INFORMATION REQUEST NO. 1 FROM THE RÉGIE DE L'ÉNERGIE (THE RÉGIE) TO IGUA: APPLICATION FOR RENEWAL OF INCENTIVE MECHANISM, REGULATORY CLOSING OF THE BOOKS FOR THE PERIOD OF JANUARY 1, 2009 TO DECEMBER 31, 2009, APPROVAL OF SUPPLY PLAN FOR FISCAL 2011, AND CHANGES TO GAZIFÈRE INC.'S RATES AS OF JANUARY 1, 2011

PHASE 2 - RETURN ON EQUITY

1. Documents:
(i) IGUA Exhibit C-2-13, Dr. Booth's evidence, page 64;
(ii) IGUA Exhibit C-2-13, Dr. Booth's evidence, page 65;
(iii) IGUA Exhibit C-2-13, Dr. Booth's evidence, page 66;
(iv) IGUA Exhibit C-2-13, Dr. Booth's evidence, page 67.

Preamble:

(i)

Q. SO DO YOU RECOMMEND A 75% ROE ADJUSTMENT AND A 50% SPREAD ADJUSTMENT?

A. *Of the alternatives this is the best for several reasons. First, Bank of Canada researchers have indicated that for investment grade bonds most of the yield change (63%) was due to liquidity changes rather than changes in default risk, which indicates that only 37% of the change in the yield spread may be due to default risk that might be linked to changes in the equity market. Consequently, although I judge 50% to be marginally excessive, I can accept this as it evens out over the business cycle.*

So if we accept the NEB's judgement that its formula ROE was working fine in 2001, we have the following ROE adjustment formula (Booth1):
ROE = 9.90% = 6.12% + 0.75(LTC Yield -6.12%) + 0.50*(Spread – 0.94%)*

This uses the data for 2000 in McShane Schedule 28 and was clearly a time when not just the NEB but every other board in Canada accepted the ROE adjustment formula as giving fair and reasonable ROEs; in fact the AEUB had yet to have its generic ROE hearing that mimicked the NEB formula. The 2000 date also has three advantages:

1. The yield spread of 0.94% was approximately normal. Since 1980 the A spread using Scotia Capital's index has averaged 104 bps, which is biased slightly high due to the unprecedented levels of the last two years.

2. As long as the Bank of Canada sticks to its 1.0-3.0% inflation forecast I would anticipate that the LTC yield will average about 5.50%. This is consistent with my forecast of 4.5% for next year as the economy recovers and then some normal over shooting as the economy peaks.

3. The date is shortly after the Regie's decision on Gazifere in 1999.

(ii)
Q. WHERE CAN THE REGIE GET THE YIELD SPREAD DATA?
A. *As far as I am aware there are no publicly available sources of yield spread data. This was the main reason why the use of yield spreads was rejected by the AEUB in 2004. Ms. McShane recommends the use of PC Bond which has the Scotia Capital yield data. However, if the Board or its experts has access to a Bloomberg terminal they can download series C29530Y, which is the 30 year A rated yield that Bloomberg estimates for Canadian utilities and is used by the OEB in their new ROE formula. The OEB then also uses Cansim series V39056 for the LTC yields. The same series can also be used to backfill to 2001.*

(iii)
I would recommend that if the Regie decides to change its formula ROE to avoid the need for the sorts of additions that were made by boards last year then it use a formula like Booth1, which mimics the performance of the NEB's ROE formula at a time when similar formulae were judged to be giving fair and reasonable ROEs. This formula also "corrects" for the behaviour of the ROE formula during recessions when corporate spreads and utility borrowing costs increase.
Over the whole of the business cycle I would anticipate that this would change the ROE from the Regie's existing formula in range of about 63 bps, since I would expect the normal range of the A spread to be from 50 to 175 bps. However, in my judgement this formula marginally overstates the fair ROE and should be recalibrated. This would mean a reduction of about 50-100 bps in the intercept. (emphasis added)

(iv)
Q. WHAT WOULD THIS MEAN FOR GAZIFERE?
A. *A new formula based on the 1999 decision would be as follows:*
ROE = 10% + 0.75 (LTC yield forecast – 5.70%) + 0.50 * (Spread – 0.99%)*

These are the data involved in Gazifere's last fair ROE determination where from Ms. McShane's Schedule 28 she has the corporate spread at that time as 99 bps. Obtaining a forecast spread is very difficult, but the current utility spread is about 130 bps so with my LTC forecast yield of 4.50% the new formula would give a fair ROE of 10.0% + 0.75(4.50-5.70) + 0.50* (1.30-.99) or 9.25%. The decline in the LTC yield would cause the fair ROE to drop by 0.90% while the increase of 31 bps in spreads would cause an offset of 15 bps. Compared to the Regie' decision last year where Gaz Metro was awarded a 0.25-0.55% addition to the ROE due to the crisis, the addition resulting from the new formula would only be 15 bps reflecting the stabilisation in financial markets that has occurred since then. However, as I have indicated before I consider this formula in need of some rebasing as I judge the result to be above a fair and reasonable ROE.* (emphasis added)

Requests:

1.1 Regarding the Booth1 formula, please provide available historic data covering several economic cycles (going back to at least 1960, if possible), in Excel format, on Canadian long-term bond yields for: corporate bonds rated A on the Scotia Capital index referred to in Document (i), bonds issued by regulated Canadian companies rated A on the Bloomberg index referred to in Document (ii), and Canadian federal government bonds with the same maturity (10, 20 or 30 years). Please calculate and provide the yield spreads, the average yield spread and the standard deviation for the entire period. Please provide a chart showing the yield spreads and the average historic spread for the entire period, and indicate the range defined by plus or minus 1 and 2 standard deviations.

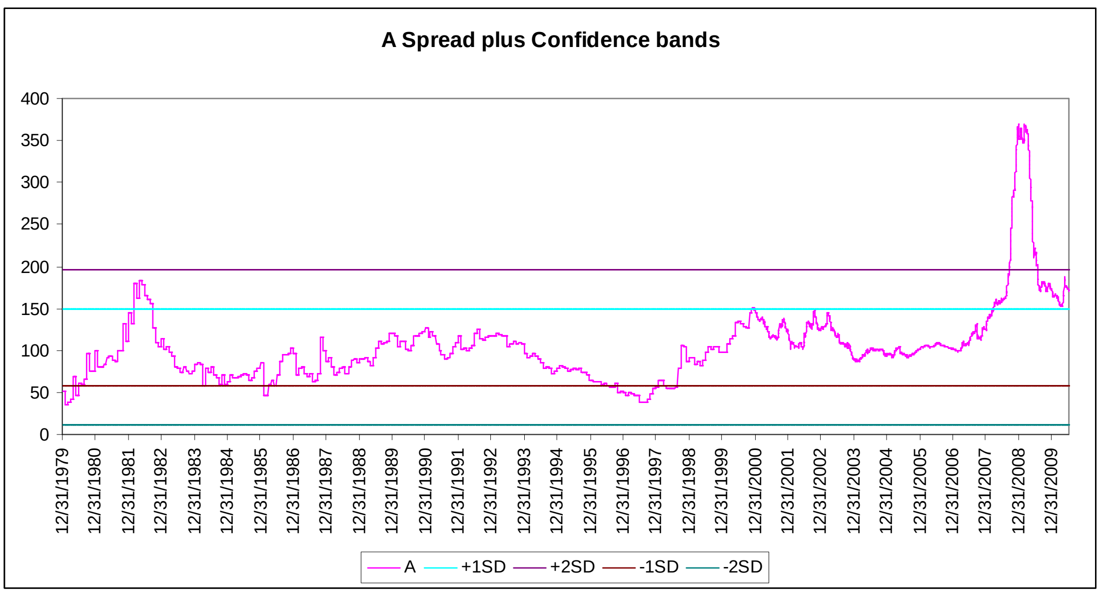
1.2 Please explain and comment on the volatility and evolution of the yield spread on A-rated long-term Canadian corporate bonds and the yield spread on A-rated long-term bonds issued by regulated Canadian corporations, covering the various economic cycles and during the 2008-2009 financial crisis.

1.3 Please explain your recommendation to use 0.94% as the average yield spread on A-rated long-term Canadian corporate bonds in your formula in Document (i).

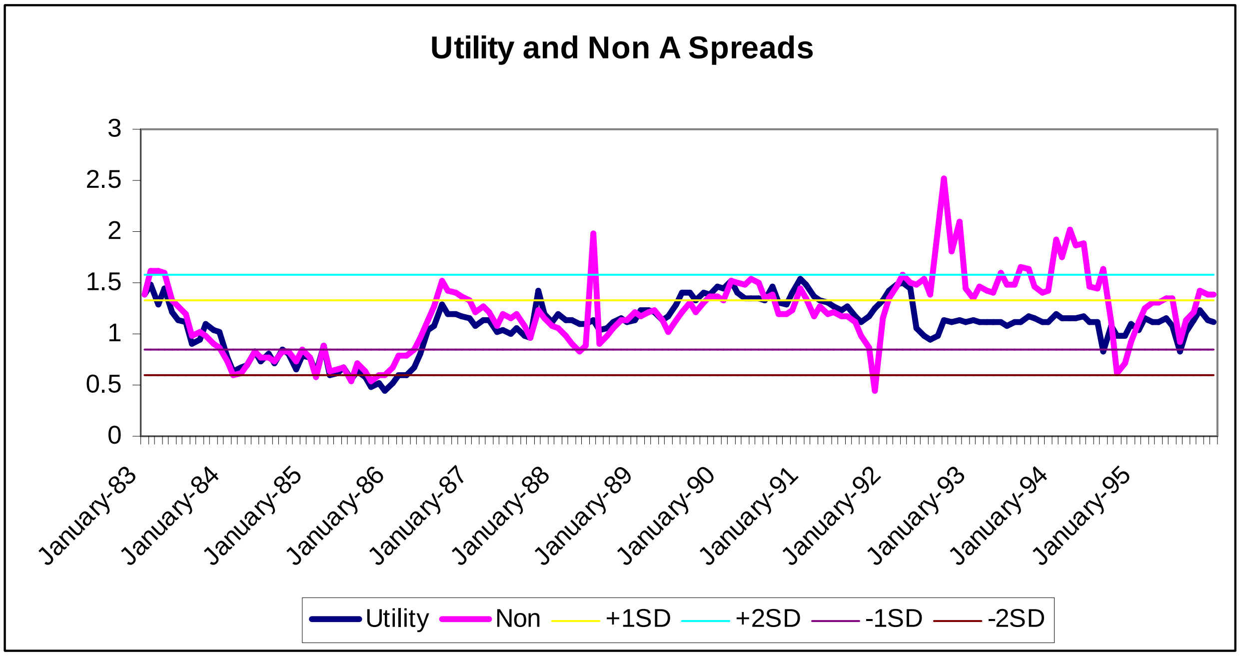
1.4 Please explain the methodology used to calculate the Bloomberg index referred to in Document (ii). Please provide the names of the companies included in the index.

1.5 Is the Régie to understand from the underlined passages in the quotes from Documents (iii) and (iv) above that the current ROE should be reduced and replaced by the result of your formula in Document (iv)? Please clarify.

1.1 An Excel spread sheet with the data is attached as Booth Regie answer 1.1. Note that Utility data is not available as far back as requested Dr. Booth has provided some data that CBRS used to provide before it was taken over by S&P and the available Bloomberg data. The chart of A spreads plus the confidence bands of the average spread plus and minus 1 and 2 standard deviations follows.

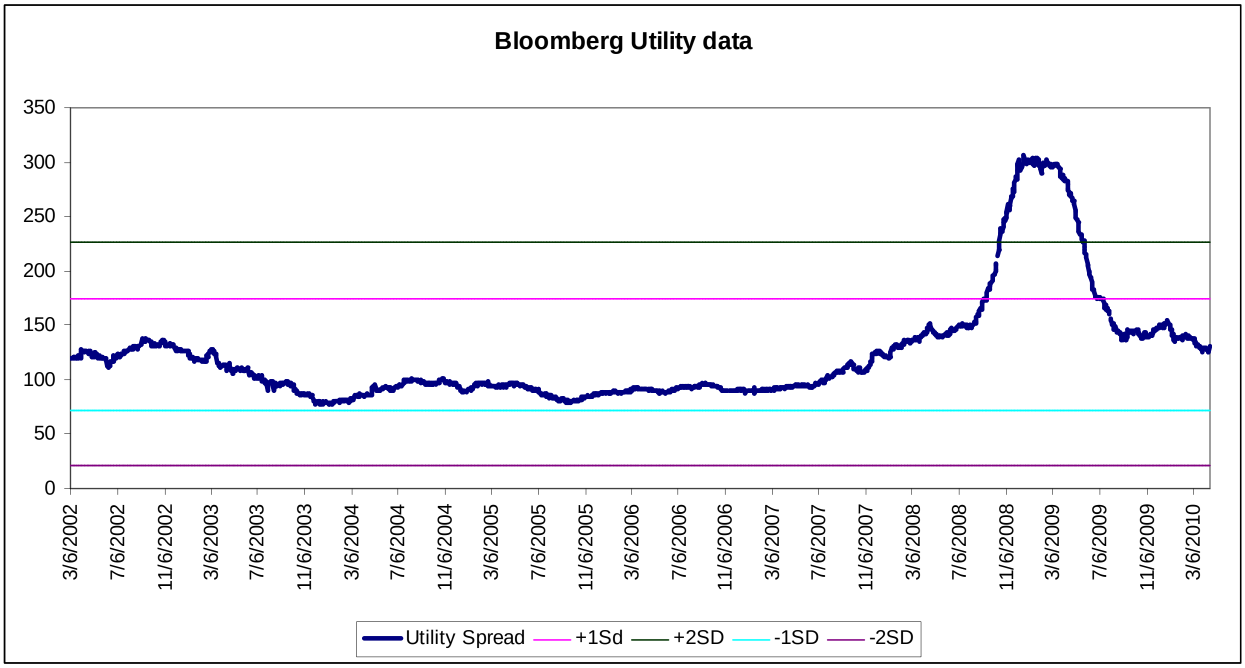


The average A spread was 104 bps with a standard deviation of 46bps for a 1 SD range of 92 bps and a 2 SD range of 184 bps.
The CBRS data from 1983-1995 shows the following:



The average utility spread was 109 bps and the non-utility spread 120 bps. The SD was 25 bps since it does not include the impact of the 2008/9 financial crisis.

The Bloomberg data goes back to 2002 and has the following spread history with an average spread of 123 bps and standard deviation of 51 bps, both are high since the impact of the financial crisis is weighted more heavily.



1.2 The yield spread varies with the business cycle even for utilities since part of the spread change is due to liquidity changes and part increased risk of default. In the longer history for the Scotia McLeod series the impact of the recession in the early 1980s is evident as the spreads increased to approach a two sigma (2 standard deviation) event. The increased spreads in the early 1990s recession is also evident as is the slowdown in the early 2000s. However, the financial crisis of 2008/9 is clearly outside if any reasonable range and is almost a 6 Sigma event (369-104)/46 = 5.77)

1.3 That recommendation is based on the average spread consistent with the determination of the fair ROE using the NEB formula ROE. The assumption is that when the NEB reviewed its ROE formula and assessed the ROE as being fair it was within the context of a yield spread of about 94 bps. The 2005 ROE of 9.46% Dr. Booth also regards as a good starting point since it is consistent with the timing of other reviews including the Regie's in 2007. It has the advantage of having values for the LTC yield forecast of 5.55% and A spread of 0.96% closer to what Dr. Booth would regard as long run averages consistent with the Bank of Canada's 1.0-3.0% operating range.

1.4 A screen shot of the firms currently in the index follows (composition is constantly changing):

GRAB Corp **BFVC**

Hit <PAGE> for more info or <MENU> for a list of curves

Sector 295 Canada Utility (A) Type: Can$ Domestic Page 4 of 5

Ticker:C295.. Curve freq: 2 Last fit to close: 5/10/10 11:16 ET

	TICKER	CPN	MATURITY	PRICE	BFV	OPT	YIELD	OAS	PX DIFF
A 1)	ENB	5.160	12/04/2017		105.74				
X 2)	SE	8.650	10/19/2018		130.05				
3)	CUCN	5.432	1/23/2019	108.17	106.92	0.00	4.30	-16.82	-1.25
A 4)	GZM	4.930	6/18/2019		102.89				
A 5)	IPLUCN	4.897	2/03/2020		102.02				
6)	GZM	5.450	7/12/2021	106.32	105.70	0.00	4.71	-6.98	-0.61
A 7)	ENB	4.770	12/17/2021		99.26				
8)	CUCN	9.400	5/01/2023	144.38	143.22	0.00	4.77	-9.73	-1.16
9)	ENB	6.050	7/05/2023	109.50	110.32	0.00	5.05	8.22	0.82
A10)	CUCN	6.215	3/06/2024		111.60				
A11)	ENB	9.850	12/02/2024		149.63				
A12)	ENB	8.850	10/02/2025		139.76				
13)	ENB	6.650	11/03/2027	115.31	116.14	0.00	5.30	6.83	0.83
A14)	CUCN	5.563	5/26/2028		103.25				
15)	FTSCN	6.950	9/21/2029	119.00	120.05	0.00	5.36	7.99	1.05
16)	HYDONE	7.350	6/03/2030	123.65	125.21	0.00	5.41	11.37	1.56
17)	HYDONE	6.930	6/01/2032	119.98	121.09	0.00	5.37	7.83	1.11
18)	ENB	6.900	11/15/2032	120.55	120.96	0.00	5.32	2.81	0.40
19)	GZM	6.300	10/31/2033	112.45	113.22	0.00	5.36	5.48	0.77
20)	ENB	6.160	12/16/2033	111.18	111.39	0.00	5.32	1.46	0.20

Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2010 Bloomberg Finance L.P.
SN 731224 H434-106-0 10-May-10 11:30:14

GRAB Index **DES**

BFV CAD Canada Utility (A) 30 Year

Graph Type

Index Information

Ticker	C29530Y Index
Quoted	Yield Mid
Frequency	Intraday
Update Status	Latest data available from the source
Currency	CANADIAN DOLLAR
Last Update	05/07/10
Trading Day	24 HR. MARKET
Source	Bloomberg Fair Value
History	Close Only
Begins	03/05/02 Daily

Price Graph

Index Notes

Fair market value indices are derived from data points on Bloomberg's option free fair market curves. To view the underlying curve and securities type, <CORP> BFVC 295. The yield at each maturity point represents the composite yield of securities around that maturity.

Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2010 Bloomberg Finance L.P.
SN 731224 H434-106-1 10-May-10 11:28:56

The yields are not simple averages but created by a proprietary Bloomberg "fair market value" curve that removes the impact of outliers since many of the bonds do not trade on a daily basis. A brief description follows.

Bloomberg Fair Value Curves: The Bloomberg Fair Value Canada 30-Year A-rated Utility (C29530Y) curve is a yield curve based upon the yields and maturities of Canadian dollar-denominated fixed-rate bonds, issued by Canadian utility companies, with ratings of A+, A, A- from S&P, Moody's, Fitch and/or DBRS. The index is not comprised solely of 30-year bonds, but rather is "derived" using an optimization model that solves simultaneously for all yields and maturity points in constructing the term structure of Canadian A-rated utility bond Issuances to best fit the existing bond yield data. The bond yields and maturities listed below serve as inputs to the optimization model and cannot be traced directly to the curve, i.e. the specific points on the curve are derived from the optimization model and do not correspond to any specific bond yield. The yields are from the secondary market (not new issues), thereby eliminating the ability of an issuing company to skew results. The same group of bonds is used to derive the Canadian Utility A-rated bond index for each maturity category. As each of the bonds rolls down the curve, new longer maturities are added. The Bloomberg 30-Year Canadian Corporate A-rated curve is derived similarly (C28730Y).

1.5 There are many definitions of "fairness." In fulfilling Dr. Booth's mandate he has derived an estimate of the fair ROE for Gazifere from first principles, which is his recommendation of 8.50% for 2011. This estimate includes a 0.50% premium to reflect the impact of the financial crisis. However, fairness also is with respect to what other similar utilities have been allowed in Canada. Consequently Dr. Booth extended the NEB formula which has been in operation since 1995 by adding a 50% adjustment to "A" spread changes. This adjustment would have alleviated the need for many of the changes made in 2009 to adjust to the financial crisis. When a similar process is applied to Gazifere it results in a 9.25% fair ROE. Dr Booth would regard this as at the very top of a fair and reasonable range at 75 bps higher than his first principles recommendation of 8.50% and above a fair and reasonable ROE if the 0.50% crisis premium is removed from Dr. Booth's recommendation.

2. Document: IGUA Exhibit C-2-13, Dr. Booth's evidence, page 73.

Preamble:

ARE THERE OTHER FACTORS DEPRESSING BOND RATINGS IN THE US?

Yes. S&P has been concerned for sometimes that US regulators have not protected US bond holders from corporate M&A activity and raids by poorly rated parent or holding 6 companies. This was a feature of the late 1990s when many local telephone companies either took over or were taken over by Internet companies and were subsequently downgraded. In response, S&P implemented a policy that the credit rating of a regulated telecom cannot be higher than the credit rating of its parent. For non-telecom utilities S&P states.

The balance sheets of the U.S. companies in the Gazifère expert's sample show significant liabilities related to pension plans, other fringe benefits and medical plans. These corporate commitments and the risks associated with inability to cover these large liabilities are a major factor in many bankruptcies.

Requests:

2.1 Please explain whether calculating the equity ratio or capitalization ratio of U.S. companies using only equity and debt, without taking into account significant liabilities such as those related to pension plans and medical plans, gives an accurate picture of the financial risk of the U.S. companies in the Gazifère expert's sample. Please comment.

2.2 To your knowledge, are there any empirical studies showing the effect of significant liabilities, such as those related to pension plans and medical plans, on the credit rating and borrowing power of U.S. companies? If so, please identify the studies and file their main conclusions.

2.1 Generally Dr. Booth would recommend that these liabilities be treated in a consistent manner across the two samples, so they are either excluded in both or included in both. On matters of principle, Dr. Booth would only include existing contractual liabilities as debt. As a result, Dr. Booth would not include most medical expenses since for most companies these can be renegotiated if the firm gets into financial difficulties, so they are closer to preferred shares than debt. For pension liabilities generally only current service and plan assets are included, but the true liability depends on both the actuarial assumptions and the proportion of the liability that is to actual retirees and thus contractual. The current pension liability for young companies is often to workers who won't retire for a long period of time and where the pension liability can still be renegotiated.

2.2 Dr. Booth is not aware of any recent empirical studies in academic journals. This was an issue in the early 1980's after the passage of ERISA in the US. Of course these liabilities were a huge factor in the bailout of General Motors and Chrysler in the United States last year, but generally these liabilities only become a significant factor when companies get close to bankruptcy.

3. Document: IGUA Exhibit C-2-13, Dr. Booth's evidence, page 89.

Preamble:

Q. ISN'T THE 40% JUSTIFIED BY GAZIFERE'S SMALL SIZE?
A. *No. It is undoubtedly true that smaller firms face more financial constraints. However, the stand alone principle does not justify passing on these higher costs to consumers. Regulation of public utilities is designed to reap the benefits of competition without the exercise of monopoly power from decreasing long run costs. In my judgment Gazifere would have a short life expectancy were it to be an independent utility: it would quickly be taken over by a larger utility able to reap these economies of scale. The record of the disappearance of most publicly owned utilities in Canada supports this prediction.*

Of importance is that some of these economies of scale are financial, in that larger firms can access the public markets on better terms. I therefore would expect Gazifere to only incur the *financial costs of a larger entity in a competitive market. To allow the higher costs of a smaller utility to be passed on to consumers is then to pass on costs that are not justified in a competitive market. In this way I disagree with the statements made in GI-31 Doc 1.3, where Gazifere's debt cost is listed as 7.53% or a 5.45% premium over the 5 year Canada yield with 0.20% of this borne by its parent and the rest allocated to customers. I regard this as unfair and unreasonable and would recommend that the Regie only allow Gazifere the cost actually incurred by its parent and mirrored down to Gazifere through inter corporate loans.*

On March 5 Enbridge raised 9 year debt at 4.53% or a 109 bps spread over Canadas, while on April 10, 2010 its long term debt was 5.26% or about a 125 bps spread over long Canadas. Charging customers a spread of 5.25% when its parent Enbridge is only incurring spreads of 109-125bps is essentially transfer pricing funds to its parent at the expense of consumers.

As a benchmark I would point out that the OEB applies the same long term bond cost to all the electric distribution companies regardless of size. In EB2009-0084 (page VIII) this rate was described as the forecast LTC yield plus the average spread between A rated utility debt and LTC yields at the time of the calculation.

Requests:

3.1 Please elaborate on your statement that "the stand alone principle does not justify passing on these higher costs to consumers. Regulation of public utilities is designed to reap the benefits of competition without the exercise of monopoly power from decreasing long run costs."

3.2 Are there other regulators aside from the OEB that determine the cost of debt using a benchmark bond and not the standalone principle, while using the standalone principle to set ROE? Please provide references and explain the differences, if applicable.

3.1 The economic motivation for regulating natural monopolies is that underlying economic forces propel the institution to get larger to reap scale economies until there is one firm in the market. However, without regulation this firm would then abuse its position and charge prices above marginal cost generating poor market signals and allocation of investment. As a result the natural monopolist is regulated or taken under state control. In this model small firms die off due to competition and the fact they can not compete with larger firms. What generates these scale economies are a variety of factors including access to capital. The economic theory of regulation then does not suggest that small regulated firms be protected from market forces by forcing consumers to pay their higher average costs when these firms would die off in a competitive market. Such a philosophy runs against the central idea of generating the scale economies of the monopolist and the efficient pricing of a competitive firm.

3.2 Dr. Booth is only aware of the OEB's decisions, since as far as he is aware this only became an issue at the OEB due to provincial regulatory changes to the electric distribution market from municipal electric utilities (MEUs) to private corporations. When this changeover was made the OEB found itself regulating large numbers of small and medium sized electric

LDCs that were previously MEUs. These were operating with a variety of different financial structures.

4. Documents: (i) IGUA Exhibit C-2-13, Dr. Booth's evidence, appendix B, schedule 1, page 15;

(ii) IGUA Exhibit C-2-13, Dr. Booth's evidence, appendix B, schedule 10, page 25.

Preamble:

Historical yield data.

Requests:

4.1 Please provide, in Excel format, the data used to calculate historic Canadian yields in Document (i).

4.2 Please provide, in Excel format, the data used to calculate historic U.S. yields in Document (ii).

4.1 Data attached in a single excel file as booth answer to Regie 4.