COST OF CAPITAL SUMMARY

1. This evidence shows a summary of EGD's cost of capital for each of the 2007 Board Approved, 2011 Estimate, 2012 Bridge Year and the 2013 Test Year in Tables 1 through 4.

Table 1
Cost of Capital Summary

Line No.		2007 Board Approved Principal ($millions)	Component %	Cost Rate %	Return %	Return ($millions)
1.	Long-term debt	2,234.4	59.65%	7.31%	4.36%	163.3
2.	Short-term debt	62.9	1.68%	4.12%	0.07%	2.6
3.	Preferred shares	99.9	2.67%	5.00%	0.13%	4.9
4.	Common equity	1,348.5	36.00%	8.39%	3.02%	113.1
5.	Total	3,745.7	100.00%		7.58%	283.9

Table 2
Cost of Capital Summary

Line No.		2011 Estimate Principal ($millions)	Component %	Cost Rate %	Return %	Return ($millions)
1.	Long-term debt	2,319.6	58.36%	6.02%	3.51%	139.5
2.	Short-term debt	124.1	3.12%	1.70%	0.05%	2.0
3.	Preferred shares	100.0	2.52%	2.48%	0.06%	2.4
4.	Common equity	1,430.9	36.00%	8.94%	3.22%	128.0
5.	Total	3,974.6	100.00%		6.85%	271.9

Witness: K. Culbert

Table 3
Cost of Capital Summary

Line No.		2012 Bridge Year Principal ($millions)	Component %	Cost Rate %	Return %	Return ($millions)
1.	Long-term debt	2,353.2	57.84%	5.89%	3.41%	138.7
2.	Short-term debt	150.8	3.70%	2.50%	0.09%	3.7
3.	Preferred shares	100.0	2.46%	3.28%	0.08%	3.3
4.	Common equity	1,464.7	36.00%	8.52%	3.07%	124.9
5.	Total	4,068.7	100.00%		6.65%	270.6

Table 4
Cost of Capital Summary (Weighted)

Line No.		2013 Test Year Including CIS Principal ($millions)	Component %	Cost Rate %	Return %	Return ($millions)
1.	Long-term debt	2,357.0	56.24%	5.89%	3.31%	138.8
2.	Short-term debt	(22.1)	(0.53%)	3.70%	(0.02%)	(0.8)
3.	Preferred shares	100.0	2.39%	4.16%	0.10%	4.2
4.	Common equity	1,755.9	41.90%	9.41%	3.95%	165.2
5.	Total	4,190.8	100.00%		7.34%	307.4

2. Written evidence with respect to the above forecast elements, including a requested increase in the allowed equity level from 36% to 42% for the 2013 Test Year, is found in evidence at Exhibit E1, Tab 2, Schedule 1 and Exhibit E2, Tab 1, Schedules 1, and 2. Evidence with respect to the return on equity included within the revenue requirement and revenue deficiency calculation is found in evidence at Exhibit E2, Tab 1, Schedule 1.

3. Further details of each of the elements of the capital structure and the determination of the cost of capital overall and any resulting deficiency or sufficiency in earnings

are found at Exhibits E3, E4 and E5, Tab 1, Schedules 1 to 5. A summary of the drivers or make up of the revenue deficiency of $91.3 million for the 2013 Test Year is found at Exhibit A2, Tab 4, Schedule 1.

COST OF CAPITAL

1. The purpose of this evidence is to provide an update of financing activity for the Historic (2011) and Bridge (2012) Years and to provide the cost of financing capital requirements and the implementation plan for the 2013 Test Year.

2. For evidence outlining the cost of equity, please see Exhibit E1, Tab 1, Schedule 1. For evidence outlining the justification for the proposed 42% equity ratio, please see Exhibits E2, Tab 1, Schedule 2 and E2, Tab 2, Schedule 1.

2011 (Historic Year) Financing Update

3. A total of $150 million of term debt matured during 2011. The Company refinanced this maturing debt through the issuance of $50 million of short-term commercial paper backstopped by existing credit facilities; as well as, the issuance of $100 million of medium term notes (“MTN”). The actual/approved coupon, issuance costs and all-in effective costs of these transactions are set out in Table 1 below.

Table 1

Item No.		Amount ($MM)	Issue Date	Term (Yrs)	Canada Yield	Corporate Spread	Coupon	Amortized Issue Costs	Effective Cost
1	Actually Issued [1]	100	Sept 1/11	39	3.10%	1.60%	4.95%[2]	0.03%	4.98%
2	Board Approved	100	Sept 15/11	40.5	3.80%	1.25%	5.05%	0.03%	5.08%

1 Re-open of an existing $200 million MTN with a coupon of 4.95% maturing November 22, 2050.
2 Issued at a price of $104.415 with an effective yield of 4.702%.

4. The term-debt issuance above was issued pursuant to a MTN Base Shelf Prospectus filed November 16, 2010. The MTN Base Shelf Prospectus filed at cost of $75,000, which is amortized over a 2-year term.

5. The existing $700 million commercial paper program and $700 million credit facility in place to backstop the commercial paper program were adequate to accommodate the peak gas storage cycle throughout 2011.

6. There were no preferred shares or common equity issued in 2011.

<u>2012 (Bridge Year) Financing Update</u>

7. The existing $700 million commercial paper program and $700 million credit facility in place to backstop the commercial paper program are anticipated to adequately accommodate the peak gas storage cycle throughout the 2012 Bridge Year.

8. The MTN Base Shelf Prospectus will be refilled in the third quarter of 2012. The MTN Base Shelf Prospectus will be re-filed at an estimated cost of $80,000, which will be amortized over a 2-year term.

9. There are no term debt maturities scheduled for the 2012 Bridge Year. There are no term debt, preferred share or common equity issuances planned for the 2012 Bridge Year.

<u>2013 (Test Year) Financing Update</u>

10. The Company proposes to change the capital structure to 42% common equity (See Exhibit E3, Tab 1, Schedule 1 for presentation of Test Year Capital Structure) in the 2013 Test Year. To accommodate the change in the capital structure, Enbridge Inc. will subscribe for the necessary common equity of the Company to support the 42% proposed common equity level. This will require an equity infusion of $247 million through the course of the 2013 Test Year (42%-36% of $4,120.3 million). The Company does not have any term debt maturities in 2013. As a result, the cash

proceeds from the equity issuance will be used to repay short-term indebtedness on an interim basis during the 2013 Test Year.

11. On a permanent basis, the Company will investigate the potential to early mature the required level of term debt currently outstanding by the Company. Absent the cost effective early maturity of the outstanding Company term debt, the Company has $200 million of term debt maturing in each of January and September 2014. At which point, the maturing term debt will be retired and not refinanced.

12. The existing $700 million commercial paper program and $700 million credit facility in place to backstop the commercial paper program are anticipated to adequately accommodate the peak gas storage cycle throughout the 2013 Test Year.

13. There are no term debt or preferred share issuances planned for the 2013 Test Year.

<u>Cost of Short-Term Debt</u>

14. EGD currently maintains a $700 million, committed credit facility provided by a syndicate of Canadian banks. In addition to committing to the availability of the $700 million credit facility, the banks' also commit to a fixed pricing level (fixed spread over the relevant floating rate for the underlying cost of funds) for a period of 364-days; assuming that EGD adheres to the terms and conditions of the committed credit agreement.

15. The Canadian banks' commitments allow for the $700 million, committed credit facilities to be used to backstop EGD's $700 million commercial paper program. The Canadian commercial paper ("CP") market targets investors who purchase Canadian Bankers' Acceptance deposit notes ("BA"). To access the CP market, an

issuing company must maintain a commercial paper public rating(s) from DBRS, Moody's Investor Service or Standard & Poor's. Currently, EGD's CP program is rated R-1 (low) with a stable outlook by DBRS; and A-1 (low) by Standard & Poor's.

16. The BA market is largely priced using the Canadian Deposit Offer Rate ("CDOR") as the underlying cost of funds with a risk-adjusted, company-specific spread charged in addition to the relevant CDOR. The CP market provides the most cost effective financing of short-term borrowing requirements. Assuming the maintenance of EGD's current, public CP ratings, the following outlines the Company's anticipated assumed short-term borrowing costs:

Per Annum Interest Rate	2011	2012	2013
Short Term Debt Rate	1.70%	2.50%	3.70%

17. The Company's CP program is largely used to finance short-term gas storage requirements.

18. In the maintenance of the $700 million committed credit facility, the Company is charged an annual $50,000 administration fee. In addition, the Company is charged a 0.22% standby fee on any undrawn balance of the committed credit facility; as well as, an annual 0.06% fee to extend the maturity date of the committed credit facilities for an additional 364 days. The administration, extension and standby fees are estimated at $2 million annually. These fees are amortized over a 2-year term. The Company is also charged approximately $200,000 per annum to maintain its credit ratings with DBRS and Standard & Poor's. The combined credit facility, credit rating agency and MTN Base Shelf Prospectus re-filing fees total approximately $1.25 million for the 2012 Bridge Year and 2013 Test Year.

Cost of Long-Term Debt

19. EGD uses long-term debt to finance maintenance capital and expansion capital expenditure requirements; as well as, to re-finance existing long-term debt issuances that are maturing. To support the Company's long-term debt financing requirements, EGD maintains a Short Form Base Shelf Prospectus ("MTN Prospectus") that allows for the cumulative issuance of up to $800 million of medium term notes into the Canadian debt capital market. The MTN Prospectus expires December 16, 2012, at which time it will be renewed.

20. The Canadian medium term note ("MTN") market is targeted to the Canadian retail and institutional investor looking for medium to long-term, fixed income investment alternatives. To access the MTN market, issuers must maintain a public debt rating(s) issues by DBRS, Moody's Investor Service or Standard & Poor's. Currently, EGD's MTN program is rated A with a stable outlook by DBRS, A- (low) with a stable outlook by Standard & Poor's, and Baa1 with a stable outlook by Moody's Investor Service.

21. The MTN market is largely priced using the relevant Government of Canada bond rate ("GoC") as the underlying cost of funds with a risk-adjusted, company-specific spread charged in addition to the relevant GoC. Assuming the maintenance of EGD's current, public MTN ratings, the following outlines the Company's anticipated assumed long-term borrowing costs:

Per Annum Interest Rate	2011	2012	2013
Long Term Debt Rate	4.35%	4.80%	5.90%

RETURN ON EQUITY CALCULATION FOR 2013

1. The purpose of this evidence is to provide the return on equity ("ROE") used for the calculation of the cost of capital.

2. The Ontario Energy Board (the "Board") recently reset and refined the formulaic approach for determining a utility's ROE, which was documented in the Report of the Board on the Cost of Capital for Ontario's Regulated Utilities, issued December 11, 2009 (the Cost of Capital Report).

3. Based on the methodology set out in the Cost of Capital Report and the September 2011 data from the Bank of Canada, Consensus Forecasts and Bloomberg LLP, the Board has calculated the allowed ROE, for rates effective January 1, 2012, to be 9.42%.[1]

4. EGD has asked Concentric Energy Advisors to provide an assessment of the reasonableness of 9.42%. That evidence can be found at Exhibit E2, Tab 2, Schedule 1. Concentric has concluded that the current ROE formula output is reasonable if applied to the Company's requested equity ratio of 42%. Evidence outlining the requested equity ratio can be found at Exhibit E2, Tab 1, Schedule 2.

5. The Company will use the current formula output as a placeholder until such time as the data is available for an update. Updated formulaic inputs will be prepared in November 2012 on the basis of September 2012 data inputs to be included in a final rate order.

[1] Cost of Capital Parameter Updates for 2012 Cost of Service Applications for Rates Effective January 1, 2012, Ontario Energy Board, November 10, 2011.

Witness: R. Fischer
M. Lister
S. Murray

UPDATED EVIDENCE

6. This updated evidence provides an update to the calculation of the Board's 2009 ROE Formula from the Cost of Capital Report referenced above. This update is based on data from March 2012.

7. The updated ROE result is calculated based on the following formula (the Board's 2009 ROE Formula):

   ROE_t = Base ROE + 0.5 x ($LCBF_t$ – Base LCBF) + 0.5 x (Utility Bond $Spread_t$ – Base Utility Bond Spread)

   Where,

   Base ROE ("Return on Equity") = 9.75%;

   Base LCBF ("Long Canada Bond Forecast") = 4.25%; and

   Base Utility Bond Spread = 1.415%.

   Thus the ROE adjustment formula is specified as:

   ROE_t = 9.75% + 0.5 x ($LCBF_t$ – 4.25%) + 0.5 x (Utility Bond $Spread_t$ – 1.415%)

8. The $LCBF_t$ is calculated as follows:

   $LCBF_t$ = (a) Avg Consensus long bond yield + (b) Canadian bond yield spread

Consensus Long Canada Bond (3-month forecast)[2]	2.1%
Consensus Long Canada Bond (12-month forecast)[3]	2.5%
Average	2.30%

[2] Consensus Economics Monthly Survey. March 2012 Edition, pg. 17. Survey Date: March 12, 2012.
[3] Consensus Economics Monthly Survey. March 2012 Edition, pg. 17. Survey Date: March 12, 2012.

Witness: R. Fischer
M. Lister
S. Murray

30-day historical bond yields (30-years)[4]	2.67%
30-day historical bond yields (10-years)[5]	2.11%
Difference	0.56%

Therefore, $LCBF_t$ = 2.30% + 0.56% = 2.86%

9. Utility Bond $Spread_t$ is calculated as follows:

30-Day Canadian Utility bond yields (30-years)[6]	4.04%
30-day historical bond yields (30-years)[7]	2.67%
Difference	1.37%

10. Plugging in the updated $LCBF_t$ and Utility Bond $Spread_t$ terms results in the following:

ROE = 9.75% + 0.5 x (2.86% – 4.25%) + 0.5 x (1.37% – 1.415%)

ROE = 9.03%

11. Therefore, for the purposes of an update to the 2013 Test Year application, the Company will use 9.03% for the ROE.

12. As explained in the pre-filed evidence, however, the Company intends to use the current formula output as a placeholder only until such time as the data is available for an update at the time of a final rate order. Updated formulaic inputs will be prepared in November 2012 on the basis of September 2012 data inputs to be included in a final rate order.

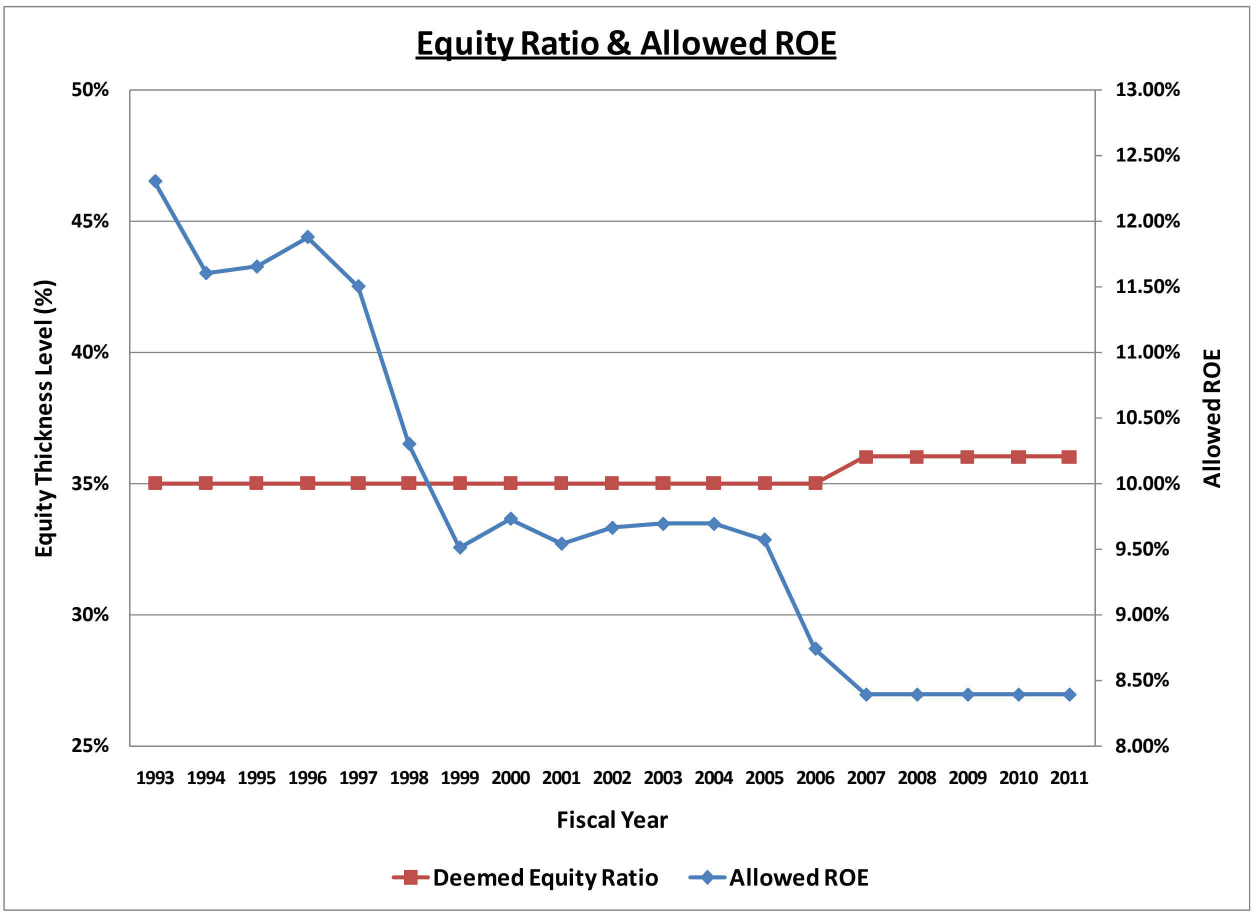
[4] Canadian Bonds yields from BoC website; identifier V39056; March 1 – March 30, 2012
[5] Canadian Bonds yields from BoC website; identifier V39055; March 1 – March 30, 2012
[6] A-Rate Cdn Utility bond yields March 1 – March 30, 2012; from Bloomberg
[7] Canadian Bonds yields from BoC website; identifier V39056; March 1 – March 30, 2012

Witness: R. Fischer
M. Lister
S. Murray

CAPITAL STRUCTURE: EQUITY RATIO

1. The purpose of this submission is to present evidence that supports a request for an increase to EGD's equity ratio from 36% to 42%, beginning with the 2013 test year.

2. In 2009, the Board undertook a consultative to review Cost of Capital, the result of which was the issuance of the 2009 Report of the Board on Cost of Capital for Ontario's Regulated Utilities in December of 2009. The 2009 Cost of Capital Report left equity ratios for Ontario utilities unchanged, but did establish a reset of the starting point for the ROE formula to 9.75%. The chart below depicts the allowed equity thickness and ROE for EGD from 1993 to 2011.



Witnesses: R. Fischer
M. Lister
D. Yaworsky

3. EGD engaged Concentric Energy Advisors (Concentric) to present expert evidence regarding an appropriate equity ratio for EGD. Concentric recommends an equity ratio in the 40-45% range. The report and recommendation provided by Concentric can be found at Exhibit E2, Tab 2, Schedule 1.

4. EGD believes that the current Cost of Capital parameter values, specifically the Capital Structure component, is deficient, and that an increase in equity thickness is warranted for the following reasons:

   I. EGD's capital structure needs to be reflective of the business risks currently faced by the utility.
   II. The current equity ratio of 36% is significantly below that of North American peer utilities with comparable business risk and Ontario electric utilities which exhibit lower business risk.
   III. An appropriate capital structure is necessary to minimize the risk of a credit downgrade, to maintain financial flexibility, and to provide financing at a lower cost of debt.

5. In order to address these deficiencies, and based on the expert evidence provided by Concentric, the Company believes that an equity ratio of 42% is appropriate.

I. Business Risk

6. EGD believes that the current equity ratio of 36% is not reflective of changes in business risk over time. That is, in 1993, the equity ratio was set at 35%. Since that time there have been fundamental changes that have increased business risk

for gas distribution utilities. EGD believes that the 1% increase in equity ratio from 2007 is not fully reflective of the increased business risk since 1993.

7. The sources of business risk include many factors such as regulatory risk, economic risk, competitive risk, sales/consumption risk, price/cost risk, and operations risk, among others. One significant source of risk is a result of uncertainty in demand for a firm's products, which can affect revenue generation. Further, reductions in the quantity demanded can result in higher prices (i.e., distribution rates) which can further erode demand, and can also impede the ability to earn a fair return.

8. In January 2010, Standard & Poor's issued their Natural Gas Distribution Industry Survey stating,

> A series of regulatory reforms from 1978 (when regulations that set natural gas prices at the wellhead were first loosened) to 2005 (when the Public Utilities Holding Company Act, or PUHCA, was repealed, which dropped federal restrictions on utility mergers) have created a vastly different operating environment than that which prevailed 30 years ago. Natural gas prices are generally higher and more volatile, energy markets are more competitive, and corporate mergers have created huge, diversified energy companies with trading capabilities across several different energy sources. These developments have generated new risks—as well as new potential rewards—for gas distribution utilities.[1]

9. From EGD's perspective, the main factors that demonstrate increased business risk since 1993 include:
   i. The volumetric demand profile
   ii. System size and complexity
   iii. Environmental and technological advancements

[1] Industry Survey's: Natural Gas Distribution. Standard & Poor's, January 14, 2010.

Volumetric Demand Profile

10. Average residential gas consumption has been in decline for decades. Between 1993 and 2010, average weather-normalized residential consumption fell by 1.03% per year (normalized to 2010). Exhibit C1, Tab 3, Schedule 1 shows an average use decline of 1.2% per year for the 2006-2013 forecast period (normalized to 2013).

11. Since 2007, the Average Use True Up Variance Account ("AUTUVA") has helped mitigate the impact of uncertainty around the declining average use for EGD. The AUTUVA ensures that revenues are not impacted by variances from the forecast average use decline. If the actual average use decline is less than forecast, then customers are credited for the difference through the disposition of the variance account. Alternatively, if the actual average use decline is greater than forecast, then customers are debited for the difference.

12. EGD has applied to continue the use of the AUTUVA account for the 2013 test year.

13. The AUTUVA minimizes the intra-year revenue impact associated with the uncertainty of actual residential average use declines compared to the forecast; however, it does not address the longer-term implications that result from a trend of declining average use. In addition, there is no variance account associated with industrial demand.

14. A phenomenon known as industrial demand destruction occurs when large customers, who have the capability of switching source fuels, move away from natural gas and use, instead, alternative energy sources to fuel their demand. In addition to price sensitivities, industrial demand is also associated with general

economic activity. Natural gas commodity price levels and volatility reached peak values in the early 2000s, while economic health has waned since 2008. Since 2000, large volume demand, excluding general service volumes (Rate 1 & Rate 6), has declined by 5.21% per year on average.[2]

15. The combination of declining average use and industrial demand destruction has resulted in a reduction in total volumetric demand of approximately 625 million m^3 from 2000 to 2010, even while the Company added 462,000 customers.

16. The impact of declining volumes necessarily results in higher distribution rates. Higher rates reduce competitiveness and increase the desire to either fuel-switch or reduce demand further, which has the potential to put pressure on earnings and earnings growth.

<u>System Size and Complexity</u>

17. In 1993, EGD's system was comprised of 22,977 km of main. By 2010 there was a total of 35,492 km of main. More distribution mains require more operational attention. In 1993 there were 1.1 Million customers. By 2010 EGD had almost double that number, with 1.9 Million customers. Each customer with a service line and a meter means significantly more infrastructure to manage. Furthermore, this increase in customers has significantly changed the peak demand profile of the system, with more demand requested on particularly cold days.

18. This massive expansion over 20 years increases operations risks at every level. With greater size and complexity, more resources and maintenance are required.

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[2] As mentioned in Exhibit C1, Tab 3, Schedule 1 beginning in the Fall of 2006, there has been large migration of customers from some of the large volume rates to a Rate 6 designation. The annual volume decline is 1.37% per year from 2000-2010 including rate 6 in the definition of "large volume".

With greater size and complexity comes greater risk to safety and reliability, as it requires management of more assets.

19. Managing the system is much more complex, covers greater distances and geographical dispersion, and requires significantly more employees than in 1993. In 2000, EGD required approximately 1,624 people throughout its franchise regions to operate the business, while in 2010 the company required 1,994 people. This increase in workforce is a direct result of increased workload, which itself requires greater coordination of activities. For example, in 1995, there were 21 major projects (>$500,000) underway, while in 2013 that number is projected at 46 (see Exhibit B3, Tab 2, Schedule 2).

20. In 1993, there was virtually no interface between gas and electricity. Today, EGD works with power generation customers to plan and design large, complex, costly projects to bring natural gas-fired electricity to the province of Ontario. Power generation has also introduced incremental political risk, as evidenced by the cancelation of the Oakville and Mississauga gas-fired power plants. Power generation customers typically have very large demand requirements and are typically more volatile than traditional load.

21. In 1993, the capital expenditure requirement to maintain the system was $247.5 million per year. For 2013, EGD's requires a capital budget of $483.9 million. Similarly, in 1993 the annual O&M requirement was $214.9 million, while in 2013 EGD requires $426.1 million. The increases in O&M and capital are reflective of the need for increased resourcing and materials required to maintain the system.

22. Another change since the early 1990's has been the introduction of pipeline integrity rules. The TSSA issued a Director's Order in 2001 that requires the inspection of pipelines operating at or above 30% SMYS. In 2006, the TSSA issued another Director's Order that requires the inspection of certain pipelines operating below 30% SMYS. The result has been a large undertaking of labour, resources, and capital on the utility's part to comply with these orders, which ultimately ensure higher operating standards. Being held to higher standards than existed in 1993 is another demonstration of additional incremental risk.

23. These are but just a few examples of how the complexity and nature of the gas distribution system has changed since the early 1990's. Greater system size and complexity increases operating and capital expenditures to ensure the safety and reliability of the system. In addition, with greater system size and complexity, come greater operational risks, which are necessarily greater now than they were in 1993.

Environmental and Technological Advancements

24. Risks associated with demand shifts to less carbon intensive fuels or technologies are greater now than in 1993. Policy makers, environmentalists, and consumers are increasingly seeking opportunities to increase the contribution of alternative, renewable energy sources. Specific examples in Ontario include the OPA sponsored FIT program that pays higher generation prices for certain renewable energy production, for example, from wind or solar, and the Ontario Green Energy Act (GEA). The GEA even goes so far as to change the institutional landscape in Ontario, by putting into law the desire to increase reliance on renewable energies, and thereby decrease reliance on fossil fuels.

25. Relative to 20 years ago, technological advancement and market adoption of renewable energy has increased markedly. A report by National Economic & Research Associates ("NERA") commissioned by the Canadian Gas Association identified areas of business risk common to US and Canadian gas distribution firms. NERA saw the risk of customers bypassing the network by switching fuels or adopting alternative technologies as one of several common business risks. Another was the risk that competitive pressures from alternative fuels or technologies could affect the long term competitiveness of natural gas.[3]

II. Comparability with North American Peers and Ontario Electric Utilities

Comparability with North American Peers

26. As indicated above, EGD asked Concentric Energy Advisors to provide expert evidence and a recommendation as to an appropriate equity ratio for EGD. Their analysis examines the capital structure history and context in Ontario, credit ratings and metrics and the implications of a downgrade, as well as a relative comparison of equity ratios among peer North American gas distribution utilities.

27. Concentric finds that that Ontario's gas utilities' capital structures have fallen out of line with like-risk peers. Concentric's analysis also shows that EGD's equity ratio is a clear and distinct outlier compared to North American peer utilities. They conclude that the allowed equity ratio for EGD is insufficient and does not meet the standard of fairness.

28. Concentric recommends an equity ratio of between 40 and 45%.

[3] Allowed Return on Equity in Canada and the United States: An Economic, Financial, and Institutional Analysis, National Economic Research Associates, Inc., Kenneth Gordon, Ph.D, Jeff D. Makholm, Ph.D, February, 2008.

Comparability to Ontario Electric Distribution Equity Thickness

29. The 2009 Cost of Capital Report of the Board found that an appropriate ROE would be 9.75% for all Ontario's utilities beginning in 2010. In 2006, the Board found that the appropriate Equity Thickness for Ontario's electric utilities was 40%. Specifically, in the Report of the Board on the Cost of Capital and 2nd Generation Incentive Regulation for Ontario's Electricity Distributors, the Board said the following:

> The Board is guided in this matter by the need to reflect appropriately risk in rates such that investors are provided a reasonable opportunity to earn a fair return and consumer interests are protected…. In addition, the Board considered regulatory practice in several Canadian and United States jurisdictions…
>
> **The Board will deem a single capital structure for all distributors for rate-making purposes**. The Board has considered the concerns that have been expressed by distributors and certain members of the investment community that a reduction in equity thickness or return might result in a lower credit rating. As discussed below, the Board is not convinced these concerns warrant differentiated deemed capital structures. Therefore, **the Board has determined that a split of 60% debt, 40% equity is appropriate for all distributors.**[4]

30. EGD submits that gas distribution is relatively riskier than electric distribution, and therefore, should require higher equity ratios. The Alberta Utilities Commission has found that electricity and gas are at least relatively equal in terms of risk.[5] As Concentric points out in their report, a Board commissioned research paper, authored by Dr. Cannon, states that, all else equal, gas distribution is a riskier proposition than electric distribution.

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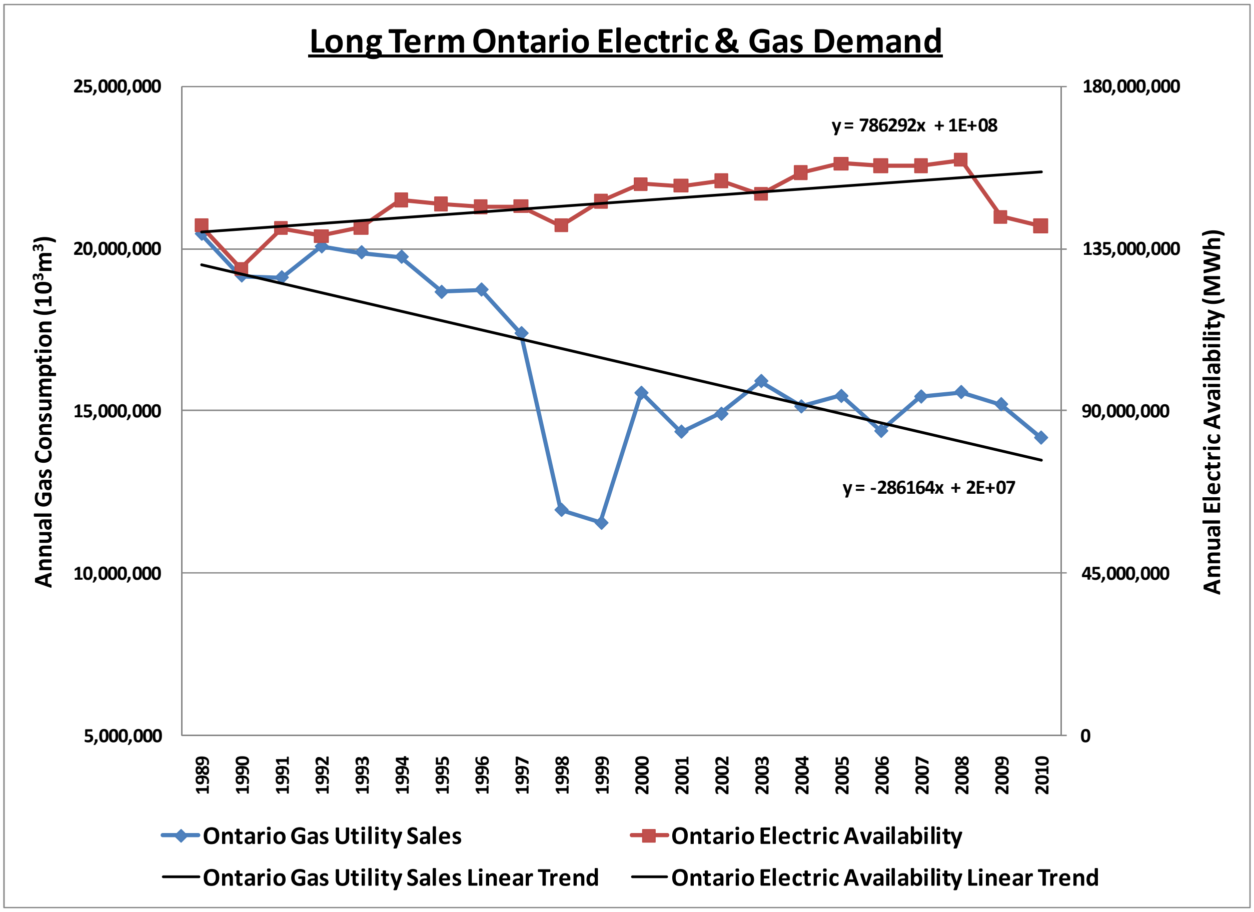
[4] Report of the Board on Cost of Capital and 2nd Generation Incentive Regulation for Ontario's Electricity Distributors. Ontario Energy Board, December 20, 2006, p.p. 4-5.
[5] Alberta Utilities Commission Generic Cost of Capital Decision 2009-216 and Generic Cost of Capital Decision 2011-474

31. For one, the seasonality of gas consumption is more pronounced for gas consumption than for electricity consumption. This means that one season can have a relatively greater impact on the earnings of a gas distributor than an electric distributor. While electric LDC's face high summer peaks, and gas LDCs face high winter peaks, the volatility from one season to the next is much more dramatic for gas than it is for electricity. Another key risk differentiator is that end uses for electricity are numerous and varied. Everything from home appliances to space heating and cooling to computing power to gadgets and tools run with electricity. Gas demand is primarily related to space heating. The result of these diversified end uses is higher demand growth and an annual demand pattern that is much more stable than gas consumption.

32. The graph below details the historic demand for electricity and gas in the province of Ontario going back to 1989. The graph shows that demand for electricity rose for nearly two decades, while gas consumption continued to decline. The two very divergent paths that electricity and gas have faced for the past 20 to 25 years are clearly evident.



Source: Statistics Canada, Energy Statistics Handbook, Tables 6.7, 8.4, 8.5, & 8.6[6]

33. EGD believes that if the business risk of EGD relative to electric utilities is taken into account, the Board should determine that gas utilities require a higher equity ratio than that for the electric distribution utilities in Ontario.

[6] The Energy Statistics Handbook does not provide provincial electric utility sales, so we present electric availability, which is calculated as total generation plus imports less exports, as a proxy for sales, since electricity is generally consumed as it is produced. At the national level, electric availability is virtually equal to final demand.

Witnesses: R. Fischer
M. Lister
D. Yaworsky

III. Attract financing and fund future capital programs at the lowest overall cost of capital

Rating Agency Concerns and Capital Market Implications

34. EGD's access to and pricing within the Canadian CP and MTN markets are impacted by the Company's public debt rating. As outlined in paragraph 8, Standard & Poor's views that the Natural Gas Distribution Industry is faced with new risks. These concerns are echoed by DBRS. In the written evidence provided by G. S. Lackenbauer and A. M. Engen in support of TransCanada's 2004 Mainline Toll and Tariff Application, the two individuals cite Mr. Walter Schroeder's, Chairman of DBRS, call for changes in the Canadian regulatory standards[7]. In particular, Mr. Schroeder's concerns that the lower equity ratio amongst Canadian utility companies provides less flexibility to absorb emerging industry risks; making the Canadian utility companies vulnerable to potentially quick downgrades by Rating Agencies.

35. In the written evidence provided by G. S. Lackenbauer and A. M. Engen in support of TransCanada's 2004 Mainline Toll and Tariff Application, Mr. Lackenbauer and Engen indicated that "It is no exaggeration to say that putting TransCanada into the BBB category would be playing with fire". From a long term debt/bond pricing perspective, EGD is often viewed as a comparable company to TransCanada's regulated business. As a result, it is safe to assume the same conclusion could be drawn if EGD was downgraded into the BBB category.

[7] Written Evidence of G.S. Lackenbauer and A. M. Engen, TransCanada 2004 Mainline Tolls and Tariff Application, revised November 15, 2004.

Witnesses: R. Fischer
M. Lister
D. Yaworsky

36. Institutional debt investors manage their respective investment portfolios to address risks relating to industry, credit quality and single name (company) exposure. Based upon *Portfolio Theory*, limitations placed on industry exposure, credit quality exposure and company exposure will result in lower total portfolio risks stemming from diversification. The regulatory environment impacts the institutional debt investors' assessment of risk of the industry, credit quality and company risk. Should an industry's business environment change and the regulatory environment not keep pace, institutional debt investors' may view the industry as riskier. As a result of the riskier conclusion, capital may be retratced from that industry sector and re-directed to another. The capital retraction increases the scarcity of debt capital; as well as, increases the cost of debt as institutional debt investors demand higher returns for investments placed with companies within that industry sector.

37. Similar to institutional debt investors, credit rating agencies assess the regulatory environment impacting a company when determining the appropriate public debt rating for that company. Should the credit rating agencies view the actions of a regulatory body as insufficient to address industry business conditions, the public debt rating for a company operating in that industry is susceptible to downgrade. A downgrade impacts the credit quality assessment by an institutional debt investor. This credit quality assessment may lead to further contraction of capital invested or made available for investment into the downgraded company.

38. The additional capital contraction further increases the scarcity of debt capital; as well as, increases the cost of debt. Once the industry and credit quality assessment is complete, institutional debt investors examine the appropriate level of exposure to a company based on limitations on industry exposure and credit quality. More

specifically, limitations will be placed on the maximum level of exposure that a single company forms in relation to the total exposure for the industry sector the company operates within. In addition, limitations will be placed on the maximum level of exposure that a single company is afforded based upon its public debt rating. These limitations will result in further contraction of available debt capital for a company that experiences a downgrade; resulting in further increases in the cost of debt.

Impact on Cost of Short and Long-Term Debt Pricing and Market Access

39. Both DBRS and Standard and Poor's have expressed concerns over the increased risk within the natural gas distribution industry. Both DBRS and Standard and Poor's have also expressed concerns that the equity thickness of Canadian natural gas distribution companies' may not be sufficient to absorb the increased industry risks and support the maintanence of current public debt ratings. Since EGD has a thinner equity thickness than its peers, the Company is faced with an increased risk of a potential downgrade to its current public debt ratings.

40. Concentric has indicated that a single notch downgrade within the investment grade range could result in as much as 20 to 45 basis point increase in the cost of debt. Although Concentric's analysis focused on long-term debt, it is safe to assume short-term debt investors, similar to long-term debt investors, would demand increased compensation in the face of increased risk. Consequently, it is safe to assume that EGD's short-term borrowing costs would also increase.

41. The Canadian Commercial Paper (CP) market is primarily reserved for strong investment grade rated entities, which maintain ratings similar to EGD's current CP ratings. Not only would a downgrade result in an increase in EGD's CP debt costs,

it could materially impact the Company's continued ability to access the CP market. The access limitation would result in less financing flexibility, as the Company would have to rely solely on the Bank credit market to fund short-term financing needs. Given continued global, capital market concerns on the liquidity within the inter-connected global banks, the limited financing flexibility exposes EGD to increased financing risk.

Conclusion

42. EGD believes that an increase in the equity ratio to 42% is justified for the following reasons:
    - Increased business risks since 1993 warrant an increase to the equity ratio.
    - To be in alignment with peer North American utilities' capital structure which exhibit similar business risk to EGD
    - To reflect the greater business risk faced by EGD compared to Ontario electric distribution utilities, and
    - To effect a capital structure that will result in the continued ability to attract financing capital without negatively impacting the current A- debt rating.

43. For all of the reasons and evidence provided above, EGD respectfully submits that an equity ratio of 42% is necessary and justified.

Witnesses: R. Fischer
M. Lister
D. Yaworsky

Equity Thickness Evaluation and Recommendation

Prepared for:
Enbridge Gas Distribution

January 27, 2012

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APPENDIX

EXHIBITS

I. INTRODUCTION AND OVERVIEW

Enbridge Gas Distribution, Inc., here forth referred to as "EGDI" or "the Company," retained Concentric Energy Advisors ("Concentric") to update its 2009 Cost of Capital analysis and analyze EGDI's currently authorized equity thickness. In doing so, Concentric assessed whether EGDI's cost of capital and equity thickness, when taken together, are adequate in terms of the Company's current risk profile relative to other companies with comparable risk, and ultimately whether they satisfy the principles of the Fair Return Standard. Concentric has determined that EGDI's currently allowed equity ratio by the Ontario Energy Board ("the OEB" or "the Board") is:

1. The lowest of all North American gas utilities researched, and below the average Canadian and U.S. allowed equity ratios for gas utilities;

2. Not sufficient to satisfy the financial metrics associated with an "A- or above" credit rating;

3. Not sufficient to ensure that EGDI will continue to meet its forecast coverage ratios and debt covenants;

4. Below the authorized equity ratios of Ontario's electric utilities; and is

5. Not adequate for its current level of risk due to changes in the Company's risk profile since the equity ratio was originally set in 1993, and subsequently changed in 2006.

Concentric's analysis supports an equity thickness in the range of 40 to 45 percent, based on a proxy group comprised of North American gas distribution utilities with comparable risk profiles to EGDI. EGDI's proposed equity ratio of 42 percent would bring EGDI in closer alignment with its industry peers and supports the maintenance of an A- credit rating to the benefit of both shareholders and ratepayers. In order to satisfy the Fair Return Standard, this recommendation is contingent on the adoption of the Board's revised ROE formula from its *Report of the Board on the Cost of Capital for Ontario's Regulated Utilities,* issued December 11, 2009. That ROE is currently

9.42%.[1] Concentric's updated Cost of Capital study is supportive of the current OEB ROE formulaic result.

A. The Fair Return Standard

1. Federal

The basis for evaluating whether EGDI's cost of capital is reasonable is ultimately a question of satisfying the Fair Return Standard. "Fair" has been defined through a series of bellwether decisions that are widely recognized by utility regulators. In Canada, the Supreme Court in *Northwestern Utilities v. City of Edmonton (1929) ("Northwestern")* established a foundation for utility cost of capital. As stated by Mr. Justice Lamont in that case:

> The duty of the Board was to fix fair and reasonable rates; rates which, under the circumstances, would be fair to the consumer on the one hand, and which, on the other hand, would secure to the company a fair return for the capital invested. By a fair return is meant that the company will be allowed as large a return on the capital invested in its enterprise (which will be net to the company) as it would receive if it were investing the same amount in other securities possessing an attractiveness, stability and certainty equal to that of the company's enterprise.... [2]

In the U.S., *Bluefield Waterworks and Improvement Company v. Public Service Commission of West Virginia (1923) ("Bluefield")*, and *Federal Power Commission v. Hope Natural Gas Company (1944) ("Hope")* established a comparable foundation.

The NEB adopted the view that the Fair Return Standard can be met by fulfilling three particular requirements. Specifically, a fair or reasonable return on capital should:

- Be comparable to the return available from the application of the invested capital to other enterprises of like risk (the comparable investment requirement);
- Enable the financial integrity of the regulated enterprise to be maintained (the financial integrity requirement); and

1 Ontario Energy Board, *Cost of Capital Parameter Updates for 2012 Cost of Service Applications for Rates Effective January 1, 2012*, November 10, 2011.

2 Northwestern Utilities v. City of Edmonton [1929] S.C.R. 186 (NUL 1929).

- Permit incremental capital to be attracted to the enterprise on reasonable terms and conditions (the capital attraction requirement).[3]

Equity thickness and the cost of common equity are inextricably linked in determining the fair return for regulated utilities. It is not possible to evaluate the reasonableness of the equity thickness without having made some determination on the reasonableness of the utility's cost of equity. The product of the two determines the overall allowed return to equity shareholders.

2. Ontario

In 2009, the Board addressed its application of the Fair Return Standard through a Consultative Process on the Cost of Capital for Ontario's Regulated Utilities. The Board reviewed the cost of equity produced by its then applicable ROE formula to determine if the ROE produced by that formula met the standard of fairness. In the Board's Report, it reiterated the tenets of the Fair Return Standard and recognized that the standard was composed of three prongs (comparability, financial integrity, and capital attraction) that are not optional but are legal requirements that must be met both individually and in totality.[4] The Board further recognized that U.S. comparators may be relevant for determining whether the comparability standard has been met for Ontario's regulated utilities, providing that those comparators are carefully selected, based upon reasoned, analytical and transparent criteria.[5]

Ultimately, in the Consultative Process, the Board concluded that it was necessary to reset and refine the ROE formula to better accommodate changing economic and financial conditions,[6] and to address the unreconciled difference between the allowed return on equity arising from the application of the formula and the return on equity for a low-risk proxy group.[7] While the ROE was the focus of the Consultative Process, equity ratios were not examined in detail. However, with

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3 Reasons for Decision, TransCanada Pipelines Limited, RH-2-2004, Phase II, April 2005, Cost of Capital, and reaffirmed by Reasons for Decision, Trans Quebec & Maritimes Pipelines, Inc., RH-1-2008, March 2009, at 6-7.

4 Ontario Energy Board, EB-2009-0084, *Report of the Board on the Cost of Capital for Ontario's Regulated Utilities* (December 11, 2009) at (i).

5 Ibid at 22-23.

6 Ibid at (i) – (ii)

7 Ibid at (i) – (ii).

respect to capital structure, the Board stated that its previous policy for all regulated utilities continued to be appropriate.[8] Presently, the allowed common equity ratios for Ontario's utilities are:

- Union Gas 36%
- Enbridge Gas Distribution 36%
- Ontario Electric Utilities 40%.

The Board stated that its new policies with respect to ROE would go into effect for the setting of rates, beginning in 2010, by way of a cost of service application, i.e. in the case of EGDI, the Board's "Minimum Filing Requirements for Natural Gas Distribution Cost of Service Application". The Board indicated that there was no need for additional filings to implement its new policies. However, it did state that "The onus is on an applicant to adequately support its proposed cost of capital, including the treatment of and appropriate rates for debt instruments."

Concentric notes that it developed evidence in the Boards' Consultative Process on behalf of EGDI and Hydro One and the Coalition of Large Electric Distributors that was reflected in the Board's cost of capital Report. Concentric's ROE analysis was based on a proxy group of North American natural gas and electric utilities. In that analysis, Concentric found that the comparable natural gas utility was allowed a return, on average, of 10.31 percent on 44.5 percent equity. When adjusted for additional leverage in the capital structure up to 40 percent equity, this return equated to 10.5 percent.[9] The Board's final decision represented a compendium of the equity risk premiums derived from all of the ROE estimates presented in the proceeding by a variety of different parties, and when combined with the forecast long term government of Canada bond yield, the Board's revised return on equity formula resulted in an ROE of 9.75%.[10]

In this Report, Concentric builds on that analysis previously presented to the Board. We presume that when the Board reached its decision, it did so based on the evidence presented in the consultative process, which included proxy groups of like-risk utilities.

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8 Ibid at 50.

9 Ibid at 43. *See* the Prepared *Comments on behalf of Enbridge Gas Distribution*, Inc. in the Consultative Process, by Concentric Energy Advisors, Inc, *Table 1: Leverage Adjusted ROEs and Capital Structures for Ontario Utilities*, at 10 (September 8, 2009).

10 Ontario Energy Board, op. cit. at ii.

II. COST OF CAPITAL ANALYSIS

A. Proxy Group Selection

In the 2009 Consultative Process, Concentric selected a group of North American energy holding companies with substantial operations in regulated natural gas distribution, and with comparable business risk profiles to the Ontario gas utility companies. It was necessary to utilize North American energy holding companies, as opposed to Canadian energy holding companies, due to the lack of available data for comparable Canadian companies. In fact, there are only two publicly traded "energy holding companies" in Canada, Enbridge Inc. and TransCanada pipelines. Neither would satisfy the screening criteria Concentric developed for its analysis, as one company is the parent to EGDI and the other is a diversified pipeline and energy company which does not focus on gas distribution.

The Board embraced Concentric's approach to proxy group selection and provided the following comments during that proceeding:[11]

> Concentric carefully selected comparable companies based on a series of transparent financial metrics, and the Board is of the view that this approach has considerable merit. Commenting on Concentric's analysis, Union Gas noted that no one else in the consultation performed this kind of detailed analysis of U.S. comparators.[17] The use of a principled, analytical, and transparent approach to determine a low risk comparator group from a riskier universe for the purpose of informing the Board's judgment was supported by various participants in the consultation.
>
> …
>
> The Board is of the view that the U.S. is a relevant source for comparable data. The Board often looks to the regulatory policies of State and Federal agencies in the United States for guidance on regulatory issues in the province of Ontario. For example, in recent consultations, the Board has been informed by U.S. regulatory policies relating to low income customer concerns, transmission cost connection responsibility for renewable generation, and productivity factors for 3rd generation incentive ratemaking.
>
> Finally, the Board agrees with Enbridge that, while it is possible to conduct DCF and CAPM analyses on publicly-traded Canadian utility holding companies of comparable risk, there are relatively few of these companies. As a result, the Board

[11] OEB, op. cit., at 22 and 23.

concludes that North American gas and electric utilities provide a relevant and objective source of data for comparison.

In the 2009 Consultative Process, Concentric began its proxy group selection with the population of North American Gas Utility companies classified by Value Line as "Natural Gas Utility". To that list, Concentric applied the following screens to best reflect the financial characteristics of the Ontario natural gas utilities. The criteria were as follows:

1. Currently publicly traded and paying dividends;
2. S&P credit ratings greater than or equal to BBB and less than or equal to A+;
3. Utilities with greater than 60 percent regulated operations, as measured by the percentage of regulated utility revenue to total consolidated revenue for 2006 through 2008;
4. At least 60 percent of regulated revenue derived from natural gas distribution operations for 2006 through 2008; and lastly
5. Excluded any utility that was the target of an acquisition or merger since the stock price may not be representative of its underlying utility operations.

The resulting natural gas distribution group presented in the 2009 Consultative Process consisted of the following six companies:

1. AGL Resources Inc.
2. Piedmont Natural Gas Company, Inc.
3. Sempra Energy
4. South Jersey Industries, Inc.
5. Southwest Gas Corporation
6. Vectren Corporation

In the present update to the Cost of Capital Analysis for EGDI, Concentric re-applied the above screening criteria with one exception. In the present analysis Concentric has also drawn its sample from companies classified by Value Line as "Natural Gas Diversified," which typically has been comprised of gas transmission companies. However, there are several companies in that group whose business operations have changed significantly since 2009, such that regulated gas distribution has become their dominant regulated business. Since those companies otherwise satisfy all of the above screening criteria for comparability to EGDI, they have been added to the proxy group in our present analysis. We note that none of the companies that were classified as "Natural Gas Diversified" in 2009 would have satisfied the same screening criteria for the analysis we developed at that time.

Further changes to the composition of our proxy group are due to changed circumstances and changed business risk profiles of the proxy companies included in our 2009 analysis. Because AGL Resources Inc. is currently involved in a merger, it no longer meets the screening criteria and falls out of the group. In addition, the percentage of regulated revenue to total consolidated revenue at South Jersey Industries, Inc. has declined in the period 2008 – 2010 so that it no longer meets the third screen above. In the process of re-screening the Value Line utilities for inclusion in the comparable group, three new companies enter the group: National Fuel Gas Company, Northwest Natural Gas Company, and Questar Corporation. Our present cost of capital analysis therefore is conducted on the following seven companies:

1. National Fuel Gas Company
2. Northwest Natural Gas Company
3. Piedmont Natural Gas Company, Inc.
4. Questar Corporation
5. Sempra Energy
6. Southwest Gas Corporation
7. Vectren Corporation

Screening criteria results are provided in Exhibit Concentric-01; financial information and data for the proxy groups are reflected in Exhibits Concentric-02 – Concentric-04.

B. ROE Analysis

Concentric's ROE analysis in the 2009 Consultative Process included a DCF analysis and CAPM analysis on a group of North American Utilities, screened in accordance with the above parameters. Concentric's recommendations were based primarily on its DCF and CAPM results, corroborated by a variety of risk premium analyses and by a Canadian proxy group of regulated utility companies.

Concentric's initial ROE results for natural gas distribution utilities were adjusted for leverage that was higher than the benchmark debt ratio. A deemed equity of 40 percent resulted in a recommended ROE of 10.5%. Performing a similar analysis today, Concentric arrives at the following ROEs adjusted for alternative levels of equity relative to the proxy group benchmark:

Table 1: Updated ROE and Capital Structures for EGDI

SUMMARY OF COMMON EQUITY RATIOS AND ROES										
Equity %	36.00%	37.00%	38.00%	39.00%	40.00%	41.00%	42.00%	43.00%	44.00%	45.00%
ROE	11.29%	11.17%	11.05%	10.93%	10.83%	10.72%	10.62%	10.53%	10.44%	10.36%

Similar to the analysis we performed in 2009, Concentric arrived at these results by performing a DCF analysis and CAPM analysis for the proxy group. We have corroborated those results with a proxy group of Canadian utilities (Canadian Utilities Ltd., Emera Inc., Enbridge Inc., Fortis Inc., and TransCanada Corp.) The unadjusted mean DCF and CAPM results were averaged to obtain an average ROE, and then adjusted for varying degrees of leverage (equity ratios).[12] The analysis Concentric performed is addressed in further detail in Appendix A to this Report.

Concentric's updated ROE analysis produces the results shown in Table 2. The table reflects the average equity thickness for both the North American gas utility proxy group and the Canadian utility proxy group, and the DCF analysis and CAPM analysis for each, before and after flotation cost adjustments. As the results show, the Canadian results corroborate the reasonableness of the North American gas utility group results, with a slightly higher ROE on average. Performing a leverage adjustment to the North American gas utility group to reduce the equity thickness associated with the ROE result from 49.9 percent (actual for the group) to 42 percent (EGDI's proposed equity thickness), increases the cost of capital result of the North American gas group from 9.99 percent to 10.60 percent. This result is above the unadjusted Canadian average ROE result produced by our analysis of 10.17 percent and is above the allowed return on equity produced

[12] An implied risk premium was derived by subtracting the applicable long bond risk free rate. Concentric de-levered and re-levered the proxy group average beta using the Hamada method and used the implied equity risk premium derived from the CAPM and DCF analyses to arrive at the distribution of ROE results for specified levels of equity, using the CAPM formula. Concentric de-levered using the U.S. bond yield forecast and re-levered using the Canadian bond yield forecast, which at the time of this writing is estimated to be approximately 74 basis points below the U.S. bond yield.

by the OEB formula, currently 9.42 percent. However, if one were to consider the difference in forecast bond yields between the U.S. and Canada (currently we estimate 74 basis points), our analysis would yield a 9.88 percent ROE for 42 percent equity. This adjusted result is aligned with the current ROE formula result of 9.42 percent and supports EGDI's request for an increase in its equity thickness to 42 percent.

Table 2: Summary of Mean ROE Results[13]

	U.S. (Re-screened)	Canada
DCF Mean	8.83%	10.58%
DCF Mean + Flotation Cost Adj.	9.33%	11.08%
CAPM Mean	10.15%	8.77%
CAPM Mean + Flotation Cost Adj.	10.65%	9.27%
Average	9.49%	9.67%
Average + Flotation Cost Adj.	9.99%	10.17%
Leverage Adjusted (40% equity)	10.83%	*10.09%*
Leverage Adjusted (42% equity)	10.62%	*9.88%*
Leverage Adjusted (45% equity)	10.36%	*9.62%*

III. THE IMPORTANCE OF AN APPROPRIATE EQUITY THICKNESS

A. Financial Theory

Equity thickness and the cost of common equity are closely linked in determining the fair return for regulated utilities. Other factors being equal, firms with lower common equity ratios require higher rates of return to compensate for the additional financial risks in the form of financial leverage to

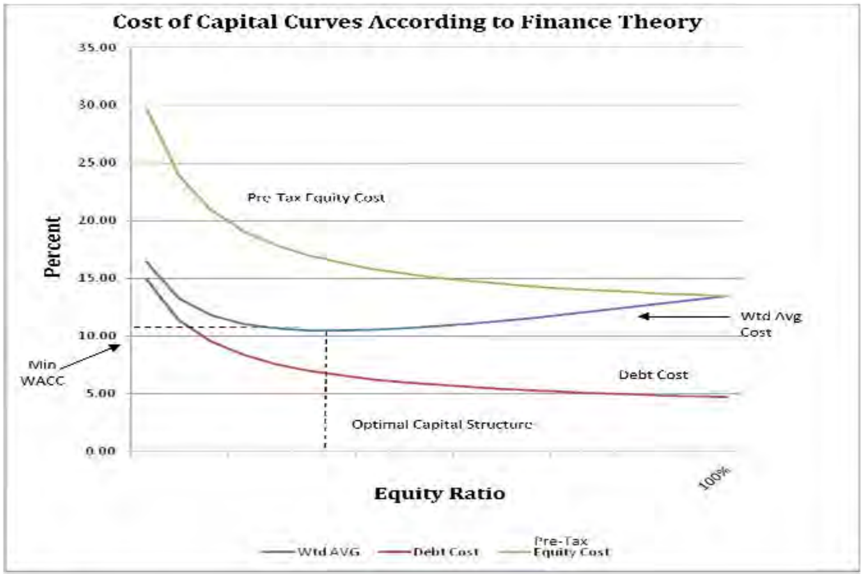
13 Canadian leverage adjusted ROE estimates were derived by subtracting the difference between the forecast bond yields of 74 basis points (U.S. bond yield premium over the Canadian bond yield) from the leverage adjusted U.S. results. This produces the same result as would de-levering at the U.S. bond yield rate and re-levering at the Canadian bond yield rate.

which their shareholders are exposed. Accordingly, regulators must consider capital structure in the establishment of a fair return on common equity.

Most utilities are financed using a mix of debt and equity capital. Debt in the capital structure can provide a low-cost source of funds because the common equity holders shield lenders from a portion of the risks of the company. However, the requirement to pay a fixed level of interest and principal causes the possibility of bankruptcy or other financial distress to increase as the firm takes on more debt. Financial "leverage" provided by debt also tends to translate relatively small fluctuations in a company's operating income into much larger variations in the net income available to common stockholders. When the proportion of debt is increased, both lenders and stockholders require greater rates of return on their investments to compensate for the greater risks involved. In theory, there is an optimal range of financial leverage that minimizes the overall cost of capital.

When the risk of default and financial distress costs are minimal, the weighted average cost of capital (WACC) continues to decline as leverage is added, since the cost of debt is typically lower than equity and incremental tax savings associated with the deductibility of interest expense add value to the firm. However, at some point increasing leverage increases the risk of financial distress. Eventually, each dollar of new debt added will increase costs to the firm as the risks of financial distress outweigh the lower cost and tax benefits provided by the debt. The optimum capital structure is achieved at the point where the cost advantage of debt is exactly offset by the costs associated with the increased risk of financial distress. Beyond this point, the cost advantages of debt are outweighed by the increasing cost of capital due to the lesser degree of protection for creditors. This is the point where the WACC begins to turn upward. As illustrated in Figure 1, the theoretically optimum capital structure corresponds to the lowest point on the WACC curve.

Figure 1: Weighted Average Cost of Capital Curve



B. Regulatory History of Capital Structure in Ontario

The Board's approach to setting capital structure in Ontario has evolved through a number of proceedings for both gas and electric distribution utilities. The Board issues a generic ROE applicable to all utilities under its jurisdiction and generally accounts for the differences in risk among the individual utilities by adjusting their capital structures.

EGDI's equity thickness was set at 35 percent in 1993. In 1997, the Board published guidelines for its cost of capital methodology for gas distribution utilities. In the Board's Draft Guidelines, it stated: "The Board's guidelines [assume] that the base capital structure will remain relatively constant over time and that a full reassessment of [the Company's] capital structure will only be undertaken in the event of significant changes in the company's business and/or financial risk."[14]

In 2006, EGDI requested an increase in equity thickness from 35 to 38 percent to restore financial integrity and to allow access to capital on reasonable terms. The Board noted the trend among Canadian regulators towards thicker equity for utilities, and that EGDI's equity percentage may have fallen out of line with its peers. However, since the Board had recently allowed Union Gas an equity percentage of 36 percent by way of a negotiated settlement, and Union Gas was perceived to have

14 OEB, Draft Guidelines on a Formula-Based Return on Common Equity For Regulated Utilities (March, 1997) at 30. [clarification added]

greater business risk than EGDI, EGDI's equity determination was effectively bound by Union Gas's negotiated settlement. As a result, the Board allowed EGDI an equity percentage increase of one percentage point to equal that of Union Gas, at 36 percent.

The history of capital cost methods for Ontario's electric distributors is relatively recent. Not until 1998 and the passage of the Energy Competition Act did the OEB have responsibility for regulating the 270 plus municipal electric utilities that existed at that time. The Board commissioned a research paper to examine the question of equity thickness and cost of capital for Ontario's newly regulated electric utilities. The Board established a formulaic risk premium approach to ROE and created a hypothetical "deemed" capital structure that varied by the size of the utility.

The research paper underlying the Board's approach noted a number of potential factors for categorizing risk into risk classes for regulated electric utilities, such as: i) size of operations, assets and rate base; ii) the nature and stability of the MEU's customer mix; iii) the degree of competition from other fuels; iv) the age and condition of the physical distribution system; v) local climate peculiarities; vi) the geographic size and isolation of the service area; and the availability of back up self generation capacity.[15] But, the relative risk of the MEU's was ultimately categorized on the basis of size of rate base alone.[16] Companies with regulated rate bases in excess of $1 billion were considered low risk; between $300 million and $1 billion was medium/low risk; between $100 million and $300 million was medium risk; between $40 million and $100 million was medium/high risk; and smaller than $40 million considered high risk.[17]

The research paper concluded that although gas utilities were more risky than electric utilities in terms of business risk,[18] the electric utilities had greater overall risk presumably because the electric utilities were smaller than Ontario's gas utilities. The conclusions on the relative risks of Ontario's electric utilities, versus those of its natural gas utilities, were as follows:

> In Section 2.3.2, I concluded that there appears to be very little difference between the long-run, enterprise viability riskiness of electricity and gas distributors in general,

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15 Dr. William T. Cannon, *A Discussion Paper on the Determination of Return on Equity and Return on Rate Base for Electricity Distribution Utilities in Ontario*, Prepared for the Ontario Energy Board (December 1998) at 16.
16 Ibid at 27.
17 Ibid at 19.
18 Ibid at 13.

and smaller and more-isolated electricity and gas LDCs in particular, although I felt that the risk for gas LDCs might be marginally greater than that for MEUs when enterprises of similar size and geographic diversity are compared. In Section 2.3.3.3, I concluded that, with respect to short-run, volatility-of-return-related risks, gas distributors might also be marginally more risky than MEUs of similar size and diversity. These two conclusions reinforce each other and lead me to conclude that, controlling for organizational size and diversity, Ontario's MEUs are marginally less risky, in terms of overall business risk exposure, than gas LDCs. It is doubtful, however, that the small magnitude of this overall difference in business riskiness would, by itself, justify different deemed capital structure proportions, or different degrees of acceptable financial leverage risk, between similarly sized and similarly diversified MEUs and gas LDCs.

The Board ultimately adopted a version of the proposed risk/equity ratio matrix in its Electric Distribution Rate Handbook, promulgated in the Board's Decision with Reasons in RP-1999-0034 on January 18, 2000, resulting in the risk/equity ratio matrix represented in Table 3.

Table 3: Deemed Capital Structure by Risk Class

RISK CLASS	RATE BASE	COMMON EQUITY RATIO
Low	> $1.0 billion	35%
Medium- Low	$250 - $1.0 billion	40%
Medium-High	$100 - $250 million	45%
High	< $100 million	50%

Source: OEB, Electricity Distribution Rate Handbook (March 9, 2000), Table 3-1, Page 3-7

In the Ontario Energy Board's 2006 Report on Cost of Capital, the Board further simplified its approach to capital structure for electric utilities by adopting a common 60 percent debt/40 percent equity ratio. In that Report, the Board concluded that "**size is not a key determinant of, or proxy for, risk**".[19] The Board viewed differing capital structures of distributors as potential barriers to consolidation and noted that often times small distributors had greater leverage in their actual capital structures than their deemed equity thicknesses. As such, the small distributors did not appear to have difficulty obtaining financing. The Board concluded with the following:

> …The Board concludes that utility size no longer represents an accurate proxy for risk. As a result, there is no basis upon which ratepayers should be required to bear different costs, associated with different capital structures, on the basis of distributor size. The question the Board must ask is whether ratepayers of smaller distributors should pay higher rates than those of larger distributors because of a thicker equity

[19] Ontario Energy Board, *Report of the Board on Cost of Capital and 2nd Generation Incentive Regulation for Ontario's Electricity Distributors* (December 20, 2006) at 7.

> component. For these reasons it is the Board's view, that for ratemaking purposes, a single capital structure for all distributors is appropriate.

The Board proceeded to set a transitional schedule to move all of Ontario's electric distribution utilities to a common capital structure by the end of 2010. The Board's related discussion on cost of capital in its 2006 Report provided some additional perspective on capital structure determinations:

> The Board's previous reviews of cost of capital reveal a general agreement that regulated distributors are less risky than the broader market on which the rating agencies primarily focus. Beyond that, however, there is a large potential range of risk and varied opinion on the best way of representing that risk in the current circumstances of Ontario's distribution companies. The Board is guided in this matter by the need to reflect appropriately risk in rates such that investors are provided a reasonable opportunity to earn a fair return and consumer interests are protected. The Board has looked to the advice of experts to assist in the development of an effective policy for setting the cost of capital for 2007 and beyond. In addition, the Board considered regulatory practice in several Canadian and United States jurisdictions.[20]

Within these guidelines, capital structures have been set in Ontario. Electric distributors are allowed a higher equity thickness than gas distributors, even though the Board's cost of capital policy was premised on the notion that electricity distributors are <u>less</u> risky than gas distributors, *but for* the large size of its gas distributors. As indicated, the Board later determined that the size of rate base was not a significant determinant in the risk of a utility and began steps to move all electric distribution utilities to a common capital structure of 40 percent. However, the gas distributors in Ontario remain subject to the old rules and their legacy capital structures. Oftentimes, Board policy between its gas and electric utilities has been aligned or even the same. For example, with respect to interest rate methodology, the Board has adopted the same methodology amongst the rate-regulated companies in the energy sector.[21] In addition, the Board uses the exact same determination of ROE for both its gas and electric utilities. However, it appears that a discrepancy exists in the ratemaking policies involving capital structure between the gas and electric utilities affording a greater equity thickness to the electric utilities, when the basis for those differences was dismissed in 2006.

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20 Ontario Energy Board, *Report of the Board on Cost of Capital and 2nd Generation Incentive Regulation for Ontario's Electricity Distributors* (December 20, 2006) at 4.

21

In the case of EGDI, the settlement that Union struck with its stakeholders was a significant influence in the Board's decision. Because any settlement, by its nature, provides a balance of gives and takes, we do not know what concessions were granted elsewhere in Union's settlement package. Selecting one element of Union's settlement package and applying it to EGDI subjects EGDI to the terms of Union's negotiated settlement and does not provide a basis to establish a fair return. Though Union's rates and capital structure are relevant for consideration by the Board, they should be considered in the context of other relevant proxy companies and should not dominate the Board's decisions specific to EGDI.

Further, the Board has provided guidance that its long-standing policy with respect to revisions to capital structure for ratemaking purposes is that such revisions may only occur upon a showing of changed business or financial risk. In the 2009 Consultative Process, the Board found:

> As noted in the Board's draft guidelines, capital structure should be reviewed only when there is a significant change in financial, business or corporate fundamentals. The Board's current policy is as follows: The Board has determined that a split of 60% debt, 40% equity is appropriate for all electricity distributors. Capital structure was not a primary focus of the consultation and the Board notes that the comments made by participants in the consultation largely supported the continuation of the Board's existing policy.
>
> For electricity transmitters, generators, and gas utilities, the deemed capital structure is determined on a case-by-case basis. The Board's draft guidelines assume that the base capital structure will remain relatively constant over time and that a full reassessment of a gas utility's capital structure will only be undertaken in the event of significant changes in the company's business and/or financial risk.[22]

In Concentric's view, this methodology is flawed because it does not respond to shifts in market fundamentals external to the company's own operations, nor does it provide an avenue for relief if the utility believes its previously awarded equity thickness did not satisfy the Fair Return Standard. In order for this methodology to produce a fair rate of return (including capital structure), the following must hold true: i) the Board's initial determination of risk and capital structure was fair and reasonable; and ii) the only factors that impact the appropriate leverage for a regulated utility are changes in its own business and/or financial risk. If either or both are found to be untrue, the

[22] Ontario Energy Board, EB-2009-0084, *Report of the Board on the Cost of Capital for Ontario's Regulated Utilities* (December 11, 2009) at 50.

capital structure authorized by the Board would likely fail to satisfy the Fair Return Standard. We believe this represents an unfinished element of the Board's generic cost of capital Report since we have observed that Ontario's gas utilities' capital structures have fallen out of line with their like-risk peers.

IV. REGULATORY AND FINANCIAL BASIS FOR INCREASED EQUITY

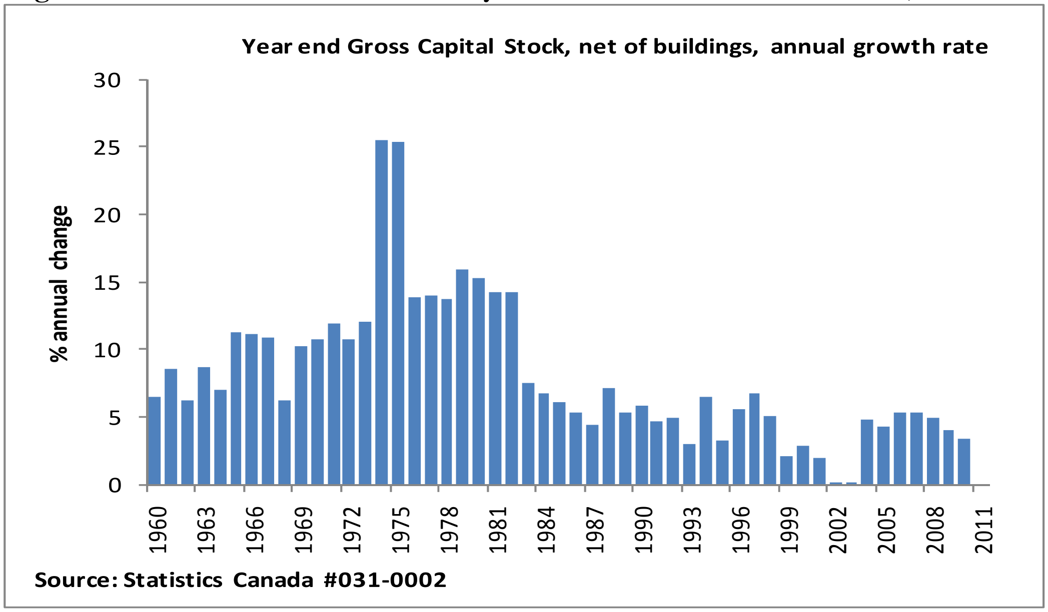
A. Business Risk Environment – 1990 to Present

The risk environment in the natural gas distribution business has changed materially since EGDI's equity ratio was initially set at 35 percent in 1993 and later raised by 1 percentage point in 2006. Periods of high and volatile natural gas commodity prices coupled with a movement to conserve energy resources have led to an evolution of ever more efficient natural gas appliances and greater energy efficiency on the part of the consumer.

Today's natural gas distribution utilities are substantially affected by increased conservation efforts, DSM programs, appliance use standards, and housing trends towards multiple versus detached single family dwellings. These factors have led to a steady decline in natural gas use per customer for the past two decades. This has occurred at a time when infrastructure investment is more important than ever. Consumers demand safe and reliable service. In the wake of several high-profile natural gas catastrophes such as the San Bruno incident in September 2010, which lead to 8 deaths, 52 injuries and destroyed 50 homes; or the Allentown, Pennsylvania explosion which occurred in February 2011 and resulted in 5 deaths, and the destruction of 47 homes, the natural gas industry has stepped up its commitment to reliability and safety.

Much of Canada's natural gas infrastructure was originally put in place over the late 1960's and the 1970's (see Figure 2). Forty to fifty years later, large portions of these natural gas transmission and distribution systems are reaching the end of their design lives. These systems were built as the cities, towns and communities they now serve were less populated for installation of natural gas pipes and other infrastructure.

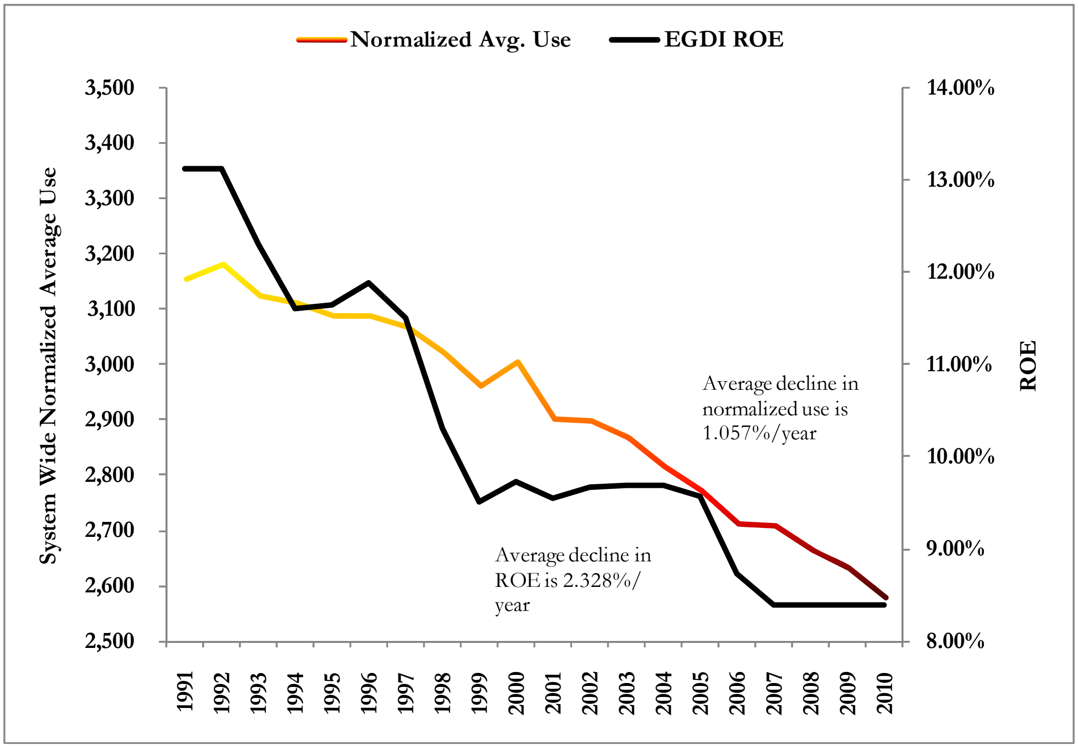
Figure 2: Canadian Natural Gas Utility Investment Annual Growth Rate, 1960-2010



Renewing or replacing these systems today will be more costly and complicated. For example, EGDI is firming up its plans for the Greater Toronto Area Reinforcement Project, which would require a significant capital investment over the next several years. This level of capital investment will require ongoing access to debt and equity capital on reasonable terms.

These investment requirements occur, however, against the back drop of steadily lower ROEs over the past decade paired with a decidedly low equity thickness for EGDI compared to other North American gas utilities. As Figure 3 illustrates, this trend has been coupled with steadily lower average natural gas consumption for EGDI's residential and commercial customers, which has declined by roughly 1 percent per year while ROEs have steadily declined by approximately 2 percent per year. Though Concentric notes that the Board's new ROE formula should provide a higher ROE than in the past, the past two decades of downward pressure on earnings and financial flexibility serve to reduce the earnings buffer of the company, creating more risk for both debt and equity holders.

Figure 3: Decline in EGDI System-Wide Normalized Average Use (1991-2010)

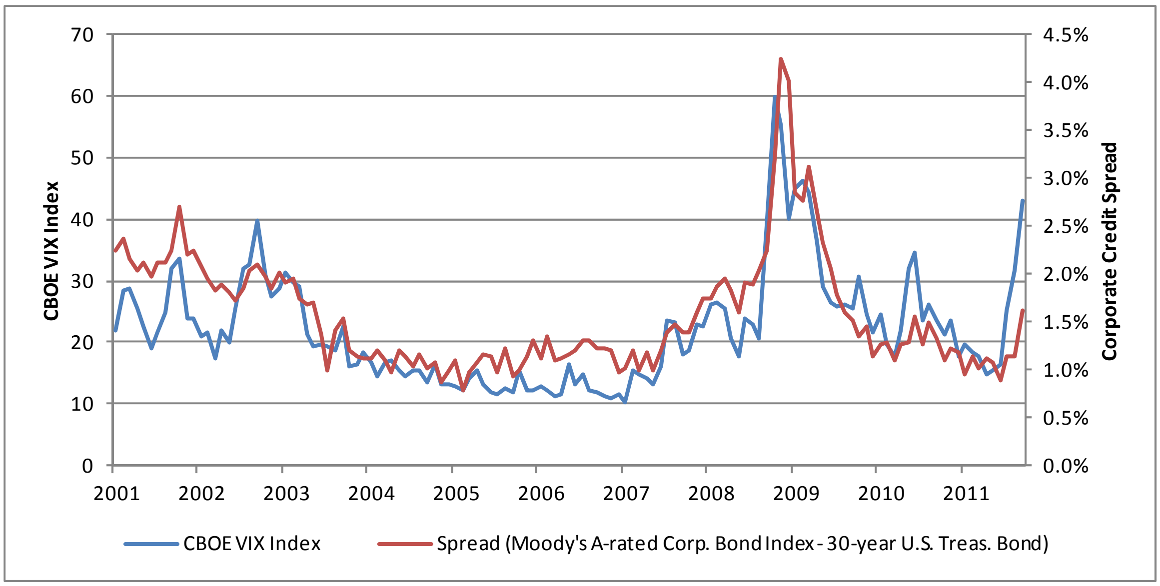


Data was provided by EGDI.

The shrinking equity cushion provides less of a buffer over the company's fixed debt obligations to address unanticipated events such as unforeseen infrastructure requirements, the effects of a severe economic downturn, significant decline in demand due to weather, or a sustained period of high gas prices that weaken sales. Typically, interest coverage ratios falling below 2.0x signal that financial integrity may be in jeopardy. This point is highlighted for EGDI, since the Company holds a trust indenture with CIBC Mellon which requires an EBIT/Interest Coverage Ratio of 2.0x for at least a consecutive 12 month period in the 23 months prior to debt issuance in order for the Company to access debt capital under the terms of the indenture. Concentric notes that EGDI's interest coverage as calculated by S&P for the year ended 2010 was 2.3x, which places EGDI very close to losing access to capital under its trust indenture. Based on S&P's 2010 data, a swing in EGDI's gas distribution revenues of only 3 percent would be sufficient to decrease its EBIT/Interest Coverage Ratio to 2.0x.

At a time when Ontario's utilities will be required to commit increasing capital, there is evidence that investors have become more risk averse over the past decade, especially in the wake of the 2008 financial crisis. In the April 2010 Study by Graham and Harvey of Duke University, the professors found that the equity risk premium was strongly correlated to consumer confidence and that volatility leads to uncertainty and lack of confidence. Further the professors found that the equity risk premium was highly correlated with the volatility index and corporate credit spreads. Figure 4 presents an illustration of corporate credit spreads and the volatility index over the past decade.

Figure 4: VIX and Corporate Credit Spreads



As Figure 4 shows, recent years have been characterized by unprecedented volatility in equity markets and credit spreads well above the historical averages. These are indications that equity markets have remained unstable in the wake of the financial crisis and there has been a shift in the risk tolerances of investors. These indications were supported in the Graham Harvey study noted above, where they conclude:

> Given the current global economic crisis, the risk premium has hit a record high for our nine years of surveys. We also present evidence on disagreement. With higher disagreement, people often have less confidence in their forecasts. We find that disagreement is also higher in recessionary times and the current level of disagreement is at a record level.[23]

Accordingly, not only have the financial risks for EGDI grown over the past two decades, but investors have less tolerance for risk. Indeed, this shift in investor risk tolerance was recognized by

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[23] John R. Graham and Campbell R. Harvey, *Lessons from the Financial Crisis: The Equity Risk Premium amid a Global Financial Crisis* (April 9, 2010)

the Alberta Utilities Commission in its 2009 Order on Cost of Capital, where it stated in its findings on capital structure: "The credit crisis warrants an increase in the equity ratios for all utilities to reflect increased risk and the re-pricing of risk."[24] In its recent generic Cost of Capital Decision, the AUC reaffirmed the credit ratios of all of the Alberta utilities, except for ATCO Pipelines which had significantly changed business risk due to its integration with Nova Gas Transmission Ltd.[25] Today's investors require a greater degree of certainty that the Company will earn its required return, and as a result, require a higher return for the same level of risk, or conversely, will require a lower level of risk for the same return. The OEB's approach of holding equity thickness constant, "but for" a demonstration that the utility has experienced a significant shift in risk is not responsive to shifts in market fundamentals external to the company's own operations. EGDI's equity thickness of 36 percent does not reflect either the increased financial and business risks of the company, or the shift in risk tolerances of equity investors, and is not appropriate given EGDI's present risk profile and the risk appetites of investors in today's economy.

B. Credit Ratings and the Implication of a Ratings Downgrade

In setting capital structure, a common regulatory objective is maximizing leverage on one hand while allowing an equity ratio that is sufficient to maintain financial integrity on the other. In doing so, regulators often consider credit ratings as thresholds. However, it is a misconception that bond credit ratings provide information on the returns (defined as the allowed ROE and equity ratio) required by equity investors. An allowed ROE and equity ratio that are adequate to attract borrowing are not necessarily sufficient to attract or compensate common equity.

Credit ratings do, however, send important signals to debt investors. Regulators recognize that lower credit ratings result in higher debt costs and reduced financial flexibility to manage through unexpected events. Credit downgrades can cause companies to be shut out of credit markets, unable to issue commercial paper to finance short-term working capital requirements, violate loan covenants, or force a utility to issue equity at unfavorable times. A significant setback in operations could result in a credit rating downgrade to below investment grade. In other words, there is little or no financial flexibility when the goal is to maintain the lowest possible investment-grade credit

24 AUC Decision 2009-216 (November 12, 2009) at 111
25 AUC Decision 2011-474 (December 8, 2011) at 230.

rating. Table 4 shows the credit ratings that rating agencies issue. For each rating category, except the lower ratings, Moody's also attaches a 1, 2, or 3 to designate whether the quality of a bond is at the high, medium, or low end of the rating category. Similarly, S&P may attach a "+" or a "-" designation and DBRS may give a "high" or "low" designation to a bond rating to indicate where within the rating a company's credit is more inclined. All ratings above the line are deemed to be "investment grade".

Table 4: Credit Ratings

	MOODY'S	**S&P**	**DBRS**
Investment Grade	Aaa	AAA	AAA
	Aa	AA	AA
	A	A	A
	Baa	BBB	BBB
Speculative	Ba	BB	BB
	B	B	B
	Caa	CCC	CCC
	Ca	CC	CC
	C	C	C

Ratings determinations are made on the basis of the company risk profile. Generally, for a regulated utility, ratings are based on two key risk areas: business risk and financial risk. Using S&P for example, the ratings agency adheres to a lengthy list of considerations for each risk category. In assessing a utility's business risk, the ratings agency considers: regulatory support, commodity exposure, operational performance, asset concentration, markets and service area economy, competitive position, ownership, risk appetite, and governance. S&P categorizes business risk profiles from excellent to vulnerable and has stated that it considers the business risks of most regulated utilities to be either excellent or strong.[26] S&P has rated EGDI's business risk as "excellent."[27] Similarly, under financial risk, S&P considers the utility's sustainable cash flow strength with respect to its debt obligations, financial policies, liquidity and liability management,

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[26] Standard and Poor's, Global Credit Portal, Ratings Direct, *Issuer Ranking: Canadian Gas And Electric Utility Companies, Strongest to Weakest* (December 2010) at 2.

[27] Ibid.

accounting and disclosure practices, and financial flexibility. They consider three primary ratios to be indicative of financial risk: FFO/Debt, Debt/EBITDA, and Debt/Capital. These metrics help to establish thresholds of financial risk which span from minimal to highly-leveraged.[28] Table 5 reflects the ratios associated with each risk level.

Table 5: S&P Financial Risk Indicative Ratios

Financial Risk Indicative Ratios for Corporate Issuers			
	FFO/Debt (%)	**Debt/EBITDA (x)**	**Debt/Capital (%)**
Minimal	Greater than 60	Less than 1.5	Less than 25
Modest	45-60	1.5-2	25-35
Intermediate	30-45	2-3	35-45
Significant	20-30	3-4	45-50
Aggressive	[Less than 12]	4-5	50-60
Highly Leveraged	Less than 12	Greater than 5	Greater than 60

With their assessments of these two factors, S&P arrives at a credit rating determination for a given company. Concentric's calculations of these three indicative ratios for EGDI indicate a FFO/Debt of 17.1 percent, Debt/EBITDA 3.9x, and Debt/Capital of 58.7 percent.[29] For each metric, EGDI is either in or borders on the financial risk category of "Aggressive", but for its Debt/Capital metric which borders on "Highly Leveraged." Using the matrix in Table 6, illustrating how S&P arrives at its rating determination when combining the "excellent" business risk profile for a utility with its "aggressive" financial profile, indicates that EGDI's credit rating should be in the BB to BBB range. Though S&P has maintained that these guidelines are not strictly applied and S&P has rated EGDI's financial risk as "significant," these metrics suggest that EGDI's current credit rating of A- should not be taken for granted.

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28 *Ibid.* Note that S&P made an error on its Table in the December 2010 publication. Per discussion with an S&P representative, though the FFO/Debt % that equates to Aggressive is shown on the Table to be "less than 12", it should actually read "12 – 20". As such, EGDI's FFO/Debt % falls into the "Aggressive" category. Only, companies with FFO/Debt % of "less than 12" would be reflected in S&P's "highly leveraged" category.

29 Calculations are based on EGDI 2010 Consolidated Financial Statements. S&P subtracts gas inventories from total debt to arrive at these credit metrics. Without this adjustment, the FFO/debt ratio is 14.9%, the Debt/EBITDA ratio is 4.4x, and the Debt/capital ratio is 62.0%.

Table 6: S&P Business and Financial Risk Profile Matrix

Business and Financial Risk Profile Matrix						
	-- Financial Risk Profile --					
Business Risk Profile	**Minimal**	**Modest**	**Intermediate**	**Significant**	**Aggressive**	**Highly Leveraged**
Excellent	AAA	AA	A	A-	BBB	--
Strong	AA	A	A-	BBB	BB	BB-
Satisfactory	A-	BBB+	BBB	BB+	BB-	B+
Fair	--	BBB-	BB+	BB	BB-	B
Weak	--	--	BB	BB-	B+	B-
Vulnerable	--	--	--	B+	B	CCC+

Moody's follows a similar methodological approach by developing a weighted risk analysis, based on four primary factors: i.) regulatory framework; ii.) ability to recover costs and earn returns; iii) diversification; and iv) financial strength and liquidity. Moody's develops their assessment in each of these areas based upon the weightings in the matrix shown in Table 7.

Table 7: Moody's Ratings Factors and Weighting[30]

Rating Factor/ Sub-Factor Weighting - Regulated Utilities			
Broad Rating Factors	**Broad Rating Factor Weighting**	**Rating Sub-Factor**	**Sub-Factor Weighting**
Regulatory Framework	25%		25%
Ability to Recover Costs and Earn Returns	25%		25%
Diversification	10%	Market Position Generation and Fuel Diversity	5%* 5%**
Financial Strength, Liquidity and Key Financial Metrics	40%	Liquidity CFO pre-WC + interest/interest CFO pre-WC / Debt CFO pre-WC - Dividends / Debt Debt / Capitalization or Debt / Regulated Asset Value	10% 7.5% 7.5% 7.5% 7.5%
Total	100%		100%
*10% weight for issuers that lack generation; **0% weight for issuers that lack generation			

Similarly, the financial strength ratings factor is a major contributor to the overall assessment of the utilities' risk profile with 40 percent weight afforded to financial risk factors. A computation of the financial metrics associated with EGDI yields the following results: Concentric assumes that liquidity will fall into the A or Baa range, CFO-WC+Interest/Interest of 3.5 percent, CFO-

30 Moody's Rating Methodology, *Global Infrastructure Finance, Regulated Electric and Gas Utilities* (August 2009)

WC/Debt of 17.1 percent, and Debt/Capitalization of 58.7 percent, and Debt/Regulated Asset Value 81.9%.[31]

Table 8: Moody's Key Financial Metrics for Ratings Determination

Factor 4: Financial Strength, Liquidity and Key Financial Metrics							
Weighting: 40%	Aaa	Aa	A	Baa	Ba	B	Sub-Factor Weighting
Liquidity	Financially robust under all scenarios with no need for external funding, unquestioned access to the capital markets, and excellent liquidity.	Financially robust under virtually all scenarios with little to no need for external funding, superior access to the capital markets, and very strong liquidity.	Financially strong under most scenarios with some reliance on external funding, solid access to the captial markets, and strong liquidity.	Some reliance on external funding and liquidity is more likely to be affected by external events, good access to the capital markets, and adequate liquidity under most scenarios.	Weak liquidity with more susceptibility to external shocks or unexpected events. Significant reliance on debt funding. Bank financing may be secured and there may be limited headroom under covenants.	Very weak liquidity with limited ability to withstand external shocks or unexpected events. Must use debt to finance investments. Bank financing is normally secured and there may be a high likelihood of breaching one or more convenants.	10%
CFO pre-WC + Interest/ Interest	>.8.0x	6.0x - 8.0x	4.5x - 6.0x	2.7x - 4.5x	1.5x - 2.7x	<1.5x	7.5%
CFO pre-WC/ Debt	>40%	30% - 40%	22% - 30%	13% - 22%	5% - 13%	<5%	7.5%
CFO pre-WC - Dividends/ Debt	>35%	25% - 35%	17% - 25%	9% - 17%	0% - 9%	<0%	7.5%
Debt/ Capitalization	<25%	25% - 35%	35% - 45%	45% - 55%	55% - 65%	>65%	7.5%
Debt/RAV	<30%	30% - 45%	45% - 60%	60% - 75%	75% - 90%	>90%	7.5%

Although Moody's does not rate EGDI, as Table 8 illustrates, with EGDI's significant degree of leverage, Moody's would assign between a Baa and Ba rating for 40% of its ratings assessment. Based on the tables that Moody's publishes for its regulatory methodology, the best estimate of the rating of EGDI's regulatory risk would be in the A category. So, it follows that assuming an A rating for 60% of the utility credit risk assessment and a Ba or Baa rating for the remaining 40% of the assessment, places EGDI on the cusp of a Baa rating, indicating that EGDI is operating very close to the theoretical threshold of its Moody's rating. Indeed, it is Standard and Poor's opinion that EGDI's credit metrics are low for its rating and the ratings agency recently placed all of the Enbridge, Inc. ("EI") subsidiaries on negative outlook. S&P noted that the credit metrics of EI and its subsidiaries are weak and may not be sufficient to absorb additional business risk at the current rating.[32]

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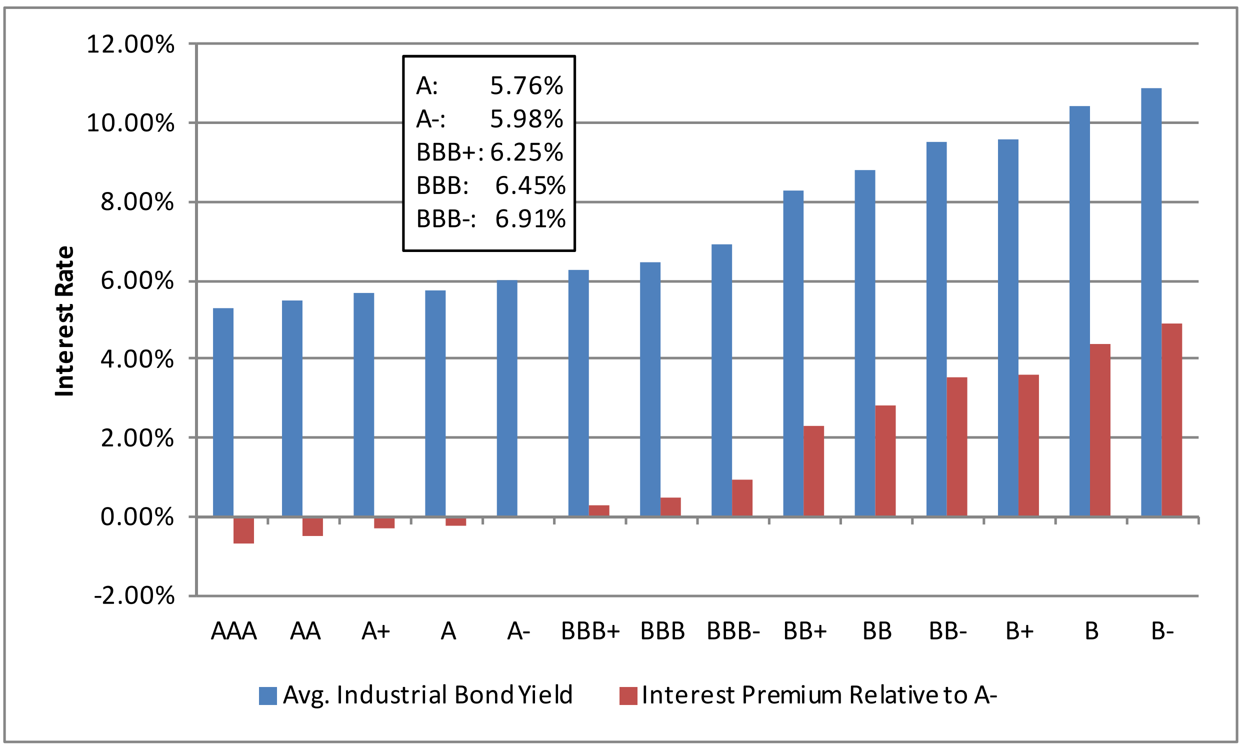
31 Calculations are based on EGDI 2010 Consolidated Financial Statements.

32 Standard and Poor's, Research Update: Enbridge Inc, Enbridge Pipelines Inc, And Enbridge Gas Distribution Inc. Outlooks Revised To Negative; Ratings Affirmed (March 23, 2011)

If EGDI were downgraded, ratepayers would have to bear the higher cost of debt on EGDI's debt portion of its capital structure. To illustrate, Figure 5 shows a graph of the five-year average yields on U.S. Industrial Bonds, and the premiums over/under EGDI's current A- yield, as an example of the changes in debt costs associated with greater leverage. As the chart indicates, on average over the past five years a drop below investment grade (i.e. to BB+) would likely add over 2 percent to EGDI's current debt costs. A drop of one ratings grade to BBB- would result in an approximate 1 percent increase in debt costs. Typically movements of one notch up or down (within the investment grade ratings categories) are in the range of 20 to 45 basis points.

Figure 5: Average Yields and Credit Spreads versus A- Industrial Bond



On a rate base of approximately $4.0 billion, and a debt cost of 6.0%, a ratings downgrade leading to a 100 bps increase in the cost of debt would increase rates by approximately $25.6 million ($4.0 billion x .64 debt ratio x 100 bps), a result which costs ratepayers as much as an approximate 7.5

percentage point increase in the equity ratio to 43.5 percent, impacting rates by ($4.0 billion x (7.5% additional equity x 9.42% cost of equity[33]/(1 - .35 tax rate), less 7.5% debt x .06).[34]

As this analysis shows, the cost to ratepayers of a ratings downgrade may be equivalent to a fairly significant increase in equity. However, the financial integrity of the utility would be far superior under the increased equity scenario than enduring the debt cost impact of a ratings downgrade. An increase in the equity ratio will in the long term promote financial flexibility and the ability to endure changing economic conditions allowing the Company to maintain its financial integrity as required by the Fair Return Standard.

C. Comparison of Equity Ratios among North American Gas Distribution Utilities

To put EGDI's equity thickness of 36 percent into context, Concentric researched SNL Statistics for the population of all U.S. regulatory awards for gas utilities over the period 2000 to present.[35] The average is represented by the dotted line in Figure 6. In addition, Concentric gathered equity ratio data for all of the major gas distribution utilities in Canada (the average is the central solid line in Figure 6). As Figure 6 shows, EGDI's allowed common equity ratio of 36 percent is well below the average annual equity ratios awarded to both Canadian and U.S. natural gas distribution utilities. Presently, the Canadian average equity ratio (excluding EGDI in Ontario) is 40.96 percent[36] and the

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[33] This analysis assumes that EGDI will be awarded the formula rate of return upon filing its application, currently at 9.42%.

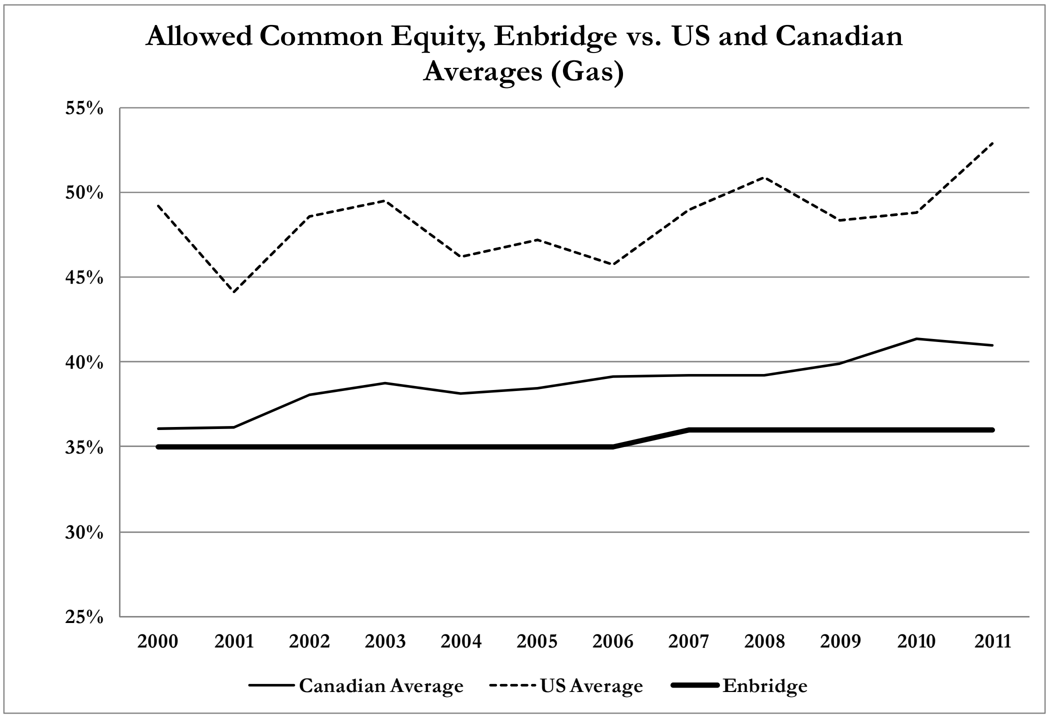
[34] The calculation on an "after-tax" basis would be as follows: on a rate base of approximately $4.0 billion, and a debt cost of 6.0%, a ratings downgrade leading to a 100 bps increase in the cost of debt would increase rates by approximately $16.64 million ($4.0 billion x .64 debt ratio x (100 bps x (1 – .35 tax rate))), a result which costs ratepayers as much as a 7.5 percentage point increase in the equity ratio to 43.5 percent ($4.0 billion x (7.5% additional equity x 9.42% cost of equity, less 7.5% debt x (.06 * (1 - .35 tax rate)).

[35] This data includes all regulatory proceedings covered by Regulatory Research Associates (RRA) for approximately 106 U.S. gas utilities and 361 regulatory proceedings of which 251 regulatory proceedings specified an equity thickness. RRA is a proprietary data base that may be accessed through a subscription to SNL Interactive.

[36] The average excluding Union Gas would be 41.41 percent. The Canadian Average includes Alta Gas Utilities (43.0%), ATCO Gas (39.0%), Enbridge Gas New Brunswick (45.0%), FortisBC Energy Terasen Gas (40.0%) Terasen Gas Vancouver Island (40.0%) Terasen Gas Whistler (40.0%), Gaz Metro (38.5%), Heritage Gas (45.0%), Pacific Northern Gas Western Division (45.0%) Fort St. John/Dawson Creek Division (40.0%) Tumbler Ridge Division (40.0%) and Union Gas (36.0%).

U.S. average equity ratio is 52.84 percent.[37] In fact, EGDI's equity ratio is the lowest in the industry, along with Union's, at 36 percent.

Figure 6: Allowed Common Equity Ratios (2000-2011)



Sources: Average equity ratio data for US gas companies as recorded by SNL Regulatory Research Associates. Canadian average determined by Concentric.

Looking beyond the averages for all Canadian and U.S. companies, we have developed a proxy group of companies having comparable risks to EGDI at the regulated entity level. This yields a different group of companies than those that we used to develop our ROE analysis. Note however, that we have established that the proxy group used for developing our ROE analysis was capitalized at an average of 49.9 percent equity, well above that of EGDI at 36 percent.

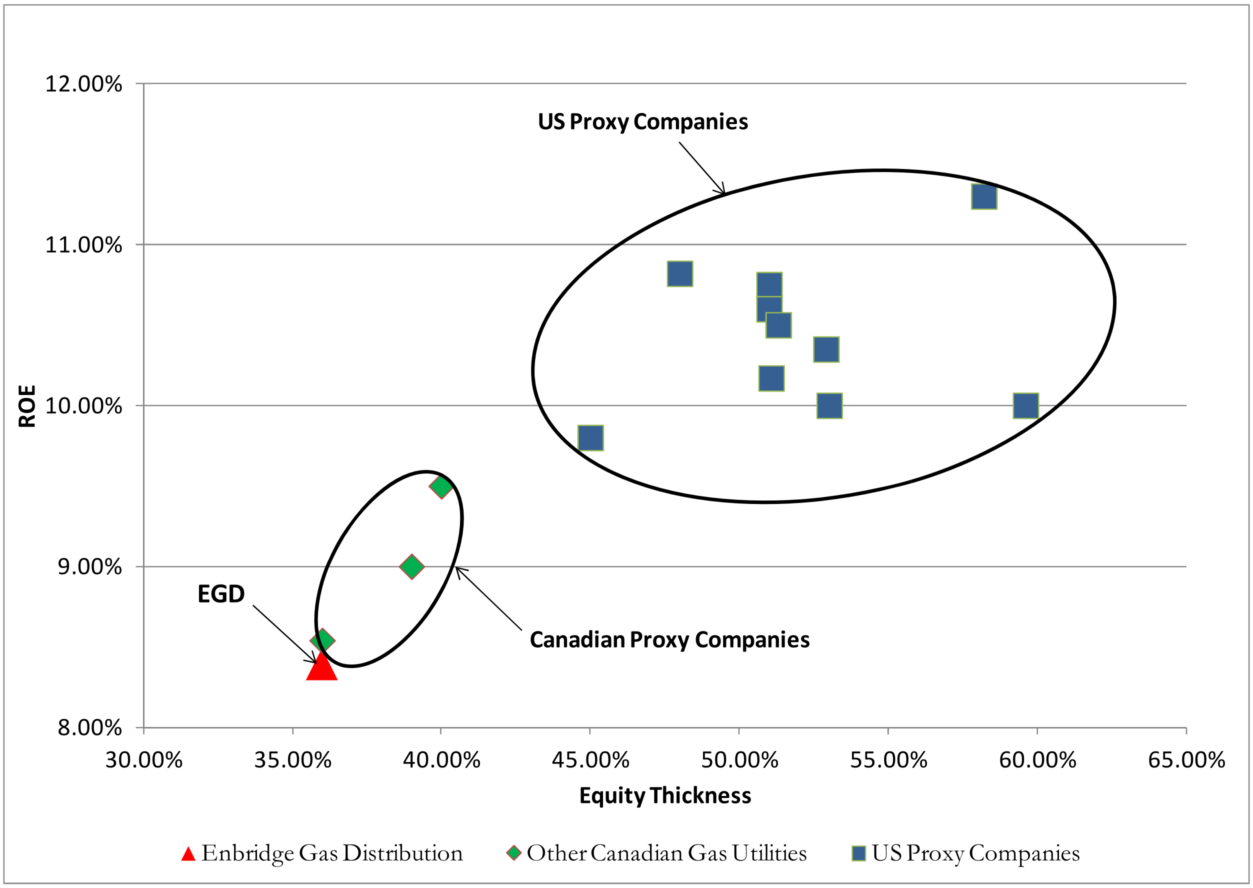
We have screened at the regulated entity level as opposed to the holding company level for purposes of this analysis in order to perform an apples to apples comparison of risks and returns across a group of regulated North American gas utilities, specifically selected to reflect the risks of EGDI at

37 U.S. average gas company equity ratio as calculated by SNL Regulatory Research Associates and represents the average common equity ratio authorized in gas rate cases, updated on a quarterly basis. The average allowed common equity ratio for 2011 of 52.84 is the result of averaging the allowed common equity ratios from the first and second quarters of that year, 52.47% and 53.21%, respectively. This represents rulings in seven rate cases.

the operating level. This group is necessarily different than the group of holding companies we selected for our ROE analysis, because although the consolidated profile of the holding company may be comparable to EGDI relative to other holding companies, its operating entities may not be comparable. Secondly, one can go beyond screens that are necessary and appropriate for a cost of capital analysis to analyze comparability at the regulated entity level, i.e. at the utility operating company level. By removing those constraints and screening at the regulated entity level, we add another perspective to the comparability of EGDI's equity thickness relative to its peers. The results of this analysis are described in Appendix B.

After performing this operating risk analysis for each company, Concentric assigned an overall risk rating by weighing each of the four risk categories equally. Of the 10-company proxy group (operating in 15 separate jurisdictions), 8 operating companies were rated as having approximately equal risk to EGDI, while 7 operating companies were rated as having less risk than EGDI. No companies were rated as having more risk than EGDI. On average, EGDI's risk profile is comparable to the average North American comparable group member, albeit slightly more risky. However, although EGDI's risk profile is in-line with the proxy group component companies, as the chart below shows, EGDI's allowed common equity is markedly below those of its peers, both in terms of ROE and equity thickness, and has been so for over a decade.

Figure 7: Common Equity EGDI vs. North American Proxy Group



In addition to conducting the risk assessment discussed above, Concentric analyzed the key credit metrics considered by Standard & Poor's when assigning a credit rating. As mentioned previously, the three key credit metrics are (1) funds from operations ("FFO") interest coverage, (2) FFO as a percent of debt, and (3) debt as a percent of total capital. Concentric reviewed these metrics for the most recent three years for EGDI and each of the Canadian and U.S. proxy group companies. The majority of the data was provided by Standard & Poor's RatingsDirect, but in the case of EGDI and ATCO Gas, S&P's most recent report was published prior to the end of 2010. As a result, metrics for 2010 were calculated manually by Concentric based on the companies' financial statements, adjusting for the same items that S&P had incorporated in the most recent analysis.[38] Metrics were

[38] For EGDI, S&P adjusted debt in the capital structure downward by the amount of "gas in storage funding" which was $400 million in 2010. Without this adjustment, the FFO/debt ratio is 14.9%, the Debt/EBITDA ratio is 4.4x, and the Debt/capital ratio is 62.0%.

also manually calculated by Concentric for FortisBC Energy Inc., which is no longer rated by S&P, Atlanta Gas Light and Brooklyn Union Gas, since S&P's rating is based on the financials of the parent companies, AGL Resources in the case of Atlanta Gas Light, and National Grid in the case of Brooklyn Union Gas. Table 9, presents a summary of each entity's credit metrics analysis. For each company and for each credit metric, we have calculated the percentile rank relative to the benchmark group as a whole, i.e. the 50th percentile would represent the median of the group.

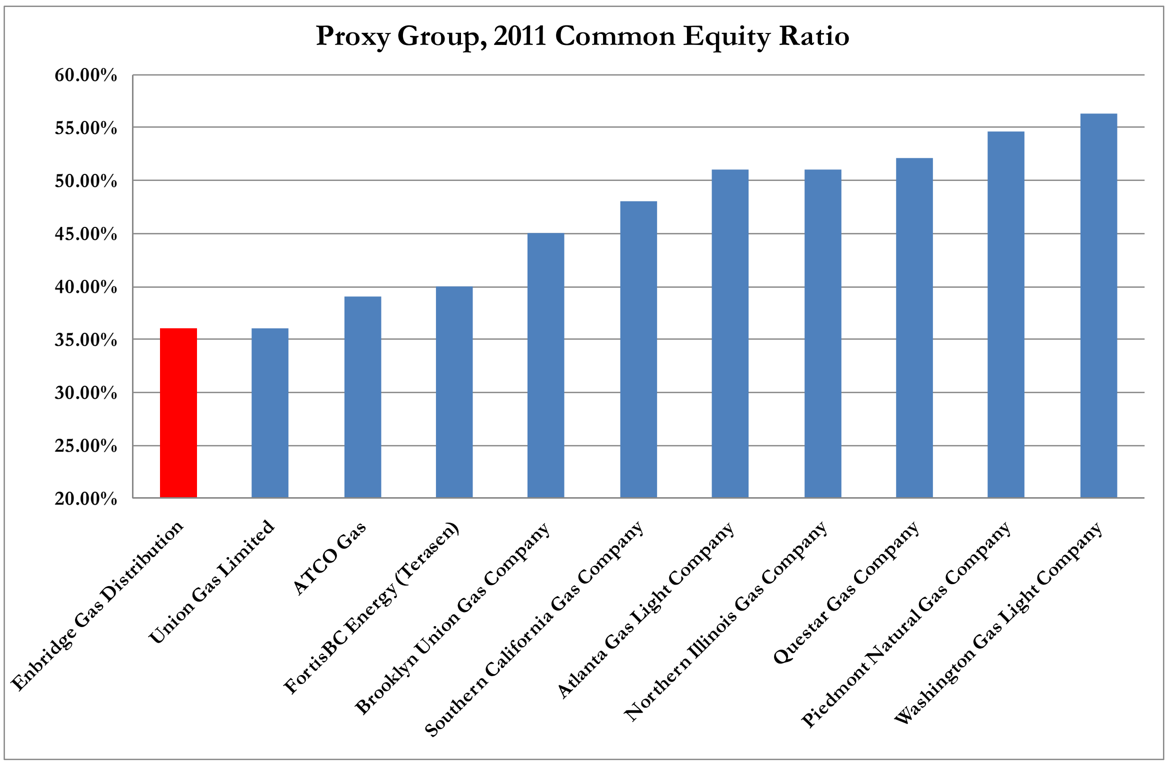
Table 9: Credit Metrics

				Standard & Poor's											
		Credit	Year	FFO Interest Coverage (x)				FFO/Debt (%)				Debt/Debt and Equity (%)			
		Rating	End	2010	% Rank	2009	2008	2010	% Rank	2009	2008	2010	% Rank	2009	2008
Canada	Enbridge Gas Distribution Inc	A-	Dec-31	3.5	*10.0*	3.5	3.3	17.1	*20.0*	18.1	16.3	58.7	*20.0*	59.6	61.9
	ATCO Gas (CU Inc.)	A	Dec-31	3.7	*30.0*	3.4	3.6	17.7	*30.0*	17.7	17.6	53.4	*60.0*	57.6	59.5
	FortisBC Energy Inc.	NR	Dec-31	2.6	*0.0*	2.7	2.8	10.0	*0.0*	11.3	12.2	61.3	*10.0*	65.2	65.2
	Union Gas Ltd.	BBB+	Dec-31	3.5	*20.0*	2.9	3.4	16.5	*10.0*	14.8	15.1	68.4	*0.0*	64.5	66.3
	CANADA AVERAGE			**3.3**		**3.1**	**3.3**	**15.3**		**15.5**	**15.3**	**60.5**		**61.7**	**63.2**
United States	Atlanta Gas Light Company	A-	Dec-31	----	----	----	----	----	----	----	----	----	----	----	----
	S&P Reported			*5.4*	----	*5.1*	*4.4*	*20.0*	----	*20.9*	*18.8*	*59.3*	----	*58.0*	*59.0*
	Concentric Calculated			5.6	*50.0*	5.0	3.6	30.3	*80.0*	25.5	16.6	47.1	*100.0*	49.7	51.3
	Brooklyn Union Gas Compan	A	Mar-31	----	----	----	----	----	----	----	----	----	----	----	----
	S&P Reported			*3.3*	----	*2.8*	*3.3*	*12.8*	----	*10.2*	*13.9*	*85.6*	----	*86.1*	*77.6*
	Concentric Calculated			7.6	*100.0*	4.8	3.9	34.0	*100.0*	24.2	17.3	47.8	*80.0*	49.5	49.1
	Northern Illinois Gas Compan	AA	Dec-31	7.0	*90.0*	6.1	5.7	28.4	*70.0*	25.3	18.6	57.7	*30.0*	56.9	60.3
	Piedmont Natural Gas Compa	A	Oct-31	5.5	*40.0*	6.4	4.6	26.2	*50.0*	24.8	21.8	49.0	*70.0*	53.7	55.4
	Questar Gas Company	A	Dec-31	6.1	*70.0*	4.6	5.0	25.9	*40.0*	23.1	23.2	56.1	*50.0*	54.0	55.2
	Southern California Gas Comp	A	Dec-31	5.7	*60.0*	5.3	5.1	27.1	*60.0*	27.6	21.7	57.7	*40.0*	55.9	62.0
	Washington Gas Light Comp	A+	Sep-30	6.9	*80.0*	6.6	5.4	30.7	*90.0*	29.6	26.5	47.5	*90.0*	47.7	46.2
	UNITED STATES AVERAGE			**6.3**		**5.5**	**4.8**	**29.0**		**25.7**	**20.8**	**51.8**		**52.5**	**54.2**

Overall, this analysis indicates that EGDI's credit metric score is in the bottom quartile (i.e. 25th percentile or lower) of all the similarly rated North American companies that we reviewed. In general, Canadian companies scored lower than U.S. companies for financial credit metrics. EGDI reported an interest coverage ratio in the bottom decile at 3.5x. Its FFO/Debt % was in the bottom 20% at 17.1% of the companies reviewed; as was its debt to capital ratio at 58.7% (after S&P's adjustment).

In summary, Concentric determined that EGDI is no less risky in terms of regulatory risk than the ten natural gas distribution utilities included in these U.S. and Canadian proxy groups, and clearly has a greater degree of financial risk than its peers, as evidenced by Figure 8 and Table 10. Therefore, the difference in the authorized common equity ratio below the absolute levels and average for the seven U.S. companies and the other Canadian utilities (with the exception of Union) is not justified by a risk differential. Figure 8 details the current allowed common equity ratios for EGDI relative to its peers in the proxy group. Despite the fact that EGDI's size, financial profile, and regulatory risk are aligned with those of the North American proxy group members, none had a lower equity thickness than EGDI's (and Union Gas's) at 36 percent.

Figure 8: Proxy Group 2011 Allowed Common Equity Ratios



In Table 10, we provide a forward estimate of EGDI's projected financial metrics. As the financial data indicates, EGDI is projecting weakened financial metrics over the next two years if the equity ratio remains at 36% or status quo. By 2012 EGDI is projecting a coverage ratio of 2.18x, slightly down from where it is today, and close to the 2.0x that must be maintained to satisfy its trust indenture covenant with CIBC Mellon. Further, the projection shows continued aggressive leveraging with Debt/Capital ratios exceeding 60 percent at current equity levels. More importantly, none of the financial metrics listed below support the financial profile of an A-rated regulated natural gas distribution utility. According to the published ratings criteria reproduced in Tables 5 through 8 of this Report, only as the equity thickness approaches 45 percent do the financial metrics begin to reflect the stronger financial profile associated with an A- credit rating. Even by raising the equity thickness to 42 percent in 2013, S&P's ratings criteria would show that EGDI's financial profile was "aggressive"; and Moody's would consider EGDI's financial metrics indicative of a Baa/Ba rated-company rather than an A- rated company. Therefore, EGDI's decision to propose a 42% equity ratio should be considered conservative from a credit metric perspective.

Table 10: EGDI's Budgeted Financial Metrics

	2011 Estimate	2012 Budget	2013 Budget	2013 Budget Scenario 1	2013 Budget Scenario 2	2013 Budget Scenario 3
Equity Thickness	36%	36%	42%	36%	40%	45%
Earnings to Common Shareholders	$ 130	$ 128	$ 167	$ 146	$ 160	$ 178
Cash Flow	$ 407	$ 420	$ 457	$ 436	$ 450	$ 467
EBIT	$ 321	$ 311	$ 362	$ 343	$ 356	$ 371
EBITDA	$ 597	$ 603	$ 651	$ 632	$ 645	$ 661
Interest Expense	$ 142	$ 142	$ 136	$ 145	$ 139	$ 131
Total Assets (RateBase)	$ 3,975	$ 4,069	$ 4,120	$ 4,120	$ 4,120	$ 4,120
Short Term Debt (incl. Current Portion)	$ 124	$ 151	$ (22)	$ 225	$ 60	$ (146)
Long Term Debt	$ 2,320	$ 2,353	$ 2,312	$ 2,312	$ 2,312	$ 2,312
Preference Shares	$ 100	$ 100	$ 100	$ 100	$ 100	$ 100
Equity	$ 1,431	$ 1,465	$ 1,731	$ 1,483	$ 1,648	$ 1,854
Interest Coverage	2.26	2.18	2.67	2.37	2.56	2.83
Debt/EBITDA	4.10	4.15	3.51	4.01	3.68	3.28
FFO/Interest	3.87	3.95	4.37	4.01	4.24	4.57
FFO/Avg. Debt	16.6%	16.8%	19.9%	17.2%	19.0%	21.6%
Debt to Capitalization	61.5%	61.5%	55.6%	61.6%	57.6%	52.6%

Source: EGDI; Note: 2013 amounts exclude CIS.

V. CONCLUSIONS

The Board's determination of ROE and capital structure for Ontario's regulated utilities is integral to meeting the Fair Return Standard. The Board has provided guidance to its utilities that only with a showing of changed business or financial risk might the Board entertain a proceeding to modify the company's capital structure. For this reasoning to produce capital structure determinations that are "fair", the following must hold true: i) the Board's initial determination of risk and capital structure was initially correct; and ii) the only factors that impact a fair degree of leverage for a regulated distribution utility are changes in the company's own business risk. This approach of holding equity thickness constant, "but for" a demonstration that the utility has experienced a significant shift in risk, is not responsive to shifts in market fundamentals external to the company's own operations.

In this Report, we have shown that the Company will be subject to increasing financial pressure in meeting its debt obligations. Further, EGDI has experienced a substantial increase in business risk since the time its equity thickness of 35 percent was affirmed by the OEB in 1993, certainly more than the 1 percent increase in equity thickness EGDI was awarded in 2006. EGDI's equity thickness of 36 percent was effectively capped at the level granted to Union in "settlement". It is questionable whether that 36 percent was appropriate for EGDI in 2006, and certainly today does not reflect the increased financial risks of the company, the recent shift in risk tolerances of equity investors, or the deemed equity ratios of its similarly situated peers in North America. EGDI's deemed equity ratio results in financial metrics that do not satisfy the published ratings criteria for an A- rated Canadian natural gas distribution utility, as described by S&P or by Moody's. Furthermore, EGDI's deemed equity ratio is well below the average Canadian and U.S. allowed equity ratios for gas utilities. In fact, EGDI's deemed equity ratio is the lowest among a group of comparable North American utilities and its key financial metrics are in the bottom quartile of the same group.

We conclude, based on this analysis, that the allowed equity thickness for EGDI of 36 percent is insufficient, and does not meet the standards of fairness. There is a lingering disconnect between the Board's capital structure policies for the Ontario electricity distributors and its natural gas distributors. While the Board's cost of capital policy was premised on electricity distributors being less risky than natural gas distributors due to size, the Board later determined in its 2nd IRM Report that the size of rate base was not a significant determinant in the risk of the utility and began steps to move all electric distribution utilities to a common capital structure. We find no evidence that the Board reconciled the capital structures of its electric and gas utilities. If in fact size is no longer considered a determinant of risk, as the Board has stated, and natural gas utilities are more risky than electric distribution utilities, and if equity thickness is to be the vehicle to express differences in risk among Ontario's utilities, then it follows that equity thickness for gas distribution utilities should be higher than their electric counterparts.[39]

[39] This is consistent with the findings of the AUC in its Decision in AUC 2009-216 (November 12, 2009) at 111 where the Commission awarded natural gas distribution companies the same or higher equity ratios than the electric

It is Concentric's opinion that the Board should ensure fairness in the ratemaking policies of its natural gas utilities and its electric utilities and provide cost of capital parameters that do not advantage or disadvantage one group of utilities over the other. Further, the Board should allow an equity ratio that provides for adequate financial flexibility to absorb the economic fluctuations that are inherent in the seasonal nature of the gas distribution business as well as the cyclical nature of the economy.

We believe by increasing EGDI's equity thickness from 36 percent to 42 percent as requested by the Company, and adopting the ROE produced by the newly adopted ROE formula, the Board will have arrived at a cost of capital that is fair to EGDI. This recommendation is supported by our ROE analysis, which indicates an appropriate range of equity to be within 40 – 45 percent at the level of allowed ROE currently produced by the formula. Our recommendation is similarly corroborated by the ROE results of the Canadian regulated utilities group.

distribution utilities. Concentric further notes that Alberta's gas distribution utilities do not have exposure to commodity risks as Alberta's rate payers buy natural gas from competitive retail providers.

APPENDIX A – ROE ANALYSIS

1. Discounted Cash Flow (DCF) Analysis

Concentric used the Constant Growth DCF Model in its analysis given by the following formula:

$$P = \frac{D_0(1+g)^1}{(1+r)^1} + \frac{D_0(1+g)^2}{(1+r)^2} + \cdots + \frac{D_0(1+g)^\infty}{(1+r)^{n\infty}}$$

Where:

P = the current stock price

g = the dividend growth rate

D_n = the dividend in year n

r = the cost of common equity.

Assuming a constant growth rate in dividends, the model may be rearranged to compute the ROE accordingly:

$$r = \frac{D}{P} + \mathrm{g}$$

<u>Dividends</u>

The current dividend yield for each company in the proxy group has been calculated using the annualized current dividend[40] divided by the average stock price for the 90-trading days ended November 30, 2011. The dividend yield for each proxy group company was increased by one-half of the assumed growth rate to reflect the expected growth in dividends over the coming year.

<u>Growth Rates</u>

We selected available earnings growth estimates from the same analysts, i.e. Value Line, Zacks, Thomson First Call and Bloomberg for each of the proxy companies as was performed in the Consultative Process. Since Zacks, Thomson First Call, and Bloomberg are consensus growth estimates; we averaged them together to arrive at one combined consensus forecast. To the extent

[40] Calculated as the current dividend multiplied by the number of dividend payments per year.

there were missing growth estimates for any given company, we averaged those that we were able to obtain. As Value Line is an independent source of investment data and analysis, we then averaged the Value Line earnings growth estimate (as available) with the mean consensus growth estimate for each company to derive the earnings growth estimate we used in our DCF model.

DCF Results

For each proxy group company, the average growth rate was added to the expected dividend yield in order to calculate the DCF result. We have calculated the low DCF result by taking the lowest of the available growth rates for a given company plus the expected dividend yield for that anticipated level of growth (i.e., multiplied the dividend yield by 1 plus one half of the *low* growth rate). Correspondingly, we have calculated the high DCF result in the same manner, using the highest of the four growth rates. Finally, we averaged the low, mean and high company-specific DCF results to obtain the unadjusted DCF results for the proxy group. To those results we added a 50 basis point allowance for flotation costs and financing flexibility. This flotation cost allowance was acknowledged by the Board to be appropriate in its 2006 *Report of the Board*.[41]

The mean DCF results are shown below and are detailed in Exhibit Concentric-05.

Table 11: DCF Results

	Low	**Mean**	**High**
U.S. Gas Proxy Group (Mean)	7.02%	8.83%	10.14%
Flotation Adjustment	0.50%	0.50%	0.50%
Adjusted U.S. Gas Proxy Group	**7.52%**	**9.33%**	**10.64%**
Canadian Utility Proxy Group (includes flotation)	**10.52%**	**11.08%**	**12.19%**

2. Capital Asset Pricing Model (CAPM) Analysis

Concentric has utilized the standard form of the CAPM model given by the following expression:

$$R_e = R_f + \beta (R_m - R_f)$$

[41] Ontario Energy Board. *Report of the Board on Cost of Capital and 2nd Generation Incentive Regulation for Ontario's Electricity Distributors*. December 20, 2006. At p.17

Where:

R_e = the required return on common equity for a specific stock

R_f = the risk free rate of return

R_m = the return required for the market as a whole

β = Beta, a measure of the covariance between the returns (dividends plus capital gains) of the market average and those of a specific stock.

Risk Free Rate

Concentric used forecasts of U.S. and Canadian 30-year bond yields, based on long-term forecasts of the respective 10-year government bond yields, as reported in the Consensus Forecast issue, dated October 10, 2011.[42] This forecast covered the period for which rates would be in effect, 2013 – 2018. To the forecast of the respective 10-year government bond yield, we have added the daily average historical spread between 10-year and 30-year bonds for November 2011 (most recently available at this writing). That convention resulted in the following 30-year bond yield forecasts for the U.S. and Canada in each country's native currency.

Table 12: Risk-Free Rate

30-Year Risk Free Yield	**CDN$**	**US$**
10-year bond forecasts	3.95%	4.30%
Average Daily Spread between 10-year and 30-year government bonds (November 2011)	0.61%	1.00%
Average	4.56%	5.30%

The calculation of the risk free rates for the U.S. and Canada are detailed in Exhibit Concentric-07.

Beta

Concentric used two reputable sources for beta: Value Line and Bloomberg. When both sources of beta were available, they were averaged. The mean beta for the North American gas utility proxy group was 0.79, and the mean beta for the group of Canadian utilities was 0.68.

Market Equity Risk Premium

42 Concentric used the midpoint of the 10-year forecasts for the years 2013 – 2018, the period for which rates are expected to be in effect.

Concentric has used the arithmetic means of risk premiums calculated by Morningstar Ibbotson for the U.S. and Canada. For the U.S. this data goes as far back as 1926 and for Canada as far back as 1936. In the 2009 Consultative Process Concentric determined that it was appropriate to average the two risk premia as the markets are more similar than not, and where good reason does not exist to expect a continued divergence in market risk premiums (based on market indicators such as returns and interest rates), to derive a single forward looking estimate. Concentric calculated a market risk premium of 6.16 percent which is the midpoint of the long-horizon equity risk premia data averaged over the longest period for which data were available from Morningstar Ibbotson for both the U.S. and Canada. In the U.S., Ibbotson risk premia data is available from 1926-2010 and results in a 6.70 percent risk premium, the arithmetic mean of the premium of the S&P 500 returns over long-term government bond income returns for large company common stocks. In Canada, the longest period for which risk premia data is available from Ibbotson is from 1936 – 2010 in Canadian currency, which yielded an equity risk premium of 5.62 percent; and from 1939-2010 in U.S. dollars, yielding a 6.27 percent equity risk premium. The Canadian market is represented by the S&P/TSX Composite Index and earlier sources provided by Ibbotson Associates.[43] Concentric's equity risk premium estimate is an average of the U.S. and Canadian country-specific risk premia measured in their respective native currencies. We view the resulting equity risk premium to be a conservative (low) estimate of the North American market risk premium. The calculation of the North American market risk premium is further illustrated in Exhibit Concentric-07.

We view this estimate to be conservative as the recent economic cycle has affected the CAPM in a number of important ways. First, the risk free rate is represented by government bond yields. During the financial market dislocation, investors reacted to the extraordinary levels of market volatility by investing in low-risk securities such as government bonds. Consequently, the first term in the CAPM model (i.e., the risk-free rate) is lower than it would have been absent the elevated degree of risk aversion that has, at least in part, resulted in historically low government bond yields in North America.

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[43] Ibbotson Associates, *2011 Risk Premia Over Time Report,* Estimates from 1926-2010; Ibbotson - *Canadian Risk Premia over Time Report 2006,* Estimates from 1936 - 2006*;* and *Morningstar International Equity Risk Premia Report 2011*, Estimates from 1970 - 2010.

Also, the Beta coefficient estimates reported by Bloomberg and Value Line are calculated over historical periods of 24 and 60 months, respectively. Because the Value Line Beta coefficients include market data from the financial market dislocation, those Beta coefficients tend to underestimate the "systematic" risk that investors are compensated for in the CAPM analyses.

Finally, the market risk premium measured on a historical basis is out of sync with forward looking estimates. While estimates of investor sentiment indicate that risk has increased in equity markets, as measured by increased volatility and credit spreads, the historical risk premium indicates has actually declined. For these reasons, I consider my estimate of the North American market risk premium of 6.16 percent to be understated, or at a minimum, conservative. To corroborate this, I have developed a forward-looking (ex-ante) estimate of the Market Risk Premium. This *ex-ante* estimate is based on the expected return of the S&P TSX Index, less my forecast estimate of the 30-year Canadian long bond yield. The expected return on the S&P TSX is calculated using the constant growth DCF model discussed above for the companies in the S&P TSX Index for which long-term earnings projections are available. See Exhibit Concentric-09. My ex-ante market risk premium calculated by this method was 11.3 percent.

The CAPM results below, calculated using the arithmetic average of historical returns published by Ibbotson for the U.S. and Canada, incorporates a substantially lower estimate of the market risk premium than a forward looking analysis would suggest. As such, I consider the CAPM results to be conservative.

<u>CAPM Results</u>

Table 13: CAPM Results

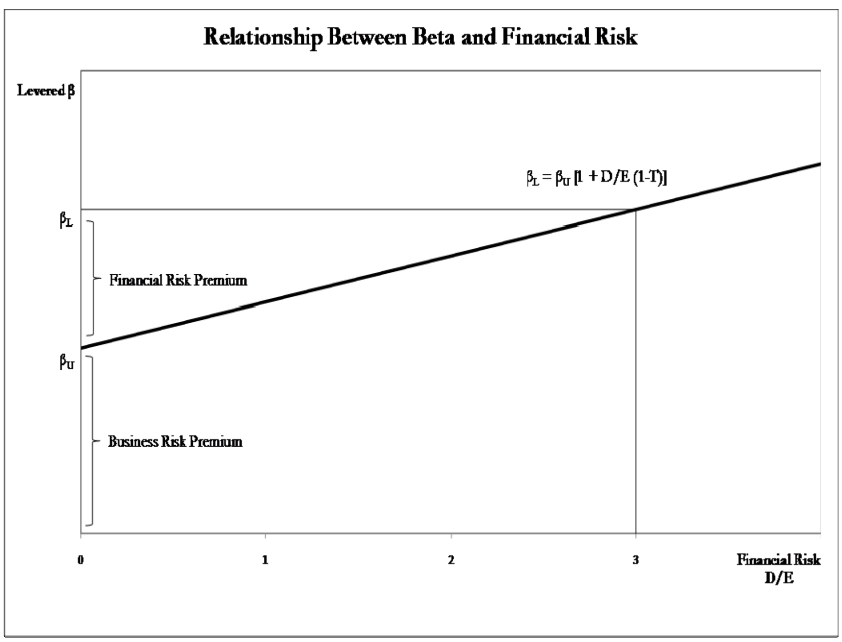
Proxy Group	**Low**	**Mean**	**High**
U.S. Gas Proxy Group (mean)	9.83%	10.15%	10.47%
Flotation Costs	0.50%	0.50%	0.50%
Adjusted U.S. Gas Proxy Group	**10.33%**	**10.65%**	**10.97%**
Canadian Utility Proxy Group (includes flotation)	**9.05%**	**9.27%**	**9.48%**

Concentric's results are described in detail in Exhibit Concentric-06.

3. Leverage Adjustment

Because the required return on equity increases as financial leverage increases, in situations where the debt ratios of the proxy companies are substantially different from those of the subject company, it is necessary to perform a calculation which de-levers and re-levers the beta of the proxy group to neutralize the risks that the capital structure imposes for any given company. This principle is shown graphically in Figure 9 and detailed in Exhibit Concentric-08. The vertical axis represents the beta, or total risk, of the company. The horizontal axis denotes the degree of financial risk measured by the debt-equity ratio. For an all-equity financed company with no financial risk, the levered beta coincides with the unlevered beta. In other words, the company's total risk equals its business risk, as the financial risk is nil. As the financial risk increases, the total risk of the company increases steadily.[44]

Figure 9: Beta and Financial Risk



The formula below, known as the Hamada equation, decomposes the observed beta for a given company by removing the impact of leverage which results in a beta representing solely the business risk of the company. This would be the observed beta if there was no debt in the capital structure

44 *See* Dr. Roger A. Morin, *New Regulatory Finance*, at 222.

and all assets were financed solely with equity. In this scenario, the return on equity would be the same as the weighted average of the cost of capital.

$$\beta_{Unlevered} = \frac{\beta_{Levered}}{\left[1 + (1 - T_c)\frac{Debt}{Equity}\right]}$$

As the capital structure for EGDI is significantly more levered than that of the proxy group, the adjusted betas are higher when applied to a more levered capital structure.[45] We have used the Hamada equation to adjust our average DCF and CAPM results for varying leverage percentages. To do this, we have inferred the market risk premium implied by our average DCF and CAPM results, by subtracting the risk free rate from the ROE estimated by those models. We have then divided that result by the proxy group beta, effectively converting the implied equity risk premium to a market risk premium. We then performed the de-levering and re-levering as described above. To our re-levered results, we have added a 50 basis point adjustment for financing flexibility and flotation costs. Our calculations and the associated schedules are shown in detail in Exhibit Concentric-08.

[45] Financial textbooks generally instruct these calculations be performed on market value capital structures. In utility ratemaking, where returns are typically applied to book capital structures, we have used book values to de-lever and re-lever the beta.

APPENDIX B – REGULATORY RISK COMPARISON

To develop the screening criteria for this element of the study, we began by reviewing EGDI's Annual Information Form for the year ended December 31, 2010, which indicated that the company had 1,980,678 active customers and is rated A- by Standard & Poor's.[46] In order to create a proxy group of sufficient size and to ensure that EGDI was being compared with other large gas distribution entities with similar credit profiles, utilities with less than 800,000 customers were excluded and only those companies with Standard & Poor's credit ratings of A- or better were included for comparison.

Concentric applied these screens to the 108 U.S. natural gas distribution utilities covered by SNL Financial and the 9 Canadian natural gas distribution utilities which represent the major investor-owned natural gas LDCs in Canada. We relaxed our credit rating screen to allow the inclusion of Union Gas, the only other Ontario gas distribution utility, which is rated BBB+ by S&P. These screens resulted in three Canadian utilities and seven U.S. utilities (operating in 12 jurisdictions). These companies are summarized in Table 14:

Table 14: Composition of the Comparable Group

	Company	Operates in	Number of Customers	S&P Credit Rating	Deemed Equity Ratio	Percentile
	EGDI	**Ontario**	**1,980,678**	**A-**	**36.00%**	0%
Canada	ATCO Gas	Alberta	1,057,369	A	39.00%	20%
	FortisBC Energy	British Columbia	846,234	A3[47]	40.00%	30%
	Union Gas, Ltd.	Ontario	1,300,000	BBB+	36.00%	0%
United States	Atlanta Gas Light	GA	1,544,000	A-	51.00%	60%
	Brooklyn Union Gas	NY	1,203,688	A	45.00%	40%
	Northern Illinois Gas	IL	2,177,018	AA	51.07%	70%
	Piedmont Natural Gas	NC, SC, TN	961,937	A	54.61%	90%
	Questar Gas Company	ID, UT, WY	904,068	A	52.11%	80%
	Southern California Gas	CA	5,535,007	A	48.00%	50%
	Washington Gas Light	DC, MD, VA	1,073,722	A+	56.32%	100%

[46] Enbridge Gas Distribution, Inc. Annual Information Form for the year ended December 31, 2010, at 9 and 13.

[47] Fortis BC is not rated by S&P. It's Moody's rating is A3, which would equate to S&P's A-, and is rated by DBRS as A, which would also equate to an A rating by S&P.

To further establish comparability between EGDI and these operating companies, Concentric examined the risk profiles of the utilities. The greatest risk to a utility from a regulatory perspective is inadequate or untimely cost recovery. Non-recovery or delayed recovery of cost could either be due to increases in costs above those in rates or due to factors beyond the utility's control such as weather, declining use, and commodity price movements. In addition, delays in earning a return on committed capital such as increases to rate base or assets under construction impact the utilities' ability to recoup costs in a timely fashion. As we find these to be the most significant risks to a utility's risk profile, we have selected metrics to distinguish the risk profiles in each of these areas. These risks include: regulatory lag, exposure to commodity price risk, volumetric risk due to weather or conservation, and the recovery of CWIP, AFUDC or IDC on infrastructure investment.

Utilities that are allowed to recover changes in commodity costs through rates on a quarterly basis, that develop rates on a forecast or future test year, that are protected against volumetric shifts due to conservation and weather, and are allowed to earn a return on committed capital for infrastructure investment in progress are best able to manage unexpected changes in business conditions. As a result, these companies are most able to earn their allowed return, and consequently will be most attractive to equity investors. To that end, we have assessed the extent to which risk mitigation is present for each operating utility in each jurisdiction, based primarily on a review of the regulatory mechanisms employed. Concentric assessed each proxy group company's exposure to the risks listed above by reviewing annual reports, regulatory orders and decisions, tariffs, and government statutes. The results of this research are summarized in Figure 10, where a darkened circle indicates "robust or comprehensive" mitigation of risk, a partially-darkened circle indicates that the "risk is somewhat mitigated", and the empty circle indicates that the risk is substantially "not mitigated". From this standpoint, all dark circles are preferable.

Figure 10: Regulatory Risk Comparison[48]

		Test Year	Purchased Gas Adjustment	Revenue Stabilization	CWIP	Overall
	Enbridge Gas Distribution Inc.	●	●	◑	◔	◕
	North American Proxy Group Average	◑	◕	◕	◕	◕
Canada	ATCO Gas	●	●	◑	◕	◕
Canada	FortisBC Energy Inc.	●	●	●	◕	●
Canada	Union Gas Ltd.	●	●	◑	◔	◕
United States	Atlanta Gas Light Company	●	●	●	●	●
United States	Brooklyn Union Gas Company	●	●	●	◕	●
United States	Northern Illinois Gas Company	●	●	◑	●	●
United States	Piedmont Natural Gas Company, Inc.					
United States	- North Carolina	○	◑	●	●	◕
United States	- South Carolina	○	◑	●	●	◕
United States	- Tennessee	●	◑	◑	●	◕
United States	Questar Gas Company					
United States	- Utah	●	●	●	◕	●
United States	- Wyoming	◑	●	●	◕	◕
United States	Southern California Gas Company	●	●	●	◕	●
United States	Washington Gas Light Company					
United States	- District of Columbia	●	●	◑	●	●
United States	- Maryland	○	●	●	●	◕
United States	- Virginia	○	●	●	●	◕

48 With respect to test year, companies with fully forecasted test years for setting rates have darkened circles, while those with partially forecasted test years have half-darkened circles and historical test years are shown as empty circles. In ranking the regulatory risk associated with purchased gas costs, companies that adjusted rates to reflect purchased gas costs more than semiannually have darkened circles, while companies that adjusted rates less frequently received half-darkened circles. With respect to revenue stabilization measures, companies received a black circle if they were not subject to volumetric risk through a full decoupling mechanism, a combination of weather normalization and conservation decoupling or straight-fixed variable rate design. Companies with any of these types of mitigation but to a lesser degree have a partially-blackened circle (either a half or a quarter). In regards to recovery of a return on CWIP, companies that were entitled to CWIP in rate base treatment, as evidenced by the regulatory commission in the jurisdiction the company operates, allowing for a cash return on CWIP were provided a darkened circle; AFUDC inclusive of a long term debt and equity component, that is deferred until the asset is placed in service, received a ¾ 's darkened circle; a company that receives only interest during construction (IDC) at the long-term debt rate received a half darkened circle; IDC treatment at the medium-term to short-term debt rate received a ¼ darkened circle; and very limited to no recovery of AFUDC or IDC received an empty circle.

To use EGDI as an example, the Company was provided full credit in the Test Year category based on the many forward-looking elements in the incentive rate plan regime currently in place. EGDI was also awarded a full circle for its purchased gas adjustment, which is revised quarterly. EGDI was given a half-circle in the Revenue Stabilization category. While its incentive rate plan does consider declining use-per-customer through its Average Use True-Up Variance Account ("AUTUVA"), and allows EGDI to recover lost revenues associated with conservation initiatives ("LRAM"), EGDI continues to be subject to the variable impact of weather. Because EGDI's capital plan over the next several years projects substantial levels of infrastructure investment, recovery of the return on investment is of distinct importance. The initial investment outlay and succeeding additions to the investment in the period of time between the inception of construction and when the asset is placed in service can place significant financial pressure on cash flows in advance of rate recovery. We anticipate that the allowance of a return on capital costs will be among the most important cost of service considerations in the upcoming rate period for EGDI. As such, we have evaluated this factor relative to the proxy group. Currently, we assume that EGDI will receive continued IDC treatment of significant infrastructure investments. This places EGDI at a slight disadvantage to the comparable group, which either allow AFUDC (with an equity component) or allow a full cash return on CWIP. If AFUDC treatment were to be allowed for EGDI in the future, it would serve to better align EGDI with the risk profiles of its peer group of companies.

To describe the results of our analysis, we begin with an examination of test year and a comparison of ratemaking policies among the proxy companies. All of the Canadian utilities and the majority of the U.S. utilities utilize a future or forecasted test year. There are several operating companies in the peer group that employ a historical test year allowing only for known and measureable differences as of the date of filing, such as Piedmont in North Carolina and South Carolina, and Washington Gas Light in Maryland and Virginia. These utilities were marked with an empty circle since they have little protection against earnings attrition due to increases in rate base between rate proceedings. Questar in Wyoming forecasts its rates up to the end of the year in which the rates are filed. Since this is less than a full forecasted test year, Questar Wyoming was awarded only half credit.

Exposure to gas commodity prices is substantially mitigated with proxy companies generally having monthly, quarterly, or semi-annual recovery of gas costs through rates. ATCO Gas has no exposure to commodity prices since it operates in a competitive retail access market in Alberta. AGL, like ATCO Gas, has no commodity price exposure due to retail competition. Brooklyn Union Gas and Northern Illinois Gas Co. employ monthly purchased gas adjustment mechanisms. Washington Gas Light files new commodity rates at least quarterly, and recovers differences between rates and actual costs through an annual surcharge. Likewise, Questar Gas files new commodity rates at least semi-annually, and recovers differences between rates and actual costs through an annual surcharge. Piedmont in North Carolina, South Carolina, and Tennessee receive recovery for purchased gas costs only upon filing for a rate adjustment (these adjustments may be requested at any time) and these adjustments are subject to annual gas cost prudence proceedings. Because there is some risk of non-recovery of gas costs and recovery is not automatic, Piedmont's operating companies only receive half credit in this area.

Revenue stabilization may be achieved through a variety of means. By revenue stabilization, we mean that swings in revenue that could negatively impact earnings due to volume (caused by weather and / or customer consumption) may be mitigated through rate design. Means of mitigation may include straight fixed variable rate design, full decoupling, weather normalization adjustments in combination with conservation adjustments, and some companies adjust rates such that actual earned returns are trued up to the awarded equity return (i.e. Piedmont South Carolina). Under a straight fixed variable rate design, fixed costs are recovered through the fixed customer charge and only volumetric costs are subject to swings in volume in the volumetric rate, theoretically providing for full recovery in rates. Of the peer group, AGL and Northern Illinois Gas Co. employ straight fixed variable rate designs. However in the case of Northern Illinois Gas Co, only 80 percent of fixed costs are recovered through residential rates. Additionally, most of the peer companies have full decoupling mechanisms or employ weather normalization mechanisms and conservation mechanisms in tandem, to effectively operate as full decoupling. However, Enbridge and Union are allowed to recoup only lost revenues associated with conservation and declining use but not weather. ATCO Gas, Piedmont Tennessee, and Washington Gas Light D.C. recover lost revenues associated with weather but not conservation.

Lastly, a significant contributor to regulatory lag is the inability to earn a full return on capital committed to construction in progress. All of the peer group companies receive some allowance for capital used during construction, either in the form of AFUDC or IDC (interest during construction). However, there are several companies in the peer group that allow CWIP to be included in rate base for ratemaking purposes. Those companies are: AGL; Northern Illinois Gas Co.; Piedmont (North Carolina, South Carolina, and Tennessee); and Washington Gas Light (District of Columbia, Maryland and Virginia). The remainder of the companies, with the exception of Union Gas, are allowed to capitalize AFUDC (with both a debt and an equity component) that is recovered when the asset is placed in service. Union Gas, like EGDI, only earns a return equal to its short-term debt rate on CWIP for interest during construction. This amount is deferred until the asset is placed in service.

U.S. GAS DISTRIBUTION UTILITIES SCREENING CRITERIA

		[1]	[2]	[3]	[4]	[5]
	Ticker	Pays Dividends	Credit Rating ≥ BBB & ≤ A+	Regulated Revenue ≥ 60% Total Revenue	Gas Dist. Revenue ≥ 60% Total Regulated Revenue	Not Party to Merger / Acquisition
AGL Resources Inc.	AGL	✓	✓		✓	
Atmos Energy Corp.	ATO	✓	✓		✓	✓
Laclede Group, Inc. (The)	LG	✓	✓		✓	✓
National Fuel Gas Company	**NFG**	✓	✓	✓	✓	✓
New Jersey Resources Corporation	NJR	✓	✓		✓	✓
Nicor Inc.	GAS	✓		✓	✓	
NiSource Inc.	NI	✓		✓	✓	✓
Northwest Natural Gas Company	**NWN**	✓	✓	✓	✓	✓
Piedmont Natural Gas Company, In	**PNY**	✓	✓	✓	✓	✓
Questar Corporation	**STR**	✓	✓	✓	✓	✓
Sempra Energy	**SRE**	✓	✓	✓	✓	✓
South Jersey Industries, Inc.	SJI	✓	✓		✓	✓
Southwest Gas Corporation	**SWX**	✓	✓	✓	✓	✓
UGI Corporation	UGI	✓	✓		✓	✓
Vectren Corporation	**VVC**	✓	✓	✓	✓	✓
WGL Holdings, Inc.	WGL	✓	✓		✓	✓

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional
[3] 2008-2010 Form 10-K
[4] 2008-2010 Form 10-K
[5] SNL Financial

PROXY GROUP CAPITAL STRUCTURES

			Long-Term Debt				Shareholders' Equity				
		Short-Term Debt	Current Portion	Non-Current Portion	Total Debt	%	Non-Controlling Interest	Common Equity	Total Equity	%	Total Capital
U.S. NATURAL GAS DISTRIBUTION UTILITIES											
National Fuel Gas Company	NFG	40	150	899	1,089	36.5%	-	1,892	1,892	63.5%	2,981
Northwest Natural Gas Company	NWN	181	40	602	823	54.2%	-	697	697	45.8%	1,520
Piedmont Natural Gas Company, Inc.	PNY	270	60	675	1,005	49.6%	-	1,022	1,022	50.4%	2,027
Questar Corporation	STR	278	25	881	1,184	52.0%	-	1,094	1,094	48.0%	2,278
Sempra Energy	SRE	641	137	10,033	10,811	52.0%	354	9,630	9,984	48.0%	20,795
Southwest Gas Corporation	SWX	-	221	937	1,158	49.4%	(1)	1,188	1,187	50.6%	2,345
Vectren Corporation	VVC	216	138	1,581	1,936	57.1%	-	1,452	1,452	42.9%	3,388
						50.1%				49.9%	
CANADIAN UTILITIES											
Canadian Utilities Limited	CU	-	294	3,724	4,018	54.8%	343	2,974	3,317	45.2%	7,335
Emera Incorporated	EMA	184	17	3,147	3,348	65.3%	224	1,557	1,780	34.7%	5,129
Enbridge Inc.	ENB	430	96	14,566	15,092	64.5%	669	7,629	8,298	35.5%	23,390
Fortis Inc.	FTS	242	91	5,824	6,157	60.5%	205	3,809	4,014	39.5%	10,171
TransCanada Corporation	TRP	1,865	1,189	18,806	21,860	55.4%	1,496	16,105	17,601	44.6%	39,461
						60.1%				39.9%	

Source: SNL Financial; excludes preferred equity

PROXY GROUP EFFECTIVE TAX RATES

		12 Months Ending December 31, 2010		
		Provision for Taxes	Net Income	Effective Tax Rate
		($ millions)		
National Fuel Gas Company	NFG	141	226	38.4%
Northwest Natural Gas Company	NWN	49	73	40.5%
Piedmont Natural Gas Company, Inc.	PNY	92	142	39.3%
Questar Corporation	STR	109	341	24.3%
Sempra Energy	SRE	102	733	12.2%
Southwest Gas Corporation	SWX	55	103	34.7%
Vectren Corporation	VVC	75	134	35.8%
				32.2%

Source: SNL Financial

PROXY GROUP COST OF DEBT

		12 Months Ending December 31, 2010		
		Interest Expense	Total Debt	Cost of Debt
		($ millions)		
National Fuel Gas Company	NFG	93.946	1,249	7.5%
Northwest Natural Gas Company	NWN	42.578	860	5.0%
Piedmont Natural Gas Company, Inc.	PNY	43.711	974	4.5%
Questar Corporation	STR	57.1	1,323	4.3%
Sempra Energy	SRE	436	9,487	4.6%
Southwest Gas Corporation	SWX	77.589	1,200	6.5%
Vectren Corporation	VVC	104.6	1,834	5.7%
				5.4%

Source: SNL Financial

90-DAY CONSTANT GROWTH DCF - U.S. NATURAL GAS DISTRIBUTION UTILITIES

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Bloomberg Long-Term Growth	Thomson First Call Growth Estimate	Zacks Earnings Growth Estimate	Value Line Earnings Growth Estimate	Average Growth Rate	Low DCF ROE	Mean DCF ROE	High DCF ROE
National Fuel Gas Company	NFG	$1.42	$58.39	2.43%	2.49%	--	1.20%	4.20%	6.50%	4.60%	3.65%	7.09%	9.01%
Northwest Natural Gas Company	NWN	$1.78	$44.77	3.98%	4.06%	3.83%	3.63%	4.30%	4.50%	4.21%	7.68%	8.27%	8.57%
Piedmont Natural Gas Company, Inc.	PNY	$1.16	$30.12	3.85%	3.92%	4.00%	5.20%	4.67%	3.00%	3.81%	6.91%	7.74%	9.15%
Questar Corporation	STR	$0.65	$18.58	3.50%	3.59%	--	5.65%	5.00%	--	5.33%	8.59%	8.92%	9.25%
Sempra Energy	SRE	$1.92	$51.43	3.73%	3.83%	7.87%	7.33%	7.00%	3.50%	5.45%	7.30%	9.28%	11.75%
Southwest Gas Corporation	SWX	$1.06	$37.13	2.85%	2.95%	6.00%	2.20%	5.25%	9.00%	6.74%	5.09%	9.69%	11.98%
Vectren Corporation	VVC	$1.40	$27.33	5.12%	5.27%	6.00%	6.00%	4.67%	5.50%	5.53%	9.91%	10.79%	11.28%
MEAN		$1.34	$38.25	3.64%	3.73%	5.54%	4.46%	5.01%	5.33%	5.10%	7.02%	8.83%	10.14%
MEDIAN		$1.40	$37.13	3.73%	3.83%	6.00%	5.20%	4.67%	5.00%	5.33%	7.30%	8.92%	9.25%

Flotation Cost Adjustment	0.50%	0.50%	0.50%
Adjusted Mean DCF	7.52%	9.33%	10.64%
Adjusted Median DCF	7.80%	9.42%	9.75%

Notes:
[1] Source: Bloomberg
[2] Source: Bloomberg. 90-day historical average for period ending November 30, 2011.
[3] Equals Col. [1]/Col. [2]
[4] Equals (Col. [1] x (1+(0.5 x Col. [9])))/Col. [2]
[5] Source: Bloomberg
[6] Source: Yahoo! Finance
[7] Source: Zacks
[8] Source: Value Line
[9] Equals Midpoint of Mean(Cols. [5], [6], [7]) and Col. [8]
[10] Min. (Cols. [5] -- [8]) + (Col. [1] x (1 + (0.5 x Min. (Cols. [5] -- [8]))))/Col. [2]
[11] Col. [4] + Col. [9]
[12] Max. (Cols. [5] -- [8]) + (Col. [1] x (1 + (0.5 x Max. (Cols. [5] -- [8]))))/Col. [2]

90-DAY CONSTANT GROWTH DCF - CANADIAN UTILITIES

Company	Ticker	[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Bloomberg Long-Term Growth	[6] Thomson First Call Growth	[7] Zacks Earnings Growth	[8] Value Line Earnings Growth	[9] Average Growth Rate	[10] Low DCF ROE	[11] Mean DCF ROE	[12] High DCF ROE
Canadian Utilities Ltd.	CU	$1.61	$59.76	2.69%	2.80%	--	7.90%	--	--	7.90%	10.70%	10.70%	10.70%
Emera Inc.	EMA	$1.35	$31.60	4.27%	4.35%	--	3.40%	--	--	3.40%	7.75%	7.75%	7.75%
Enbridge Inc.	ENB	$0.98	$33.04	2.97%	3.10%	7.20%	13.20%	--	7.50%	8.85%	10.27%	11.95%	16.36%
Fortis Inc.	FTS	$1.16	$32.38	3.58%	3.68%	--	5.20%	--	--	5.20%	8.88%	8.88%	8.88%
TransCanada Corp.	TRP	$1.68	$41.50	4.05%	4.24%	--	8.27%	--	10.50%	9.39%	12.49%	13.62%	14.76%
MEAN		$1.36	$39.65	3.51%	3.63%	7.20%	7.59%	--	9.00%	6.95%	10.02%	10.58%	11.69%
MEDIAN		$1.35	$33.04	3.58%	3.68%	7.20%	7.90%	--	9.00%	7.90%	10.27%	10.70%	10.70%

	Low DCF ROE	Mean DCF ROE	High DCF ROE
Flotation Cost Adjustment	0.50%	0.50%	0.50%
Adjusted Mean DCF	10.52%	11.08%	12.19%
Adjusted Median DCF	10.77%	11.20%	11.20%

Notes:
[1] Source: Bloomberg
[2] Source: Bloomberg. 90-day historical average for period ending November 30, 2011.
[3] Equals Col. [1]/Col. [2]
[4] Equals (Col. [1] x (1+(0.5 x Col. [9])))/Col. [2]
[5] Source: Bloomberg
[6] Source: Yahoo! Finance
[7] Source: Zacks
[8] Source: Value Line
[9] Equals Midpoint of Mean(Cols. [5], [6], [7]) and Col. [8]
[10] Min. (Cols. [5] -- [8]) + (Col. [1] x (1 + (0.5 x Min. (Cols. [5] -- [8]))))/Col. [2]
[11] Col. [4] + Col. [9]
[12] Max. (Cols. [5] -- [8]) + (Col. [1] x (1 + (0.5 x Max. (Cols. [5] -- [8]))))/Col. [2]

CAPITAL ASSET PRICING MODEL - U.S. NATURAL GAS DISTRIBUTION UTILITIES

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
		Adjusted Betas							
Company	Ticker	Bloomberg	Value Line	Mean Beta	U.S. 30-Yr. Treasury Yield Forecast	Market Risk Premium	Low CAPM	Mean CAPM	High CAPM
National Fuel Gas Company	NFG	1.29	1.05	1.17	5.30%	6.16%	11.77%	12.50%	13.24%
Northwest Natural Gas Company	NWN	0.82	0.60	0.71	5.30%	6.16%	9.00%	9.67%	10.34%
Piedmont Natural Gas Company, Inc.	PNY	0.84	0.65	0.75	5.30%	6.16%	9.30%	9.89%	10.48%
Questar Corporation	STR	0.92	--	0.92	5.30%	6.16%	10.98%	10.98%	10.98%
Sempra Energy	SRE	0.79	0.80	0.79	5.30%	6.16%	10.17%	10.20%	10.23%
Southwest Gas Corporation	SWX	0.88	0.75	0.81	5.30%	6.16%	9.92%	10.31%	10.70%
Vectren Corporation	VVC	0.78	0.70	0.74	5.30%	6.16%	9.61%	9.86%	10.11%
MEAN		0.84	0.70	0.79			9.83%	10.15%	10.47%
MEDIAN		0.83	0.70	0.77			9.77%	10.04%	10.41%

	Low CAPM	Mean CAPM	High CAPM
Flotation Cost Adjustment	0.50%	0.50%	0.50%
Adjusted Mean CAPM	10.33%	10.65%	10.97%
Adjusted Median CAPM	10.27%	10.54%	10.91%

Notes:

[1] Source: Bloomberg
[2] Source: Value Line
[3] Equals mean of Cols. [1], [2]
[4] Equals average long-term forecast of 10-year government bond yield for the period 2013-2018 plus average spread between 10- and 30-year bond for November 2011.
Source: Consensus Forecasts and Bloomberg
[5] Equals mean of U.S. MRP (6.7%) and Canadian MRP (5.62%) per Morningstar / Ibbotson Associates
[6] Equals Col. [4] + (Min (Cols. [1], [2]) x Col. [5])
[7] Equals Col. [4] +(Col. [3] x Col. [5])
[8] Equals Col. [4] + (Max (Cols. [1], [2]) x Col. [5])

CAPITAL ASSET PRICING MODEL - CANADIAN UTILITIES

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
		Adjusted Betas							
Company	Ticker	Bloomberg	Value Line	Mean Beta	CDN 30-Yr. Treasury Yield Forecast	Market Risk Premium	Low CAPM	Mean CAPM	High CAPM
Canadian Utilities Ltd.	CU	0.54	--	0.54	4.56%	6.16%	7.90%	7.90%	7.90%
Emera Inc.	EMA	0.68	--	0.68	4.56%	6.16%	8.73%	8.73%	8.73%
Enbridge Inc.	ENB	0.59	0.65	0.62	4.56%	6.16%	8.22%	8.39%	8.56%
Fortis Inc.	FTS	0.82	--	0.82	4.56%	6.16%	9.62%	9.62%	9.62%
TransCanada Corp.	TRP	0.61	0.90	0.75	4.56%	6.16%	8.30%	9.20%	10.10%
MEAN		0.65	0.78	0.68			8.55%	8.77%	8.98%
MEDIAN		0.61	0.78	0.68			8.30%	8.73%	8.73%

	[6]	[7]	[8]
Flotation Cost Adjustment	0.50%	0.50%	0.50%
Adjusted Mean CAPM	9.05%	9.27%	9.48%
Adjusted Median CAPM	8.80%	9.23%	9.23%

Notes:

[1] Source: Bloomberg
[2] Source: Value Line
[3] Equals mean of Cols. [1], [2]
[4] Equals average long-term forecast of 10-year government bond yield for the period 2013-2018 plus average spread between 10- and 30-year bond for November 2011.
Source: Consensus Forecasts and Bloomberg
[5] Equals mean of U.S. MRP (6.7%) and Canadian MRP (5.62%) per Morningstar / Ibbotson Associates
[6] Equals Col. [4] + (Min (Cols. [1], [2]) x Col. [5])
[7] Equals Col. [4] +(Col. [3] x Col. [5])
[8] Equals Col. [4] + (Max (Cols. [1], [2]) x Col. [5])

CAPITAL ASSET PRICING MODEL - INPUTS

	Bond Yields (%)					
	Government of Canada			United States Treasury		
	10-year	30-year	Spread	10-year	30-year	Spread
11/30/2011	2.15	2.69	0.54	2.08	3.06	0.98
11/29/2011	2.13	2.67	0.54	2.00	2.96	0.96
11/28/2011	2.12	2.67	0.55	1.97	2.93	0.96
11/25/2011	2.11	2.66	0.55	1.97	2.92	0.95
11/24/2011	2.05	2.63	0.58	--	--	--
11/23/2011	2.04	2.63	0.59	1.89	2.82	0.93
11/22/2011	2.08	2.68	0.60	1.94	2.91	0.97
11/21/2011	2.10	2.72	0.62	1.97	2.96	0.99
11/18/2011	2.13	2.74	0.61	2.01	2.99	0.98
11/17/2011	2.10	2.71	0.61	1.96	2.98	1.02
11/16/2011	2.09	2.72	0.63	2.01	3.05	1.04
11/15/2011	2.11	2.74	0.63	2.06	3.10	1.04
11/14/2011	2.11	2.74	0.63	2.04	3.09	1.05
11/10/2011	2.14	2.76	0.62	2.04	3.12	1.08
11/9/2011	2.09	2.73	0.64	2.00	3.03	1.03
11/8/2011	2.18	2.81	0.63	2.10	3.13	1.03
11/7/2011	2.15	2.81	0.66	2.04	3.05	1.01
11/4/2011	2.16	2.83	0.67	2.06	3.09	1.03
11/3/2011	2.21	2.86	0.65	2.09	3.10	1.01
11/2/2011	2.17	2.81	0.64	2.03	3.03	1.00
11/1/2011	2.15	2.79	0.64	2.01	2.99	0.98
			0.61			1.00

Source: Bloomberg

Step 2: Long-Term Bond Forecast		
	Canada	**United States**
10-year Forecast:	3.95	4.30
+ Average Spread:	0.61	1.00
	4.56	5.30

Source: Consensus Forecasts, Long-term Forecast, October 10, 2011
(Midpoint for years 2013 - 2018).

Market Risk Premium	
Canada:	5.62
United States:	6.70
Average:	6.16

Source: Ibbotson SBBI 2011 Valuation Yearbook, at 123.
Ibbotson Associates, Inc., Canadian Risk Premia Over Time Report 2006; and
Morningstar, Inc., International Equity Risk Premia Report 2011.

LEVERAGE ADJUSTMENT - U.S. NATURAL GAS DISTRIBUTION UTILITIES

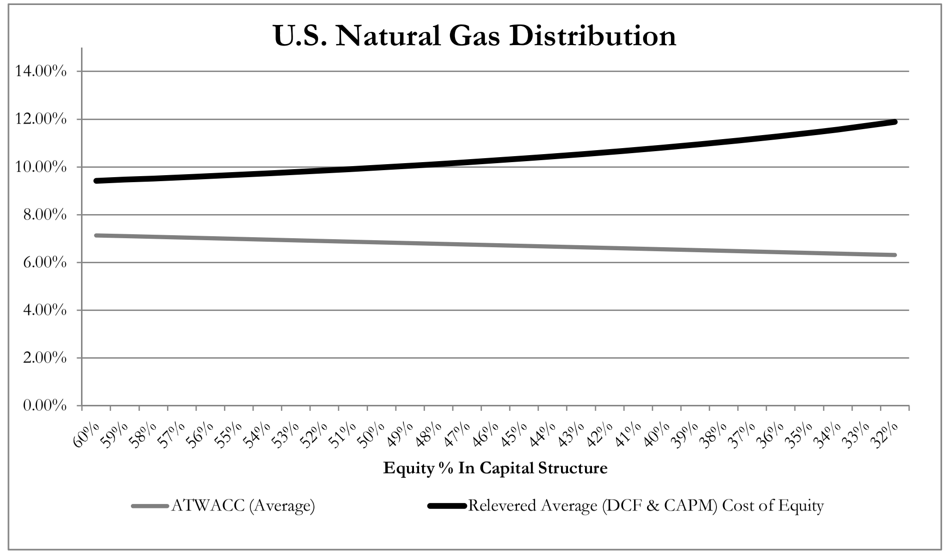
	PROXY GROUP DATA AND ROE RESULTS	
1		
2	Book Debt	50.10%
3	DCF ROE Result Before Flotation Adjustment	8.83%
4	CAPM Result Before Flotation Adjustment	10.15%
5	Average Recommendation before Financing Adjustment	9.49%
6	Embedded Debt Cost	5.43%
7	Proxy Group Average Levered Beta	0.79
8	Adjustment for Financing Flexibility	0.50%
9	Average Proxy Group Tax Rate	32.18%
10	Average Proxy Group Risk Free Rate	5.30%
11		

12 Hamada Formula:

$$\beta_{UL} = \frac{\beta_L}{1+(1-T_C)*(D/E)}$$

$$\beta_{RL} = \beta_{UL} * [1 + (1-T_C)*(D/E)]$$

β_{UL} = unlevered beta (at book cap structure)
β_{RL} = relevered beta (at book cap structure)
D = Debt Ratio
E = Equity Ratio
T_C = Corporate tax rate



13 **CALCULATION OF UNLEVERED AND RELEVERED COST OF EQUITY USING THE HAMADA FORMULA:**

14

	TARGET COMMON EQUITY RATIO	60.00%	58.00%	56.00%	54.00%	52.00%	50.00%	48.00%	46.00%	44.00%	42.00%	40.00%	38.00%	36.00%	34.00%	32.00%
15																
16																
17	Debt Cost	5.43%	5.43%	5.43%	5.43%	5.43%	5.43%	5.43%	5.43%	5.43%	5.43%	5.43%	5.43%	5.43%	5.43%	5.43%
18	After Tax Debt Cost	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%
19	Debt/Total Capital Ratio	50.10%	50.10%	50.10%	50.10%	50.10%	50.10%	50.10%	50.10%	50.10%	50.10%	50.10%	50.10%	50.10%	50.10%	50.10%
20	Proxy Group Mean Debt/Equity Ratio	100.42%	100.42%	100.42%	100.42%	100.42%	100.42%	100.42%	100.42%	100.42%	100.42%	100.42%	100.42%	100.42%	100.42%	100.42%
21	Combined Proxy Group Tax Rate	32.18%	32.18%	32.18%	32.18%	32.18%	32.18%	32.18%	32.18%	32.18%	32.18%	32.18%	32.18%	32.18%	32.18%	32.18%
22	Target Debt/Total Capital Ratio	40.00%	42.00%	44.00%	46.00%	48.00%	50.00%	52.00%	54.00%	56.00%	58.00%	60.00%	62.00%	64.00%	66.00%	68.00%
23	Target Debt/Equity Ratio	66.67%	72.41%	78.57%	85.19%	92.31%	100.00%	108.33%	117.39%	127.27%	138.10%	150.00%	163.16%	177.78%	194.12%	212.50%
24	Levered Beta	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
25	Risk Free Rate (U.S.)	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%	5.30%
26	Market Risk Premium (CAPM)	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%
27	Implied Market Risk Premium (DCF)	4.48%	4.48%	4.48%	4.48%	4.48%	4.48%	4.48%	4.48%	4.48%	4.48%	4.48%	4.48%	4.48%	4.48%	4.48%
28	Implied Market Risk Premium (Average)	5.32%	5.32%	5.32%	5.32%	5.32%	5.32%	5.32%	5.32%	5.32%	5.32%	5.32%	5.32%	5.32%	5.32%	5.32%
29	Unlevered Beta	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
30	Relevered Beta	0.68	0.70	0.72	0.74	0.76	0.79	0.81	0.84	0.87	0.91	0.94	0.99	1.03	1.08	1.14
31	Flotation/Financing Flexibility Adjustment	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
32	Relevered CAPM Cost of Equity	9.99%	10.10%	10.22%	10.35%	10.49%	10.64%	10.81%	10.98%	11.18%	11.39%	11.62%	11.88%	12.16%	12.48%	12.84%
33	Relevered DCF Cost of Equity	8.85%	8.93%	9.02%	9.11%	9.21%	9.32%	9.44%	9.57%	9.71%	9.86%	10.03%	10.22%	10.43%	10.66%	10.92%
34	Relevered Average (DCF & CAPM) Cost of Equity	9.42%	9.52%	9.62%	9.73%	9.85%	9.98%	10.12%	10.27%	10.44%	10.62%	10.83%	11.05%	11.29%	11.57%	11.88%
35																
36	ATWACC Computed on Average (DCF and CAPM)	7.13%	7.07%	7.01%	6.95%	6.89%	6.83%	6.78%	6.72%	6.66%	6.60%	6.54%	6.48%	6.42%	6.37%	6.31%

LEVERAGE ADJUSTMENT - U.S. NATURAL GAS DISTRIBUTION UTILITIES - EXPLANATION FOR CALCULATIONS

1		1	
2	Exhibit Concentric-02, p. 1 of 1	2	Book Debt
3	Exhibit Concentric-05, p. 1 of 2	3	DCF ROE Result Before Flotation Adjustment
4	Exhibit Concentric-06, p. 1 of 2	4	CAPM Result Before Flotation Adjustment
5	Average Rows (3,4)	5	Average Recommendation before Financing Adjustment
6	Exhibit Concentric-04, p. 1 of 1	6	Embedded Debt Cost
7	Exhibit Concentric-06, p. 1 of 2	7	Proxy Group Average Levered Beta
8	Ontario Energy Board, *Report of the Board on Cost of Capital and 2nd Generation Incentive Regulation for Ontario's Electricity Distributors*, page 17	8	Adjustment for Financing Flexibility
9	Exhibit Concentric-03, p. 1 of 1	9	Average Proxy Group Tax Rate
10	Exhibit Concentric-07, p. 1 of 1	10	Average Proxy Group Risk Free Rate
11		11	
12		12	

Hamada Formula:

$$\beta_{UL} = \frac{\beta_L}{1+(1-T_C)*(D/E)}$$

$$\beta_{RL} = \beta_{UL} * [1 + (1-T_C)*(D/E)]$$

β_{UL} = unlevered beta (at book cap structure)
β_{RL} = relevered beta (at book cap structure)
D = Debt Ratio
E = Equity Ratio
T_C = Corporate tax rate

13		13	
14		14	
15		15	
16		16	
17	Row 6	17	Debt Cost
18	Row 6 x (1 - Row 9)	18	After Tax Debt Cost
19	Row 2	19	Debt/Total Capital Ratio
20	Row 2 / (1-Row 2)	20	Proxy Group Mean Debt/Equity Ratio
21	Row 9	21	Combined Proxy Group Tax Rate
22		22	Target Debt/Total Capital Ratio
23	Row 22 / (1-Row 22)	23	Target Debt/Equity Ratio
24	Row 7	24	Levered Beta
25	Row 10	25	Risk Free Rate (U.S.)
26	Exhibit Concentric-07, p. 1 of 1	26	Market Risk Premium (CAPM)
27	(Row 3 - Row 10) / Row 7	27	Implied Market Risk Premium (DCF)
28	(Row 5 - Row 10) / Row 7	28	Implied Market Risk Premium (Average)
29	Row 24/ (1+(1 - Row 21)x Row 20)	29	Unlevered Beta
30	Row 29 x (1 + (1-Row 21) x Row 23)	30	Relevered Beta
31	Row 8	31	Flotation/Financing Flexibility Adjustment
32	Row 25 + (Row 30 x Row 26) + Row 31	32	Relevered CAPM Cost of Equity
33	Row 25 + (Row 30 x Row 27) + Row 31	33	Relevered DCF Cost of Equity
34	Row 25 + (Row 30 x Row 28) + Row 31	34	Relevered Average (DCF & CAPM) Cost of Equity
35		35	
36	[Row 34 x (1-Row 22)] + [Row 22 x Row 17 x (1- Row 21)]	36	ATWACC Computed on Average (DCF and CAPM)

Note: It is our intention to illustrate the effect of leverage over the critical range where the ATWACC is relatively flat, and not to address increases in debt costs associated with increased leverage, i.e. debt costs are held constant over the range.

CANADIAN EX-ANTE MARKET RISK PREMIUM CALCULATION

Company Name	Ticker	Shares Outstanding	Price	Market Cap.	Weight	Div. Yld.	Earnings Growth	Div. Yld. x Weight	Earn. Gr. x Weight
Advantage Oil & Gas Ltd	AAV	166.3	4.13	686.8	0.04%	0.00%	n/a	0.00%	n/a
Aecon Group Inc	ARE	55.8	11.42	637.4	0.04%	1.75%	2.00%	0.00%	0.00%
AGF Management Ltd	AGF/B	95.4	16.72	1,595.2	0.10%	6.56%	n/a	0.01%	n/a
Agnico-Eagle Mines Ltd	AEM	170.7	38.48	6,567.8	0.41%	1.69%	10.00%	0.01%	0.04%
Agrium Inc	AGU	157.8	75.77	11,958.0	0.74%	0.35%	48.40%	0.00%	0.36%
Alacer Gold Corp	ASR	279.0	11.01	3,072.0	0.19%	0.00%	31.22%	0.00%	0.06%
Alamos Gold Inc	AGI	118.3	17.50	2,071.1	0.13%	0.81%	71.00%	0.00%	0.09%
Algonquin Power & Utilities Corp	AQN	136.1	6.30	857.5	0.05%	4.85%	n/a	0.00%	n/a
Alimentation Couche Tard Inc	ATD/B	123.2	31.10	3,831.5	0.24%	0.91%	10.00%	0.00%	0.02%
Allied Properties Real Estate Investment Trust	AP-U	51.3	25.88	1,327.8	0.08%	5.12%	n/a	0.00%	n/a
AltaGas Ltd	ALA	89.0	30.58	2,722.9	0.17%	4.53%	n/a	0.01%	n/a
ARC Resources Ltd	ARX	288.5	23.53	6,789.2	0.42%	5.10%	n/a	0.02%	n/a
Artis Real Estate Investment Trust	AX-U	88.8	15.00	1,331.3	0.08%	7.20%	n/a	0.01%	n/a
Astral Media Inc	ACM/A	52.6	35.41	1,862.7	0.12%	2.64%	7.30%	0.00%	0.01%
Atco Ltd/Canada	ACO/X	50.9	60.40	3,072.4	0.19%	2.03%	n/a	0.00%	n/a
Athabasca Oil Sands Corp	ATH	399.4	11.65	4,652.7	0.29%	n/a	n/a	n/a	n/a
Atlantic Power Corp	ATP	113.5	14.85	1,685.1	0.10%	7.83%	n/a	0.01%	n/a
AuRico Gold Inc	AUQ	281.6	8.97	2,525.8	0.16%	0.09%	21.50%	0.00%	0.03%
Aurizon Mines Ltd	ARZ	163.0	5.38	877.1	0.05%	0.00%	3.82%	0.00%	0.00%
Avion Gold Corp	AVR	440.2	1.52	669.2	0.04%	n/a	131.00%	n/a	0.05%
B2Gold Corp	BTO	382.3	3.09	1,181.4	0.07%	n/a	52.00%	n/a	0.04%
Bank of Montreal	BMO	639.9	58.27	37,289.6	2.30%	4.89%	7.00%	0.11%	0.16%
Bank of Nova Scotia	BNS	1,089.6	51.63	56,255.3	3.48%	4.15%	8.33%	0.14%	0.29%
Bankers Petroleum Ltd	BNK	247.5	4.76	1,178.2	0.07%	n/a	n/a	n/a	n/a
Banro Corp	BAA	197.0	4.41	868.8	0.05%	n/a	n/a	n/a	n/a
Barrick Gold Corp	ABX	1,000.2	49.74	49,751.7	3.07%	1.14%	6.50%	0.04%	0.20%
Baytex Energy Corp	BTE	117.6	57.00	6,701.0	0.41%	4.63%	n/a	0.02%	n/a
BCE Inc	BCE	778.0	42.07	32,728.7	2.02%	5.17%	6.47%	0.10%	0.13%
Bell Aliant Inc	BA	227.8	27.90	6,355.7	0.39%	6.81%	3.00%	0.03%	0.01%
Birchcliff Energy Ltd	BIR	126.7	12.50	1,583.5	0.10%	0.00%	n/a	0.00%	n/a
BlackPearl Resources Inc	PXX	284.7	5.00	1,423.7	0.09%	0.00%	n/a	0.00%	n/a
Boardwalk Real Estate Investment Trust	BEI-U	47.8	53.81	2,570.3	0.16%	3.46%	n/a	0.01%	n/a
Bombardier Inc	BBD/B	1,438.5	4.23	6,084.9	0.38%	2.40%	8.00%	0.01%	0.03%
Bonavista Energy Corp	BNP	143.0	25.10	3,589.2	0.22%	5.74%	n/a	0.01%	n/a
Bonterra Energy Corp	BNE	19.5	52.41	1,020.9	0.06%	6.03%	n/a	0.00%	n/a
Brookfield Asset Management Inc	BAM/A	621.9	29.00	18,034.5	1.11%	1.87%	n/a	0.02%	n/a
Brookfield Office Properties Inc	BPO	503.2	16.55	8,327.6	0.51%	3.47%	n/a	0.02%	n/a
CAE Inc	CAE	257.6	10.11	2,604.0	0.16%	1.50%	7.95%	0.00%	0.01%
Calfrac Well Services Ltd	CFW	43.9	29.37	1,289.5	0.08%	0.59%	n/a	0.00%	n/a
Calloway Real Estate Investment Trust	CWT-U	106.9	26.92	2,876.7	0.18%	5.76%	n/a	0.01%	n/a
Cameco Corp	CCO	394.7	19.63	7,748.4	0.48%	2.04%	22.20%	0.01%	0.11%
Canadian Apartment Properties REIT	CAR-U	85.0	22.59	1,920.4	0.12%	4.78%	n/a	0.01%	n/a
Canadian Imperial Bank of Commerce/Canada	CM	400.8	74.60	29,898.9	1.85%	4.92%	6.50%	0.09%	0.12%
Canadian National Railway Co	CNR	443.9	80.09	35,548.3	2.20%	1.78%	12.00%	0.04%	0.26%
Canadian Natural Resources Ltd	CNQ	1,095.2	38.31	41,957.8	2.59%	0.99%	19.00%	0.03%	0.49%
Canadian Real Estate Investment Trust	REF-U	67.5	37.45	2,526.2	0.16%	3.91%	n/a	0.01%	n/a
Canadian Utilities Ltd	CU	87.2	60.61	5,287.5	0.33%	2.84%	n/a	0.01%	n/a
Canadian Western Bank	CWB	75.5	26.31	1,985.4	0.12%	2.36%	10.00%	0.00%	0.01%
Canadian Oil Sands Ltd	COS	484.5	23.68	11,473.0	0.71%	5.17%	6.00%	0.04%	0.04%
Canadian Pacific Railway Ltd	CP	169.8	69.30	11,769.4	0.73%	1.78%	10.50%	0.01%	0.08%
Canadian Tire Corp Ltd	CTC/A	78.0	64.85	5,059.6	0.31%	1.86%	5.00%	0.01%	0.02%
Canexus Corp	CUS	118.2	7.00	827.6	0.05%	7.86%	n/a	0.00%	n/a
Canfor Corp	CFP	142.7	11.02	1,572.6	0.10%	n/a	n/a	n/a	n/a
Capital Power Corp	CPX	49.7	25.10	1,248.4	0.08%	5.02%	n/a	0.00%	n/a
Capstone Mining Corp	CS	376.2	3.04	1,143.8	0.07%	0.00%	26.00%	0.00%	0.02%
CCL Industries Inc	CCL/B	31.1	32.50	1,011.4	0.06%	2.15%	n/a	0.00%	n/a
Celestica Inc	CLS	197.5	7.91	1,562.6	0.10%	0.00%	10.00%	0.00%	0.01%
Celtic Exploration Ltd	CLT	104.8	20.23	2,120.4	0.13%	n/a	n/a	n/a	n/a
Cenovus Energy Inc	CVE	753.5	34.38	25,905.9	1.60%	2.37%	16.00%	0.04%	0.26%
Centerra Gold Inc	CG	236.3	18.50	4,372.3	0.27%	0.57%	61.50%	0.00%	0.17%
CGI Group Inc	GIB/A	228.4	18.71	4,273.2	0.26%	n/a	10.00%	n/a	0.03%
Chartwell Seniors Housing Real Estate Investment Trust	CSH-U	144.7	8.61	1,246.2	0.08%	6.27%	n/a	0.00%	n/a
China Gold International Resources Corp Ltd	CGG	396.2	2.98	1,180.6	0.07%	0.51%	n/a	0.00%	n/a
Chorus Aviation Inc	CHR/B	109.2	3.19	348.2	0.02%	18.81%	n/a	0.00%	n/a
CI Financial Corp	CIX	284.1	20.70	5,880.2	0.36%	4.66%	n/a	0.02%	n/a
Cineplex Inc	CGX	58.5	24.93	1,457.4	0.09%	5.25%	n/a	0.00%	n/a
CML HealthCare Inc	CLC	89.8	10.20	916.1	0.06%	7.35%	n/a	0.00%	n/a
Cogeco Cable Inc	CCA	33.1	54.00	1,788.3	0.11%	1.87%	18.40%	0.00%	0.02%
Colossus Minerals Inc	CSI	105.4	6.14	647.0	0.04%	0.00%	n/a	0.00%	n/a
Cominar Real Estate Investment Trust	CUF-U	76.8	22.30	1,713.1	0.11%	6.46%	n/a	0.01%	n/a
Corus Entertainment Inc	CJR/B	79.0	20.59	1,627.2	0.10%	4.61%	8.30%	0.00%	0.01%
Cott Corp	BCB	94.9	6.41	608.6	0.04%	n/a	n/a	n/a	n/a
Crescent Point Energy Corp	CPG	288.2	45.70	13,171.9	0.81%	6.04%	n/a	0.05%	n/a
Crew Energy Inc	CR	119.8	12.36	1,480.3	0.09%	n/a	n/a	n/a	n/a
Davis & Henderson Corp	DH	59.2	18.14	1,074.5	0.07%	6.99%	n/a	0.00%	n/a
Denison Mines Corp	DML	384.7	1.52	584.7	0.04%	0.00%	n/a	0.00%	n/a
Detour Gold Corp	DGC	101.5	27.50	2,790.5	0.17%	0.00%	10.00%	0.00%	0.02%
Dollarama Inc	DOL	73.7	43.99	3,243.0	0.20%	0.82%	n/a	0.00%	n/a
Dorel Industries Inc	DII/B	27.8	25.57	710.5	0.04%	2.39%	n/a	0.00%	n/a
Dundee Corp	DC/A	51.7	24.18	1,251.0	0.08%	n/a	n/a	n/a	n/a
Dundee Precious Metals Inc	DPM	125.2	9.30	1,164.7	0.07%	n/a	n/a	n/a	n/a
Dundee Real Estate Investment Trust	D-U	66.1	34.70	2,294.6	0.14%	6.34%	n/a	0.01%	n/a
Eldorado Gold Corp	ELD	551.7	14.68	8,098.3	0.50%	1.61%	5.00%	0.01%	0.03%
Emera Inc	EMA	122.2	32.79	4,008.0	0.25%	4.15%	n/a	0.01%	n/a
Empire Co Ltd	EMP/A	33.7	56.51	1,903.7	0.12%	1.59%	7.00%	0.00%	0.01%
Enbridge Inc	ENB	779.5	36.80	28,685.9	1.77%	3.06%	7.20%	0.05%	0.13%

CANADIAN EX-ANTE MARKET RISK PREMIUM CALCULATION

Company Name	Ticker	Shares Outstanding	Price	Market Cap.	Weight	Div. Yld.	Earnings Growth	Div. Yld. x Weight	Earn. Gr. x Weight
Encana Corp	ECA	735.4	18.61	13,685.3	0.85%	4.37%	33.00%	0.04%	0.28%
Endeavour Silver Corp	EDR	87.3	10.66	930.9	0.06%	n/a	499.00%	n/a	0.29%
Enerflex Ltd	EFX	77.2	13.06	1,008.7	0.06%	2.07%	n/a	0.00%	n/a
Enerplus Corp	ERF	181.0	25.40	4,596.4	0.28%	8.50%	n/a	0.02%	n/a
Ensign Energy Services Inc	ESI	153.2	16.36	2,506.5	0.15%	2.41%	n/a	0.00%	n/a
European Goldfields Ltd	EGU	183.9	12.38	2,277.1	0.14%	0.00%	n/a	0.00%	n/a
Extendicare Real Estate Investment Trust	EXE-U	83.9	8.23	690.9	0.04%	10.21%	n/a	0.00%	n/a
Extorre Gold Mines Ltd	XG	92.5	8.42	779.3	0.05%	n/a	n/a	n/a	n/a
Fairfax Financial Holdings Ltd	FFH	19.9	431.57	8,573.4	0.53%	2.36%	n/a	0.01%	n/a
Finning International Inc	FTT	171.6	22.96	3,939.3	0.24%	2.34%	20.00%	0.01%	0.05%
First Capital Realty Inc	FCR	171.4	17.63	3,021.6	0.19%	4.54%	n/a	0.01%	n/a
First Majestic Silver Corp	FR	105.1	18.99	1,995.1	0.12%	n/a	667.00%	n/a	0.82%
First Quantum Minerals Ltd	FM	476.3	22.40	10,669.1	0.66%	0.79%	2.10%	0.01%	0.01%
FirstService Corp/Canada	FSV	28.6	26.55	759.7	0.05%	n/a	13.75%	n/a	0.01%
Flint Energy Services Ltd	FES	48.0	13.56	651.0	0.04%	0.55%	n/a	0.00%	n/a
Fortis Inc/Canada	FTS	188.4	32.79	6,178.3	0.38%	3.68%	n/a	0.01%	n/a
Fortuna Silver Mines Inc	FVI	124.6	5.90	735.1	0.05%	n/a	431.00%	n/a	0.20%
Franco-Nevada Corp	FNV	138.4	40.80	5,645.2	0.35%	1.12%	19.69%	0.00%	0.07%
Freehold Royalties Ltd	FRU	60.9	20.02	1,219.3	0.08%	8.39%	n/a	0.01%	n/a
Gabriel Resources Ltd	GBU	379.6	6.24	2,368.8	0.15%	n/a	n/a	n/a	n/a
Genworth MI Canada Inc	MIC	98.7	22.14	2,184.7	0.13%	5.27%	n/a	0.01%	n/a
Gildan Activewear Inc	GIL	121.4	21.32	2,588.5	0.16%	1.47%	16.27%	0.00%	0.03%
Goldcorp Inc	G	809.9	46.10	37,336.4	2.31%	0.99%	39.50%	0.02%	0.91%
Golden Star Resources Ltd	GSC	258.6	1.78	460.4	0.03%	0.00%	n/a	0.00%	n/a
Grande Cache Coal Corp	GCE	98.3	9.93	976.3	0.06%	n/a	n/a	n/a	n/a
Great Basin Gold Ltd	GBG	475.6	1.09	518.4	0.03%	n/a	n/a	n/a	n/a
Great-West Lifeco Inc	GWO	949.8	21.06	20,001.9	1.24%	5.98%	9.00%	0.07%	0.11%
Groupe Aeroplan Inc	AIM	174.0	12.37	2,151.9	0.13%	4.90%	n/a	0.01%	n/a
Guyana Goldfields Inc	GUY	83.7	8.31	695.7	0.04%	n/a	n/a	n/a	n/a
H&R Real Estate Investment Trust	HR-U	172.0	23.44	4,031.7	0.25%	5.03%	n/a	0.01%	n/a
Harry Winston Diamond Corp	HW	84.8	11.17	947.7	0.06%	0.00%	83.00%	0.00%	0.05%
Home Capital Group Inc	HCG	34.6	49.07	1,699.8	0.11%	1.80%	n/a	0.00%	n/a
HudBay Minerals Inc	HBM	171.9	10.35	1,779.6	0.11%	1.93%	12.66%	0.00%	0.01%
Husky Energy Inc	HSE	957.5	24.36	23,325.6	1.44%	4.93%	-1.00%	0.07%	-0.01%
IAMGOLD Corp	IMG	375.9	17.45	6,559.5	0.41%	1.21%	19.00%	0.00%	0.08%
IGM Financial Inc	IGM	257.2	44.32	11,401.0	0.70%	4.89%	n/a	0.03%	n/a
Imperial Oil Ltd	IMO	847.6	46.41	39,337.9	2.43%	0.97%	7.00%	0.02%	0.17%
Industrial Alliance Insurance & Financial Services Inc	IAG	90.2	26.32	2,375.0	0.15%	3.79%	9.00%	0.01%	0.01%
Inmet Mining Corp	IMN	69.3	66.25	4,593.3	0.28%	0.30%	-9.19%	0.00%	-0.03%
Intact Financial Corp	IFC	129.6	56.16	7,275.7	0.45%	2.81%	n/a	0.01%	n/a
Inter Pipeline Fund	IPL-U	263.0	18.50	4,864.8	0.30%	5.68%	n/a	0.02%	n/a
Ivanhoe Mines Ltd/CA	IVN	739.0	19.28	14,248.3	0.88%	0.00%	n/a	0.00%	n/a
Jaguar Mining Inc	JAG	84.4	6.93	585.0	0.04%	0.00%	n/a	0.00%	n/a
Jean Coutu Group PJC Inc/The	PJC/A	105.7	13.34	1,410.2	0.09%	1.82%	6.00%	0.00%	0.01%
Just Energy Group Inc	JE	138.9	11.58	1,608.7	0.10%	10.88%	n/a	0.01%	n/a
Keyera Corp	KEY	71.5	50.14	3,586.0	0.22%	4.06%	n/a	0.01%	n/a
Kinross Gold Corp	K	1,137.5	13.08	14,878.9	0.92%	0.88%	49.00%	0.01%	0.45%
Kirkland Lake Gold Inc	KGI	69.9	17.38	1,214.9	0.08%	n/a	n/a	n/a	n/a
Labrador Iron Ore Royalty Corp	LIF-U	64.0	36.30	2,323.2	0.14%	8.45%	54.00%	0.01%	0.08%
Lake Shore Gold Corp	LSG	400.2	1.52	608.2	0.04%	n/a	n/a	n/a	n/a
Laurentian Bank of Canada	LB	23.9	47.13	1,127.6	0.07%	3.94%	5.00%	0.00%	0.00%
Legacy Oil + Gas Inc	LEG	143.3	11.45	1,640.3	0.10%	n/a	n/a	n/a	n/a
Linamar Corp	LNR	64.7	15.45	999.7	0.06%	2.05%	n/a	0.00%	n/a
Loblaw Cos Ltd	L	281.8	37.00	10,425.4	0.64%	2.27%	11.37%	0.01%	0.07%
Lundin Mining Corp	LUN	582.5	4.59	2,673.6	0.17%	0.00%	20.51%	0.00%	0.03%
MacDonald Dettwiler & Associates Ltd	MDA	31.8	46.54	1,479.7	0.09%	2.31%	6.00%	0.00%	0.01%
Magna International Inc	MG	235.7	39.52	9,316.4	0.58%	3.22%	11.88%	0.02%	0.07%
Major Drilling Group International	MDI	78.9	16.56	1,306.8	0.08%	n/a	n/a	n/a	n/a
Manitoba Telecom Services Inc	MBT	65.9	29.91	1,972.2	0.12%	5.67%	3.73%	0.01%	0.00%
Manulife Financial Corp	MFC	1,793.6	11.76	21,093.2	1.30%	4.42%	10.00%	0.06%	0.13%
Maple Leaf Foods Inc	MFI	140.0	10.59	1,483.1	0.09%	1.51%	n/a	0.00%	n/a
MEG Energy Corp	MEG	193.4	40.55	7,843.7	0.48%	0.00%	71.00%	0.00%	0.34%
Mercator Minerals Ltd	ML	258.8	1.81	468.4	0.03%	0.00%	56.00%	0.00%	0.02%
Methanex Corp	MX	93.2	24.95	2,326.5	0.14%	2.84%	38.00%	0.00%	0.05%
Metro Inc	MRU/A	100.4	52.69	5,292.6	0.33%	1.53%	8.00%	0.01%	0.03%
Minefinders Corp	MFL	83.0	11.99	994.9	0.06%	n/a	49.14%	n/a	0.03%
Mullen Group Ltd	MTL	80.8	19.48	1,574.7	0.10%	5.56%	n/a	0.01%	n/a
NAL Energy Corp	NAE	150.9	7.57	1,142.2	0.07%	11.10%	n/a	0.01%	n/a
National Bank of Canada	NA	160.4	72.33	11,602.5	0.72%	4.23%	8.50%	0.03%	0.06%
Neo Material Technologies Inc	NEM	116.2	7.95	923.6	0.06%	n/a	n/a	n/a	n/a
Nevsun Resources Ltd	NSU	200.0	6.19	1,237.9	0.08%	0.99%	-7.00%	0.00%	-0.01%
New Gold Inc	NGD	461.4	10.95	5,051.9	0.31%	0.12%	5.00%	0.00%	0.02%
Nexen Inc	NXY	527.9	18.11	9,560.1	0.59%	1.13%	3.00%	0.01%	0.02%
Niko Resources Ltd	NKO	51.6	47.80	2,467.1	0.15%	0.51%	n/a	0.00%	n/a
Nordion Inc	NDN	62.4	9.02	562.7	0.03%	n/a	-52.00%	n/a	-0.02%
North American Palladium Ltd	PDL	162.9	3.12	508.1	0.03%	0.00%	50.00%	0.00%	0.02%
North West Co Inc/The	NWC	48.4	19.44	940.5	0.06%	4.94%	n/a	0.00%	n/a
Northern Dynasty Minerals Ltd	NDM	95.0	6.36	604.0	0.04%	n/a	n/a	n/a	n/a
Northland Power Inc	NPI	77.8	17.17	1,336.5	0.08%	6.29%	n/a	0.01%	n/a
Novagold Resources Inc	NG	240.0	9.21	2,210.3	0.14%	n/a	n/a	n/a	n/a
NuVista Energy Ltd	NVA	99.5	5.11	508.5	0.03%	0.00%	n/a	0.00%	n/a
OceanaGold Corp	OGC	262.6	2.48	651.3	0.04%	n/a	18.30%	n/a	0.01%
Onex Corp	OCX	115.3	33.55	3,869.1	0.24%	n/a	n/a	n/a	n/a
Open Text Corp	OTC	57.9	50.69	2,933.3	0.18%	n/a	10.50%	n/a	0.02%
Osisko Mining Corp	OSK	385.4	11.25	4,336.3	0.27%	0.04%	293.00%	0.00%	0.78%
Pacific Rubiales Energy Corp	PRE	273.8	22.21	6,080.4	0.38%	2.31%	78.84%	0.01%	0.30%
Pan American Silver Corp	PAA	105.0	25.02	2,626.3	0.16%	0.30%	-7.50%	0.00%	-0.01%

CANADIAN EX-ANTE MARKET RISK PREMIUM CALCULATION

Company Name	Ticker	Shares Outstanding	Price	Market Cap.	Weight	Div. Yld.	Earnings Growth	Div. Yld. x Weight	Earn. Gr. x Weight	
Paramount Resources Ltd	POU	85.5	38.06	3,252.4	0.20%	n/a	n/a	n/a	n/a	
Parkland Fuel Corp	PKI	64.0	12.91	826.4	0.05%	7.90%	n/a	0.00%	n/a	
Pason Systems Inc	PSI	81.9	13.10	1,072.9	0.07%	3.13%	n/a	0.00%	n/a	
Pembina Pipeline Corp	PPL	167.8	28.68	4,812.5	0.30%	5.44%	n/a	0.02%	n/a	
Pengrowth Energy Corp	PGF	359.6	10.78	3,876.5	0.24%	7.79%	n/a	0.02%	n/a	
Penn West Petroleum Ltd	PWT	471.3	21.23	10,006.4	0.62%	5.00%	n/a	0.03%	n/a	
PetroBakken Energy Ltd	PBN	187.3	13.15	2,463.2	0.15%	7.30%	n/a	0.01%	n/a	
Petrobank Energy & Resources Ltd	PBG	106.4	11.48	1,221.3	0.08%	2.96%	n/a	0.00%	n/a	
Petrominerales Ltd	PMG	99.3	18.71	1,858.6	0.11%	2.70%	n/a	0.00%	n/a	
Peyto Exploration & Development Corp	PEY	138.0	22.45	3,097.2	0.19%	3.21%	n/a	0.01%	n/a	
Potash Corp of Saskatchewan Inc	POT	858.6	44.72	38,396.7	2.37%	0.64%	35.00%	0.02%	0.83%	
Power Corp of Canada	POW	411.0	23.62	9,708.8	0.60%	4.91%	n/a	0.03%	n/a	
Power Financial Corp	PWF	708.1	25.49	18,049.8	1.12%	5.49%	n/a	0.06%	n/a	
Precision Drilling Corp	PD	276.1	10.66	2,942.9	0.18%	0.00%	-0.20%	0.00%	0.00%	
Premier Gold Mines Ltd	PG	127.4	5.23	666.4	0.04%	n/a	n/a	n/a	n/a	
Primaris Retail Real Estate Investment Trust	PMZ-U	80.5	21.00	1,690.5	0.10%	5.81%	n/a	0.01%	n/a	
Progress Energy Resources Corp	PRQ	232.6	12.14	2,823.8	0.17%	3.29%	n/a	0.01%	n/a	
Progressive Waste Solutions Ltd	BIN	118.9	20.88	2,482.0	0.15%	2.53%	16.40%	0.00%	0.03%	
Provident Energy Ltd	PVE	273.4	10.03	2,741.9	0.17%	5.45%	n/a	0.01%	n/a	
Quadra FNX Mining Ltd	QUX	191.5	15.21	2,912.7	0.18%	n/a	14.63%	n/a	0.03%	
Quebecor Inc	QBR/B	43.7	35.78	1,564.8	0.10%	0.56%	3.95%	0.00%	0.00%	
Reitmans Canada Ltd	RET/A	51.6	14.21	733.2	0.05%	5.63%	n/a	0.00%	n/a	
Research In Motion Ltd	RIM	524.2	15.92	8,344.6	0.52%	0.00%	6.77%	0.00%	0.03%	
RioCan Real Estate Investment Trust	REI-U	273.9	26.77	7,331.1	0.45%	5.16%	n/a	0.02%	n/a	
Rogers Communications Inc	RCI/B	414.7	38.82	16,097.6	0.99%	4.01%	5.75%	0.04%	0.06%	
Romarco Minerals Inc	R	583.8	1.20	700.5	0.04%	n/a	n/a	n/a	n/a	
RONA Inc	RON	127.8	9.76	1,247.1	0.08%	1.43%	-7.00%	0.00%	-0.01%	
Royal Bank of Canada	RY	1,439.9	52.61	75,751.0	4.68%	4.20%	6.33%	0.20%	0.30%	
Rubicon Minerals Corp	RMX	237.8	3.97	944.1	0.06%	n/a	n/a	n/a	n/a	
Russel Metals Inc	RUS	60.1	24.46	1,469.3	0.09%	4.91%	n/a	0.00%	n/a	
San Gold Corp	SGR	312.7	1.82	569.1	0.04%	n/a	n/a	n/a	n/a	
Saputo Inc	SAP	200.7	38.50	7,726.1	0.48%	1.90%	10.00%	0.01%	0.05%	
Savanna Energy Services Corp	SVY	84.8	7.34	622.4	0.04%	0.00%	69.70%	0.00%	0.03%	
SEMAFO Inc	SMF	273.0	6.95	1,897.3	0.12%	0.47%	n/a	0.00%	n/a	
Shaw Communications Inc	SJR/B	416.8	20.48	8,536.9	0.53%	4.60%	8.87%	0.02%	0.05%	
ShawCor Ltd	SCL/A	57.8	28.07	1,623.8	0.10%	1.07%	-27.70%	0.00%	-0.03%	
Sherritt International Corp	S	295.7	6.47	1,913.3	0.12%	2.32%	n/a	0.00%	n/a	
Shoppers Drug Mart Corp	SC	214.8	41.42	8,896.4	0.55%	2.58%	7.00%	0.01%	0.04%	
Silver Standard Resources Inc	SSO	80.6	15.40	1,241.5	0.08%	0.00%	618.00%	0.00%	0.47%	
Silver Wheaton Corp	SLW	353.5	31.63	11,181.1	0.69%	1.32%	32.15%	0.01%	0.22%	
Silvercorp Metals Inc	SVM	170.6	7.30	1,245.5	0.08%	1.24%	355.00%	0.00%	0.27%	
SNC-Lavalin Group Inc	SNC	151.0	53.64	8,097.3	0.50%	1.91%	8.00%	0.01%	0.04%	
SouthGobi Resources Ltd	SGQ	181.8	6.41	1,165.4	0.07%	0.00%	0.86%	0.00%	0.00%	
Stantec Inc	STN	45.5	27.00	1,228.4	0.08%	n/a	11.50%	n/a	0.01%	
Sun Life Financial Inc	SLF	584.5	20.20	11,806.3	0.73%	7.13%	9.00%	0.05%	0.07%	
Suncor Energy Inc	SU	1,574.3	32.73	51,526.7	3.18%	1.43%	3.00%	0.05%	0.10%	
Superior Plus Corp	SPB	110.6	6.04	668.0	0.04%	9.93%	n/a	0.00%	n/a	
SXC Health Solutions Corp	SXC	62.4	65.75	4,100.2	0.25%	0.00%	23.33%	0.00%	0.06%	
Tahoe Resources Inc	THO	143.1	19.00	2,718.8	0.17%	n/a	-59.00%	n/a	-0.10%	
Talisman Energy Inc	TLM	1,031.2	12.37	12,756.5	0.79%	2.14%	12.00%	0.02%	0.09%	
Taseko Mines Ltd	TKO	195.3	3.08	601.6	0.04%	0.00%	11.00%	0.00%	0.00%	
Teck Resources Ltd	TCK/B	579.4	39.35	22,797.9	1.41%	2.06%	2.59%	0.03%	0.04%	
TELUS Corp	T	174.9	56.34	9,854.7	0.61%	4.33%	8.30%	0.03%	0.05%	
Thompson Creek Metals Co Inc	TCM	167.9	7.84	1,316.3	0.08%	0.00%	59.00%	0.00%	0.05%	
Thomson Reuters Corp	TRI	827.5	28.41	23,510.2	1.45%	4.73%	9.58%	0.07%	0.14%	
Tim Hortons Inc	THI	158.1	48.27	7,629.5	0.47%	1.69%	13.50%	0.01%	0.06%	
TMX Group Inc	X	74.6	41.90	3,127.2	0.19%	4.02%	n/a	0.01%	n/a	
Toromont Industries Ltd	TIH	76.6	22.10	1,693.3	0.10%	1.97%	n/a	0.00%	n/a	
Toronto-Dominion Bank/The	TD	902.6	77.00	69,497.1	4.29%	3.67%	8.00%	0.16%	0.34%	
Tourmaline Oil Corp	TOU	158.3	25.15	3,980.6	0.25%	0.00%	n/a	0.00%	n/a	
TransAlta Corp	TA	223.6	20.90	4,673.8	0.29%	5.57%	n/a	0.02%	n/a	
TransCanada Corp	TRP	703.2	42.42	29,830.2	1.84%	4.17%	n/a	0.08%	n/a	
Transcontinental Inc	TCL/A	65.9	12.76	840.6	0.05%	4.52%	3.00%	0.00%	0.00%	
TransForce Inc	TFI	95.6	15.26	1,458.2	0.09%	3.11%	n/a	0.00%	n/a	
TransGlobe Energy Corp	TGL	73.0	9.12	666.0	0.04%	n/a	n/a	n/a	n/a	
Trican Well Service Ltd	TCW	146.8	17.37	2,549.6	0.16%	0.58%	n/a	0.00%	n/a	
Trilogy Energy Corp	TET	90.0	32.90	2,961.6	0.18%	1.28%	n/a	0.00%	n/a	
Trinidad Drilling Ltd	TDG	120.9	6.98	843.6	0.05%	2.87%	n/a	0.00%	n/a	
Uranium One Inc	UUU	957.2	2.38	2,278.1	0.14%	0.00%	n/a	0.00%	n/a	
Valeant Pharmaceuticals International Inc	VRX	298.1	49.69	14,810.7	0.92%	0.00%	17.01%	0.00%	0.16%	
Veresen Inc	VSN	165.2	15.20	2,511.6	0.16%	6.58%	n/a	0.01%	n/a	
Vermilion Energy Inc	VET	96.3	45.55	4,386.1	0.27%	5.01%	n/a	0.01%	n/a	
Viterra Inc	VT	371.7	11.04	4,103.5	0.25%	0.91%	n/a	0.00%	n/a	
West Fraser Timber Co Ltd	WFT	40.1	43.75	1,752.8	0.11%	1.28%	n/a	0.00%	n/a	
Westjet Airlines Ltd	WJA	130.6	11.51	1,503.2	0.09%	1.74%	6.00%	0.00%	0.01%	
George Weston Ltd	WN	129.1	66.35	8,564.2	0.53%	2.17%	10.00%	0.01%	0.05%	
Westport Innovations Inc	WPT	48.4	33.82	1,637.6	0.10%	n/a	30.00%	n/a	0.03%	
Westshore Terminals Investment Corp	WTE-U	74.3	23.40	1,737.5	0.11%	n/a	n/a	n/a	n/a	
Wi-Lan Inc	WIN	123.7	5.36	662.9	0.04%	n/a	n/a	n/a	n/a	
Yamana Gold Inc	YRI	745.7	15.58	11,617.4	0.72%	1.27%	44.95%	0.01%	0.32%	
					100.00%			2.87%	12.80%	15.86%

	Div. Yld.	Earnings Growth
Min.	0.00%	-59.00%
Max.	18.81%	667.00%
Avg.	3.11%	40.03%
Median	2.36%	10.00%
Count	208	119

Risk Free: 4.56%

Risk Premium: 11.30%

% of Market Cap with Div. Yld. ≥ 0.00%: 95.92%
% of Market Cap with Earnings Growth ≥ 0.00%: 72.74%

REVENUE DEFICIENCY CALCULATION
AND REQUIRED RATE OF RETURN
2013 TEST YEAR

Line No.		Col. 1 Principal Excl. CC/CIS	Col. 2 Component	Col. 3 Cost Rate	Col. 4 Return Component
		($Millions)	%	%	%
1.	Long and Medium-Term Debt	2,311.9	56.11	5.90	3.310
2.	Short-Term Debt	(22.1)	(0.54)	3.70	(0.020)
3.		2,289.8	55.57		3.290
4.	Preference Shares	100.0	2.43	4.16	0.101
5.	Common Equity	1,730.5	42.00	9.42	3.956
6.		4,120.3	100.00		7.347
7.	Rate Base	($Millions)			4,120.3
8.	Utility Income	($Millions)			242.9
9.	Indicated Rate of Return				5.895
10.	Deficiency in Rate of Return				(1.452)
11.	Net Deficiency	($Millions)			(59.8)
12.	Gross Deficiency	($Millions)	(other than CC - CIS)		(80.3)
13.	Customer Care/CIS Deficiency	($Millions)	($110.2 vs $99.2)		(11.0)
14.	Total Gross Revenue Deficiency	($Millions)			(91.3)
15.	Revenue at Existing Rates	($Millions)			2,559.1
16.	Revenue Requirement	($Millions)			2,650.4
17.	Gross Revenue Deficiency	($Millions)			(91.3)
	Common Equity				
18.	Allowed Rate of Return				9.420
19.	Earnings on Common Equity				5.962
20.	Deficiency in Common Equity Return				(3.458)

CALCULATION OF COST RATES
FOR CAPITAL STRUCTURE COMPONENTS
2013 TEST YEAR

Line No.		Col. 1 Average of Monthly Averages ($Millions)	Col. 2	Col. 3 Carrying Cost ($Millions)
	Long and Medium-Term Debt			
1.	Debt Summary	2,334.9		137.7
2.	Unamortized Finance Costs	(23.0)		-
3.	(Profit)/Loss on Redemption	-		-
4.		2,311.9		137.7
5.	Calculated Cost Rate		5.90%	
	Short-Term Debt			
6.	Calculated Cost Rate		3.70%	
	Preference Shares			
7.	Preference Share Summary	100.0		4.2
8.	Unamortized Finance Costs	-		-
9.	(Profit)/Loss on Redemption	-		-
10.		100.0		4.2
11.	Calculated Cost Rate		4.16%	
	Common Equity			
12.	Board Approved Formula ROE		9.42%	

SUMMARY STATEMENT OF PRINCIPAL
AND CARRYING COST OF
TERM DEBT
2013 TEST YEAR

Line No.	Coupon Rate	Maturity Date	Col. 1 Average of Monthly Averages Principal ($Millions)	Col. 2 Effective Cost Rate	Col. 3 Carrying Cost ($Millions)
Medium Term Notes					
1.	8.85%	October 2, 2025	20.0	8.970%	1.8
2.	7.60%	October 29, 2026	100.0	8.086%	8.1
3.	6.65%	November 3, 2027	100.0	6.711%	6.7
4.	6.10%	May 19, 2028	100.0	6.161%	6.2
5.	6.05%	July 5, 2023	100.0	6.383%	6.4
6.	6.90%	November 15, 2032	150.0	6.950%	10.4
7.	6.16%	December 16, 2033	150.0	6.180%	9.3
8.	5.16%	September 24, 2014	200.0	5.610%	11.2
9.	5.21%	February 25, 2036	300.0	5.183%	15.5
10.	4.77%	December 17, 2021	175.0	5.310%	9.3
11.	5.16%	December 4, 2017	200.0	5.220%	10.4
12.	5.57%	January 29, 2014	200.0	5.660%	11.3
13.	4.04%	November 23, 2020	200.0	5.209%	10.4
14.	4.95%	November 22, 2050	200.0	4.990%	10.0
15.	4.95%	November 22, 2050	100.0	4.731%	4.7
16.			2,295.0		131.7
Long-Term Debentures					
17.	9.85%	December 2, 2024	85.0	9.910%	8.4
18.			85.0		8.4
19.	Removal of separately treated CIS 64% assumed debt of 2013 $70.5M rate base value		(45.1)	5.350%	(2.4)
20.	Total Term Debt		2,334.9		137.7

UNAMORTIZED DEBT DISCOUNT AND EXPENSE
AVERAGE OF MONTHLY AVERAGES
2013 TEST YEAR

Line No.		Col. 1 Unamortized Debt Discount and Expense
		($Millions)
1.	January 1	24.9
2.	January 31	24.6
3.	February	24.3
4.	March	24.0
5.	April	23.7
6.	May	23.3
7.	June	23.0
8.	July	22.7
9.	August	22.4
10.	September	22.1
11.	October	21.8
12.	November	21.5
13.	December	21.1
14.	Average of Monthly Averages	23.0

Witness: K. Culbert

PREFERENCE SHARES
SUMMARY STATEMENT OF PRINCIPAL
AND CARRYING COST
2013 TEST YEAR

Line No.	Coupon Rate	Maturity Date	Col. 1 Average of Monthly Averages Principal ($Millions)	Col. 2 Effective Cost Rate	Col. 3 Carrying Cost ($Millions)
	Fixed/Floating Cumulative Redeemable Convertible $25 Par Value				
1.	N/A	Group 3 Series D	100.0	4.16%	4.2
2.	Total		100.0		4.2

UNAMORTIZED PREFERENCE SHARE ISSUE EXPENSE
AVERAGE OF MONTHLY AVERAGES
2013 TEST YEAR

Line No.		Col. 1 Unamortized Issue Expense
		($Millions)
1.	January 1	-
2.	January 31	-
3.	February	-
4.	March	-
5.	April	-
6.	May	-
7.	June	-
8.	July	-
9.	August	-
10.	September	-
11.	October	-
12.	November	-
13.	December	-
14.	Average of Monthly Averages	-

Witness: K. Culbert

COST OF CAPITAL
2012 BRIDGE YEAR

Line No.		Col. 1 Principal	Col. 2 Component	Col. 3 Cost Rate	Col. 4 Return Component
		($Millions)	%	%	%
1.	Long and Medium-Term Debt	2,353.2	57.84	5.89	3.407
2.	Short-Term Debt	150.8	3.70	2.50	0.093
3.		2,504.0	61.54		3.500
4.	Preference Shares	100.0	2.46	3.28	0.081
5.	Common Equity	1,464.7	36.00	8.52	3.067
6.		4,068.7	100.00		6.648
7.	Rate Base	($Millions)			4,068.7
8.	Utility Income	($Millions)			251.8
9.	Indicated Rate of Return				6.189
10.	Deficiency in Rate of Return				(0.459)
11.	Net Deficiency	($Millions)			(18.7)
12.	Gross Deficiency	($Millions)			(25.4)
13.	Revenue at Existing Rates	($Millions)			2,522.0
14.	Revenue Requirement	($Millions)			2,547.4
15.	Gross Revenue Deficiency	($Millions)			(25.4)
	Common Equity				
16.	Allowed Rate of Return				8.520
17.	Earnings on Common Equity				7.244
18.	Deficiency in Common Equity Return				(1.276)

CALCULATION OF COST RATES
FOR CAPITAL STRUCTURE COMPONENTS
2012 BRIDGE YEAR

Line No.		Col. 1 Average of Monthly Averages ($Millions)	Col. 2	Col. 3 Carrying Cost ($Millions)
	Long and Medium-Term Debt			
1.	Debt Summary	2,380.0		140.1
2.	Unamortized Finance Costs	(26.8)		-
3.	(Profit)/Loss on Redemption	-		-
4.		2,353.2		140.1
5.	Calculated Cost Rate		5.89%	
	Short-Term Debt			
6.	Calculated Cost Rate		2.50%	
	Preference Shares			
7.	Preference Share Summary	100.0		3.3
8.	Unamortized Finance Costs	-		-
9.	(Profit)/Loss on Redemption	-		-
10.		100.0		3.3
11.	Calculated Cost Rate		3.28%	
	Common Equity			
12.	Board Approved Formula ROE		7.52%	
13.	100 Basis Point Allowance Before Earnings Sharing		1.00%	
14.	Total Allowed ROE for ESM Purposes		8.52%	

Witness: K. Culbert

SUMMARY STATEMENT OF PRINCIPAL
AND CARRYING COST OF
TERM DEBT
2012 BRIDGE YEAR

Line No.	Coupon Rate	Maturity Date	Col. 1 Average of Monthly Averages Principal ($Millions)	Col. 2 Effective Cost Rate	Col. 3 Carrying Cost ($Millions)
	Medium Term Notes				
1.	8.85%	October 2, 2025	20.0	8.970%	1.8
2.	7.60%	October 29, 2026	100.0	8.086%	8.1
3.	6.65%	November 3, 2027	100.0	6.711%	6.7
4.	6.10%	May 19, 2028	100.0	6.161%	6.2
5.	6.05%	July 5, 2023	100.0	6.383%	6.4
6.	6.90%	November 15, 2032	150.0	6.950%	10.4
7.	6.16%	December 16, 2033	150.0	6.180%	9.3
8.	5.16%	September 24, 2014	200.0	5.610%	11.2
9.	5.21%	February 25, 2036	300.0	5.183%	15.5
10.	4.77%	December 17, 2021	175.0	5.310%	9.3
11.	5.16%	December 4, 2017	200.0	5.220%	10.4
12.	5.57%	January 29, 2014	200.0	5.660%	11.3
13.	4.04%	November 23, 2020	200.0	5.209%	10.4
14.	4.95%	November 22, 2050	200.0	4.990%	10.0
15.	4.95%	November 22, 2050	100.0	4.731%	4.7
16.			2,295.0		131.7
	Long-Term Debentures				
17.	9.85%	December 2, 2024	85.0	9.910%	8.4
18.			85.0		8.4
19.	Total Term Debt		2,380.0		140.1

Witness: K. Culbert

UNAMORTIZED DEBT DISCOUNT AND EXPENSE
AVERAGE OF MONTHLY AVERAGES
2012 BRIDGE YEAR

Line No.		Col. 1 Unamortized Debt Discount and Expense
		($Millions)
1.	January 1	28.7
2.	January 31	28.4
3.	February	28.1
4.	March	27.8
5.	April	27.4
6.	May	27.1
7.	June	26.8
8.	July	26.5
9.	August	26.2
10.	September	25.9
11.	October	25.6
12.	November	25.2
13.	December	24.9
14.	Average of Monthly Averages	26.8

PREFERENCE SHARES
SUMMARY STATEMENT OF PRINCIPAL
AND CARRYING COST
2012 BRIDGE YEAR

Line No.	Coupon Rate	Maturity Date	Col. 1 Average of Monthly Averages Principal	Col. 2 Effective Cost Rate	Col. 3 Carrying Cost
			($Millions)		($Millions)
Fixed/Floating Cumulative Redeemable Convertible $25 Par Value					
1.	N/A	Group 3 Series D	100.0	3.28%	3.3
2.	Total		100.0		3.3

UNAMORTIZED PREFERENCE SHARE ISSUE EXPENSE
AVERAGE OF MONTHLY AVERAGES
2012 BRIDGE YEAR

Line No.		Col. 1 Unamortized Issue Expense
		($Millions)
1.	January 1	-
2.	January 31	-
3.	February	-
4.	March	-
5.	April	-
6.	May	-
7.	June	-
8.	July	-
9.	August	-
10.	September	-
11.	October	-
12.	November	-
13.	December	-
14.	Average of Monthly Averages	-

REVENUE SUFFICIENCY CALCULATION
AND REQUIRED RATE OF RETURN
2011 HISTORICAL YEAR

Line No.		Col. 1 Principal	Col. 2 Component	Col. 3 Cost Rate	Col. 4 Return Component
		($Millions)	%	%	%
1.	Long and Medium-Term Debt	2,319.6	58.62	6.02	3.529
2.	Short-Term Debt	112.9	2.85	1.61	0.046
3.		2,432.5	61.47		3.575
4.	Preference Shares	100.0	2.53	2.40	0.061
5.	Common Equity	1,424.5	36.00	8.94	3.218
6.		3,957.0	100.00		6.854
7.	Rate Base (Ex. B-2-1)	($Millions)			3,957.00
8.	Utility Income (Ex. B-5-2)	($Millions)			291.70
9.	Indicated Rate of Return				7.372
10.	Sufficiency in Rate of Return				0.518
11.	Net Sufficiency	($Millions)			20.50
12.	Gross Sufficiency	($Millions)			28.57
13.	Revenue at Existing Rates	($Millions)			2,391.02
14.	Revenue Requirement	($Millions)			2,362.45
15.	Gross Revenue Sufficiency	($Millions)			28.57
	Common Equity				
16.	Allowed Rate of Return				8.940
17.	Earnings on Common Equity				10.38
18.	Sufficiency in Common Equity Return				1.44

Witness: K. Culbert

CALCULATION OF COST RATES
FOR CAPITAL STRUCTURE COMPONENTS
2011 HISTORICAL YEAR

Line No.		Col. 1 Average of Monthly Averages ($Millions)	Col. 2	Col. 3 Carrying Cost ($Millions)
	Long and Medium-Term Debt			
1.	Debt Summary	2,353.0		141.6
2.	Unamortized Finance Costs	(33.4)		-
3.	(Profit)/Loss on Redemption	-		-
4.		2,319.6		141.6
5.	Calculated Cost Rate		6.02%	
	Short-Term Debt			
6.	Calculated Cost Rate		1.61%	
	Preference Shares			
7.	Preference Share Summary	100.0		2.4
8.	Unamortized Finance Costs	-		-
9.	(Profit)/Loss on Redemption	-		-
10.		100.0		2.4
11.	Calculated Cost Rate		2.40%	
	Common Equity			
12.	Board Approved Formula ROE		7.94%	
13.	100 Basis Point Allowance Before Earnings Sharing		1.00%	
14.	Total Allowed ROE for ESM Purposes		8.94%	

Witness: K. Culbert

SUMMARY STATEMENT OF PRINCIPAL
AND CARRYING COST OF
TERM DEBT
2011 HISTORICAL YEAR

Line No.	Coupon Rate	Maturity Date	Col. 1 Average of Monthly Averages Principal ($Millions)	Col. 2 Effective Cost Rate	Col. 3 Carrying Cost ($Millions)
Medium Term Notes					
1.	8.85%	October 2, 2025	20.0	8.970%	1.8
2.	7.60%	October 29, 2026	100.0	8.086%	8.1
3.	6.65%	November 3, 2027	100.0	6.711%	6.7
4.	6.10%	May 19, 2028	100.0	6.161%	6.2
5.	6.05%	July 5, 2023	100.0	6.383%	6.4
6.	6.90%	November 15, 2032	150.0	6.950%	10.4
7.	6.16%	December 16, 2033	150.0	6.180%	9.3
8.	5.16%	September 24, 2014	200.0	5.610%	11.2
9.	5.21%	February 25, 2036	300.0	5.183%	15.5
10.	4.77%	December 17, 2021	175.0	5.310%	9.3
11.	5.16%	December 4, 2017	200.0	5.220%	10.4
12.	5.57%	January 29, 2014	200.0	5.660%	11.3
13.	4.04%	November 23, 2020	200.0	5.209%	10.4
14.	4.95%	November 22, 2050	200.0	4.990%	10.0
15.	4.95%	November 22, 2050	29.2	4.731%	1.4
16.			2,224.2		128.4
Long-Term Debentures					
17.	10.80%	April 15, 2011	43.8	10.920%	4.8
18.	9.85%	December 2, 2024	85.0	9.910%	8.4
19.			128.8		13.2
20.	Total Term Debt		2,353.0		141.6

Witness: K. Culbert

UNAMORTIZED DEBT DISCOUNT AND EXPENSE
AVERAGE OF MONTHLY AVERAGES
2011 HISTORICAL YEAR

Line No.		Col. 1 Unamortized Debt Discount and Expense
		($Millions)
1.	January 1	36.5
2.	January 31	36.2
3.	February	35.8
4.	March	35.5
5.	April	35.2
6.	May	34.9
7.	June	34.5
8.	July	34.2
9.	August	33.9
10.	September	29.7
11.	October	29.3
12.	November	29.1
13.	December	27.8
14.	Average of Monthly Averages	33.4

Witness: K. Culbert

PREFERENCE SHARES
SUMMARY STATEMENT OF PRINCIPAL
AND CARRYING COST
2011 HISTORICAL YEAR

Line No.	Coupon Rate	Maturity Date	Col. 1 Average of Monthly Averages Principal ($Millions)	Col. 2 Effective Cost Rate	Col. 3 Carrying Cost ($Millions)
Fixed/Floating Cumulative Redeemable Convertible $25 Par Value					
1.	N/A	Group 3 Series D	100.0	2.40%	2.4
2.	Total		100.0		2.4

Witness: K. Culbert

UNAMORTIZED PREFERENCE SHARE ISSUE EXPENSE
AVERAGE OF MONTHLY AVERAGES
2011 HISTORICAL YEAR

Line No.		Col. 1 Unamortized Issue Expense
		($Millions)
1.	January 1	-
2.	January 31	-
3.	February	-
4.	March	-
5.	April	-
6.	May	-
7.	June	-
8.	July	-
9.	August	-
10.	September	-
11.	October	-
12.	November	-
13.	December	-
14.	Average of Monthly Averages	-

Witness: K. Culbert