REPONSES DE GAZIFERE INC. AUX DEMANDES DE RENSEIGNEMENTS N° 1 DE L'ACIG (DR. BOOTH) DEMANDE RELATIVE AU RENOUVELLEMENT DU MECANISME INCITATIF, A LA FERMETURE REGLEMENTAIRE DES LIVRES POUR LA PERIODE DU 1ER JANVIER 2009 AU 31 DECEMBRE 2009, A L'APPROBATION DU PLAN D'APPROVISIONNEMENT POUR L'EXERCICE 2011 ET A LA MODIFICATION DES TARIFS DE GAZIFERE INC. A COMPTER DU 1ER JANVIER 2011

PHASE 2 – TAUX DE RENDEMENT

Information requests of Gazifere

IR #1

a) Please indicate whether in Gazifere's 1998 evidence the company requested an automatic ROE adjustment mechanism and whether it recommended a 75% adjustment to forecast long Canada bond yields (please include relevant sections of the evidence).

Réponse 1 a):

Yes. A copy of Ms. McShane's evidence in that proceeding is attached as GI-31, document 1.4.

b) Please provide the allowed and earned return on common equity (ROE) for Gazifere for each year since Decision D-99-09 when it was placed on an automatic adjustment mechanism. The actual ROE should be before and after the impact of any performance based regulation (PBR) and sharing mechanisms.

Réponse 1 b):

Please refer to exhibit GI-31, document 1.1, page 1.

c) Please discuss in detail the variation of actual from allowed ROE noted in (a) above both before and after any PBR adjustments, particularly for any deviations greater than 1%.

Réponse 1c):

See response to question 1d) below.

d) Please discuss any trend noted in a) over time and whether in Gazifere's judgment it has become more or less difficult for the company to earn its allowed ROE.

Réponse 1d):

There is no trend for the period between 1999 and 2005. The results for this period are a function of actual revenues and costs within each of the test years. Gazifère has not gone back to the financial results for each of the years to establish the drivers for deviations from the allowed return. Gazifère submits that this would be a substantial exercise that cannot be accomplished within the available resources.

Gazifère has been operating under a CPBR regime from 2006 through 2009. A trend of actual returns gradually increasing as compared to the allowed return in the first three years of the CPBR term and leveling off in 2009 can be observed for this period. This trend in a CPBR environment is not unusual. The rationale behind a CPBR regime is to provide an incentive to the utility to reduce costs versus the annual distribution revenue requirement envelope determined by the CPBR formula. If the utility is successful in doing so, then actual returns will be higher than allowed returns. The utility gets to retain a portion of the over-earnings, which is the incentive the utility aims to realize within the CPBR term. The return may gradually increase over the term as the utility is able to carry forward the cost savings.

While the incentive of the CPBR regime is to earn a higher than allowed return, the risks are also higher. Please see response to question 7.3 in exhibit GI-31, document 2.

IR#2

a) Please provide copies of all security analyst reports that discuss Gazifere since January 1999.

b) Please provide copies of all presentation materials provided to DBRS and any other rating agency that significantly discuss Gazifere's business risk and its impact on its parent's bond rating.

c) Please provide copies of any credit analyst reports that discuss Gazifere's contribution to its parent's bond rating since 1999.

d) Please provide copies of all material change reports or other filings that Gazifere's parent has filed with any securities regulators indicating that the business risk of Gazifere has changed since 1999.

Réponse 2 a) à d):

Neither Enbridge Inc. nor Gazifère is aware of any such reports. While Enbridge Inc. may have included mention of Gazifère in security analysts reports, presentations to DBRS or other credit rating agencies, credit analysts reports, or material change reports, it is unlikely that, given Gazifère's small contribution to the total operations of Enbridge Inc., there would have been any discussion of Gazifère and its impact on Enbridge Inc.

IR#3

a) Please provide a breakdown of the $ revenues of Gazifere for each of the three major customer classes, that is, residential, commercial and industrial since 1999.

Réponse 3 a):

Please refer to exhibit GI-31, document 1.1, page 1.

b) Please discuss any significant changes in the customer breakdown in a) above.

Réponse 3 b):

Gazifère's growth since 1999 is mostly in the residential and the commercial sector. Please refer to exhibit GI-30, document 1.1, lines 1 to 8.

c) Please indicate the concentration of the industrial load in terms of major users and whether any customer has reduced their demands on Gazifere while specifically citing their desire to use lower cost alternative fuels.

Réponse 3c):

Since 1999, the interruptible loads of the major users in the industrial sector have decreased (see exhibit GI-31, document 1.1, page 1 of 3, line 39). Customers under the interruptible rate are pulp and paper industries. Their consumptions have gone down significantly since 1999 and vary year over year based on price of natural gas over oil.

d) Please provide a cost comparison of natural gas against the major alternative fuels for Gazifere's industrial, commercial and residential customers as of the time of Gazifere's 1998 evidence and now.

Réponse 3 d):

In 1999, the price of natural gas in the residential sector in the Gazifère franchise area had an advantage over oil of approximately 24%, where as the advantage over electricity was approximately 37%. As for current comparison of natural gas against other alternatives please refer to exhibit GI-31, document 1.2.

In 1999, the price of natural gas in the commercial sector in the Gazifère franchise area had a disadvantage over oil of approximately 8%, where as the advantage over electricity was approximately 57%. As for current comparison in the commercial sector, the advantage over oil is approximately 53%, where as the advantage over electricity is approximately 33%.

For the industrial sector, Gazifère does not track the information related to heavy oil and is therefore not able to provide the competitive advantageous in 1999 versus today for that sector.

IR#4

a) Please indicate the breakdown of the average rate for each customer class in terms of a fixed demand charge and a variable charge based on use, for 1999 and currently.

Réponse 4 a):

For 2010, Gazifère has customers who take service under rate classes 1,2,3,5 and 9. Based on a typical customer taking sales service, the following is a breakdown of the percentage of fixed and variable revenues which are recovered from each customer

class. Between 1999 and 2010, the proportion of fixed revenue recovery decreased due to the proportion of the bill which is attributable to the gas supply charge (i.e. commodity cost of gas). In 1999, the gas supply charge was less than half of the 2010 level. In 1999 the gas supply charge was approximately 9 cents/m^3 and in 2010 it is approximately 21 cents/m^3. Gas Supply charges are recovered on a variable/volumetric basis.

Following is the percentage of Fixed and Variable Revenue Recovery based on a typical Sales Service customer's bill:

	1999		2010	
Rate Class	Fixed	Variable	Fixed	Variable
Rate 1	11%	89%	9%	91%
Rate 2	15%	85%	10%	90%
Rate 3	4%	96%	2%	98%
Rate 5	8%	92%	4%	96%
Rate 9	20%	80%	12%	88%

b) Please discuss any significant changes in the rate design used by Gazifere since 1999 and provide an explanation for the change.

Réponse 4 b):

In 2009, Gazifère made the following three changes to its rate design:

1) **Removed the winter/summer seasonality component from its delivery rates for its large volume rate classes. Gazifère receives gas supply service from Enbridge Gas Distribution ("EGD") under Rate 200. In 2005, EGD eliminated its seasonal differential in its rates; therefore it was no longer warranted to have a seasonal differential in Gazifère's rates.**

2) Unbundled the transportation charge from the delivery charge for all rate classes. Prior to 2009, the transportation charge in Gazifère's rates was bundled with the delivery and load balancing charges. This was consistent with how EGD's rates were designed and billed. All customers were charged the transportation charge through Gazifère's delivery rates however Ontario T-service customers received a T-service credit (equivalent to the transportation rate embedded in the delivery charge). This T-service credit recognized the fact the Ontario T-service customers acquire their own transportation arrangements and therefore should not be charge for this service in Gazifère's rates. The new CIS billing systems implemented in 2009 at EGD and Gazifère allowed for the unbundling of transportation charges. As a result Ontario T-service customers are no longer charged and than remitted the T-service credit.

3) Increased the fixed charges for all rate classes in 2009 and 2010. This re-aligned the level of distribution (i.e. fixed) costs recovery through fixed charges back to the 2007 level. Without this re-alignment, gradually an increased percentage of distribution costs would be recovered through volumetric charges. In 2009 and 2010, the approximate level of fixed cost recovery for each rate class is as follows:

Percentage of Fixed Cost Recovery from Fixed Charges

	Total	Rate 1	Rate 2	Rate 3	Rate 4	Rate 5	Rate 9
2010	21.8%	7.4%	27.4%	13.1%	0%	37.0%	52%

Each of these rate design changes were revenue neutral for Gazifère. Fixed charges as a percentage of the total bill are presented in response to 4a) above.

c) Please provide a table with the depreciation rate for the major classes of assets as well as the composite depreciation rate used each year since 1999. Please provide an explanation for any changes in the depreciation rate used.

Réponse 4 c):

Please refer to exhibit GI-31, document 1.1, page 2.

d) Please indicate the last time Gazifere filed a depreciation study and whether its recommendations were adopted by the Regie.

Réponse 4 d):

Gazifère filed a depreciation study in its 2001 Rate Case. All the depreciation rate changes were approved by the Régie except for the depreciation rate proposal on the account 473 – services. Please refer to the Régie's decision D-2001-55 to that regard.

Gazifère is requesting depreciation rate changes in phase I of the present filing. The Régie has not yet rendered a decision on Gazifère's proposal.

IR#5

a) Please provide for each year since 1999 the following aggregate data for Gazifere:
   a) Net rate base;
   b) Aggregate gross additions to the net rate base each year;
   c) Common equity for ratemaking purposes;
   d) Debt for ratemaking purposes divided into funded and non-funded debt;
   e) The allowed ROE;
   f) Actual interest charges, corporate income taxes and net income;
   g) The interest coverage ratio as would be calculated by DBRS if different from that calculated from the data in e) above;

Réponse 5 a):

Please refer to Exhibit GI-31, document 1.1, page 3.

b) Please indicate how Gazifere raises its debt and how the embedded interest cost is estimated for ratemaking purposes.

Réponse 5 b):

See exhibit GI-31, document 1.3 which explains how Gazifère's cost of new debt is established. The embedded interest cost for ratemaking purposes is determined based on the actual cost rates of previously issued debt and the forecast cost rate of the new debt issues, divided by the 13 month average of the total debt during the test year.

c) Please discuss any problems Gazifere has experienced in raising capital since 1999.

Réponse 5 c):

Enbridge Inc. lends 10-year funds to Gazifère based on the long-term Canada bond yield plus a spread applicable to Gazifère. The funds are lent by Enbridge Inc. to Gazifère without any terms and conditions attached, that is, there in no required amortization schedule and no minimum coverage ratios or maximum debt ratios that must be maintained. With respect to short-term debt, Gazifère's short-term funding is also provided by Enbridge Inc. at prime. Gazifère's ability to raise both short-term and long-term funds through its parent means that it is not subject to capital market constraints to the same degree that it would be if it had to raise long-term debt from the public markets, a bank or other institutional lender on a stand-alone basis. Gazifère's access to capital through its parent effectively limits the negative impact on the terms and conditions that might otherwise have been faced, for example, with the deterioration of the pulp and paper industry in Gazifère's service territory (e.g., the closure of Domtar in 2007, and Bowater and Papier Masson going under the protection of the courts under the Companies' Creditors Arrangement Act in 2009 and 2010 respectively). Please also see response to ACIG (Booth) 6 a).

d) Please discuss any material factor that has changed Gazifere's business risk since 1999?

Réponse 5 d):

Since 1999, a major change has been the significant decline in the pulp and paper industry in the Gazifère's service area. Gazifère's growth prospects are currently tied to the new housing market, where there has been a shift to multi-unit dwellings, a sector in which the Company's penetration rate is relatively low.

Since 1999, there has been a change in energy policy which encourages the development of green energy technologies, favours green technologies relative to natural gas, and encourages energy conservation. Particularly in the commercial sector, through its demand side management programs, Hydro-Québec is able to offer potential customers substantial financial assistance to adopt electricity rather than natural gas, incentives which Gazifère is not able to offer.

IR#6

a) Please discuss the impact of the financial crisis of 2008/9 on Gazifere's ability to raise capital.

Réponse 6 a):

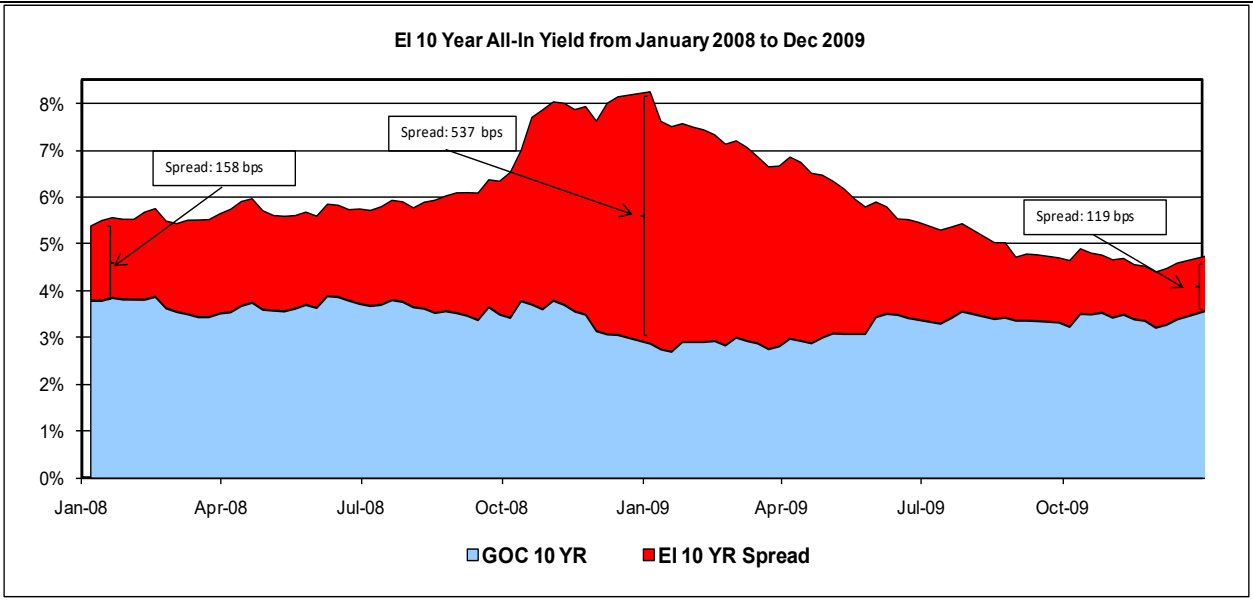
The financial crisis of 2008/09 impacted Gazifère's ability to raise capital consistent with any corporate debt issuer in the market during that time. The credit spreads for Gazifère debt issues widened dramatically and although corporate public debt issuers did experience reduced investor appetite for investing, Gazifère was somewhat insulated from this as Enbridge Inc. did continue to provide access to debt funding for Gazifère.

Because of market conditions, the tenor of the 2009 debt issuance was reduced from the typical 10 year tenor to a 5 year issuance for Gazifère to manage the financing costs within a more historical interest rate band (5 year yield was approximately 125 bps lower than a 10 year yield).

b) Please discuss the impact of the financial crisis of 2008/9 on Gazifere's parent company's ability to raise capital.

Réponse 6 b):

The financial crisis of 2008/09 created very unfavorable issuance terms for most market participants, including Enbridge Inc. During this time, credit spreads widened dramatically and investor demand for debt issued by corporations reduced significantly. There were some windows for issuance, however as the economic crisis worsened, these windows were rare and short. The graph below illustrates the volatility in Enbridge Inc.'s 10-year credit spread during this time.



Enbridge Inc. did not access the debt capital markets as originally planned in the fall of 2008, primarily because the market conditions at the time resulted in prohibitive funding costs. Instead, a credit facility providing incremental liquidity was put in place with a small group of Enbridge Inc. lenders, whose pricing was much more expensive than historically.

Enbridge Inc.'s borrowing costs for its 364-day credit facility also increased significantly during this time. The pricing in 2008 vs. 2009 is outlined below:

	July 2008	**July 2009**
Credit Facility Amount	$1.75 billion	$1.5 billion
Drawn Margin	30 bps	225 bps
Standby Fee	7 bps	60 bps
Renewal Fee	-	50 bps

c) Please discuss any instance during the financial crisis where a Canadian utility was unable to raise capital on fair and reasonable terms.

Réponse 6 c):

Unless one is privy to the ongoing discussions between the companies and their underwriters and the underwriters and potential investors, which Ms. McShane is not, it is virtually impossible to know whether a company tried to issue a longer-term issue than it was able to, whether the company wanted to issue at a particular time or had to wait, whether it had to agree to a spread concession to issue, whether it wanted to issue more debt than it ultimately could, or whether it had to agree to more stringent terms and conditions in order to issue.

Nova Scotia Power raised five year debt in December 2008 at a 400 basis point spread over the five-year benchmark Canada bond; the treasurer of Emera told Ms. McShane that, at the time, NSPI could not have raised debt with a term of 10 years or more. That being said, in the then current market conditions, even A rated utilities were facing financing difficulties. AltaLink informed the AUC in mid-December 2008 that it did not expect to be able to successfully market its previously approved long-term debt issue until first quarter 2009.

It is also important to recognize that the market for BBB rated debt in Canada is relatively small. As reported in "Back to Basics" by Marlene K. Puffer, *Canadian Investment Review*, Fall 2006, the BBB corporate debt market is only 4% of the total market and it is mainly limited to issues with terms under 10 years. Many institutional investors such as pension funds face limits on the proportion of BBB rated debt they are allowed to hold in their portfolios or cannot invest in BBB rated debt at all.

From January 2006 to March 2009, RBC Capital Markets, *Credit Weekly* recorded $164 billion (452 issues) of corporate debt financing in Canada. Of that amount, companies all of whose ratings were in the BBB category or below accounted for approximately 6% and 9% of the total dollar value and number of issues respectively. Even including companies with one rating in the A category (i.e., split-rated A/BBB category or lower) are included, those issues account for only 13% and 17% of the total value and number of issues respectively. From mid-2007 to March 2009, during which the credit markets were experiencing various degrees of turmoil, of 189 reported issues, only seven were by companies with all ratings in the BBB category or lower, none of which was for a term in excess of 10 years.

While not during the financial crisis, but rather during a period of relatively robust capital markets, the clearest example of a utility which experienced difficulty issuing and for which there is publically available information is Pacific Northern Gas. Details are provided in the BCUC decision *"In the Matter of Pacific Northern Gas Ltd. Application for Approval to Recapitalize Under an Income Trust Ownership Structure", Decision*, September 9, 2005.

[http://www.bcuc.com/Documents/Decisions/2005/DOC_8464_DOC_8464_G-84-05_Income_Trust_Decision.pdf] In the BCUC decision *In the Matter of FortisBC Inc., 2005 Revenue Requirements Application, 2005-2024 System Development Plan, 2005 Resource Plan, Decision*, May 31, 2005, the BCUC notes FortisBC's statement that it could not raise 30-year debt in 2004, a period of relatively easy credit market conditions. [http://www.bcuc.com/Documents/Proceedings/ 2005/DOC_7645_G-52-05%20FortisBC%202005 RR-SDP-RP%20and%20Decision.pdf]

Information requests of Gazifere's expert financial witness Ms. McShane

IR#7

a) In her evidence in 1998 Ms. McShane recommended an ROE adjustment mechanism that varied by 75% of the change in the forecast long term Canada bond yield. She further provided an upper limit to the use of the adjustment mechanism when long Canada yields reached 10%, but no lower limit:
   a) Please explain why Ms. McShane now recommends a 50% adjustment to forecast long Canada bond yield changes;
   b) Please explain why she would change her 1999 recommendation given that the forecast long Canada bond yield is only marginally below her forecast in 1999 and why she had no lower limit in 1998?

Réponse 7 a) a):

Ms. McShane is recommending a 50% adjustment factor based on the empirical evidence that is presented in her testimony, and which reflects the experience of the past 10 plus years.

Réponse 7 a) b):

Please see response to ACIG (Booth) 7 a). Also please note that McShane's forecast of long-term Canada bond yields for Gazifère's test year is 4.7%, which she would regard as more than marginally lower than the 6% forecast relied upon in R-3406-98. Ms. McShane does not recall why she did not specify a lower limit in R-3406-98. However, the Consensus Economics, *Consensus Forecasts* at the time did not anticipate a material decline in the 10-year Canada bond over the subsequent 10-year period. Please also see response to 7 f) below.

b) In 1998 Ms. McShane states that the equity risk premium is "stable" at long Canada bond yields below 6%, so that the fair ROE adjusts 1 to 1 with changes in the forecast long Canada yield provided the equity risk premium test were sufficiently 'reliable."

What has caused Ms. McShane to believe that the equity risk premium test is not reliable at the current point in time, i.e., Summer 2010?

Réponse 7 b):

The complete passage from Ms. McShane's 1998 testimony is presented below:

Q. If, as you suggest, the equity risk premium should be stable at interest rates below 6%, shouldn't the Régie reduce the ROE by 1% for every percentage point decrease in interest rates?

A. Yes, if the equity risk premium technique were sufficiently reliable to be used as the sole and exclusive measure for estimating a fair equity return. However, the standard for a fair return for a utility needs to respect the opportunity to earn a return on the value of its property commensurate with that of comparable risk enterprises, which means that it needs to respect the comparable earnings standard. In principle, the comparable earnings result, which reflects the anticipated business cycle average returns on equity for comparable risk competitive industrials, does not change from year-to-year unless there are fundamental changes in the macroeconomic factors which impact the achievable returns, such as inflation and longer-term economic growth. Significant changes in these variables are not anticipated.

As Ms. McShane stated at lines 769-773 in her current testimony, "Each of the [cost of equity] tests is based on different premises and brings a different perspective to the fair return on equity. None of the individual tests is, on its own, a sufficient means of ensuring that all three requirements of the fair return standard are met; each of the tests has its own strengths and weaknesses. Individually, each of the tests can be characterized as a relatively inexact instrument; no single test can pinpoint the fair return." The specific issues that arise in respect to the reliability of the CAPM are discussed in Appendix B to Ms. McShane's testimony.

c) In 1998 Ms. McShane changed her 1 : 1 ROE adjustment conclusion (with forecast long Canada bond yield changes) by weighting her comparable earnings testimony at 25%. Please indicate the Regie's conclusions in 1999 with regard to Ms. McShane's comparable earnings testimony.

Réponse 7 c):

In D-99-09, R-3406-98, dated 1999 02 05, the Régie stated "L'utilisation du *comparable earnings test* représente un changement avec la méthodologie utilisée par Gazifère dans les années passées et récentes." (p. 28) With respect to this comment of

the Régie, please see response to e) below. Further, the Régie stated, "Quant à elle, la Régie, lors des causes tarifaires antérieures, avait privilégié la méthode Prime de risque et le Modèle d'Équilibre des Actifs Financiers (MÉAF)."(p. 10)

d) Further to c) above please indicate any regulatory board that has placed explicit weight on comparable earnings testimony since 1999 and provide relevant decision extracts.

Réponse 7 d):

To Ms. McShane's knowledge, the only Canadian regulatory board which has placed explicit weight on comparable earnings testimony since 1999 is the BCUC who gave it a very small amount of weight in Order G-158-09 (December 2009).

e) Please discuss in detail why Ms. McShane has not provided comparable earnings testimony in her current evidence when she has done so in other recent testimony.

Réponse 7 e):

As stated in footnote 29, page 33, "I am strongly of the view that the comparable earnings test is the only test which measures returns in a manner compatible with the base (original cost) to which they are applied. However, I also recognize that the comparable earnings test is the most controversial, not only in terms of its applicability to the estimation of a fair return, but in terms of its application (e.g., criteria for selection of comparables, period over which returns should be measured, need for adjustments for relative risk). Therefore, for the sole purpose of this evidence, in order to limit the issues relevant to the estimation of a fair return, I have applied risk premium and discounted cash flow tests only." [emphasis added] Similarly, in her testimony in Gazifère's 1997 rates application to the Régie (R-3389-97), for reasons of simplicity, she relied solely on the risk premium test.

f) In her 1998 testimony Ms. McShane pointed out that the use of automatic ROE adjustment formulae in Canada had created a "wide divergence" between Canadian and US allowed utility allowed ROEs. Please confirm that she still recommended the use of a 75% adjustment formula and that the current divergence between US and Canadian utility allowed ROEs was entirely predictable in 1998 given that she did not place a lower bound on the use of an ROE adjustment mechanism.

Réponse 7 f):

The question erroneously suggests that, because no lower limit was recommended, a lower limit was not of concern. As stated on page 43 of Ms. McShane's testimony in R-3406-98, "Although I am not recommending a specific floor on interest rates below which the formula should be reviewed, at no time should the allowed ROE endanger the Company's creditworthiness. In my opinion, such a result would be contrary to the standard to which the determination of a fair return should adhere." She also stated:

> **In my view, the need for a full cost of capital hearing should be tied to the magnitude of the change in interest rates, as interest rates are the key driver of the automatic adjustment mechanism. The formula I recommend has been utilized elsewhere over interest rates ranging from approximately 6.25-9.25%; in my opinion, a full cost of capital hearing need not be required until interest rates exceed 10%. This level is significantly lower than the upper end of the range initially adopted by the BCUC (13%). *Neither the NEB nor the Ontario Energy Board have set any pre-determined ranges.* In any event, the utility should retain the option to have the formula reviewed if business risk, financial circumstances, or changes in regulatory framework warrant its reconsideration. [emphasis added] (R-3406-98, page 44)**

Further, Ms. McShane's recommendation in R-3406-98 was for a return on equity of 11.7% for Gazifère, compared to the ROE of 10.0% which was awarded.

IR#8

a) Please indicate what reviews of formula based ROE adjustment mechanism Ms. McShane has participated in since 1998, prior to the recent financial crisis of 2008/9.

Réponse 8 a):

Ms. McShane has participated in the following regulatory proceedings which reviewed the existing formula:

Proceeding/ Company	Date of Decision	Benchmark ROE	Benchmark Long Canada	Adjustment Mechanism Adopted
British Columbia Benchmark	Aug-99	9.5%	6.0%	Sliding scale: Fixed RP of 350bp < Long Canada 6.5% >80% adj. (G-80-99)
Enbridge & Union Gas	Feb-04	10.65% (For EGD; no change)	7.25%	No change in formula (75%) (RP-2002-0158)
British Columbia Benchmark	Mar-06	9.145%	5.25%	75% symmetric (2004-052) (G-14-06)

b) Please discuss the results of the reviews of the ROE adjustment mechanism discussed in a) above.

Réponse 8 b):

Please see response to ACIG (Booth) 8(a) above for the adjustment mechanism adopted.

c) Please indicate whether Ms. McShane was a participant in the Alberta (AEUB) generic hearing that introduced an automatic ROE adjustment mechanism in 2003 and what her recommendations were.

Réponse 8 c):

Ms. McShane was a participant in the 2003 Alberta generic proceeding. Her recommended benchmark return on equity was 11.25% at a forecast long Canada yield of 5.75% and a formula adjusting the ROE by 50% of the change in forecast long-term Canada bond yields.

d) Please indicate what the AEUB decision in the generic hearing in c) above was in terms of a fair ROE.

Réponse 8 d):

The AEUB set the initial ROE at 9.60% at a long-term Canada bond yield of 5.68%, with an automatic adjustment formula adjusting the ROE by 75% of the change in forecast long-term Canada bond yields.

e) Please confirm that Ms. McShane participated in an Ontario Power Generation hearing where the OEB confirmed the use of its ROE adjustment mechanism and formula in a decision dated November 3, 2008.

Réponse 8 e):

It is confirmed.

f) Please indicate the ROE adjustment formulae in use as of December 31, 2008 by: the National Energy Board, the Ontario Energy Board, the Alberta Energy and Utilities Board, the BC Utilities Commission, the Manitoba PUB, the Regie de L'energie, the Board of Commissioners of Newfoundland and Labrador.

Réponse 8 f):

The formulas and indicated returns on equity at a forecast long Canada yield of 4.46% (as per footnote 1 page 4 of Ms. McShane's testimony) using the formulas in force as of December 31, 2008 for the various regulatory boards are presented in the table below:

Regulatory Board	Base Equity Return	Underlying Forecast Long Canada Yield	Adjustment Mechanism 12/31/2008	ROE as of February 2010	Status of Formula
National Energy Board	12.25%	9.25%	75%	8.66%	Discontinued
Ontario Energy Board	9.35%	5.5%	75%	8.57%	Revised [1/]
Alberta Energy and Utilities Board	9.6%	5.68%	75%	8.69%	Suspended 2010/Under Review
BC Utilities Commission	9.145%	5.25%	75%	8.55%	Eliminated/Report on Alternatives due December 2010
Manitoba PUB	12.12%	9.12%	80%	8.39%	[2/]

Régie de L'énergie (for Gazifère)	**10.0%**	**5.7%**	**75%**	**9.07%**	**Under Review**
Board of Commissioners of Newfoundland and Labrador	**9.75%**	**5.6%**	**80%**	**8.84%**	**Renewed April 2010, change from use of actual to forecast bond yields**

[1/] Revised as follows: Refined formula-based ROE calculated as the base ROE + 0.5 X (change in Long Canada Bond Forecast from base year) + 0.5 X (change in the spread of (A-rated Utility Bond Yield – Long Canada Bond Yield) from the spread in the base year).

[2/] The formula was established for Centra Gas Manitoba in 1995; the rate base/rate of return methodology was replaced with a net income approach following the company's acquisition by Manitoba Hydro.

g) Ms. McShane states that if the Regie's ROE formula were applied in February 2010 to Gazifere the ROE would be 9.07%, please indicate the ROEs allowed by the formulae referenced in f) above on the same date.

Réponse 8 g):

Please see response to ACIG (Booth) 8(f) above.

IR#9

a) In her discussion of the graph on page 8, Ms McShane blames the use of ROE adjustment mechanisms for the "significant gap" between allowed ROEs in the US and Canada, please confirm that the Alberta EUB only introduced an ROE formula effective 2004, so any difference in the allowed ROEs for Alberta utilities and those in the US could not be caused by the use of an ROE formula.

Réponse 9 a):

It is confirmed that the Alberta utilities did not explicitly operate under an automatic formula approach until 2004. However, since the allowed ROEs had been closely tied to changes in the long-term Canada bond yield for a number of years, the approach in Alberta had been similar to the operation of an automatic adjustment mechanism.

b) Further to a) above please confirm that the "significant gap" between US and Canadian allowed ROEs occurred between 1995 and 1999 and thereafter the difference has been relatively constant. If not why not and provide statistical support.

Réponse 9 b):

It is confirmed that the gap appeared in the mid-1990s and has been fairly constant since that time.

c) Please confirm that ROE adjustment mechanisms have been confirmed as providing fair and reasonable ROEs by the NEB, OEB, BCUC, Alberta EUB, the Board of Commissioners of Newfoundland and Labrador and the Regie itself in reviews after 1999 so the "significant gap" referred to was not caused by the ROE adjustment formulae, but the actions of regulators in determining that the formulae provided fair and reasonable ROEs. If not please explain in detail why not.

Réponse 9 c):

Reviews were conducted prior to 2009 resulting in confirmation of the formulae at the NEB, in Ontario, and Québec, revisions of the initial formulae were implemented in British Columbia and Newfoundland and Labrador, and a formula was adopted in Alberta in 2004. Ms. McShane would note, given the wide divergence of views of experts, and fact that the preponderance of Canadian utilities had been operating under similar automatic adjustment mechanisms, it became increasingly difficult for regulators to abandon the prevailing formula approach. To the extent that regulators look to other jurisdictions for the confirmation of their decisions, there is an inevitable amount of circularity. The circularity becomes more problematic when virtually all of the ROEs are determined on the basis of automatic adjustment formulas which yield the same result.

d) In Ms. McShane's judgement did regulators conduct a thorough review of their ROE adjustment formulae when they were confirmed as generating fair and reasonable returns by the NEB, OEB, AEUB, BCUC, the Board of Commissioners of Newfoundland and Labrador and the Regie after 1999 and before the recent financial crisis.

Réponse 9 d):

Yes.

e) In Ms McShane;s judgement were any of the reviews of the ROE adjustment mechanisms carried out in 2009 the result of factors other than either a required review (AUC) or the impact of the financial crisis. If the answer is yes, please provide evidence to support the claim.

Réponse 9 e):

The TQM proceeding, which set the allowed return for TQM for 2007 and 2008, and the ultimate discontinuation of the formula was not the result of the financial crisis. The review of the formula for Newfoundland Power arose because Newfoundland Power was applying for new rates, not because of the financial crisis. The review of the formula in British Columbia arose from an application by Terasen Gas, which cited the financial crisis as one of numerous reasons that it was seeking a review. Terasen's evidence cited the increase in business risk, the TQM decision and the reasons contained therein for abandoning the formula, and the fact that the lower end of the range of ROEs over which the formula was applicable had been triggered and the Company's view that the formula ROE was not meeting the fair return standard (independently of the financial crisis). Whatever the impetus, regulators found, at least under the circumstances prevailing, the validity of the formulas was in question, and in several cases (BCUC, OEB, NEB), adopted returns that were materially higher than the ROEs that would have resulted from the formulas.

f) Please confirm that apart from the 2001 CIBC report which was prior to many ROE reviews the only report referred to which was not during the financial crisis is that by Karen Taylor of BMO in 2006.

Réponse 9 f):

It is confirmed.

g) Please confirm that the Karen Taylor referred to in g) above was appointed as a special assistant to the chair of the OEB and participated in the technical conference that was prior to the OEB report and decision referred to on page 14.

Réponse 9 g):

It is confirmed.

IR#10

a) Please confirm that the basic theory of regulation is that as far as possible regulation should generate the same minimum average cost results of perfect completion. If not why not.

Réponse 10 a):

The purpose of regulation is to emulate competition; perfect competition does not exist. The objective is to avoid allowing utilities, which have market power, the ability to collect monopoly profits.

b) Please confirm that if a 'stand alone' utility is of such a small size that it would not exist in a competitive market that its costs should not be passed on to ratepayers. If not please indicate any economic theory that justifies the idea that regulation should protect utilities that are of an inefficient scale.

Réponse 10 b):

Ms. McShane does not agree. Ms. McShane's view is that regulation should allow a regulated company an opportunity to recover its prudently incurred costs, including the cost of capital that it incurs in providing utility service. The return available from the application of invested capital to other enterprises of like risk is one requirement of the fair return standard. This standard is used to determine the cost of capital for a utility. Adherence to the stand-alone principle through capital structure, return on equity, or a combination thereof, for individual segments, divisions, or subsidiaries of a larger company is a means of ensuring that it is the cost of capital related to the risk of the specific investment that is being estimated and passed on to ratepayers.

c) Further to b) above, please confirm that the qualification to Ms. McShane's definition of stand-alone on page 18 is that the utility be of a sufficient scale that it could exist as an independent entity. If not please explain in detail why not.

Réponse 10 c):

Ms. McShane agrees that, in the application of the stand-alone principle, the ability to actually exist as an independent entity is a reasonable consideration in the estimation of the cost of capital.

d) Please confirm that scale or size is a factor in bond ratings and financial market access. If not please indicate any references in bond rating reports that states that size is not a factor in their assessment of the utility's business risk and rating.

Réponse 10 d):

It is confirmed.

IR#11

a) In her discussion of the business risk of Gazifere Ms. McShane discusses the value of diversification and the fact that negative events are likely to have a greater impact on its earnings. Please indicate any negative events that have affected Gazifere since 1998 that are not captured by a deferral mechanism.

Réponse 11 a):

Since 1999, with the decline in the pulp and paper industry in Gazifère's service area, the volumes from Gazifère's large industrial customers have declined by close to over two-thirds. Domtar closed its Gatineau plant in 2007. Bowater (2009) and Papier Masson (2010) sought the protection of the courts under the Companies' Creditors Arrangement Act, and Gazifère has incurred higher than forecast bad debt expense as a result. Gazifère also experienced the loss of two sizeable customers due to bankruptcy in 2005, as a result of which the Company incurred unanticipated bad debt expense. Gazifère's incremental growth is largely tied to new housing construction. Lower than forecast housing starts due to lower than anticipated economic growth has happened in 2009.

b) Further to a) above please indicate what negative events Ms. McShane can think of which might affect Gazifere and which would not lead to a hearing before the Regie to consider how they should be treated.

Réponse 11 b):

Negative events which could impact Gazifère include loss of major customers, the incurrence of costs that are not recoverable under the prevailing regulatory model, the development and support from government agencies for use of alternative sources of energy, rates that are not competitive with alternative energy sources and the inability to deliver supply due to system interruption. As with any utility, Gazifère has the ability to seek relief from the regulator, but there is no guarantee that the shareholder can or will be held whole.

c) Please confirm in their rating procedures for gas and electric utilities Moody's weights diversification as the least of the four basic groups of factors that it looks at.

Réponse 11 c):

It is confirmed. Diversification is further split between Market position (5%) and Generation and Fuel Diversity (5%). For issuers such as gas or electric LDCs which lack generation, the full 10% is applied to market position.

d) Please confirm that if Gazifere were an independent company it would have shares traded on a stock exchange and investors could then diversify these risks by holding its shares within a diversified portfolio. If not please explain in detail why not.

Réponse 11 d):

If Gazifère were to have shares traded on a stock exchange, investors could diversify the risks associated with the stock by holding a diversified portfolio. However, Gazifère itself has a limited ability to diversify its risks. To illustrate, a company's capital structure decisions are based on firm- and industry-specific business risk factors, not on those aspects which an investor might, in the context of an investment portfolio, be able to diversify away. It follows logically that if the firm-specific business risks were completely diversifiable, all utilities would have the same capital structure and cost of equity.

e) Please confirm that Gazifere is a part of a large Canadian utility holding company and indicate the overall corporate structure and the diversification which it achieves.

Réponse 11 e):

It is confirmed. It may be that the diversity and size of the entity that raises capital results in an overall cost of debt that is lower than would be the case if each operation were a stand-alone operation. However, adherence to the stand-alone principle through capital structure, return on equity, or a combination thereof, for the individual segments or divisions of a larger company is a means of ensuring that it is the cost of capital related to the risk of the specific investment that is being estimated and passed on to ratepayers. Assume, for example, the corporate entity that raises debt is comprised of an LDC and oil and gas exploration and development. The cost of debt would be lower to the diversified entity than the combined costs of debt of each of the operations as a stand-alone operation. However, if the LDC were to be charged (and pass on to ratepayers) the parent's company-wide cost of debt, the LDC

operations would be subsidizing the oil and gas exploration and development operations. Please also see response to ACIG (Booth) 11(d) above.

f) Please confirm that FortisBC referred to on page 24 is not an independent company but part of a large Canadian utility holding company.

Réponse 11 f):

It is confirmed that FortisBC is a subsidiary of a holding company. However, Fortis Inc., the parent, operates the utilities it owns on a stand-alone, financially separate basis. FortisBC raises debt in its own name independently from Fortis Inc.

IR#12

a) In her statement on the CAPM (page 31) Ms. McShane states (#2) that the application of the CAPM proceeds on an assumption which is directly contradicted by an assumption underlying the model, which is that the risk free rate is uncorrelated with the market return. Please confirm that Ms. McShane is assuming that the risk free rate is a short term treasury bill rate or the expected return on the zero beta portfolio. If not please provide any and all references to the literature for this assumption.

Réponse 12 a):

Ms. McShane is not making any assumption about what constitutes the risk-free rate. She is simply saying that one of the underlying assumptions is that the risk-free rate, however defined, is uncorrelated with the market return. In the application of the CAPM, the proxy for the risk-free rate, which is typically a long-term government bond, is directly correlated with the market return.

b) Please confirm that neither Ms. McShane nor most expert financial witnesses in Canada nor any regulatory board in Canada bases a fair return on a short term treasury bill yield. If she cannot so confirm please provide references to board decisions or other expert testimony which has been based on the current treasury bill yield

Réponse 12 b):

It is confirmed.

c) Please confirm that most expert testimony and all Canadian board decisions have been based on a forecast of the long Canada bond yield and that such a yield is not risk free since it bears both interest rate and inflation risk. If not please discuss in detail.

Réponse 12 c):

It is confirmed.

d) Please confirm that her assumption that the application of the CAPM results in fair return estimates that "move in tandem" with the risk free rate relies on the assumption that the estimator does not adjust their estimate of the market risk premium.

Réponse 12 d):

It is not confirmed. When Ms. McShane used the term "in tandem", she did not intend to suggest that the application of the CAPM assumed a one-for-one change in the market return with a change in the long-term Canada bond yield. Rather the application is based on the premise that the market return and the long-term Canada bond yield, used as the proxy for the risk-free rate move in the same direction, i.e., positively correlated, while the assumption underpinning the CAPM is that the risk-free rate and the market return are uncorrelated.

e) Further to d) above please provide any and all evidence that Ms. McShane is aware of that indicates that in the application of the CAPM expert financial witnesses do not adjust their estimate of the market risk premium as a forward estimate when applying the CAPM.

Réponse 12 e):

Ms. McShane does not claim that cost of capital witnesses do not adjust their market risk premium estimates.

f) Finally, can Ms. McShane confirm that in her use of the CAPM she uses a "risky long Canada bond yield forecast of 4.7% as the risk free rate and that her market risk premium estimate is not the same as she used in 1998? As a result she has not made the error that she ascribes to the application of the CAPM in 2? If her use of the CAPM is in error please explain the extent of the error.

Réponse 12 f):

It is confirmed that Ms. McShane's estimates of the market risk premium and long-term Canada bond yields are not the same as they were in R-3406-98. With respect to the reference to whether Ms. McShane has made an error, please see response to ACIG (Booth) 12(d).

IR#13

a) In her discussion of the market risk premium on page 37 Ms. McShane states that investors ***should*** take into account US experience, please explain in detail why this is the case? Is this a normative statement based on economic theory or Ms. McShane's judgment? If it is based on financial theory please discuss in detail the assumptions she is making to take an interest rate, fair return or market risk premium from one country to apply to another without making any adjustments.

Réponse 13 a):

The term "should" on page 37 is used to express both Ms. Ms. McShane's judgment that it is appropriate to take the U.S. experience into account and an expectation that investors would take the U.S. experience into account

b) On page 35 Ms. McShane states that "an equity investor **should** (her bold) require" is this a different type of "should" to that in a) above?

Réponse 13 b):

Ms. McShane is using the term "should" in a normative context (as contrasted with a positive context).

c) On page 40 Ms. McShane estimates the historic Canadian market risk premium at 1.1%-1.5% less than that in the US. How much of this difference would Ms. McShane ascribe to the following factors:

a) The tax preferences for Canadians to hold equities as discussed on page 38, that is, the foreign property restriction and the dividend tax credit;
b) The role of the US $ as the world's reserve currency and hence lower returns on the US long treasury bond;
c) The higher returns earned on US securities in terms of the well documented survivor bias;
d) The higher risk nature of the US economy and securities markets.

Réponse 13 c):

Ms. McShane does not have estimates of the various components referenced. Approximately 0.4% of the difference is due to higher equity returns in the U.S. (12.4% versus 12.0%) and the remainder is due to higher bond returns in Canada (0.7% based on income returns and 1.1% based on total returns). Ms. McShane's estimate of the market risk premium is consistent with the equity market returns (nominal) achieved in Canada and expected long-term Canada bond yields.

IR#14

a) In her discussion of the earned equity market returns on page 41, please confirm that these are nominal (ie., actual) returns and she is using them as a forecast of future nominal returns to estimate the market risk premium.

Réponse 14 a):

It is confirmed.

b) Is it Ms. McShane's view that investors ignore the expected rate of inflation when determining their fair (nominal) rate of return, that is, the expected equity return was the same when inflation was over 10% in the 1970s as it is now when it is about 2.0%? if this is her judgement please provide any citations to financial theory that indicate that the expected rate of inflation has no impact on equity holder's required or fair nominal rate of return.

Réponse 14 b):

Ms. McShane does not state that the expected equity return is the same at different levels of inflation nor that the expected rate of inflation has no impact on the expected equity return. See page B-18 for a discussion of the impact of expected inflation on expected returns. The impact of inflation on actual equity market returns is discussed in Section 3.b.(8) starting at line 1079 and in Appendix B, page B-18 to B-19.

c) In discussing the decline in the long Canada bond yield on page 5 Ms. McShane indicates that the expected rate of inflation is one factor that has caused this nominal yield or expected rate of return to decline. Please provide references to the literature

that confirm that expected rates of return on bonds incorporate an expected inflation rate.

Réponse 14 c):

Any basic finance textbook would confirm that. For example, Eugene Brigham, *Fundamentals of Financial Management*, 7th edition, Fort Worth, TX: Dryden Press, 1995 states: "Inflation has a major impact on interest rates because it erodes the purchasing power of the dollar and lowers the real rate of return on investment…Investors are well aware of all this, so when they lend money, they build in an inflation premium (IP) equal to the expected inflation rate over the life of the securities."

d) Please indicate why Ms. McShane believes that bond investors incorporate an expected rate of inflation into their expected nominal rate of return on long Canada bonds and yet equity investors do not? Please indicate by reference to the literature why Ms. McShane believes that equity investors behave differently to bond investors.

Réponse 14 d):

As explained at page 5, unlike bond investors whose investment is made at a fixed coupon rate, corporate earnings, from which equity investors ultimately derive their return, are better able to keep pace with the rate of inflation. As a result, unlike bond investors, investors in equities would not require a premium of the same magnitude to compensate for the possibility that higher than expected inflation will erode their return. In Basil Copeland, "Inflation, Interest Rates and Equity Risk Premia", *Financial Analysts Journal*, May-June 1982 (pages 32-43), the author states: "With uncertain inflation, the bond investor faces substantial risk of capital loss, whereas the firm's ability to raise prices offers some protection to the shareholders." In James Farrell, Jr., "The Dividend Discount Model: A Primer", *Financial Analysts Journal*, Nov-Dec 1985 (pages 16-25), the conclusion is reached that "These data indicate that, over the long term, corporations have been able to offset inflation and provide a significant real return to investors. Over shorter intervals, however, corporate performance has been less steady. On balance, it appears that stocks, while exposed to purchasing power risk, are less susceptible than long-term bonds or preferred stocks."

e) If. Ms. McShane does believe that equity and bond investors behave differently with respect to inflation, please discuss in detail why they couldn't also react differently in terms of risk perception and why as a result yields on corporate debt could behave differently from expected returns on equities during a financial crisis?

Réponse 14 e):

Ms. McShane does not disagree that individual types of securities may behave differently at different points in time, depending on various factors, including the prevailing degree of risk aversion, the perceived risks (e.g., inflation) associated with different types of securities and the demand for and supply of different types of securities. However, an increased risk of default related to an increase in the risk of the underlying corporate activity, leading to increased credit spreads, a priori could be expected to correspond to an increase in equity risk (since equity holders are subordinate to debt holders). Various studies have shown a positive correlation between credit spreads and the equity risk premium, including J.R. Graham and C.R. Harvey, *The Equity Risk Premium amid a Global Financial Crisis*, 2009 and R.S. Harris, "Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return", *Financial Management*, Spring 1986.

IR#15

a) Can Ms. McShane please confirm that when the required rate of return on a bond goes up its price falls, that is, that bond prices and interest rates are inversely related.

Réponse 15 a):

Confirmed.

b) Can Ms. McShane confirm that when expected inflation persistently increased until 1981 the expected return on long Canada bonds (yield) went up causing losses and lower realised returns on long Canada bond portfolios? If not why not.

Réponse 15 b):

Confirmed.

c) Conversely can Ms. McShane confirm that when inflation came down so did expected returns and yields on long Canada bonds causing very high realised returns on long Canada bond portfolios? If not why not.

Réponse 15 c):

Confirmed.

d) Please confirm that if equity holders behaved the same way as bond holders then higher expected inflation would similarly caused higher expected rates of return causing prices to drop and resulting in lower realised equity returns. If not why not.

Réponse 15 d):

If equities had the same characteristics as bonds and equities behaved the same as bonds, that would be true. Please see response to ACIG (Booth) 14(e).

e) Can Ms. McShane confirm that the statement on page 42 that "the negative relationship between the achieved real equity returns and inflation does not suggest that the expected nominal equity rates of return should be lower than the historic nominal returns as a result of lower expected inflation," ignores this basic fact that when inflation increases and expected nominal equity returns go up, then achieved or realised returns go down. If not please explain in detail why the simple application of financial theory as in a)-d) above does not fully explain actual experienced returns in Canada and confirm that nominal equity returns do in fact go up with expected inflation?

Réponse 15 e):

The actual impact on equity returns would depend on how quickly increases in inflation are accommodated in the underlying economic activity of the firms (e.g., output and input prices). There has been extensive study of the issue of the relationship between expected inflation and real stock returns, with a number of studies indicating a negative relationship. Various reasons for that relationship have been suggested, including lower levels of inflation at higher levels higher levels of real activity.

IR#16

a) On page 43-44 Ms. McShane uses the ratio of standard deviations as a measure of risk. Recognizing that from her resume she is a Chartered Financial Analyst (CFA), can she reference one paper on the CFA syllabus that indicates that this is an appropriate measure of risk?

Réponse 16 a):

Ms. McShane has not reviewed the CFA syllabus. Standard deviations are a widely accepted measure of stand-alone risk.

b) Can Ms. McShane confirm then when securities have less than perfect correlation the standard deviation of the portfolio is generally less than that of the individual securities? If not please explain in detail why not.

Réponse 16 b):

It is confirmed.

c) Can Ms. McShane confirm that 7 of the TSX sub-indexes in her Schedule 8 have higher average standard deviations than the TSX index, one basically the same (consumer discretionary) and only the consumer staples and utilities have smaller standard deviations? Can she also confirm that this is what we would expect from portfolio diversification; that the overall market is less risky than most of the constituents?

Réponse 16 c):

Both statements are confirmed.

d) Can Ms. McShane confirm that her approach of using relative standard deviations as a risk measure would indicate that the expected return on 7 of the TSX sub indexes would then be higher than that of the market as a whole? If not why not.

Réponse 16 d):

It is not confirmed. Ms. McShane's relative risk adjustment is calculated by dividing the standard deviation of the utility index by the simple mean (and median) of the standard deviations of the 10 sub-sector indices including the utility index not the standard deviation of the S&P/TSX Composite as suggested by the question. Calculated relative to the average of the 10 sector indices, only 5 sub-sectors would have a relative risk adjustment of approximately 1 or more. See the table below.

S&P/TSX Sub-Sector Indices as a Percent of	
Mean of 10 Sector Indices	
Consumer Discretionary	**0.71**
Consumer Staples	**0.62**
Energy	**1.07**
Financials	**0.77**
Health Care	**1.19**
Industrials	**0.89**
Information Technology	**2.06**
Materials	**1.08**
Telecommunication Services	**0.96**
Utilities	**0.65**

e) Since the market is simply the weighted average of all the sub indexes can Ms. McShane explain how the weighted average of the expected returns from these sub indexes (7 of which are riskier than the market, one the same and only two lower) can also arithmetically be the expected market return? That is, for example, if two securities are both riskier than the portfolio and their expected returns are 10% and 12%, how can the simple average of these two of 11% also be the expected return on the portfolio, which is lower risk than either of them?

Réponse 16 e):

Please see response to ACIG (Booth) 16(d) above. As stated on page 44, the ratio of standard deviations is used as an estimate of the "relative market volatility" of the utility sub-sector index to the simple average of the 10 sub-sector indices.

f) Further to e) above If the expected return on the market is lower than that of 7 of the sub indexes, equal to one, and higher than the two low risk sub indexes, please indicate how much lower the expected return on the two low risk sub indexes have to be in order for the arithmetic to add up. Please provide a specific example calculation to support her hypothesis.

Réponse 16 f):

Please see response to ACIG (Booth) 16 (d) above.

IR#17

a) On page 48 Ms. McShane notes that utilities' Bloomberg betas are higher than "raw" beats. Please confirm that this is always the case when you average the betas of low risk securities with the overall market average of 1.0. If not please explain why not

Réponse 17 a):

It is confirmed. As stated at lines 1222-1223, "All three of these firms [Bloomberg, *Value Line* and Merrill Lynch] use a similar methodology to adjust "raw" betas toward the equity market beta of 1.0."

b) Please indicate any and all Canadian regulators that have explicitly accepted the use of Bloomberg or other mechanically adjusted betas that average the actual (raw) beta with 1.0.

Réponse 17 b):

Ms. McShane is not aware of any Canadian decisions which have specifically relied on the adjustment methodology.

c) Since Ms. McShane thinks US data is relevant to Canadian utilities please provide similar beta estimates to those in Table 7 for Canadian utilities where the market return is that on the S&P500 both with and without an adjustment for the value of the C$.

Réponse 17 c):

The table below presents the requested calculations. The betas for Enbridge and TransCanada against the U.S. market were calculated two ways; using prices reported from the NYSE as those two stocks trade on the NSYE, and using prices converted to U.S. dollars as calculated by Ms. McShane using daily exchange rates (Bank of Canada, daily close)

	S&P TSX	S&P500
Canadian Utilities	**0.38**	**(0.02)**
CU adjusted to US$		**0.31**
Emera	**0.39**	**0.13**
EMA adjusted to US$		**0.47**
Enbridge	**0.51**	**0.10**
ENB adjusted to US$		**0.44**
ENB US		**0.83**
Fortis	**0.48**	**0.10**
FTS adjusted to US$		**0.44**
TransCanada	**0.44**	**0.12**
TRP adjusted to US$		**0.45**
TRP US		**0.76**

Over the specific period for which the betas were calculated, while the standard deviation of the price changes of the two equity market composites was similar, the correlation between the weekly price movements was low, and the beta of the Canadian market against the U.S. market was 0.36.

d) In Ms. Shane's judgement which is the better relative risk assessment for Canadian utilities: their risk relative to the Canadian market; relative to the US market or relative to the world market. Please support her recommendation with the appropriate beta coefficients and estimate of the overall market risk premium.

Réponse 17 d):

While Ms. McShane uses U.S. market data and Canadian data to develop the equity risk premium, the resulting value is a premium for Canada and the relative risk adjustment for a benchmark Canadian utility is relative to the Canadian market.

e) Please confirm that Value Line also mechanically adjusts actual betas with the overall market beta of 1.0.

Réponse 17 e):

Please see response to ACIG (Booth) 17(a).

IR#18

a) Please confirm that when Ms. McShane says "US regulated companies are reasonable proxies for estimating the cost of equity for a benchmark Canadian gas distribution utility" (page 50) what she really means is that they are perfect proxies since she uses the estimates without making any adjustments. If not please explain where she makes adjustments in going from her US DCF estimates to her Canadian recommendations.

Réponse 18 a):

Ms. McShane confirms that she did not make any adjustments to the DCF results.

b) Please indicate all studies she has done to confirm that her US proxies are perfect substitutes for Gazifere or provide references to any decisions that have accepted the use of US DCF estimates for a Canadian utility without making any adjustments.

Réponse 18 b):

No proxy is a perfect substitute; Ms. McShane's testimony indicates that the selected utilities are reasonable proxies (lines 1277-1278). Please see response to 2.12 in GI-30 Document 1.

c) Please indicate any and all studies Ms. McShane has done to confirm that the cost of capital is currently the same in Canada as it is in the US. Please indicate whether the following variables are currently identical between the US and Canada:

a) Prime rate
b) Long US treasury yield and long Canada yield
c) The return on the real return bond in Canada and treasury indexed securities in the US
d) The federal deficit as a % of GDP in the US and Canada
e) The long run "break-even inflation rate (BEIR) in the US and Canada
f) The dividend yield on the S&P500 versus the TSX composite in Canada

Réponse 18 c):

Ms. McShane regularly compares various indicators of the cost of capital in the U.S. and Canada to assess whether it is reasonable to rely upon estimates of the cost of equity for U.S. utilities in estimating the cost of equity for a benchmark Canadian utility. None of the variables listed in the question are identical in the two countries. The prime rate is lower in Canada than the U.S. (2.25% versus 3.25%); commercial paper rates at the end of April 2010 were lower in the U.S. than in Canada. The 30-year Treasury bond yield at the end of April 2010 was approximately 0.5% higher than in Canada; the 10-year yields were virtually identical. The most recent

Consensus Economics, *Consensus Forecasts*' outlook for 10-year yields anticipates that the U.S. 10-year old over the next 10 years will be 0.3% higher than in Canada. The yields on the 20-year and 30-year U.S. inflation-indexed bonds were 1.85% and 1.7% respectively, versus the long-term inflation-indexed bond yield in Canada of 1.5%. The break-even inflation rates were 2.7% versus 2.5% in Canada and the U.S. respectively. The end of April 2010 yield on the Moody's long-term AAA and AA corporate bonds in the U.S. were 5.13% and 5.39% respectively; the DEX AAA/AA long-term corporate bond index yield was 5.42%. The long-term Moody's and DEX BBB bond index yields were 6.07% and 6.02% respectively. The dividend yield on the S&P/TSX Composite was 2.65%; the dividend yield on the S&P 500 was 1.9%. Ms. McShane acknowledges that the comparability of the cost of capital environment in the two countries will need to be reassessed on an ongoing basis given the higher government deficit in the U.S. versus Canada. At present, the cost of capital indicators continue to be sufficiently similar for the purpose of relying on the cost of equity for a sample of low risk U.S. utilities as proxies for a benchmark Canadian utility.

d) Please indicate whether in Ms. McShane's judgment the rating agencies (Moody's and S&P) judge the risk of US and Canadian utilities to be identical, in particular the regulatory protection afforded utilities in both countries.

Réponse 18 d):

No, they do not judge the business risks to be identical. Moody's concludes that, in the aggregate, regulatory risk in the U.S. is higher than in Canada. For the companies in Ms. McShane's benchmark utility sample, the regulatory framework rating is on average Baa, compared to A for the Canadian utilities which have been rated under the Moody's methodology adopted in August 2009. The ability to recover costs and earn returns rating is A on average for both the Canadian utilities and the benchmark U.S. utilities which have been rated by Moody's since the rating methodology was adopted. The average actual rating, which includes financial risk, for the Canadian utilities rated by Moody's, is A3, the same as the average rating for the benchmark sample. With respect to S&P, the debt rating agency considers the regulatory environment in Canada to be supportive; a review of individual debt rating reports for the individual companies in Ms. McShane's benchmark utility sample indicates that, with one exception, S&P characterizes the regulatory environments of the relevant operating companies as supportive or constructive. All of the companies in the U.S. benchmark utility sample are in the "Excellent" business risk rating category; the average debt rating is A, which is a notch higher than the average S&P debt rating of the universe of Canadian utilities rated by S&P.

IR#19

a) On page 54 Ms. McShane begins her discussion of historic utility risk premia in the US and Canada. Please confirm that these risk premia by definition reflect the historic risk that investors have been exposed to over this period.

Réponse 19 a):

It is confirmed.

b) Please indicate how Ms. McShane has adjusted for the following reductions in risk that have resulted from regulatory actions:

a) Introduction of forward test years;
b) The use forward averaging of the rate base;
c) The introduction of purchased gas variance accounts;
d) The removal of the merchant function
e) The removal of non-core monopoly services such as water heater rentals from the rate base;
f) Rate rebalancing when customer mix change;
g) The movement to fixed cost rate structures from variable rates
h) The introduction of performance based regulation

Réponse 19 b):

Ms. McShane notes that the 4.5% referenced risk premium represents the difference between the achieved equity market returns for Canadian utilities and total bond returns. The 4.5% is not Ms. McShane's estimate of the utility market risk premium and return. Ms. McShane did not make any adjustments for the factors listed in the question. The returns that have been achieved over the longer term would capture various factors, both positive and negative, including the rate of expansion of the utility industries, the evolution of the regulatory regime over time, the trends in allowed returns, and the reaction of the capital markets to macroeconomic factors (e.g., increases in inflation and interest rates, followed by decreases in inflation and interest rates). Ms. McShane has no evidentiary basis for concluding that the returns achieved on average over the longer-term represent an overestimate of the returns that utility investors expect based on the risks that they face under current circumstances. As suggested at lines 1385-1387 of her testimony, there is no evidence of a secular upward or downward trend in the market returns achieved by utilities that would warrant a reduction to the historic returns for the purpose of estimating utility investors' future return expectations.

c) Conversely is it Ms. McShane's judgement that none of the factors in b) above have reduced the risk of regulated utility operations in Canada. If the answer is that in her judgement they have reduced risk, to what extent should her average utility risk premium estimate of 4.5% be lowered as an estimate of the current or forward estimate of utility risk that reflects this risk reduction?

Réponse 19 c):

No adjustment to Ms. McShane's estimate of the utility risk premium is required. Please see response to part (b) above.

IR#20

a) On page 54 Ms. McShane discusses her DCF estimates based on US utilities and indicates that they are based on IBES analyst growth forecasts and a sustainable growth estimate. Please indicate any and all evidence that Ms. McShane is aware of that indicates that analyst growth forecasts are unbiased estimates of future growth rates.

Réponse 20 a):

Ms. McShane is aware that there is a body of studies that conclude that analysts' forecasts are upwardly biased. However, the studies and conclusions regarding upward bias have not been specific to utilities. The potential upward bias of the IBES growth rates for the U.S. utilities was assessed in three separate ways. First, as discussed in the testimony, because utilities are quintessentially mature companies, it is reasonable to expect that investors would anticipate that, over the long-term, growth would parallel the long-term nominal rate of growth in the economy. In this context, the I/B/E/S forecasts were compared to the consensus forecasts of long-term growth. For the benchmark sample of utilities used to estimate the relationship between the DCF-based cost of equity, interest rates and spreads, the average expected long-term growth rate, as estimated using analysts' forecasts, for the entire 1995-September 2009 period of analysis was 4.8%. That growth rate is lower than the expected long-term nominal growth in the economy as a whole has been over the same period. The average expected long-term nominal rate of growth in the U.S. economy, based on consensus forecasts (Blue Chip *Economic Indicators*, March and October editions, 1995-2009), has been 5.2% over the same period covered by the DCF-based analysis. The similar expected nominal growth in the economy compared to the IBES forecasts suggests that the IBES forecasts are not upwardly biased.

Second, the IBES forecasts were compared to the long-term earnings forecasts for the same companies made by *Value Line*. As an independent research firm, *Value Line* has no incentive to "inflate" its estimates of earnings growth in an attempt to make

stocks more attractive to investors, which is the criticism frequently aimed at equity analysts. Over the period of analysis (1995-2009), the average *Value Line* long-term earnings growth rate forecast for the sample of companies was 5.4%, compared to the average IBES long-term earnings growth rate forecast for the same companies of 4.8%. Again, the higher *Value Line* than IBES forecasts suggests that the IBES forecasts are not upwardly biased.

Third, allowed returns for U.S. utilities are derived primarily through reference to the results of the DCF model. Regulators in all jurisdictions, however, do not use the same form of the DCF model. For example, some regulators may rely on the constant growth model, while others prefer to use a multi-stage growth model. In addition, even if different jurisdictions use the same form (e.g., constant growth) of the model, the inputs to the model are not necessarily derived in equivalent ways. For example, two jurisdictions may use the constant growth model but one may favor the use of forecast growth, while another may favor the use of historic growth rates. In the aggregate, however, across all jurisdictions, the differences in approach likely balance out, resulting in the allowed returns reflecting neither an upwardly or downwardly biased measure of the utility cost of equity as a result of the underlying growth assumptions. When the allowed returns for all U.S. utilities published by Regulatory Research Associates (RRA) are compared to the estimated DCF costs of equity for the benchmark sample of U.S. utilities (over the same period 1995-2009Q3), the comparison shows that the allowed returns for all U.S. utilities as reported by RRA exceeded the returns estimated using the various DCF models as follows:

RRA Allowed Return 1995-2009Q3	10.9%	Difference from RRA
Constant Growth	10.6%	-0.3%
Sustainable Growth	10.1%	-0.8%
Three Stage Growth	9.8%	-1.1%

This comparison lends further support to the conclusion that the IBES forecasts have not been upwardly biased.

b) In Schedule 16 Ms. McShane indicates that the average forecast growth rate for her US utilities is 5.9%. Please confirm that this is an infinite growth rate and that it exceeds the forecast growth rate for the US economy. Please confirm that if her estimates are correct eventually the entire US economy will consist of utilities, since they are forecast to grow more rapidly forever than the US economy.

Réponse 20 b):

It is confirmed that the forecast growth rate exceeds the current forecast nominal growth rate for the U.S. economy. Growth in earnings/corporate profits cannot

exceed, in the longer term, growth in the economy as a whole, as corporate profits would overwhelm the GDP. However, the fact that the growth rates for this sample exceed the forecast growth rate in the economy does not mean that the entire U.S. economy will be dominated by utilities, as the growth forecasts are specific to this sample (and relate to the dividend yields of the sample) and because not all companies in the economy will grow in the longer-term at the rate of growth in the economy.

c) With her three stage growth model Ms. McShane assumes that these utilities will grow at the average growth rate of US GDP of 5.0%, please provide all statistical work that supports this assumption. In particular please provide the earnings per share, book value per share, dividend per share and net rate base per share for each of the utilities in her US proxy sample back to 1990 and the annual growth rate in each. Then please estimate a regression of the annual growth rate in each of these variables against the annual growth rate of US GDP and report the size of the coefficients and the significance of the estimates.

Réponse 20 c):

The growth component of a DCF model is intended to be an estimate of what investors expect the long-term growth to be and thus build into the prices they are willing to pay (and thus is embedded in the dividend yield component of the model). Ms. McShane's use of forecast long-term growth in the economy as a reasonable estimate of investors' expectations for long-term growth in earnings for mature industries is based on the link between corporate profits and GDP growth in the long-term. The two primary determinants of profit growth are growth in nominal GDP and unit labour costs. Nominal GDP measures the current dollar value of the goods and services produced in the economy. Simplistically, GDP less payments to labour, depreciation, plus income from abroad equals corporate profits. As long as labour costs are contained, increases in economic growth will be reflected in growth in profits. To Ms. McShane's knowledge, the conclusion that corporate profit growth will track GDP growth in the long-term is not contested.

However, industries and companies go through life cycles. During the different phases of the cycle, growth would reasonably be expected to differ from the long-term average. The phases of the life cycle include introduction (or initial growth), rapid growth, maturity and decline. In the first two phases, industry growth would be expected to outpace growth in the economy as a whole, and then in maturity stabilize at level similar to that of the general economy. Decline is characterized by falling demand for the industry's products and/or services. As noted at page D-2 (Appendix D), utilities are considered to be a quintessential mature industry.

Ms. McShane notes that the FERC adopted direct reliance on expected long-term growth in GDP as an input to its DCF model for gas pipelines. In Order 396-B

(Northwest Pipeline Corp., June 11, 1997), the FERC cited the fact that all experts in the proceeding had relied on long-term GDP forecasts as support for, or confirmation of, their pipeline growth forecasts in their own DCF models. The development of their model was in part validated by the valuation practices of Merrill Lynch and Prudential Securities who relied on the growth in the economy as their estimate of long-term growth for all firms, including regulated firms.

With respect to the specific requested information, it is found in the attached file GI-31 document 1.5. Ms. McShane does not have the requested data on net rate base per share.

The analysis of historical growth rates in earnings per share, book value per share and dividends per share does not find them to be significantly correlated with GDP growth. Over the period 1990-2009, growth in earnings was approximately 4.0%; that of book value per share approximately 4.2%; and dividends approximately 2.5%. The lower growth rates relative to growth in GDP are consistent with a period characterized with generally declining interest rates and declining allowed returns. Allowed returns in the U.S. declined from approximately 12.7% in 1990 to approximately 10.4% in 2009 (Schedule 2, page 3 of 3). Such reductions are not compatible with earnings (and therefore dividends and book value per share) keeping pace with long-term economic growth.

IR#21

a) On page 59 Ms. McShane estimates financing costs by targeting a market to book value of 1.05-1.10. Please justify the choice of 1.05-1.1.

Réponse 21 a):

As stated at page 58 starting at line 1476, the "financing flexibility allowance is an integral part of the cost of capital as well as a required element of the concept of a fair return. The allowance is intended to cover three distinct aspects: (1) flotation costs, comprising financing and market pressure costs arising at the time of the sale of new equity; (2) a margin, or cushion, for unanticipated capital market conditions; and (3) a recognition of the 'fairness' principle." Please see the response to 15 in GI-32, document 1 for discussion of the specification of a market/book ratio range of 1.05 to 1.10.

b) For all the US utilities in her US proxy group please provide the market to book ratio for each year back to 1990.

Réponse 21 b):

The market to book ratios for the U.S. benchmark utilities are included in GI-31, document 1.6.

IR#22

a) On page 61 Ms. McShane estimates that a stand-alone Gazifere would rate a BBB debt rating. Is this Ms. McShane's estimate of Gazifere's issuer rating or what an issue of secured debt by the company would rate? Please be specific.

Réponse 22 a):

An issuer rating. The rating on a specific issue would be a function of the specific covenants of the issue.

b) Can Ms. McShane indicate whether in her judgement size is a factor in a bond rating?

Réponse 22 b):

Yes, size is a factor. The extent to which it is a factor differs by rating agency.

c) Can Ms. McShane provide the net rate base and revenues for each utility in her US BBB sample in Schedule 22 and the same data for Gazifere.

Réponse 22 c):

Ms. McShane does not have the requested net rate base data. The 2009 total current operating revenue for the companies in the BBB sample as well as Gazifère are presented in the table below:

	2009 $ Millions
Gazifère	21.9
ALLETE INC	759.1
ALLIANT ENERGY CORP	3,432.8
AMEREN CORP	7,090.0
ATMOS ENERGY CORP	4,969.1
BLACK HILLS CORP	1,269.68
CONSTELLATION ENERGY GRP INC	15,598.8
DTE ENERGY CO	8,014.0
ENTERGY CORP	10,745.6
EXELON CORP	17,318.0
FIRSTENERGY CORP	12,712.0
HAWAIIAN ELECTRIC INDS	2,309.6
OGE ENERGY CORP	2,869.0
PEPCO HOLDINGS INC	9,25900
PG&E CORP	13,39900
PINNACLE WEST CAPITAL CORP	3,297.0
PORTLAND GENERAL ELECTRIC CO	1,80400
PPL CORP	7,55600
PUBLIC SERVICE ENTRP GRP INC	12,40600
SEMPRA ENERGY	8,10600
SOUTH JERSEY INDUSTRIES INC	845.4
XCEL ENERGY INC	9,644.3

d) In terms of the Ibbotson small cap premium can Ms. McShane confirm that this is for small cap stocks that are traded in the stock market, rather than small firms per se that are part of larger firms. If the answer is yes, can Ms. McShane confirm that small publicly traded firms do not have the same characteristics as divisions of publicly traded firms. If the answer is no, please indicate any and all studies she has done to show that small publicly traded firms in the Ibbotson small cap premium work have the same characteristics as Gazifere.

Réponse 22 d):

It is confirmed both that the Ibbotson analysis is based on the returns of publicly traded stocks and that the characteristics of publicly traded stocks are different from those of small firms that exist as part of a larger firm when the smaller firms have the ability to rely on their parent for various forms of support (e.g., financial support or expertise). The purpose of utilizing the Ibbotson study findings on small size and returns was to provide a perspective on the reasonableness of the recommended incremental risk premium of 0.50% relative to a benchmark distribution utility. Based on the small cap premium studies, the estimate of the incremental risk premium warranted "if Gazifère were a stand-alone publicly traded stock" was over 200 basis points based on the application of the CAPM. As noted in footnote 71 to Ms. McShane's testimony, the actual returns of small regulated companies have been 1.5 (geometric average) to 3 (arithmetic average) percentage points higher than the corresponding returns for large regulated companies. In that context, a 0.50% premium for Gazifère is conservative.

IR#23

a) On pages 66 on Ms. McShane discusses her alternative ROE adjustment mechanism, can she confirm that the yield spread should average out over the business cycle. That is, the yield spread increases during recessions and falls during recoveries, but that absent a huge aberrant shock, such as the financial crisis of 2008/9, over a full business cycle, all else constant the differences from the average spread should equal zero.

Réponse 23 a):

All things constant, i.e., no fundamental change in the risk premiums required from one business cycle to the next, the average spreads would be similar from one cycle to the next.

b) Further to a) above can Ms. McShane confirm that adding the corporate yield spread to the ROE adjustment formula simply injects volatility and rate shock into the ROE adjustment formula without changing its value over the full business cycle.

Réponse 23 b):

The average value may not change (relative to a formula that includes solely a long-term government bond yield variable), just as the average value may not change when the sole variable in the adjustment formula is the long-term Canada bond yield, assuming that there is no fundamental change in the factors that determine the

government bond yield. The financial crisis highlighted the potential for the formula ROE to move in the opposite direction from the cost of equity. The addition of the spread to the formula is intended to improve the tracking of the allowed return over the cycle with the cost of equity. Since the proposed formula incorporates sensitivity factors of 0.50 to both the long-term government bond yield and the spread, the result is less volatility in the ROE than under a formula that increases or decreases the allowed ROE by 75% of the change in long-term government bond yields.

c) Can Ms. McShane confirm that her suggested 50% adjustment to changes in the long Canada bond yield was rejected by the NEB in 1993 when they arrived at the 75% adjustment for their multi-pipeline formula?

Réponse 23 c):

Confirmed.

d) Can MS. McShane confirm that the NEB reviewed and confirmed its ROE formula in a 2001 TransCanada Mainline hearing and then refused to hear ROE evidence in a 2004 hearing?

Réponse 23 d):

Confirmed.

e) Can Ms. McShane redo her Schedule 28 using the start dates for the 50% adjustment to changes in the long Canada yield as 2001 and 2004 since on these dates the NEB considered their ROE adjustment formula as delivering fair and reasonable ROEs.

Réponse 23 e):

Since the now discontinued RH-2-94 formula was premised on the assumption that the cost of equity for a benchmark pipeline changed by 75% of the change in long-term Canada bond yields, by construction, the 2002 and 2005 multi-pipeline formula ROEs of 9.53% and 9.56%, respectively, reflect the presumption that the cost of equity had declined by 75% of the approximately 3.75 percentage point decline in the forecast long-term Canada bond yield experienced between both 1995 and November 2001 and 1995 and November 2004. The determination in RH-4-2001 that the results of the RH-2-94 formula continued to be reasonable was largely based on the application of the Capital Asset Pricing Model, a test which does not easily lend itself

to estimating the relationship between interest rates and the cost of equity over time. The empirical evidence presented in Chapter VIII indicates that the cost of equity for regulated companies since the time of the RH-2-94 decision has not been as sensitive to long-term government bond yields as the RH-2-94 formula implied. As a result, the 2002 and 2005 multi-pipeline ROEs were not relied upon as the starting point for the application of the proposed revised formula. The requested recalculations are presented in GI-31, document 1.7.

f) Can Ms. McShane confirm that with a 50% adjustment to both changes in the long Canada bond yield and A spreads her formula collapses to a 50% adjustment to changes in the A bond yield?

Réponse 23f):

Yes, the formula could be restated as a single variable; however, the formula as proposed requires separate calculations of the two variables. The objective in setting out the two variables separately was for transparency, i.e., to be able to easily determine the extent to which the two components were responsible for the change in the formula-based ROE.

g) Can Ms. McShane confirm that the corporate bond yield is a promised yield and not an expected rate of return and explain what she understands as a promised yield?

Réponse 23 g):

The promised yield is the yield to maturity of the bond, which reflects the return the investor will receive by holding the bond to maturity and reinvest all of the coupon payments at the yield to maturity. An expected rate of return is the anticipated rate as, theoretically, determined by a probability distribution of the possible outcomes. The promised yield on a bond is equal to its expected rate of return when the bond has no default risk.

h) Can Ms. McShane confirm that promised yields are driven by more factors than the risk premium, for example changes in liquidity and periodic flights to quality? If not why not.

Réponse 23 h):

The promised yield is a function of market rates of interest (which reflect a real rate plus the expected rate of inflation), the duration of the bond, the probability of default, the expected recovery in the case of default, the liquidity of the bond and investors' risk aversion. The higher the default risk, the bigger the gap between promised yield and expected rate of return on the bond. For bonds with low default risk (e.g. A rated bonds), the smaller is the gap between the promised yield and expected return.

i) Can Ms. McShane indicate how the Regie can extract a change in a risk premium that might exist in a bond spread from a change in other factors such as liquidity? If she can't, can she indicate whether in her judgement liquidity in the bond market changes lock step with liquidity changes in the equity market?

Réponse 23 i):

Ms. McShane recognizes that liquidity changes in the two markets may not move in lock-step (just as changes in the cost of equity do not move in lock-step with changes in the long-term government bond yield). However, Ms. McShane's proposed revised formula only changes the allowed ROE by 50% of the change in A rated corporate bond yield spreads and by 50% of the change in forecast long-term Canada bond yields; it is not based on the premise that equity risk premiums and corporate bond yield spreads move in lock-step. As a result, in Ms. McShane's judgment, it is not necessary to attempt to break down the changes in the A rated corporate bond yield spreads into various components (e.g., liquidity and default).