

**CARRYING CHARGES ON DEFERRAL AND VARIANCE
ACCOUNTS FOR HYDRO QUEBEC DISTRIBUTION**

R-3905-2014

EVIDENCE OF

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BEFORE THE

Regie de L'Energie

November 6, 2014

I INTRODUCTION AND OVERVIEW

Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I am a professor of finance in the Rotman School of Management at the University of Toronto, where I hold the CIT Chair in Structured Finance. I appeared before the Regie most recently in a 2013 hearing into the fair rate of return for HQD and HQT. I have also appeared before most of the major utility regulatory boards in Canada including the CRTC, the Ontario Energy Board (OEB), the BC and Alberta Utility Commissions (BCUC and AUC), the Nova Scotia Utilities and Review Board, the New Brunswick Public Utilities Board, the Manitoba Public Utilities Board, the Board of Commissioners of Newfoundland and Labrador and the Prince Edward Island Regulatory and Appeals Commission. I have also filed testimony before the Ontario Securities Commission and in a variety of civil suits pertaining to financial matters. A detailed resume has been filed previously with the Regie, but a current CV, further information and copies of my working papers can be can be downloaded from my web site at the University of Toronto at <http://www.rotman.utoronto.ca/~booth>.

Q. PLEASE DESCRIBE THE PURPOSE OF YOUR TESTIMONY

A. I was asked by the Association Québécoise des Consommateurs Industriels d'Électricité (AQCIE) and Conseil de l'Industrie Forestière du Québec (CIFQ) to review Hydro Quebec Distribution's application to be allowed to recover its weighted average cost of capital on the balances in various deferral and variance accounts.

My understanding is that until now the Regie has been somewhat flexible in its approach to prescribing a cost for deferral accounts, preferring a case by case approach. In the past it has allowed the utility's weighted average cost of capital (WACC), but it now wants to reassess this practise and instructed HQD to submit an in depth analysis of the issues ((D-2014-037). This is particularly relevant at the moment due to the \$380 million (HQD-3 document 4, page 4)¹ that

¹ All references are to the English translations of filed documents.

HQD did not recover in its distribution rates in 2013-4 due to extreme weather. It has proposed that this shortfall be recovered over a five year period beginning in 2016 to minimise the impact on rates in 2015. The immediate question is then what cost should HQD recover on this five or six year deferral account.

In its review of a sampling of Canadian and US practises, HQD concluded (HQD-3 document 3 page 18) that “the return on VDAs (variance and deferral accounts) is not uniform across North America.” However, HQD went on to recommend (believes) that the weighted average cost of capital should be used seemingly for the following (paraphrased) reasons:

1. HQD is financed in an integrated manner and it is not possible to connect financing with specific cash flows (HQD-3, document 3, page 16, first paragraph);
2. VDA linked assets are financed by HQ by means of a mix of debt and equity which applies to assets similar to VDAs like vehicle and accounts receivable. (HQD-3, document 3, page 16, second paragraph)
3. Ascribing a specific form of financing would be incompatible with HQD’s deemed capital structure (HQD-3, document 3, page 16, sixth paragraph)
4. For a given cost of debt a lower cost for VDAs means a higher cost charged to other assets or a “shortfall” in its equity ratio. HQD argues this violates the principle of a reasonable return for shareholders.(HQD-3 document 3, page 18, first paragraph)
5. Applying a different cost to VDAs introduces “added complexity.” (HQD-3, document 3, page 18, penultimate paragraph)

In my judgment none of these reasons have any validity and HQD has not touched on the important issues.

1 **Q. WHAT DO YOU REGARD AS THE MOST IMPORTANT ISSUE?**

2 **A.** As I have previously testified before the Regie, a fair rate of return was confirmed in the
3 BC Electric decision when Mr. Justice Lamont's definition of a fair rate of return put forward in
4 Northwestern Utilities, was adopted²:

5 "that the company will be allowed as large a return on the capital invested in the
6 enterprise as it would receive if it were investing the same amount in other
7 securities possessing an attractiveness, stability and certainty equal to that of the
8 company's enterprise."

9 This definition is referred to as an opportunity cost: only if the owners of a utility earn their
10 opportunity cost will the returns accruing to them be fair, i.e., they will neither reward the
11 owners with excessive profits, nor ratepayers by charging prices below cost. The critical
12 question faced by the Regie is then, what is the opportunity cost of investing in a deferral
13 account versus the normal HQD rate base?

14 In this respect it is important to note that Mr. Justice Lamont's definition refers to the return on
15 capital invested in the enterprise. By convention most Canadian regulators allow debt investors
16 their embedded cost and then determine a fair ROE (Return on Equity) to the stock holders
17 taking into account any financing risk imposed by the debt. The National Energy Board was an
18 exception to this general principle in its TQM decision (RH-1-2008) where it allowed an overall
19 after tax weighted average cost of capital of 6.4% and left the financing of its rate base to TQM.
20 In footnote 38 to that decision the NEB noted that its award amounted to a 9.7% ROE on a 40%
21 common equity ratio, an 11.2% ROE on a 32% common equity ratio or an 8.46% ROE on a
22 50.5% common equity ratio.

23 The important implication of the NEB's decision is to confirm that a regulator can award an
24 overall return on capital or divide the financing up into "slices" and then award a fair rate of
25 return on the different slices. The conventional definition of the financing slices is then common

² Northwestern Utilities Limited v City of Edmonton [1929] S.C.R. 186.

British Columbia Electric Railway Co. Ltd. V Public Utilities Commission of British Columbia et al
[1960] S.C.R. 837, page 848.

equity, preferred shares and debt. However, there is no logical reason why the debt financing slice cannot be further divided into long term debt and short term debt. Indeed the major utilities in Ontario, for example, routinely finance with short term debt and recover that financing cost separately from long term debt.³ There is no reason therefore why the Regie cannot allow HQD a short term debt component to finance a deferral account, as well as long term debt and common equity components to finance the normal rate base.

To address HQD's points in more detail assume a hypothetical utility has a rate base of \$100 for which the regulator determines a fair overall return to be 10%, so \$10 is allowed in the revenue requirement for financing costs. Suppose this utility acquires another regulated utility, where there are no synergies with existing assets, that also has a \$100 rate base but for which the fair overall return is 5%, so only \$5 is included in the revenue requirement. Clearly the two together have \$200 in rate base assets and, all else constant, the fair return is 7.5% and \$15 should be included in the revenue requirement.

However, suppose the regulator only allowed \$15 for both utilities and the utility countered that it 1) finances in an integrated manner, 2) does not link financing to cash flows, 3) could not ascribe a specific form of financing since it would be incompatible with its deemed capital structure or 4) if it did it would fail to earn its reasonable return for its shareholders. As a result, the utility claims it still needs the 10% return allowed its original assets, regardless of the lower risk and lower fair return on its new asset. In this instance I think it is obvious to anyone that the above arguments are false and that consistent with the opportunity cost principle the regulator has to allow a fair return consistent with the lower risk of the newly acquired assets. Indeed it is clear that even within HQ, and consistent with the opportunity cost principle, the Regie treats the transmission and distribution assets of HQ differently for precisely this reason, despite the fact that HQ finances generation, transmission and distribution in an integrated manner.

In this hypothetical example it is clear that each of the two sets of assets of the combined utility need to be financed according to their different levels of risk and they should have a different

³ In the latest Ontario Energy Board letter (November 25, 2013) the OEB allowed a deemed long term debt rate of 4.88% and a deemed short term debt rate of 2.11%.

1 allowed return. If need be the combined entity can be financed with a weighted average of the
 2 financing rates of the two entities, but in this case the fair return drops to 7.5% to reflect the
 3 lower risk of the combined entity.⁴

4 For the \$380 million deferral account I would suggest the Regie think of this in terms of a newly
 5 acquired asset as in the prior example. Existing assets earn the normal WACC, but by definition
 6 this is a special or unusual deferral account, since it does not zero out in the normal way. As a
 7 result HQD can now be considered as a combination of its normal rate base earning the WACC
 8 and this newly acquired asset. The Regie can then either lower the overall WACC of this new
 9 entity, since HQD's risk is now marginally lower, or simply allow a fair return on this new \$380
 10 million acquired asset that reflects its "attractiveness, stability and certainty."

11 The implication of the change in risk is clear in the example because the assets are about the
 12 same size. As a result the cost of making a mistake and allowing the 10% return to the new lower
 13 risk assets is material. If, in contrast, the new assets were only \$0.01 the error may not be
 14 material and it might be easier for administrative purposes to simply allow the same 10%
 15 allowed return to the new assets. In this respect this is *not* HQD's last point as there is no added
 16 "complexity" in allowing a different return to the VDAs since they are already itemised in the
 17 accounting system. The real point is the administrative cost of separately itemizing them, but that
 18 cost has already being incurred.

19 **Q. HOW MATERIAL IS THE DEFERRAL ACCOUNT BALANCE?**

20 **A.** Given an HQD WACC of 7.102% and a return in the main deferral account balance of the
 21 Bankers Acceptance (BA) rate plus a 0.25% spread,⁵ or about 1.45%, the return difference could
 22 be 5.652%. I would judge the application of this difference to the \$380 million balance in the

⁴ This happened for example when Union Gas acquired Centra Gas Ontario and merged the two entities. The result was a new deemed common equity ratio for the combined entity. It happened in reverse when the electricity industry was unbundled in various jurisdictions.

⁵ This is not my recommended rate. I use it because it is the rate used by the Ontario Energy Board as I discuss below.

1 main deferral account to be material.⁶ For example, if the \$380 million is amortised, like a
 2 mortgage, over five years then the amortization tables would be as follows:⁷

	Amortisation Table at WACC				
	1	2	3	4	5
Principal	380.00	314.06	243.43	167.78	86.77
Interest	26.99	22.30	17.29	11.92	6.16
Payment	92.93	92.93	92.93	92.93	92.93
Close	314.06	243.43	167.78	86.77	0.00

	Amortisation Table at BA + 0.25				
	1	2	3	4	5
Principal	380.00	306.17	231.27	155.29	78.20
Interest	5.51	4.44	3.35	2.25	1.13
Payment	79.34	79.34	79.34	79.34	79.34
Close	306.17	231.27	155.29	78.20	0.00

3
 4 In the first case, at a 7.102% WACC the incremental “interest” for the first year would be \$26.99
 5 million and the annual payment \$92.93 million. As a result, at the end of the year the balance in
 6 the deferral account would be reduced to \$314.06 million. The complete balance would then be
 7 retired at the end of year five with total undiscounted interest payments, without any tax
 8 adjustments, of \$84.66 million. In contrast, with the cost allowed at the BA rate plus 0.25% the
 9 undiscounted interest costs would be \$16.69 million for a saving before tax of \$67.97 million. I
 10 would judge a saving of the order of \$67.97 million as being worth any minor complexity added
 11 to the accounting system of HQD.

12 **Q. IS THE WACC GENERALLY INAPPROPRIATE?**

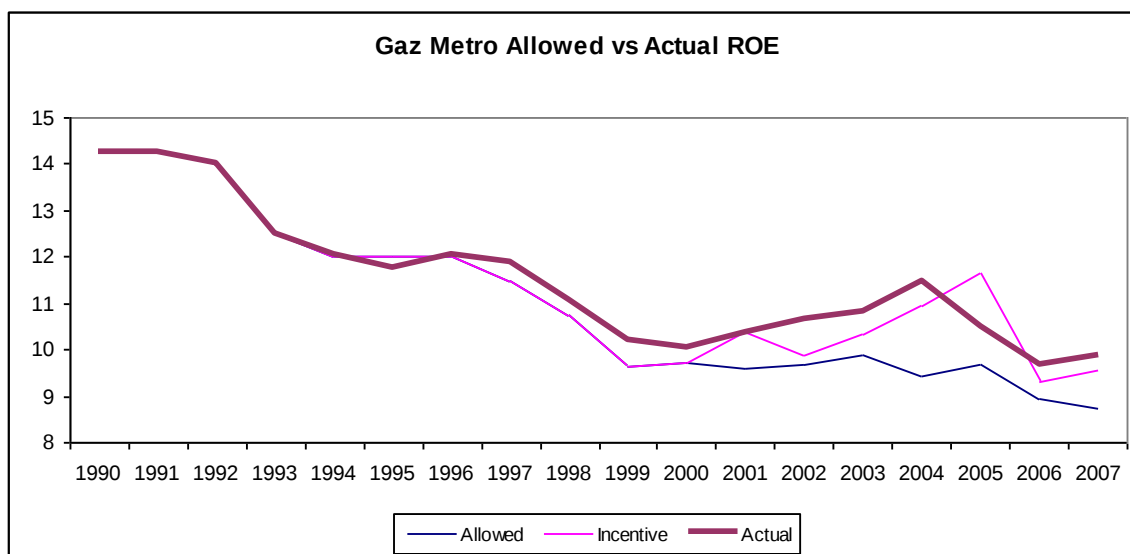
13 **A.** Yes. In my testimony before the Regie in 2009 for Gaz Metropolitan I discussed the
 14 business risk of GMI in Appendix H. I pointed out that the Regie had three tools to manage
 15 GMI’s risk: first it could allow deferral accounts to transfer the risk to the ratepayers, second it

⁶ HQD uses a 7.102% WACC in HQD-3, Document 3, page 18 Table 3, whereas deferral accounts in Ontario attract a return of the Bankers’ Acceptance rate plus 0.25%. At the end of 2013 the BA rate was about 1.2 %.

⁷ I have assumed for simplicity annual payments rather than a more realistic monthly amortisation schedule.

could adjust the amount of financial risk through the deemed common equity ratio to adjust for the business risk and finally it could allow an ROE commensurate with the remaining shareholder risk. The \$380 million balance in the deferral account is witness to the protective nature of the Regie's approach to regulation. Unlike a competitive firm it indicates how the utility can recover unexpected costs from future rate payers and how the regulatory dynamic in Canada lowers the risk of the utility.

In that Appendix H I then discussed the nature of business risk as entailing a short run dimension, which is the ability of the utility to earn its fair ROE, what I term the return *on* capital and the ability of the utility to recover its capital, which I term the return *of* capital.⁸ Given the amount of regulatory protection in Canada I deem the return on capital to be of lesser importance. For GMI, for example, I produced the following graph of its actual versus its allowed ROE. The point of the graph was to show that for GMI there had been no obvious inability to earn its allowed ROE, so return on capital was not a large factor in its business risk.



I then discussed the long run risk of GMI and in particular its supply risk, given that the NEB had regarded TQM's risk as having increased, and the fact that TQM serves GMI. This also entailed a discussion of the competitiveness of natural gas against other fuels, customer

⁸ Both Concentric and HQD accept that this distinction is often made. Answer to ACQCIE-CIFQ IR # 1.4

breakdown, bypass risk etc and GMI's bond rating. These are the typical range of factors that go into an assessment of the long run business risk of a utility and its ability to recover its investment, that is, the return of capital.

GMI's business risk expert, Dr. Paul Carpenter, had a similar approach to business risk where he concluded (Dr. Carpenter's GMI 2009 testimony, page 9):

"Q11. Why do you say that equity investors give greater weight to fundamental capital recovery risk?"

A11. When investors buy a share of stock, they are buying a share of a long-term earnings stream. They are not buying only a month, or even a year's worth of performance. The time horizon of any equity investment is inherently long term. The short-term variability in the earnings of an equity investment is only a small part of the business risk picture. This is particularly important for utility investments that when "sunk" into the ground are difficult to redeploy to other valuable uses should their fundamental risks be realized."

I would not go quite as far as Dr. Carpenter because the regulatory dynamic in Canada is to deal with "risks" as they arise, so that in practise these risks are often reallocated to the ratepayer so the shareholder is not affected. The Ontario Energy Board seems to agree with this assessment. When faced with business risk testimony from the company and Concentric's witness Mr. Coyne, it stated (Enbridge Gas Distribution Inc. (EGDI) Decision 2013-0207, Page 7),

Regarding the risk of future events, the Board agrees with CCC that the relevant future risks are those that are likely to affect Enbridge in the near term. Any risks that may materialize over the longer term can be taken into account in subsequent proceedings. In considering the risk of future events, the Board will take into account the fact that, generally, the more distant the potential event, the more speculative is any conclusion on the likelihood that the risk will materialize.

I generally agree with this assessment, but sometimes there is little a regulator can do in the face of significant changes in market structure. For example, a recent TransCanada Mainline case (RH-003-2.11) focussed on how to address the implications of the decline in throughput on the Mainline and the resulting increase in tolls (the death spiral). As the National Energy Board stated in its introduction (page 1)

"The Mainline is in an unprecedented position. No major NEB regulated natural gas transmission pipeline has ever been affected by market forces to the extent that the

Mainline is now affected. Throughput on the Mainline has decreased significantly, and as a result, Mainline tolls have increased substantially over a short period of time.

The future of the Mainline depends on how TransCanada is able to respond to the changes to its business environment. The Mainline faces increasing competition for gas supply from intra-Alberta demand, other ex-Western Canada Sedimentary Basin (WCSB) pipelines and new markets for WCSB gas. The Mainline competes with pipelines from emerging shale and tight gas basins in the United States of America (U.S.), which deliver gas to eastern markets. The Mainline must adjust to this new environment because eastern consumers may not renew contracts for long-haul service and bypass infrastructure may be built.”

Tolls cannot continue to increase each year in response to throughput decline. Costs associated with throughput variation have been passed to remaining Firm Transportation service (FT) shippers. Those shippers have borne all of the costs of, and the risk associated with, competition. If this were to continue, the Mainline’s competitiveness could further erode and exacerbate the root cause of throughput declines.

The business risk faced by the Mainline is an extreme case, but it is this sort of business risk assessment that goes into determining the financial structure and fair ROE for a utility. It is also why business risk experts tend to look to the capital market for measures of risk. In his GMI testimony, Dr. Paul Carpenter on behalf of GMI stated (page 7 of his written testimony)

Q8. What kinds of risks matter the most in evaluating a company’s business risk from a cost of capital perspective?

A8. The risks that matter the most from an equity investor’s perspective are those that cannot be diversified away through the holding of a broad portfolio of securities. Risks that are hard to diversify are those that are generally correlated with the level of (and changes in) general economic activity. Such risks are referred to as “systematic.” Broadly speaking, systematic risks associated with the gas distribution business include uncertainties in the demand for, and supply of, distribution services that are affected by changes in economic activity, including incomes, prices and governmental policies including environmental concerns.

I would agree with this assessment that what matters when we look at all these risk factors is how the business and financial risk is priced in the capital market and how it affects investors.

I mention these business risk excerpts to emphasise the difference in the risk assessment of the overall company over an indefinite future to the risk involved in recovering unexpected expenses in a short term deferral account. It is these overall risks that are reflected in the utility’s deemed

common equity ratio, fair ROE and weighted average cost of capital. As HQD and Concentric agree when asked whether they accept Mr. Justice Lamont's definition of a fair return they state (ACQCIE-CIFQ IR # 1.2), that

*"Yes, Concentric accepts that the weighted average cost of capital (WACC) incorporates the risk of the enterprise by weighting the respective required returns on debt and equity in accordance with the Company's deemed capital structure."*⁹

In my judgment the WACC, as confirmed by HQ and Concentric, reflects all the risks that a utility is faced with. In contrast, a short term deferral account does not reflect these enterprise risks. As such, the use of the WACC as a return on a deferral account is not generally acceptable.

Q. IS THE TERM OF THE ASSET IMPORTANT?

A. Yes. Utilities generally argue that they have to have access to long term financing throughout the business cycle, since they need to finance long term assets. This is what is termed the matching principle. For example, in 2006 Enbridge Gas Distribution Inc., argued (EB-2006-0034) that it needed an immediate 3% increase in its common equity ratio, since warmer weather in Ontario had reduced its earnings and precluded it from issuing long term funded debt. This was despite DBRS pointing out that it had ample financial flexibility due to its \$1 billion credit line and ability to issue commercial paper or "unfunded debt".¹⁰

Concentric and HQD seem to agree with the matching principle when they state (ACQCIE-CIFQ IR # 1.5)

"Concentric agrees that it is generally advisable to match the financing term to the life of the asset being financed."

⁹ Quite surprisingly Concentric qualifies this by stating that *"The risks associated with the deferral and variance accounts (DVA) are exposed to the same risks of cost recovery as the rest of Hydro Quebec's rate base."* How the risk of capital recovery of very long term plant and equipment can be compared to the recovery of a short term deferral account is never explained.

¹⁰ EGDI's medium term notes required a 2.0X interest coverage ratio before EGDI could issue more medium term notes and warmer weather caused a drop in demand and lower earnings such that EGDI could not meet this requirement.

Concentric goes on to qualify this, but the fact is the matching principle is a basic principle. As a result, the rate base is usually financed with long term sources of funds unless there are special circumstances. In ACQCIE-CIFQ-IR 1.6 HQD was asked to provide the average useful life of its major equipment classes and except for measuring equipment and distribution posts these ran out to 33 to 40 years. In answer to ACQCIE-CIFQ 1.7 HQD then estimated the weighted average life of its debt as 18-19 years. Consistent with the matching principle HQD has funded long term assets with long term debt. Further on its web page HQ states¹¹ as part of its financing strategy

“Plan bond issuance-in particular, series maturing in 2035, 2040, 2045, and 2055- in order to increase market liquidity.

-these long term bonds are in line with the service life of our property, plant and equipment.”

It is quite clear that HQ follows a matching strategy and also that a five year amortising balance in a deferral account with an average life of about 3 years should not be financed with debt with an average life of 18-19 years and equity with an infinite life. When asked whether the five year deferral has an attractiveness, stability and certainty equal to the company’s enterprise, that is, its physical plant and equipment in ACQCIE-CIFQ IR 1.10, quite amazingly Concentric answered yes. The words “attractiveness, stability and certainty equal to the company’s enterprise” were not arbitrarily chosen, but reflect the legal definition of a fair rate of return in Canada (Mr. Justice Lamont.) as applied to the weighted average cost of capital.

Q. ARE THERE TIMES WHEN THE WACC IS APPROPRIATE FOR WORKING CAPITAL AND TIMES WHEN A DIFFERENT RATE IS APPROPRIATE?

A. Yes. To understand this we have to understand the concept of net working capital (NWC). This is the difference between current assets and current liabilities, but within current liabilities some are referred to as spontaneous. A spontaneous liability is simply an account like accounts payable and accrued wages that automatically increase as a firm continues in business.

¹¹ <http://www.hydroquebec.com/investor-relations/about-financing/objectives-strategies-financing.html>

1 The difference between current assets, things like accounts receivable, cash, inventory etc., and a
 2 firm's spontaneous liabilities then has to be financed. Most of these assets have a high degree of
 3 "moneyness", in that they turn into cash within a year, which is why they are referred to as
 4 current assets. As such they are prime candidates for security under a bank loan. A rule of thumb
 5 is that a bank will finance 100% of cash, 70-75% of a firm's good receivables¹² and 50% of
 6 inventory. Normally this would be under an operating line so that as the current assets turn into
 7 cash they are replaced with new ones to support the debt.

8 For firms that are large enough they can escape the bank by issuing commercial paper. The
 9 advantage being that with a large enough scale and a good credit rating the institution can cut out
 10 the bank spread and lower its financing cost below the bank's prime based lending. It also means
 11 that, within reason, the firm can finance a larger share of its current assets with short term
 12 commercial paper.

13 Within this net financing need, we generally differentiate between permanent working capital
 14 and temporary working capital. Permanent (sometimes called fixed) working capital is the core
 15 working capital that needs to be financed on a continuous basis. Since it is permanent there is an
 16 argument for financing it with permanent funds, such that its cost is the weighted average cost of
 17 capital. This is because although a particular account receivable or item in inventory converts to
 18 cash, it will be replaced by other similar items, so there is a permanent amount outstanding that
 19 needs to be financed.

20 In contrast to permanent working capital, there is temporary working capital. We see this for
 21 example with a retailer that builds up inventory prior to major selling periods such as Christmas
 22 and needs to finance this temporary inventory. It is then hoped that if the sales are good this
 23 inventory gets converted into sales and the inventory and associated accounts receivable
 24 disappear by Spring. It is for this reason that traditionally some firms with seasonal sales time
 25 their year-end to avoid large seasonal working capital appearing on their balance sheet. This
 26 temporary working capital would then be financed through short term bank loans or other forms

¹² That is, not long since passed the due date.

of short term finance with the proviso that there is a clean-up period, so the bank knows it is not financing 100% permanent capital.

Q. HOW DOES THIS RELATE TO A UTILITY?

A. Normally utilities have very little net working capital as the bulk of their assets are property, plant and equipment. For example, at Schedule 1 is the balance Sheet for Hydro Quebec. At the end of 2013 cash and short term investments amounted to about \$3.4 billion, accounts receivable \$2.2 billion, and inventory (materials, fuel and supplies) \$194 million. The other assets are related to derivative contracts with \$1 million in regulatory assets, that is, the net balance in deferral accounts. Offsetting these current assets were accounts payable of \$2.2 billion and accrued interest of \$809 million. The other items are mainly the liability on derivative instruments, and the fact that some of the long term debt comes due for refinancing, as does the dividend to the province.

What is clear is that for Hydro Quebec accounts receivable and inventory (\$2.4 billion) minus payables (\$2.2 billion) is basically a wash at under \$0.2 billion. The bulk of the liabilities are then financing liabilities attached to the interest and dividend payables and the refinancing of long term debt. The Hydro Quebec balance sheet only shows \$23 million of borrowings at year end.

Utilities generally do not have a significant short term financing need to finance receivables and inventory, since they are selling a service, not goods, so inventories are relatively small while for many the merchant function has now been transferred to others.

Q. HOW DOES THIS RELATE TO DEFERRAL ACCOUNTS?

A. Deferral accounts are very similar to temporary working capital. If the forecasts are accurate, the balance in a deferral account should fluctuate around zero. In such cases it is inappropriate to finance such deferral accounts with anything other than short term financing. On the other hand, since the balances should fluctuate around zero, the choice of cost is not a critical factor in ratemaking. However, given the size of Hydro Quebec I would recommend that the balance in deferral accounts be financed using commercial paper.

In Schedule 2 are the bond ratings of Hydro Quebec, where currently its long term debt is rated at A (high) by DBRS and its commercial paper at R1 (mid). These ratings reflect the impact of the provincial guarantee. In total Hydro Quebec is allowed to issue up to US\$ 3.5 billion so it has ample financial flexibility to finance the normal balances in deferral accounts.¹³ The Canadian banks are generally rated very similarly to Hydro Quebec. Their short term paper is referred to as a Bankers Acceptance, since the bank has accepted the liability for commercial paper issued by a firm that could not otherwise sell it in the Canadian money market.¹⁴ In this sense the BA rate is a bank guaranteed commercial paper in the same way that HQ commercial paper is guaranteed by the province.

In Schedule 3 is a graph of the Commercial Paper rate and the rate on Bankers Acceptances over equivalent maturity three month Treasury Bill yields. As is clear the spread is normally about 15-20 basis points, but periodically there is panic in the market as investors refuse to roll over short term debt even that issued by the most credit worthy institutions.¹⁵ Currently Commercial Paper and BA rates are about 1.14% for 30 day notes and 1.17% for 90 day notes. These rates are consistent with the recent (28 August 2014) Hydro Quebec issue of \$1 billion in five year floating rate notes with a yield of 90 day CDOR + 0.14%, where the Canadian Dollar Offered Rate (CDOR) is essentially the overnight rate of 1.0%.

For financing normal deferral accounts I would recommend that the Regie allow the BA rate plus 0.25% as a premium for the cost of the provincial guarantee.

¹³ HQ has credit lines of \$750 million and an authorised credit facility guaranteed by the Province of Quebec of \$2 billion in addition to the \$3.5 billion commercial paper program.

¹⁴ The Canadian money market is very credit sensitive and being investment grade (adequate) is generally not sufficient to access the market to any serious degree.

¹⁵ During the financial crisis even the Canadian banks had some problems, since the crisis emanated from the US banking sector.

1 **Q. WHAT BASIS IS THERE FOR BA+0.25%?**

2 **A.** The cost of a guarantee varies with its maturity. Guaranteeing the financing of a short
3 term deferral account is clearly less risky than guaranteeing a 30 year bond issue. In addition BA
4 +0.25% is the rate allowed by the Ontario Energy Board.

5 In EB-2006-0117 the OEB was faced with the same issues as the Regie. OEB Board Staff
6 proposed the one year Treasury Bill yield updated each quarter as the interest rate on deferral and
7 variance accounts. However, there was some concern that this was an investment rate, whereas
8 the Board should use a borrowing rate, like the BA rate. The Board then calculated that over the
9 period 2001-2006 the average difference between these rates was 0.27%. The Board then
10 rounded this off to BA +0.25%. Since this was for all utilities it is consistent with a 0.25%
11 guarantee premium for HQD short term debt.¹⁶

12 The deferral and variance accounts the OEB applies the BA +0.25% rate to are in Schedule 4.

13 **Q. YOU MENTION NORMAL DEFERRAL ACCOUNTS, WHAT IS AN**
14 **ABNORMAL ACCOUNT?**

15 **A.** Normally the balance in deferral accounts should net out to zero, so the balance is
16 essentially temporary working capital. However, occasionally there are special cases where the
17 balance becomes so large it cannot be allocated to rates for the following year, instead it is
18 amortised over several years. This is the case with the \$380 million balance in the deferral
19 account in question. In these cases, instead of using the BA +0.25% rate I would recommend
20 using the rate equal to the average maturity expected of the deferral balance. In the case of the
21 \$380 million balance with an average maturity of about 3 years, I would recommend a three year
22 rate. The current yield on the three year Government of Canada benchmark bond is 1.13%. To
23 this I would add 0.45% to bring it to an HQD rate of 1.58% or rounding up 1.60%.

¹⁶ Note it is important that the guarantee fee not be applied twice.

1 **Q. IS THERE ANY SUPPORT FOR SUCH AN APPROACH?**

2 **A.** Yes. In RH-3-2011 the National Energy Board had to consider the implications of the
 3 dramatic decline in throughput on the TransCanada Mainline. The Canadian Association of
 4 Petroleum Producers (CAPP) suggested that the NEB allow a toll stabilisation account (TSA)
 5 where the revenue shortfalls from low throughput and a fixed toll would be put into this medium
 6 term deferral account and then drawn down as throughput recovered, as TransCanada forecast it
 7 was to do. CAPP hired experts that forecast the balance of this account would peak at about \$250
 8 million, would not be excessive relative to the Mainline's debt, or be deferred for a long period
 9 of time. On this basis, and on behalf of CAPP, I recommended that the Mainline be allowed a
 10 medium term borrowing cost of 2.5% on the balance in this account.

11 The NEB accepted the bulk of CAPP's proposal, but allowed the Mainline's WACC as the cost
 12 of financing the balance in the TSA deferral account. This was because the NEB judged the risk
 13 of the TSA balance as equivalent to the risk of the recovery of the throughput on the Mainline,
 14 since without that recovery the TSA balance would not zero out. Essentially the NEB judged this
 15 to be a non-normal deferral account, since in RH-3-86 it had allowed a cost that approximated
 16 the utility's probable cost of financing the deferral account.¹⁷

17 **Q. WHAT IS YOUR CONCLUSION FROM THESE DECISIONS?**

18 **A.** The message is that the carrying cost of deferral accounts has to match the underlying
 19 nature of the account. This is essentially the Regie's policy of being flexible, since not all
 20 deferral accounts are equal. Normal deferral accounts should zero out on average and justify the
 21 OEB's policy of BA +0.25%, while special deferral accounts should have a carrying cost
 22 appropriate to the underlying risk of capital recovery. In the case of the TransCanada TSA the
 23 NEB judged this risk to be the same as TransCanada's underlying business risk, since it relied
 24 heavily on TransCanada's throughput forecast to zero out. In the same light the New Brunswick
 25 Power deferral account referred to by the company (HQD-3 Document 3, page 11) and

¹⁷ The Mainline has now reached a settlement that is before the NEB (December 2013) that eliminates the TSA.

(ACQCIE-CIFQ IR 2.4) refers to a \$1.036 billion recovery incurred over a six year period from 2008-2013 that extends the useful life of the Point LePreu nuclear power plant. I would have thought it obvious that such expenditures bear the same risk as the business risk of the nuclear plant and would have recommended the utility cost of capital and not a BA +0.25% rate.¹⁸

Consequently, I would recommend the following:

- Normal deferral accounts be allowed BA+0.25%
- Special deferral accounts be allowed a return that reflects:
 - The expected term of the account
 - The risk of non-recovery
 - What has given rise to the account
 - Materiality of the account

Q. WHAT ABOUT HQD’S ARGUMENT THAT NOT ALLOWING WACC MEANS A VIOLATION OF HQD’S DEEMED COMMON EQUITY RATIO AND ADVERSELY AFFECTS THE SHAREHOLDER?

A. There is no validity to such a charge as a utility’s common equity ratio always differs from that deemed, whenever there is any financing of assets not currently in rate base. As Concentric agrees (ACQCIE-CIFQ IR 3.1)

“The equity ratio will diverge from the deemed equity ratio when incremental debt or new equity financing is arranged for the increase in assets out of rate base. The amount of change would depend on the amount of the financing.”

The deemed common equity ratio is a target rate and the amount of additional risk to the equity holder imposed by the deemed debt ratio depends on whether the change is permanent. In contrast, it is the nature of deferral account balances that such changes are either temporary or short term. Consequently, there is no additional risk to the common shareholder and no possible loss.¹⁹

¹⁸ Note the NB EUB allowed the recovery of a debt return, since it is a publicly owned.

¹⁹ Note the OEB canvassed stakeholders and specifically mentions that the gas utilities’ comments on the OEB staff proposal “were supportive of proposals regarding the use of market-based rates and quarterly updates of these rates.”

1 Finally HQD argues that the balances in deferral accounts are similar to other assets financed by
2 the utility cost of capital, such as vehicles and accounts receivable (HQD-3, Document 3, page
3 16). However, this statement is only partly correct. The vehicles and receivables in rate base are
4 a small component and essentially financed by similar payables, so it is the net that is financed
5 by the WACC. Further, these assets are not constant, receivables are constantly being replaced as
6 they turn over, as are company vehicles as they come off lease,²⁰ so an argument can be made
7 that these are permanent components of working capital. However, normal deferral accounts
8 balance out to zero, while special ones are simply that: special.

9 As a final comment if the shareholder feels that being allowed a debt carrying charge on deferral
10 accounts does not satisfy the fair return standard then there is a simple remedy: they can sell or
11 factor the receivable. \$380 million is a significant amount of money and I am sure HQD could
12 sell this receivable to a financial institution or securitise it. In Schedule 5 is the composition of
13 the Canadian money market prior to the financial crisis, starting in 2007. Of interest is that 30%
14 of the market was composed of special purpose vehicles (SPV) containing auto loans and leases
15 and trade receivables. These SPVs were invariably rated R1 (high) and simply conduits for the
16 issue of commercial paper. That is, the assets were purchased from companies and their purchase
17 financed by the sale of commercial paper generally rated R1 (high). This market is not as active
18 as it was in 2007 due to problems in the United States, but HQD could investigate selling the
19 \$380 million deferral account balance to a financing vehicle. This would remove the balance
20 from rate base and make it clear that there is no impact on the common shareholder. If need be
21 the Regie could allow a short term rate rider for added assurance of recovery.

22 **Q. DOES THIS COMPLETE YOUR TESTIMONY?**

23 A. Yes.

²⁰ I don't know whether HQD finances such vehicles through leases, the way most companies do, and then charges the ratepayer the higher cost of capital.

Schedule 1**HQ Balance Sheet****CONSOLIDATED BALANCE SHEETS**As at December 31
In millions of Canadian dollars

	Notes	2013	2012
ASSETS			
Current assets			
Cash and cash equivalents	16	1,695	2,183
Short-term investments		1,689	609
Accounts receivable and other receivables	16	2,177	1,911
Derivative instruments	16	883	1,052
Regulatory assets	2	1	16
Materials, fuel and supplies		194	178
		6,639	5,949
Property, plant and equipment	8	59,077	57,174
Intangible assets	9	2,323	2,241
Investments	10	146	134
Derivative instruments	16	659	1,269
Regulatory assets	2	8	10
Other assets	11	4,258	3,731
		73,110	70,508
LIABILITIES			
Current liabilities			
Borrowings		23	19
Accounts payable and accrued liabilities		2,229	2,069
Dividend payable	18	2,207	645
Accrued interest		890	835
Asset retirement obligations	12	118	178
Derivative instruments	16	576	663
Current portion of long-term debt	13	1,157	694
		7,200	5,103
Long-term debt	13	43,067	42,555
Asset retirement obligations	12	834	774
Derivative instruments	16	1,295	1,816
Other liabilities	14	1,067	1,003
Perpetual debt	15	253	275
		53,716	51,526
EQUITY			
Share capital	18	4,374	4,374
Retained earnings		15,568	14,833
Accumulated other comprehensive income		(548)	(225)
		15,020	14,608
		19,394	18,982
		73,110	70,508
Commitments and contingencies	22		

The accompanying notes are an integral part of the consolidated financial statements.

On behalf of the Board of Directors,

/s/ Jacques Leblanc
Chair of the Audit Committee/s/ Pierre Karl Péladeau
Chairman of the Board

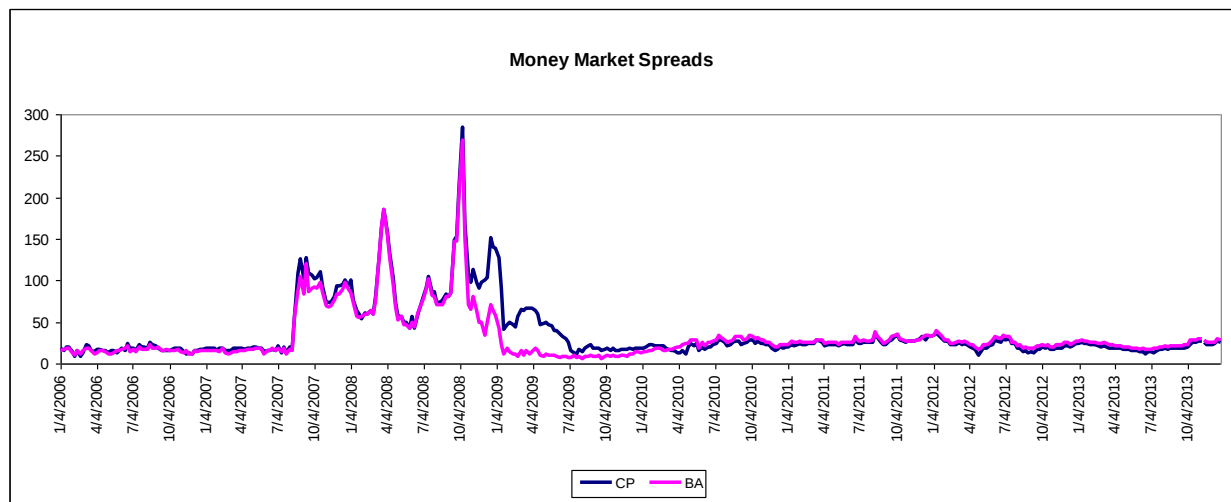
*Schedule 2***Hydro Quebec Bond and Commercial paper ratings****Long-term debt**

Year	Moody's	Standard & Poor's	Fitch Ratings	DBRS
2013	A-2	A-	AA-	A (high)
2012	A-2	A-	AA-	A (high)
2011	A-2	A-	AA-	A (high)
2010	A-2	A-	AA-	A (high)
2009	A-2	A-	AA-	A (high)
2008	A-2	A-	AA-	A (high)
2007	A-2	A-	AA-	A (high)
2006	A-3, A-2	A-	AA-	A (high)
2005	A1	A-	AA-	A
2004	A1	A-	AA-	A

Commercial paper

Year	Moody's	Standard & Poor's	Fitch Ratings	DBRS
2013	P-1	A-1+	F1+	K-1 (middle)
2012	P-1	A-1+	F1+	K-1 (middle)
2011	P-1	A-1+	F1+	K-1 (middle)
2010	P-1	A-1+	F1+	K-1 (middle)
2009	P-1	A-1+	F1+	K-1 (middle)
2008	P-1	A-1+	F1+	K-1 (middle)
2007	P-1	A-1+	F1+	K-1 (middle)
2006	P-1	A-1+	F1+	K-1 (middle)
2005	P-1	A-1+	F1+	K-1 (low)
2004	P-1	A-1+	F1+	K-1 (low)

<http://www.hydroquebec.com/investor-relations/about-financing/credit-ratings.html>

Schedule 3

Schedule 4**OEB DEFERRAL ACCOUNTS ATTRACTING BA + 0.25%****Variance and Deferral Accounts**

1508	Other Regulatory Assets
1508	Other Regulatory Assets - Sub-account OEB Cost Assessments
1508	Other Regulatory Assets - Sub-account Pension Contributions
1518	Retail Cost Variance Account - Retail
1525	Miscellaneous Deferred Debits
1525	Miscellaneous Deferred Debits, Sub-account Payments to Customers
1548	Retail Cost Variance Account - STR
1550	LV Variance Account
1555	Smart Meter Capital and Recovery Offset Variance Account
1556	Smart Meter OM&A Variance Account
1562	Deferred Payments in Lieu of Taxes
1563	PILs contra account
1572	Extraordinary Event Losses
1574	Deferred Rate Impact Amounts
1580	Retail Settlement Variance Account - Wholesale Market Service Charges
1582	Retail Settlement Variance Account - One-time Wholesale Market Service
1584	Retail Settlement Variance Account - Retail Transmission Network Charges
1586	Retail Settlement Variance Account - Retail Transmission Connection Charges
1588	Retail Settlement Variance Account - Power
1588	RSVA Power - Sub-account Global Adjustments
1590	Recovery of Regulatory Asset Balances
1592	2006 PILs and Taxes Variances
2425	Other Deferred Credits

Schedule 5

1

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Table 8: Securitization Outstandings by Seller Type

(\$ millions)	Dec. 2006	Dec. 2005	Dec. 2004	Dec. 2003	Dec. 2002	Dec. 2001	Dec. 2000
Multi-seller	103,851	80,799	61,925	58,639	55,821	51,486	49,996
Single-seller	2,848	3,188	3,513	4,629	7,792	9,812	9,586
Total short-term	106,699	83,987	65,438	63,268	63,613	61,298	59,582

Table 9: Market Share of Top Five Asset Classes

	Structured Financial Assets (CDO)	Auto Leases & Loans	Residential Mortgages	Equipment leases & loans	Trade receivables
December 2006	28.5%	25.2%	20.2%	5.9%	4.8%
December 2005	19.5%	24.6%	22.2%	7.6%	6.4%