all or part of the Electricity supplied pursuant to this Agreement to any other person directly or indirectly without prior authorization from the British Columbia Utilities Commission and notice to B.C. Hydro.

ACTION ON DEFAULT

25. Subject to other provisions of this Agreement, if the Customer fails at any time in the performance of its obligations under clauses 20 or 21 or subclauses 6(a), 6(b), 7(c), 7(f), 13(b), 13(c), 13(d) or 14(b) and does not, within 30 days after B.C. Hydro has given to it notice of such failure, commence to remedy with due diligence, and thereafter continue to remedy the matter in which it is in default, B.C. Hydro may, without terminating this Agreement, after the expiry of 5 days' notice given to the Customer by B.C. Hydro of its intention to do so, and without liability therefor, discontinue the supply of Electricity to the Customer, but no such discontinuance shall relieve the Customer from any obligation under this Agreement. B.C. Hydro shall not be obliged to resume the supply of Electricity to the Customer until such failure shall have been remedied.

SUCCESSORS, ASSIGNS

26. This Agreement shall enure to the benefit of and be binding upon the parties and their respective successors and assigns, provided, however, that this Agreement shall not be transferred or assigned by the Customer without prior consent of B.C. Hydro, which consent shall not be unreasonably withheld.

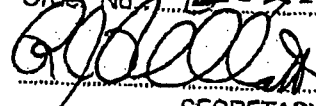
HEADINGS

27. The headings in this Agreement are provided for convenience only and shall not be used to interpret the Agreement.

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Order No. 6-4-91



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B.C. UTILITIES COMMISSION

PRIOR AGREEMENTS

28. All prior agreements for supply of Electricity by B.C. Hydro to the Customer at the Point of Delivery are terminated as of the Commencement Date, subject to entitlements or obligations, then accrued or incurred, of both parties.

LAW

29. (a) This Agreement shall be construed in accordance with the laws of the Province of British Columbia.
- (b) B.C. Hydro and the Customer will promptly comply with all relevant laws and regulations and the relevant orders, rules and requirements of all authorities having jurisdiction.

IN WITNESS WHEREOF the duly authorized representative of each party has executed this Agreement. [If the Customer is a joint venture or partnership, then this Agreement shall be executed and sealed by all joint venturers or partners and all declarations and agreements of the Customer shall be deemed to be joint and several.]

BRITISH COLUMBIA HYDRO
AND POWER AUTHORITY

Per:

THE CORPORATE SEAL of the
Customer, _____

_____)
_____)
was hereunto affixed in the)
presence of:)
_____)
_____)

Authorized Signatory

Authorized Signatory

C/S

Accepted for filing: APR 11 1991

Effective: JAN 21 1991

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B.C. UTILITIES COMMISSION

First Revision of Page 26
Effective: 7 October 1998

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Page 98 of 102

Refer to Schedule 1821 in the Electric Tariff, as amended or replaced
from time to time. n

Accepted for filing: **NOV 27 1998**
Effective: **OCT 07 1998**
Order No.: **G-89-1998**


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B.C. HYDRO

Electric Tariff Supplement No. 5

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First Revision of Page 27

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Page 99 of 102

Refer to Schedule 1880 in the Electric Tariff, as amended or replaced
from time to time.

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First Revision of Page 28
Effective: 7 October 1998

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Accepted for filing: NOV 27 1998
Effective: OCT 07 1998
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B.C. UTILITIES COMMISSION

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Electric Tariff Supplement No. 5

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First Revision of Page 29
Effective: 7 October 1998

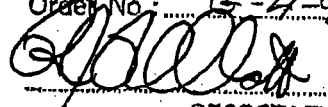
Accepted for filing: NOV 27 1998
Effective: OCT 07 1998
Order No.: G-89-1998


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B.C. UTILITIES COMMISSION

APPENDIX

Provisions Respecting Transmission Extensions and
Other Site Specific Matters

[This Appendix will contain site specific provisions from agreements in force prior to the Commencement Date of this new standard form Electricity Supply Agreement. This will include, but will not necessarily be limited to, rights and obligations related to existing Transmission Connections and Right-of-Way. In addition, this Appendix may also contain other site specific details related to the supply of Electricity for which no provision was made in this new standard form Electricity Supply Agreement.]

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