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**MINISTER:** HONOURABLE GEOFF PLANT, Attorney General and Minister Responsible for Treaty Negotiations

**IDENTIFIER NUMBER:** Assigned to the Ministry by Cabinet Operations (after receipt of the penultimate draft).

**DATE:** July 2, 2002

**TITLE:** Implementing Recommendations of the Administrative Justice Project for 2003/04  
Appointments, Tribunal Chairs and Statutory Powers

**ISSUE:**

s.14

**Cabinet Decision Document**

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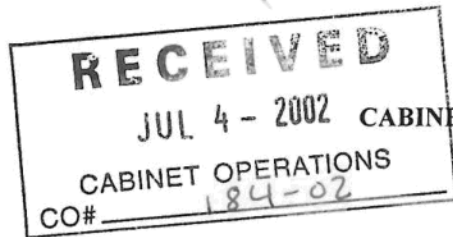
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Ministry Document Number: \_\_\_\_

**MINISTER:** Honourable Richard Neufeld, Minister of Energy and Mines

**IDENTIFIER NUMBER:** 184-02

**DATE:** JULY 4, 2002

**TITLE:** FUTURE STRUCTURE OF BC HYDRO

**ISSUE:**

On March 15, 2002, the Energy Policy Task Force delivered its final report *Strategic Considerations for a New British Columbia Energy Policy*. The Task Force recommended the creation of separate, commercially structured Crown-owned entities - a transmission company, two generation companies, and four regional distribution companies. The Task Force contemplated divestiture of non-core generation assets, and the restructuring of the transmission company along the lines of an airport authority.

After reviewing the Task Force's recommendations and considering presentations made by the Minister of Energy and Mines, on June 10, 2002, Cabinet approved a vision for the electricity sector. This vision consisted of four components: guaranteed low rates; secure, reliable supply; protect the environment; and maintain government revenues. Cabinet also indicated its desire to maintain participation in external power trading markets, and interest in the concept of an "endowment contract" to guarantee low rates (previous Submission July 3, 2002).

There are a number of structures for BC Hydro that are compatible with the vision. This submission is to explore the implications of those alternatives and seek Cabinet's direction on:

1. Restructuring BC Hydro;
2. Restricting BC Hydro's participation in new generation; and
3. BC Hydro's capital structure.

**RECOMMENDATIONS:**

1. Create a separate, independent entity to operate (as opposed to own) the transmission system in a way that will ensure access to U.S. markets and trading income.
2. Maintain the rest of BC Hydro as a single Crown corporation with clearly-defined lines of business for generation, transmission and distribution. This will keep BC Hydro assets in public ownership, while still ensuring business principles and transparency.
3. Encourage private sector investment in new generation by restricting BC Hydro's participation to upgrades to its existing facilities or, if approved by Cabinet, other new hydroelectric projects
4. Do not restructure BC Hydro's balance sheet to commercial standards at this time, since this would be costly to ratepayers and since decisions recommended in 1-3 above obviate the need. Remove tax distortions in conjunction with general tax policy reform for Crown corporations.

## **Linkages to New Era Commitments**

Two key commitments relate to BC Hydro's structure:

- Protect BC Hydro and all of its core assets, including dams, reservoirs and power lines under public ownership.
- Restore an independent BC Utilities Commission, to re-regulate BC Hydro's electricity rates.

In addition to the above, earlier versions of the New Era document included "encourage job creation from viable independent power production projects that will increase benefits to consumers through greater competition."

## **Linkages to Strategic Plan**

- Develop an energy policy that balances economic opportunities, conservation considerations and a safe secure energy supply for British Columbians
- Choice: afford citizens the opportunity to exercise self-determination

## **Energy Policy Task Force Recommendations**

- 5.01** Develop a wholesale electricity market based on open access to the electricity transmission system. The development of this market must be consistent with market developments in Alberta and the US Pacific Northwest.
- 5.02** Establish an independent transmission entity as a Crown Corporation clearly separate from all generators, distribution utilities and retailers. All transmission in the province needs to be coordinated by that entity. The entity would be regulated and would: manage transmission assets; ensure reliability and security of the system; administer a wholesale market; and schedule and balance the transmission system. The establishment of an independent transmission entity will necessitate the restructuring of BC Hydro.
- 5.03** Restructure BC Hydro. A new Crown Corporation responsible solely for generation from the endowment assets and Burrard Thermal needs to be established. In addition, four separate regional distribution utilities need to be established. Non-core assets need to be handled in a separate entity.
- 5.04** Establish Crown-owned entities on a commercial basis to resemble comparable, non-government-owned commercial enterprises.
- 5.05** Encourage private-sector investment in additional electricity generation in the province. This generation needs to be for both domestic and export markets.

## **BACKGROUND:**

### ***Current BC Hydro Structure:***

BC Hydro currently operates as a vertically integrated monopoly utility that is responsible for:

- generating/acquiring enough electricity to meet its customers' current and future needs;
- reliably transmitting electricity over a grid of high voltage wires to major demand centres;
- distributing electricity to end use customers; and
- providing retail customer services (connections, metering, billing, Power Smart, etc.).

BC Hydro provides significant benefits to the Province:

- high reliability and rates that are among the lowest in North America; and
- government revenues of about \$700 million per year in shareholder dividends (\$300M); resource rents (water rentals, \$250M), and taxes/grants-in-lieu (\$150M).

Over the past 10 years, BC Hydro has operated differently from other private and public sector monopoly utilities. Its rates have been regulated by government through rate caps and freezes, so that the BC Utilities Commission (BCUC) and customers have not had the opportunity to scrutinize its costs and rate structures. Except for improvements at its existing facilities, government also directed BC Hydro to procure new generation from independent power producers (IPPs, e.g., Island Cogeneration in Campbell River and Port Alberni Cogeneration).

BC Hydro has been able to maintain its low rates due to electricity trade in markets that have emerged since the mid-1990s. As a condition of access to U.S. markets, in 1996 BC Hydro implemented open-access rules for its transmission system. Although these rules conform in all respects to the rules established by the US Federal Energy Regulatory Commission (FERC), there is a perception by a number of B.C. IPPs that they do not have adequate access to the transmission system. BC Hydro continues to be involved with the development of new wholesale market structures. A summary of electricity market development over the past 10 years is attached as Appendix 1.

With its presence across the province, BC Hydro has a number of assets on First Nations' reserves. This is particularly the case for the high-voltage transmission system. Should government choose to create a new corporate entity to hold these assets, approval of the title transfer by the federal Minister of Indian and Northern Affairs is required, and can take many years. The federal Minister usually seeks concurrence of affected First Nations, which may also result in financial demands. Recent court decisions with respect to consultation requirements for activities in traditional territories may create further delay or financial demands. BC Hydro has explored some options to allow for timely transfer, but success is uncertain (see Appendix 2).

### ***Core Services Review:***

In October 2001, BC Hydro made a preliminary presentation to the Core Review and Deregulation Task Force. Recognizing that major structural changes would only occur after a new energy policy, the Core Review Task Force endorsed establishing internal business units for BC Hydro's core functions (generation; transmission; distribution), and exploration of opportunities to outsource non-core shared service functions.

BC Hydro has established internal business units for generation, transmission and distribution, plus the development of Engineering Services and Field Services businesses, including a system of inter-business charge-backs and segmented financial reporting. After competitive bidding processes, BC Hydro is currently negotiating with successful bidders for its customer services, information technology, business support, and property and material management functions (Accenture), and fleet services (finalist not yet public). The RFEI could affect one-third of BC Hydro's current workforce.

***What's Broken (or About to Be)?:***

Much of the public speculation regarding the upcoming energy policy centres on BC Hydro, and the fact that it currently provides low cost and reliable electricity services. The spectres of California and Alberta are raised to illustrate the potential pitfalls of deregulation and privatization. Even though government is not contemplating full-scale deregulation at this time, there are a number of issues for government to consider in the future structure of BC Hydro.

BC Hydro has been operating as a public, essentially unregulated, monopoly, inconsistent with a future vision of greater competition and private sector investment:

Although BC Hydro has continued to provide low rates and significant contributions to government, it has not been subject to the rigours of either competition in its domestic market or, for the past 8 years, rate regulation by the BCUC. Government intervention in the form of rate caps and freezes has precluded BCUC rate reviews. The New Era committed to restore an independent BCUC to re-regulate BC Hydro's rates.

Even if major restructuring is undertaken to introduce competition, BC Hydro's transmission and distribution "wires businesses" will still require regulation. These functions are natural monopolies where it is appropriate to regulate to protect the public interest regardless of ownership. There is greater scope for competition in generation, through wholesale markets, and customer service by allowing end-use customers to choose their electricity supplier.

Competition requires liquid markets with many buyers and sellers. At present, these conditions do not exist in B.C., and our neighbouring markets are still evolving. There are, however, opportunities to restructure and restrict BC Hydro to encourage IPPs, thereby increasing competition and allowing private investors to place their equity at risk in finding innovative new sources of generation. As noted in earlier submissions, permitting and tenure issues that impede IPP investment are being dealt with through Ministry Service Plans.

Market rules are changing:

U.S. FERC rules from the mid-1990s led to utilities opening up their high-voltage wires to other users to facilitate competition and trade. In 2000, FERC began to move this to the regional level, by requiring utilities to provide open access through truly independent Regional Transmission Organizations (RTOs). Both BC Hydro and the Ministry of Energy and Mines have been involved in the development of RTO West.

The goal of RTOs is to increase competition and trade by ensuring all market participants (IPPs, marketers and utilities) have equal access, and that available transmission is allocated based on market principles (e.g., new generation versus expanded transmission; price signals to locate new generation and relieve transmission bottlenecks). Over the long-term, cost to consumers can be reduced through competition and efficient system development.

RTO participation will require, at a minimum, that control of BC Hydro's transmission assets must be in an entity that has no relationship to any generation or distribution business in the region. BC Hydro has proposed a BC Independent Grid Operator (BC IGO) to participate in RTO West while maintaining provincial sovereignty and regulatory jurisdiction. BC IGO would be responsible for transmission planning and management in a regional context, and would ensure reliability by scheduling and balancing the transmission system to meet B.C.'s needs. BC IGO would require moving up to 280 BC Hydro transmission planners, operators and dispatchers into a separate not-for-profit organization that would be regulated by the BCUC.

Restructuring could help to address to government's fiscal challenges:

A number of options for restructuring BC Hydro could provide significant net proceeds to address government's near-term fiscal challenges, while retaining public ownership of core assets. These net proceeds would be at the expense of future revenue streams to government.

**RESTRUCTURING OBJECTIVES:**

In addition to the four components of the electricity vision - guaranteed low rates; secure, reliable supply; protect the environment; and maintain government revenues - three additional objectives should be considered for the future structure of BC Hydro:

Top quartile commercial performance:

A number of BC Hydro activities are currently benchmarked against other public and private sector electricity utilities and companies. Whether BC Hydro remains an integrated utility or evolves into separate corporate entities, it should be striving to be as efficient and effective as possible in delivering its mandate.

Flexibility to adapt:

Any decision to restructure BC Hydro should retain sufficient flexibility to make further changes as trading markets evolve, and also to allow for further restructuring or divestiture in the event that some businesses or assets are deemed to be non-core at a future date. Participation in trading opens opportunities for development of competitive regional markets and investment in the province to meet the needs of those markets. Divesting some non-core generation assets could further advance market development in B.C.

Public ownership:

The New Era commits to public ownership of core assets. Public ownership can take many forms, including: Crown corporations; public companies where the government retains a majority of the shares; no-share capital corporations like the Vancouver Airport Authority; and income trusts where



government still owns the assets but income streams are pre-sold for a lump sum. This submission does not propose these structures, but government may want to consider them in the future.

Competitive electricity market:

Restructuring BC Hydro should support the future vision that, over time, a robust electricity market will be developed in British Columbia to promote competition, innovation, customer choice, and private sector investment.

**DECISION A: STRUCTURE OF BC HYDRO**

The future structure of BC Hydro could take a number of forms. They could range from the status quo to divestiture of some or all of the corporation to the private sector. The direction from the June 10 Cabinet retreat was that the divestiture of major assets will not be pursued at this time. As noted above, restructuring should maintain sufficient flexibility to accommodate future decisions to divest non-core assets. The options presented below are variants that retain BC Hydro under public ownership.

Also at the Cabinet retreat, Ministers indicated their desire for BC Hydro to continue to participate in electricity trading activities. To maintain access to the U.S. market, all indications are that over the next one to two years BC Hydro will need to join a Regional Transmission Organization. At a minimum, this will require separation of BC Hydro's grid operations group into an independent organization that will coordinate operation and facilitate planning on a regional basis to support competition and trade. Government could continue to own the transmission assets. All of the options below assume that a BC IGO will be established.

**OPTIONS:**

**A1 Single Corporation with well-defined lines of business**

This is the structure that BC Hydro has been working toward over the past year, and is a precondition to the other options below and potential future restructuring options such as divestiture of non-core businesses. The goal of the lines of business model is to create virtual internal companies without the time and expense of creating separate corporations. Internally, each line of business reports results and establishes formal relationships to drive the discipline equivalent to separate organizations. The attraction of this model is cost effectiveness, flexibility, and probable public acceptance in that it would not be perceived as "breaking up BC Hydro."

Advantages:

- requires no action from government
- lower cost compared to new corporate entities
- moves part way toward separate corporate entities
- may be viewed more favourably by the public than the other options
- flexibility for future restructuring - lines of business may be divested almost as efficiently as separate corporate entities
- can still restructure businesses or divest assets deemed to be non-core
- avoids uncertainty, delay and potential costs of transferring title to assets on First Nations reserves

Disadvantages:

- may not achieve the clear mandate, focus and performance of separate entities
- an endowment relationship and new regulatory structures can be established, but not as clean as with separate corporate entities
- IPPs will still perceive bias if generation, transmission and distribution ownership still in same company and unlikely to make significant investments in new generation

**A2 Holding company with legal subsidiaries**

This model would formalize the lines of business into separate legal entities under a holding company. Each subsidiary would have a clear mandate and separate financial reporting. Separate corporate entities would create clear mandates and greater focus on performance.

Advantages:

- could be accommodated with minor legislative amendments
- easier to further restructure or divest a separate legal entity
- separate governance structures could provide greater focus and improved performance
- contractual endowment relationship easier between separate corporate entities
- distribution subsidiary could administer competitive IPP acquisition independent of the generation subsidiary

Disadvantages:

- may be seen by the public as the break-up of BC Hydro
- may not achieve the clear mandate, focus and performance of fully separate entities
- marginally higher cost than internal lines of business
- uncertainty and potential costs and delays of transferring title on First Nations Reserves
- IPPs may still perceive bias if generation, transmission and distribution subsidiaries are in same company

**A3 Multiple Crown corporations**

This option is similar to Option 2. Government would replace the *Hydro and Power Authority Act* with legislation establishing new Crown corporations for generation, transmission and distribution.

Advantages:

- focus on clearly separate mandates, businesses and performance
- similar initial cost to creating subsidiaries
- contractual endowment relationship easier between separate corporate entities
- clear separation of distribution to competitively acquire new resources
- clearer signal to IPPs and investment community

Disadvantages:

- will be seen by the public as the break-up of BC Hydro
- higher ongoing cost of separate corporations

#### **A4 Multiple Crown corporations including multiple distribution companies**

This is a variant of Option 3 consistent with the Energy Policy Task Force recommendation to create four regional distribution companies - Vancouver Island; Lower Mainland; Interior/Columbia; and the North. The distribution companies could be established to initially all have the same rate levels. Over time, differential rates would evolve due to differing rates of demand growth and the cost of new resources acquired to meet that growth.

##### Advantages:

- creates competition by establishing several large buyers of power in the market
- significant step in establishing a market in B.C.
- allows local needs and preferences to be addressed (e.g., if Vancouver Island wanted to be a green energy zone, or add new submarine cables to buy power from elsewhere, they could pay for it)

##### Disadvantages:

- additional costs of multiple organizations
- some concern that economies of scale could be lost with multiple distribution companies
- new generation selected by individual distribution companies may not be optimal from an overall system perspective

**Recommendation: Option 1 - Maintain BC Hydro as a single Crown corporation with clearly-defined lines of business for generation, transmission and distribution. This will keep BC Hydro assets in public ownership, while still ensuring business principles and transparency.**

#### **DECISION B: BC HYDRO'S PARTICIPATION IN NEW GENERATION**

If the long-term vision is to create more competition in the BC market, decreasing, BC Hydro's dominance in generation would be desirable. Except for upgrades to its existing facilities and recent attempts to develop a new gas-fired project on Vancouver Island under a joint venture with the private sector, BC Hydro has been acquiring power from IPPs over the past 10 years.

The BCUC has not had a role in determining whether these projects are least-cost alternatives. While most projects have been subject to competitive bidding processes, many have been exempted from BCUC review by Ministerial Orders. Whether BC Hydro or the private sector develops new generation, BCUC approval of new electricity projects would be consistent with the New Era commitment to have an independent BCUC re-regulate BC Hydro, as well as supporting the objective of lowest possible rates.

#### **B1 Allow BC Hydro to develop new generation**

BC Hydro's core competency is in the development and operation of large hydroelectric projects. As part of the capital maintenance of its facilities, upgrades may result in increased output at very low cost. In addition, some BC Hydro facilities have been designed for more turbines than were initially installed. These generation additions may also be lower cost than IPP alternatives. Upgrades and additions at its existing dams are what BC Hydro's calls their Resource Smart program.

Depending on its capital structure and tax position, BC Hydro may be able to develop other new generation at lower cost than IPPs. This would support the vision of guaranteed low rates.

Advantages:

- Resource Smart projects are low cost
- Development of new non-hydroelectric projects could be lower cost
- public acceptance of BC Hydro's role in generation

Disadvantages:

- limits opportunities for private sector investment
- increases BC Hydro's dominance
- does not move toward the establishment of a competitive market

**B2 Restrict BC Hydro's Participation in New Generation**

BC Hydro could be limited to its Resource Smart program for a period of time (e.g., the 10-year term of the endowment contract). In addition, there may be opportunities for major new developments (e.g., Site C), that are consistent with BC Hydro's core competencies. Major new developments could require Cabinet approval before taking them to the BCUC.

Restrictions on BC Hydro's participation in new generation would allow IPPs to compete to serve demand growth, and use the open access transmission system to explore export opportunities.

Advantages:

- creates more participants in the BC market
- potential for greater innovation from new generation technologies
- reduces BC Hydro's dominance in support of more competitive BC market
- supports past commitments to IPPs, and lets them prove they can compete

Disadvantages:

- may be marginally higher cost

**Recommendation: Option B2 – Encourage private sector investment in new generation by restricting BC Hydro's participation to upgrades to its existing facilities or, if approved by Cabinet, other new hydroelectric projects.**

**DECISION C: BC HYDRO'S CAPITAL STRUCTURE**

BC Hydro's capital structure does not conform with private sector utilities. As of March 31, 2002, it has a debt to equity ratio of 72:28 compared to an industry standard 60:40. In addition, the equity it reports does not meet generally accepted accounting principles, in that it includes customer contributions in aid of constructions (\$581 million), and the rate stabilization account (\$87 million). An industry-standard debt level would mean \$1.7 billion less BC Hydro debt than it currently has on its balance sheet.

BC Hydro also does not pay full property taxes and receives a government debt guarantee. These factors lead to accusations that BC Hydro is subsidized and as a result, there is no level playing field in B.C. Further discussion of commercialization is attached as Appendix 3.

#### **OPTIONS:**

##### **C1 Status Quo**

Because BC Hydro's equity, tax and debt costs are lower than what a private sector utility would pay, it can develop new power projects at lower cost in support of the low rates vision.

##### Advantages:

- consistent with keeping rates low
- reduced need to level the playing field if BC Hydro is constrained in developing new generation
- public acceptance due to lower cost

##### Disadvantages:

- does not level playing field with IPPs
- does not prepare BC Hydro for a future competitive market
- may expose BC Hydro to subsidy challenges by U.S. competitors

##### **C2 "Commercialize" BC Hydro**

Under any of the BC Hydro structure options above, the corporation or corporations could be restructured to resemble a commercial utility by:

- moving to a commercial debt:equity structure by adopting a GAAP definition of equity and adjusting the capital structure through a debt:equity swap or allowing equity to build over time through reduced dividend payouts;
- payment of a grant-in-lieu of income tax and dividends on an after tax basis;
- payment of full property taxes; and
- adding a debt guarantee fee.

The effect of these changes would increase costs by about \$200 million, equivalent to a rate increase of 8%. This rate impact could be eliminated by a downward adjustment in water rentals, which are the highest in Canada and were instituted in the 1980s to extract revenue from BC Hydro. BC Hydro paid \$228 million in water rentals in 2001/02. Reducing water rentals (a relatively stable resource rent) and increasing income-based grants in lieu of taxes would increase the volatility of BC Hydro's contributions to government.

##### Advantages:

- creates a level playing field
- better benchmarking with other utilities
- prepares BC Hydro for future competition
- precludes potential challenges from U.S. competitors that BC Hydro power is subsidized

Disadvantages:

- public may perceive commercial capital structure(s) as precursor to privatization
- increases taxpayer-supported debt (but not overall debt)

**Recommendation: Option C1 – Do not restructure BC Hydro's balance sheet to commercial standards at this time, since this would be costly to ratepayers and since decisions recommended above obviate the need. Remove tax distortions in conjunction with general tax policy reform for Crown corporations.**

**FISCAL MANAGEMENT CONSIDERATIONS:**

BC Hydro is facing a number of fiscal challenges: it must meet its income targets in the fiscal plan; operate in more competitive markets; adopt new accounting principles that increase income volatility; and acquire new generation at higher cost than existing resources.

The formation of a BC IGO coincides with a planned move of the system control centre at Burnaby Mountain and consolidation of four regional control centres. Incremental costs to establish the IGO and operate it are expected to be minimal.

Other than IGO costs, there are no other significant financial implications of the recommended decisions. Implications of property taxation of Crown corporations will be a separate decision that may have an impact on future rate levels.

**SIGNIFICANT IMPLICATIONS:**

**LEGISLATION**

- Amendments to the *Utilities Commission Act* and *Hydro and Power Authority Act* will be required to establish a new BC Hydro structure.

**CONSULTATIONS:**

**Public Consultation:**

- Months of consultation and over 200 hundred stakeholder submissions were included in the Energy Policy Task Force process.

**Inter-Ministry, Inter-Agency and Inter-governmental Consultation.**

- The following ministries and agencies have reviewed this submission:

MEM                      MFIN/TBS      BC Hydro

**COMMUNICATIONS:**

- A comprehensive communication plan is being developed.
- It is expected that the Energy Policy response will attract considerable media attention, particularly components dealing with electricity rates.

## **RECOMMENDED DECISIONS:**

1. Create a separate, independent entity to operate (as opposed to own) the transmission system in a way that will ensure access to U.S. markets and trading income.
2. Maintain the rest of BC Hydro as a single Crown corporation with clearly-defined lines of business for generation, transmission and distribution. This will keep BC Hydro assets in public ownership, while still ensuring business principles and transparency.
3. Encourage private sector investment in new generation by restricting BC Hydro's participation to upgrades to its existing facilities or, if approved by Cabinet, other new hydroelectric projects
4. Do not restructure BC Hydro's balance sheet to commercial standards at this time, since this would be costly to ratepayers and since decisions recommended in 1-3 above obviate the need. Remove tax distortions in conjunction with general tax policy reform for Crown corporations.

## **SIGNATURE:**

Honourable Richard Neufeld, Minister  
Ministry of Energy and Mines

Date

## **KEY CONTACT:**

Chris Trumpy,  
Special Energy Policy Advisor  
to the Minister of Energy and Mines on  
387-6206

## **APPENDICES TO SUBMISSIONS**

1. Evolution of Electricity Markets
2. Asset Transfer on First Nations Reserves
3. Commercialization



## Appendix 1

### **Evolution of US Wholesale Electricity Market Rules – 1992 to Present**

US electricity markets have been undergoing a change in the provision of generation and the facilitating open access transmission for over 40 years. In the Public Utilities Regulatory Policies Act of 1978 (PURPA), Congress recognized that large scale generation no longer had the advantage of economies of scale and required utilities to buy power from “qualifying facilities” at a price that was not to exceed their avoided cost. As the independent power producer (IPPs) industry grew, demand to sell power to other entities increased.

In the Energy Policy Act of 1992, congress recognized that PURPA was not successful in providing IPPs access to transmission systems, thereby limiting the significant benefits that IPPs could provide. The Energy Policy Act gave the Federal Energy Regulatory Commission (FERC) significant new powers in two areas:

1. FERC was able to exempt IPPs from the Public Utility Holding Company Act that was restricting IPP investment; and
2. Allowed FERC to order transmission wheeling on a utility’s transmission system and required that FERC established filing guidelines for utilities to describe available transmission capacity and transmission constraints.

As experience grew with the Energy Policy Act, FERC came to realize that transmission owners were enjoying a greater level of service and access to transmission than third party users. To eliminate these shortcomings of transmission service, FERC issued Order 888 (Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities and Transmitting Utilities) and Order 889 (Open Access Same-Time Information System – OASIS) in 1996. These orders provided the following further transmission service requirements/procedures:

- Transmission providers were to file an Open Access Transmission Tariff (of which FERC had provided a pro forma example);
- Utilities were to operate their transmission businesses functionally separate from their other operations;
- A method to recover costs for the transition to competitive markets was provided;
- Utilities were to offer their transmission services on a co-ordinated electronic information; and
- The method and rules for implementing an Independent System Operator (ISO) were provided, albeit ISOs were not required.

Further, FERC required that any entity requesting the ability to trade power (granted through a Power Marketing Authorization – PMA), must offer equivalent transmission access on their system. As a result, BC Hydro participated by filing (and using) a Wholesale Transmission Tariff which complied with the FERC model.

While Orders 888/889 were successful as far as they went, concerns remained that utilities were exhibiting self-serving behaviour and lacked geographic scope. FERC released their Regional Transmission Organization (RTO) Order 2000 in December of 1999. Order 2000 requires vertically integrated utilities (utilities who own generation or electricity marketing and transmission



businesses) to transfer either operational control, or both operational control and ownership, of their transmission assets to an independent body - a "Regional Transmission Organization (RTO)".

Operational control typically includes setting the system operating parameters, designing and offering tariffs, collecting transmission revenues, and planning future transmission system expansion. An independent body is defined as one that is unaffiliated with generation or marketing functions.

FERC indicated that it wants to have the ability to evolve over time as it gains operating experience and the flexibility to accommodate the changing needs of the market.

While FERC had initially placed a timeframe for the implementation of RTOs (December 2002), no region has managed to complete the creation of an RTO to date (the Mid-west ISO is close). The problems of the market, especially California, have created reluctance for stakeholders to commit to further restructuring in many jurisdictions and FERC has not yet pushed the timetable.

Following from FERC's review of various RTO proposals, the delay in implementing workable RTO structures, and as a consequence of the California situation, FERC is now contemplating a Standard Market Design. Where the RTO Order 2000 looked for innovative methods to solve the market design issues, FERC is now wanting to have a standard design to help ensure markets will be functional and integrate the various regions.

In an April 10<sup>th</sup>, 2002 Options Paper, FERC contemplates methods for supplying transmission service including access fees, transition of existing transmission contracts, assignment of transmission rights, and generation adequacy. FERC is also considering methods of managing transmission shortages (congestion) and market monitoring roles for RTOs. FERC expects to issue a Notice of Proposed Rulemaking on Standard Market Design during the summer of 2002.

The US electricity markets continue to be a changing landscape and those changes are expected to continue for the foreseeable future. BC needs to continue to adapt to US market changes if it wishes continue to participate in those markets.

## Appendix 2

### Aboriginal Consent on Transfers of Transmission Line Permits and Rights-of-Ways

The transfer of BC Hydro assets into separate legal entities would likely require consent from the owners of land over which BC Hydro holds rights. Potential aboriginal issues are considered from two aspects; permits on Reserve Lands, and transfers of rights-of-ways (RoWs) over Crown land that are subject to claims of aboriginal title or infringement of aboriginal rights. While the following details surround transmission assets, similar issues arise for generation and distribution assets.

#### Transfers on Reserve Lands

BC Hydro's transmission system has 2.3% of its transmission line length built on Reserve Lands. Many permits were issued to BC Hydro under Section 28(2) of the Indian Act and these permits are not transferable without consent of the Federal Minister of Indian Affairs. By practice, the Federal Minister will not give consent without band council approval. The process to obtain such consents is expected to be lengthy, i.e. in the order of at least 8 years, and many may never be obtainable from the affected bands even with significant payments or financial sharing. One such consent is still outstanding from the privatization of BC Gas in the late 1980s.

#### Transfers on Crown Lands

The transfer of rights-of-way (RoW) over Crown land may result in an obligation to consult with aboriginal groups. A First Nation may argue that the transfer, or the Crown's consent to the transfer, of a RoW constitutes an infringement of their aboriginal rights or title. It is the Crown's obligation to consult with the aboriginal groups where there is a reasonable prospect that an infringement may occur. It is believed that, provided the transfer of the Crown land RoW does not change the use on the ground, no consultation would be required.

Recent developments in case law, i.e. Taku River Tlingit decision, may result in a requirement for the Crown to consult on RoW transfers if there is a reasonable prospect that infringement may occur, even where aboriginal rights or title have not been established through court proceedings. Further, the Haida Nation vs. BC and Weyerhaeuser decision (although under reconsideration on this point) may place an onus on BC Hydro, and not just the Crown, to consult.

#### Mitigation Measures

Dealing with the aboriginal issues concerning asset transfers may cause a lengthy delay in implementing BC Hydro restructuring. Two models are being contemplated to manage these concerns in a reasonable timeframe: the successorship model, and the co-ownership model. The successorship model contemplates legislation that vests all rights and obligations of BC Hydro's transmission business into a new transmission entity, such that the new entity is a smaller version of the old BC Hydro. In addition to managing the multitude of assets, contracts, rights and obligations BC Hydro currently has, it may be successful in managing the aboriginal issues, though there is considerable uncertainty.

The second model, co-ownership, would have all assets not able to be transferred to the new entity at the time of the transaction closing being retained by the existing BC Hydro. The co-ownership model may be a default position to the successorship model if the latter is not successful.

The appropriateness of the two mitigation models, as well as the aboriginal risks and issues generally, is being considered by the Attorney General's office.

#### Case Example – TransAlta Sale To Alta Link

TransAlta's recent sale of its transmission system to AltaLink (Alberta Energy and Utilities Board – AEUB approval on March 28, 2002) provides a good example of the aboriginal issues and constraints that can occur. TransAlta had originally asked for approval to sell all of its transmission assets to AltaLink. Several aboriginal bands objected to the sale on the basis that TransAlta required consent of either the bands or the Minister of Indian and Northern Affairs in order to assign Indian Act permits. TransAlta originally proposed to hold the permits and assets on First Nations land in trust until consents to assign the permits could be obtained. In response to objections that this structure breached the permits in question as really being disguised assignments, TAU later changed its position before the AEUB to state that there would be no agreement to sell or any terms of sale or any commitments to sell or purchase the permits and assets on First Nations lands. Several aboriginal bands opposed approval of the sale on those terms as it would harm the reliability of service. Further, their position was that all past and future transmission issues should be dealt with prior to any sale.

The AEUB approved the sale on the basis that it felt there would be no harm to customers from the sale. As far as is known, TransAlta will retain the ownership of the transmission lines that require First Nation's consent. TransAlta will make joint filings with AltaLink for regulatory purposes. TransAlta will also contract the maintenance of their lines to AltaLink. In essence, TransAlta is operating under a co-ownership model as contemplated above, although it is unclear if there is a co-ownership agreement in place.

## Appendix 3

### Commercialization

#### **Background / Description**

Commercialization is a modification of the financial and management structure of BC Hydro to resemble a private company that would allow BC Hydro to compete on an equal footing with private companies. It does not change its Provincial Government ownership, but provides BC Hydro with many private sector characteristics.

Commercialization is undertaken to achieve the following high level benefits:

- To remove perception of BC Hydro participating on a non-level playing field and possible countervail duties;
- To permit BC Hydro to compete effectively with business focus and quick decision making; and
- To achieve enhanced performance through better comparison and benchmarking with high-performance private sector utilities.

#### **Institution of Commercialization at BC Hydro**

Each of the following components need to be considered in the context of meeting the Energy Policy objectives of keeping guaranteed low electricity rates while maintaining government revenues:

#### ***Commercial Capital Structure***

BC Hydro's debt to equity ratio as at 31 March, 2002 is 72:28. If the intent was to move BC Hydro to debt to equity ratio more consistent with a similar privately held company the ratio would need to move towards 60:40. It should be noted that this is on a consolidated basis. Depending on the risk profile, individual business units, subsidiaries, and/or legal entities might require a higher or lower debt to equity structure to conform to private sector standards.

#### ***GAAP Definition of Equity***

BC Hydro's current government-directed definition of equity is inconsistent with commercial definitions of equity. In particular, accounts funded by customers and set up under 'Contributions in Aid of Construction' and the Rate Stabilization Account (RSA) are allowed to be included as equity. If these accounts, which currently have a balance of \$581M and \$87M respectively, were not included as equity, BC Hydro's overall debt to equity ratio would be approximately 80:20.

Ratepayers are currently required to pay a 15.5% return on this "deemed equity." Moving to a GAAP definition would result in ratepayer savings of \$103M/year.

#### ***Moving to Commercial Debt:Equity***

Once a GAAP equity definition is established, a move to a commercial debt to equity capital structure of 60:40 would require an injection of approximately \$1.7B and a corresponding transfer of debt to the government. This would have the effect of increasing tax-payer supported debt but not overall provincial debt. Alternatively, the higher equity component could be achieved by lowering the dividend paid to the provincial government by BC Hydro (currently 85% of net income is paid out as dividends) for a period of time.

The impact of this step would be that ratepayers would now have to pay the pre-tax rate of return of 15.5% on \$1.7 billion that was formerly debt at an average cost of 8%. This differential would increase ratepayer costs by \$128M/year.

#### ***Property Tax***

BC Hydro currently pays grants-in-lieu of property tax on its assets. Depending on assumptions regarding tax caps for certain small municipalities that have incorporated large dams after boundary extensions (e.g. Hudson's Hope; Revelstoke) full taxation could increase ratepayer costs from \$20-\$140M per year.

#### ***Debt Guarantee***

BC Hydro also enjoys a 75 basis point debt cost advantage based on its Provincially debt guarantee. On the \$6B of debt remaining after an injection of equity to move to a commercial capital structure, the incremental cost to ratepayers would be \$45M/year.

#### ***Grant-in-Lieu of Income Tax***

BC Hydro's current return on equity is pre-tax. Establishing a grant-in-lieu of income tax and after-tax return on equity would have no effect on rates.

#### **NET EFFECT OF COMMERCIALIZATION ON RATEPAYERS (\$millions/year)**

GAAP definition of equity	\$(103)M
Move to 60:40 debt:equity	\$128M
Full Property Tax	\$20-\$140M
Debt Guarantee	\$45M
Grant-in-lieu of Income Tax	\$ 0
Total	\$90-\$210M/year

The upper range of these costs would be approximately \$200M. These costs could be funded in a variety of ways lowering of water rentals (\$228M paid by BC Hydro in 2001/02) or increasing rates (approximately 8%), or combination thereof.

#### **Benefits of Commercialization**

- Puts BC Hydro on a level playing field enabling it to maintain low rates to customers and maintain future dividends for the Government;
- Demonstrates that the Government is being proactive in ensuring crown corporations have a commercial focus;
- Removes the Province's guarantee of BC Hydro's debt, which reduces the Government's liability and risk.

#### **Summary/Conclusions**

BC Hydro is facing changing electricity markets and competition. BC Hydro needs to begin operating on a competitive commercial basis in order to remain a viable competitive utility in the future. There is an opportunity to undertake these changes now, in advance of market reform, to demonstrate a business focus.

## **Response to the Energy Policy Task Force**

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**Future Structure of BC Hydro  
Presentation to Cabinet  
July 10, 2002**

### **Purpose**

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- Cabinet Direction on:
  - restructuring BC Hydro
  - restricting BC Hydro
  - refinancing BC Hydro

## **Outline:**

- Current Structure
- Issues
- Restructuring Objectives
- Restructuring Options
- BC Hydro's role in new generation
- Refinancing

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## **Current BC Hydro Structure**

- Vertically integrated
  - Low rates with high reliability
  - ~\$700 million/year to government
  - Active in trading
- Core Review Outcome
  - internal "lines of business"
  - outsource non-core shared services

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## Issues

- Unregulated Monopoly
- Changing Market Rules
- Restructuring could Address Fiscal Challenges

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## Objectives

- Electricity Policy Vision
  - Guaranteed low rates
  - Secure, reliable supply
  - Protect the environment
  - Maintain government revenues
- Top Quartile Financial Performance
- Flexibility to Adapt
- Public Ownership
- Future Competitive Electricity Market

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## **Decision A: BC Hydro Structure**

### ■ Options

1. Internal Lines of Business
2. Holding Company/Subsidiaries
3. Multiple Crown corporations
4. Multiple Distribution Companies

### ■ For all options:

- Create Independent Grid Operator to maintain US market access and trading income

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## **Decision A - Recommendation**

### ■ **Option 1** - Single company with internal Lines of Business

- Lower cost
- Flexible - can still restructure/divest
- Delays First Nations asset transfer
- public acceptance

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## **Decision B - BC Hydro's Role**

### ■ Options

1. BC Hydro competes for new generation
2. Ring-fence BC Hydro to promote IPPs

### ■ Recommendation - **Option 2**

- hydro upgrades or approved new hydro only
- IPPs role increased

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## **Decision C - Refinancing**

### ■ Options

1. Status Quo
2. Refinance to create commercial capital structure and level the playing field

### ■ Recommendation: **Option 1**

- no need to level field if BC Hydro not playing
- tax reform in conjunction with other Crowns

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## **BC Hydro Structure - Summary**

- Single company with clear lines of business
  - focus on commercial performance
  - flexible
  - public acceptance
- Restricted participation in new generation
  - opportunity for new IPP investment
- Deal with property tax issues across all Crowns

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