

**BC Hydro's Energy Purchases from Private Power Developers:  
Do We Want the \$15.6 Billion Price Tag?  
by  
John Calvert**

On July 27<sup>th</sup> 2006, BC Hydro announced the outcome of its 2006 tender 'call' for new energy from private energy developers. While Christmas was almost half a year away, the Champagne glasses were full in corporate boardrooms. For BC Hydro had committed the ratepayers of the province to energy purchases that could amount to as much as \$15.6 billion between now and 2051. Private power interests were celebrating the decision to purchase three times more energy than the tender call requested at prices that were far higher - up to \$87.50 per Megawatt Hour (MWh) - than the \$55 to \$60 range anticipated when the tender call went out last December. In sum, the financial commitment was between four and five times more than earlier indicated by BC Hydro.

Yet this bonanza for private energy interests represents an enormous future financial liability for ordinary BC ratepayers. It will add between \$400 and \$500 million a year to energy prices every year from 2012 and 2039. The impact on rates of this one tender call is estimated to be 8.1%. Far from protecting the public's financial interests, the inflation adjusted prices in the contracts guarantee the future profits of the investors, while saddling ratepayers with the enormous risks associated with uncertain energy demand and uncharted prices twenty, thirty or forty years into the future.

BC Hydro's announcement should be triggering alarm bells across the province as it provides the first clear – and dramatic - indication of the disastrous financial implications of the Government's energy policies. The Government's decision to prevent BC Hydro from acquiring new generation assets in favour of power purchases from private energy interests means that BC Hydro will have to purchase even more private energy in the future, adding to the already large commitments made in the 2006 and earlier tender calls. As a result, customers can expect their electricity bills to escalate, dramatically, in the coming years as more and more of their energy comes from high cost private sources.

To understand why BC is losing its competitive advantage in low cost electricity, it is necessary to analyse the profound policy changes that have recently been implemented. Since its election in 2001, the Liberal Government has moved, step by step, to deregulate and privatize BC's electricity system, while integrating it with the US dominated energy market in the Pacific Northwest.

The new policy framework was clearly laid out in the 2002 Energy Plan. It transforms BC Hydro from a generator of publicly-owned electricity to a purchaser of energy from private power developers. The Energy Plan signalled a fundamental shift from the earlier - and highly successful - policy of relying on the Crown Corporation to build and deliver BC's electrical energy at prices based on the cost of production and controlled through public ownership of BC's generation assets. This earlier policy resulted in BC's prices being among the lowest in North America and enabled customers to enjoy a period of 8 years with no rate increases whatsoever during the 1990s.

Turning its back on this successful history of public hydro, the BC Government, in its 2002 Energy Plan, now requires BC Hydro to acquire virtually all its future electrical energy from private power developers. This is done through issuing tenders for new

energy to private bidders. BC Hydro then enters into Energy Purchase Agreements (EPAs) with the successful bidders. EPAs are legally binding contracts to supply energy to BC hydro for periods of between 15 and 40 years. They entail major, long term financial commitments by BC Hydro and, ultimately, the ratepayers (and taxpayers) of BC.

In signing these contracts, the Crown utility commits BC ratepayers to purchasing a fixed amount of private energy, annually, during the term of each contract. The price of the energy is indexed, rising each year during the term. While this guarantees escalating revenues to energy investors, it does so at the expense of BC ratepayers who will be required to pay incrementally higher prices every year.

The 2006 energy ‘call’ requested bids from private power developers for the acquisition of 2,700 Gigawatt Hours (GWh) of electricity.<sup>1</sup> There were two broad categories of bidders: those with large projects, defined as over 10 MW, and those with small projects of less than this capacity. The ‘call’ was an open one allowing any of five technologies: hydro, waste heat, wind, biomass and coal. The inclusion of coal reflected, in part, the concerns of the large industrial customers whose members were worried about the potentially high cost of energy generated from run-of-the-river and wind farm projects.

However, when BC Hydro announced the results of the 2006 ‘call’ in July, the amount of energy had risen dramatically, from 2,700 GWh to 7,125 GWh (plus an additional 226 GWh from the Brilliant Expansion project of Columbia Power). This represented over three times the amount that BC Hydro had earlier indicated it would purchase.

BC Hydro’s explanation for this decision was that it was necessary because projected future energy requirements (load forecast) for the province had increased significantly since the previous projections had been made in December, 2004. The new information indicated that there could be a significant shortfall unless BC Hydro acquired a much larger amount of energy in the near future.

Aside from the obvious question about whether it is appropriate to change the volume of energy to be purchased after the tender has gone out, BC Hydro’s decision represents a dramatic shift in the expected purchase volume from the amount that was widely discussed even a few months earlier, including the discussions in its major stakeholder consultative process, the Integrated Electricity Planning (IEP) committee (of which this author was a member).

It is not clear why BC Hydro had to purchase such a large amount in the 2006 call; nor is it clear that this was the only option BC Hydro had available, even if the new projections indicated that forecast energy requirements would be somewhat larger than had earlier been anticipated. What is clear is that this represents an enormous windfall for private energy developers.

As a Crown Corporation owned by the Government, BC Hydro is constrained by the Energy Plan and is not in a position to comment on how the Plan limits its options by

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<sup>1</sup> BC Hydro Report on the 2006 CFT Process, p. 44. Initially, 48 potential bidders with 81 projects registered to participate in the EPA process. By the ‘call’ deadline of April 7, 2006, BC Hydro had received 61 tenders from 37 bidders. These included capacity of 1,800 MW and a total energy supply of approximately 6,500 GWh/year of firm energy.

requiring it to purchase new energy from private power developers within the province (thus restricting the competitive process and arguably pushing up the price it pays). Nor is it in a position to question the way in which the Government's decision to deregulate BC's electricity system has further limited its options by opening the grid to permit private energy interests, such as Cominco and Alcan, to export energy, regardless of BC's future energy needs. And it is not in a position to argue for the repatriation of the downstream benefits as an alternative to purchasing high priced private energy. Moreover, given the much lower projected energy prices at the border with the US during much of the same planning period, it is not clear why locking BC into long term contracts at extremely high prices is sensible public policy. But all these options – as well as having BC Hydro build new generating facilities itself - should have been considered before requiring BC Hydro to purchase such a large amount of private energy.

In addition to the larger volume of energy in the 2006 call, the price is also much higher than earlier projected. When the tender process was first being developed in early 2005, the market price of energy was in the \$50 to \$55 per MWh range. Earlier tender calls had resulted in bid prices in the \$56 to \$61 range. However, the bids submitted to BC Hydro were far higher.

BC Hydro notes that its adjusted bid price averaged about \$74 per MWh. But this \$74 price is based on the price at the power plant gate, not what BC Hydro will end up paying when delivered to lower mainland customers, due to various adjustments for transmission losses, attrition, greenhouse gas emissions, hourly firm energy requirements and inflation between now and the time the Crown utility actually pays for the annual increments of energy. Consequently, the actual cost to BC Hydro – and the ratepayers of BC - will be considerably higher. Most of the energy purchased will come from large projects where the adjusted price is \$87.5 per MWh.

To put this price in context, during BC Hydro's Integrated Electricity Planning process, the Crown utility indicated that the estimated cost of energy from Site "C" (were it to be built by BC Hydro) was \$42 per MWh. The estimated price of coal generated electricity was in the \$48 to \$50 MWh range (but admittedly subject to a big question mark about greenhouse gas offset charges, as well as whether it is desirable in the first instance). Equally disturbing is the comparison table included in BC Hydro's submission to the BCUC which provides estimates by different forecasters of future energy prices. The US Energy Information Administration (part of the US Department of Energy) projects that market energy prices at the BC border will be in the range of \$50 per MWh until roughly 2018 and are not likely to increase to the level being paid in the Energy Purchase Agreements for almost two decades. All this raises fundamental questions concerning why BC Hydro is choosing to purchase so much expensive private energy in the 2006 'call'.

But the numbers from the 2006 call announcement – alarming as they are – do not convey the entire picture. For in reality, BC ratepayers are effectively paying the costs of the new private power plants. The Energy Purchase Agreement approach used by BC Hydro provides private energy developers with a public revenue guarantee that assists them in raising the capital they need to finance their new power projects. Once they have a commitment from BC Hydro that it will enter into a long term purchase agreement at a defined price, they can go to the bank - using this guarantee of public financing as collateral - to borrow the money to construct their new power plants. In other words, the

public, through the EPA process, is guaranteeing their financing. Yet the public gets no assets, no price protection once the contracts have expired and no guarantee that the energy will not be exported in the future.

While BC Hydro maintains that there may be as much as 30% attrition from the \$15.6 billion in tender awards from the 2006 ‘call’ – which still leaves a huge financial obligation for ratepayers - in reality, there is no way of knowing whether this attrition will occur. While previous energy ‘calls’ resulted in the delivery of significantly less energy than initially contracted, these ‘calls’ were at much lower prices. Whether a similar proportion of bids will fail to deliver the contracted energy volume is unclear, given the much higher price BC Hydro is now willing to pay for private energy.

The high bid prices, when combined with the purchase of three times more energy than originally planned has resulted in a financial commitment between four and five times higher than was initially indicated by BC Hydro. Not surprisingly, the rate impact of this one tender call is estimated by BC Hydro in its submission to the Utilities Commission to be about 8.1%, once most projects are on stream in about six or seven years’ time.

Arguably, there is no immediate crisis that would justify locking BC Hydro into such large future expenditures, especially as once the contracts have been signed, the public will be committed to purchasing the energy at the prices specified, even if changes in BC’s economic position result in less actual demand in the coming years or energy prices in the Pacific Northwest energy market are lower than the contracted prices.

But the current energy call is not the end of the story. BC Hydro was already committed to \$1.8 billion in EPAs signed up until the end of 2003. And it was on the hook for an unspecified - but significant - additional amount for the two tender calls immediately preceding the 2006 call. Moreover, the current Energy Plan requires that, in another year or two, BC Hydro will be initiating yet another tender call for a new block of expensive private energy. BC ratepayers are only at the beginning of this process.

The huge sums now being committed for purchasing energy from private power producers should be generating – to coin a phrase – a major public debate about the entire rationale of the Government’s energy policy. Far from guaranteeing reasonable prices, security of supply and self-sufficiency for the province – as was the case when BC Hydro built its own generation assets – the current policy is guaranteeing that BC ratepayers will pay more – a lot more – for their future electricity. At the same time, ratepayers will be taking on major risks in terms of the security of future energy supplies and the ability of the Province to remain self- sufficient in energy. However you look at it, \$15.6 billion in one tender call is a lot of money. It is time the public entered this debate.

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**End of Article – The table immediately below “BC Hydro Expected Annual Energy Payments” in MS word format could be included as useful statistical information. Also the second table on estimated future**

**energy costs might also be of interest. Both are from the BC Hydro submission to the BCUC -- John Calvert**

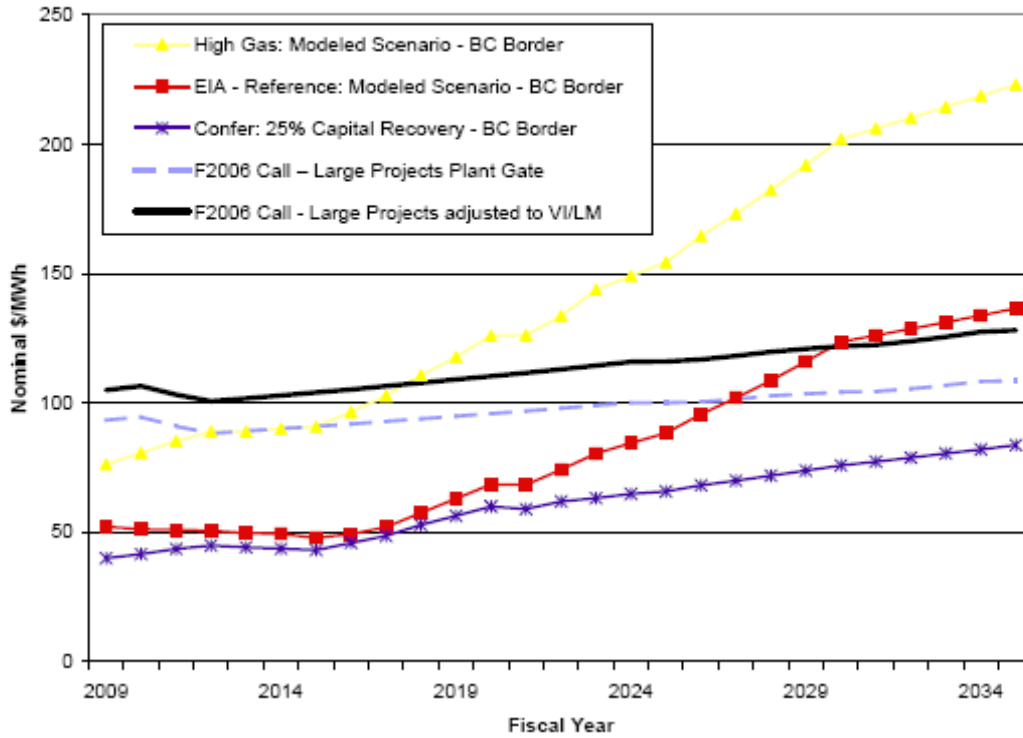
**BC Hydro Expected Annual Energy Payments  
To Private Energy Developers  
F-2006 Call (2009 - 2051)**

<b>Fiscal Year</b>	<b>Payment (\$mm)</b>	<b>Energy GW/yr</b>	<b>Unit Price (\$MWh)</b>
F2007	\$0	0	\$0.00
F2008	\$0	0	\$0.00
F2009	\$8	93	\$84.80
F2010	\$94	1,019	\$92.10
F2011	\$305	3,389	\$90.00
F2012	\$438	4,987	\$87.80
F2013	\$442	4,987	\$88.70
F2014	\$447	4,987	\$89.50
F2015	\$451	4,987	\$90.50
F2016	\$456	4,987	\$91.40
F2017	\$460	4,987	\$92.30
F2018	\$465	4,987	\$93.30
F2019	\$470	4,987	\$94.30
F2020	\$475	4,987	\$95.30
F2021	\$480	4,987	\$96.30
F2022	\$486	4,987	\$97.40
F2023	\$491	4,987	\$98.40
F2024	\$496	4,987	\$99.50
F2025	\$496	4,987	\$99.50
F2026	\$498	4,987	\$99.90
F2027	\$504	4,987	\$101.00
F2028	\$510	4,987	\$102.20
F2029	\$509	4,939	\$103.10
F2030	\$508	4,898	\$103.80
F2031	\$484	4,654	\$104.00
F2032	\$469	4,463	\$105.00
F2033	\$474	4,463	\$106.30
F2034	\$477	4,424	\$107.90
F2035	\$435	4,034	\$107.90
F2036	\$402	3,731	\$107.70
F2037	\$406	3,728	\$109.00
F2038	\$411	3,728	\$110.30
F2039	\$416	3,728	\$111.70
F2040	\$385	3,404	\$113.10
F2041	\$271	2,431	\$111.50
F2042	\$191	1,682	\$113.60
F2043	\$193	1,682	\$114.90
F2044	\$195	1,676	\$116.10
F2045	\$192	1,646	\$116.80
F2046	\$145	1,311	\$110.50
F2047	\$126	1,155	\$109.30
F2048	\$128	1,155	\$110.60
F2049	\$129	1,155	\$112.00

F2050	\$115	1,013	\$113.70
F2051	\$62	498	\$124.00
<b>Total/Average</b>	<b>\$15,595</b>	<b>154,878</b>	<b>\$100.69</b>

Source: BC Hydro submission to BCUC. Aug 31-2006. (includes attrition & outages) Author has provided totals

Figure 12 - F2006 Call Annual Adjusted Gate Price vs. Price Forecast Scenarios



Source: BC Hydro submission to BCUC August 31, 2006 p. 49.