COMMENTARY **B.C. HYDRO**

B.C. HYDRO LOSES $560 MILLION IN FIFTEEN MONTHS ON INTEREST RATE HEDGING GAMBLE

Thanks to the wonders of B.C. Hydro's rate-regulatory accounting finance minister Carole James does not need to worry that growing losses incurred by the Crown utility in its hedging activities will threaten the government's fiscal plan.

In 2018/19, B.C. Hydro lost $321 million on its interest rate hedging program, with a further loss of $239 million incurred during the first three months of the current year. However, a major hit to its net income (and the government's revenue) was avoided because the losses on the hedging contracts were deferred to a regulatory account created to smooth the gains or losses over many years.

This paper will review the interest rate hedging program, and how the gamble on future interest rates resulted in the large losses.

Rationale for Hedging Future Interest Rates

In March 2016, the British Columbia Utilities Commission (BCUC) approved a new regulatory deferral account for B.C. Hydro. The Debt Management Regulatory Account (DMRA) would allow the utility to defer any gains and losses from a new program to hedge against volatility in interest rates for a significant amount of the utility's planned future debt.[1] B.C. Hydro believed that interest rates were at historic lows, and that there was a high likelihood that interest rates would increase between 2016 and 2024, during the period when B.C. Hydro expected to issue some $10 billion in debt.[2]

By hedging the future interest rate on $5 billion of the debt the utility argued that the increase in the interest cost to ratepayers could be partly offset by gains on the hedging contracts. This would help moderate possible rate increases to ratepayers resulting from the higher interest rate cost on the new borrowing.

[1] https://www.bcuc.com/Documents/Proceedings/2016/DOC_45368_B-1_BCH_DBT_Mgmt_Reg_Acct-App.pdf

[2] Most of this debt was for capital projects, including the Site C dam. The utility based its interest rate forecast to 2019/20 on the ministry of finance's forecast, which shoed an increase to 5.55%; see p.29 in https://www.bcuc.com/Documents/Transcripts/2016/DOC_45581_Transcript_Volume_1_Workshop_01-27-2016.pdf .

When questioned B.C. Hydro admitted that it was not aware of any other regulated Canadian power utility that was using interest rate hedges.[3] The provincial government does hedge against changes in interest rates.[4]

Deferring Hedging Gains and Losses

Having the ability to defer the gains and losses from the contracts (both the fair value and the actual gains or losses upon closing) was a fundamental component of B.C. Hydro's future debt hedging strategy. Under normal accounting rules the mark-to-market gains or losses would be recorded as interest costs each year. Using rate-regulatory accounting allows the gains or losses would be amortized over the term of the associated future long-term debt through finance charges. These could range up to 30 years.

In its application B.C. Hydro asked the BCUC to endorse the hedging strategy and to approve the new DMRA deferral account. The Commission declined to endorse the hedging strategy because it did not have the authority to regulate the operation of B.C. Hydro's borrowing.[5] Yet by approving the regulatory account one could reasonably assume that the BCUC was implicitly endorsing the hedging strategy.

B.C. Hydro management was confident that because the interest rates were at low levels there was a high likelihood of increased borrowing costs in the near future. The resulting gains on the hedging instruments would help offset the higher costs of the new planned borrowing. This would stabilize customer rates as increased borrowing costs due to an increase in interest rates would be balanced by the gain on the hedges. Conversely, any losses on the hedges would be offset by lower borrowing costs on the debt. However, B.C. Hydro downplayed the risk that the benefit to the customers of lower borrowing costs would be lost because the utility would be required to make large payments to the counterparties to the hedges.

The Hedging Strategy Depended on Deferring Losses

When asked if it would proceed with the forward interest rate hedging strategy without a deferral account Fred James, a manager in B.C. Hydro's regulatory group, told a 2016 workshop that the risk of loss was too great:

> So if we don't get approval for the DMRA, we're going to reassess -- I think we would reassess whether we would enter into these mark-to market gains -- or sorry into,

[3] See response to BCUC question 2.5 at Pdf 25/333; https://www.bcuc.com/Documents/Proceedings/2016/DOC_45753_B-3_BCH_Responses_IRES_1.pdf

[4] As of 31 March 2019, the government had an unrealized gain of $290 million on its interest rate swaps, an increase of $25 million compared to the prior year; see https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/government-finances/public-accounts/2018-19/public-accounts-2018-19.pdf p. 67.

[5] https://www.bcuc.com/Documents/Proceedings/2016/DOC_46024_G-42-16_Reasons.pdf

> these hedging strategies for future debt. The risk of having a [sic] ineffective hedge show up, could be quite -- I mean we've seen very quickly you can get into hundred million dollar sort of hits to your income. And we think the risks of that happening is to[sic] great if we didn't have some sort of mechanism to recover the variance between the four -- in that mark-to-market gain of loss.... With the hedge accounting, in our view, there's a risk there that we don't want to take, and so to get around that having the debt management regulatory account will get us away from that risk.[6]

The ability to defer losses to the regulatory account transfers the risk of loss, and the potential for a gain, to the customers rather than to B.C. Hydro and its single shareholder – the government.

The Hedging Losses Grow

We do not have access to the details about each hedging agreement, such as the duration of the contract. B.C. Hydro does report the mark to market gains or losses in the "financial instruments-hedges" footnote to its year-end and quarterly financial statements. The total value of the interest rate hedges and the mark to market aggregate valuation losses of contracts were:

	2017/18	**2018/19**	**Q1 2019/20**
Value of Contracts ($=billion)	4.90	6.05	5.55
Net Loss in Value ($=million)	(38)	(321)	(239)
Loss per Month ($=million)	n/a	26.7	79.7

B.C. Hydro cautions that the valuation is not the amount of actual cash that has been paid to the counterparties of the hedging contracts. These are liabilities that B.C. Hydro has as incurred based on the fair value of the contracts at certain points in time (such as year-end and the end of Q1). If interest rates remain at the current levels, the corporation will be required to transfer the funds to the counterparties to cover the losses when its hedging contracts are settled. If interest rates increase the mark-to-market liabilities will be reduced, or potentially generate a positive mark value variance.

A major concern is that the valuation losses as of 30 June ($79.7 million/month) appear to be much greater than the $321 million loss for 2018/19 ($26.7 million/month). If the Q1 loss was projected for the full 12 months of 2019/20 the annual loss would be approximately $950 million. Such a result is far more serious than the size of the potential loss cited by Mr. James in the 2016 workshop.

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[6] https://www.bcuc.com/Documents/Transcripts/2016/DOC_45581_Transcript_Volume_1_Workshop_01-27-2016.pdf p. 77/78.

The Current Forecast

Due to the nature of the hedging contracts there is a real potential for large losses to accumulate as long as interest rates remain below the level specified in the hedging contracts.

Table 1 shows B.C. Hydro's multi-year forecast for the DMRA balance as of a 6 June 2019 response to a question from an intervener in the BCUC review of B.C. Hydro's rate increase request for 2019 and 2020. The table also shows the revised forecast submitted on 22 August 2019, which incorporated the actual hedging losses for 2018/19.

Table 1 – Debt Management Account Forecast Balances ($=million)

	FY17/18	FY18/19	FY19/20	FY20/21	FY21/22	FY22/23	FY23/24
June 6, 2019	(158)	(260)	(248)	(235)	(208)	(181)	(154)
Aug. 22, 2019	(158)	163	276	289	296	298	294
Difference	0	423	524	524	504	479	448

Source: BCUC, B.C. Hydro F20-F21 RRA, IR 1, Fortis 1.4.1 Attachment Pdf 1559/2358, and Evidentiary Update of 22 August 2019, Appendix D, Pdf 42/86.

The forecast for the DMRA for the end of the current year is a balance of $276 million was developed in mid-August. In early September B.C. Hydro released its first quarter results where the actual DMRA balance to 30 June 2019 had increased to $405 million.[7] To achieve the lower year-end forecast will require interest rates to significantly increase between now and 31 March 2020.

To eliminate the August forecast balance of $276 million in the DMRA for 31 March 2020 would require a one-time rate increase of approximately 5.5% for all B.C. Hydro's customers. In terms of scale, the $560 million in losses in the 18 months from April 2018 to June 2019 is equal to the cost of all of B.C. Hydro's capital expenditures (excluding Site C) for the current year.

Summary

In early 2016 B.C. Hydro management (presumably with the approval of the provincial government) embarked on a risky gamble to hedge future interest rates on new debt. During discussions with the BCUC, B.C. Hydro stated that the risk to its net income and the dividend was too great to proceed without the ability to defer gains and losses. By approving a new regulatory account for this purpose, the BCUC transferred the risk from the shareholder to the ratepayers.

[7] https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/accountability-reports/financial-reports/quarterly-reports/F20-Q1-Report-Final-20190910.pdf p. 22.

The losses to date have been dramatic. The BCUC should be requiring B.C. Hydro to justify continuing the hedging gamble because the continuing losses are adding to the regulatory balance that future generations of customers must eventually pay off.[8]

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APPENDIX

Each quarter B.C. Hydro records the value of the future debt being hedged and the net balance in the Debt Management Regulatory Account. The following summary shows the value being hedged, the marginal change in the quarter in the fair value of the hedges and the actual gains or losses on settlement, and the balance in the regulatory account. A positive balance is recorded as an asset (owing from the ratepayers), while a negative balance is recorded as a liability (owing to the ratepayers).

	Value (billion)	Marginal Change	DMRA Balance
2016/17 Q1	2.2	(80)	80
2016/17 Q2	2.7	(18)	98
2016/17 Q3	3.9	299	(201)
2016/17 Q4	**3.6**	**(14)**	**(187)**
2017/18 Q1	3.4	4	(191)
2017/18 Q2	3.9	61	(252)
2017/18 Q3	3.9	(56)	(196)

[8] The BCUC did not question the hedging losses in its information requests to B.C. Hydro respecting its revised submission. Only the Association of Major Power Consumers had detailed questions about the DMRA; see https://www.bcuc.com/Documents/Proceedings/2019/DOC_55611_C11-7-AMPC-IR3-to-BCH.pdf p. 14.

2017/18 Q4	**4.9**	**(38)**	**(158)**
2018/19 Q1	4.3	10	(168)
2018/19 Q2	2.7	92	(260)
2018/19 Q3	3.4	(92)	(158)
2018/19 Q4	**6.05**	**(321)**	**163**
2019/20 Q1	5.55	(239)	405

Source: B.C. Hydro quarterly and annual reports, notes to financial statements respecting financial instruments.

The quarterly reports show that for most quarters the hedging program was operating as anticipated when the DMRA was proposed and approved. However, the quarterly losses began in Q3 and continued through Q4, and escalated during the first three months of the current year.