

THE COMMERCIAL ENERGY CONSUMERS OF BRITISH COLUMBIA

**IN THE MATTER OF BRITISH COLUMBIA HYDRO AND POWER AUTHORITY
("BC HYDRO") 2004/2005 AND 2005/2006 REVENUE REQUIREMENTS
APPLICATION
AND
BRITISH COLUMBIA TRANSMISSION CORPORATION ("BCTC")
APPLICATION FOR DEFERRAL ACCOUNTS**

**Direct Testimony of
David Craig**

**On behalf of the
Commercial Energy Consumers of British Columbia**

April 20, 2004

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Commercial Energy Consumers

Evidence Summary

This Revenue Requirements Hearing is about the choice. It is about the choices available to BC Hydro and the choices BC Hydro has made. It is about the choices other intervenors propose should be made and about the choices the BC Utility Commission will eventually make.

BC Hydro has presented Revenue Requirements

6 **Table 2A-1. Pro forma Statement of Operations (Revised)**

(\$ millions)	F2003 Actual	F2004 Forecast	F2005 Plan	F2006 Plan
Equity	\$2,700	\$2,730	\$3,064	\$3,168
Domestic				
Revenues	2,475	2,552	2,720	2,756
Inter-segment revenues	6	81	125	116
Expenses	(2,267)	(2,551)	(2,528)	(2,528)
	\$214	\$82	\$317	\$344
Trade Income	\$138	\$108	\$89	\$91
Net Income before transfers to RSA/	\$352	\$190	\$406	\$435
Transfer from RSA (Note 1)	66	21	-	-
Net Income	\$418	\$211	\$406	\$435
Allowed rate of return on equity	15.47%	14.33%	13.91%	13.91%
Allowed Net Income	\$418	\$396	\$427	\$442
Requested rate increase (%)	N/A	N/A	8.90%	N/A

7 Notes:

8 It is anticipated that the RSA balance will be nil at the end of F2004.

9

4 **Table 2-1. Pro forma Statement of Operations, No Rate Increase**

(\$ millions)	F2003 Actual	F2004 Forecast	F2005 Plan	F2006 Plan
Equity	\$2,700	\$2,726	\$3,042	\$3,120
Domestic				
Revenues	2,475	2,516	2,525	2,539
Inter-segment revenues	6	76	124	91
Expenses	(2,267)	(2,537)	(2,478)	(2,498)
	214	55	171	132
Trade Income	138	91	80	89
Transfer from RSA (Note 1)	66	21		
Net Income	\$418	\$167	\$251	\$221
Rate of return on equity	15.47%	6.13%	8.25%	7.08%
Allowed rate of return on equity	15.47%	14.33%	13.91%	13.91%
Required rate increase (%)	N/A	N/A	7.23%	2.00%

5 Notes:

6 1. It is anticipated that the RSA balance will be nil at the end of F2004.

At the time of the original evidence Table 2-1 the 7.23% increase requested was required to raise revenue requirements from \$251 million to \$427 million an increase of \$176 million.

Now BC Hydro has updated its evidence to Table 2A-1 suggesting that the rate increase granted by the BCUC on an interim basis was insufficient and is therefore now requesting 1.67% additional in the fall of 2004 to raise the total application to 8.9% in total.

The main changes incorporated in this requested increase are increases to the costs of energy in 2005 and 2006 of \$82 million and \$57 million respectively and a decrease in finance charges of \$33 million and \$36 million respectively.

1 **Table 2A-9. Domestic Cost of Energy, F2004 to F2006 (Revised)**

(\$ millions)	F2004 Forecast	F2005 Plan	F2006 Plan
Domestic cost of energy – Revised Evidentiary Update	\$968	\$906	\$865
Domestic cost of energy – Application	944	824	808
Increase in domestic cost of energy	\$24	\$82	\$57

9 **Table 2A-12. Finance Charges, F2004 to F2006 (Revised)**

(\$ millions)	F2004 Forecast	F2005 Plan	F2006 Plan
Finance Charges – Revised Evidentiary Update	\$444	\$430	\$461
Finance Charges – Application	454	463	497
Decrease in finance charges	\$10	\$33	\$36

This has been BC Hydro's choice with respect to asking for revenue requirements.

When we examine the detail behind the requested revenue requirements we find several issues on which BC Hydro has made choices and on which the requested revenue requirements stand. In broad perspective these issues can be categorized as follows.

1. Equity
2. Depreciation
3. Finance Charges
4. Cost of Energy
5. Operation, Maintenance & Administrative Efficiency

Each of these gives rise to alternative choices that BC Hydro could make and that are available to the BCUC to make for BC Hydro.

A summary of a number of the issues on which alternative choices could be made and the impact on rates that would be created by making the alternative choices is provided here for convenience. The essential consequence of this summary is to present alternatives which if implemented could allow BC Hydro to adopt a revenue requirements scenario of zero revenue required and offer its customers a deferred need for any rate increases.

REVENUE REQUIREMENT SAVINGS SUMMARY				
ISSUE	IMPACT IN \$MILLIONS			
	2005	2006	2007	2008
EQUITY				
FRSR - Ongoing		\$33	\$33	\$33
FRSR – Base	\$120	\$120		
CIA	\$6	\$14	\$24	\$32
DEBT/EQUITY	\$80	\$80	\$80	\$80
D/E - Ongoing		\$10	\$20	\$30
Sub-Total	\$206	\$257	\$157	\$175
DEPRECIATION				
DISMANTLING	-	-	-	-
BURRARD	\$7	\$7	\$7	\$7
WUP			\$3	\$3
FNN			\$3	\$3
DISTRIBUTION	\$9	\$6	\$6	\$9
Sub-Total	\$16	\$13	\$19	\$19
COST OF ENERGY				
START UP	\$64	\$22	-	-
MARKET	\$5	\$5	\$5	\$5
Sub-Total	\$69	\$27	\$5	\$5
FINANCE				
REVISED RATES	\$33	\$36	\$35	\$35
REVOLVING DEBT	\$5	\$5	\$5	\$5
CASH FLOW costs		(\$8)	(\$16)	(\$24)
Sub-Total	\$38	\$33	\$24	\$16

OM&A EFFICIENCY				
SPENDING LAG	\$15	\$15	\$15	\$15
INCENTIVES	\$10	\$10	\$10	\$10
BCTC	\$5	\$5	\$5	\$5
EXPANSION	\$2	\$2	\$2	\$2
SAVINGS Ongoing		\$10	\$20	\$30
SAVINGS Lag	(\$10)	(\$10)	(\$10)	(\$10)
Sub-Total	\$22	\$32	\$42	\$52
TOTAL	\$351	\$362	\$247	\$267

EQUITY – (FRSR)

In accounting for its depreciation over prior years BC Hydro has been charging over and above the traditional depreciation rates an amount to recover Future Removal and Site Restoration (FRSR) costs. This has resulted in accumulated balances on the BC Hydro balance sheet.

The balances are \$240 million for FRSR and \$64 million for anticipated recoveries. The net is \$176 million in charges collected from customers.

According to new CICA guidelines Asset Retirement Obligations (AROs) may not be charged unless certain conditions are met. Those conditions are a requirement for a legal obligation and an ability to make a reasonably estimate.

BC Hydro's charges and balance sheet amount for the FRSR does not meet the new CICA guidelines and therefore BC Hydro has chosen to take the FRSR balance into its equity. That is BC Hydro has decided to take the funds reserved for future costs and take them to the credit of the shareholder, the BC Government.

One of the consequences of this is that as those funds are added to equity then the Provincial Government earns a Return on Equity against those funds based on its Special Directive. This results in an extra \$33 million of revenue requirements in Fiscal Year 2006.

An alternative choice to apply to the BCUC to have those funds returned to customers or held in a deferral account until they could be used to meet various customer requirements was not taken by BC Hydro.

There is support in the CICA guidelines for alternative accounting treatments for rate regulated enterprises.

There are a number of precedents where BC Hydro is applying for deferral accounts to allow for funds to be held or borrowed until future resolution of the revenue or expense item.

Customers would find it appropriate for the \$240 million to be used to meet future revenue requirement from customers. If it were used over the next two years it would reduce revenue requirements by \$120 million per year

I believe the \$240 million could be transferred into a deferral account to stabilize rate increases and reduce the revenue requirement in FY 2005 and 2006 By \$120 million and in FY 2006 by a further \$33 million by order of the BCUC.

EQUITY – DEBT to EQUITY MINIMUM

The BC Hydro Debt to Equity Ratio is determined using definitions supplied in a Government Special Directive HC 1.

This directive determines that the maximum debt to equity ratio BC Hydro can have is 80:20 without jeopardizing the annual payment, of 85% of the net income less interest during construction, to the Government.

A further Special Directive HC 2 requires that BC Hydro earn a return on equity (ROE) equal to the pre-tax return earned by the most comparable investor-owned utility regulated by BCUC.

The Directives are silent with respect to a minimum debt to equity ratio.

BC Hydro could choose to apply to the BCUC for a minimum debt to equity ratio beyond which it no longer needs to accumulate equity in favour of borrowing. BC Hydro has not done so.

If a debt to equity ratio minimum were established then the customers would not be exposed to the risk of paying too much for the cost of capital used by BC Hydro.

If a fair and reasonable debt to equity ratio were to be established then any earning in excess of this level could be transferred to a deferral account for rate stabilization.

BC Hydro's payment to the Province would leave approximately \$80 million of its earnings being added to its equity each year.

If the debt to equity ratio for BC Hydro is below a fair and reasonable minimum this residual earning could be transferred to a deferral account.

The BC Hydro need for equity in its capital structure is limited and can fairly, reasonably and adequately be satisfied by a 75% to 25% debt to equity ratio.

Therefore it would be possible to transfer approximately \$80 million per year to a deferral account to offset revenue requirements.

Customers would prefer to have the choice made to defer the \$80 million to the need for meeting revenue requirements rather than to continue to maintain or lower the debt to equity ratio.

I believe that a minimum debt to equity ratio of 75% to 25% could be set by order of the BCUC and that approximately \$80 million per year could be applied to the revenue requirements for FY 2005 and FY 2006.

EQUITY – CONTRIBUTIONS IN AID OF CONSTRUCTION

BC Hydro charges for connections to its distribution and transmission systems whenever the revenue anticipated from a customer or an independent power producer does not meet a required test.

The consequence of these charges is an amount of funds received by BC Hydro and accounted for as Contributions in Aid (CIA) of Construction.

BC Hydro receives approximately \$50 million of CIA per year.

The CIA amounts are retained on BC Hydro's balance sheet and amortized over the life of the assets they match.

Customers providing funds in this fashion secure the revenue earning BC Hydro needs to support construction of the assets.

One of the consequences of providing these CIA funds is that these amounts are added into the equity balance on which BC Hydro earns a return on equity.

Therefore BC Hydro is earning approximately 13.91% on the funds customers contribute to pay for assets they need constructed. So not only do the customers pay cash for the assets but then all customers pay the Government a return on the cash contributed.

BC Hydro could have chosen to apply to the BCUC for orders to facilitate alternative methods for customers to secure revenue to BC Hydro.

One method would be to allow customers to finance the asset additions externally to BC Hydro. Another method would be for BC Hydro finance the additions and charge in rates to those customers sufficient to recover the costs of financing the asset additions, while holding other forms of security other than cash contributions.

If one of these alternate policies were adopted then on a going forward basis BC Hydro would be adding less to its equity balances and would have lower revenue requirements by approximately \$7 million per year in FY 2005 and \$14 million per year in FY 2006.

This would build up at this rate until the CIA process reached a new balance.

Customers would prefer to have the choice made to avoid the \$7 million per year cumulative additional revenue requirements created by customer's cash contributions.

I believe that an alternative approach to securing BC Hydro's revenues in support of asset construction could be adopted by order of the BCUC and save customers approximately \$7 million per year in revenue requirements for FY 2005 and \$14 million for FY 2006.

DEPRECIATION – DISMANTLING AND SITE REMOVAL

BC Hydro has recorded asset dismantling and site restoration costs of \$18 million and \$19 million in FY 2005 and FY 2006.

At this time we believe these costs are related to the removal of distribution assets and are a new charge as a result of the change in accounting policy with respect to the recording of AROs.

These costs may be expected to be a repeating series of costs.

While it may be appropriate for BC Hydro to recover dismantling and site restoration costs from its customers, the fact that such costs have already been recovered in the FRSR charge makes it critical to ensure that these charges are not charged to customers yet again.

If these costs are for a one time dismantling and site restoration then it is important not to continue charging in rates for an item which occurred once.

Regardless of what has given rise to these costs, as an alternative to collecting these costs via a rate increase it would be possible to recover these costs from a deferral account.

The consequence of recovering these cost from a deferral account is that the ongoing revenue requirement to be recovered from rates would be reduced by \$19 million.

If the costs continue to be incurred in future years and the deferral amounts are used up for this or any other purpose, it would then become appropriate to introduce recovery of these charges in rates

Customers would prefer to have the choice made to avoid the \$18 to \$19 million per year revenue requirements being factored into rates.

I believe that an alternative approach to accounting for BC Hydro's asset dismantling and site restoration costs could be adopted by order of the BCUC and save customers approximately 0.8% of the BC Hydro proposed rate increase.

DEPRECIATION – BURRARD GENERATING STATION ACCELERATION

BC Hydro has chosen to reflect an additional \$7 million per year in depreciation for the Burrard Generating Station, as an acceleration of depreciation.

This acceleration of depreciation is intended to recognize a potentially reduced economic life for the Burrard plant.

The remaining economic life being anticipated by BC Hydro is 10 years.

The evidence BC Hydro has submitted is that the Burrard plant has economic value in a variety of roles and that the economic life of the plant and these values can be extended for some time to come.

In fact with regard to supplying capacity BC Hydro indicates that there are no limits on the capability of the Burrard station to provide its capacity. BC Hydro also indicates that Burrard is needed to supply VAR support to the transmission system. These have been basic values of the Burrard plant for many years.

The current Burrard plant regime of 3 units operational for VAR support and 3 on standby for recall for generation is viewed by BC Hydro as a short term plan while it assesses the future options with respect to the plant. This assessment is not complete.

Nevertheless, BC Hydro indicates that there is an economic benefit being generated from the current regime.

BC Hydro states that the anticipated low utilization of Burrard for energy, increased costs of maintenance, potential for repowering the plant and uncertainties regarding the MLA Review have led a reduction in the expected economic value of the existing facility. This BC Hydro says has prompted them to reduce the book value to zero over 10 years.

When asked for the values BC Hydro supplied a value of \$3 million per year as the value of the plant in providing firm capacity. If this is the value then there is likely an impairment of value. BC Hydro should under CICA 3063 look at the value of the asset under these circumstances and determine if there is an impairment to the value of the long lived asset. If BC Hydro has concluded that there is an impairment then it should record a loss. If there has not been an impairment then the book value remains the same. Under either circumstance BC Hydro should amortize the greater of cost less salvage value over the life of the asset or cost less residual value over its useful life under CICA 3061. Cost should be adjusted for impairment if necessary.

BC Hydro has not provided definitive information with regard to the useful life of the Burrard plant but has instead reflected a list of concerns. We should know the facts regarding the plant's future before accelerated depreciation should be accepted.

I believe that accelerated depreciation for the Burrard plant should not be allowed at this time because the information to support the acceleration is insufficient.

DEPRECIATION – WATER USE PLANS

BC Hydro is developing Water Use Plans (WUP) and has spent or anticipates spending at least something on the order of \$35 million on these plans.

The expenditures on these plans have been capitalized onto BC Hydro's balance sheet.

BC Hydro is anticipating in 2006 to start amortization of the WUP expenditures over a period of 10 years.

Therefore currently WUP amortization may be in the order of \$3.5 million per year. This amount may be reduced by remission contributions from the government when and if those are established and made. BC Hydro expects to amortize these over the useful life of the related asset where a physical asset is acquired.

There is an alternative choice available to amortize these expenditures over the life of the related generation assets. This might involve periods of 50 or 100 years.

The WUP can and do have important effects on the generation for BC Hydro and as such can and do relate to generation assets with lives significantly greater than 10 years.

It would appear appropriate to anticipate that while the WUP may be updated from time to time that the work going into the plan and the effective substance of the plan will be valid for the life of the related generation asset.

Updated WUP would not be expected to repeat work done but would be expected to be cumulative in value. Therefore it would seem inappropriate to restrict the anticipated useful life of the WUP to anything less than the expected useful life of the generation assets.

The WUP asset would be assessed from time to time and if it was indeed obsolete as opposed to additive then the appropriate asset impairment accounting guidelines could be applied.

Customers would prefer to have the choice made to have the lower amortization amount based on the longer related asset lives. Under such an alternative approximately \$.5 million per year or less may be needed in the revenue requirements being factored into rates.

I believe that an alternative approach to accounting for BC Hydro's WUP amortization could be adopted by order of the BCUC and save customers approximately 0.1% of the BC Hydro proposed rate increase.

DEPRECIATION – FIRST NATIONS NEGOTIATIONS

BC Hydro has established First Nations Negotiation (FNN) with respect to its use of land as it may relate to First Nations claims and treaty negotiations.

BC Hydro has been capitalizing the negotiations and settlement costs onto its balance sheet. By order of the BCUC these costs are amortized against income over 10 years.

These negotiations costs are intended by BC Hydro to support one of the key elements of the government's energy plan, that being to provide secure and reliable energy supply.

The negotiations are being done in respect of the Williston Reservoir, The WAC Bennett Dam, the Bridge, Seton and LaJoie Power plants.

BC Hydro looks at these negotiations as providing ability to continue to use these assets and to reducing any unnecessary future costs or restrictions which might be imposed without the negotiations.

BC Hydro plans to spend \$7.2 million in FY 2004, \$6.8 million in FY2005 and \$3.3 million in FY 2006. In addition BC Hydro has \$21 million in deferred negotiation costs on its balance sheet.

According to BC Hydro accounting policy this work is being amortized as it proceeds because it is put into service each year as opposed to waiting until negotiations are concluded. Deferred negotiation costs are presumably retained until the deferral is over.

With expenditure levels such as these once amortization is started BC Hydro will be charging approximately \$1 to \$2 million per year in revenue requirements to rates.

As these totals do not include any amount for settlements it is clear that the charges could become substantially greater.

As the purpose of the negotiations is to preserve the generation assets and their capability to provide a secure and reliable supply it would appear that another alternative would be to revisit the order to amortize these expenditures over 10 years and instead amortize them over the expected useful life of the generation assets they are protecting.

The consequence of following this alternative would be to reduce the amortization charges into the range of \$.2 million per year.

Customers would prefer to have the choice made to have the lower amortization amount based on the longer related asset lives.

I believe that an alternative approach to accounting for BC Hydro's FNN amortization could be adopted by order of the BCUC and save customers approximately 0.1% of the BC Hydro proposed rate increase.

DEPRECIATION – DISTRIBUTION SYSTEM ASSETS

BC Hydro has had a study done of the distribution assets to review the appropriateness of the FRSR amounts being charged to customers and to review the appropriateness of the useful lives of the distribution assets and therefore the applicable depreciation rates.

The study demonstrated that the depreciation charges BC Hydro was making based on its depreciation rates were consistent with the depreciation which would apply if the mean or median of other consulted utility's depreciation rates were used.

The study reported that BC Hydro was potentially over depreciating buildings by at least \$2 million per year this was not considered material and no change was recommended.

The study indicated that poles had a life of 40 years a life 5 years greater than the 35 years BC Hydro was using for depreciation. However this was not considered anything needing change as a result of the study. The pole data was based on actual BC Hydro pole data unlike some of the other asset categories.

BC Hydro has included in its depreciation charges for 2005 an additional \$9 million for changes in the useful lives of assets. The change is related to distribution transformers which have had the useful life changed from 35 years to 30 years. In addition there is a \$3 million write off related to the transformers booked as a one time cost in 2005. So in 2006 the ongoing impact of the changes is \$6 million.

It appears that BC Hydro has been both arbitrary and selective with regard to amending depreciation rates. They selected the one they thought might support an increase in costs and rates while ignoring the others particularly those that might have resulted in a decrease in costs.

BC Hydro has over the past many years conducted research and development into life extension for its assets. Approximately 75% to 80% of the R&D that has been conducted has been directed at extensions in the lives of BC Hydro's assets. Nothing has been examined by BC Hydro to factor the life extensions achieved into reduced depreciation rates.

The support for the change in the useful live presented is tenuous and the lack of attention to recognizing that there are other areas where assets lives could be extended is prejudicial.

Customers would prefer to have the choice made to have the lower depreciation rates based on the longer related asset lives and require better information before shortening the useful lives of the transformers.

I believe that an alternative approach to accounting for BC Hydro's depreciation rate changes could be adopted by order of the BCUC and save customers approximately 0.25% of the BC Hydro proposed rate increase.

COST OF ENERGY – START UP & NORMAL WATER FLOW

The main reservoirs on the BC Hydro hydro-electric generation system are the Williston and Kinbasket reservoirs on the Peace and Columbia rivers respectively.

The opening reservoir levels for March 31, 2004 are 2157.9 feet or 657.5 metres for Williston and 2362.8 feet or 720.2 metres for Kinbasket. These are below the mean reservoir levels for this time of year, based on the record by 2,600 GWh. The reservoir levels over the 2005 and 2006 period are expected to improve by a net 200 GWh made up of drafting in 2005 600 GWh and improving in 2006 800 GWh.

The Evidentiary Update uses expected run off conditions or water flows as opposed to normal run off conditions or water flows. These expected water flow conditions are 90% of normal. Therefore the evidentiary update requires additional market purchases.

The original Schedule A-9 showed the cost of energy being based on hydro-electric generation of 46,130 GWh in 2005 and 46,293 GWh in 2006, with market purchases of 2,316 GWh in 2005 and 1,506 GWh in 2006. The Schedule A-9-A Evidentiary Update showed the cost of energy based on hydro-electric generation of 44,980 GWh for 2005 and 46,045 GWh for 2006, with market purchases of 4,266 GWh for 2005 and 2,757 GWh for 2006. The cost of market purchases is \$183 million for 2005 and \$112 million for 2006 up from \$105 million for 2005 and \$55 for 2006.

Under average water conditions the expected generation production from the hydro-electric systems is expected to be 46,600 GWh.

The energy supply shortfall expected in 2005 is 46,600 GWh minus 44,980 GWh or about 1,610 GWh. The energy supply shortfall projected in 2006 is 46,600 GWh minus 46,045 GWh or about 555 GWh. These shortfalls should be accounted for in the deferral account and taken out when greater than average water conditions apply.

The market purchases are planned at \$42.897 per MWh in 2005 and \$40.624 per MWh in 2006. So the deferral should be for a total of \$69.064 million for 2005 and \$22.546 for 2006.

The initial reservoir conditions being 2,600 GWh below normal should be anticipated to be taken back to normal at sometime in the future. For rate making purposes the revenue requirements should reflect the recovery to normal over the 10 year Heritage contract at 260 GWh per year.

Customers would prefer to have the choice made to have the low stream flows and initial low reservoir conditions refilled with the funds required to do this placed in a deferral account.

I believe that an alternative approach to accounting for the cost of energy related to low water flow conditions and due to low reservoir levels could be adopted by order of the BCUC and save customers approximately 1% of the BC Hydro proposed rate increase.

COST OF ENERGY – MARKET PURCHASES FOR DOMESTIC SUPPLY

BC Hydro has established a planning policy to limit market purchases for planning purposes to 2,500 GWh.

BC Hydro has been obtaining additional energy requirements from committed contracts with the independent power producer market and from customer energy efficiency or displacement projects.

BC Hydro has projected that the cost of market purchases will be less expensive than the cost of committed contracts.

Energy from committed contracts is expected to be purchased at \$57 per MWh while energy purchased from the market is expected to be purchased at \$46 per MWh in 2005. (Revised updates show market purchased energy at \$42 in 2005 and \$40 in 2006)

The market for energy is variable seasonally and between high load hours and low load hours as well as for a number of other reasons.

If BC Hydro extended its limit for market purchases for planning purposes to 3,500 GWh and was able to purchase this portion of the portfolio for \$5 per MWh less than acquiring the energy through contract commitments there would be a significant benefit.

The saving from such an approach could be \$5 million.

The BC Hydro IEP indicates that market purchases are a viable option for acquiring energy and evaluates them as a low cost option with the ability to minimize rate increases.

The 2,500 GWh constraint is not an absolute constraint but is rather a judgment with respect to the balance between risks and benefits.

Over time the BC Hydro system has been run more lean with respect to the judgments built in for risk versus benefits. This has benefited the customers of BC Hydro enormously relative to the pre-build approaches of the past.

Customers would prefer to have the choice made to have the market purchase planning constraint relaxed to a small degree.

I believe that an alternative approach to have a greater portion of the portfolio planned with purchases could be adopted by order of the BCUC and save customers approximately 0.2% of the BC Hydro proposed rate increase.

FINANCE – REVOLVING BORROWINGS

BC Hydro has a limit on revolving borrowings of \$1,400 million.

BC Hydro expects to do refinancing of \$600 million in 2005 and \$700 million in 2006. Of the refinancing amounts BC Hydro intends to do \$173 million in 2005 as revolving borrowings and \$104 million in 2006.

This is expected to take revolving borrowing from \$404 million in 2004 to \$578 million in 2005 and \$682 million in 2006.

BC Hydro's forecast of rates for short term borrowings is 2.8% in 2005 and 4.0% in 2006.

The forecast for long-term Canadian rates is 5.68% in 2005 and 6.26% in 2006.

If BC Hydro were to extend the revolving borrowing more quickly to \$1,400, by adding \$400 million in 2005 and \$300 million in 2006, there would be considerable savings to customers.

The savings to customers to would be approximately \$10 million in each of 2005 and 2006.

The basic portfolio approach to having a portion of revolving debt is that it is less expensive as a means of financing. Historically for the last number of decades this would be true with the exception of a few periods of time where short term rates invert over the long term rates. The only times that it is not productive to have a portion of short term financing is when long term rates rise continuously under pressure from inflation over a number of years.

So long as we have stable monetary policy and inflation is not allowed to spiral upward there is a substantial benefit to having a significant portion of the debt structure in short term instruments.

BC Hydro has recognized this appropriately and has provided for increasing levels of short term debt.

Customers would prefer to have the choice made to have the greater levels of short term debt introduced sooner rather than later.

I believe that an alternative approach to have a greater portion of the portfolio planned with short term debt could be adopted by order of the BCUC and save customers approximately 0.4% of the BC Hydro proposed rate increase.

EFFICIENCY – SPENDING LAG

BC Hydro's test period estimates are based on its budgets for both capital and operating expenditures.

The BC Hydro budget projections are frequently under spent when it comes to providing actual results.

BC Hydro has provided historical data for its capital plans showing that they are frequently under spent when it comes to actual versus plan.

The under spending is created by a lag between approval of the plans for expenditure and the time frames in which the expenditures will occur.

The under expenditure for capital has been typically -4.0% as evidenced by BC Hydro's record of actual versus plan.

The under expenditure for operating has been typically about -3.0% as I recollect having experienced it over many years. BC Hydro has not provided the actual versus plan expenditures for the last 10 years.

Over the last two years where BC Hydro has provided expenditure versus plan numbers the operating plans have been over spent.

A year or two of over expenditure does not necessarily mean that the spending lag has been eliminated, just that in those years the expenditures were allowed to exceed plan for various reasons.

With OM&A costs at about \$550 million the operating lag for spending should be approximately \$16 million.

Capital expenditures are expected to be about 800 million and an appropriate lag for these expenditure should be approximately \$32 million. This would in turn result in reduced interest costs and reduced depreciation costs following the in service dates for the capital expenditures. The impact of this would be small in the \$1 to \$2 million range.

It is important in preparing the regulatory revenue requirements that the actual expected cash flows be the basis for setting rates and not budgets for which we should have every expectation that they will not and should not be met exactly.

Customers would prefer to have the choice made to have the appropriate levels of expenditure lag built into the revenue requirements and hence the rate proposals.

I believe that an alternative approach to have an expenditure lag for operating expenditures particularly by order of the BCUC would save customers approximately 0.6% of the BC Hydro proposed rate increase.

EFFICIENCY – INCENTIVES FOR SAVINGS

BC Hydro management and staff receive incentive bonus payments for meeting goals each year. These payments amount to approximately \$20 million per year.

BC Hydro believes these payments assist it in aligning the management and staff to the corporate objectives.

BC Hydro when asked if they could provide how much in savings had been achieved as a result of these objectives and bonuses were not able to identify any. Instead they reminded us that there are other objectives than the one to reduce cost structures and save money.

The customers of BC Hydro also have objectives. In addition to safe, secure & reliable supply of electricity and customer service the customer expect that BC Hydro be diligently working to reduce its costs of providing service.

If bonuses are being paid for superior performance in meeting goals and objectives the customers would like to see the cost savings goal featured prominently. They would like it to have sufficient importance to the corporation that it can be aggregated and reported to the CEO regularly in the same way as the other important goals and objectives.

If such accountability were in place there should be little difficulty in experiencing a productivity gain of 2% to 3% per year. This would be worth about \$10 to \$15 million.

In the private sector there are periodic events which can put businesses under severe strain and result in close attention being paid to maintaining and improving a competitive cost structure. It is particularly true that this can happen and does with great frequency as a result of variables beyond a businesses control.

For a regulator to provide a modicum of simulation of market pressures it will be important to ensure that such an incentive mechanism is in place.

An acceptable mechanism and discipline would be to have the bonuses and accountability for them tied back to customers objectives including the one to obtain productivity gains each year. If the commission puts an amount equivalent to the \$20 million of bonuses at risk relative to the accountability for the performance as significant improvement will have been achieved.

Customers would prefer to have the choice made to have firm productivity gain objectives set.

I believe that an alternative approach to accountability for BC Hydro's productivity gain performance could be adopted by order of the BCUC and save customers approximately 0.6% of the BC Hydro proposed rate increase.

EFFICIENCY – BCTC STRUCTURAL COSTS

BC Hydro has shed its Transmission Group into the formation of the British Columbia Transmission Corporation (BCTC) based on the Provincial Government's directions and plans to establish an independent transmission provider as an operating company.

In establishing BCTC a number of people have been transferred from BC Hydro along with a number of functions required to run the BCTC.

In order to be able to fulfill the functions transfer to the BCTC the management have created a number of new positions.

BCTC has created 36 new positions to deal with a number of functions. Of these positions 14 are described as strategic and investment planning, technology and stakeholder relations. The other 22 positions are for corporate executive, policy and strategy development, legal, regulatory, finance, human resources, communication and information technology.

The increase of 36 positions to establish BCTC has resulted in a net increase in cost of \$17.8 million.

In the process of creating BCTC there were no net reductions in BC Hydro's organization and costs that relate to the positions established in BCTC.

BC Hydro and BCTC believe that the positions created are necessary for good governance, management and oversight.

However, it is clear that the technology, stakeholder, strategy planning and management requirements were all present prior to the creation of BCTC as a separate entity. It is also clear that these corporate functions also were being performed for the Transmission Group previously by the BC Hydro Corporate functions.

It is very peculiar that the expansion of positions is so great and that nothing has been reduced at BC Hydro. I believe at a minimum the total net increase in costs could be reduced by \$5 million.

Customers would prefer to have the choice made to have BCTC created without such gross expansions of costs and inefficiency.

I believe that an alternative approach to establishing BCTC could be adopted by order of the BCUC and save customers approximately 0.2% of the BC Hydro proposed rate increase.

EFFICIENCY – EXPANSION ACTIVITIES

BC Hydro has expanded its activities in three areas, sustainability, HydroGen, and strategic R&D.

These activities have expanded from an expenditure level of \$1.2 million to \$8.6 million.

Sustainability is being funded for \$1.7 million.

HydroGen is being funded for \$1.3 million.

Strategic R&D is being funded for \$5.7 million.

In addition BC Hydro is funding \$2.9 million in research and development for its key functions, \$.2 million for Generation, \$.7 for Distribution, and \$1.7 for Transmission.

A significant portion of these expenditures are not rationalized in terms of BC Hydro's mission and purpose.

For instance HydroGen is rationalized based on its ability to take advantage of a key knowledge capability retained in PowerTech Labs.

It is doubtful that BC Hydro will realize benefits for its ratepayers from its forays into some of these expanded activities. In fact BC Hydro has vague perceptions itself as to the benefits of some of these activities, such as the acquisition of knowledge and some future non-specific benefit.

There are of course reasons for everything BC Hydro is proposing to do and no doubt many laudable reasons.

From a customer perspective the objectives of such activities should more directed toward the direct needs of BC Hydro, and for these reasons a lesser level of expenditure is really acceptable and desirable.

BC Hydro has over its history had frequent forays into R&D expansion and other forms of expansion of activity. In the end they are frequently orphaned and or wasted.

I believe BC Hydro could perform as satisfactorily with \$2 million less allocated to such activities.

Customers would prefer to have the choice made to have sustainability, research and development without such gross expansions of costs.

I believe that an alternative approach to establishing sustainability, research and development could be adopted by order of the BCUC and save customers approximately 0.1% of the BC Hydro proposed rate increase.

EFFICIENCY – SAVINGS LAG and CASH FLOW

In projecting savings for BC Hydro and its customers by making alternative choices it is necessary to anticipate a lag effect before some of the savings could be achieved.

In order to allow for a lag before savings could be achieved a reduction of \$10 million per year has been built into these estimates. It may well occur that if BC Hydro must be ordered into making the savings that this lag may need to be increased. If such an increase is needed it will not compromise the overall sustainable impact of the case for lower rates.

When examining the items for which alternative treatments are recommended there are a number of non-cash items that would potential require BC Hydro to fund the changes proposed. These have a compounding impact if they reoccur for each year they are implemented.

It is therefore necessary when estimating the impact of the alternative choices proposed to segregate out the non-cash items and estimate the cash flow cost of implementing them. This has been done and an estimate of \$8 million a year compounding has been used to account for this effect.

There are positive effects of the alternatives proposed and the lower resulting rates. These have not yet been estimated here and are not accounted for in the summary estimate.

DIRECT TESTIMONY OF DAVID CRAIG

- Q1. Please state your name, position and role in this hearing?
- A. My name is David Craig. I am an independent management consultant. I am President of Consolidated Management Consultants Ltd. I am engaged by the Commercial Energy Consumers' of BC to provide consulting advice with respect to the BC Hydro revenue requirements application.
- Q2. How long have you been an independent consultant?
- A. I have been providing independent consulting services for approximately 9 years since I left employment with BC Hydro.
- Q3. What positions have you held with BC Hydro?
- A. I have held the positions of Manager - Management Services, Project manager for Divestiture of Gas Division and Railway, Assistant Comptroller - Corporate Accounting, Manager - Plant Accounting Department, Executive Assistant to E.V.P. Finance & Administration, Systems Development Supervisor, Systems Analyst.
- Q4. What are your educational and professional qualifications?
- A. I was trained as an Industrial Engineer and achieved a Bachelor degree in Applied Science and subsequently I became a Chartered Accountant.
- Q5. Have you testified before this Commission or its predecessors before?
- A. Yes I testified before the BCUC in BC Hydro's first revenue requirement hearing, in a hearing into a project application for a natural gas pipeline to Vancouver Island, and a hearing into the Site C project.
- Q6. What testimony are you responsible for?
- A. I am responsible for the Commercial Energy Consumers' Evidence Summary.
- Q7. What is the purpose of this evidence.
- A. The Commercial Energy Consumers' want to demonstrate that there is an alternative to the BC Hydro revenue requirements application and proposed rate increases. The CEC wants to demonstrate that there are alternative choices with respect to accounting, policy, expenditure and strategy that would allow BC Hydro to continue to function and meet its objectives without requiring rate increases for several years. The most important aspect of this alternative choice is that it can be developed, financed and sustained without compromising BC Hydro's mission or objectives. Ultimately I believe such an approach is more customer centric, more fair, just and reasonable than the approach contained in the BC Hydro application.

Q8. Why is this important to the Commercial Energy Consumers?

A. It is apparent that the commercial class is already paying in excess of its costs as evidenced by the presentations BC Hydro's executives have made to the Provincial Cabinet.

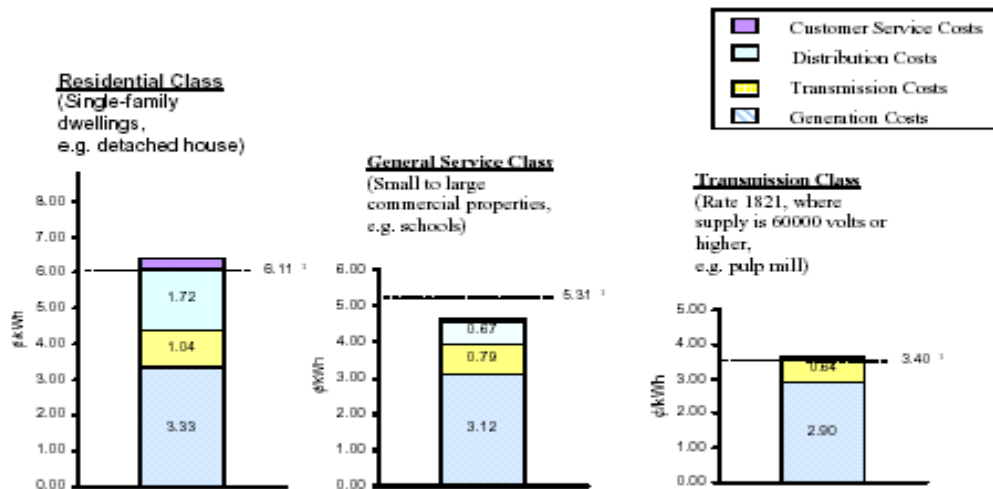
**- Excerpt -
Select Standing Committee on Crown Corporations
June 11, 2003**

Hansard Blues

"(...) The dotted line, which is a little bit hard to see, **shows our tariff for each type of customer, and the blocks show what our costs are. Really, what this shows is that our commercial customers are subsidizing our residential customers and our large industrial customers. This is a fairly common picture across North America.** It's something that the BCUC again will deal with through a rate design hearing. That will be after we have dealt with our revenue requirement hearing next year. There will, at some point, be a hearing that will address that. This kind of rate design issue is very much one that.... **From our point of view, it's up to our customers to argue their case before BCUC.**"

Bob Elton, before the Select Standing Committee on Crown Corporations - June 11,

BC Hydro Rates



Note 1: Existing BC Hydro Tariff

While this is a matter to be dealt with in rate design, any rate increase at this time exacerbates the problem

