

Deferral and Regulatory Account Backgrounder

Generally when accounting principles are applied, expenses that a company incurs are written off in the fiscal year in which they are incurred. There are exceptions to this general principle such as capital expenses that are carried forward until the underlying asset comes into service and the capital expenses are then amortized over the life of the particular assets.

Because BC Hydro (“BCH”) is a regulated utility and a government owned entity, the application of accounting principles is subject to alteration by its shareholder or the British Columbia Utilities Commission (“BCUC”). The main areas where most of the alterations have been made are with respect to “regulatory accounts”. It is a very byzantine area that is loaded with acronyms and terminology. The following passage from BCH’s Fiscal 2011 Revenue Requirements Application¹ illustrates this point:

“Regulatory accounts can be either regulatory assets (amounts potentially to be recovered by BC Hydro) or regulatory liabilities (amounts potentially to be refunded by BC Hydro).”

BC Hydro refers to the following four regulatory accounts as “Deferral Accounts”: the HDA, the NHDA, the TIDA and the BCTDA. The HDA and the NHDA are collectively referred to as the cost of energy Deferral Accounts.”

This same application² contains the following policy framework for regulatory accounts:

“The purpose of a regulatory account is to defer for potential future recovery or refund costs or revenues that under GAAP would otherwise be recorded in the current accounting period.

There are three situations in which a regulatory account could be appropriate:

- 1. To better match costs and benefits for different generations of customers;*
- 2. To smooth out the rate impact of a large non-recurring cost; and*
- 3. To defer to a future period differences between forecast and actual costs or revenues.*

The Site C regulatory account is an example of a regulatory account established to provide a better matching of costs and benefits for different generations of customers of customers. If the Site C investigation costs were expensed as required under GAAP, it could cause an unfair rate impact on existing customers, considering the long development period before Site C could be placed into service.

The F07/F08 RRA Depreciation Study regulatory account is an example of a regulatory account designed to smooth out the rate impact of a large non-recurring

¹ Page 7-1

² Page 7-1

cost. As discussed in section 7.4.1 below, BC Hydro is proposing a similar regulatory account to smooth out the initial rate impact of the Waneta Transaction.

The four Deferral Accounts are examples of deferring, for recovery or refund in a future period, differences between forecast and actual costs or revenues.

With respect to the deferral of differences between forecast and actual costs, BC Hydro remains of the view that it should assume financial responsibility for controllable risks and create regulatory accounts for non-controllable risks....

The BCUC noted that even if some costs are non-controllable, the risk of variances from forecasts may be appropriately borne by the shareholder because of risk/reward considerations.”

The above represents a small portion of the matters that have been discussed over the years before the BCUC which controls the formation and clearing of the balances in the regulatory accounts. Technically, the Heritage and Non-Heritage Deferral Accounts are created by law and regulation but as a matter of practice, the BCUC oversees them.

The regulatory accounts are subject to prudency reviews³:

“As noted above, part of the regulatory parameters associated with a deferral account is an ex post prudency. The effect of the prudency review is to increase the regulatory risk to the shareholder because amounts in the deferral accounts will be subject to a prudency review which, in most circumstances, would not be the subject of a review in the absence of a deferral account.”

Although there is constant confusion between the use of the words “deferral account” and “regulatory account” generally if the BCUC is convinced, after the fact, that an amount already spent and contained in a regulatory account was not properly spent, then BCH’s shareholder i.e. the Provincial Government and not BCH’s customers bear the loss.

The BCUC⁴ accepted the following with respect to the clearing of BCH’s deferral accounts:

“BC Hydro proposes that no cap or limit be set on any of the deferral accounts, and that the accounts be looked at together rather than separately when determining the amount to be taken into the revenue requirement. BC Hydro further submits that the quantum to be recovered in a particular test period should be determined by the balances in the accounts and factors such as water inflows, interest rate variations, or other factors affecting BC Hydro’s financial outlook and expectation around future revenue and rate requirements. The objectives in determining the appropriate

³ BCUC decision re BC Hydro 2004/05 to 2005/06 Revenue Requirements Application, October 29, 2004, page 44.

⁴ Ibid, page 44.

amount to recover at any one time, and the period of time to take that amount into rates, would be smooth and stable rates for ratepayers.”

The balances in the regulatory accounts are carried at BCH’s weighted average cost of capital which includes return on equity.

The proliferation and use of the deferral accounts all as approved by the BCUC, at the behest of BCH and its customers, has resulted in BCH’s management being shielded from the results of its decisions and the Government as shareholder put at risk. Of the material that has been put before the BCUC with respect to regulatory accounts, the words: *“BC Hydro remains of the view that it should assume financial responsibility for controllable risks and create regulatory accounts for non-controllable risks”* stand out.

It is the function of BCH’s management to manage controllable and non-controllable risks and for the shareholder to benchmark its performance. It is not possible to do this when there are approximately 25 separate regulatory accounts. It is also not possible or even necessary to ration capital in these circumstances because the regulatory review of the spending decision is made after, and not before the fact. As an example in a regulatory proceeding the Association asked that BCH’s preliminary financial screening model for Site C be produced before the Site C regulatory account was created. Its motivation was simple – it wanted to see if, at the very basic level, there was a viable project from the financial perspective.

The request was turned down and to date approximately \$100 million has been spent to investigate Site C and the capital cost has ballooned from approximately \$3 billion in F2006 to \$7.9 billion in F2012. Without the establishment of a transparent financial benchmark in F2006 it is very difficult to determine the causes for the capital cost increase and whether the project is financially viable at the new capital cost and whether this cost will increase further in the future. Should the project not proceed and the BCUC decides that it wasn’t prudent for BCH to embark on investigating Site C, the Government, as shareholder, will bear the loss which today would be about \$100 million.

As evidenced by the long list set out below, of “regulatory accounts” other than “deferral accounts”⁵ there is evidence to suggest that operating costs are being “capitalized” and deferred, which also defers a good deal of the need to make hard decisions about whether they should or should not be incurred. If this spending had an immediate impact on rates, then BCH’s customers would have a much better understanding as to why their rates were increasing, and BCH could be made more accountable for its spending decisions.

In particular, and for the reasons set out in “Demand Side Management Background”, BCH’s Power Smart Program may not be achieving the results claimed yet the impacts on BCH’s rates from the corresponding spending are going to be spread out over time. The cause, effect and accountability for the spending will be lost assuming the BCUC

⁵ Consisting of the Heritage Deferral Account, Non-Heritage Deferral Account, Trade Income Deferral Account and BCTC Deferral Account.

doesn't conclude through means of a prudency review the Government as shareholder should bear the risk.

The "regulatory accounts" consist of:

Demand-Side Management
First Nations Costs
First Nations Provisions
F07/F08 RRA Depn Study
Site C
Future Removal
Foreign Exchange
Pre-1996 Contributions
Storm Restoration
Procurement Enhancement
Capital Project Investigation
GM Shrum 3
F2010 ROE Adjustment
Net Employment Costs
Total Taxes
Amortization - Capital Additions
Total Finance Charges
Smart Metering & Infrastructure
Home Option Purchase Plan
Non-Current Pension Cost
Waneta
Environmental Provisions
IFRS PP&E
IFRS Pension
F12-F14 Rate Smoothing

The balances in these accounts are going to increase from a total of about \$1.3 billion as planned in F2011 to \$3.9 billion as planned in F2014 or over 200% in the space of 4 years⁶. This is a very large increase in BCH's and the Government's total contingent liability. Assuming the expenditures were prudently made, they will be a source of rate increases for years to come -, a source for which it will be very difficult for BCH's customers to identify the causes, let alone do anything about them.

The balances in BCH's Heritage Deferral Account and Non-Heritage Deferral Account should also be cause for concern as evidenced by the following⁷:

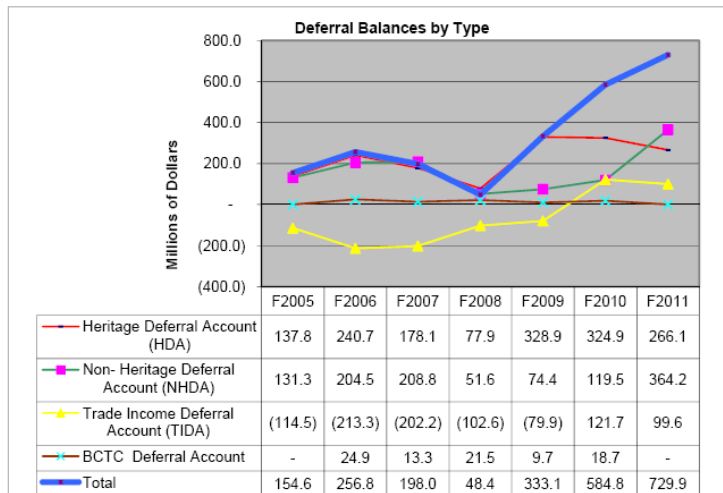
⁶ Appendix 1, as attached.

⁷ BCH F2011 Revenue Requirement Application, Exhibit B-11, BCH response to BCUC IR 2.544.1.

2.544.1 For the period F2005 to F2011, please provide tabular data and graphical chart for the fiscal year ending balance of Heritage Deferral Account (HDA), Non-Heritage Deferral Account (NHDA), Trade Income Deferral Account (TIDA), and BCTC Deferral Account. Please also discuss and provide a graphical trend line for the total deferral account balance for the period F2005 to F2011.

RESPONSE:

The requested graph and tabular data are as follows:



The total Deferral Account balance has been on an increasing trend since F2009 largely as a result of lower water inflows in each of F2009 to F2011 together with the sharp decline in Trade Income in F2010.

Because of the impact of the Heritage Contract and other factors, it isn't always clear why the balances are being driven upward but as noted above in the text below the graph, the main drivers are lower water inflow which leads to imports of electricity and a decline in Powerex's revenues.

It should also be noted that during the last decade, BCH has imported a lot of electricity e.g. in 2006 approximately 18% of its domestic requirements⁸. This is because it has not been self-sufficient.

The theory has been that the import "bill" would be eventually paid by sales of surplus electricity when water conditions are better than in years when there are imports for domestic purposes, or from revenues from Powerex's trading activities that aren't related to domestic water conditions e.g. purchasing electricity in non-peak periods and selling it in peak periods.

Powerex has not been able to earn the type of income that it has in the past for a variety of reasons as evidenced by its response to following question by the Association in a BCUC regulatory process⁹:

⁸ Appendix 2, as attached.

⁹ BCH F2011 Revenue Requirement Application, Exhibit B-11, BCH response to IPPBC IR 2.4.1.

2.4.1 Is the narrow price spread for electricity shown in Figure 1 between HLH and LLH a major factor in the reduction of Powerex's net income in F2010 to \$8 million? If yes, please quantify.

RESPONSE:

The spread between the Mid-C HLH and LLH prices is one of several factors that may impact Trade Income. Other factors include the seasonal price spreads, price spreads between markets, transmission availability, decisions around spot and forward trading activities, weather conditions, economic conditions and market driven demand.

The export market is a complex market and as its features change so does Powerex's ability to ascertain these changes and continue to earn income. Delivery by independent power producers of energy during the spring freshet which is strictly controlled and priced in accordance with BCH's electricity purchase agreements, has little if anything to do with Powerex's earning capacity. However, the attached material¹⁰ providing dates for open houses in the U.S. in relation to: "BPA and BC Hydro Seek New Long-Term Water Storage Agreement" will not only affect Powerex but also IPPs. No notice or discussion with IPPs has been held in B.C. with respect to this matter.

It is very important to note that Powerex provides shaping and storage for the Vantage Wind Energy Project in Washington State. The value added product is sold to Pacific Gas and Electric in California. Ultimately the deal will be backed by BCH's generation system and/or the Columbia Treaty downstream benefits which Powerex manages for the Province¹¹

The ability of BCH to clear balances because of better water conditions is not as simple as it sounds. The further away BCH is from self-sufficiency under critical water conditions, in which case it doesn't need to import any electricity, then the more difficult it becomes to clear the balance. Firstly there is no symmetry in the prices that have to be paid for imports in low water conditions and those that will be obtained when in good water conditions¹². Generally the prices that will have to be paid under low water conditions will be higher than those in good water conditions. Usually when it is dry in B.C. it is dry all the way to California as illustrated by conditions in 2001¹³. There is fierce competition for any surplus electricity and prices get driven up.

The opposite generally holds true when there are good water conditions.

Even if the prices are symmetrical, the balances won't be cleared if BCH isn't self-sufficient in average or better than average water conditions. The degree of self-sufficiency impacts the clearance of the account balances. In the F2012-2014 Revenue Requirements Rate Application it says¹⁴:

¹⁰ Appendix 3, as attached.

¹¹ Appendix 4 as attached

¹² Appendix 54, as attached.

¹³ Appendix 56, as attached.

¹⁴ BCH Revenue Requirements Application, F2012-2014, page 4-3.

“For the test period, under assumed average inflow conditions, BC Hydro forecasts that the integrated system will be close to annual energy load-resource balance. However, to capture the distribution of possible outcomes, the forecast Cost of Energy is derived from an ensemble which includes consideration of a range of future inflow and price conditions. For 2012, based on the 37 historic weather sequences, currently used as the Cost of Energy forecast, there is approximately a 10 per cent probability of net surplus resulting in surplus sales, a 50 per cent probability of net deficit resulting in market purchases, and a 40 per cent probability of being energy load-resource balanced. For F2013 and F2014, the probability of being net surplus increases to approximately 40 and 60 per cent, respectively. The forecast used in the Application is the annual average across all the ensembles and this average therefore shows both surplus market sales and market purchase volumes for each forecast year, as shown on Schedule 4.0. The increase in likelihood of surplus sales during the test periods reflects progress toward self-sufficiency.”

What the above passage doesn't say is that if assumed average inflow conditions turn out to be lower than average, and/or forecast demand is higher than expected because of increased industrial demand as the B.C. economy recovers from the recession, or Power Smart doesn't achieve its lofty targets, then more electricity will have to be imported. The balances in the Heritage and Non-Heritage Deferral accounts will increase. It is not an easy task to clear the balances by relying on the weather and the deferral account rate rider of 2.5%. This rate rider is meant to assist in clearing the balance. Assuming Powerex's net income is close to historical levels, average water conditions, movement to self-sufficiency and a rate rider of 2.5% the total balance in deferral accounts will only be reduced from \$879 million in F2011 to \$750.8 million in F2014.

Conclusion

The overuse of regulatory accounts and not being self-sufficient in electricity will leave BCH with contingent liabilities of approximately \$4.7 billion. Its industrial and commercial customers have encouraged the proliferation of these accounts and the increases in the balances. For them the carrying cost is BCH's weighted average cost of capital which will, in almost all cases, be lower than that of these customers - i.e. they are essentially using BCH, the residential ratepayers, and the Government, as a low-cost bank. Sooner or later these balances are going to have to be paid by BCH's customers in the form of higher electricity rates, or in some cases absorbed by the Government because of prudence reviews.

In any event, for years to come, these accumulated regulatory account balances will be a source of rate increases that have nothing to do with independent power producers. And these rate increases will be due to spending that has already occurred in the past, so there will be nothing, other than a prudence review, that will be able to spare the ratepayers from the consequences.