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**OBJET: DEMANDE RELATIVE À L'ÉTABLISSEMENT DES TARIFS
D'ÉLECTRICITÉ POUR L'ANNÉE TARIFAIRE 2008-2009**
Votre dossier : R-3644-2007
Notre dossier : 1038697

Chère Consoeur,

Notre attention a été attirée sur une erreur lors de la production du rapport du docteur El-Ramly. Seules les pages impaires de l'annexe B de ce rapport avaient été reproduites.

Nous nous excusons de cette erreur et vous transmettons ce jour par courrier une copie complète de cette annexe en huit exemplaires. Nous en transmettons aussi par courriel copie au Distributeur et aux intervenants.

Nous vous prions d'accepter, chère consœur, l'expression de nos sentiments les meilleurs.

Stein Monast S.E.N.C.R.L.


PIERRE PELLETIER

PP/lm
pièces jointes
c.c. Hydro-Québec – Me Éric Fraser
Les intervenants

INDUSTRIAL RATE PROPOSAL

OBJECTIVES

The Lieutenant Governor in Council's Special Direction No. 3 requires that B.C. Hydro's rates:

- contribute to conservation and the efficient use of electricity;
- recognize the higher cost of new electricity supply;
- provide for smooth and stable increases; and
- are otherwise fair, just and reasonable.

As set forth in the Executive Summary of B.C. Hydro's Rate Design Application, the effect of Special Direction No. 3 is no more than to give particular emphasis to certain traditional objectives of rate design which have been used to determine whether rates are fair, just and reasonable as required by the Utilities Commission Act. The overall objective in developing B.C. Hydro's Industrial Rate Proposal (IRP) was to satisfy the requirements of Special Direction No. 3 and the Utilities Commission Act.

A prerequisite to attaining the related goals of "ensuring rates contribute to conservation and the efficient use of electricity and recognize the higher cost of new electricity supply" is giving customers the correct price signal. The goal of the industrial rate redesign is to continue to provide B.C. Hydro's transmission voltage customers with access to and the benefits of the current system while providing a price signal that reflects future costs.

The current energy environment has developed over a long period of time and any modifications to it should allow industry enough time to adjust and to make the most of the new initiatives. This objective is reflected in the criteria in Special Direction No. 3 requiring rate changes to be smooth and stable and the related traditional objective of gradualism.

B.C. Hydro's intends to implement the IRP in an orderly and elective way. If customers are shown the benefits of the choices they are being offered under the IRP they will take advantage of these options when it is in their interest to do so and dictate the pace of change.

B.C. Hydro has also considered the requirement that its rates are otherwise fair, just and reasonable. The requirement includes the need to develop a rate structure which collects B.C. Hydro's revenue requirements which are based on the embedded cost of the system. This criteria involves consideration of both intra-class and inter-class issues. Although customers differ between classes, pricing represents the major link between these customers and B.C. Hydro's initiatives. Accordingly, under the IRP, B.C. Hydro seeks to ensure that its pricing and other initiatives form a coherent and cohesive policy to benefit all customers.

A related objective under the IRP is providing customers with an opportunity to match their electricity service with their needs by providing them with a wide range of choices. These choices include quality of service, price, supplier and degree of risk. Providing industrial customers with choices associated with their supply of electricity provides a mechanism for the optimization of resources for the customer and B.C. Hydro. In the absence of choice, the customer may be purchasing a product with characteristics that it does not need. Currently there is only one packaged industrial rate available at a uniform price from the same supplier. In matching the customer's needs B.C. Hydro and/or other suppliers may be able to provide these services at a lower cost than providing a standard package of services to all industrial customers.

DEFICIENCY OF THE CURRENT RATE STRUCTURE

B.C. Hydro's long run incremental cost (LRIC) is projected to be much higher than its average rates. The LRIC is a measure of the cost of providing new demand for energy and capacity over a planning horizon. An average rate that is lower than the LRIC causes consumers to demand electricity based on historical cost in circumstances where this demand will impose significantly higher costs on the system in the future.

The impact of increasing incremental costs can be diminished by ensuring that least-cost planning criteria are employed when increasing supply and that every effort is made to encourage conservation through programs like Power Smart. However, increasing costs will remain a fact and in this environment the price

signal to customers should reflect this and encourage alternative supply sources and demand side management programs which are below B.C. Hydro's LRIC. More fundamentally, when a customer is making a decision with respect to the consumption of electricity, the price paid should be based on the cost that decision will impose on the utility supplying that electricity.

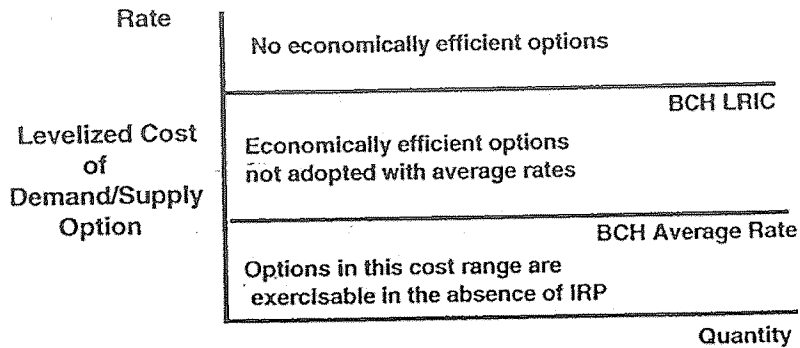


Figure 1 - Deficiency of Current Rate Structure

THE PROPOSED SOLUTION

B.C. Hydro's proposal to overcome this problem is to give customers the option of choosing a new rate, which reflects B.C. Hydro's LRIC but collects revenue based on embedded cost or a standard rate. Figure 2 illustrates the new optional rate and the standard rate structures.

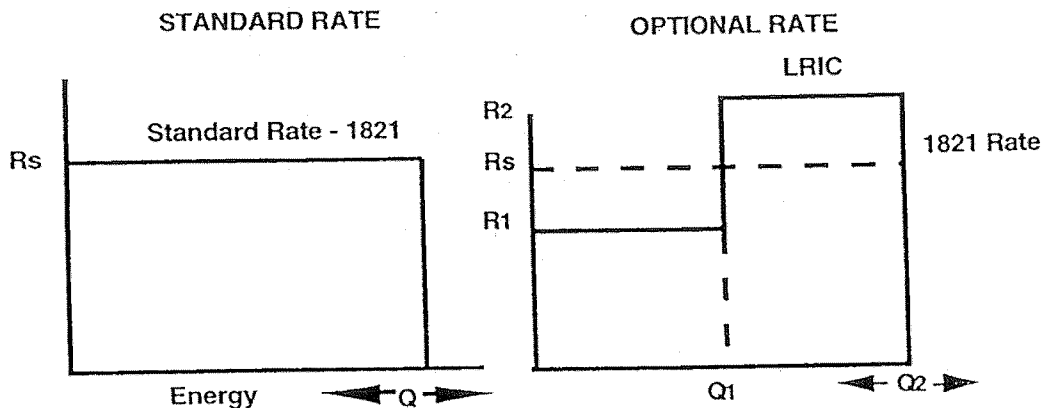


Figure 2 - Firm Rate Options

The standard rate is exactly the same as the current Rate 1821. The rate has a flat demand and energy charge and there is, technically speaking, no limit on the level of service.

Under the optional rate, B.C. Hydro is proposing a two-step rate for demand and energy. The trailing block is set at LRIC (R2); to give the correct price signal, while the first block rate (R1) is set lower than the standard 1821 rate in such a way that $(R1 + R2)/2 = Rs$, where Rs is the standard rate 1821. Following this principle, if the size of the first block is equal to the size of the second block, the total revenue from the

customer, under normal operation, is the same; i.e., revenue neutral. The first block will be fixed in size for a specific physical plant (as detailed under Rate 1823). Accordingly, changes in a customer's consumption (decrease or increase) is priced at the second block level or LRIC.

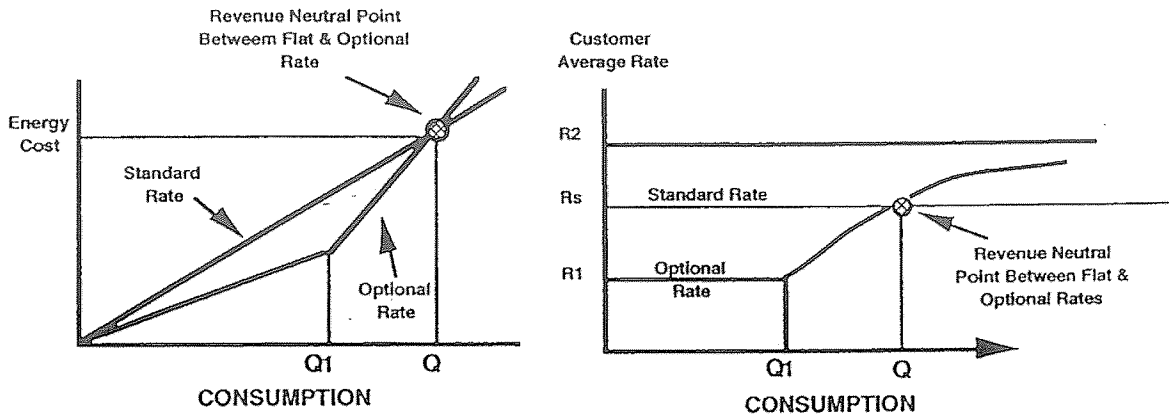


Figure 3 - Variation of Energy Cost and Average Rate With Consumption

As a result of this rate relationship, customers who elect to move to the optional rate and do not change their consumption level will be paying the same revenue as they would have under the standard rate 1821 regardless of changes in R_s or LRIC. However, customers who choose the optional rate and change their consumption patterns will experience an average rate which is higher or lower than under the standard rate 1821 (R_s) depending upon whether they increase or decrease their energy requirements. The characteristics of the rate are shown in Figure 3. Under the optional rate customers will be facing the true long term cost for their marginal consumption. Another advantage of the optional rate, besides promoting conservation, self generation and purchase from independent producers, will be its response to business cycles. If a customer's consumption is reduced as a result of hard times, its average energy rate will decline; this represents a benefit, to some extent, since fixed costs per unit of production will probably be climbing. In boom times when production is increased, the average cost of energy would go up typically at a time when other fixed costs are decreasing per unit of production. In effect, customers electing the optional rate would also enjoy a form of production rate.

THE INDUSTRIAL RATE FAMILY

B.C. Hydro expects that, as a result of customers taking this option, the competitiveness of the energy industry will be enhanced. Currently some customers have their own on site source of supply, under the IRP, all customers will have the potential for multiple sources of supply as:

- energy wheeled from Independent Power Producers (IPP) or a sister facility;
- self /cogeneration; or
- energy purchased from the Power Exchange Operation (PEO).

In anticipation of these new business dynamics, B.C. Hydro is proposing two additional basic firm rates to complement the standard 1821 rate and the optional rate which has been called 1823. These two other

rates include conditions for provision of service where more than one supplier is involved. These rates will be called 1822 and 1824. The basic choices for service under the industrial rate family is illustrated in Figure 4.

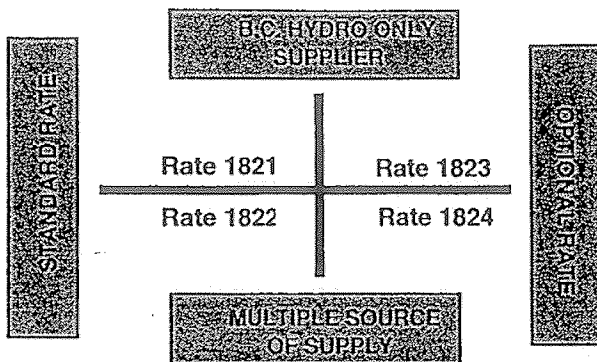


Figure 4 - Firm Rate Family

Rate 1821- Standard Rate with B.C. Hydro as Exclusive Supplier

This rate is identical to the existing 1821. This rate will serve customers who opt for B.C. Hydro as their exclusive supplier.

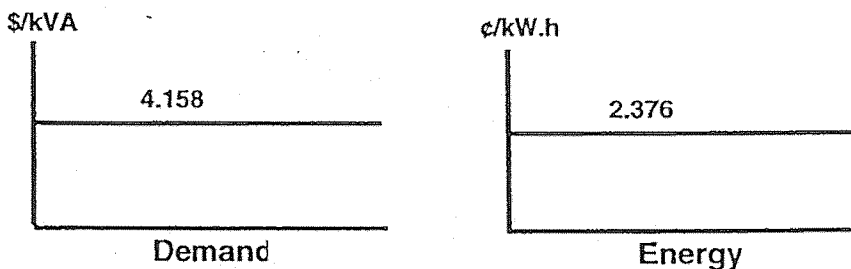


Figure 5 - Standard Rate

Rate 1822 - Standard Rate with Alternate Source of Supply

This rate has the same pricing structure as 1821; the flat energy and demand charge. However, the customer is receiving energy from another supplier and/or is self generating.

In order to allow B.C. Hydro to efficiently plan to serve this customer a nomination is required, on a contractual basis, to determine the priority of supply from B.C. Hydro and from its alternate source. There will be three forms in which the customer can make his nomination.

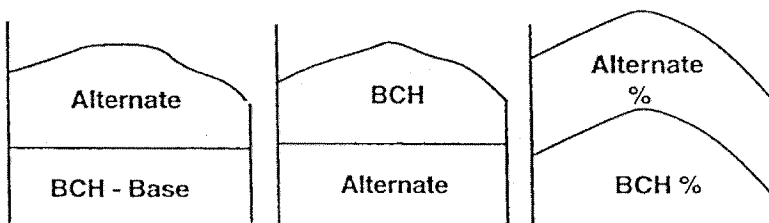


Figure 6 - Nomination Modes

- B.C. Hydro as the base load; first through the meter - nomination must be exhausted before receiving energy from other sources,
- B.C. Hydro is last through the meter - supply from other sources must be used to nomination levels before drawing on B.C. Hydro supply, or,
- Proportional supply from B.C. Hydro and alternate source(s).

Rate 1823 - Optional Rate with B.C. Hydro as Exclusive Supplier

This is the optional rate for customers electing B.C. Hydro as their exclusive supplier.

The rate is structured so that if the customer maintains his current consumption pattern the rate is revenue neutral.

Customers electing to take service under the optional rate will have to agree with B.C. Hydro on the level of consumption to be used in setting first block quantities. To establish a trend for a customer's existing facility up to 5 years consumption history will be extracted, excluding abnormal months. A regression analysis will be applied to this consumption history to estimate what the customer's consumption will be in the upcoming year. This is illustrated in Figure 7. Initially the first block, Q1 and D1, is set at 50% of the total annual energy consumption (Q) and average demand (D). This represents the customer's base consumption.

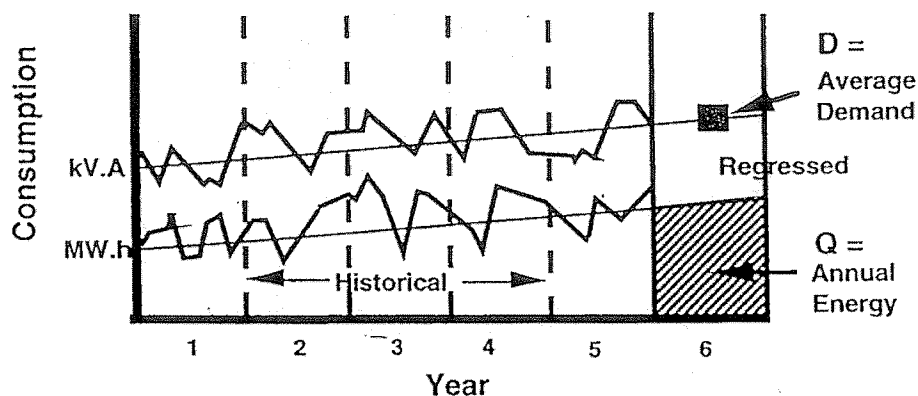


Figure 7 - Calculation of Q & D

A customer's base consumption is for existing facilities; permanent changes in customer facilities, plant additions or removal, would result in recalculating Q1 and D1 in a way that its increase or decrease in its electricity bill as a result of changing its consumption will be at an equivalent rate to the standard rate at the time.

For new customers, the consumption level would be estimated if both parties can agree. If agreement is not reached or if it is difficult to estimate the consumption, then the choice of the optional rate would be delayed until consumption history is available.

It is envisioned that the BCUC will resolve any dispute, between customers and B.C. Hydro, as to the appropriate consumption levels.

The rate for the first block is derived from the requirement $(R1 + R2)/2 = Rs$. Rs (the 1821 rate) for energy is 2.376 ¢/kW.h. Since the LRIC, which establishes the second block (R2), is 3.23 ¢/kW.h, the first block rate (R1) would be 1.522 ¢/kW.h. Similarly, the current Rate 1821 demand charge (RDs) equals \$4.158/kVA/month. B.C. Hydro's LRIC of capacity for transmission voltage customers (RD2) is \$5.88/kVA/month. Therefore, the demand charge for the first block (RD1) would have to be set at \$2.436/kVA/month to maintain the rate relationship $(RD1 + RD2)/2 = RDs$.

The rate levels for demand and energy under the optional rate are compared to the standard rate in Figure 8.

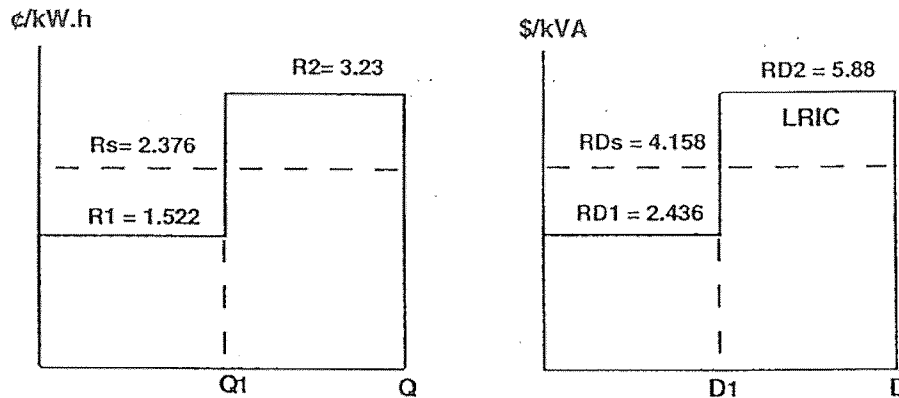


Figure 8 - Characteristics of Optional Rate

Rate 1824 - Optional Rate with Alternate Source of Supply

This rate is identical in structure to Rate 1823 coupled with the nomination condition associated with Rate 1822 - see Figure 6.

This rate option provides the customer with maximum flexibility in price, quality of supply, suppliers and degree of risk. This menu, together with a customer's operational flexibility, would allow a customer to customize its electricity supply and purchases such that it is at the lowest cost. In meeting its electricity needs, and putting together a portfolio to meet its energy and capacity requirements, a customer has many products, services and suppliers available, some of which are purchasing firm electricity from B.C. Hydro, buying from the PEO at market prices (when it becomes available), self-generating, purchasing and wheeling from an IPP, buying on an intermediate term firm or non-firm contract and exercising demand management.

RATE SWITCHING

B.C. Hydro has established rules which govern rate switching. These rules will allow B.C. Hydro to optimize its resource plan, provide customers with the flexibility and security of service they require and protect B.C. Hydro's customers from costs which may be incurred in the absence of restrictions on rate switching.

New customers may select the standard rate or the optional rate. Existing customers can elect the optional rate any time. Customers electing to self-generate (or who are currently self-generating) or acquire supply from sources other than B.C. Hydro will be automatically switched to Rates 1822 or 1824. Customers who elect to take service on 1823 and 1824 must stay on the optional rate for two years before they can give a two year notice that they wish to revert to the standard rates 1821 and 1822 respectively.

This same rule applies if that customer then wishes to switch again to the optional rate. This parameter is to prevent rate switching driven solely by economic considerations.

Customers who are on Rate 1822 or 1824 can go back to Rates 1821 or 1823 respectively on giving B.C. Hydro four years' notice and subject to fulfilling all other contractual obligations, e.g. wheeling contracts. This will allow B.C. Hydro enough time to plan for and acquire resources to serve the customer wishing to revert to exclusive supply from B.C. Hydro.

STANDBY SERVICE

Customers on Rates 1822 and 1824 who have their own self generation or cogeneration on site may need standby service for a temporary loss of their supply (i.e. for hours or days).

B.C. Hydro is introducing two levels of standby service as a substitute to the customer investing in his own level of higher reliability for its on-site facility.

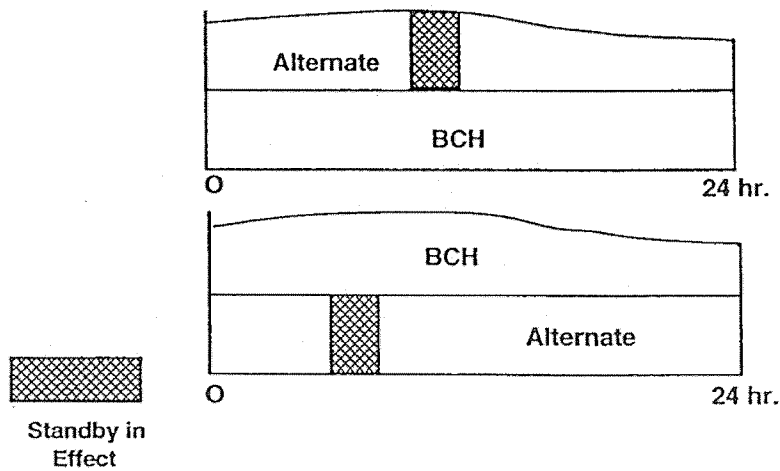


Figure 9 - Example of Standby Needs

Firm Standby - Rate 1881

A customer taking firm standby will be supplied automatically when its generation is derated or there is a forced outage, up to the amount of capacity reserved. There is no interruption of electricity due to the customer's source failure; the customer enjoys the same characteristics of supply as other B.C. Hydro customers. Standby energy will be supplied at short term market prices.

Interruptible Standby - Rate 1882

This rate provides a customer with automatic interruptible supply in case of the customer's source failure. This supply may be interrupted or curtailed by B.C. Hydro at any time. Customers taking interruptible supply must be connected to a circuit that can be interrupted and/or controlled by B.C. Hydro. B.C. Hydro will endeavour to give customers as much notice of interruption as practicable.

BACKUP CONTRACTS - Rate 1852

Customers with alternate sources of supply, whether an IPP, self generation or who have energy wheeled from other sites, may suffer a long term (months or years) or permanent loss of that supply.

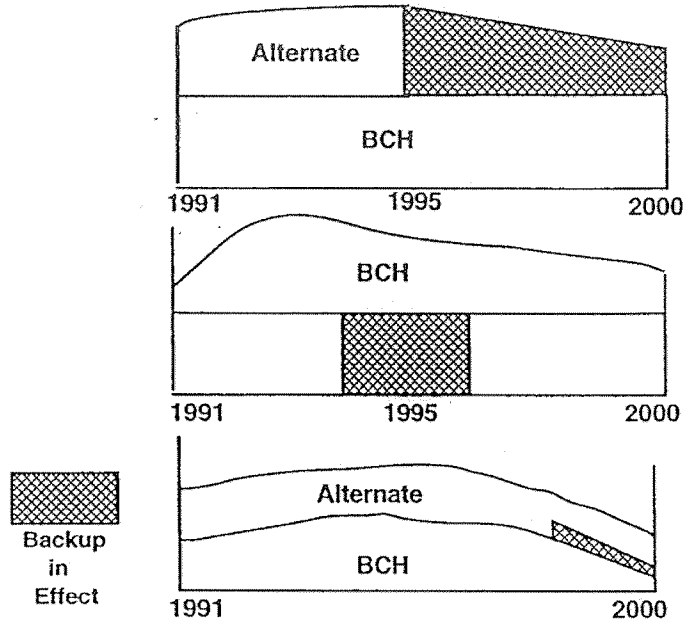


Figure 10 - Examples of Backup Needs

These loads are not included in B.C. Hydro's system plan. Since B.C. Hydro requires a four year notice to return to exclusive supply from B.C. Hydro the customer would be required to look for a substitute supply. However, B.C. Hydro will endeavour to provide this backup supply on a reasonable effort contractual basis.

The rate for this contract will be based on B.C. Hydro's short term/opportunity cost for the characteristics and length of the contract sought by the customer and would be defined at the time of the application of the contract.

WHEELING/TRANSMISSION SERVICE - Rate 1841

Long term wheeling service, for a duration of one year or greater, is available for transmission of electricity generated by one party to another. This service includes shaping, backup and operational flexibility such that the generation source and load are decoupled from each other, i.e. the load receives B.C. Hydro's quality of service regardless of generation performance. A wheeling energy charge of 0.1¢/kW.h applies to all wheeled energy to compensate B.C. Hydro for operation, maintenance and administration costs. As well, there is a demand charge based on applicable industrial rates.

For wheeling agreements longer than six years, the supply side receives a capacity credit at the point where wheeled energy enters the system, based on its future value to the system. The capacity credit is

differentiated by time of day, season and region. The differentiation by time and region reflects the relative value of capacity with respect to time and to different geographical locations respectively.

This policy is designed to encourage favourable location of future power supply facilities. It gives the correct price signal and will facilitate the development of an efficient bulk power market in B.C.

ACCESS TO THE PEO - RATE 1851

Under the IRP customers will have access to short term market supply through the PEO. Customers may secure supply, from the PEO, as part of their alternate source supply or from time to time may find that taking supply from the PEO can reduce its energy costs. Instances under which a customer may seek access are:

- capacity requirement over and above normal capacity needs; or
- to provide energy for standby requirements to offset a shortage under a wheeling contract.

Access to the PEO for this type of supply is beyond a customer's normal supply arrangements with B.C. Hydro.

RATE CHANGE AND REVENUE ADJUSTMENT

With the introduction of the optional rates there will be three rate levels in the industrial rate family ; the level for the standard rate and the two levels for the blocks of the optional rate. R refers to the standard energy rate in ¢/kW.h and RD to the standard demand charge in \$/kVA (see Figure 8). R1 and RD1 are the first block rates and R2 and RD2 are the trailing block, LRIC, rates.

R2 and RD2 will change with B.C. Hydro's LRIC. The LRIC may change with time or with changes in B.C. Hydro's System Plan. The first block energy rate R1 will change to retain the relationship $(R1 + R2)/2 = R_s$; similarly for the demand charge RD1. By maintaining the rate relationship $(R1 + R2)/2 = R_s$ customers who do not change their consumption level pay the same average rate on the optional rate as they would have on the standard rate. Customers who do adjust their consumption level will see the change in their average rate at the margin. This is illustrated in Figure 3. The following scenarios illustrate how revenue for the industrial class would be adjusted.

Long Run Incremental Cost Increasing or Decreasing No Change in Revenue Requirement

Any change in the LRIC will result in a change in R2 and RD2. As there is no change in the revenue requirement R_s and RDs remain the same. Accordingly, R1 and RD1 move in the opposite direction as the change in R2 and RD2 to maintain the relationship between the standard and optional rates.

Revenue Requirement Increase Without a Change in LRIC

R2 and RD2 remain the same as there is no change in LRIC. To collect the revenue requirement R_s and RDs increase. R1 and RD1 increase to capture the remaining revenue requirement for the class and maintain the relationship between the standard and optional rates.

Change in Revenue Requirement and LRIC

R2 and RD2 change to reflect the new LRIC. R_s and RDs are changed to cover the class revenue requirement and R1 and RD1 change to recover the balance of the revenue requirement for the class and offset the change in R2 and RD2, maintaining the relationship between the standard and optional rate ensuring there is no over collection of revenue.

**IRP INTERACTION WITH B.C. HYDRO INITIATIVES
- POWER SMART & SELF/COGENERATION**

Under IRP, B.C. Hydro will continue to promote load displacement through Power Smart or self generated load displacement (SGLD) programs. Customers served on the standard rates will continue to receive Power Smart and SGLD program incentives.

Naturally, with a different rate structure, the incentive criteria for Power Smart has been adjusted. Customers served on the optional rates have the choice of implementing demand side management or load displacement measures on their own; receiving no subsidy from B.C. Hydro, reducing their Q2 energy requirements and saving at the LRIC level. Alternatively, customers requiring financial support to assist in the implementation of any Power Smart or SGLD measure could receive an incentive in a manner similar to current policies. In this case the customer would have to agree to reduce its Q1 assessment by an amount equivalent to the expected savings. As illustrated in Figure 11, the customer's Q1 level will be reset to Q1'. There are no Power Smart or SGLD incentives available under Q2.

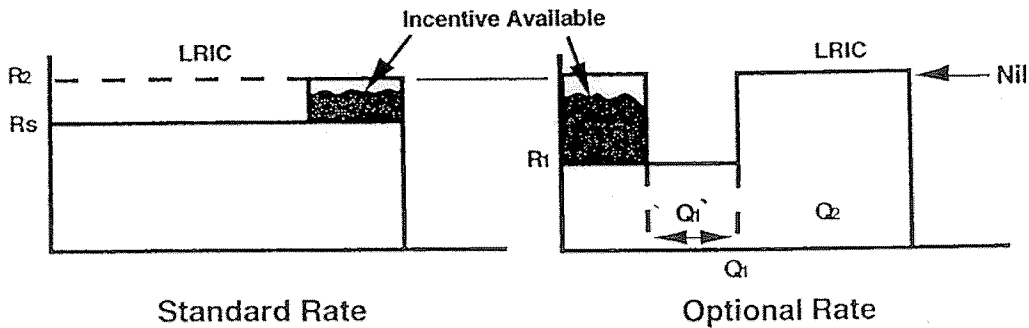


Figure 11 - Power Smart Incentive Levels

Power Smart's educational and public-participation programs (for example Product Knowledge Days) will not be affected by the IRP and will continue to be available to all customers.

Summary of Industrial Rates & Services

