4 BC HYDRO'S CONCLUSIONS WITH RESPECT TO SOME ASPECTS OF STEPPED RATE DESIGN AND IMPLEMENTATION MECHANISMS

Based on the analysis performed by E3, BC Hydro has reached some conclusions with respect to certain aspects of rate design, but appreciates that much more work with stakeholders needs to occur before a detailed design can be developed. Indeed, in one important area, the principles that should govern access to service from BC Hydro, BC Hydro has reached the very firm conclusion that development of access rules must await identification of the specific rate design to which the rules of access will attach. On the other hand, BC Hydro has concluded that the objectives of the methodology for determining base load consumption for each customer (customer baseline or "CBL") can be determined now. However, further stakeholder input is necessary to advance beyond high-level principles and develop the specific mechanisms to determine CBLs. While many aspects of the stepped rate design will be clarified after further consultations, the shopping credit mechanism appears to be the preferred method of implementation whatever rate design is ultimately chosen. BC Hydro's position in connection with each of these issues is presented in the balance of this section.

4.1 *Access Principles*

The E3 report identifies some significant risks associated with the implementation of a stepped rate design. It groups these risks into three categories:

(1) Risks arising from fluctuating markets;

(2) Risks arising from inaccurate setting of price signals; and

(3) Risks arising from providing customers with the ability to switch suppliers.

The worst-case quantification analysis performed by E3 demonstrates that unless these risks can be successfully mitigated, the potential costs of the stepped rate overwhelm its advantages. Accordingly, the incorporation of appropriate measures to limit risk will be a key component of any desirable rate design.

The discussion of risk factors in the E3 report makes clear that a wide variety of mitigative measures are available to deal with risk, some through rate design and others

through principles that govern access to those rates. Thus, provisions dealing with adjustments to CBLs may mitigate some sorts of risks, while provisions governing the rights of customers to demand supply from BC Hydro when they have chosen alternative supply sources may deal with others. This suggests that the choice of access principles is integrally linked with the choice of rate design. Until the design is known, it is not possible to determine appropriate access principles.

In light of these considerations, BC Hydro has not sought to identify access principles in this proposal. As consensus develops around the design of the stepped rate, BC Hydro will evoke access principles to suit and expects them to be fully considered through the consultation process described in Section 5.2.

4.2 *Customer Baseline*

BC Hydro has concluded that, as a matter of principle, CBLs should be developed for each industrial customer that reflect average economic conditions on an industry-by-industry or facility-by-facility basis. However, beyond this general objective, the E3 report describes some of the difficulties associated with the derivation of each customer's CBL, which would be an integral part of either the shopping credit or two-part designs. BC Hydro and its customers have some experience with developing CBLs in connection with BC Hydro's Real-Time Pricing (RTP) rates (Schedule 1848). There is no question that derivation of CBLs will raise many challenging issues and no one approach is likely to please all stakeholders. Compounding the challenges of CBL derivation is the issue of "load aggregation", about which the Commission was directed to make recommendations in paragraph 4(b) of the Terms of Reference. Actual CBLs will inevitably be the product of customer-by-customer discussions, possibly with the Commission's review and approval.

For this reason, BC Hydro believes that the specific mechanism for developing CBLs for individual customers or customer groups should be the subject of further stakeholder input.

A particularly difficult issue in connection with CBL derivation is the treatment of new load. Should a customer's CBL change with its load over time and how should the load of new customers be treated?

As elaborated in Volume 1 dealing with the Heritage Contract, BC Hydro does not believe the Energy Plan contemplates vintaging access to the low embedded cost of BC Hydro's existing generating resources. Thus, new customers, as well as old, should have access to the benefits of low-cost generation. This suggests setting CBLs for new customers based on "normal" consumption. Any other approach would favour old over new consumption and defeat economic development objectives by imposing significantly higher costs on new investment than old.

On the other hand, from a fairness point of view, it is difficult to see why new facilities in an existing plant should be treated differently than a new plant. Parity could only be accomplished by permitting existing customers a new CBL if they increased consumption because of increased production at their facility. This would add great complexity to the rate design and raise difficult questions with respect to identifying what conditions did and did not qualify a customer for a new CBL.

The difficulties associated with new load illustrate an inherent tension that will be introduced by any stepped rate design that charges higher rates at the margin. Higher marginal rates will tend to discourage energy consumption, thus, discouraging energy intensive development. In this sense, economic development objectives may conflict with the promotion of conservation and the maintenance of low-cost energy for the load that is already here.

The stakeholder consultation process should help clarify the issues, but is unlikely to resolve the conflict between those who give different weight to the value of economic development, conservation or even-handedness in rate design. Even if consensus were to develop amongst existing interests, government would need to consider the interests of potential new customers not represented in this process. In these circumstances, the Commission can best fulfill its role in this inquiry by clearly identifying the public policy

tradeoffs it has made in arriving at its recommendations. Balancing these competing objectives is a matter of provincial policy.

4.3 *Shopping Credit vs. Two-Part Rate*

E3's report distinguishes between two mechanisms to assist in the implementation of any stepped rate design. The first is a two-part rate with a portion of a customer's normal existing consumption being charged at one rate and the remainder at another. The second is the "shopping credit" mechanism in which all normal existing consumption is charged at one rate, but customers are given a credit or charged for variations from normal consumption based on a different rate or rates. BC Hydro has concluded the "shopping credit" is the preferable mechanism for introducing any of the potential rate designs that would be consistent with the policy objectives the stepped rate is intended to serve.

The shopping credit allows BC Hydro to offer direct access under a retail tariff without undertaking a complete unbundling of retail rates. The shopping credit constitutes a "price to beat" for third party suppliers, or investment in demand-side management (DSM) or self-generation.

This mechanism has a number of advantages over a strict two-part rate design.

First, the shopping credit mechanism is more flexible than a two-part rate in that the terms of the credit can take into account a broad spectrum of policy preferences and can be modified to take into account unforeseen circumstances that require immediate action. It lends itself to phased-in implementation, which is desirable for a relatively untested rate form. If, notwithstanding the design efforts of all participants, the final rate design caused undesirable behaviours by market participants, the terms and conditions of ongoing access to the credit could be adjusted more easily than undertaking a wholesale redesign of a two-part rate.

Second, the shopping credit mechanism can be used to give customers greater flexibility by allowing them to pursue direct access for up to their entire loads, regardless of where

the Tier 1 cut-off point is placed. A stepped rate without a shopping credit, for all intents and purposes, allows direct access only for that portion of load served at the Tier 2 rate.

Third, the E3 report makes clear that determining the manner in which retail industrial customers should obtain access to transmission is potentially very complex. Section 4(a) of the Terms of Reference provides that:

> "The Commission shall make specific Recommendations relating to any changes it believes are desirable in the rates of transmission voltage customers to accomplish the objectives set out in the Energy Plan, including:
>
> (a) The terms and conditions that should govern existing and new large industrial or transmission rate customers' access to transmission for the purposes of acquiring power from other energy suppliers' generation;"

Further, the Energy Plan provides the following specific policy actions:

> **"Policy Action #15 (new): The BC Hydro Transmission Corporation will improve access to the transmission system and enable IPP participation in US wholesale markets.**
> A new publicly owned entity, BC Hydro Transmission Corporation, will be responsible for planning, operating, and managing BC Hydro's transmission system."
>
> **"Policy Action #16 (new): The BC Utilities Commission will determine the terms and rates for this new transmission entity.**
> The BC Utilities Commission will review and approve wholesale transmission rates. In an initial hearing, the Commission will consider issues such as the allocation of costs between generation and transmission, and exit and entry fees for large customers who leave the BC Hydro system (under the new rate structure). Once the initial rates have been determined, future rate changes will also be reviewed and approved by the Commission."

The objective of transferring responsibility for the operation of BC Hydro's transmission system to a new corporation that will have responsibility, amongst other things, to design transmission rates, makes it undesirable to adopt a stepped rate design that would necessitate immediate redesign of the Wholesale Transmission Service (WTS) tariff. It is not expected that the Commission will determine the terms and rates for the new

transmission entity until 2004/2005, and a redesign of the WTS tariff should only take place, if at all, at that time.

BC Hydro believes that all of these factors point in the same direction. The shopping credit mechanism permits a clear identification of risks and will accommodate appropriate risk mitigation factors once its particulars are known. The shopping credit mechanism can be phased in in a number of ways as discussed in the E3 report, and it may obviate the need to use WTS for the provision of direct access. For these reasons, BC Hydro has concluded that a shopping credit mechanism is the preferred way to implement a stepped rate design.

If the government, based on a Commission recommendation, determines that the shopping credit mechanism is appropriate, a Commission Order is all that would be required to make it available to transmission voltage customers.