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Reprint from Volume 22 Number 19

Oct 14, 2010

Special Report on BCHydro by Patrick Brown

What The Annual Report Tells Us—Part III

## How BCHydro power purchases subsidize big industry

The US financial meltdown in 2009 resulted in unusually low market prices for electricity. This dealt a triple whammy to BCHydro.

First of all, Hydro paid much higher than market prices for the 16% of its power that it bought under long-term contracts.

Second, nearly half of this power was generated, not from 'green power' initiatives, but from BC's existing large industries; so these prices amounted to an industrial subsidy paid by BCHydro.

Third, BCHydro's power trading operations, whose profits have in the past been relied upon to cover the extra costs of contracted power, lost some \$202 million compared to plan. (All figures, except where noted, are drawn from BCHydro's annual report for the fiscal year end March 31, 2010.)

The triple whammy is a foretaste of what is to come, as the provincial energy policy of privatizing electricity generation, and making the province 'self-sufficient', means that an increasing percentage of BC's electricity is purchased from Independent Power Producers and from industrial sources. In fiscal 2010, BCHydro sold a total of 50,233 gigawatt-hours (GWh) of electricity in British Columbia.

### Mother Nature Takes A Hand

2009/2010 was a low water year, and so BCHydro generated only 42,115GWh from its hydro-electric dams; the potential of these dams, as reflected in the Heritage Power contract, is 49,000GWh. The operating cost of producing this power—not counting amortization of capital costs, overhead, and financing—is \$0.00719 per kilowatt-hour (KWh) for which the residential consumer pays 6¢ or more. (1GWh = 1,000MWh and 1MWh = 1,000KWh)

### BC's Industrial Power Generation Contracts

In fiscal 2010, BCHydro purchased 8,893GWh from IPPs 'and other long-term contracts', at an average cost of \$63,850/GWh (\$.06385/KWh).

Contracts with Alcan and Island oil Cogeneration accounted for 3,845GWh (44% of the total) in fiscal 2010. Alcan's 2007 contract with BCHydro to provide power from the 50-year-old Kemano dam was intended both to provide firm power to BCHydro until 2034 and to provide additional revenue to Alcan to encourage the company to revitalize its Kitimat aluminum smelter. However, no such revitalization has yet taken place, and BCHydro purchased some 1,945GWh from Alcan in fiscal 2010.

The latest of these industrial contracts is with Howe Sound Pulp and Paper, who revealed that they expected to realize some \$40 million annually from selling 400GWh per year to Hydro; this would work out to \$100,000/GWh, or 10¢ per KWh.

BCHydro's outright purchase in 2009 of a one-third interest in Teck-Cominco's Waneta dam for \$825 million amounted to a similar acquisition of power from an existing industrial user. This was not a long-term contract, but the Independent Power Producers of BC suggested that the purchase price paid was equivalent to run-of-river prices of \$77,000/GWh ('levelized', weighted average of both firm and non-firm), or a firm energy cost of \$101,100/GWh.

IPPBC's intended conclusion may have been that power from the Waneta dam was not significantly cheaper than 'run-of-river' power; an alternative conclusion might be that BCHydro paid much more than they should have for the 50-year-old dam.

For a volume comparison, 'run-of-river' generation

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This article was published (Oct 14, 2010) in 'Island Tides'. 'Island Tides' is an independent, regional newspaper distributing 18,000 print copies throughout the Gulf Islands and Vancouver Island from Victoria to Campbell River.

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accounted for only 1361GWh in fiscal 2010, to which must this year be added Plutonic's Toba/Montrose facility, contracted to produce an additional 745GWh per year.

### An Industrial Advantage

While contract prices for power purchased from industry are generally not revealed, they appear to match the prices paid for firm and non-firm power from current 'clean power' calls. This provides these industries with a generous and reliable additional source of revenue, subsidizing existing operations and making them more profitable.

In the case of Alcan, the question arises whether it is more profitable for the company to use the power to operate an aluminum smelter or to sell the power to BCHydro; this is an unintended effect of high contract prices.

### The Price Gap

As noted above, BCHydro paid an average \$63,850/GWh in fiscal 2010 for power under longterm contracts. Some of this would have been firm, dispatchable power at prices higher than this average; some not, at lower prices.

However, power purchases on the open market during the year were made at averages from \$36,800–\$36,970/GWh, a significantly lower price. BCHydro was unable to take full advantage of these lower prices, because of its longterm contract commitments.

Had it been able to, it would have saved some \$240 million in energy costs—which should be compared to the recorded actual operating loss of \$249 million.

In the 2010 financial report, the total gap between retail electricity sales revenues and the actual electricity costs and overheads that BCHydro has incurred—the operating loss—has been placed in deferred 'regulatory' accounts (details in *Island Tides* September 16 edition, page 13: 'BC Hydro losses, from today to tomorrow').

### Cost To BCHydro

In fiscal 2010, the average cost of power used by BC consumers— residential, commercial, and industrial—was \$0.0283/KWh (\$28,300/GWh) this, once again, does not include overhead, capital, or financing costs, which are relatively constant. About 76% of this was hydroelectric power generated by BCHydro's own facilities, 16% was purchased under long-term contracts, less than 1% was generated by BCHydro thermal facilities, and about 6.6% was purchased on the open market.

Clearly, increases in the proportion of expensive long-term contract power will have a very significant effect on

### The 'Regulatory' Accounts

The cost of the BCHydro's triple whammy, of course, was not entirely reflected in the current electricity prices paid by BCHydro's customers; it has been deferred, which means that it is expected to be made up from future profits, maybe from trading; but more likely it will be recouped from increasing rates charged to BCHydro provincial customers (see below).

As outlined in Parts I and II of this investigation into BCHydro's Annual Report, the total deferred amount was \$696 million, turning a \$249 million actual loss into a \$447 million apparent profit.

(Parts I and II can be found in 'BCHydro losses, from today to tomorrow' in our September 16 edition and 'When is a loss a profit? Auditor General questions BCHydro accounting' in our September 2 edition—all three are combined in PDF-format, 'BCHydro: 2010 Annual Report' in the BCHydro archives on the *Island Tides* website).

The totals deferred included not only operating losses from generating, purchasing, and selling electricity in BC, and the trading losses referred to above, but also deferred expenses and investments. They are recorded in 'regulatory' accounts, the name implying that the deferrals are the fault of the regulatory body (the BC Utilities Commission) failing to set electricity prices at a level that would cover the deferred losses and expenses.

This leaves the clear expectation that BCUC will set prices higher in the future, to catch up. And indeed, BCHydro's customers should expect this to happen.

### What BCHydro Customers Pay Now

Average domestic (BC) electricity sales prices per KWh in fiscal 2010 were:

|                             |         |
|-----------------------------|---------|
| • residential               | \$0.074 |
| • light industry/commercial | \$0.063 |
| • large industry            | \$0.037 |
| • other                     | \$0.095 |
| Weighted average            | \$0.061 |

(Note that these prices do not include the 'rate rider'.)

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average costs. (Recall that the cost of every extra KWh generated by BCHydro's heritage dams is only \$0.00719—less than one cent.)

### **Commentary: Power—Paying For Industry**

Besides illustrating that large industries in the province already receive a significant discount—in fact, well below cost—on the electricity they use—and bearing in mind that BCHydro actually lost money in fiscal 2010, and that this is carried forward through the 'regulatory' accounts and is expected to be made up by future rate increases, one might conclude that:

- BCHydro's increasing purchases of private power, besides ensuring profitable long-term investments for 'green' power producers, are also being used to subsidize some of the province's largest and oldest industries;
- BCHydro customers are paying for this industrial development strategy, at a cost that exceeds the cost of purchasing power outside the province on the open market;
- BCHydro's rates will have to increase to pay for government policies of private power development and provincial self-sufficiency;
- BCHydro cannot rely on profits from power trading to cover these increased costs; and

The policy of discounted electricity rates to encourage industrial development, which dates from Premier WAC Bennett, appears to have been combined by BCHydro with high purchase prices for privately generated electricity, initiated by the present government.

This may be too generous. The return on investment from this electrical generation may have become so attractive as to exceed the return from the industries that the cheap rates were supposed to encourage.

Either way, it's the BCHydro customer who pays ... and pays. ✎

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