Témoignage de MM. James M. Coyne et John P. Trogonoski de Concentric Energy Advisors sur le taux de rendement et l'analyse de risque

ROE and Risk Analysis

Prepared Direct Testimony of

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and Hydro-Québec TransÉnergie

Presented to the

Régie de l'énergie

April 19, 2013

TABLE OF CONTENTS

I. Introduction 1
A. Qualifications 1
B. Scope of Testimony 4
C. Executive Summary 5
II. Profile of HQD and HQT 15
III. Determination of a Fair Return 17
IV. Selection of Proxy Companies 21
V. Precedent for Considering U.S. Data 28
VI. Business and Economic Conditions in Canada and the U.S. 34
VII. Risk Analysis 41
VIII. Analysis of Earned and Authorized Returns 54
IX. Cost of Equity Methodology and Results 64
X. Overall Conclusions and Recommendations 109

Appendix A: Business Risk Analysis A-1
Appendix B: Financial Risk Analysis B-1

TABLE OF EXHIBITS

Exhibit JMC-1	% of Regulated Operating Income and Revenue
Exhibit JMC-2	Canadian & U.S. Macroeconomic Factors
Exhibit JMC-3, Schedule 1	Canadian and U.S. Proxy Groups
Exhibit JMC-3, Schedule 2	Proxy Group Operating Statistics
Exhibit JMC-4, Schedule 1	Regulated Generation and Stranded Cost Recovery
Exhibit JMC-4, Schedule 2	Fuel Cost Risk
Exhibit JMC-4, Schedule 3	Volume/Demand Risk
Exhibit JMC-4, Schedule 4	Capital Cost Recovery Risk
Exhibit JMC-4, Schedule 5	Rate Regulation and Earnings Sharing
Exhibit JMC-4, Schedule 6	Regulatory Lag

Exhibit JMC-4, Schedule 7	Other Cost Recovery
Exhibit JMC-5	Proxy Group Credit Metrics
Exhibit JMC-6	Capital Asset Pricing Model – Reconciled Approach
Exhibit JMC-7	Forward-Looking Market Risk Premium – U.S.
Exhibit JMC-8	Forward-Looking Market Risk Premium – Canada
Exhibit JMC-9, Schedule 1	30-Day Constant Growth DCF – U.S. Proxy Group
Exhibit JMC-9, Schedule 2	90-Day Constant Growth DCF – U.S. Proxy Group
Exhibit JMC-9, Schedule 3	180-Day Constant Growth DCF – U.S. Proxy Group
Exhibit JMC-9, Schedule 4	30-Day Constant Growth DCF – Canadian Proxy Group
Exhibit JMC-9, Schedule 5	90-Day Constant Growth DCF – Canadian Proxy Group
Exhibit JMC-9, Schedule 6	180-Day Constant Growth DCF – Canadian Proxy Group
Exhibit JMC-10, Schedule 1	30-Day Sustainable Growth DCF – U.S. Proxy Group
Exhibit JMC-10, Schedule 2	90-Day Sustainable Growth DCF – U.S. Proxy Group
Exhibit JMC-10, Schedule 3	180-Day Sustainable Growth DCF – U.S. Proxy Group
Exhibit JMC-10, Schedule 4	Sustainable Growth Rate Calculation – U.S. Proxy Group
Exhibit JMC-11, Schedule 1	30-Day Multi-Stage DCF – U.S. Proxy Group
Exhibit JMC-11, Schedule 2	90-Day Multi-Stage DCF – U.S. Proxy Group
Exhibit JMC-11, Schedule 3	180-Day Multi-Stage DCF – U.S. Proxy Group
Exhibit JMC-11, Schedule 4	30-Day Multi-Stage DCF – Canadian Proxy Group
Exhibit JMC-11, Schedule 5	90-Day Multi-Stage DCF – Canadian Proxy Group
Exhibit JMC-11, Schedule 6	180-Day Multi-Stage DCF – Canadian Proxy Group

I. INTRODUCTION

Concentric Energy Advisors, Inc. ("Concentric") provides this testimony on behalf of Hydro-Québec Distribution ("HQD") and Hydro-Québec TransÉnergie ("HQT") under two witnesses who have collaborated in its preparation. Mr. Coyne's testimony primarily relates to the determination of the appropriate ROE; Mr. Trogonoski's testimony primarily relates to the associated risk analysis. The words "Concentric", "we", and "our" are used interchangeably in the text.

A. QUALIFICATIONS

Q. Please state your name, affiliation, and business address.

A. My name is James M. Coyne, and I am employed by Concentric as a Senior Vice President. My business address is 293 Boston Post Road West, Suite 500, Marlborough, MA 01752.

Q. Please describe your experience and qualifications.

A. I am among Concentric's professionals who provide expert testimony before federal, state and Canadian provincial agencies on matters pertaining to economics, finance, and public policy in the energy industry. Concentric provides financial, economic and regulatory advisory services to clients across North America, including utility companies, regulatory and public agencies, and utility sector investors. I regularly advise utilities, generating companies, public bodies and private equity investors on business issues pertaining to the utility industry. This work includes calculating the cost of capital for the purpose of ratemaking, and providing expert testimony and studies on matters pertaining to incentive regulation, rate policy, valuation, capital

costs, demand side management, low-income programs, fuels and power markets. In addition, I work for utilities, independent developers and public bodies on issues pertaining to the management and development of power generation, distribution and transmission facilities.

I have authored numerous articles on the energy industry and filed testimony before the Federal Energy Regulatory Commission and jurisdictions in Alberta, British Columbia, California, Connecticut, Maine, Massachusetts, New Jersey, Nova Scotia, Ontario, Québec, South Dakota, Texas, Vermont and Wisconsin. I also have co-authored two studies that compare and analyze ROEs for gas and electric utilities in Canada, and I have spoken at industry and regulatory sponsored events on the topic.

Prior to joining Concentric, I was Senior Managing Director in the Corporate Economics Practice for FTI/Lexecon, and Managing Director for Arthur Andersen's Energy & Utilities Corporate Finance Practice. In those positions, I provided expert testimony and advisory services on mergers, acquisitions, divestitures and capital markets for clients in the energy industry. In addition to the foregoing positions, I was also Managing Director for Navigant Consulting, with responsibility for the firm's Financial Services practice, Director in DRI's Electric and Natural Gas practices, and Senior Economist for the Massachusetts Energy Facilities Siting Council, where I analyzed the supply plans and facilities proposals from the state's electric and gas utilities. I also served as State Energy Economist for the Maine Office of Energy Resources. I hold a B.S. in Business Administration

from Georgetown University and a M.S. in Resource Economics from the University of New Hampshire. My qualifications are more fully detailed in the curriculum vitae.

Q. Please state your name, affiliation, and business address.

A. My name is John P. Trogonoski, and I am also employed by Concentric as a Project Manager. My business address is 293 Boston Post Road West, Suite 500, Marlborough, MA 01752.

Q. Please describe your experience and qualifications.

A. I have approximately 20 years experience in utility regulation, financial analysis, business valuation, property taxation, and program administration. Since joining Concentric in February 2008, I have advised numerous utility and energy clients on a wide range of financial and economic issues with primary concentrations in the determination of the cost of capital for rate-making purposes and an assessment of business, regulatory and financial risk. As a member of the Staff of the Colorado Public Utilities Commission from 1999-2008, I supervised the financial analysts in the energy and telecommunications sections and provided expert testimony on rate of return, revenue requirement, cost allocation, rate design, incentive regulation, and public policy matters. I have a Master's degree in Business Administration and an undergraduate degree in Marketing from the University of Colorado at Denver. My qualifications are more fully detailed in the curriculum vitae.

Q. On whose behalf are you testifying?

A. We are submitting this testimony on behalf of HQD and HQT, divisions of Hydro-Québec, Inc. ("Hydro-Québec").

B. SCOPE OF TESTIMONY

Q. What is the scope of your testimony in this proceeding?

A. The testimony provides an estimate of the cost of common equity for HQD and HQT for the purpose of establishing the overall rate of return for the 2014 rate year. In order to estimate the cost of equity, Concentric has relied upon analytical tools and data sources normally used for such purposes before regulators in Canada and the U.S., including a risk analysis that compares the business and financial risks of HQD and HQT to proxy groups of Canadian utilities and U.S. electric utilities with similar business and operating profiles as HQD and HQT. Concentric has also reviewed the past decisions and precedents established by the Régie de l'énergie (the "Régie") in consideration of such matters.

The analysis provided in this testimony supports Concentric's overall recommendation on the cost of equity for ratemaking purposes. That analysis includes the following:

(1) assessment of HQD's and HQT's operating and financial profile;

(2) examination of the legal and regulatory requirements for determination of a fair rate of return;

(3) selection of Canadian and U.S. proxy groups with companies comparable to HQD and HQT with respect to business and operating risks;

(4) examination of the regulatory, institutional, economic and financial conditions in Canada and the U.S. to address the Régie's prior concerns regarding reliance on a U.S. proxy;[1]

(5) examination of the business and financial risks of HQD and HQT relative to the Canadian and U.S. proxy group companies to determine whether it is reasonable to rely on those respective proxy groups to estimate the required ROE for HQD and HQT;

(6) estimation of the cost of equity using well-established financial methodologies – the Capital Asset Pricing Model ("CAPM") and the Discounted Cash Flow ("DCF") method;

(7) development of a range of results for the Canadian and U.S. proxy groups; and

(8) estimation of HQD's and HQT's cost of common equity based on application and interpretation of that range and the business and financial risks of HQD and HQT relative to the respective proxy groups.

C. EXECUTIVE SUMMARY

Q. Please summarize your analyses and conclusions.

A. Concentric has relied upon the following regulatory standards and analyses to reach the following conclusions and recommendations:

[1] Specifically, the Régie has sought evidence that would make it possible to conclude that the regulatory, institutional, economic and financial contexts of the two countries and their impacts on the resulting opportunities for investors are comparable. Régie de l'énergie, Décision D-2011-182, File R-3752-2011, Phase 2, November 25, 2011, at paragraphs [294-295].

1) Established legal and regulatory principles require that HQD and HQT be given an opportunity to earn a fair return on their invested capital.[2]

2) In order for the rate of return to be judged as fair, the Companies must be provided with a reasonable opportunity to earn a return that meets three requirements:

- Capital attraction requirement
- Financial integrity requirement
- Comparable earnings requirement

These three standards must be met individually and in total in order to satisfy a fair return.[3]

3) Concentric has estimated the cost of equity for HQD and HQT utilizing both the CAPM and DCF models, with alternative inputs and model specifications designed to test the reasonable range of results. In doing so, we look for evidence of consistency between models and results, and evidence of outlying results that should be questioned.

Due to our concerns regarding the inputs and results from the traditional CAPM, and in consideration of more recent decisions by the Régie that attempt to

[2] Concentric understands that the Régie adheres to the "just and reasonable" standard for the setting of overall utility rates, consistent with regulatory practice elsewhere in Canada and the U.S. We refer here, specifically to the "Fair Return Standard", emanating from the decision in *Northwestern Utilities v. City of Edmonton* (1929) [1929] S.C.R. 186 ("Northwestern"), and widely acknowledged as the legal and regulatory standard in Canada for purposes of determining the appropriate cost of capital for regulated utilities.

[3] The National Energy Board and provincial regulators have ascribed to these same requirements.

account for those problems and differences with other models, Concentric has developed a "Reconciled CAPM" that results in a 9.22 percent ROE.

The DCF analysis applied to a proxy group of Canadian utility companies produces a range of ROEs from 9.4 percent to 12.1 percent, with a mean result of 10.7 percent, including flotation costs of 30 basis points. The results of the DCF model using a U.S. electric utility proxy group range from 9.2 percent to 9.6 percent, with a mean result of 9.4 percent, including flotation costs of 30 basis points.

The results of the methods Concentric has relied upon are summarized in Table 1.

4) Proxy Groups - It is appropriate to consider Canadian and carefully chosen U.S. proxy groups as benchmarks for electric distribution and transmission utilities, such as HQD and HQT. More specifically, given the small number of publicly-traded Canadian utilities, it is appropriate to consider the analytical results for a group of low-risk U.S. electric utilities. Concentric's evidence indicates that a carefully-selected group of U.S. electric utility companies is more like HQD and HQT than the Canadian proxy companies due to differences in their business profiles. It is important to note that Concentric does not conclude that all U.S. electric utilities are comparable to HQD and HQT. Our selection of the U.S. electric utility proxy group is based on a careful screening of the universe of U.S. companies to select those most comparable to HQD and HQT. That screening

process considers factors such as credit ratings, payment of dividends, market capitalization, percentage of revenues derived from regulated operations and from regulated electric utility operations, and whether the company is involved in a merger/acquisition that materially affected the stock price during the evaluation period. Importantly, Concentric's credit rating screen selects low-risk U.S. electric utilities with long-term issuer ratings from Standard and Poor's ("S&P") of A- or higher. Those credit ratings imply that the rating agencies view these U.S. companies as having relatively low business and financial risks. Concentric ultimately selects six Canadian utilities and six U.S. electric utilities for further risk analysis at the operating company level.

5) Risk Factors – Concentric has developed a detailed assessment of the risks of the Canadian and carefully selected U.S. electric utility proxy companies with respect to economic conditions, the integration of financial markets, government and regulatory policies, and business and financial risks. The following summarizes the conclusions of our risk analysis.

- Investment Risk – More than ever, Canada and the United States are similar from an investment perspective. Specifically, it is reasonable to conclude that investors would not find material differences in economic, financial and regulatory conditions between Canada and the U.S. that would cause them to assign a different risk profile to Canadian and U.S. companies that are otherwise comparable.

- Business Risk – Both Canadian and U.S. regulators have provided the operating companies in the proxy groups with cost recovery and revenue stabilization mechanisms that mitigate many of the important business risks, such fuel supply, fluctuations in volume/demand, capital investment costs, and operating costs that tend to fluctuate significantly from year to year. Based on the business risks identified in this testimony, the only important difference is that a percentage of electric utilities in the U.S. proxy group (and in Canada) own some regulated generation, which suggests that those companies have somewhat more business risk than HQD and HQT.

- Financial Risk – HQD and HQT have somewhat more financial leverage in their capital structures than the Canadian utilities and substantially more financial leverage and weaker credit metrics than the U.S. electric utility proxy group companies. Credit rating agencies may be satisfied with the degree of regulatory protection and cash flow protection for debt investors, but these metrics expose equity investors to greater risk than their U.S. counterparts. As such, HQD and HQT have greater financial risk than the U.S. electric utility proxy group, which more than offsets the ownership of regulated generation described above.

6) Recommended ROE – The results produced from the various methods and inputs cover a broad spectrum. This is not surprising considering the range of inputs and techniques employed and recent unprecedented market conditions. All methods are not, however, producing a reasonable estimate for HQD's and HQT's cost of equity.

Specifically, Concentric has concerns with the ability of the CAPM to produce reasonable results in light of the factors affecting the inputs at this time. Bond yields in Canada and the U.S. have been driven to all time lows, and most would agree below sustainable levels in the longer term. As a result of the financial crisis and recession, utility betas have also been impacted, and market equity risk premium estimates cover a broad spectrum. There is a substantial gap between historic equity returns and the higher returns implied in current stock market data. These are problems with the CAPM, and in general, in the current market environment.

As shown in Table 1 and described in the CAPM section, Concentric has attempted to reconcile for these differences using logic employed by the Régie in the past. We began with a Canadian risk free rate. The market risk premium is a combination of both Canadian and U.S. market inputs, including both historical and forward-looking estimates. The beta is derived from the U.S. electric utility proxy group. Concentric finds that a carefully-selected U.S. electric utility proxy group is more representative of HQD and HQT than the Canadian companies; therefore, the beta from the U.S. companies is more representative. Flotation

costs are included consistent with the Régie's past decisions, and finally, Concentric makes a 75 basis point adjustment for differences between the CAPM results and the DCF model. This reconciliation is consistent with the Régie's approach in factoring in an adjustment for the "Results of Other Models" in the 2012 Gaz Métro rate case. The reconciled CAPM results of 9.22 percent offer a view into the required adjustment to inputs to achieve a reasonable result in the current environment.

Under current market conditions, Concentric believes greater weight should be given to the DCF model. The average of our DCF method for the U.S. proxy group produces a relatively tight range of 9.20 percent to 9.58 percent, with an average of 9.41 percent. The Canadian DCF produces a range of 9.38 percent to 12.05 percent, with an average of 10.71 percent. Placing principal reliance on the DCF model with U.S. electric utility proxy companies and selecting the lower end of the range for the lack of generation risk (even though we have not made any offsetting adjustment for higher financial risk) the estimated cost of equity for HQD and HQT is 9.2 percent. This recommended ROE is supported by the range of analytical results produced by the DCF analyses for both the Canadian and U.S. electric utility proxy groups, and can be reconciled with the CAPM with appropriate adjustments.

Application of the traditional CAPM formula, not including flotation costs, using the Canadian proxy group would produce an ROE of 7.81 percent.[4] This return would not be within the reasonable range of ROE estimates, and in Concentric's opinion would not meet the measures of a fair return. In addition, it would not be consistent with the stand-alone principle, which requires the allowed ROE for HQD and HQT to be set at a level as if the companies were independently going to the equity markets to raise capital.

[4] See Exhibit JMC-6.

Table 1: Summary of Results

Capital Asset Pricing Model				
Inputs	**CAPM Reconciled**			
Risk Free Rate	4.23%			
Beta	0.59			
Market Risk Premium	6.67%			
Sub-Total	8.17%			
Flotation Cost	0.30%			
Sub-Total	8.47%			
Adjustment for Other Models	0.75%			
Total	9.22%			
Discounted Cash Flow				
Market Averaging Period	**Constant Growth**	**Sustainable Growth**	**Multi-Stage**	**Average**
Canadian Utility Proxy Group				
Average ROE	11.75%	N/A	9.08%	10.41%
Flotation Cost	0.30%	N/A	0.30%	0.30%
Average ROE with Flotation Cost	**12.05%**		**9.38%**	**10.71%**
U.S. Electric Utility Proxy Group				
Average ROE	9.28%	8.90%	9.14%	9.11%
Flotation Cost	0.30%	0.30%	0.30%	0.30%
Average ROE with Flotation Cost	**9.58%**	**9.20%**	**9.44%**	**9.41%**

In response to the Régie's previous concerns with relying on market-based returns for U.S. utilities to estimate the allowed ROE, Concentric also presents an analysis of the allowed and earned ROEs for the U.S. proxy group at the operating company

level from 2000-2011. That analysis demonstrates that it is reasonable and appropriate to conclude that operating utilities in the U.S. electric utility proxy group have earned their authorized ROE in the vast majority of instances over that twelve year period. From this perspective, the evidence suggests that the regulatory regimes in these U.S. jurisdictions have generally provided utilities with timely cost recovery, which in turn, gives utilities and their investors a reasonable opportunity to earn their allowed ROE.

Q. How is the remainder of your testimony organized?

A. The remainder of the testimony is organized as follows. Section II provides an overview of HQD's and HQT's operations. Section III discusses the legal requirements and regulatory precedents for the determination of a fair rate of return. Section IV describes the criteria used to select proxy groups in order to estimate the cost of equity for HQD and HQT. Section V discusses the precedent in Canada for considering the use of U.S. data and proxy groups to establish the allowed ROE for a Canadian utility. Section VI presents a comparison of the business and economic conditions in Canada and the U.S. Section VII discusses the business and financial risks of the companies in the Canadian and U.S. proxy groups (at the operating company level) relative to HQD and HQT. Section VIII provides an analysis of earned and authorized returns for the Canadian and U.S. proxy groups as compared to HQD and HQT. Section IX discusses the various methods used to estimate the cost of equity and their reliability under current market conditions, and summarizes the results of the CAPM and DCF analyses. Section X summarizes our results and recommendations.

II. PROFILE OF HQD AND HQT

Q. Please describe the operations of HQD and HQT.

A. HQD is the electricity distribution division of Hydro Québec, serving roughly four million customers. The division operates a distribution system comprising 113,525 km of lines and five distribution control centers; the division also has a small amount of generation capacity to supply customers on off-grid systems.[5] In 2011, HQD reported revenue of $10.8 billion and $8.9 billion in property, plant, and equipment.[6] In 2011, HQD made $950 million in investments in property, plant, equipment, and intangible assets (including its energy efficiency plan).[7] In 2011, HQD derived approximately 31 percent of its revenue from industrial customers.[8]

HQT is the electricity transmission division of Hydro Québec. HQT's customers consist primarily of HQD for native load transmission service and North American wholesalers that use point-to-point transmission services. HQT operates the largest power transmission system in North America with 33,630 kilometers of lines, and 514 substations.[9] In addition, the system includes 15 interconnections allowing energy interchanges with the Maritime provinces, Ontario and the U.S. Northeast. As of 2011, the fixed assets of HQT were $17.6 billion, including $0.9 billion under construction. In 2011, HQT had revenues of $3.1 billion, net income of $435

5 Hydro-Québec Annual Report, 2011, at p. 20.
6 Ibid.
7 Ibid.
8 Ibid.
9 Hydro-Québec Annual Report, 2011, at p. 114.

million and invested $1.3 billion in its transmission system.[10] Over the past five years, HQT has invested a total of $5.7 billion.

Q. How do credit rating agencies view Hydro-Québec?

A. Neither HQD nor HQT issue their own debt. Hydro-Québec, the parent company of HQD and HQT, has investment grade ratings from each of the credit rating agencies; the Company's current corporate credit rating is A+ (outlook: stable) from S&P, Aa2 (outlook: stable) from Moody's Investors Service ("Moody's") and A (high) (outlook: stable) from DBRS.[11] Hydro-Québec's debt is guaranteed by the Province of Québec, meaning that HQ's credit rating is linked to the rating of the provincial government. The cost of the government debt guarantee has previously been estimated by Merrill Lynch at approximately 50 basis points.[12]

Moody's notes: "HQ's T&D assets operate in a supportive, stable regulatory environment with limited regulatory lag. However, HQ's allowed ROE and deemed equity ratio are low in comparison to other Canadian utilities and international peers."[13] On the issue of financial leverage, DBRS comments: "Although the Province unconditionally guarantees almost all outstanding debt, high debt levels nevertheless result in a higher interest expense, thus constraining profitability and resulting in weaker interest coverage ratios."[14] With respect to capital spending, DBRS notes: "As outlined in its *Strategic Plan 2009-2013*, Hydro-Québec is

10 Hydro-Québec Annual Report, 2011, at p. 14.
11 Source: SNL Financial.
12 "Opinion Regarding Hydro-Québec's Theoretical Borrowing Costs in the Absence of a Government Guarantee," Merrill Lynch & Co. Ratings Advisory Group, prepared by Brian Keegan, August 2000, at p. 3
13 Moody's Investors Service, Credit Opinion: Hydro-Québec, August 6, 2012, at p. 2.
14 DBRS Rating Report, Hydro-Québec, April 12, 2012, at p. 2.

undergoing a substantial capital expenditure (capex) program which calls for an increase in debt levels, leading to weaker credit metrics."[15]

III. DETERMINATION OF A FAIR RETURN

Q. What are the key legal and regulatory precedents in Canada and the U.S.?

A. The principles surrounding the concept of a "fair return" for a regulated company were established by the Supreme Court of Canada in the *Northwestern Utilities v. City of Edmonton* (1929) ("Northwestern") case, where the Supreme Court found:

> 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.[16]

As stated by Major and Priddle in 2008, this definition remains in full legal effect today.[17]

United States law regarding fair return for utility cost of capital has evolved similarly. The U.S. Supreme Court set out guidance in the bellwether cases of *Bluefield Water Works* and *Hope Natural Gas Co.* as to the legal criteria for setting a fair return. In *Bluefield Water Works & Improvement Company v. Public Service Commission of West Virginia* (262 U.S. 679, 693 (1923)), the Court found:

> The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its

15 Ibid, at p. 1.

16 *Northwestern* at p. 186.

17 *The Fair Return Standard for Return on Investment by Canadian Gas Utilities: Meaning, Application, Results, Implications*, by The Honourable John C. Major, Former Justice, Supreme Court of Canada, and Roland Priddle, President, Roland Priddle Energy Consulting Inc., Former Chair of the National Energy Board, March 2008, at p. 4.

> credit and enable it to raise the money necessary for the proper discharge of its public duties. A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally.

The U.S. Court further elaborated on this requirement in its decision in *Federal Power Commission v. Hope Natural Gas Company* (320 U.S. 591, 603 (1944)). There the Court described the relevant criteria as follows:

> From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock [....] By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.

With the passage of time, the Fair Return Standard has been interpreted many times in both Canada and the U.S. The National Energy Board ("NEB") summarized its interpretation of the "fair return standard" in its RH-2-2004 Phase II Decision and more recently reiterated that interpretation in its *Trans Québec & Maritimes Pipelines Inc.* RH-1-2008 Decision, at pp. 6-7.

> The Board is of the view that the fair return standard can be articulated by having reference to 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 standard);
>
> - enable the financial integrity of the regulated enterprise to be maintained (the financial integrity standard); and

- permit incremental capital to be attracted to the enterprise on reasonable terms and conditions (the capital attraction standard).

> In the Board's view, the determination of a fair return in accordance with these enunciated standards will, when combined with other aspects for the Mainline's revenue requirement, result in tolls that are just and reasonable.[18]

Similarly, the Ontario Energy Board ("OEB") has discussed the necessity of adhering to the fair return standard as follows:

> The Board affirms its view that the Fair Return Standard frames the discretion of a regulator, by setting out the three requirements that must be satisfied by the cost of capital determinations of the tribunal. Meeting the standard is not optional; it is a legal requirement. Notwithstanding this obligation, the Board notes that the Fair Return Standard is sufficiently broad that the regulator that applies it must still use informed judgment and apply its discretion in the determination of a rate regulated entity's cost of capital.[19]
>
> ***
>
> … all three standards or requirements (comparable investment, financial integrity, and capital attraction) must be met and none ranks in priority to the others. The Board agrees with the comments made to the effect that the cost of capital must satisfy all three requirements which can be measured through specific tests and that focusing on meeting the financial integrity and capital attraction tests without giving adequate comparability to the comparable investment test is not sufficient to meet the [Fair Return Standard].[20]

Q. Has the Régie adopted the same legal standards for application of the fair return standard as those described above?

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18 National Energy Board RH-2-2004 Reasons for Decision, TransCanada PipeLines Ltd, Phase II, April 2005, at p. 17.

19 Ontario Energy Board, EB-2009-084, Report of the Board on the Cost of Capital for Ontario's Regulated Utilities, December 11, 2009, at i.

20 Ibid., at p. 19.

A. Yes. The Régie embraces the same legal standards for the application of the fair return standard as those put forth by the NEB, the OEB and those established through Canadian and U.S. law. The Régie recognizes the three primary criteria of the fair return standard (i.e., the comparability standard, the financial integrity standard, and the capital attraction standard) and has indicated that these should be used as a guide in exercising its role with respect to fixing a reasonable rate of return.[21] In addition, the Régie has indicated that its duty is to determine a reasonable rate of return, and the method which it uses is at its discretion.[22] The Régie has also recognized that, like operating costs, the return allowed to the shareholder is one of the elements of the regulated company's cost of service. The allowed return must, under the official Act[23] governing utility regulation, ensure that there are sufficient revenues to cover all of the costs.[24]

Q. Are there other key principles that Canadian regulators have adopted with regard to establishing a fair return on equity?

A. Yes. Canadian regulatory authorities have determined that another key principle in establishing a fair return on equity for a regulated utility is the "stand-alone" principle. The Régie has indicated in prior decisions that the ROE for HQD and HQT should be set on a "stand-alone" basis, as if the entities were independently seeking to attract capital in the financial markets.[25]

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21 Régie de l'énergie, Décision D-2009-156 (R-3690-2009), Gaz Métro, (December 7, 2009), at para [189].
22 Ibid., at para [195].
23 R.S.Q., chapter R-6.01, An Act respecting the Régie de l'énergie ("the Act") empowers the Régie to set rates for regulated energy utilities in Québec.
24 Régie de l'énergie, Décision D-2009-156 (R-3690-2009), Gaz Métro, (December 7, 2009), at para [192].
25 Régie de l'énergie, Décision D-2002-95 (R-3401-98), Hydro Québec-TransÉnergie, (April 30, 2002) at p. 163, and Décision D-2003-93 (R-3492-2002), Hydro-Québec Distribution (May 21, 2003), at p. 70.

Q. Please summarize the history of the authorized return on equity for HQD and HQT.

A. The Régie first established authorized ROEs for HQD and HQT for rate years 2004 and 2001, respectively.[26] For both HQD and HQT, the Régie has consistently established the authorized ROE according to the following formula:

Authorized ROE = Risk Free Rate + Company-specific Risk Premium

Each year, the Régie has adjusted the authorized ROEs according to the formula based on the latest forecasted risk free rate from *Consensus Forecasts*. Table 2 shows the authorized ROEs for HQD and HQT over time.

Table 2: Authorized ROEs for HQD and HQT

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
HQD	--	--	--	9.06	8.71	7.96	7.57	7.74	6.98	7.85	7.32	6.37
HQT	9.66	9.66	9.66	9.66	8.59	8.59	7.50	7.85	7.63	7.59	7.14	6.39

IV. SELECTION OF PROXY COMPANIES

Q. Why is it necessary to select a proxy group to estimate the fair return on equity for HQD and HQT?

A. Since the ROE is a market-based concept, and given the fact that HQD and HQT are divisions of Hydro-Québec, a government-owned crown corporation that is not publicly-traded, it is necessary to establish a group of companies that are both publicly-traded and comparable to HQD and HQT in certain fundamental business and financial respects to serve as a "proxy" for purposes of the ROE estimation process.

[26] Régie de l'énergie, Decisions D-2002-95 and D-2003-93.

Even if HQD's and HQT's regulated electric distribution and transmission operations made up the entirety of a publicly-traded entity, it is possible that transitory events could bias those entities' market value in one way or another over a given period of time. A significant benefit of using a proxy group, therefore, is the ability to mitigate the effects of anomalous events that may be associated with any one company. As demonstrated later in this testimony, the proxy companies used in the ROE analyses possess a set of business and operating characteristics that make them similar to HQD's and HQT's regulated distribution and transmission operations, and thus provide a reasonable basis for the derivation and assessment of ROE estimates.

Q. Does the careful selection of a proxy group suggest that analytical results will be tightly clustered around average results?

A. Not necessarily. Notwithstanding the care taken to ensure risk comparability, market expectations with respect to future risks and growth opportunities will vary from company to company. Therefore, even within a group of similarly situated companies, it is common for analytical results to reflect a seemingly wide range. At issue, then, is how to select an ROE estimate in the context of that range. That determination must be based on an assessment of the company-specific risks relative to the proxy group and the informed judgment and experience of the analyst.

Q. Why has Concentric developed three proxy groups?

A. Since the purpose of this proceeding is to establish the allowed ROE for the regulated electric distribution and transmission operations of HQD and HQT, respectively, and because there are very few publicly-traded, pure-play electric utilities in Canada, Concentric has selected a sample of Canadian utilities to provide a benchmark for the resulting cost of equity of Canadian utilities in general. Then, in order to gain additional perspective on the cost of equity and risks specific to electric distribution and transmission utilities, we have developed a sample of U.S. companies that are primarily engaged in the provision of electric utility service. Finally, to provide additional perspective, Concentric has compared the authorized returns of HQD and HQT against a group of Canadian government-owned electric utilities.

Q. Please describe how Concentric selected the Canadian proxy group.

A. Concentric developed a group of publicly-traded regulated Canadian electric and natural gas utility companies. Because there are relatively few companies in that sector in the Canadian public market, no specific screening criteria were used to derive the proxy group. The following six companies comprise the Canadian Utility Proxy Group:

- Canadian Utilities Limited
- Emera, Inc.
- Enbridge, Inc.
- Fortis, Inc.

- TransCanada Corporation
- Valener, Inc.

Q. How did you select the group of U.S. electric utility proxy companies that are risk appropriate for HQD and HQT?

A. To establish the group of U.S. electric utility proxy companies that are risk appropriate for HQD and HQT, Concentric relied on screening criteria to narrow the list of potential proxy companies. As HQD's and HQT's business operations are 100 percent electric, an evaluation of the potential proxy companies' business units was conducted to identify a group of comparable risk companies to HQD and HQT.

As a starting point, Concentric utilized the 48 companies that Value Line classifies as Electric Utility Companies to ensure that the company is considered to be primarily engaged in electric utility operations. From that group, Concentric screened for companies that:

- Have credit ratings of at least A- from S&P;
- Pay dividends;
- Have earnings growth rates from at least two utility industry analysts;
- Derived at least 60 percent of their revenue from regulated operations in the period from 2009-2011;
- Derived at least 60 percent of their regulated revenue from electric utility operations in the period from 2009-2011;
- Are not considered a small capitalization company; and

- Are not involved in a merger or other transformative transaction that had a material effect on the company's stock price during the evaluation period.

Q. What companies met those screening criteria?

A. The following six companies met those criteria:

- Consolidated Edison Inc.
- NextEra Energy, Inc.
- Northeast Utilities
- Southern Company
- Wisconsin Energy Corp.
- Xcel Energy Inc.

Q. Did you also consider a third proxy group of government-owned electric utilities in Canada?

A. Yes. Since HQD and HQT are divisions of a government-owned crown corporation, Concentric also selected a group of municipal and provincial government-owned Canadian electric distribution and transmission utilities for purposes of comparing the authorized ROE of HQD and HQT to those entities. That group consists of the following six companies:

- British Columbia Hydro
- ENMAX Corp.
- EPCOR Utilities, Inc.
- Hydro One Networks

- Manitoba Hydro
- Saskatchewan Power

Q. What is the importance of your credit rating screen?

A. Credit ratings are based on the utility's business risk profile (which includes an assessment of the regulatory environment in which the utility operates) and its financial risk profile. Companies with similar credit ratings have been determined by the rating agency to have similar levels of business and financial risk. This concept has been adopted by regulatory agencies, including the Federal Energy Regulatory Commission ("FERC"), which has found that "it is reasonable to use the proxy companies' corporate credit rating as a good measure of investment risk, since this rating considers both financial and business risk."[27]

The Régie has also recognized in previous decisions that credit ratings are an important indicator of business and financial risk. Specifically, in a 2011 Gaz Métro decision, the Régie stated: "The Régie considers the credit rating information contained in the S&P Utility Report, particularly with respect to regulated natural gas distribution activities in Québec, to be relevant information that the market uses in assessing Gaz Métro's risk…"[28]

Concentric's credit rating screen selects U.S. electric utility companies with credit ratings of A- or higher, thereby taking into consideration the business and financial risk profile of those utility companies. The basis for choosing proxy group

[27] See, for example, *Potomac-Appalachian Transmission Highline, LLC*, 122 FERC ¶ 61,188 at P 97 (2008).
[28] Régie de l'energie, Décision D-2011-182, File R-3752-2011, Phase 2, Gaz Métro, November 25, 2011, at paragraphs [294-295]. English translation.

companies with credit ratings of A- or higher is that absent the government debt guarantee, the credit rating for Hydro-Québec would be several notches lower.[29] Selecting a proxy group of low-risk U.S. electric utility companies with credit ratings of A- or higher minimizes the need to adjust the U.S. results to account for perceived differences in business or financial risk between those U.S. companies and HQD and HQT. To reinforce this conclusion, Concentric has evaluated the business and financial risks of HQD and HQT in relation to the operating companies within the Canadian and U.S. proxy groups.

Q. Are any of the utilities in the Canadian and U.S proxy groups engaged in non-regulated operations, and, if so, how does that affect the choice of the appropriate proxy group?

A. Yes. Regulated utilities are typically part of a holding company structure, which may also include non-regulated business activities. In particular, several companies in the Canadian utility proxy group have affiliates that are engaged in non-regulated activities or in regulated activities other than electric distribution and transmission. As shown on Exhibit JMC-1, in 2011, the average company in the Canadian utility proxy group derived approximately 61 percent of its operating income from regulated utility operations and 59 percent of its revenues from regulated utility service.[30] Two companies, however, have substantial non-electric and/or unregulated operations, which have different business risks than the regulated

[29] In August 2012, Moody's Investors Service indicated that its Baseline Credit Assessment for Hydro-Quebec would be Baa1 (S&P equivalent BBB+) absent the government debt guarantee from the Province of Quebec. See Moody's credit report for Hydro-Québec, issued August 6, 2012, at p. 2.

[30] This percentage does not include income or revenue from gas transmission service.

electric transmission and distribution business. The extent of non-electric utility activities and non-regulated activities at Enbridge, Inc. and TransCanada Corp. underscores the benefit of using a proxy group of U.S. electric utilities to estimate the cost of equity for HQD and HQT, supplemented by the results for the Canadian proxy group.

Non-regulated operations are not a significant concern for the U.S. electric utility proxy group because, as also shown on Exhibit JMC-1, regulated electric utility service represented approximately 86 percent of operating income and 92 percent of revenues for the U.S. proxy group companies in 2011. Furthermore, Concentric conducts the risk analysis at the operating company level, so that the risk comparison reflects the operations of the regulated utilities. This approach enables comparisons between utilities, while mitigating concerns that the results are unduly influenced by the non-regulated activities of the parent holding companies.

V. PRECEDENT FOR CONSIDERING U.S. DATA

Q. Has the Régie considered the use of U.S. data as it relates to setting the return on equity for regulated utilities in Québec?

A. Yes. The Régie has recently given equal weight to U.S. data in estimating the market risk premium. In a 2009 Order, the Régie stated:

> With respect to the weighting of Canadian and U.S. data to be used in estimating the market risk premium, the Régie, in Decision D-99-150, established a weight of 60% for Canadian data and 40% for U.S. data. *Based on the evidence in this case, the Régie bases its estimate of the market risk premium using equal portions of Canadian and U.S. data.* It considers that the opening of markets offers investors various investment options such that it is necessary to reflect the situation in

> establishing a reasonable rate of return. It also justifies greater consideration of U.S. data because of the increasing integration of the two economies.[31]

The Régie, however, has also indicated that applicants have not provided a sufficient basis to conclude that it was reasonable to consider U.S. proxy group results to estimate the cost of equity for natural gas or electric utilities in Québec. Specifically, the Régie has expressed concerns with the evidence that has been presented in previous cases with respect to the use of U.S. proxy groups and the use of authorized returns for regulated utilities in the U.S. as a relevant benchmark for Canadian electric and natural gas utilities. Among the specific concerns cited by the Régie are the following:

- The Régie believes that the distributor has not demonstrated that the opportunities on the U.S. market are comparable in terms of risk.[32]
- The Régie has not been persuaded that the regulatory, institutional, economic and financial contexts of the two countries and their impacts on the resulting opportunities for investors are comparable.[33]
- The Régie has found that the evidence has not been very convincing regarding the reasons that would justify relying on authorized returns in the U.S. as a reference point for the rates to allow in Québec.[34]

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31 English translation of Régie de l'énergie, Décision D-2009-156 (R-3690-2009), Gaz Métro, December 7, 2009, at paragraph [249]. [Emphasis added]

32 English translation of Régie de l'énergie, Décision D-2011-182 (R-3752-2011, Phase 2), Gaz Métro, November 25, 2011, at paragraph [270].

33 Ibid., at paragraphs [294-295].

34 Ibid., at paragraph [270].

- The Régie has indicated that a relevant aspect of the risk assessment is a comparison between the authorized and realized returns of regulated U.S. companies with comparable risk, over a long period, and limited to the regulated operations of the companies in the sample.[35]

Q. Is there precedent among other Canadian regulators for considering U.S. data and a U.S. proxy group to estimate the cost of equity for a Canadian utility?

A. Yes, there is. In recent orders, other Canadian regulators have determined that it is appropriate to consider the use of U.S. data and U.S. proxy groups to estimate the allowed ROE for a Canadian regulated utility. Regulators in Canada have noted several reasons that support consideration of U.S. data. First, the development of a proxy group comprised entirely of Canadian electric utilities is difficult due to the small number of publicly-traded utilities in Canada and the fact that many of those Canadian companies derive a significant percentage of their revenues and net income from operations other than the provision of regulated electric utility service. Second, this problem has been exacerbated by the continuing trend toward mergers and acquisitions in the utility industry, both within Canada and across the border with U.S. utility companies.

The question for Canadian regulators has become: How do we account for any differences in risk between U.S. and Canadian utilities? Concentric's research and analysis demonstrates that it is possible to select a group of U.S. electric utilities that is comparable to HQD and HQT in terms of business and operating risk. In that

[35] Ibid., at paragraph [271].

regard, Concentric agrees with the conclusion of the OEB that it is not necessary to find that utilities are the *same*, only that they are *comparable,*[36] and with the NEB conclusion that it is possible to account for differences in risk that would influence an investor's required rate of return.[37]

Q. Please summarize the recent orders in which Canadian regulators have accepted the use of U.S. data to estimate the cost of equity for a regulated utility in Canada.

A. A growing number of Canadian utility regulators have accepted the use of U.S. data or U.S. proxy groups in recent years. For example, in its TQM Decision, the NEB found that U.S. market returns are relevant to the cost of capital for Canadian firms, and that the regulatory regimes in Canada and the U.S. are sufficiently similar as to justify comparison. The NEB appears to view U.S. market returns as valuable information in establishing the cost of capital for Canadian utilities. Moreover, the NEB found that Canadian utilities are competing for capital in global financial markets that are increasingly integrated. The NEB recognized that it is no longer possible to view Canada as insulated from the remainder of the investing world, and that doing so would be detrimental to the ability of Canadian utilities to compete for capital.[38] These findings suggest that it is reasonable and appropriate to consider a proxy group of U.S. utility companies as sufficiently comparable to Canadian regulated utilities in terms of their risk profile. Importantly, the NEB also found that

[36] Ontario Energy Board, EB-2009-0084, Report of the Board on the Cost of Capital for Ontario's Regulated Utilities, December 11, 2009, at p. 21.
[37] National Energy Board, Reasons for Decision, TQM RH-1-2008 (March 2009), at p. 71.
[38] National Energy Board, Reasons for Decision, TQM RH-1-2008 (March 2009), at p. 66-72.

the regulatory regimes in the U.S. and Canada were sufficiently similar as to justify comparison between utilities in the two countries, stating:

> The Board is not persuaded that the U.S. regulatory system exposes utilities to notable risks of major losses due either to unusual events or cost disallowances. The Board views the losses and disallowances experienced by U.S. regulated entities as a result of the restructuring that took place to terminate the merchant gas function of pipelines, as well as some other circumstances such as the Duquesne nuclear build, to be, to a large extent, unique events. The Board also finds that such instances are not likely to weigh significantly in investors' perceptions today, and would thus have little or no impact on cost of capital.[39]

Likewise, the OEB concluded that the U.S. is a relevant source of comparable data and that it often looks to the U.S. to inform its decisions:

> 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 concludes that North American gas and electric utilities provide a relevant and objective source of data for comparison.[40]

Finally, the British Columbia Utilities Commission ("BCUC") accepted the use of U.S. data, stating:

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39 Ibid.

40 Ontario Energy Board, EB-2009-0084, Report of the Board on the Cost of Capital for Ontario's Regulated Utilities, December 11, 2009, at p. 23.

> In addition, the Commission Panel continues to be prepared to accept the use of historical and forecast data of U.S. utilities when applied: as a check to Canadian data, as a substitute for Canadian data when Canadian data do not exist in significant quantity or quality, or as a supplement to Canadian data when Canadian data gives unreliable results. Given the paucity of relevant Canadian data, the Commission Panel considers that natural gas distribution companies operating in the US have the potential to act as a useful proxy in determining TGI's capital structure, ROE, and credit metrics.[41]

In summary, regulatory authorities in Canada have recognized that Canadian utility companies are competing for capital in global financial markets and that Canadian data is often limited by the small number of publicly-traded utilities. They have also recognized the integrated nature of Canadian and U.S. financial markets, and the similarity of the utility regulatory regimes. Therefore, they have determined that it is reasonable and appropriate to consider the results of a risk-comparable U.S. proxy group for purposes of establishing the allowed ROE for a Canadian natural gas or electric utility.

Q. How have you addressed the Régie's previous concerns with the use of a U.S. proxy group to estimate the ROE for regulated utilities in Québec such as HQD and HQT?

A. The following sections of the testimony address each of the specific concerns expressed by the Régie, starting with the comparability of business and economic conditions in Canada and the U.S., followed by a detailed assessment of the business and financial risks of HQD and HQT relative to the Canadian and U.S. proxy

[41] British Columbia Utilities Commission, In the Matter of Terasen Gas Inc., Terasen Gas (Vancouver Island) Inc., Terasen Gas (Whistler) Inc., Return on Equity and Capital Structure, Decision G-158-09, December 16, 2009, at pp. 15-16.

groups, and a comparison of the earned and authorized ROEs for the U.S. electric utility proxy group at the operating company level.

VI. BUSINESS AND ECONOMIC CONDITIONS IN CANADA AND THE U.S.

Q. How is the fair return standard affected by the business and economic climate for utilities in Canada and the U.S.?

A. In order for utilities to fund their operations on a stand-alone basis, they must be able to attract capital on reasonable terms and conditions from investors with a broad array of alternative investment options (the capital attraction standard). In order to do so, utilities must offer returns that are comparable to enterprises of similar risk (the comparable investment standard). These elements of capital attraction and comparability of investment risk cannot be separated from the business and economic environment that frames capital market and investor expectations. In a world of increasingly linked economies and capital markets, investors seek returns from a global basket of investment options. Investors consider risks on a country-to-country basis, factoring in the comparability of the economies and the business environments.

Q. Has Concentric evaluated the relative economic and business conditions in Canada and the U.S. that affect investment risk?

A. Yes. Country-specific economic and business conditions that affect investment risk may be measured through a variety of qualitative and quantitative metrics. One such measure, produced by the Economist Intelligence Unit (affiliated with the *Economist*

magazine), provides a ranking of the world's largest economies based on a range of factors impacting the business environment. According to that report:

> The business rankings model measures the quality or attractiveness of the business environment in the 82 countries covered by *Country Forecasts* using a standard analytical framework. It is designed to reflect the main criteria used by companies to formulate their global business strategies, and is based not only on historical conditions but also on expectations about conditions prevailing over the next five years.
>
> ***
>
> The business rankings model examines [91 indicators] in ten separate criteria or categories, covering the political environment, the macroeconomic environment, market opportunities, policy towards free enterprise and competition, policy towards foreign investment, foreign trade and exchange controls, taxes, financing, the labor market and infrastructure.[42]

The business environment ranks are updated annually in individual country forecasts. Based on the April 2012 update, which provides both the historical 2007-2011 rank and the projected 2012-2016 rank for 82 countries, Canada and the U.S. are ranked 4th and 5th respectively over the historic period, and 5th and 9th over the projected five years.[43] This report suggests that from a business investment perspective, Canada and the U.S. are highly comparable in a global context.

The World Economic Forum ("WEF") also publishes its annual Global Competitiveness Report, which ranks 144 countries on twelve economic factors, including institutions, infrastructure, the macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor

[42] "World Investment Prospects to 2011", The Economist Intelligence Unit, written with the Columbia Program on International Development, 2007 Edition, at pp. 38, 39, 235.

[43] The Economist Intelligence Unit, Country Forecast United States Updater April 2012, and Country Forecast Canada Updater April 2012.

market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation.[44] According to the 2012-2013 report, Canada is ranked 14th and the U.S. is ranked 7th in competitiveness and productivity.[45] The WEF report describes the Global Competitiveness Index as "a comprehensive tool that measures the microeconomic and macroeconomic foundations of national competitiveness."[46] The report further explains:

> We define competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the level of prosperity that can be earned by an economy. The productivity level also determines the rates of return obtained by investments in an economy, which in turn are the fundamental drivers of its growth rates.[47]

Q. Are you aware of any reports that comment on the relative strength of the Canadian and U.S. economies?

A. Yes. In an October 2012 report, S&P commented:

> Standard and Poor's base case outlook is for subdued growth in Canada, with real GDP advancing 2.1% in 2012 and 1.9% in 2013. Our forecast assumes the fragile position of the global recovery, impairment in international trade, and the high value of the Canadian dollar will continue to dampen business for Canadian exporters. The economic headwinds buffeting Canadian exports stem primarily from the loss of economic momentum in the U.S. and recessionary conditions in Europe, Canada's two main export markets and the destination for more than 80% of Canada's exports. We don't expect Europe to emerge from recession until later in 2013, while for the

44 "The Global Competitiveness Report: 2012-2013", World Economic Forum, Centre for Global Competitiveness and Performance, at pp. 4-7.
45 Ibid., Table 3, at p. 13.
46 Ibid., at p. 4.
47 Ibid.

> U.S. we see subpar GDP growth of about 2% continuing through the end of 2013.[48]

> From the current vantage point it appears that downside risk to Canada's economy will continue to outweigh upside potential through 2013. We expect the weakened global economy and impairment in international trade to limit growth. Domestic spending is unlikely to be a major source of growth as consumers appear to be focusing more on repairing their balance sheets and less willing to spend. Against this backdrop, we expect nonfinancial companies to remain focused on conserving capital, tempering their investment plans. We see this spilling over into reduced hiring activity and weakening demand for labor, which could put downward pressure on unemployment through the first half of 2013. We think this means income growth will remain subdued so it appears the stage is set for a moderation in housing demand.[49]

Further, a February 2013 report from the International Monetary Fund on the Canadian economy states:

> Growth [in Canada] is expected to gain new momentum over 2013. We expect economic activity to grow at a pace slightly above potential (estimated at about 2 percent) from the second half of the year, thanks to the strengthening of the U.S. economy from mid-2013 …. The United States is Canada's largest trading partner, absorbing about two thirds of total Canadian merchandise exports, and with significant financial linkages to Canada. Tighter financial conditions in the United States tend to lead to tighter financial conditions in Canada. When the impact of the U.S. financial shock is decomposed into trade and financial channels, the latter channel appears to be larger.[50]

Finally, according to Consensus Economics, the forecast for economic growth in Canada and the U.S. is very similar, with both countries expected to experience real GDP growth between 2.0 and 2.5 percent in the period from 2018-2022.[51]

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48 "Economic Research: A Weakened Global Economy Threatens Canada's Growth Momentum," Standard & Poor's Ratings Direct, October 3, 2012, at 2.

49 Ibid., at pp. 7-8.

50 International Monetary Fund, Country Report No. 13/40, February 2013, at pp. 7, 8, 35, and 36.

51 Consensus Forecasts, for 2018-2022, October 8, 2012, at pp. 3 and 28.

Q. Have you compared the overall economic and investment environment in Canada and the U.S.?

A. Yes. Exhibit JMC-2 presents several measures that reflect the overall economic and investment environment in Canada and the U.S. The first measure compares the returns to investors from the TSX 300 and S&P 500 stock indices. From 1988 through 2012, the total return on the TSX 300 was 9.66 percent compared to 11.34 percent for the S&P 500. Over the past five years, the total return on the TSX has been 3.63 percent compared to 4.52 percent for the S&P 500. Turning to the Utility Stock Index, average total returns for Canadian and U.S. utility investors have been very similar between 2003 and 2012 (i.e., 11.89 percent in Canada vs. 11.66 percent in the U.S.).[52]

As also shown on Exhibit JMC-2, the correlation between real GDP growth rates in the two countries is strong, as is the correlation between the consumer price indices for each country, indicating that these metrics tend to move together over time between the two countries. Over the 25-year period, real GDP growth has been 2.40 percent in Canada and 2.54 percent in the U.S., while consumer inflation has been 2.33 percent in Canada and 2.86 percent in the U.S. The average unemployment rate over the 25 year period has been substantially higher in Canada (i.e., 7.4 percent in Canada vs. 6.0 percent in the U.S.), but that trend has reversed since 2008 as the U.S. has been slower to recover from the recent recession.

Q. Have you also compared bond yields between Canada and the U.S.?

[52] Source: Bloomberg Professional Service. Return includes both price appreciation and dividend yield. Dividend data for the S&P/TSX Utilities Index were not available prior to 2003.

A. Yes. The average yields on 10-year government bonds have also been very similar in Canada and the U.S. over the past decade. Specifically, the 10-year average yield on 10-year Canadian government bonds has been 3.67 percent, while the average yield on 10-year U.S. Treasury bonds has been 3.66 percent. During 2012, the average yield on 10-year government bonds was 1.85 percent in Canada and 1.80 percent in the U.S. The correlation between average annual interest rates on 10-year government bonds in Canada and the U.S. since 1988 has been 0.98, the highest of all macroeconomic indicators compared; similarly, the correlation between daily average interest rates on 10-year government bonds in Canada and U.S. from 2008 through 2012 was 1.00, as central banks in both countries responded to the credit crisis and financial market dislocation by providing supportive monetary policy. Correlations of this degree are reflective of closely integrated financial markets.

Q. What other evidence did Concentric consider to assess the extent to which the Canadian and U.S. economies are integrated?

A. First, the magnitude and significance of trade between the two countries also indicates the high degree of integration between the two markets. In 2012, in terms of trade in goods, 73.7 percent of Canada's total exports went to the U.S., and imports from the U.S. accounted for 49.5 percent of Canada's total imports.[53] Moreover, according to a report by the Congressional Research Service ("CRS"), Canada is the largest single-nation trading partner of the United States. The CRS observes:

[53] Trade Data Online – Canadian Trade by Industry, Industry Canada.

> That the United States and Canada trade substantial volumes of the same goods bespeaks the economic integration of the two economies. This integration has been assisted by trade liberalization over the past 40 years, beginning with the Automotive Agreement of 1965 (which eliminated tariffs on shipments of autos and auto parts between the two countries), through the Canada-U.S. Free Trade Agreement of 1989, and NAFTA [the North American Free Trade Agreement of 1994].[54]

Furthermore, the CRS report comments on the amount of foreign investment between Canada and the U.S. as follows:

> The U.S.-Canada economic relationship is characterized by substantial ownership interests in each nation by investors in the other. The United States is the largest single investor in Canada, with a stock of $296.7 billion in 2010, a figure representing 7.6% of U.S. direct investment abroad (DIA). U.S. investors accounted for 54.4% of the stock of foreign direct investment (FDI) in Canada in 2010, down from 64.1% in 2004… Canada had a prominent (though not the largest) FDI position in the United States at $206.1 billion, 8.8% of the total FDI stock in the United States in 2010, and the United States is the most prominent destination for Canadian DIA, with a stock of 40.5% of total Canadian DIA that year.[55]

The high degree of integration between the Canadian and U.S. markets is also evident in data regarding trade between the U.S. and Québec. According to the Province of Québec, the U.S. accounts for more than 60 percent of foreign investment in Québec.[56] Moreover, in 2011, trade with the U.S. accounted for 68 percent of Québec's exports and 30 percent of Québec's imports.[57]

Q. What has been the exchange rate between Canada and the U.S.?

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54 Ian F. Fergusson, "United States – Canada Trade and Economic Relationship: Prospects and Challenges," Congressional Research Service, September 14, 2011, at p. 3.

55 Ibid., at p. 10.

56 See http://www.gouv.qc.ca/portail/quebec/international/usa/quebec/quebec-etats-unis/.

57 Institut de la statistique du Québec.

A. The value of the Canadian dollar has fluctuated against the U.S. dollar (as with all currencies) over the past 25 years. The Canadian dollar fell to $1.57 per U.S. dollar in 2002 before rebounding to $0.99 in 2011; it stood at $1.03 as of March 4, 2013. Consensus Forecasts reports that exchange rates between the Canadian and U.S. dollar are expected to remain relatively stable through at least February 2015.[58]

Q. What are your conclusions regarding the economic and business environments of Canada and the U.S. and their effect on investment risk?

A. On balance, the economic and business environments of Canada and the U.S. are highly integrated and exhibit strong correlation across a variety of metrics, including GDP growth and historical government bond yields. From a business risk perspective, including overall business environment and competitiveness, Canada and the U.S. are ranked closely when compared against other developed and developing countries. Based on these macroeconomic indicators, there are no fundamental dissimilarities between Canada and the U.S. (*i.e.*, in terms of economic growth, inflation rates, unemployment rates, or government bond yields) that would cause a reasonable investor to have different return expectations for the two countries.

VII. RISK ANALYSIS

Q. What is the purpose of Concentric's risk analysis?

A. Concentric's risk analysis has two purposes. First, the risk analysis examines whether it is reasonable and appropriate to use Canadian and U.S. proxy groups to establish

[58] Consensus Forecasts, Consensus Economics, Inc., February 11, 2013, at p. 27.

the allowed ROE for HQD and HQT. Second, the risk analysis evaluates whether any adjustments should be made to the results for the Canadian and U.S. proxy groups to account for differences in business and financial risk between those proxy groups and HQD and HQT.

In order to evaluate the comparability of the Canadian and U.S. proxy groups, Concentric has examined the business and financial risks of each operating company relative to those of HQD and HQT. The purpose of this evaluation is to determine the extent to which the companies in the Canadian and U.S. proxy groups operate in regulatory environments which provide similar risk protection as HQD and HQT receive in Québec. In addition, Concentric has reviewed the allowed ROEs for a group of government-owned electric utilities in Canada to provide additional context.

Q. Has Concentric examined the ownership, operations and financing of each of the companies in the Canadian and U.S. proxy groups?

A. Yes. Exhibit JMC-3, Schedule 1, provides a summary of several relevant indicators for the companies in the Canadian and U.S. proxy groups, including: (1) the S&P credit rating for the parent company; (2) the Beta coefficient reported by Bloomberg for the parent company as of February 28, 2013; (3) the most recent authorized ROE for the operating company; and (4) the most recent deemed equity ratio for the operating company.

Exhibit JMC-3, Schedule 2, presents a summary of several operating statistics for the operating companies in the Canadian and U.S. proxy groups, including: (1) the

province or state in which the utility provides service; (2) the 2011 regulated electric revenues; (3) the percentage of sales to industrial customers; and (4) the number of retail distribution customers served. As shown on Exhibit JMC-3, Schedule 2, HQD's regulated electric revenues are higher than the other distribution companies in the Canadian and U.S. proxy groups with the exception of Florida Power and Light, which is comparable; HQT's regulated revenues are approximately ten times higher than the only other electric transmission company in the Canadian proxy group (i.e., ATCO Electric Transmission). HQD has more retail distribution customers than any other distribution company in the Canadian and U.S. proxy groups with the exception of Florida Power and Light; and HQD is more dependent on sales to industrial customers than any of the companies in the Canadian or U.S. proxy groups, except ATCO Electric Distribution.

A. Business Risk

Q. Please define business risk.

A. Business risk represents changes in revenues and costs that may result in variability in cash flows and earnings and the ability of the utility to recover its costs including the fair return on, and of, its capital in a timely manner.

Q. Please describe your business risk analysis.

A. For purposes of this testimony, Concentric has focused on eight primary business risks for electric utilities. Since certain of these risk factors are more relevant for transmission companies, while others are more applicable to distribution companies,

the discussion accompanying each risk factor explains the relevance of that factor for HQD and HQT. The risk factors include:

(1) Ownership of regulated generation;

(2) Fuel and purchased power cost risk;

(3) Volume/demand risk;

(4) Capital cost recovery risk;

(5) Rate regulation and earnings sharing;

(6) Regulatory lag;

(7) Cost recovery mechanisms; and

(8) Longer-term risks.

The detailed results of the business risk analysis are presented in Appendix A and in Exhibit JMC-4, Schedules 1-7.

Q. Please summarize the overall conclusions with respect to the business risk of HQD and HQT relative to the Canadian and U.S. proxy groups.

A. As a preliminary matter, Concentric notes that regulatory protection is generally more effective at reducing short-term business risk, but may not fully mitigate longer-term business risk. The following briefly summarizes the conclusions with regard to the major categories of business risk for HQD and HQT relative to the Canadian and U.S. proxy groups:

(1) Regulated generation risk: HQD owns very limited regulated generation (diesel generation in remote communities) and has similar business risk as the operating companies in the Canadian proxy group, the majority of which do

not own regulated generation. HQD has lower business risk than the U.S. proxy group operating companies, several of which own significant regulated generation. HQT is a pure-play transmission company and does not own regulated generation.

(2) Fuel and purchased power cost risk: HQD obtains approximately 97 percent of its energy supply from the Heritage Pool and has no risk associated with changes in the price of that supply. HQD purchases the remaining three percent of its energy supply under long-term contracts and does not have an automatic adjustment mechanism for purchased power costs. Rather, those costs are recovered through the annual rate case filing, and any difference between actual and forecasted purchased power costs is deferred and recovered through a cost variance account. The distribution companies in the Canadian and U.S. proxy groups have fuel adjustment clauses that allow them to pass through fuel costs to customers. As such, those companies are generally not at risk for differences between the projected and actual cost of fuel, with limited exceptions in Wisconsin and Nova Scotia.

(3) Volume/demand risk: HQD has somewhat less protection against changes in volume/demand than the operating companies in the Canadian proxy group, the majority of which have broader protection against volume risk through revenue decoupling or Lost Revenue Adjustment Mechanisms ("LRAM") than HQD, which only has protection against volumetric risk through its weather variance account. HQD has similar protection against volume risk

as the operating companies in the U.S. electric utility proxy group, some of which have revenue decoupling mechanisms or operate under formula rate plans that protect against volumetric risk and some of which have weather normalization clauses. HQT is not exposed to risks associated with changes in demand. Similarly, other Canadian and U.S. transmission operations have little risk with respect to fluctuations in volume/demand due to the way in which costs are trued-up and recovered.

(4) Capital cost recovery risk: HQD and HQT generally have comparable risk mitigation for capital cost recovery as the operating companies in the Canadian proxy group because regulated utilities in Canada generally file rate cases on a more frequent basis, and are able to include capital investments in rate base once they are placed into service and start earning a return on those investments without significant regulatory lag. Although most of the operating companies in the U.S. electric utility proxy group do not file rate cases as frequently as those in Canada, the companies have comparable risk protection on this factor as HQD and HQT because many U.S. regulators have approved a cash return on CWIP while the plant is under construction, or have approved implementation of cost tracking mechanisms that provide accelerated recovery of capital costs for replacing aging infrastructure.

(5) Rate regulation and earnings sharing: HQD and HQT have historically operated under traditional cost-of-service regulation, while more than 70 percent of operating companies in the Canadian proxy group are under

incentive regulation mechanisms ("IRM") or are in the process of renewing those plans. Most, but not all, of those incentive plans include an earnings sharing mechanism ("ESM"). Among the U.S. electric utility proxy group, slightly more than half of the operating companies are subject to an IRM within the context of a multi-year rate plan or formula rate plan, and all of those plans include a mechanism for sharing earnings with customers. If HQD and HQT were to begin operating under an ESM, as they have proposed as part of this filing, their business risk would become more similar to the majority of operating companies in the Canadian and U.S. proxy groups, depending on the design and parameters of the specific ESM that is approved by the Régie. A reasonably balanced ESM should not materially impact the level of risk faced by HQD and HQT.

(6) Regulatory lag: HQD and HQT have similar regulatory treatment with respect to the use of forecasted test years as the operating companies in the Canadian proxy group and slightly less risk than the companies in the U.S. electric utility proxy group, which are somewhat less likely to use forecasted test years. With regard to interim rates, HQD has somewhat higher risk than the operating companies in the Canadian proxy group and higher risk than the operating companies in the U.S. proxy group, the vast majority of which have the ability to request interim rate increases while a rate case is pending. HQT can implement interim rates, and therefore has somewhat lower risk than the operating companies in the Canadian proxy group and similar risk to the operating companies in the U.S. proxy group on this factor.

(7) Cost recovery mechanisms: On balance, HQD and HQT have similar regulatory protection to the companies in the Canadian and U.S. proxy groups against specific categories of costs that tend to fluctuate significantly from year to year, are material in nature, and are beyond the control of utility management. Notable exceptions are that HQD has limited protection for operating costs but not capital costs related to storms, and HQT does not have a storm cost recovery mechanism, while that protection is widely available to the companies in the U.S. electric utility proxy group, and HQD and HQT have variance accounts for pension expense, while more than half of the companies in the U.S. electric utility proxy group do not have protection against this risk.

(8) Longer-term risks: HQD faces higher competitive risk than the operating companies in the Canadian and U.S. proxy groups due to its concentration of industrial customers. HQD also faces higher business risk than when the Régie issued its previous ROE determination due to changes in the relative competitiveness of electricity and natural gas prices in Québec, especially given the importance of electricity for heating purposes among residential and commercial customers. HQT faces higher business and financial risk due to its capital expenditure requirements over the next decade for growth response and to replace aging transmission infrastructure as compared with the amount of capital spent over the previous decade.

Based on the business risk analysis, Concentric concludes that HQD and HQT and the operating companies in the Canadian proxy group generally receive comparable protection against the business risks which are important to investors and credit rating agencies. There are several important ways, however, in which HQD's and HQT's longer-term business risk is higher than the Canadian proxy group. Specifically, HQD faces more competitive risk due to its higher concentration of industrial customers, which suggests that HQD is more susceptible to risks associated with economic bypass and demand destruction, as well as more vulnerable to weak economic conditions. Further, HQD faces higher business risk than at the time of its previous ROE determination because natural gas prices have become more competitive with electricity prices in Québec. In addition, HQT faces greater business and financial risk associated with its capital expenditure requirements over the next decade for growth response and to replace aging transmission infrastructure.

With regard to the operating companies in the U.S. electric utility proxy group, on balance, the one distinguishable difference in business risk between HQD and the U.S. proxy group is the higher percentage of U.S. companies that own regulated generation. As discussed in the subsequent section on financial risk, however, Concentric finds that the higher business risk associated with regulated generation is more than offset by the lower financial risk (i.e., higher equity ratios) of the operating companies in the U.S. proxy group relative to HQD. With regard to HQT, although none of the comparators are pure transmission companies, Concentric concludes that there are no fundamental differences in business risk between HQT and the U.S. electric utility proxy group that would render comparisons inappropriate. As

discussed above, HQD and HQT have similar business risk as the U.S. electric utility proxy group on most factors that affect the short and intermediate term variability of earnings and cash flows. Notable differences are the approval of CWIP in rate base for companies in the U.S. proxy group, the use of forecasted test years for HQD and HQT, and the prevalence of storm cost trackers for the U.S. proxy group. In summary, there are no significant differences in business risk between HQD and HQT and the operating companies in the U.S. electric utility proxy group, other than the ownership of regulated generation by the U.S. electric utilities, which is more than offset by higher equity ratios in the U.S.

From the perspective of establishing the allowed ROE for HQD and HQT, Concentric concludes that the U.S. proxy group (at the holding company level) is more comparable to HQD and HQT than the Canadian proxy group because it is comprised of companies that derive the majority of their operating income and revenues from electric utility service. Moreover, there are very few potential proxy companies in Canada, which limits the ability to select companies that are comparable to the electric distribution and transmission operations of HQD and HQT. For that reason, Concentric believes it is reasonable and appropriate to rely primarily on the results of the U.S. electric utility proxy group and to use the Canadian proxy group to corroborate the reasonableness of the U.S. results.

B. Financial Risk

Q. Please define financial risk.

A. Financial risk exists to the extent a company incurs fixed obligations in financing its operations. These fixed obligations increase the level of income which must be generated to cover interest payments before common stockholders receive any return, and they are considered by equity investors in addition to business and regulatory risks. Fixed financial obligations also reduce a company's financial flexibility and its ability to respond to adverse economic circumstances and capital market conditions, such as those during the credit crisis and financial market dislocation of 2008 and 2009. The detailed results of the financial risk analysis are discussed in Appendix B and on Exhibit JMC-5.

Q. What is your conclusion with respect to the financial risk of HQD and HQT relative to the Canadian and U.S. proxy group companies?

A. Based on the lower equity ratios and the weaker credit metrics of HQD and HQT, Concentric concludes that these companies have greater financial risk than either the Canadian proxy group or the U.S. electric utility proxy group. Specifically, the actual credit metrics for HQD and HQT (as shown on Exhibit JMC-5) are not consistent with Hydro-Québec's current S&P rating of A+. Assuming that the Régie approves an ESM for HQD and HQT, the Companies will be required to share some percentage of any over-earnings with customers. As discussed in Section II of the testimony, the credit rating agencies have expressed concern with the low authorized ROEs and deemed equity ratios for HQD and HQT. Recognizing that HQD's and

HQT's credit metrics have been supported by surplus earnings over the allowed ROE in the past several years, the implementation of an ESM must be designed with care. The ESM must be balanced with an appropriate ROE in order to avoid any diminution in credit quality that would affect the cost of the HQD and HQT government debt guarantee, or limit the ability of Hydro-Québec to continue paying comparable cash dividends to its shareholder.

Q. Did Concentric evaluate the effect of HQD's and HQT's deemed equity ratios on the appropriate cost of equity for those companies?

A. Yes. HQD and HQT are proposing to maintain their current deemed equity ratios of 35.0 percent and 30.0 percent, respectively. As discussed in Appendix B, the equity ratios for HQD and HQT are somewhat lower than the deemed equity ratios for the operating divisions of the Canadian proxy group, and are substantially lower than the authorized equity ratios of the U.S. electric utility proxy group. In order for HQD and HQT to have the opportunity to earn weighted compensatory equity return at their respective equity ratios as the U.S. electric utility proxy group at an average equity ratio of 50.2 percent, significant increases in the authorized ROE would be required to compensate for the difference in authorized capital structure. Using commonly-accepted methodologies, Concentric estimates that an adjustment to ROE of between approximately 1.50 percent and 3.00 percent would be warranted to compensate for a 15 to 20 percent decline in the common equity ratio from the U.S. proxy group average. These estimates are consistent with the range reported by empirical and theoretical studies for public utilities. Those studies

show increases in the required ROE from 0.34 to 2.37 percentage points to compensate for a 10 percent increase in the debt ratio.[59]

Q. How does this adjustment for the difference in equity ratios between HQD and HQT and the U.S. proxy group compare to the effect on the cost of equity related to the U.S. proxy group companies' ownership of regulated generation?

A. As discussed in the following section of this testimony, the incremental ROE required to offset the increased operating risk of regulated generation is approximately 41 basis points. Although Concentric does not propose an adjustment in this proceeding for the difference in capital structure between HQD and HQT and the U.S. electric utility proxy group, Concentric views the financial risk of a more highly-leveraged capital structure as more than offsetting any potential difference in the required ROE of the U.S. electric utility proxy group companies that own regulated generation.

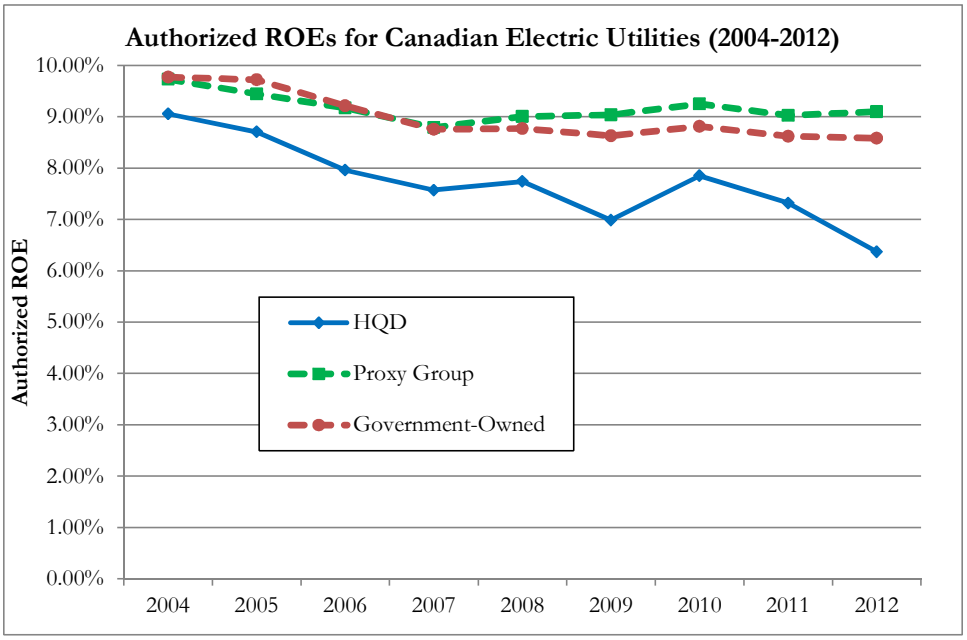
[59] See, *New Regulatory Finance*, Dr. Roger Morin, Public Utility Reports, 2006, pp. 456 - 471

VIII. ANALYSIS OF EARNED AND AUTHORIZED RETURNS

Q. Have you analyzed the authorized returns for HQD and HQT relative to the Canadian and U.S. proxy group companies?

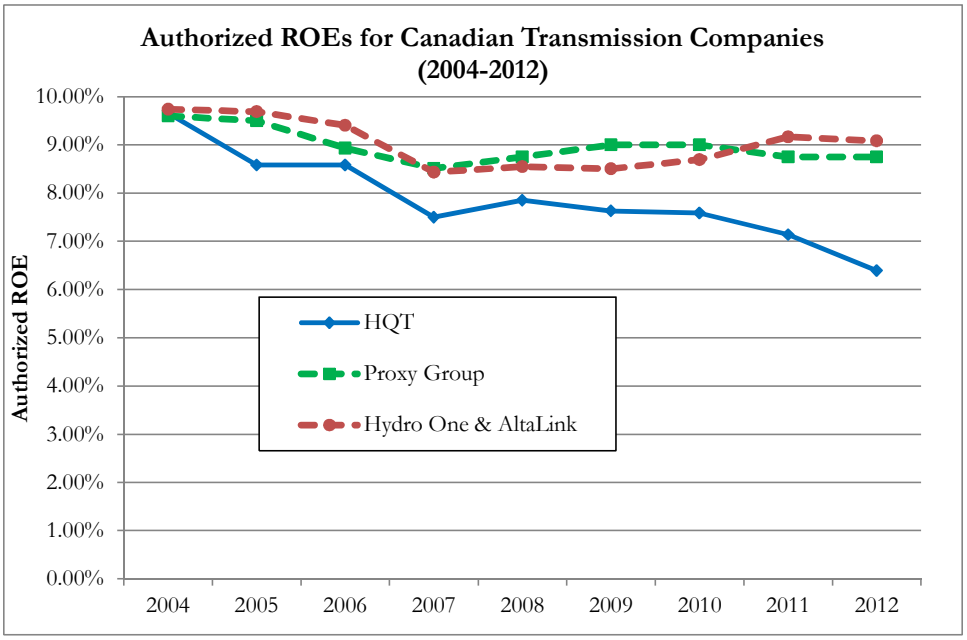
A. Yes. As shown on Charts 1 and 2, the authorized ROEs for HQD and HDT from 2004-2012 have been lower than the Canadian investor-owned electric utilities ("IOU") and Canadian government-owned electric utilities ("GOU"), and this margin has grown over the past two years. Among the possible explanations for the increasing disparity between the authorized ROEs for HQD and HQT and other Canadian IOUs and GOUs are: (1) a more favorable automatic adjustment formula for the other IOUs and GOUs in Canada, and (2) a higher risk premium for the other Canadian IOUs and GOUs as a result of a different adjustment adder.

Chart 1: Authorized ROE for Canadian Electric Distribution Utilities[60]



[60] The Proxy Group average includes ATCO Electric (Distribution), FortisAlberta, FortisBC Electric, Newfoundland Power, and Nova Scotia Power Inc. The government-owned average includes Hydro One Inc. (Distribution), SaskPower, ENMAX Power, and EPCOR Distribution. Manitoba Hydro is not included among the government-owned utilities because its rates are set based on a targeted debt-to-equity ratio rather than an authorized return on common equity. BC Hydro is not included because its authorized return on equity of 14.37 percent includes an adjustment for income taxes based on the tax rate of the benchmark utility in British Columbia (i.e., 9.50% X 1.342 = 12.75%) plus an adder of 1.63 percent.

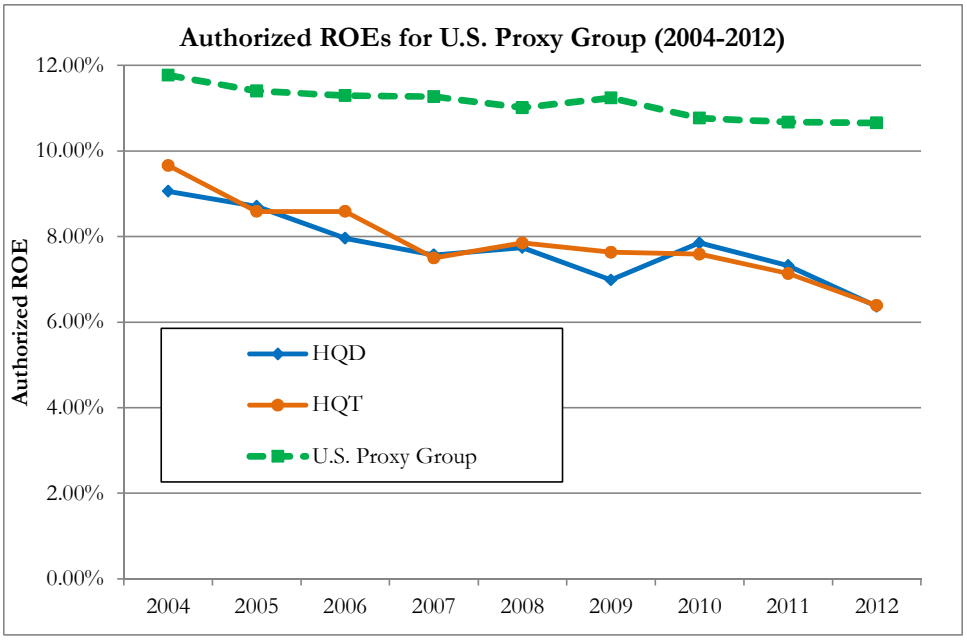
Chart 2: Authorized ROE for Canadian Electric Transmission Utilities[61]



Similarly, as shown on Chart 3, the authorized ROEs for HQD and HQT from 2004-2012 have been lower than the operating companies in the U.S. electric utility proxy group, and that margin has widened over the past several years.

[61] The Proxy Group line represents ATCO Electric (Transmission), and the other line shows the average of AltaLink and Hydro One Inc. (Transmission).

Chart 3: Authorized ROE for U.S. Electric Utility Proxy Group (Compared to HQD and HQT)



Concentric also compared the allowed ROEs for HQD and HQT to the authorized return for integrated electric utilities and T&D utilities in the U.S. While this survey contains a broader group of electric utility companies than the U.S. proxy group, it does provide useful information regarding the aggregate level of returns that has been approved for electric utilities in the U.S. as compared to those in Canada generally and for HQD and HQT in particular. According to Regulatory Research Associates, the average authorized ROE for vertically-integrated electric utilities in the U.S. between 2004 and 2012 was 10.46 percent, and the average authorized ROE for transmission and distribution ("T&D") only utilities in the U.S. was 10.05 percent.[62] Furthermore, the average authorized equity ratio for vertically-integrated

[62] Source: SNL Financial.

electric utilities and T&D only utilities in the U.S. over this same time period was very similar (i.e., 48.90 percent for integrated and 47.61 percent for T&D).[63]

Compared to the computed average authorized ROE, HQD's average allowed ROE of 7.73 percent from 2004-2012 was 273 basis points lower than the average integrated U.S. electric utility and 232 basis points lower than the average U.S. T&D company. Similarly, HQT's average allowed ROE of 7.88 percent from 2004-2012 was 258 basis points lower than the average U.S. electric utility company and 217 basis points lower than the average U.S. T&D company. In summary, HQD's and HQT's allowed ROEs over this period have been substantially below those granted to the average integrated electric utilities and T&D companies in the U.S.

Q. Did Concentric also compare the earned and allowed returns for the U.S. electric utility proxy group?

A. Yes. As discussed earlier in our testimony, the Régie has stated in prior decisions that earned ROEs are an important indicator of whether the operating utility has sufficient regulatory protection against various business risks. While this comparison is useful in evaluating the short-term risk protection of operating companies in the proxy group, it is less helpful in terms of assessing the longer-term risks of those entities, especially with respect to recovery of their investment in rate base.

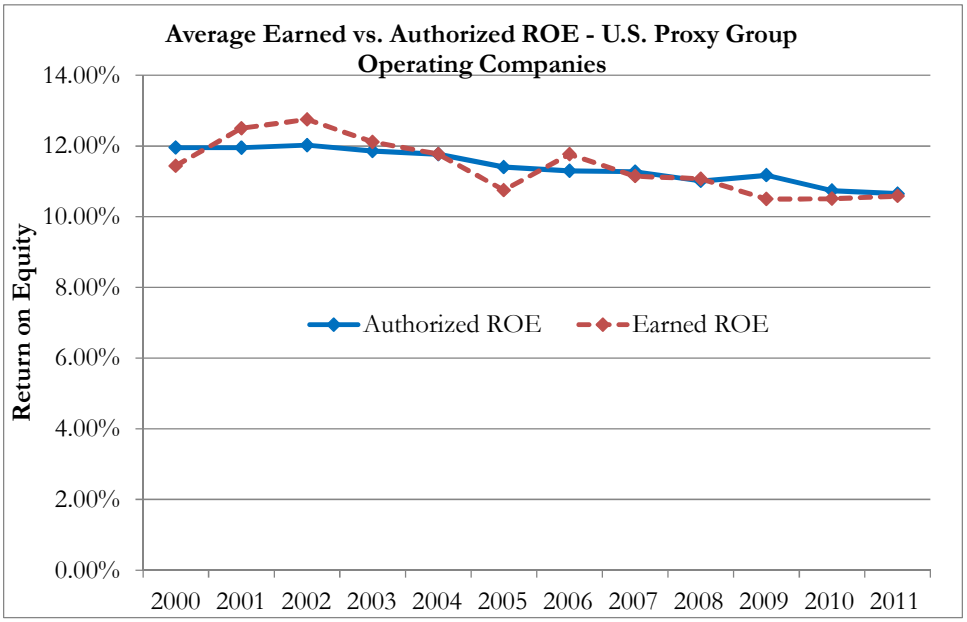
Q. Please summarize the results of that analysis.

A. As shown on Chart 4, Concentric has compared the earned and authorized ROEs for the companies in the U.S. electric utility proxy group at the operating company

[63] Ibid.

level from 2000-2011. The average earned ROE for the U.S. electric utility proxy group (at the operating company level) from 2000-2011 was almost identical to the average authorized ROE over that same period (i.e., 11.41 percent earned vs. 11.42 percent authorized).

Chart 4: Average Earned vs. Authorized ROE – U.S. Proxy Group – 2000-2011



Q. What is your conclusion with regard to the use of U.S. data based on your analysis of earned and allowed returns for the U.S. electric utility proxy group?

A. Concentric's analysis demonstrates that the operating companies in the U.S. electric utility proxy group for which data are available[64] have generally been able to earn their authorized returns from 2000-2011. This suggests that these companies

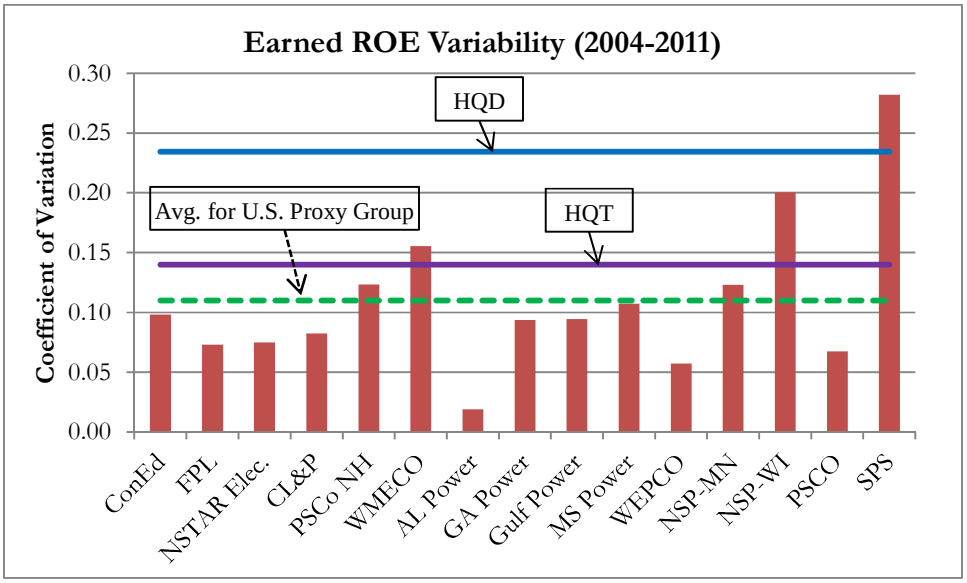
[64] There are certain years in which the authorized ROE was not specified in the settlement agreement that was approved by the Commission. In those instances, Concentric excluded the earned return from the calculation of the average. Companies affected include Southwestern Public Service in Texas, NSTAR Electric and Western Massachusetts Electric, Public Service of New Hampshire, and Wisconsin Electric Power.

generally operate in regulatory environments that afford timely cost recovery and a fair opportunity to earn their allowed returns. As such, Concentric concludes that it is reasonable and appropriate to consider the U.S. electric utility proxy group as an appropriate benchmark for the market-based cost of equity for HQD and HQT.

Q. Did Concentric also analyze the variability of earned returns for HQD and HQT to the U.S. proxy group?

A. Yes. In order to evaluate the variability of earned returns for HQD and HQT compared to the U.S. electric utility proxy group, Concentric compared the coefficient of variation ("CV") for the earned returns of HQD and HQT from 2004-2011 to the CV for each of the operating companies in the U.S. electric utility proxy group. The CV is a statistical measure that shows the extent of variability, as measured by the standard deviation, in relation to the mean. Specifically, the CV is calculated as a ratio or percentage by dividing the standard deviation by the mean. As shown on Chart 5, the earned ROEs for HQD and HQT have been more variable than the average for the U.S. electric utility proxy group from 2004-2011.

Chart 5: Coefficient of Variation – Earned ROE – U.S. Proxy Group[65]



Based on this analysis, it is not correct to assume that earnings are more variable for the companies in the U.S. electric utility proxy group than for HQD and HQT. As such, Concentric finds that it is reasonable and appropriate to consider the U.S. electric utility proxy group as a reliable benchmark for the market-based cost of equity for HQD and HQT.

E. Risk Analysis Conclusions

Q. Please summarize your conclusions and recommendations on the comparability of HQD and HQT and the Canadian and U.S. proxy groups.

A. Based on the results of the risk analysis described in our testimony, Concentric recommends that the Régie find that:

[65] The calculations in Chart 5 are based on historical data, and may not represent the future variability in earnings due to the addition/deletion of variance accounts or revenue stabilization mechanisms.

- The economic conditions and business environments in Canada and the U.S. are similar enough that investors would not require materially different returns on equity from companies that were otherwise comparable;
- The regulatory protections to mitigate business risk for HQD and HQT are similar to those for the operating companies in the Canadian and U.S. proxy groups, except that the U.S. electric utilities have more risk associated with the ownership of regulated generation;
- The financial risk of HQD and HQT is somewhat higher than the Canadian proxy group and substantially higher than the U.S. electric utility proxy group, as evidenced by lower deemed equity ratios and weaker credit metrics. This risk more than offsets the higher business risk of the U.S. electric utility proxy group due to ownership of regulated generation;
- The earned returns of the U.S. electric utility proxy group at the operating company level have been very similar to the allowed returns for those companies, suggesting that those companies generally have adequate regulatory protection in place to recover costs in a timely manner, which generally allows them to earn their authorized ROE in most years;
- The current authorized ROEs for HQD and HQT do not meet the comparable return standard[66] for a stand-alone electric transmission and distribution utility[67], as shown by comparison to authorized returns for the

[66] See Section III of this testimony for a discussion of the Fair Return Standard.
[67] As noted previously, the Régie has determined that the allowed ROE must be comparable to that which the market would require for a stand-alone electric distribution or transmission company.

Canadian and U.S. proxy groups, as well as the other government-owned electric utilities in Canada;

- It is reasonable to use the U.S. electric utility proxy group to estimate the cost of equity for HQD and HQT in this proceeding with the Canadian proxy group used to corroborate the reasonableness of the U.S. results is reasonable; and
- HQD and HQT have similar but not identical risk profiles. On balance, HQD carries greater risk than HQT. Differentiating risk factors include HQD's competition from alternative fuels, HQD's supply risk and HQD's bad debt exposure due its end use customer base. HQT carries greater risk in terms of capital exposure. This risk differential may be accounted for through a difference in ROE or, as in other Canadian jurisdictions, through a differential in deemed capital structure. Based on Concentric's analysis, we find that the current five percent differential in the deemed equity ratio between HQD and HQT continues to be reasonable given the differences in risk between the two entities.

IX. COST OF EQUITY METHODOLOGY AND RESULTS

Q. Please briefly discuss the ROE in the context of the regulated rate of return.

A. Regulated utilities primarily use common stock, preferred stock and long-term debt to finance their permanent property, plant, and equipment. The overall rate of return ("ROR") for a regulated utility is based on its weighted average cost of capital, in which the cost rates of the individual sources of capital are weighted by their percentage of the total capitalization of the company. While the costs of debt and preferred stock can be directly observed, the cost of equity is market-based and, therefore, must be estimated based on observable market information.

Q. How is the required ROE determined?

A. The ROE is estimated using one or more analytical techniques that rely on market-based data to quantify investor expectations regarding required equity returns, adjusted for certain incremental costs and risks. Quantitative models produce a range of results from which the market-required ROE is selected. That selection must be based on a comprehensive review of relevant data and information, and does not necessarily lend itself to a strict mathematical solution. As a general proposition, the key consideration in determining the cost of equity is to ensure that the methodologies employed reasonably reflect investors' views of the financial markets in general, and the subject company (in the context of the proxy group) in particular.

Q. What methods were used to determine HQD's and HQT's cost of equity?

A. Concentric has considered the results of the CAPM and the DCF method in developing an ROE recommendation for HQD and HQT within the context of the risk analysis discussed earlier in the testimony.

Q. Why is it important to use more than one analytical approach?

A. Analysts and academics understand that ROE models are tools to be used in the ROE estimation process, and that strict adherence to any single approach, or the specific results of any single approach, can lead to flawed conclusions. Concentric therefore employs multiple approaches to estimate the cost of equity. That position is consistent with the *Hope* finding that it is the analytical result, as opposed to the methodology, that is controlling in arriving at ROE determinations. The Régie has cited the *Hope* finding in recent decisions, as follows:

> [194] Finally, as stated in the Hope decision, "Under the statutory standard of "just and reasonable," it is the result reached, not the method employed, which is controlling." In this regard, the US courts have allowed regulatory agencies wide latitude and discretion in determining the best method for fixing a reasonable return on the rate base.
>
> [195] The fact that the automatic adjustment formula or any other approach suggested by the experts for the parties before the Régie may or may not be challenged is not a decisive factor; it is the result which is conclusive, as the US Supreme Court stated in Hope: "it is the result reached, not the method employed, which is controlling [....] It is not theory, but the impact of the rate order, which counts [....] The fact that the method employed to reach that result may contain infirmities is not then important". The Régie considers that

> its duty in this respect is to determine a reasonable rate of return and that the method it uses is a matter of discretion.[68]

As such, we have considered the results of the CAPM and the DCF method in developing an ROE recommendation for HQD and HQT.

A. Capital Asset Pricing Model

1. CAPM Theory

Q. Please describe the general form of the CAPM.

A. The CAPM is a risk premium approach that estimates the cost of equity for a given security as a function of a risk-free return plus a risk premium (to compensate investors for the non-diversifiable or "systematic" risk of that security). The CAPM is based on a theoretically-derived relationship between a security's required return and the systematic risk of that security. The theory of the CAPM has been subject to frequent empirical research and testing and has been relied upon in setting the required cost of equity for regulated companies throughout North America. In theory, the CAPM is an appropriate model to determine the required return. As shown in Equation [1], the CAPM is defined by four components, each of which must theoretically be a forward-looking estimate:

[68] See, for example, Régie de l'énergie, Decision in D-2009-156, part [194-195], English translation.

[1] $Ke = rf + \beta(rm - rf)$

where:

Ke = the required ROE for a given security;
β = Beta of an individual security;
rf = the risk-free rate of return; and
rm = the required return for the market as a whole.

In this specification, the term (rm – rf) represents the Market Risk Premium ("MRP"). According to the theory underlying the CAPM, since unsystematic risk can be diversified away, investors should be concerned only with systematic or non-diversifiable risk. Non-diversifiable risk is measured by Beta, which is defined as:

[2] $$\beta = \frac{Covariance(r_e, r_m)}{Variance(r_m)}$$

where:

re = the rate of return for the individual security or portfolio.

The variance of the market return, noted in Equation [2], is a measure of the uncertainty of the general market, and the covariance between the return on a specific security and the market reflects the extent to which the return on that security will respond to a given change in the market return. Thus, Beta represents the risk of the security relative to the market.

2. CAPM Analysis

Q. What assumptions are necessary to calculate the CAPM?

A. In order to calculate the CAPM, one must provide estimates of the risk-free rate of return, the market risk premium and beta. Since the CAPM is forward looking, it is appropriate to use forward-looking estimates for the input variables, if possible.

Q. Does Concentric have concerns with the application of the CAPM under current market conditions?

A. Yes. To the extent the inputs to the CAPM do not reflect investors' expectations for the risk-free rate, the beta coefficient, or the market risk premium, the results of the CAPM may not be reliable. In the current market environment, the CAPM is not producing reliable results because those three inputs are affected by current financial market conditions and monetary policy. Consequently, it is not reasonable to place substantial weight on the CAPM results under current market conditions, without making certain adjustments.

a. Risk Free Rate

Q. What do you assume as a risk-free rate in your CAPM analysis?

A. To estimate the risk free rate, Concentric relies on the 2013 through 2018 *Consensus Economics* forecast of the Canadian 10-year government bond and adds the current spread between 10-year and 30-year government debt. Use of the 2013 through 2018 forecast allows for some adjustment from near-term bond yields that are near all-time lows, to higher interest rate levels that investors are factoring into their longer-term expectations. Nonetheless, because current bond yields remain at historical lows, the CAPM is unable to produce reasonable results without additional adjustment. The determination of the market-required cost of equity must consider

alternative measures or adjustments to the standard CAPM formula, such as those adjustments presented in this evidence.

Table 3: Risk Free Rate

30-Year Risk Free Yield	CDN$
October 2012 Consensus Forecast Average 2013-2018 Forecasts	3.62%
Average Daily Spread between 10-year and 30-year government bonds (February 2013)	0.61%
Average	**4.23%**

b. Beta

Q. What is the purpose of beta in the CAPM?

A. Beta is a measure of risk and in this case it measures the volatility of a proxy group company's stock price relative to the aggregate market. It is typically calculated using a linear regression of the change in stock price as compared with the change in a general market index. Beta is the slope of the regression line. High betas (greater than 1.0) indicate greater volatility compared to the market, and therefore relatively greater risk. Conversely, low betas (lower than 1.0) indicate lower volatility compared to the market, and therefore relatively lower risk.

Q. What measures of the Beta coefficient did you use in your CAPM analysis?

A. Concentric considered two alternative sources for the Beta coefficient data, and three alternative methods for computing Beta. According to Value Line, the reported historical beta for each company is based on five years of weekly stock returns and uses the New York Stock Exchange as the market index.[69] The results have been

[69] http://www.valueline.com/sup_glossb.html

rounded to the nearest five hundredths, and no information is reported regarding the statistical significance of the underlying regression. Bloomberg, on the other hand, produces Beta estimates based on parameters entered by the user. Concentric derives the Bloomberg betas based on five years of weekly stock returns using the S&P 500 and the TSX market indices. Bloomberg results are rounded to the nearest one thousandth and include additional information regarding the statistical significance of the underlying regression. Both Value Line and Bloomberg betas are adjusted to compensate for the tendency of beta to revert toward a market mean of 1.0 over time.

As discussed later in this section, in order to appropriately estimate the cost of equity using the CAPM, it is necessary to adjust raw betas to a common point of convergence. Concentric used the adjusted betas reported by both Value Line and Bloomberg as the first approach, which is standard practice.[70] As an alternative approach, betas that revert to the industry average mean beta were used to estimate both proxy groups' average beta coefficients. Those estimates rely on raw betas reported by Bloomberg over a five year holding period, using weekly returns. Individual company raw beta coefficients are adjusted toward the industry mean beta (vs. the market mean of 1.0 which is standard practice) over the same time period based on a two-thirds weighting of the raw beta to a one-third weighting of the respective industry mean beta. Finally, Concentric estimated the straight industry

[70] Value Line adjusted beta = 0.371 + 0.635 * (raw beta). Source: Ibbotson Associates, *2012 Yearbook, Valuation Edition*, p. 78; Bloomberg adjusted beta = 0.33 + 0.67 * (raw beta). Source: Bloomberg output.

average mean beta as a third measure.[71] The relevant market indices and industry averages differed according to whether a company was included in the Canadian proxy group or the U.S. electric utility proxy group.

Q. Why is it necessary to adjust raw betas?

A. There are two primary reasons to adjust raw betas. First, there have been numerous empirical studies providing evidence that an individual company beta is more likely than not to move towards the market average of 1.00 over time. Second, adjusting beta serves a statistical purpose. Because betas are statistically estimated and have associated error terms, betas that are greater than 1.00 tend to have positive estimated errors and thus tend to overestimate future returns, while betas that are below the market average of 1.00 tend to have negative error terms and underestimate future returns. Consequently, it is necessary to adjust betas toward 1.00 in an effort to improve forecasts.[72] Because current stock prices reflect expected risk, one must use an expected beta (adjusted beta) to appropriately reflect investors' expectations. A raw beta reflects only where the stock price has been relative to the market historically and is an inferior proxy for the expected returns when compared to the adjusted beta.

Q. What empirical studies can you cite as evidence and support that company betas do regress toward the market average of 1.00?

[71] The Industry Index Beta is from the Bloomberg Professional average of five years of weekly betas for S&P utilities index.

[72] Roger A. Morin, *New Regulatory Finance*, at p. 74.

A. There have been several studies to support the reversion of beta towards the market mean.[73] In 1971, for example, Blume examined all common stocks listed on the NYSE and found a tendency for a regression of betas towards 1.00. He concluded that:

> …there is obviously some tendency for the estimated values of the risk parameter to change gradually over time. This tendency is most pronounced in the lowest risk portfolios, for which the estimated risk in the second period is invariably higher than that estimated in the first period. There is some tendency for the high risk portfolios to have lower estimated risk coefficients in the second period than in those estimated in the first. Therefore, the estimated values of the risk coefficients in one period are biased assessments of the future values, and furthermore the values of the risk coefficients as measured by the estimates of β_i tend to regress towards the means with this tendency stronger for the lower risk portfolios than the higher risk portfolios.[74] (emphasis added)

In 1975, Blume revisited the topic, measuring the statistical significance of the regression tendency. He concluded:

> A comparison of the portfolio betas in the grouping period, even after adjusting for the order bias, to the corresponding betas in the immediately subsequent period discloses a definite regression tendency. This regression tendency is statistically significant at the five percent level for each of the last three grouping periods, 1940-47, 1947-54, 1954-61. Thus, this evidence strongly suggests that there is a substantial tendency for the underlying values of beta to regress towards the mean over time.[75] (emphasis added)

Q. What Beta has the Régie used in previous decisions, and how does that compare to other jurisdictions in Canada?

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73 Ibid.
74 Marshall E. Blume, *The Journal of Finance*, Vol. 26, No. 1. (Mar., 1971), at p. 7-8.
75 Marshall E. Blume, *The Journal of Finance*, Vol. 30, No. 3. (Jun., 1975), at p. 794.

A. In its 2012 Gaz Métro Decision, the Régie determined the benchmark utility beta of 0.50 to 0.60. Comparing the beta values relied upon by the Régie in past cases to those relied upon by other regulators throughout Canada, the Régie is on the low end of the spectrum. For instance, the BCUC relied on the beta value range of 0.60 to 0.66,[76] the Newfoundland and Labrador Board of Commissioners of Public Utilities relied on a beta of 0.60,[77] and the Alberta Utility Commission ("AUC") relied on a beta range of 0.50 to 0.65.[78]

Q. Has the Régie made any adjustments to the CAPM results to account for low Beta coefficients?

A. Yes. In the recent past the Régie has not accepted that utility betas move toward the market average of 1.0 but, rather toward an industry mean of 0.50 to 0.60.[79] Also, as noted by the Régie in a past Decision:

> Even though it is a determining factor in the application of the CAPM, it remains difficult to objectively infer the value of the beta based on the market data for the enterprises retained in the samples.[80]

Q. What is your conclusion with regard to whether it is appropriate to adjust raw Betas?

A. Concentric concludes that it is appropriate and necessary to adjust raw betas. Especially in the current market environment, raw betas are too low to provide a

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76 Decision G-158-09: In the Matter of Terasen Gas Inc, Return on Equity and Capital Structure, British Columbia Utilities Commission, December 16, 2009, at 45 at p. 60.

77 Reason for Decision Order No. P.U.43 (2009), Newfoundland and Labrador Board of Commissioners of Public Utilities, at p. 20.

78 Decision No. 2011-474, Alberta Utilities Commission, 2011 Generic Cost of Capital, December 8, 2011, at p. 14.

79 Decision 2010-147, Régie de l'énergie, November 26, 2010, at p. 11.

80 Decision-2007-116, Régie de l'énergie, Gaz Métro tariffs effective October 1, 2007, October 15, 2007, at p. 6.

reasonable determination of the market-required cost of equity that can be corroborated by other models. In summary, after examining the following betas: 1) market-adjusted Betas; 2) industry-adjusted Betas; and 3) industry index Beta, Concentric determined that the most reasonable beta for HQD's and HQT's CAPM is the average of the market-adjusted Betas and the industry-adjusted betas for each respective proxy group. Using an average of those two measures of Beta reflects the statistical and market practice of adjusting beta coefficients to 1.0, while also reflecting the historical practice of the Régie using an industry beta.

c. Market Risk Premium

Q. How have you computed the Market Risk Premium?

A. Concentric examined two estimates of the MRP, comprised of an historical (ex-post) estimate and a forward-looking (ex-ante) estimate. To develop those estimates, Concentric first relied upon the long-term historical calculation for the relevant market (i.e., Canada, U.S.) as published by Morningstar. Next, we derived a forward-looking estimate of the MRP using forward projections of the return on the relevant market indices less the relevant risk-free rate.[81] Forward return projections were derived by calculating the implied market ROE on a market-capitalization weighted basis for the individual companies comprising a broad market index. The DCF methodology was used to determine the implied expected market return. For the forward-looking estimate for Canada and the U.S., Concentric calculated an MRP of 6.14 percent and 8.55 percent, respectively.

[81] See Exhibit JMC-7.

In the U.S., Morningstar/Ibbotson risk premia data are available from 1926-2011 and result in a 6.60 percent risk premium, the arithmetic mean of the premium of the returns on the S&P 500 over long-term government bond income returns. In Canada, the longest period for which risk premia data were available from Morningstar/Ibbotson is from 1936-2011 in Canadian currency, which yields an equity risk premium of 5.38 percent; and from 1939-2011 in U.S. dollars, yielding a 5.99 percent equity risk premium. The Canadian market is represented by the S&P/TSX Composite Index and earlier sources provided by Ibbotson Associates.[82] After an examination of the four MRP values discussed above, Concentric determined that a reasonable MRP would be the average of those four values, or 6.67 percent, equally weighting both historic and projected MRPs for both Canadian and U.S. markets.

Table 4: Market Risk Premium Values

	Canadian MRP	U.S. MRP
Historical MRP	5.38%	6.60%
Forward-looking MRP	6.14%	8.55%
Average	6.67%	

Q. Why is it appropriate to use the arithmetic mean of the historic market risk premiums?

A. It is appropriate to use the arithmetic mean of the historic MRPs because the arithmetic mean, as opposed to the geometric mean, is the simple average of single

[82] Ibbotson Associates, *2012 Risk Premia Over Time Report,* Estimates from 1926-2012; Ibbotson - *Canadian Risk Premia over Time Report 2006;* and Morningstar International Equity Risk Premia Report 2012.

period rates of return. The geometric mean, in contrast, is the compound rate that equates a beginning value to its ending value. The important distinction between the two methods is that the arithmetic mean treats each periodic return as an independent observation and, therefore, incorporates uncertainty into the calculation of the long-term average. In his review of literature on the topic, Cooper noted the following rationale for using the arithmetic mean:

> Note that the arithmetic mean, not the geometric mean is the relevant value for this purpose. The quantity desired is the rate of return that investors expect over the next year for the random annual rate of return on the market. The arithmetic mean, or simple average, is the unbiased measure of the expected value of repeated observations of a random variable, not the geometric mean. …[the] geometric mean underestimates the expected annual rate of return.[83]

For the purposes of the CAPM analysis, therefore, the historic arithmetic mean of the equity market returns over long-term government bond income returns as reported by Ibbotson Associates is used, along with the forward-looking market estimate.

3. CAPM Results

Q. How did you apply your CAPM analysis?

A. Concentric relied on the average of the historical and forecasted MRP estimates noted above, the average of the market- and industry-adjusted betas for the U.S. electric utility proxy group of 0.59, and the 4.23 percent projected yield on the Canadian long-term government bond. As indicated earlier, Concentric found that the U.S. electric utility proxy group is more closely comparable to HQD and HQT

[83] Ian Cooper, "Arithmetic versus geometric mean estimators: Setting discount rates for capital budgeting," *European Financial Management 2.2* (1996): 158.

from a risk perspective. As such, it is appropriate to rely on the U.S. electric utility proxy group's average beta coefficient, rather than the Canadian proxy group's Beta in estimating HQD's and HQT's required ROE. The results of the CAPM analysis, including flotation costs, are provided in Table 5 and are shown in detail in Exhibit JMC-6. Finally, we made a further adjustment of 0.75 percent to reconcile the differences between the CAPM results and the DCF model. This adjustment is consistent with the Régie's approach factoring in the adjustment for "Results of Other Models".[84]

Table 5: Reconciled CAPM Results

	Reconciled CAPM (US Proxy Group)
Risk Free Rate	4.23%
Beta	0.59
Market Risk Premium	6.67%
Sub-Total	8.17%
Flotation Cost	0.30%
Sub-Total	8.47%
Adjustment for Other Models	0.75%
Total	9.22%

Q. Have you examined previous Régie Decisions and expert evidence filed in past case where the CAPM was analyzed?

A. Yes. Table 6 compares the Régie's final CAPM determination in the 2011 Gazifere case, inputs of Dr. Roger Morin and Dr. Laurence Booth from the previous two Gaz

[84] Decision 2010-147, Régie de l'énergie, November 26, 2010, at p. 28. Decision D-2009-156, Régie de l'énergie, December 7, 2009, at p. 27. [English Version]

Métro rate cases, as well as the Régie's final CAPM determination in the 2012 case. Table 7 also includes the range of inputs provided by Dr. Booth in the recent Intragaz, Inc. ("Intragaz") ROE proceeding and the CAPM inputs filed by Concentric in Gaz Métro's most recent (2013) ROE evidence.[85] As shown, there is a wide range of CAPM results based on various assumptions used for the risk free rate, the market risk premium and beta coefficient estimates.

[85] Intragaz did not file a CAPM analysis in its 2013 return on equity evidence.

Table 6: Various CAPM Inputs for Recommended and Allowed ROEs

	Gazifere 2011 Rate Case		Gaz Métro 2012 Rate Case					Intragaz 2013 Rate Case		Gaz Métro 2013 Rate Case
	Régie	**Régie**	Morin	Booth	Booth	**Régie**	**Régie**	Booth	Booth	Coyne CAPM Reconciled
Risk-Free Rate	**4.15%**	**4.50%**	**4.40%**	4.50%	4.50%	3.91%	4.50%	3.00%	3.00%	3.75%
Beta	0.50	0.55	0.70	0.45	0.55	0.50	0.60	0.45	0.55	0.65
x Market Risk Premium	5.50%	5.75%	6.70%	5.00%	6.00%	5.50%	5.75%	5.00%	6.00%	6.94%
Proxy Group Risk Premium	**2.75%**	**3.16%**	4.69%	**2.25%**	**3.30%**	**2.75%**	**3.45%**	2.25%	3.30%	4.54%
Straight CAPM Calculation	**6.90%**	**7.66%**	**9.09%**	6.75%	7.80%	**6.66%**	**7.95%**	5.25%	6.30%	8.29%
Flotation Cost	0.50%	0.50%	0.30%	0.50%	0.50%	0.30%	0.40%	0.50%	0.50%	0.30%
"Simple" CAPM	7.40%	8.16%		7.25%	8.30%	6.96%	8.35%	5.75%	6.80%	8.59%
Risk Adjustment	**0.25%**	**0.50%**				**0.25%**	**0.35%**			
Adjustment for Other Models	**0.25%**	**0.50%**				**0.25%**	**0.50%**			0.75%
Excess Credit Spreads	**0.25%**	**0.55%**		**0.25%**	**0.40%**	**0.25%**	**0.40%**	0.40%	0.40%	
Operation Twist								0.80%	0.80%	
Total	8.15%	9.71%	9.39%	7.50%	8.70%	7.71%	9.60%	6.95%	8.00%	9.34%
Recommended ROE			**9.39%**	**8.10%**				**7.50%**		**9.34%**
Allowed ROE	**9.10%**					**8.90%**				**8.90%**

*The 9.34% CAPM result above may not calculate due to rounding.

Q. Please describe the areas where your analysis diverges from the assumptions and determinations shown in Table 6.

A. There are a few key areas where Concentric's analysis diverges from the CAPM assumptions provided in Table 6. Specifically, we disagree with Dr. Booth's beta coefficient estimates, his MRP estimates and his sole reliance on the traditional CAPM analysis. The resulting "Simple CAPM" estimates demonstrate that the traditional CAPM does not work in the current market environment without adjustments. Dr. Booth's adjustments for "Excess Credit Spreads" (Gaz Métro) and combined with "Operation Twist" (Intragaz) are inadequate to overcome the problems with the beta and market risk premium, which are too low to produce reliable ROE estimates.

Q. Why do you disagree with the beta coefficients generally relied upon by Dr. Booth?

A. Dr. Booth's beta coefficient of 0.45 to 0.55 is unsupported by any publicly available beta coefficient estimates that are used by investors on a day-to-day basis. In a data response filed by Dr. Booth in the 2012 Gaz Métro rate case, he cites a study completed by Gombala and Kahl and notes that: "the only paper that Dr. Booth is aware of that applies beta forecasting models to utilities is the Gombala and Kahl paper in Financial Management….This paper shows that utility betas revert to their own grand mean and not the grand mean of all stocks which is 1.0."[86] In that data response, Dr. Booth did not quote the Gombala paper verbatim. What it actually states is:

> The results of this study, however, indicate that 1.0 is too high an underlying mean for most utilities. Instead, they should be adjusted toward a value that

[86] Dr. Booth's answers to Gaz Métro's Information Requests, August, 2011, Data Request No. 16c.

> is less than one. For Consolidated Edison, an underlying mean of 0.7 would be more appropriate.[87]

This study is over 20 years old and is focused on a single utility. Other than this document, Dr. Booth did not cite any other studies, papers or estimates that would confirm that the grand mean of 0.45 to 0.50 is reasonable. It should be further noted that all beta values used by experts for purposes of the CAPM analysis are adjusted in some way, including the betas used by Dr. Booth. What is most troubling about Dr. Booth's beta range of 0.45 to 0.55 noted above is that he has not presented any specific analysis to support how he determined that range or how it can be used or relied upon prospectively.

Q. Have regulators also determined that Dr. Booth's beta estimate is not consistent with the practices used by financial analysts?

A. Yes, in its 2009 Decision, the BCUC stated:

> The Commission panel will give weight to the CAPM approach, but considers that the relative risk factor should be adjusted in a manner consistent with the practice generally followed by analysts, so that it yields the result that accords with common sense and is not patently absurd.[88]

Further, the Board of Commissioners of Public Utilities for Newfoundland & Labrador also declined to adopt Dr. Booth's beta coefficients:

> The Board notes that the actual beta has not been within the historical average since 1998. (Transcript, Oct. 22, 2009, pg.19/17-25) While the starting point is the historical average beta (which Ms. McShane refers to as a raw beta) the additional analysis performed by Ms. McShane provides other perspectives suggesting the historic average should be adjusted. The Board agrees with Dr. Booth that utilities are a low beta stock. However, given that betas have not recently been within historical norms and in light of the

[87] Time Series Processes of Utility Betas: Implications for Forecasting Systematic Risk, Michael J. Gombola and Douglas R. Kahl, Financial Management/Autumn 1990.

[88] Decision G-158-09: In the Matter of Terasen Gas Inc, Return on Equity and Capital Structure, British Columbia Utilities Commission, December 16, 2009, at p. 45.

> financial market conditions, the Board does not expect that the beta will be within historical averages for 2010. In this circumstance the Board relies on the evidence of Ms. McShane that there should be an upward adjustment. The Board believes that, based on the evidence, a reasonable beta for Newfoundland Power is 0.60.[89]

Q. Please explain why you disagree with the market risk premium used by Dr. Booth as noted in Table 6.

A. Dr. Booth's MRP estimate of 5.0 percent to 6.0 percent is based significantly on studies developed by Professor Pablo Fernandez. Those studies can be viewed as problematic because studies based on surveys do not reflect the views of actual market participants. Moreover, Professor Fernandez's 2011 and 2012 surveys provide the following MRPs for the U.S. and Canada:

Table 7: Recent Fernandez MRP Survey Results[90]

	2012	2011
United States	5.5%	5.5%
Canada	5.4%	5.9%

Although Concentric does not agree that these types of survey results should be used in the calculation of the CAPM, these updated survey results would not support Dr. Booth's contention that the MRP in Canada is significantly lower than the MRP in the U.S.

Q. Do you agree with Dr. Booth's sole reliance on the CAPM analysis to estimate a company's return on equity?

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89 Reason for Decision Order No. P.U.43 (2009), Newfoundland and Labrador Board of Commissioners of Public Utilities, at p. 20.

90 Market Risk Premium used in 82 countries in 2012, a survey with 7,192 answers, Pablo Fernandez, Javier Aguirreamalloa and Luis Corres, June 19, 2012, at 3. Market Risk Premium used in 56 countries in 2011: a survey with 6,014 answers, Pablo Fernandez, Javier Aguirreamalloa and Luis Corres, April 25, 2011, at 3.

A. No. As discussed earlier in this evidence, regulators in British Columbia recently adopted the DCF analysis as the primary method for determining ROE in a case involving Terasen Gas. Moreover, other jurisdictions in Canada have not limited their ROE determinations to just one method, but rather use two or more methods. The OEB concluded that several analytical tests can provide value: "The Board finds that each of the analytical tests has value as each provides a different perspective on the question of the appropriate ROE."[91] Finally, it is interesting to note that Professor Fernandez (the same person cited by Dr. Booth in his 2011 Gaz Métro evidence) has provided evidence that the CAPM does not work and has concluded that historical betas are useless to estimate the expected return of companies.[92]

Q. Do you agree with Dr. Booth's assertion that "the most important thing is to use the right estimation technique and not necessarily a variety of techniques"?[93]

A. No, we do not. As stated previously in our testimony, it is preferable to use multiple methodologies when estimating the cost of equity because each methodology provides a different perspective. Both the DCF method and the CAPM are based on different assumptions, and have strengths and weaknesses depending on the economic and financial market conditions. As such, no individual financial model should be used to estimate the cost of equity on a stand-alone basis without considering the results of other approaches and without applying informed judgment.

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91 Decision with Reasons, Ontario Energy Board, EB-2007-0905, November 3, 2008, at 157.

92 Are calculated betas worth for anything?, Pablo Fernandez, IESE Business Scholl, University of Navarra, October 16, 2008, at p. 2 and p. 18.

93 Reason for Decision Order No. P.U.43 (2009), Newfoundland and Labrador Board of Commissioners of Public Utilities, at p. 15.

4. The CAPM Approach and the Régie

Q. Should the Régie consider modifications such as those it has made in the past related to the beta coefficient, the risk-free rate and the MRP?

A. Yes. As shown in Table 6, the adjustments made to the "Simple CAPM," including the Gaz Métro risk adjustment, the adjustment for "Results of Other Models", and the adjustments for "Excess Credit Spreads" and for "Operation Twist" are all remedies used to adjust the underlying inputs used in the CAPM calculation.

Q. Please discuss the CAPM adjustments the Régie has made in the past.

A. In its recent Decisions, the Régie retained an MRP of 5.50 percent to 5.75 percent for the "Simple CAPM" and allowed an adjustment between 0.25 percent and 0.55 percent to take into account the effect on the corporate bond yield spread during the financial crisis and directly associated this adjustment with the MRP.[94] While Concentric's recommended MRP of 6.67 percent is higher, it is important to note that it does not require an adjustment for "Excess Credit Spreads" since we rely, in part, on forward-looking estimates that account for the higher credit spreads. Also, Concentric has given equal weight to the Canadian and U.S. MRP, consistent with the Régie's approach in recent Decisions.

> [217] The Régie also emphasizes that in its decision D-2009-156, for estimating the market risk premium, it used equal proportions of Canadian and American data. The Régie uses the same approach, taking account of the evidence in this case.[95]

[94] Decision 2011-182, Régie de l'énergie, November 25, 2011, at 76. [English Version] Decision 2010-147, Régie de l'énergie, November 26, 2010, at p. 19. [English Version] Decision D-2009-156, Régie de l'énergie, December 7, 2009, at p. 27. [English Version]

[95] Decision D-2011-182, Régie de l'énergie, November 25, 2009, at p. 57.

Similarly, the Régie has recognized that the CAPM has to be adjusted when the risk-free rate is significantly below its historical average. In one case, it adjusted the final CAPM determination by 40 basis points[96] and in another case adjusted the CAPM determination by a range of 25 to 50 basis points.[97] In addition, Dr Booth, in his Intragaz evidence, refers to an 80 basis point adjustment that he justifies by reference to the effects of "Operation Twist". However, as explained above, the risk-free rate Concentric has used in the CAPM analysis in this testimony relies on the 2013 through 2018 forecast yield for the Canadian long government bond, which reflects the current market reality that near-term bond yields are at all-time lows, and that investors factor higher interest rate levels into their longer-term expectations. As such, there is no need for a specific adjustment for the low level of the risk-free rate, other than the adjustment for the "Results of Other Models" that Concentric has utilized.

Finally, in the same Decisions, the Régie adjusted the "Simple CAPM" determination by 25 to 35 basis points because it recognized that the beta coefficient did not account for Gaz Métro's higher business risk in that case.[98] However, the Beta of 0.59 that Concentric has used in this testimony properly represents HQD's and HQT's risk level, which we believe is more comparable to the U.S. electric utility proxy group.

Q. Does your final CAPM recommendation align with the Régie's previous ROE determinations?

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96 Decision D-2007-116, Régie de l'énergie, October 15, 2007, at p. 7. [English Version]

97 Decision D-2009-156, Régie de l'énergie, December 7, 2009, at 27. [English Version] Decision D-2010-147, Régie de l'énergie, November 26, 2010 at p. 19. [English Version]

98 Decision 2011-182, Régie de l'énergie, November 25, 2011, at p. 76. [English Version] Decision D-2009-156, Régie de l'énergie, December 7, 2009, at p. 69. [English Version]

A. Yes, it does. But rather than the three separate adjustments made by the Régie, amounting to 75 to 155 basis points (Gazifere) or 75 to 125 basis points (Gaz Métro), Concentric has reconciled the CAPM with a single 75 basis point adjustment. This adjustment is comparable to the Régie's "Results of Other Models" adjustment, as shown in Table 6.

B. Discounted Cash Flow ("DCF") Model

1. DCF Theory

Q. Please summarize the theory behind the DCF model.

A. The DCF model evolves from the principle that investors will value a given investment according to the present value of its expected future cash flows over time. This model is widely used in valuing entire companies by discounting the projected cash flows for the enterprise. When valuing the entire enterprise, financial analysts discount the future stream of free cash flows. When considering the common stock of a company, investors consider the future stream of dividends as cash flow from this investment (characterized by the Dividend Discount Model). Efficient markets price a stock according to these expectations, leading to the expression shown in Formula [3]:

$$P = \frac{D_1}{(1+r)^1} + \frac{D_2}{(1+r)^2} + \cdots + \frac{D_n}{(1+r)^n} \quad [3]$$

Assuming a constant growth rate in dividends, the model may be rearranged to compute the ROE accordingly, as shown in Formula [4]:

$$r = \frac{D}{P} + g \quad [4]$$

where:

P = the current stock price
g = the dividend growth rate
D_n = the dividend in year n
r = the cost of common equity.

Stated in this manner, the cost of common equity is equal to the dividend yield plus the dividend growth rate.

Q. What are the assumptions underlying the Constant Growth DCF model?

A. The Constant Growth DCF model is based on the following assumptions: (1) a constant average growth rate for earnings and dividends; (2) a stable dividend payout ratio; (3) a constant price-to-earnings multiple; and (4) a discount rate greater than the expected growth rate. There are other forms of the DCF model that allow for changes in the growth rate assumption if there is reason to believe that investors do not expect a steady growth rate in perpetuity. The Multi-Stage form of the DCF model, for example, sets the subject company's stock price equal to the present value of future cash flows received over several (e.g., two or three) "stages". Cash flows are defined as projected dividends, which increase at the growth rate specific to each stage.

2. Growth Rate Estimates

Q. What are the sources of growth in a company's earnings and dividends?

A. The sources of growth in a company's earnings and dividends are influenced by the investment opportunities and strategies that a company pursues. Utilities generally achieve growth through a combination of service territory expansion, financing structure and operating efficiency. All of the expected sources of growth in a company are reflected through its current stock price, and the resulting dividend yield used in the DCF analysis. It is the growth expectation embedded in those dividend yields that an analyst must estimate in conducting a DCF analysis.

Q. Is the growth rate a key assumption in the use of the DCF model?

A. Yes. Estimating investors' expectations of future growth for the proxy companies is an important factor in the DCF model. Since the growth rate used in the DCF model is an estimate of future growth, there is no precise estimation methodology. Investors and analysts consider historical growth rates in their estimation of future growth rates, but past growth rates may be misleading because they may represent circumstances and operations that cannot be repeated in the future. For example, it is highly unlikely that historical averages over periods with widely varying rates of inflation, interest rates and costs of capital, such as have recently been experienced, will be representative of current growth rate expectations. Therefore, historical growth rates are not the best source of growth rates to be used in the DCF model.

Q. Is it reasonable to assume that investors have reviewed historical growth rates in developing their estimates of future growth for a company?

A. Yes. For that reason, the use of projected growth rates provides investors' understanding of the historical performance of the company as well as their expectations for the future. Typically, investors rely on expected earnings growth rates for several reasons. First, although the DCF model is based on dividend growth rates, a company's dividend growth is derived from and can only be sustained by earnings growth. Second, in order to reduce the long-term growth rate to a single measure, as is required in the Constant Growth DCF model, it is necessary to assume a constant payout ratio, and constant growth rate in earnings per share, dividends per share and book value per share. Third, since earnings growth rates are least influenced by capital allocation decisions that directly affect near-term dividend payout ratios, estimates of earnings growth are more indicative of long-term investor expectations than are dividend growth estimates. Finally, analysts' forecasts of earnings per share growth are widely available, while dividend and book value growth rates are not generally estimated by analysts.[99]

Q. Are projected earnings growth rates for utility companies generally available?

A. Yes, projected earnings growth rates are generally available. For example, analysts' five-year earnings growth rates are publicly available from Zacks' Investor Services for U.S. companies. Thomson First Call (as reported on Yahoo! Finance), which is a public source, and SNL Financial, a subscription-based service, publish earnings growth rates for both Canadian and U.S. companies. All of these services provide consensus estimates that compile projections of earnings growth from several analysts. Value Line, which is a

[99] Value Line Investment Survey is the only publication of which Concentric is aware that projects dividend and book value growth rates. Those estimates represent the Value Line analyst's perspective on dividend and book value growth. In contrast, many of the earnings growth rates that are publicly available are consensus estimates with contributions provided by several analysts.

subscription based publication, provides three-to-five-year projected earnings, dividend and book value growth rates based on the expectations of an individual analyst.

Q. How long have consensus earnings growth rate forecasts been available for Canadian utility companies?

A. SNL Financial began compiling consensus earnings growth estimates for Canadian utility companies in February of 2012. In addition, Thomson First Call also provides long-term growth estimates for Canadian utilities. This is a key change in circumstances from prior cases before the Régie and addresses one of the Régie's previous concerns with using the DCF model. Specifically, in the Régie's 2011 decision concerning Gaz Métro's rate of return, the only significant problem identified with using the DCF method was that: "…it is difficult to obtain a reliable estimator of the dividend growth rate as the financial analysts do not produce growth forecasts for Canadian regulated companies."[100]

3. Reliability of Analysts' Growth Rates

Q. Is there academic support for the use of analysts' earnings growth estimates in the DCF model?

A. Yes, there is significant academic support for the use of analyst growth rates. The relationship between various growth rates and stock valuation metrics has been the subject of much academic research. Many published articles specifically support the use of analysts' earnings growth projections in the DCF model in general, as well as for a method of calculating the expected market risk premium in particular. A 1986 article by Dr. Robert Harris, for example, demonstrated that financial analysts' earnings forecasts (referred to in

[100] Decision D-2011-182, Régie de l'énergie, November 25, 2011, at paragraph [193].

the article as "FAF") in a Constant Growth DCF formula are an appropriate method of calculating the expected market risk premium.[101] In that regard, Dr. Harris noted that:

> […] a growing body of knowledge shows that analysts' earnings forecasts are indeed reflected in stock prices. Such studies typically employ a consensus measure of FAF calculated as a simple average of forecasts by individual analysts.[102]

Dr. Harris further noted that,

> Given the demonstrated relationship of FAF to equity prices and the direct theoretical appeal of expectational data, it is no surprise that FAF have been used in conjunction with DCF models to estimate equity return requirements.[103]

In a 1988 article, Professors Carleton and Vander Weide performed a study to determine whether projected earnings growth rates are superior to historical measures of growth in the implementation of the DCF model.[104] Although the purpose of that study was to "investigate what growth expectation is embodied in the firm's current stock price,"[105] the authors clearly indicate the importance of earnings projections in the context of the DCF model. Professors Carleton and Vander Weide concluded that:

> […] our studies affirm the superiority of analysts' forecasts over simple historical growth extrapolations in the stock price formation process. Indirectly, this finding lends support to the use of valuation models whose input includes expected growth rates.[106]

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101 Robert S. Harris, *Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return*, Financial Management, Spring 1986 at p. 66.
102 Ibid., at p. 59.
103 Ibid., at p. 60.
104 James H. Vander Weide, Willard T. Carleton, *Investor growth expectations: Analysts vs. history,* The Journal of Portfolio Management, Spring 1988.
105 Ibid., at p. 78.
106 Ibid., at p. 82.

Similarly, in a 1992 article, Harris and Marston presented "estimates of shareholder required rates of return and risk premia which are derived using forward-looking analysts' growth forecasts".[107] In addition to other findings, Harris and Marston reported that,

> […] in addition to fitting the theoretical requirement of being forward-looking, the utilization of analysts' forecasts in estimating return requirements provides reasonable empirical results that can be useful in practical applications.[108]

More recently (2004), the Carleton and Vander Weide study was updated to determine whether the finding that analysts' earnings growth forecasts are relevant in the stock valuation process still holds. The results of that updated study continued to demonstrate the importance of analysts' earnings forecasts, including the application of those forecasts to utility companies.[109] Similarly, Brigham, Shome and Vinson noted that "evidence in the current literature indicates that (1) analysts' forecasts are superior to forecasts based solely on time series data; and (2) investors do rely on analysts' forecasts."[110]

Q. What is "optimism bias" in the earnings growth rate forecasts of security analysts, and how would it affect an estimate of the ROE?

A. Optimism bias is related to the alleged tendency for analysts to forecast earnings growth rates that are higher than are actually achieved. If optimism bias were present in analysts' earnings forecasts, it could create an upward bias in the estimated cost of capital that results from the DCF approach.

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107 Robert S. Harris, Felicia C. Marston, *Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts*, Financial Management, Summer 1992.

108 Ibid., at p. 63.

109 Advanced Research Center, *Investor Growth Expectations*, Summer, 2004.

110 *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management, Spring 1985.

Q. Is it reasonable to believe that analysts' earnings growth estimates currently may be overly optimistic or may represent a conflict of interest?

A. No. Several regulatory changes have been implemented that are designed to provide fair disclosure and eliminate analysts' bias. On August 15, 2000, the U.S. Securities and Exchange Commission ("SEC") adopted Regulation FD to address the selective disclosure of information by publicly traded companies and other issuers. Regulation FD provides that when an issuer discloses material information, the issuer must publicly disclose that information to all investors at the same time. In this way, the new rule aims to promote full and fair disclosure.

Q. Have there been other regulatory changes that affect the interaction between analysts and investors?

A. Yes. In 2002 the SEC, the New York Stock Exchange, the New York Attorney General, and other state regulators introduced guidelines regarding the interaction between analysts and investment banks that has become known as the Global Analysts Research Settlement. The Global Settlement outlines the following structural reforms that limit the interaction between analysts and investment banks:

- The firms will separate research and investment banking, including physical separation, completely separate reporting lines, separate legal and compliance staffs, and separate budgeting processes.
- Analysts' compensation cannot be based directly or indirectly upon investment banking revenues or input from investment banking personnel.
- Investment bankers cannot evaluate analysts.

- An analyst's compensation will be based in significant part on the quality and accuracy of the analyst's research.
- Decisions concerning compensation of analysts will be documented.
- Investment bankers will have no role in determining what companies are covered by the analysts.
- Research analysts will be prohibited from participating in efforts to solicit investment banking business, including pitches and road shows.
- Firms will implement policies and procedures reasonably designed to assure that their personnel do not seek to influence the contents of research reports for purposes of obtaining or retaining investment banking business.
- Firms will create and enforce firewalls between research and investment banking reasonably designed to prohibit improper communications between the two. Communications should be limited to those enabling research analysts to fulfill a "gatekeeper" role.
- Each firm will retain, at its own expense, an Independent Monitor to conduct a review to provide reasonable assurance that the firm is complying with the structural reforms. This review will be conducted eighteen months after the date of the entry of the Final Judgment, and the Independent Monitor will submit a written report of his or her findings to the SEC, NASD, and NYSE within six months after the review begins.[111]

Q. Has any research been conducted to measure whether analyst forecast bias exists since the Global Settlement was implemented?

[111] U.S. SEC Fact Sheet on the Global Settlement. The Global Settlement was finalized on April 28, 2003; however, the reforms were introduced and discussed prior to being finalized.

A. Yes. A 2010 article in Financial Analyst Journal found that analyst forecast bias has declined significantly or disappeared entirely since the Global Settlement:

> Introduced in 2002, the Global Settlement and related regulations had an even bigger impact than Reg FD on analyst behavior. After the Global Settlement, the mean forecast bias declined significantly, whereas the median forecast bias essentially disappeared. Although disentangling the impact of the Global Settlement from that or related rules and regulations aimed at mitigating analysts' conflicts of interest is impossible, forecast bias clearly declined around the time the Global Settlement was announced. These results suggest that the recent efforts of regulators have helped neutralize analysts' conflicts of interest.[112]

4. Predominance of DCF Approach in North American Regulatory Decisions

Q. What are the traditional models used in Canada and the U.S. to estimate the cost of equity for regulated utilities?

A. While Canadian regulatory agencies have generally favored the CAPM approach, the DCF model is the predominant method relied on in U.S. state and Federal regulatory proceedings.

Q. What forms of the DCF model are relied on by the FERC?

A. Since the 1980s, the FERC has relied on the DCF model for natural gas pipeline companies and electric transmission and wholesale distribution assets.[113] In Opinion No. 486-B, the FERC provided guidance on how each of the assumptions of the Two-Stage DCF model should be specified for natural gas pipeline companies. Specifically, the FERC relies on analysts' projected earnings growth rates in the first stage and a measure of GDP growth as the long-term growth rate. The FERC relies on a similar form of the Two-Stage DCF model

[112] Armen Hovakimian and Ekkachai Saenyasiri, *Conflicts of Interest and Analyst Behavior: Evidence from Recent Changes in Regulation*, Financial Analysts Journal, Volume 66, Number 4, July/August 2010, at p. 105.

[113] Docket No. PL07-2-000, Composition of Proxy Groups for Determining Gas and Oil Pipeline Return on Equity, Policy Statement, April 17, 2008, at p. 2.

to estimate the cost of equity for electric transmission and distribution assets. In that model, the FERC relies on an equal weighting of analysts' projected earnings growth rates and the sustainable growth rate in a constant growth model.

Q. Do U.S. state regulatory commissions generally give primary weight to the DCF model in estimating the cost of equity?

A. Yes. Many U.S. state regulatory commissions rely exclusively on the DCF model for estimating the cost of capital or have afforded the results of this model considerable weight in ROE determinations. Based on a review of recent state regulatory commission decisions, at least twelve state commissions have primarily relied on the DCF model for estimating the cost of equity. Furthermore, certain states have a long-standing policy of relying on the DCF model.

Alaska

> Although we consider all ROE analyses submitted to us by expert witnesses, in recent cases we have relied most heavily on the constant growth variant of the DCF model and have indicated our preferred ways of calculating it. We continue to give the most weight to constant growth DCF analyses in this case. We believe that weighting is appropriate under current economic conditions.[114]

District of Columbia

> In its decisions, the Commission has relied primarily on the DCF method to determine a utility's cost of common equity because the Commission consistently has found that the DCF method produces more reasonable results than those of other calculation methods. Nevertheless, the Commissions' preference for the DCF method does not preclude consideration of other methods for calculating the cost of equity. The Commission has taken into account the results of the various approaches (DCF, CAPM, and Risk Premium) in estimating the ROE in this proceeding.

[114] Regulatory Commission of Alaska, Docket No. U-10-29, Order No. 15, September 2, 2011, at p. 26.

> The Commission, however, will focus on the DCF model (relying primarily on forecasted growth rates) to determine the appropriate ROE.[115]

Illinois

> Historically speaking, the Commission has relied heavily on the constant growth DCF model; however, in recent years the Commission has tended to favor the multi-stage DCF model over the constant growth model due to concerns about the sustainability of analysts' growth rate estimates . . . The Commission would not be surprised if circumstances change such that, at some point in time, it would be appropriate to rely on the constant growth DCF model.[116]

Maryland

> None of the parties' recommendations for ROE were based purely on the classic DCF analysis, which the Commission has historically preferred and deemed the most reliable basis for estimating return on equity. Consistent with our preference for DCF, we find that the most appropriate estimate of ROE in this case is 9.60, which is the ROE calculated by Staff witness Alvarado using the classic DCF analysis.[117]

New Mexico

> The DCF model is the traditional method relied on by this Commission to determine return on equity. It has been used by the Commission in the past for many utilities, including PNM Gas Services and its predecessor. See, Final Orders in Case Nos. 2662, 2147, 1787. The DCF methodology is used in a majority of the states and its use by this Commission has been expressly approved by the Supreme Court of New Mexico.[118]

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115 Public Service Commission of the District of Columbia, Docket No. FC-1076, Order No. 15710, March 2, 2010, at p. 25.

116 Illinois Commerce Commission, Docket No. 11-0282, January 10, 2012, at p. 121.

117 Maryland Public Service Commission, Case No. 9267, Order No. 84475, November 14, 2011, at p. 49.

118 New Mexico Public Regulation Commission, Recommended Order in Case No. 06-00210-UT, at p. 19.

Utah

> We continue to place primary reliance upon DCF model results to estimate the cost of common equity. The risk premium models also provide information which can appropriately be considered in determining the cost of common equity in this case.[119]

In contrast, we are not aware of any state regulatory commissions that rely primarily on the CAPM. Furthermore, Massachusetts, for example, has determined that the CAPM has limited or no value in estimating the ROE.

> The Department has previously found that the traditional CAPM as a basis for determining a utility's cost of equity has limited value and, in some cases no value, because of a number of limitations including questionable assumptions that underlie the model.[120]

Q. Have any public utility commissions in Canada given primary weight to the DCF analysis?

A. Yes, the BCUC has given weight to the DCF method in the past and recently adopted the DCF analysis as its primary method for determining ROE in the Terasen Gas case. When determining a fair rate of return in 2006, the BCUC gave weight to both the Equity Risk Premium ("ERP") and DCF approaches.[121] Again in 2009, the BCUC considered DCF, ERP, and CAPM approaches, but found that the DCF and ERP are the most common approaches and determined "that the DCF approach has more appeal in that it is based on a sound theoretical base, it is forward looking and can be utility specific."[122] Overall, the BCUC decided:

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119 Utah Public Service Commission, Docket No. D-09-035-023, February 18, 2010, at p. 8-9.

120 Massachusetts Department of Public Utilities, Docket Nos. DPU 11-01 and 11-02, August 1, 2011, at p. 414-415.

121 British Columbia Utilities Commission, In the Matter of Terasen Gas Inc. and Terasen Gas (Vancouver Island) Inc. Application to Determine the Appropriate Return on Equity and Capital Structure and to Review and Revise the Automatic Adjustment Mechanism, March 2, 2006, at p. 1.

122 British Columbia Utilities Commission, In the Matter of Terasen Gas Inc., Terasen Gas (Vancouver Island) Inc., Terasen Gas (Whistler) Inc. and Return on Equity and Capital Structure, December 16, 2009, at p. 45.

> Accordingly the Commission Panel determines that in determining a suitable ROE for TGI, it will give the most weight to the DCF approach, some lesser weight to the ERP and CAPM approaches and a very small amount of weight to the CE approach.[123]

For the DCF approach, the BCUC found that U.S. data can act as a proxy for Canadian data and rejected suggestions of analyst bias, noting that no allegations of upward bias have been leveled against utility analysts.

Moreover, recently the NEB gave significant weight to a multi-stage DCF model in determining the authorized ROE for TransCanada's Mainline Pipeline, noting:

> Historically, the Board has not relied on the DCF model to estimate cost of capital, primarily due to the perceived difficulty in accurately estimating growth rates. We note that the recent financial market turmoil generates utility betas lower than their historical average and evidence from both expert witnesses noted that DCF results, in the current environment, were yielding cost of equity estimates higher than those resulting from the CAPM. In the current circumstances, we are of the view it is appropriate to give weight to the multi-stage DCF results in this proceeding. Further, we note that growth rates for relatively stable industry such as utilities are more reliable, which somewhat mitigates concerns about the reliability of analysts' forecasts.
>
> …
>
> Both the CAPM and DCF models, in our view, have some shortcomings and some advantages in their application. We believe that giving weight to both models in this case provided a more accurate estimate of the Mainline's cost of capital than would have been provided by the application of either model on its own. We are of the view that by giving weight to both models, the effects of beta decoupling and interest rate sensitivity inherent in the CAPM should be largely accounted for. Further, concerns about the analyst-estimated growth rates used in the DCF model are counterbalanced by lower CAPM results.[124]

5. The DCF Approach and the Régie

[123] Ibid.

[124] National Energy Board, Reasons for Decision, In the Matter of TransCanada PipeLines Limited, NOVA Gas Transmission Ltd., and Foothills Pipe Lines Ltd. Business and Services Restructuring Proposal and Mainline Final Tolls for 2012 and 2013, RH-003-2011, March 2013, at pp. 182-183.

Q. Has the Régie previously considered multiple methods for determining the cost of equity?

A. Yes. For example, in its Decision D-2011-182 the Régie stated:

> […] as no single method can perfectly reproduce the expected return for investors, the Régie takes into account, for the purposes of assessing the rate of return on Gaz Métro's shareholders' equity, the results from the DCF model […] [Para. 207]

Similarly, in Decision D-2009-156 the Régie stated:

> […] as no one model can perfectly reproduce investors" return expectations, the Régie is taking into consideration the results of the ECAPM and the DCF model […] as well as the results of the multi-factor model […] for its assessment of Gaz Métro's rate of return. [Para. 240]

Q. Has the Régie provided any guidance on the use of the DCF methodology for estimating the ROE?

A. Yes. In the 2011 decision concerning Gaz Métro's rate of return, the Régie declined to consider the DCF methodology, stating "[…] it is difficult to obtain a reliable estimate for the growth rate dividends given the financial analysts do not produce growth forecasts for regulated Canadian utilities."[125] However, as discussed earlier in our testimony, since that time**,** both SNL Financial and Thomson First Call now report long-term growth estimates for Canadian utilities, which alleviates the concerns raised previously by the Régie.

6. DCF Analysis and Results

a. Dividend Yield

Q. What is the formula for the dividend yield component of the DCF model?

[125] D-2011-182, November 25, 2011, at [193].

A. As shown in equation [5] below, the dividend yield component of the DCF model is calculated as follows:

$$[5] \quad Y = \frac{D_0(1+0.5g)^1}{P_0}$$

Q. Why is one half year of growth applied to the dividend in the dividend yield calculation?

A. Since utility companies tend to increase their quarterly dividends at different times throughout the year, it is reasonable to assume that dividend increases will be evenly distributed over calendar quarters. As such, it is reasonable to apply one-half of the expected annual dividend growth rate for purposes of calculating the expected dividend yield component of the DCF model. This adjustment ensures that the expected dividend yield is, on average, representative of the coming twelve-month period, and does not overstate the aggregated dividends to be paid during that time.

Q. How did you calculate the dividend yields for the companies in your comparison groups?

A. The dividend yields presented were calculated for each company in the Canadian and U.S. proxy groups by dividing the current annualized dividend by the average stock price for each company. The price component of the calculation is based on the average closing prices for the 30-, 90-, and 180-trading days ended February 28, 2013. Those dividend yields are multiplied by the DCF model factor (1 + 0.5g) to reflect expected future dividend increases, to arrive at the dividend yield component of the DCF model.

b. Constant Growth Rate Analysis

Q. Please describe the growth rates used in your Constant Growth DCF analysis.

A. The Constant Growth DCF analysis for the Canadian proxy group relies on analysts' forecasts of earnings growth. That DCF analysis recognizes that the consensus of analysts' earnings growth forecasts reflects the most important component of investors' growth rate expectations, and it assumes that the analysts' earnings growth forecasts incorporate all information required to estimate a long-term expected growth rate for a company. As discussed earlier, financial research and empirical literature indicate that analysts' earnings growth forecasts are the best available estimates for future growth rates. Available earnings growth estimates from SNL Financial, Value Line and Thomson First Call for each company in the Canadian proxy group were used.[126] Those growth rates are shown on Exhibit JMC-9. For the U.S. electric utility proxy group, Concentric used a blended growth rate that combines the analysts' consensus growth rate estimates from Zacks, SNL and First Call and Value Line forecasts. Those growth rates are also shown on Exhibit JMC-9.

c. Retention Growth Rate Analysis

Q. Did you also consider retention growth rate in your DCF analysis?

A. Yes. For the U.S. electric utility proxy group, Concentric also developed a retention growth DCF estimate. For that model, an average growth rate was developed by blending the average of the earnings growth rates reported by Zacks, SNL Financial, First Call and Value Line with the retention growth rates calculated using data from Value Line. Retention growth is generally a suitable indicator of the minimum level of growth that a company can maintain three to five years in the future. The blended growth rate forecasts that combine those two indicators for the sustainable DCF analysis are shown on Exhibit JMC-10, Schedules 1-3. In the current weak economic environment, it is reasonable to combine

[126] Zacks growth rates are not available for the Canadian proxy group companies.

retention growth forecasts for the U.S. electric utility proxy group with analysts' earnings forecasts.

Q. How is the retention growth rate calculated?

A. The retention growth rate is based on the premise that future growth in dividends results from a portion of the total return being reinvested into the company, instead of being paid to investors in the form of a dividend. The retention growth rate is calculated based on the following formula:

[6] $g = (b \times r)$

Where:

b = the percent of earnings that is retained

r = the book equity of the company

In this formula the "b" and "r" terms should be forward-looking estimates.

Retention of earnings causes an increase in the book value per share and, other factors being equal, increases the amount of earnings that is generated per share of common stock. For example, a company that is expected to earn a return of 9 percent and retain 80 percent of its earnings might be expected to have a growth rate of 7.2 percent, computed as follows:

0.80 x 9% = 7.2%

On the other hand, another company that is also expected to earn 9 percent but only retains 20 percent of its earnings might be expected to have a growth rate of 1.8 percent, computed as follows:

0.20 x 9% = 1.8%

Thus, the rate of growth in a firm's book value per share is primarily determined by the level of earnings and the proportion of earnings retained in the company.

Q. How did you account for external growth in your retention growth rate calculation?

A. The "br + sv" form of the sustainable growth estimate is meant to reflect growth from both internally generated funds (i.e., the "br" term) and from issuances of equity (i.e., the "sv" term), as shown in Equation [7] below. As noted above, the first term, which is the product of the retention ratio (i.e., "b") and the expected Return on Equity (i.e., "r") represents the portion of net income that is "plowed back" into the company as a means of funding growth. The "sv" term, which represents growth from external capital, often is represented as:

$$(\frac{m}{b} - 1) \text{ x Common Shares growth rate [7]}$$

where:

$\frac{m}{b}$ = the market to book ratio.

In this form, the "sv" term reflects an element of growth as the product of (1) the growth in shares outstanding, and (2) that portion of the market-to-book ratio that exceeds unity.

Q. What is the data source you relied on to calculate retention growth rates for the U.S. electric utility proxy group in your DCF analysis?

A. Value Line publishes forecasts of data that can be used to calculate retention growth rates for each company three to five years in the future. The derivation of Value Line's retention growth rates for the U.S. electric utility proxy group is shown on Exhibit JMC-10, Schedule 4.

d. Multi-stage DCF Model

Q. Have you considered any other forms of the DCF model?

A. Yes, in order to address some of the limiting assumptions underlying the Constant Growth form of the DCF model, Concentric also considered the results of a multi-period (three-stage) DCF Model. The Multi-stage DCF model tempers the assumption of constant growth in perpetuity in the Constant Growth DCF model with a three-stage approach: near-term, transitional, and long-term growth.

Q. Please describe your Multi-stage DCF model.

A. The Multi-stage model transitions from near-term growth, (i.e., the average of Value Line, Zacks, SNL Financial and First Call forecasts used in the Constant Growth model) for the first stage (years 1-5) of the analysis, to the long-term forecast of GDP growth for the third stage of the analysis (years 11 and beyond). The second, or transitional stage, connects the near-term growth rate with the long-term growth rate for the transitional period by changing the growth rate each year on a pro rata basis. In the terminal stage, the dividend cash flow then grows at the same rate as nominal GDP into perpetuity. The ROE is the internal rate of return based on the stock price today and the discounted value of all future dividend payments.

The Multi-stage DCF model was applied to both the Canadian and U.S. proxy groups. The assumptions used with respect to the various model inputs are shown in Table 8.

Table 8: Multi-stage DCF Model Assumptions

Model Input		Stage 1	Stage 2	Stage3
Years	Start	1 – 5	6 – 10	>11
Stock Price and Dividend Yields	30, 90 and 180 day average			
Earnings Growth		EPS growth as average of Value Line and First Call, SNL and Zacks (as available) projected growth rates	Transition to long-term GDP growth on arithmetic average basis	Long-term GDP growth

The nominal GDP growth rates for Canada and the U.S. were developed using available data for each country from Consensus Economics, Inc. for the period from 2018-2022. These forecasts are based on real (constant dollar) growth rates and estimates of inflation. The inflation estimate was applied to the estimate of real GDP growth to derive the nominal (post-inflation) GDP growth rate. The estimates of nominal GDP growth that were utilized are summarized in Table 9.

Table 9: Estimates of Nominal GDP Growth [127]

Source	Canada	U.S.
Real GDP Growth	2.0%	2.5%
Inflation	2.0%	2.4%
Nominal GDP Growth	4.04%	4.96%

e. DCF Results

[127] Consensus Forecasts, for 2018-2022, October 8, 2012, at pp. 3 and 28.

Q. Please summarize your DCF results.

A. The DCF results are summarized on Table 10. As shown on that table, the DCF analyses across all methods indicate an average cost of common equity of 10.71 percent for the Canadian proxy group and 9.41 percent for the U.S. electric utility proxy group, including a 30 basis point adjustment for flotation costs and financial flexibility.

Table 10: DCF Results (including flotation costs)

Market Data Averaging Period	Constant Growth DCF	Sustainable Growth DCF[128]	Multi-Stage DCF	Average
Canadian Utility Proxy Group				
30-day	11.96%	N/A	9.27%	10.62%
90-day	12.06%	N/A	9.40%	10.73%
180-day	12.12%	N/A	9.47%	10.80%
Average	**12.05%**		**9.38%**	**10.71%**
U.S. Electric Utility Proxy Group				
30-day	9.53%	9.15%	9.38%	9.30%
90-day	9.64%	9.26%	9.50%	9.20%
180-day	9.57%	9.20%	9.43%	9.30%
Average	**9.58%**	**9.20%**	**9.44%**	**9.41%**

7. Flotation Cost Adjustment

Q. What are flotation costs?

A. Flotation costs are the costs associated with the sale of new issues of common equity. These costs include out-of-pocket expenditures for the preparation, filing, underwriting, and other costs of issuance of common equity.

[128] Data for the Sustainable Growth model is unavailable from Value Line for Canadian companies.

Q. Does the investor return requirement that is estimated by the CAPM or DCF analysis need to be adjusted for flotation costs in order to estimate the cost of equity?

A. Yes. Because the purpose of the allowed rate of return in a regulatory proceeding is to estimate the cost of capital the regulated company would incur to raise money in the "primary" markets, an estimate of the returns required by investors in the "secondary" markets must be adjusted for flotation costs in order to provide an estimate of the cost of capital that the regulated company requires.

Q. Has the Régie typically allowed an adjustment for flotation costs and financial flexibility?

A. Yes. The Régie has recently determined that an adjustment of between 30 and 50 basis points constitutes a fair and reasonable adjustment to the results obtained from secondary market information.[129] Such an adjustment would also apply in this case, in order for HQD's and HQT's authorized ROE to reflect the risks associated with issuers of equity in the public markets. Therefore, Concentric has adjusted the CAPM and DCF results by 30 basis points for flotation costs.

Q. Is an adjustment for flotation costs reasonable for HQD and HQT despite the government ownership structure?

A. Yes. First, from a policy perspective, the HQD and HQT ROEs are established on a stand-alone basis, reflecting the true cost to raise equity capital in the markets. Because companies must pay underwriters a fee to issue new common equity, it is reasonable to reflect that cost in the determination of the market-required ROE for HQD and HQT. Next, because

[129] See Table 6.

regulation is meant to replace competition in terms of price setting, the inclusion of an allowance for flotation costs sends the appropriate price signals to consumers of electricity as to the true cost of electric distribution and transmission service. As such, Concentric has remained consistent with the Régie's historical practice of applying an adjustment for flotation costs and financial flexibility by adjusting the analytical results by 30 basis points. Such an adjustment is at the lower end of the range of flotation cost adjustments historically made by the Régie, which is reasonable considering HQD's and HQT's size and the implications for that size on the cost of issuing new common equity.

X. OVERALL CONCLUSIONS AND RECOMMENDATIONS

Q. Please summarize the results of your analyses.

A. A summary of our analytical results, including flotation costs, is provided in Table 11.

Table 11: ROE Results

Capital Asset Pricing Model				
Inputs		**CAPM Reconciled**		
Risk Free Rate		4.23%		
Beta		0.59		
Market Risk Premium		6.67%		
	Sub-Total	8.17%		
Flotation Cost		0.30%		
	Sub-Total	8.47%		
Adjustment for Other Models		0.75%		
	Total	9.22%		
Discounted Cash Flow				
Market Averaging Period	**Constant Growth**	**Sustainable Growth**	**Multi-Stage**	**Average**
Canadian Utility Proxy Group				
Average ROE	11.75%	N/A	9.08%	10.41%
Flotation Cost	0.30%	N/A	0.30%	0.30%
Average ROE with Flotation Cost	**12.05%**		**9.38%**	**10.71%**
U.S. Electric Utility Proxy Group				
Average ROE	9.28%	8.90%	9.14%	9.11%
Flotation Cost	0.30%	0.30%	0.30%	0.30%
Average ROE with Flotation Cost	**9.58%**	**9.20%**	**9.44%**	**9.41%**

Q. Considering the various ROE analyses presented in your testimony, what is your recommendation with respect to the appropriate ROE for HQD and HQT?

A. Although the CAPM has been used by experts in the past before the Régie, based on the current capital market conditions and the effect of those conditions on the CAPM at this time, Concentric believes it is now appropriate to place more weight on the DCF model as the basis for the recommended ROE for HQD and HQT. The Régie has previously recognized that the calculation of the ROE required consideration of alternative models. Furthermore, as discussed in greater detail in Section VIII, Concentric has analyzed the risks of a carefully-selected proxy group of U.S. electric utility companies and compared those risks to the risks of HQD and HQT. The results of that comparison demonstrate that the U.S. electric utility proxy group is more comparable to HQD and HQT than the Canadian utility proxy group. Concentric, therefore, places greater weight on the U.S. electric utility proxy group in forming the basis of the recommended ROE.

The results produced by the various methods and inputs cover a broad spectrum. This is not surprising given the range of inputs and techniques employed and unprecedented market conditions. All methods are not, however, providing a reasonable estimate for HQD's and HQT's cost of equity at this time. As the Régie has confirmed in the past, consistent with the *Hope* decision, it is the end result and not the method that is determinative of a fair return.

Based on the results of the analyses discussed above and throughout our testimony, the ability of the CAPM to produce reliable results is questionable in light of the factors affecting the inputs at this time. Bond yields in Canada and the U.S. have been driven to all-

time lows, and most would agree below sustainable levels in the longer term. As a result of the financial crisis and recession, utility betas have also been impacted, and market risk premium estimates cover a broad spectrum. There is a substantial gap between historic equity returns and the higher returns implied in current stock market data. These are problems with the CAPM, and in general, in the current market environment.

As shown in Table 11 and described in the CAPM section, we reconcile for these differences using logic employed by the Régie in the past. We begin with a Canadian risk free rate. The Market Risk Premium is a combination of both Canadian and U.S. market inputs, including both historic and forward-looking estimates. The beta is derived from the U.S. electric utility proxy group, based on evidence showing that a carefully selected U.S. proxy group is more representative of HQD and HQT than the Canadian companies; therefore, the beta from the U.S. companies is more representative. Floatation costs are included consistent with the Régie's past decisions, and finally, a 75 basis point adjustment is made for differences between the CAPM results and the DCF models. This reconciliation is consistent with the Régie's approach factoring in "Adjustment for the Result of Other Models" in the 2012 Gaz Métro rate case. The reconciled CAPM result of 9.22 percent offers a view into the required adjustment to inputs to achieve a reasonable result in the current environment.

Under current market conditions, Concentric believes greater weight should be given to the DCF model. The average of the DCF method for the U.S. electric utility proxy group produces a relatively tight range of 9.20 percent to 9.58 percent, with an average of 9.41 percent. The Canadian DCF produces a range of 9.38 percent to 12.05 percent, averaging

10.71 percent. Placing more weight on the analytical results produced by the DCF model with U.S. proxy companies and selecting the lower end of the range due to the lack of generation risk (even though we have not made any offsetting adjustment for higher financial risk), the estimated cost of equity for HQD and HQT is 9.2 percent. This recommended ROE is supported by the range of analytical results produced by DCF analyses for both the Canadian proxy group and the U.S. electric utility proxy group, and can be reconciled with the CAPM with appropriate adjustments.

Application of the traditional CAPM formula, not including flotation costs, to the Canadian proxy group would produce a 7.81 percent ROE. This return would not be within the reasonable range of ROE estimates, and in Concentric's view would not meet the measures of a fair return. In addition, it would not be consistent with the stand-alone principle, which requires the allowed ROE for HQD and HQT to be set at a level as if the companies were independently going to the equity markets to raise capital.

Q. Does this conclude your pre-filed Direct Testimony?

A. Yes, it does.

APPENDIX A: BUSINESS RISK ANALYSIS

Q. Please describe how your business risk analysis is organized.

A. Each section of the risk analysis begins with a discussion of the particular business risk for HQD and HQT and then examines the relative situation for the Canadian and U.S. proxy group companies. The results of Concentric's business risk analysis are summarized on Exhibit JMC-4, Schedules 1-7. The percentages on that exhibit are weighted based on the number of customers at each operating company. In Concentric's view, that is a fair and reasonable representation of the percentage of utility revenues and costs that are protected against a specific business risk. Among the U.S. electric utility proxy group, Concentric excluded any operating companies that accounted for less than 10 percent of the total distribution customers of the parent company (e.g., the risk analysis was performed for Northern States Power – Minnesota in the State of Minnesota, but not in South Dakota), any operating companies that provided service within the same jurisdiction as a larger entity (e.g., the risk analysis was performed for Consolidated Edison of New York, but not for Orange and Rockland, both of which provide service in the State of New York), and any operating companies that provide regulated natural gas distribution service.

(1) Ownership of Regulated Generation

Q. Please discuss your analysis of the business risk associated with owning regulated generation.

A. Concentric examined the effect that owning regulated generation has on the business risk of the Canadian and U.S. electric utility proxy group companies relative to HQD and HQT. In that regard, HQD owns very limited diesel generation in remote communities, but it is

essentially a pure-play distribution company. HQT does not own generation and is a pure-play transmission company. Among the operating companies in the Canadian proxy group, Nova Scotia Power is the only electric utility that owns significant regulated generation, while FortisBC Electric and Newfoundland Power own limited generation. In summary, as shown on Exhibit JMC-4, Schedule 1, 13 percent of the operating companies in the Canadian proxy group (based on number of customers) own regulated generation, and an additional 11 percent of those companies own limited generation, such as renewable resources like solar, wind, and biomass.

By comparison, as also shown on Exhibit JMC-4, Schedule 1, 70 percent of the operating utilities in the U.S. proxy group (based on number of customers) own regulated generation, while 18 percent own limited regulated generation, and the remaining 12 percent do not own regulated generation. On this factor, many operating companies in the U.S. electric utility proxy group have more business risk than HQD because they retain the generation function. As discussed in Section VIII of the testimony, from 2004-2012, integrated electric utilities in the U.S. were awarded an ROE approximately 40 basis points higher than transmission and distribution utilities. As also discussed in Section VIII of the testimony, Concentric has determined that the higher business risk of the U.S. electric utility proxy group due to ownership of regulated generation is more than offset by the lower financial risk of the U.S. proxy group. We note that the FERC relies on proxy groups containing both T&D and vertically-integrated electric utilities for the purpose of setting allowed ROEs for electric transmission, without any risk adjustment for generation. Consequently, Concentric does not believe that an adjustment to the U.S. results for ownership of regulated generation is necessary.

(2) Fuel and Purchased Power Cost Risk

Q. Please discuss the risk associated with fuel and purchased power costs.

A. Fuel and purchased power costs represent approximately 50 to 65 percent of total operating expenses for a typical electric distribution utility. For that reason, equity investors and credit rating agencies are focused on whether the utility has any risk associated with recovery of those costs. According to Moody's, "both the magnitude and volatility of these costs make fuel adjustment clauses one of the more widely used and effective cost recovery mechanisms in the industry."[130] For electric utilities that no longer own generation assets after the deregulation of electricity markets, Moody's observes that fuel adjustment clauses, which include purchased power costs, have become critical because many of these companies are responsible for procuring power for their retail customers as part of their "Provider of Last Resort" obligations, and therefore are responsible for procuring their generation requirements in the wholesale power market.[131]

HQD purchases approximately 97 percent[132] of its power from the Heritage Pool supplied by Hydro Québec Production ("HQP") at a fixed price per kilowatt hour set by the Québec government, while the remaining three percent of the energy supply is obtained primarily from long-term contracts. As such, HQD faces price fluctuations for approximately three percent of its electricity supply. HQD does not have an automatic fuel adjustment mechanism; any changes in purchased power costs are recovered through the Company's

130 "Cost Recovery Provisions Key to Investor Owned Utility Ratings and Credit Quality: Evaluating a Utility's Ability to Recover Costs and Earn Returns," Moody's Investors Service, June 18, 2010, at p. 7.

131 Ibid.

132 Source: Hydro Quebec Annual Report 2011. Total electricity sales in 2011 were 170 TWh, and HQD purchased 165 TWh of electricity from HQP.

annual rate case filing. Any difference between actual and forecasted purchased power costs is deferred and recovered through a cost variance account.

Nova Scotia Power is the only company in the Canadian proxy group that owns significant regulated generation; it has an annual fuel adjustment mechanism that includes an incentive component whereby Nova Scotia Power retains or absorbs ten percent of the over- or under-recovered amount up to a maximum of $5 million. Both gas distribution utilities (Enbridge Gas Distribution and Gaz Métro) have purchased gas adjustment ("PGA") mechanisms that allow them to pass through the cost of natural gas. Similarly, all of the operating utilities in the U.S. electric utility proxy group have fuel cost recovery mechanisms that allow them to pass through fuel and purchased power costs to customers, where applicable. As such, the operating companies in the Canadian and U.S. proxy groups are not at risk for differences between the projected and actual cost of fuel with the exception of those electric utilities in Wisconsin which are exposed to risk for two percent of fuel costs[133] and Nova Scotia Power, which has cost recovery risk for ten percent of its fuel and purchased power costs. While HQD has more protection with respect to the price stability of its electricity supply, the Canadian and U.S. proxy group companies have protection with regard to recovery of fuel or purchased power costs.

Concentric also examined the frequency of the fuel cost recovery mechanisms in order to determine whether certain companies have more timely recovery of changes in fuel supply costs. In its risk assessment of the utilities sector, DBRS differentiates its ranking on energy

[133] The Wisconsin Public Service Commission adopted new fuel cost rules that became effective January 1, 2011. Under these new rules, electric utilities forecast fuel and purchased power costs, which are included in base rates. Any variations from the forecast are deferred for future recovery, with the exception of +/- 2%, which is retained or absorbed by the utility.

cost recovery, in part, based on how often the utility is allowed to adjust fuel costs in retail rates, as well as whether the adjustment is automatic or subject to regulatory review.[134]

As noted above, HQD does not have an automatic adjustment mechanism for purchased power costs so the Company recovers any changes in those costs through its annual rate case filing. As shown on Exhibit JMC-4, Schedule 2, among the operating companies in the Canadian proxy group, Nova Scotia Power has an annual fuel cost recovery mechanism, while Enbridge Gas Distribution has a quarterly PGA mechanism and Gaz Métro has a monthly PGA mechanism. The other electric operating companies in the Canadian proxy group are not responsible for the generation function. Among the operating companies in the U.S. electric utility proxy group that have fuel cost recovery risk, approximately 44 percent (based on number of customers) are allowed to adjust fuel and purchased power costs at least twice each year, while 56 percent have annual or "periodic" adjustment mechanisms.

Since HQD has little risk associated with variations in fuel or purchased power costs, and since many of the operating companies in the Canadian and U.S. proxy groups are allowed to adjust for changes in fuel costs on at least a semi-annual basis, Concentric concludes that investors do not perceive any material difference between HQD and the operating companies in the Canadian and U.S. proxy groups in terms of the frequency of fuel cost recovery adjustments.

(3) Volume/Demand Risk

[134] Dominion Bond Rating Service, "Assessing Regulatory Risks in the Utility Sector," May 2012, at p. 7.

Q. Please discuss the risks associated with changes in customer demand as compared to test year volume for electric distribution companies.

A. The primary business risk associated with changes in customer demand is that rates are set under the assumption that customers will purchase a certain volume of electricity during the test year. To the extent the customer's actual usage is different than forecasted demand, the utility may be unable to earn its allowed return, especially if a large percentage of its fixed costs are recovered through volumetric charges. There are many different sources of risk related to changes in demand/volume, including: (1) weather conditions; (2) economic conditions; (3) electricity prices; and (4) energy efficiency and conservation programs.

Several Canadian regulators have mitigated volume/demand risk attributable to weather variations by approving variance accounts to allow the utility to recover the difference between forecast and actual demand. HQD has a weather-related variance account, as does Newfoundland Power and Gaz Métro. None of these weather variance accounts, however, take into consideration changes in demand that are caused by economic conditions, electricity prices, or energy efficiency and conservation programs. In those circumstances, regulators in both the U.S. and Canada have addressed volumetric risk in a variety of ways, including (1) revenue decoupling mechanisms ("RDM"), which break the link between volume and fixed cost recovery whether the change in demand is caused by weather, economic conditions, or energy efficiency and conservation programs, (2) lost revenue adjustment mechanisms ("LRAM"), which allow the utility to recover revenues that were lost due to conservation and energy efficiency programs, and (3) formula rate plans (also known as rate stabilization plans), which allow the utility to adjust rates annually up to a specified percentage if it did not earn its authorized return.

As shown on Exhibit JMC-4, Schedule 3, approximately 62 percent (based on the number of customers) of the operating companies in the Canadian proxy group have RDMs or LRAMs, and 11 percent have weather normalization adjustment clauses or variance accounts that protect against volume/demand risk. Among the operating companies in the U.S. electric utility proxy group, approximately 26 percent are protected against volumetric risk through RDMs or formula rate plans that adjust rates annually to account for changes in volume/demand, and 18 percent have weather normalization adjustment clauses that protect against volume/demand risk. In summary, HQD has somewhat less protection against changes in volume/demand than the operating companies in the Canadian proxy group, most of which have broader protection against volume risk through RDMs or LRAMs than HQD, which only has a weather variance account. Similarly, HQD has somewhat less protection against volume risk than the operating companies in the U.S. electric utility proxy group, approximately 44 percent of which have RDMs or operate under formula rate plans, or have weather normalization adjustment clauses.

Q. Did Concentric also consider the risk associated with changes in demand/volume for electric transmission companies?

A. Yes. HQT is not exposed to risks associated with changes in demand. Specifically, HQT's transmission revenue requirement is allocated to native load and point-to-point service on the basis of their total capacity needs. HQT provides capacity to native load at a price that is fixed at the beginning of the year, based on HQD's peak demand for that year. Residual capacity becomes available to other transmission customers. Most of HQT's transmission capacity available for point-to-point service is contracted via long-term agreements, and point-to-point customers must pay for the capacity they reserve whether they use it or not.

HQD pays HQT a fixed monthly demand charge equal to one twelfth of HQT's annual revenue requirement for native-load transmission service. In 2007, the Régie established a new variance account corresponding to the difference between revenue forecasts for point-to-point transmission services recognized by the Régie for rate-setting purposes and actual point-to-point transmission service revenue.

Other transmission companies in the Canadian proxy group also have little risk with respect to fluctuations in demand. For example, ATCO Electric Transmission collects its approved revenue requirement from the Alberta Electric System Operator in twelve equal monthly installments, and thus is not dependent on the price or volume of electricity transmitted through its system. Among government-owned transmission companies in Canada, Hydro One Networks has congestion pricing of transmission rather than a "take-or-pay" arrangement like HQT. Under this pricing arrangement, Hydro One Networks has slightly more risk associated with its transmission operations than HQT. The OEB approves Hydro One Networks' transmission and distribution rates based on projected electricity load and consumption levels. If actual load or consumption falls below projected levels, the company's rate of return for either, or both, of these businesses could be materially adversely affected.

Among companies in the U.S. proxy group, some are located within a region with an Independent System Operator ("ISO") or Regional Transmission Operator ("RTO"), while others are not. In regions with ISOs or RTOs, the cost of transmission service over the pool transmission facilities (usually classified at 115kW or above) is based on the revenue requirements of the transmission owners in the region. To determine the transmission

service rate, each transmission owner must calculate its annual revenue requirement for its eligible facilities pursuant to a revenue requirement formula contained in the ISO or RTO Tariff. This formula generally includes the operation and maintenance costs associated with the eligible facilities, as well as a return on rate base. Every year, each transmission owner populates this pro-forma formula with its own company-specific costs for the year. These individual revenue requirements are then aggregated by the ISO into a single revenue requirement and divided by a similarly aggregated monthly coincident peak demand in order to calculate the transmission service rate. Because the transmission owners can neither over-recover nor under-recover their costs, they must "true-up" their previous year's revenue requirement, if necessary, to reflect any over or under collections from the previous year. In this way, they are not exposed to demand risk since they are guaranteed full cost recovery.

In regions without an ISO or RTO, the calculation of the transmission revenue requirement is the same, with the only difference between regions being who collects the revenues. In these non-ISO/RTO regions, each transmission owner calculates its own transmission service rate based on its costs and its demand forecast in its service territory. Each transmission owner also collects the transmission service revenues from the customers using its transmission system. These customers must pay the applicable transmission rate over the system(s) they are using to service their customer load. Similar to the ISO/RTO regions, the transmission owners in non-ISO/RTO regions are guaranteed full cost recovery and update their transmission rate each year to reflect any over or under recovery from the previous year. As a result, these transmission owners are not exposed to demand risk.

(4) Capital Cost Recovery Risk

Q. Please explain the risk associated with capital cost recovery.

A. Capital spending is a two-edged sword for utilities. On the one hand, capital spending supports dividend growth and share price appreciation; on the other, it can increase the need for external financing and place pressure on cash flows and credit metrics without ongoing accommodation in rates for system expansion. Capital cost recovery has been identified by credit rating agencies as a significant business and regulatory risk. For example, in discussing the importance of cost recovery provisions to credit quality for utilities, Moody's states:

> The utilities industry is in the midst of a substantial capital expenditure program, with significant investment planned in all aspects of its business, including generation, transmission, and distribution, as well as for substantial environmental compliance expenditures. Because of the size and complexity of many of these projects, Moody's places a high degree of emphasis on the regulatory certainty for the recovery of such costs, which is critical for the maintenance of utility credit quality. For some of these projects, especially when considering added uncertainty related to the economy and the timing of future laws and regulation related to carbon, it will be viewed as a significant credit positive if utilities are able to obtain regulatory support for recovery in advance. This would serve to limit regulatory risk associated with eventual disallowance or nonrecovery of already expended costs.[135]

Q. What are the different ways that utility regulators have reduced the risk of capital cost recovery?

A. Utility regulators have reduced the risk of capital cost recovery in the following ways: (1) pre-approval of capital budgets or major capital construction projects; (2) allowing the utility to earn a cash return on Construction Work in Progress ("CWIP"); and (3) approving cost tracking mechanisms that allow the utility to recover capital costs for replacing aging infrastructure.

[135] "Cost Recovery Provisions Key to Investor Owned Utility Rating and Credit Quality: Evaluating a Utility's Ability to Recover Costs and Earn Returns," Moody's Investors Service, June 18, 2010, at p. 8.

Q. Are HQD and HQT granted pre-approval of capital budgets or major capital construction projects?

A. Yes. The Régie annually approves the capital budget for smaller projects on a dollar amount basis and approves individual major projects with an estimated cost in excess of $25 million for HQT and $10 million for HQD. Projects within that approved capital budget are included in HQT's and HQD's forecasted test year and added to rate base for cost recovery if they are expected to be commissioned into service that year. While pre-approval of construction projects allows HQT and HQD to recover capital costs once the plant is placed in service, it does not allow them to earn a cash return on the project during construction.

As shown on Exhibit JMC-4, Schedule 4, 22 percent of the operating companies (based on number of customers) in the Canadian proxy group receive pre-approval for specific capital projects, while 68 percent of the operating companies in the U.S. electric utility proxy group may request Commission pre-approval of construction costs.

Q. Why do equity investors and credit rating agencies prefer utilities that are allowed to earn a cash return on CWIP rather than AFUDC?

A. Investors may be concerned that (1) multiple capital projects will place pressure on the company's cash flows and credit metrics during construction, (2) any project delays will further postpone cost recovery, and (3) some portion of costs in excess of any pre-approved amounts may be deemed imprudent. For example, Moody's states:

> Similarly, the inclusion of CWIP in rate base provides greater regulatory certainty, reduces the chance of rate shock or regulatory disallowance at the end of the construction period, and helps moderate financial pressure on a utility during a capital build cycle. Some of these concepts require a significant departure from the mindset of traditional rate regulation, where

costs are typically recovered in rates only after a project is completed and placed into service.[136]

Therefore, from an investment and cash flow perspective, the opportunity to earn a cash return on CWIP is favorable, especially for large capital projects that are not expected to be completed for several years because it (1) provides more immediate cost recovery, (2) reduces pressure on cash flows and credit profiles during construction, and (3) reduces concerns about rate shock. This regulatory treatment is consistent with annual rate cases that allow a return on assets under construction but not yet in service. The alternative approach is Allowance for Funds Used During Construction ("AFUDC"), where the full return is delayed until the plant is placed in service. The book earnings under AFUDC are comparable to those with CWIP or annual rate cases, but a utility with AFUDC has reduced cash flows and lower financial integrity during construction, which increases uncertainty for investors and potentially raises the cost of future borrowings.

As shown on Exhibit JMC-4, Schedule 4, ATCO Electric Transmission is the only operating company in the Canadian proxy group that has been allowed to place CWIP in rate base for transmission projects directly assigned from the AESO.[137] Enbridge Gas Distribution has the possibility to earn a cash return on CWIP, although there is no evidence that it has requested approval to place CWIP in rate base. By comparison, 45 percent of the operating companies (based on number of customers) in the U.S. electric utility proxy group have received approval to place CWIP in rate base for major capital projects during construction.

[136] Ibid., at p. 2.

[137] Alberta Utilities Commission, ATCO Electric Ltd, 2011-2012 Phase I Distribution Tariff and 2011-2012 Transmission Facility Owner Tariff, Decision 2011-134, April 13, 2011, at pp. 10-11.

Q. Why are capital cost tracking mechanisms important to utilities, customers and investors?

A. Another important aspect of capital cost recovery for electric distribution and transmission utilities is related to the repair and replacement of aging infrastructure, and compliance with environmental regulations, energy efficiency requirements, and renewable portfolio standards.[138] In response, some regulators have allowed electric utilities to implement cost tracking mechanisms or rate riders to recover the costs associated with these investments over a specified period of time.

HQD and HQT do not have capital cost tracking mechanisms. Rather, both units are allowed to recover costs of projects related to replacement or repair of aging infrastructure, compliance with environmental regulations, and improvement of service quality through the traditional regulatory process. The cost of these projects, if they are expected to be commissioned into service in that year, is added to rate base for recovery through transmission and distribution rates. As shown on Exhibit JMC-4, Schedule 4, among operating companies in the Canadian proxy group, 76 percent are allowed to recover these types of capital costs through either variance/deferral accounts or cost tracking mechanisms, while 64 percent of the operating companies in the U.S. electric utility proxy group have capital cost trackers or rate riders for purposes of recovering these types of capital investments.

[138] Although Québec has not implemented renewable portfolio standards, mostly because of Hydro-Québec's major hydro-electric renewable source of energy, this is an important consideration in other Canadian provinces and U.S. states which have implemented these standards.

Q. What are your conclusions regarding capital cost recovery for HQD and HQT relative to the Canadian and U.S. proxy groups?

A. Based on Concentric's research and analysis, our view is that HQD and HQT generally have comparable risk mitigation for capital cost recovery as the Canadian proxy group because regulated utilities in Canada file rate cases on a more frequent basis, meaning that utility companies are able to include capital investments in rate base once they are placed into service and start earning a return on those investments without significant regulatory lag. In addition, HQD and HQT receive pre-approval of capital expenditures (including specific approval for major projects), whereas many of the Canadian utilities do not. With respect to the operating companies in the U.S. electric utility proxy group, Concentric concludes that even though those U.S. companies generally do not file rate cases as frequently as those in Canada, they have similar or better risk protection on this factor as HQD or HQT through either approval of CWIP in rate base while the plant is under construction, or implementation of cost tracking mechanisms that provide accelerated recovery of capital costs for replacing aging infrastructure.

(5) Rate Regulation and Earnings Sharing

Q. Please describe the risk associated with how the utility recovers its revenue requirement.

A. Utilities traditionally recovered their revenue requirement by setting rates based on the allowable expenses and the level of useful assets during the specified test year. In an effort to provide utilities with an incentive to achieve operating efficiencies and cost savings, some regulators have approved incentive regulation mechanisms ("IRM") or performance-based regulation ("PBR") plans, many of which allow the utility to retain a percentage of any cost

savings achieved as long as the utility continues to meet service quality standards. Those IRMs, however, can create additional risk for the utility. In assessing regulatory risk for the utilities sector, DBRS recently indicated that it views cost-of-service regulation as lower risk than incentive regulation. In addition, DBRS considers the length of an incentive regulation period, and gives a higher score for a shorter IRM period.[139] Table 12 shows how DBRS assigns rankings based on the method of rate regulation (i.e., cost of service vs. incentive regulation).

Table 12: DBRS Ranking Criteria: Cost of Service vs. Incentive Regulation[140]

Score	Item	Definition
Outstanding	Cost of Service	• COS regime allowing utilities to recover prudently and reasonably incurred operating costs • Capital expenditures are reviewed and approved by the regulator through an annual COS filing • There is a good mechanism for a utility to recover extraordinary operating costs
Excellent	IRM (3 years or shorter)	• IRM regime with maximum three years between COS years • Regulator sets a reasonable productivity factor • There is a reasonable mechanism to consider incremental capital expenditures
Very Good	IRM (4-5 year framework)	• The IRM period is four to five years • Regulator sets a reasonable productivity factor • There is a reasonable mechanism to consider incremental capital expenditures
Good	IRM (6-10 year framework)	• The IRM period is six to ten years • Regulator sets a reasonable productivity factor • There is a reasonable mechanism to consider incremental capital expenditures
Satisfactory	IRM (10+ years)	• The IRM period is over ten years • Regulator sets a reasonable productivity factor • There is a reasonable mechanism to consider incremental capital expenditures

[139] DBRS, "Assessing Regulatory Risk in the Utility Sector," May 2012, at p. 8.
[140] Ibid.

Neither HQD nor HQT has historically operated under an IRM. Among the operating utilities in the Canadian proxy group, Enbridge Gas Distribution operated under a five-year IRM that expired on December 31, 2012, and plans to file a new IRM plan with the OEB which would become effective for the 2014 rate year; ATCO Electric Distribution and Fortis Alberta were scheduled to begin operating under an IRM on January 1, 2013, subject to approval of compliance filings with the AUC; and Gaz Métro is currently in the midst of a proceeding before the Régie that would establish a new IRM for the 2014 rate year, however, the company will operate under cost-of-service regulation for the 2013 rate year. As shown on Exhibit JMC-4, Schedule 5, 76 percent (based on number of customers) of the operating companies in the Canadian proxy group are subject to an IRM with a multi-year rate plan, while the remaining 24 percent are under traditional cost of service regulation. Among the operating companies in the U.S. electric utility proxy group, 58 percent (based on number of customers) are subject to an IRM (50 percent with a multi-year rate plan and eight percent with formula rate plans) and 42 percent operate under traditional cost of service regulation.

Neither HQD nor HQT has historically been required to share over-earnings with customers or allowed to recover under-earnings from customers. Among the operating companies in the Canadian proxy group, Enbridge Gas Distribution and Newfoundland Power are both required to share a percentage of earnings above their authorized return; however, the recently-approved IRM for ATCO Electric Distribution and Fortis Alberta did not include an earnings sharing component. As shown on Exhibit JMC-4, Schedule 5, 64 percent (based on number of customers) of the operating companies in the Canadian proxy

group and 58 percent of the operating companies in the U.S. electric utility proxy group have an ESM, either as part of a multi-year rate plan or a formula rate plan.

If HQD and HQT were to begin operating under either an ESM or an IRM, any change in business risk of the two companies would depend on the design and parameters of the specific plan that is implemented. Important parameters would include (1) the term of the plan, (2) the level of any productivity factor, (3) the provisions for recovering incremental capital costs, and (4) whether any ESM was symmetric or asymmetric, the deadbands, and the sharing percentages. In general, as observed by DBRS, any change from cost-of-service regulation is considered an increase in risk for the utility. A reasonably balanced ESM should not, however, materially impact the level of risk faced by HQD and HQT.

(6) Regulatory Lag

Q. What is regulatory lag, and how does it affect the business risk of electric distribution and transmission companies?

A. Regulatory lag refers to the delay between the time when a utility incurs costs to serve its customers and when it recovers those costs through rates. Regulatory lag differs by jurisdiction based on the timing of test period data and the duration of the rate case process. For example, absent offsetting growth in revenues or a reduction in other expenses, when a utility places into service an infrastructure investment necessary for safe and reliable service and that cost is not reflected in rate base until a subsequent rate case, there is regulatory lag with a real cost in foregone earnings. Regulatory lag results in earnings attrition when a utility's earnings systematically fall below authorized levels.

Q. How have you measured the risk associated with regulatory lag?

A. There are a variety of factors that influence the extent to which a utility is experiencing regulatory lag. Those factors include: (1) the test year convention; (2) the use of interim rates while a rate case is pending; and (3) rate case lag.

a) Test Year Convention

A forecasted test year gives a utility the ability to recover forecasted rather than historical expenses, thereby reducing regulatory lag and earnings attrition. The Régie uses a forecasted test year to set the revenue requirements for HQD and HQT; likewise, as shown on Exhibit JMC-4, Schedule 6, all of the operating companies in the Canadian proxy group and 82 percent of the operating companies (based on number of customers) in the U.S. electric utility proxy group operate in jurisdictions that use fully or partially forecasted test years, while 18 percent of operating companies in the U.S. electric utility proxy group use historical test years adjusted for known and measurable changes.

b) Interim Rates

Interim rates allow a utility to increase current rates to recover higher test year costs while a rate case is pending, subject generally to refund once final rates are adopted, whereas suspended rates maintain the currently effective rates until a new rate decision is issued. Some regulatory authorities approve interim rates on a routine basis, while other jurisdictions only approve interim rates when the utility can demonstrate that its financial integrity would be impaired without interim rates. HQD continues to charge the currently effective rates until the Régie issues final rates for the new rate year, whereas HQT applies interim rates, as approved by the Régie, subject to adjustment in customer invoices once final rates are

adopted. As shown on Exhibit JMC-4, Schedule 6, 29 percent of the operating companies in the Canadian proxy group and 55 percent of the operating companies in the U.S. electric utility proxy group operate in jurisdictions that allow interim rates under all circumstances, while 37 percent of the operating companies in the U.S. proxy group are allowed to implement interim rates in a financial emergency.[141]

c) Rate Case Lag

Rate case lag refers to the time between when a rate case is filed and when the decision is issued. Rate case lag is important especially for utilities that use a historical test year because it means that by the time new rates become effective, they may not be representative of the utility's allowable expenses. In recent years, the time to complete a rate case has generally been slightly more than one month longer for the Canadian operating companies, including HQD and HQT, than for the companies in the U.S. proxy group (i.e., 9.9 months in Canada and 8.7 months in the U.S.)

Q. What is your conclusion concerning the effect of regulatory lag on HQD and HQT compared to the Canadian and U.S. proxy groups?

A. Based on this evidence, Concentric finds that HQD and HQT have comparable regulatory protection with regard to the use of forecasted test years as the operating companies in the Canadian proxy group, and slightly less risk than the companies in the U.S. electric utility proxy group, where fully forecasted test years are less common. With respect to interim rates, HQD has somewhat more risk than the operating companies in the Canadian proxy group, and more risk than the operating companies in the U.S. electric utility proxy group,

[141] These percentages do not include Enbridge Gas Distribution or Gaz Métro, both of which have been under incentive regulation plans, or Alabama Power and Mississippi Power, both of which are under formula rate plans.

the vast majority of which have the ability to request interim rates. HQT has somewhat less risk than the operating companies in the Canadian proxy group and similar risk to the operating companies in the U.S. electric utility proxy group on this factor. Finally, HQD and HQT have similar risk to the Canadian proxy group in terms of rate case lag, and slightly higher risk than the operating companies in the U.S. proxy group, which have somewhat shorter times between the application and the rate decision.

(7) Cost Recovery Mechanisms

Q. Please explain the risk associated with recovery of costs that tend to fluctuate substantially from year to year compared with the amount recovered in rates.

A. Cost recovery mechanisms are one of the most significant factors that determine whether a utility is able to earn its authorized ROE. Concentric examined several categories of costs that (1) tend to fluctuate substantially from year to year, (2) are significant in magnitude, and (3) are generally beyond the control of utility management. Among those cost categories for regulated utilities, Concentric considered the following: (1) pension expenses; (2) bad debt expense; (3) storm cost recovery; (4) changes in interest rates; and (5) energy efficiency and demand side management costs.

Q. Have regulatory authorities in Canada and the U.S. used the same cost recovery mechanisms for these types of costs?

A. No, they have not. When there have been variations between actual costs and test year costs in Canada, regulators have typically addressed these fluctuations through the approval of variance accounts, which are designed to reduce the volatility in earnings and cash flows due to fluctuations in costs and revenues. U.S. regulators have taken a slightly different

approach. Specifically, U.S. utility regulators have typically approved rate riders/surcharges and cost tracking mechanisms to recover costs that tend to fluctuate. The rate rider/surcharge is a temporary adjustment to the customer bill that raises or lowers rates for a limited time by a specified amount. A cost tracking mechanism is an adjustment clause that allows a utility's rates to fluctuate in response to changes in costs or conditions. Regardless of the specific method regulators have chosen to mitigate the risk of cost recovery, the end result is that the vast majority of utility companies in both Canada and the U.S. have recovery mechanisms to protect them and their customers against significant fluctuations in costs and events that are beyond the control of utility management.

Q. Please discuss the results of your analysis of cost recovery mechanisms for HQD and HQT and the Canadian and U.S. proxy groups.

A. Exhibit JMC-4, Schedule 7, presents the cost recovery mechanisms that are in place at HQD and HQT and the operating companies in the Canadian and U.S. proxy groups for the cost categories identified above. Table 13 summarizes the percentage of operating companies (based on number of customers) in the Canadian and U.S. proxy groups that has some form of cost recovery mechanism for each of these costs.

Table 13: Cost Recovery Mechanisms

Cost	HQD	HQT	Canadian Proxy Group	U.S. Proxy Group
Pension expenses	Yes	Yes	69%	36%
Bad Debt expenses	No	No	5%	13%
Storm Cost Recovery	Limited[142]	No	0%	79%
Interest Rate Change	No	No	9%	17%
Energy Efficiency/DSM	No	N/A	81%	76%

Based on this analysis, Concentric concludes that, on balance, HQD and HQT have similar regulatory protections as the companies in the Canadian and U.S. proxy groups against specific categories of costs that tend to fluctuate significantly from year to year, are material in nature, and are beyond the control of utility management. As shown in Table 13, however, HQD and HQT have higher risk associated with storm cost recovery than the majority of operating companies in the U.S. proxy group, but more protection against variations in pension expenses.

(8) Longer Term Risks

Q. Did you consider any additional longer-term risks that differentiate HQD and HQT from the companies in the Canadian and U.S. proxy groups?

A. Yes, Concentric considered several additional factors. First, HQD faces more competitive risk due to its high concentration of industrial customers in Québec, which makes HQD more vulnerable to longer-term risks associated with an economic downturn that could

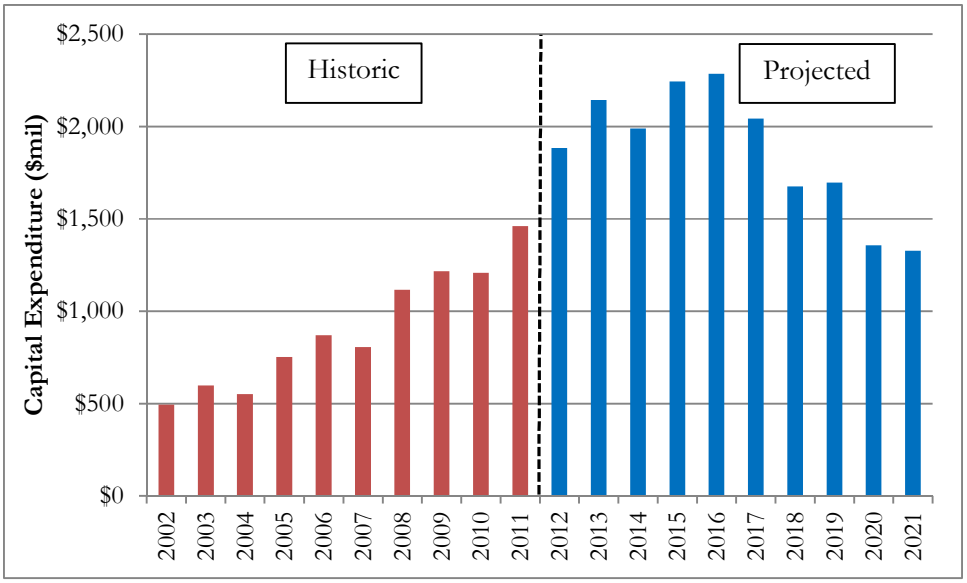
[142] Pursuant to decision D-2009-016, HQD has a mechanism in place which allows the Company to recover a portion of operating costs related to a major breakdown. Specifically, HQD can take a provision in rates for up to $8 million per year and has a variance account for operating costs that exceed $16 million. HQD is at risk for any amounts between $8 million and $16 million related to operating costs from storm. The mechanism does not pertain to capital costs for assets that were damaged during the storm.

cause those industrial customers to reduce their demand for electricity, as well as economic bypass or self-generation if the industrial customers determine those options are more economical. As shown on Exhibit JMC-3, Schedule 2, approximately 31 percent of HQD's 2011 distribution revenues were derived from sales to industrial customers; this percentage is considerably higher than the other electric distributors in the Canadian and U.S. proxy groups with the exception of ATCO Electric Distribution at 36 percent.

Second, HQD has higher business risk than it did when the Régie issued its previous ROE determination due to the relative competitiveness of electricity and natural gas in Québec. This is especially important for HQD because of the number of residential and commercial customers in Québec that use electricity for heating. As the price of natural gas has declined over the past few years, that fuel source has become more competitive with the low price of electricity in Québec.

Third, HQT is in the midst of a significant capital spending program under which it will spend approximately $17 billion over the next nine years (2013-2021) for growth response and to upgrade existing infrastructure and replace aging transmission lines and equipment. As shown on Chart 6, the annual projected capital spending from 2013-2017 for HQT is substantially higher than historical levels from 2002-2011. Specifically, annual capital spending for HQT from 2013-2017 is projected at $2,140.7 million compared with historical annual capital spending from 2002-2011 of $906.3 million. This represents an increase of 136 percent.

Chart 6: Historic and Projected Capital Spending for HQT



HQT's capital spending requirements will require continued access to capital markets at reasonable terms in order to maintain the financial integrity and the credit metrics of the Company during this period. Timely cost recovery of these capital expenditures represents a substantial business and financial risk for HQT over the next ten years.

APPENDIX B: FINANCIAL RISK ANALYSIS

Q. Please compare the financial risk of Canadian and U.S. utilities generally.

A. In general, regulators in Canada have tended to approve lower deemed equity ratios for regulated utilities than in the U.S. Concentric believes this practice has evolved for two principal reasons: (1) there is a history of government ownership of utilities in Canada particularly in the electric sector, and similar to municipal and state-owned utilities in the U.S., these utilities enjoy explicit or implicit government support, enabling higher debt ratios; and (2) Canadian regulators deem utility debt ratios with a focus on the minimum requirements for investment grade credit standards. Regulators in the U.S. more typically assess the reasonableness of capital structure based on a combination of credit metrics and reference to the proxy group range to test comparability. Regulated utilities in Canada generally have higher financial leverage than those in the U.S., and therefore more financial risk on a stand-alone basis.

Q. What are HQD's and HQT's current deemed equity ratios?

A. The current deemed equity ratios for HQD and HQT are 35.0 percent and 30.0 percent, respectively.

Q. Please compare the financial risk of HQD and HQT to the companies in the Canadian proxy group.

A. As shown in Table 14, the average deemed equity ratio in 2012 of the Canadian companies included in Concentric's risk analysis was 39.3 percent. The lowest deemed equity ratio for an electric transmission company was 37 percent (ATCO Electric Transmission), which is seven percent higher than HQT. Similarly, the lowest deemed equity ratio for an electric

distribution company was 39 percent (ATCO Electric Distribution), which is four percent higher than HQD.

Table 14: Canadian Proxy Group Deemed Common Equity Ratio

Company	Common Equity Ratio
ATCO Electric Distribution	39.00%
ATCO Electric Transmission	37.00%
Nova Scotia Power Inc.	37.50%
Enbridge Gas Distribution	36.00%
Fortis Alberta	41.00%
Fortis BC Power	40.00%
Newfoundland Power	44.69%
Gaz Métro	38.50%
TransCanada Pipelines	40.00%
Mean	**39.30%**

Q. How do HQD's and HQT's equity ratios compare to the average equity ratio for the U.S. electric utility proxy group?

A. The most notable risk difference between HQD and HQT and the operating utilities in the U.S. electric utility proxy group is the percentage of debt in the capital structure. As shown in Table 15, the U.S. electric utility proxy group average authorized common equity ratio is 50.2 percent, which is 15.2 percent higher than HQD's current deemed equity ratio of 35.0 percent, and 20.2 percent higher than HQT's current deemed equity ratio of 30.0 percent.

Table 15: U.S. Electric Utility Proxy Group

Average Authorized Common Equity Ratio[143]

Company	Authorized Common Equity Ratio
ConEdison of New York	48.00%
Florida Power and Light	N/A
Connecticut Light and Power	49.20%
NSTAR Electric	N/A
Public Service of New Hampshire	52.40%
Western Mass Electric	50.70%
Alabama Power	N/A
Georgia Power	N/A
Gulf Power	38.50%
Mississippi Power	N/A
Wisconsin Electric	52.09%
NSP – Minnesota	52.56%
NSP – Wisconsin	52.37%
Public Service of Colorado	56.00%
Southwestern Public Service - TX	N/A
Mean	**50.20%**

Q. How does the capital structure affect the cost of equity?

A. The capital structure relates to a company's financial risk, which represents the risk that a company may not have adequate cash flows to meet its financial obligations, and is a function of the percentage of debt (or financial leverage) in the capital structure. In that regard, as the percentage of debt and preferred equity in the capital structure increases, so do the fixed obligations for the repayment of that debt. Consequently, as the degree of financial

[143] For utilities with operations in multiple jurisdictions, the authorized equity ratios shown are those for the jurisdiction in which the utility predominantly operates. Those utilities marked "N/A" did not have an authorized common equity ratio in their most recent rate case decision. In most instances those cases were resolved through a settlement agreement that did not specify the authorized equity ratio.

leverage increases, the risk of financial distress for common equity holders (i.e., financial risk) also increases.[144] Since the capital structure can affect the subject company's overall level of risk, it is an important consideration in establishing a fair return.

Q. How do HQD's and HQT's capital structure impact their ability to raise capital on reasonable terms?

A. While the Canadian regulators' approach to capital structure may seek to reduce the weighted-average cost of capital (due to more debt in the capital structure), it may also place downward pressure on credit metrics. This could potentially raise the cost of debt, which ultimately flows through to rate payers in the form of higher rates, and limit the financial flexibility of the utility. Further, if more debt is deemed than that of comparable risk utilities, the cost of equity must increase to compensate investors for that additional risk. We note that HQD and HQT benefit from a government debt guarantee, but capital structure should be considered on a stand-alone basis in order to send the proper price signals, and avoid cross-subsidization between Québec's citizens and its electric consumers.

Q. Other than the percentage of financial leverage in the capital structure, what other ways do investors measure financial risk?

A. Financial risk may also be measured through other credit metrics, such as the ratio of Funds From Operations ("FFO") to debt, as well as the interest coverage ratios that compare Earnings Before Interest and Taxes ("EBIT") and FFO to interest payments on long-term debt.

[144] See Roger A. Morin, New Regulatory Finance, Public Utility Reports, Inc., 2006, at pp. 45-46.

Q. How do HQD's and HQT's credit metrics in 2011 compare to the companies in the Canadian and U.S. proxy groups?

A. As shown on Exhibit JMC-5, the credit metrics for HQD and HQT in 2011 were much weaker than for the companies in the Canadian and U.S. proxy groups. Specifically, HQD and HQT have a higher debt to capital ratio, weaker interest coverage ratios, a weaker cash flow to debt ratio, and higher debt to EBITDA ratios than the averages for both the Canadian and U.S. proxy group.

Q. What other factors affect the financial risk and credit metrics of HQD and HQT?

A. HQD and HQT do not issue their own debt and do not have their own credit ratings. Rather, the debt is issued by Hydro-Québec, and the credit rating is the same as that assigned to the Province of Québec. The credit metrics shown on Exhibit JMC-5 indicate that the allowed ROEs and deemed equity ratios for HQD and HQT, respectively, are not sufficient to support Hydro-Québec's current A+ rating from S&P or Aa2 rating from Moody's without the government debt guarantee. This supports the need for a higher ROE for HQD and HQT in order to maintain the financial integrity of the utility on a stand-alone basis. Absent a higher ROE, Hydro-Québec's credit metrics do not support the current rating and could ultimately cause an increase to the cost for the government debt guarantee.

Q. What would be the effect on HQD's and HQT's credit metrics if they were to begin operating under an ESM?

A. If HQD and HQT were to begin operating under an ESM, the credit metrics for those two entities would be lower than they have been in the past few years. For example, if HQD and

HQT had only earned their allowed ROE in 2011, their credit metrics would have been weaker as shown on Table 16.

Table 16: Credit Metrics for HQD and HQT at Earned ROE

Utility	Debt to Capital Ratio	EBIT to Interest Coverage	FFO to Interest Coverage	FFO/Debt Ratio	Debt to EBITDA
HQD - Actual	65%	1.88	3.46	0.24	3.98
HQD - Adjusted	65%	1.66	3.24	0.23	4.24
HQT – Actual	70%	1.62	2.66	0.19	5.20
HQT - Adjusted	70%	1.53	2.58	0.18	5.37

This suggests that, in order to maintain the financial integrity of HQD and HQT under an ESM, it would be necessary to allow a higher ROE and/or a higher deemed equity ratio so that HQD and HQT would be able to maintain credit metrics on a going-forward basis consistent with the assigned rating.

Q. Has Concentric calculated what the projected credit metrics would be for HQD and HQT if the Régie were to accept the recommended ROE of 9.20% for both units?

A. Yes. The projected credit metrics for HQD and HQT with an ROE of 9.20% are shown in Table 17.

Table 17: Projected Credit Metrics for HQD and HQT at 9.20% ROE

Utility	Debt to Capital Ratio	EBIT to Interest Coverage	FFO to Interest Coverage	FFO/Debt Ratio	Debt to EBITDA
HQD - Actual	65%	1.88	3.46	0.24	3.98
HQD – Projected	65%	1.81	3.38	0.24	4.07
HQT – Actual	70%	1.62	2.66	0.19	5.20
HQT - Projected	70%	1.66	2.70	0.19	5.13

These projected metrics demonstrate that raising the allowed ROE for HQD and HQT to 9.20 percent would be directionally beneficial, but would not alleviate concerns that the credit metrics are not adequate to support the assigned credit rating, absent the government debt guarantee.

2011 % Regulated Operating Income and Revenues

Utility	% Operating Income	% Revenues
Consolidated Edison	98%	88%
Northeast Utilities	101%	99%
NextEra Energy	64%	69%
Southern Co.	93%	95%
Wisconsin Energy	61%	99%
Xcel Energy	100%	99%
U.S. Proxy Group Average	**86%**	**92%**

Utility	% Operating Income	% Revenues
Canadian Utilities Ltd.	60%	56%
Emera, Inc.	94%	92%
Enbridge Inc. (1)	22%	13%
Fortis Inc.	91%	93%
TransCanada Corp. (2)	0%	0%
Valener	98%	97%
Canadian Proxy Group Average	**61%**	**59%**

Note: Percentage of operating income may exceed 100% due to losses at affiliates.
(1) Does not include operating income or revenues from gas transmission.
(2) TransCanada has no income or revenues from regulated utility service. Gas transmission income and revenue was not considered in our analysis.

Canadian & U.S. Macroeconomic Factors

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[11]	[12]	[13]	[14]
	Total Return on:		Total Return on:		Real GDP Growth		CPI		10-year Gov't Bond		Exports		Unemployment		Currency
	S&P/TSX	S&P 500	S&P/TSX Utilities	S&P 500 Utilities	Canada	U.S.	Canada	U.S.	Canada	U.S.	Canada to U.S. / Canadian GDP	U.S. to Canada / U.S. GDP	Canada	U.S.	Exchange Rate (USD / CAD)
1988	11.08	16.61	--	--	4.8	4.1	3.9	4.1	9.83	8.85	16.87	2.23	7.4	5.5	1.23
1989	21.37	31.69	--	--	2.4	3.6	5.1	4.8	9.80	8.49	16.15	2.1	7.1	5.3	1.18
1990	-14.8	-3.11	--	--	0.1	1.9	4.8	5.4	10.76	8.55	16.12	1.96	7.7	5.6	1.17
1991	12.02	30.47	--	--	-2.1	-0.2	5.6	4.2	9.42	7.86	15.55	1.86	9.8	6.8	1.15
1992	-1.43	7.62	--	--	0.9	3.4	1.4	3.0	8.05	7.01	17.28	2.10	10.7	7.5	1.21
1993	32.55	10.08	--	--	2.6	2.9	1.9	3.0	7.22	5.87	20.04	2.51	10.8	6.9	1.29
1994	-0.18	1.32	--	--	4.6	4.1	0.1	2.6	8.42	7.09	22.95	3.00	9.6	6.1	1.37
1995	14.53	37.58	--	--	2.7	2.5	2.2	2.8	8.08	6.57	24.82	3.19	8.6	5.6	1.37
1996	28.35	22.96	--	--	1.7	3.7	1.5	3.0	7.20	6.44	25.94	3.13	8.8	5.4	1.36
1997	14.98	33.36	--	--	4.3	4.5	1.7	2.3	6.11	6.35	26.82	3.51	8.4	4.9	1.38
1998	-1.58	28.58	--	--	4.2	4.4	1.0	1.6	5.30	5.26	28.67	3.94	7.7	4.5	1.48
1999	31.71	21.04	--	--	5.2	4.8	1.8	2.2	5.55	5.65	30.75	3.96	7.0	4.2	1.49
2000	7.41	-9.11	--	--	5.1	4.1	2.7	3.4	5.89	6.03	32.57	3.97	6.1	4.0	1.49
2001	-12.57	-11.89	--	--	1.7	1.1	2.5	2.8	5.47	5.02	30.90	3.82	6.5	4.7	1.55
2002	-12.44	-22.10	--	--	2.8	1.8	2.2	1.6	5.29	4.61	29.26	3.76	7.0	5.8	1.57
2003	26.72	28.68	24.96	26.27	2.0	2.5	2.8	2.3	4.79	4.01	26.34	3.02	6.9	6.0	1.40
2004	14.48	10.88	9.42	24.28	3.2	3.5	1.8	2.7	4.59	4.27	26.36	2.74	6.4	5.5	1.30
2005	24.13	4.91	38.30	16.83	3.1	3.1	2.2	3.4	4.05	4.29	26.01	2.49	6.0	5.1	1.21
2006	17.26	15.79	7.01	21.00	2.7	2.7	2.0	3.2	4.22	4.80	24.23	2.25	5.5	4.6	1.13
2007	9.83	5.49	11.80	19.38	2.1	1.9	2.2	2.8	4.28	4.63	22.64	2.07	5.2	4.6	1.07
2008	-33.00	-37.00	-20.46	-28.98	1.1	-0.3	2.3	3.8	3.58	3.66	22.41	2.10	5.3	5.8	1.07
2009	35.05	26.46	19.00	11.92	-2.8	-3.1	0.3	-0.4	3.29	3.26	17.25	1.93	7.3	9.3	1.14
2010	17.61	15.06	18.42	5.46	3.2	2.4	1.8	1.6	3.20	3.22	17.75	1.85	7.1	9.6	1.03
2011	-8.71	2.10	6.47	19.95	2.6	1.8	2.9	3.2	2.78	2.78	18.72	1.84	6.5	8.9	0.99
2012	7.19	16.00	4.00	0.47	1.8	2.2	1.5	2.1	1.85	1.80	18.59	1.89	6.3	8.1	1.00
25-year Avg.	9.66	11.34	--	--	2.40	2.54	2.33	2.86	5.96	5.45	23.00	2.69	7.4	6.0	1.27
10-year Avg.	11.06	8.84	11.89	11.66	1.90	1.67	1.98	2.47	3.66	3.67	22.03	2.22	6.3	6.8	1.13
5-year Avg.	3.63	4.52	5.49	1.76	1.18	0.60	1.76	2.06	2.94	2.94	18.94	1.92	6.5	8.3	1.05
Correlation	0.73		0.69		0.85		0.77		0.98		0.90		0.23		--
2008-2012 Correlation	0.95		0.84		0.96		0.92		1.00		0.84		0.96		--
Consensus Forecasts [15]															
2013					2.00	2.00	1.90	2.00	2.20	2.20			7.20	7.70	0.99
2014					2.30	2.80	2.00	2.30	2.70	2.90			7.00	7.20	1.02
2015					2.50	3.10	2.00	2.30	3.60	3.90					

Notes:

[1] Source: Morningstar and Bloomberg Professional; includes price appreciation and dividend yield

[2] Source: Morningstar and Bloomberg Professional; includes price appreciation and dividend yield

[3] Source: Bloomberg Professional; includes price appreciation and dividend yield, however dividend data for S&P/TSX Utilities not available prior to 2003

[4] Source: Bloomberg Professional; includes price appreciation and dividend yield

[5] Source: Statistics Canada; expenditure-based GDP at market prices, chained 2007 prices, seasonally adjusted

[6] Source: U.S. Bureau of Economic Analysis

[7] Source: Statistics Canada; not seasonally adjusted

[8] Source: U.S. Bureau of Labor Statistics; not seasonally adjusted, U.S. city average, all items

[9] Source: Statistics Canada

[10] Source: Federal Reserve Economic Data

[11] Source: Statistics Canada (exports, merchandise only), U.S. Bureau of Economic Analysis (U.S. GDP), and Federal Reserve Economic Data (currency exchange rate)

[12] Source: U.S. Bureau of Labor Statistics, International Unemployment Rates and Employment Indexes, Seasonally Adjusted

[13] Source: U.S. Bureau of Labor Statistics, International Unemployment Rates and Employment Indexes, Seasonally Adjusted

[14] Source: Federal Reserve Economic Data

[15] Source: Consensus Forecasts, Survey Dates January 14, 2013 (unemployment forecasts) and October 8, 2012 (all other forecasts)

Canadian Utility Proxy Group

Parent Company	S&P Rating	Bloomberg Beta	Operating Company	Authorized ROE	Deemed Equity Ratio
Canadian Utilities	A	0.59	ATCO Electric Distribution	8.75%	39.00%
			ATCO Electric Transmission	8.75%	37.00%
Emera Corp.	BBB+	0.63	Nova Scotia Power Inc.	9.00%	37.50%
Enbridge, Inc.	A-	0.63	Enbridge Gas Distribution, Inc.	8.39%	36.00%
Fortis, Inc.	A-	0.68	Fortis Alberta	8.75%	41.00%
			Fortis BC Power	9.90%	40.00%
			Newfoundland Power	8.80%	44.69%
TransCanada	A-	0.60	TransCanada Pipeline	11.50%	40.00%
Valener, Inc.	A-	0.49	Gaz Metro	8.90%	38.50%
Canadian Proxy Group Avg	A-	0.60		9.19%	39.30%

U.S. Electric Utility Proxy Group

Parent Company	S&P Rating	Bloomberg Beta	Operating Company	Authorized ROE	Deemed Equity Ratio
Consolidated Edison	A-	0.62	ConEdison of New York	10.15%	48.00%
NextEra Energy, Inc.	A-	0.77	Florida Power and Light	10.50%	N/A (1)
Northeast Utilities	A-	0.73	Connecticut Light and Power	9.40%	49.20%
			NSTAR Electric	N/A (1)	N/A (1)
			Public Service of New Hampshire	9.67%	52.40%
			Western Mass. Electric	9.60%	50.70%
Southern Co.	A	0.56	Alabama Power	13.75%	N/A (2)
			Georgia Power	11.15%	N/A (1)
			Gulf Power	10.25%	38.50%
			Mississippi Power	10.63%	N/A (2)
Wisconsin Energy	A-	0.65	Wisconsin Electric	10.40%	52.09%
Xcel Energy Inc.	A-	0.64	NSP - MN	10.37%	52.56%
			NSP - WI	10.40%	52.37%
			Public Service of Colorado	10.00%	56.00%
			Southwestern Public Service	N/A (1)	N/A (1)
U.S. Proxy Group Avg.	A-	0.66		10.48%	50.20%

Notes:
(1) Not specified in most recent rate case, which was resolved through settlement agreement.
(2) Not specified in formula rate plan.

Operating Stats

U.S. Proxy Group Company		Utility	State	S&P Credit Rating	2011 Regulated Electric Revenues (million)	% Industrial Sales	Retail Customers	Notes
Consolidated Edison	ED	Consolidated Edison of New York	NY	A-	8,280	7%	3,329,304	
NextEra Energy	NEE	Florida Power and Light	FL	A-	10,613	2%	4,547,052	
Northeast Utilities	NU	Connecticut Light and Power	CT	A-	2,548	5%	1,212,306	
		NSTAR Electric	MA	A-	2,487	28%	1,163,077	
		Public Service of New Hampshire	NH	A-	1,013	9%	498,216	
		Western Massachusetts Electric	MA	A-	417	10%	206,295	
Southern Co.	SO	Alabama Power	AL	A	5,702	24%	1,434,487	
		Georgia Power	GA	A	8,800	18%	2,360,489	
		Gulf Power	FL	A	1,520	11%	432,403	
		Mississippi Power	MS	A	1,113	25%	186,002	
Wisconsin Energy Corp.	WEC	Wisconsin Electric Power	WI	A-	3,211	24%	1,120,990	
Xcel Energy Inc.	XEL	Northern States Power - Minnesota	MN	A-	3,773	20%	1,399,830	
		Northern States Power - Wisconsin	WI	A-	755	19%	250,133	
		Public Service Company of Colorado	CO	A-	3,114	14%	1,372,919	
		Southwestern Public Service	TX	A-	1,707	25%	376,196	
Canadian Proxy Group		Utility	Province					
Canadian Utilities Ltd.	CU	ATCO Electric Distribution	AB	A	553	36%	213,000	[1]
		ATCO Electric Transmission	AB	A	314	N/A	N/A	[1]
Emera, Inc.	EMA	Nova Scotia Power	NS	BBB+	1,232	22%	490,000	
Enbridge	ENB	Enbridge Gas Distribution	ON	A-	2,574	4%	1,997,481	[2]
Fortis, Inc.	FTS	Fortis Alberta	AB	A-	409	21%	499,000	
		Fortis BC Electric	BC	A-	296	8%	162,000	[3]
		Newfoundland Power	NL	A-	573	0%	243,000	[3]
TransCanada Corp	TRP	TransCanada PipeLine	NEB	A-	5,327	N/A	N/A	[4]
Valener, Inc.	VNR	Gaz Metro	QC	A-	1,501	23%	189,000	
Hydro Quebec		Hydro Quebec Distribution	QC	A+	10,751	31%	4,060,195	[5]
		Hydro Quebec TransEnergie	QC	A+	3,089	N/A	N/A	[5]

Notes
[1] S&P credit rating is for Canadian Utilities.
[2] Regulated revenues are revenues from gas distribution operations.
[3] S&P credit rating is for Fortis Inc.
[3] Regulated revenues are revenues from oil and natural gas pipelines per SNL Financial.
[4] S&P credit rating is the senior unsecured rating for Hydro Québec.

Regulated Generation and Stranded Cost Recovery

U.S. Proxy Group Company		Operating Utility	State	Regulated Generation	# of Customers
Consolidated Edison	ED	Consolidated Edison of New York	NY	Limited	3,329,304
NextEra Energy	NEE	Florida Power and Light	FL	Yes	4,547,052
Northeast Utilities	NU	Connecticut Light and Power	CT	No	1,212,306
		NSTAR Electric	MA	No	1,163,077
		Public Service of New Hampshire	NH	Yes	498,216
		Western Massachusetts Electric	MA	Limited	206,295
Southern Co.	SO	Alabama Power	AL	Yes	1,434,487
		Georgia Power	GA	Yes	2,360,489
		Gulf Power	FL	Yes	432,403
		Mississippi Power	MS	Yes	186,002
Wisconsin Energy Corp.	WEC	Wisconsin Electric Power	WI	Yes	1,120,990
Xcel Energy Inc.	XEL	Northern States Power - Minnesota	MN	Yes	1,399,830
		Northern States Power - Wisconsin	WI	Yes	250,133
		Public Service Company of Colorado	CO	Yes	1,372,919
		Southwestern Public Service	TX	Yes	376,196
Canadian Proxy Group		Utility	Province		
Canadian Utilities Ltd.	CU	ATCO Electric Distribution	AB	No	213,000
		ATCO Electric Transmission	AB	No	N/A
Emera, Inc.	EMA	Nova Scotia Power	NS	Yes	490,000
Enbridge	ENB	Enbridge Gas Distribution	ON	N/A	1,997,481
Fortis, Inc.	FTS	Fortis Alberta	AB	No	499,000
		Fortis BC Electric	BC	Limited	162,000
		Newfoundland Power	NL	Limited	243,000
TransCanada Corp	TRP	TransCanada PipeLine	NEB	N/A	N/A
Valener, Inc.	VNR	Gaz Metro	QC	N/A	189,000
Hydro Quebec		Hydro Quebec Distribution	QC	No	4,060,195
		Hydro Quebec TransEnergie	QC	No	N/A

	U.S.	Canada
Total Number of Customers	19,889,699	3,793,481
Percent that own Regulated Generation	70.28%	12.92%
Percent that own Limited Generation	17.78%	10.68%

Fuel Cost Recovery Risk

U.S. Proxy Group Company		Operating Utility	State	Fuel/PP Costs	PGA	# of Customers
Consolidated Edison	ED	Consolidated Edison of New York	NY	Monthly	N/A	3,329,304
NextEra Energy	NEE	Florida Power and Light	FL	Annually	N/A	4,547,052
Northeast Utilities	NU	Connecticut Light and Power	CT	Bi-Annual	N/A	1,212,306
		NSTAR Electric	MA	Bi-Annual	N/A	1,163,077
		Public Service of New Hampshire	NH	Annually	N/A	498,216
		Western Massachusetts Electric	MA	Bi-Annual	N/A	206,295
Southern Co.	SO	Alabama Power	AL	Periodic	N/A	1,434,487
		Georgia Power	GA	Periodic	N/A	2,360,489
		Gulf Power	FL	Annually	N/A	432,403
		Mississippi Power	MS	Annually	N/A	186,002
Wisconsin Energy Corp.	WEC	Wisconsin Electric Power	WI	Annually	N/A	1,120,990
Xcel Energy Inc.	XEL	Northern States Power - Minnesota	MN	Monthly	N/A	1,399,830
		Northern States Power - Wisconsin	WI	Annually	N/A	250,133
		Public Service Company of Colorado	CO	Quarterly	N/A	1,372,919
		Southwestern Public Service	TX	Periodic	N/A	376,196
Canadian Proxy Group		Utility	Province			
Canadian Utilities Ltd.	CU	ATCO Electric Distribution	AB	N/A	N/A	213,000
		ATCO Electric Transmission	AB	N/A	N/A	N/A
Emera, Inc.	EMA	Nova Scotia Power	NS	Annually	N/A	490,000
Enbridge	ENB	Enbridge Gas Distribution	ON	N/A	Quarterly	1,997,481
Fortis, Inc.	FTS	Fortis Alberta	AB	N/A	N/A	499,000
		Fortis BC Electric	BC	N/A	N/A	162,000
		Newfoundland Power	NL	N/A	N/A	243,000
TransCanada Corp	TRP	TransCanada PipeLine	NEB	N/A	N/A	N/A
Valener, Inc.	VNR	Gaz Metro	QC	N/A	Monthly	189,000
Hydro Quebec		Hydro Quebec Distribution	QC	Annually	N/A	4,060,195
		Hydro Quebec TransEnergie	QC	N/A	N/A	N/A

	U.S.	Canada
Total Number of Customers	19,889,699	3,793,481
Percent with Monthly Fuel Cost Recovery	23.78%	0.00%
Percent with Quarterly Cost Recovery	6.90%	0.00%
Percent with Bi-Annual Fuel Cost Recovery	12.98%	0.00%
Percent with Annual Fuel Cost Recovery	35.37%	12.92%
Percent with Periodic Fuel Cost Recovery	20.97%	0.00%
Percent with Monthly PGA	0.00%	4.98%
Percent with Quarterly PGA	0.00%	52.66%

Volume/Demand Risk

U.S. Proxy Group Company		Operating Utility	State	Decoupling	LRAM	Weather Norm	# of Customers
Consolidated Edison	ED	Consolidated Edison of New York	NY	Yes	N/A	Yes	3,329,304
NextEra Energy	NEE	Florida Power and Light	FL	No	N/A	No	4,547,052
Northeast Utilities	NU	Connecticut Light and Power	CT	No	N/A	No	1,212,306
		NSTAR Electric	MA	No	N/A	No	1,163,077
		Public Service of New Hampshire	NH	No	N/A	No	498,216
		Western Massachusetts Electric	MA	Yes	N/A	Yes	206,295
Southern Co.	SO	Alabama Power [1]	AL	Yes	N/A	No	1,434,487
		Georgia Power	GA	No	N/A	No	2,360,489
		Gulf Power	FL	No	N/A	No	432,403
		Mississippi Power [1]	MS	Yes	N/A	No	186,002
Wisconsin Energy Corp.	WEC	Wisconsin Electric Power	WI	No	N/A	No	1,120,990
Xcel Energy Inc.	XEL	Northern States Power - Minnesota	MN	No	N/A	No	1,399,830
		Northern States Power - Wisconsin	WI	No	N/A	No	250,133
		Public Service Company of Colorado	CO	No	N/A	No	1,372,919
		Southwestern Public Service	TX	No	N/A	No	376,196
Canadian Proxy Group		Utility	Province				
Canadian Utilities Ltd.	CU	ATCO Electric Distribution	AB	No	N/A	No	213,000
		ATCO Electric Transmission	AB	Yes	N/A	No	N/A
Emera, Inc.	EMA	Nova Scotia Power	NS	No	N/A	No	490,000
Enbridge	ENB	Enbridge Gas Distribution	ON	No	Yes	No	1,997,481
Fortis, Inc.	FTS	Fortis Alberta	AB	No	N/A	No	499,000
		Fortis BC Electric	BC	Yes	N/A	No	162,000
		Newfoundland Power	NL	No	N/A	Yes	243,000
TransCanada Corp	TRP	TransCanada PipeLine	NEB	No	N/A	No	N/A
Valener, Inc.	VNR	Gaz Metro	QC	Yes	N/A	Yes	189,000
Hydro Quebec		Hydro Quebec Distribution	QC	No	N/A	Yes	4,060,195
		Hydro Quebec TransEnergie	QC	No	N/A	No	N/A

	U.S.	Canada
Total Number of Customers	19,889,699	3,793,481
Percent with Decoupling	25.92%	9.25%
Percent with LRAM	0.00%	52.66%
Percent with Weather Normalization	17.78%	11.39%

[1] The company has a formula rate plan or revenue stabilization plan that includes protection against volumetric risk.

Capital Cost Recovery Risk

U.S. Proxy Group Company		Operating Utility	State	Pre-Approval	CWIP	AFUDC	Cost Tracking Mechanism	# of Customers
Consolidated Edison	ED	Consolidated Edison of New York	NY	Yes	No	Yes	No	3,329,304
NextEra Energy	NEE	Florida Power and Light	FL	Yes	Yes	Yes	Yes	4,547,052
Northeast Utilities	NU	Connecticut Light and Power	CT	Yes	No	Yes	Yes	1,212,306
		NSTAR Electric	MA	No	No	Yes	Yes	1,163,077
		Public Service of New Hampshire	NH	No	No	Yes	Yes	498,216
		Western Massachusetts Electric	MA	No	No	Yes	Yes	206,295
Southern Co.	SO	Alabama Power	AL	No	No	Yes	Yes	1,434,487
		Georgia Power	GA	Yes	Yes	Yes	No	2,360,489
		Gulf Power	FL	Yes	Yes	Yes	Yes	432,403
		Mississippi Power	MS	Yes	Yes	Yes	No	186,002
Wisconsin Energy Corp.	WEC	Wisconsin Electric Power	WI	Yes	Yes [1]	Yes	No	1,120,990
Xcel Energy Inc.	XEL	Northern States Power - Minnesota	MN	No	Limited	Yes	Yes	1,399,830
		Northern States Power - Wisconsin	WI	Yes	Yes [1]	Yes	No	250,133
		Public Service Company of Colorado	CO	No	Yes	Yes	Yes	1,372,919
		Southwestern Public Service	TX	No	No	Yes	Yes	376,196
Canadian Proxy Group		Utility	Province					
Canadian Utilities Ltd.	CU	ATCO Electric Distribution	AB	No	No	Yes	Yes	213,000
		ATCO Electric Transmission	AB	No	Yes	Yes	Yes	N/A
Emera, Inc.	EMA	Nova Scotia Power	NS	Yes	No	Yes	No	490,000
Enbridge	ENB	Enbridge Gas Distribution	ON	No	No	Yes	Yes	1,997,481
Fortis, Inc.	FTS	Fortis Alberta	AB	No	No	Yes	Yes	499,000
		Fortis BC Electric	BC	Yes	No	Yes	Yes	162,000
		Newfoundland Power	NL	No	No	Yes	No	243,000
TransCanada Corp	TRP	TransCanada PipeLine	NEB	No	No	Yes	No	N/A
Valener, Inc.	VNR	Gaz Metro	QC	Yes	No	Yes	No	189,000
Hydro Quebec		Hydro Quebec Distribution	QC	Yes	No	Yes	No	4,060,195
		Hydro Quebec TransEnergie	QC	Yes	No	Yes	No	N/A

	U.S.	Canada
Total Number of Customers	19,889,699	3,793,481
Percent with Pre-Approval of Capital Projects	67.57%	22.17%
Percent with CWIP in Rate Base	44.74%	0.00%
Percent with AFUDC	100.00%	100.00%
Percent with Cost Tracking Mechanism	63.56%	75.70%

Notes:
[1] CWIP is not included in rate base, but Wisconsin PSC allows recovery of 50% of CWIP through adder to return on rate base.

Rate Regulation and Earnings Sharing

U.S. Proxy Group Company		Operating Utility	State	Cost of Svc	Incentive Reg	Multi-Year Rate	Formula Rate	ESM	# of Customers	
Consolidated Edison	ED	Consolidated Edison of New York	NY	No	Yes	Yes	No	Yes	3,329,304	
NextEra Energy	NEE	Florida Power and Light	FL	Yes	No	No	No	No	4,547,052	
Northeast Utilities	NU	Connecticut Light and Power	CT	No	Yes	Yes	No	Yes	1,212,306	
		NSTAR Electric	MA	No	Yes	Yes	No	Yes	1,163,077	
		Public Service of New Hampshire	NH	No	Yes	Yes	No	Yes	498,216	
		Western Massachusetts Electric	MA	Yes	No	No	No	No	206,295	
Southern Co.	SO	Alabama Power	AL	No	Yes	No	Yes	Yes	1,434,487	
		Georgia Power	GA	No	Yes	Yes	No	Yes	2,360,489	
		Gulf Power	FL	Yes	No	No	No	No	432,403	
		Mississippi Power	MS	No	Yes	No	Yes	Yes	186,002	
Wisconsin Energy Corp.	WEC	Wisconsin Electric Power	WI	Yes	No	No	No	No	1,120,990	
Xcel Energy Inc.	XEL	Northern States Power - Minnesota	MN	Yes	No	No	No	No	1,399,830	
		Northern States Power - Wisconsin	WI	Yes	No	No	No	No	250,133	
		Public Service Company of Colorado	CO	No	Yes	Yes	No	Yes	1,372,919	
		Southwestern Public Service	TX	Yes	No	No	No	No	376,196	
Canadian Proxy Group		Utility	Province							
Canadian Utilities Ltd.	CU	ATCO Electric Distribution	AB	No	Yes	Yes	No	No	213,000	
		ATCO Electric Transmission	AB	Yes	No	No	No	No	N/A	
Emera, Inc.	EMA	Nova Scotia Power	NS	Yes	No	No	No	No	490,000	
Enbridge	ENB	Enbridge Gas Distribution	ON	No	Yes	Yes	No	Yes	1,997,481	[1]
Fortis, Inc.	FTS	Fortis Alberta	AB	No	Yes	Yes	No	No	499,000	
		Fortis BC Electric	BC	Yes	No	No	No	No	162,000	
		Newfoundland Power	NL	Yes	No	No	No	Yes	243,000	
TransCanada Corp	TRP	TransCanada PipeLine	NEB	No	Yes	No	No	No	N/A	
Valener, Inc.	VNR	Gaz Metro	QC	No	Yes	Yes	No	Yes	189,000	[1]
Hydro Quebec		Hydro Quebec Distribution	QC	Yes	No	No	No	No	4,060,195	
		Hydro Quebec TransEnergie	QC	Yes	No	No	No	No	N/A	

	U.S.	Canada
Total Number of Customers	19,889,699	3,793,481
Percent with Cost of Service Regulation	41.90%	23.59%
Percent with Incentive Regulation Plan	58.10%	76.41%
Percent with Multi-year Rate Plan	49.96%	76.41%
Percent with Formula Rates	8.15%	0.00%
Percent with Earnings Sharing	58.10%	64.04%

Notes:
[1] Company is under cost of service regulation for 2013 rate year, but has filed incentive regulation plan that will take effect in 2014 rate year, if approved. Company previously operated under incentive regulation plan that expired in 2012.

Regulatory Lag

U.S. Proxy Group Company		Operating Utility	State	Test Year	Interim Rates	Rate Case Lag	# of Customers
Consolidated Edison	ED	Consolidated Edison of New York	NY	Forecast	Emergency	10.5	3,329,304
NextEra Energy	NEE	Florida Power and Light	FL	Forecast	Y	9	4,547,052
Northeast Utilities	NU	Connecticut Light and Power	CT	HKM	Emergency	6	1,212,306
		NSTAR Electric	MA	HKM	Emergency	N/A	1,163,077
		Public Service of New Hampshire	NH	HKM	Y	12	498,216
		Western Massachusetts Electric	MA	HKM	Emergency	6.5	206,295
Southern Co.	SO	Alabama Power	AL	Forecast	N/A	N/A	1,434,487
		Georgia Power	GA	Forecast	Y	6	2,360,489
		Gulf Power	FL	Forecast	Y	8	432,403
		Mississippi Power	MS	Forecast	N/A	N/A	186,002
Wisconsin Energy Corp.	WEC	Wisconsin Electric Power	WI	Forecast	Y	8	1,120,990
Xcel Energy Inc.	XEL	Northern States Power - Minnesota	MN	Partial	Y	17	1,399,830
		Northern States Power - Wisconsin	WI	Forecast	Y	6.5	250,133
		Public Service Company of Colorado	CO	Forecast	Emergency	5	1,372,919
		Southwestern Public Service	TX	HKM	Y	10	376,196
Canadian Proxy Group		Utility	Province				
Canadian Utilities Ltd.	CU	ATCO Electric Distribution	AB	Forecast	Y	11	213,000
		ATCO Electric Transmission	AB	Forecast	Y	11	N/A
Emera, Inc.	EMA	Nova Scotia Power	NS	Forecast	N	6.5	490,000
Enbridge	ENB	Enbridge Gas Distribution	ON	Forecast	N/A	N/A	1,997,481
Fortis, Inc.	FTS	Fortis Alberta	AB	Forecast	Y	11	499,000
		Fortis BC Electric	BC	Forecast	Y	12	162,000
		Newfoundland Power	NL	Forecast	Y	6	243,000
TransCanada Corp	TRP	TransCanada PipeLine	NEB	Forecast	Y	12	N/A
Valener, Inc.	VNR	Gaz Metro	QC	Forecast	N	N/A	189,000
Hydro Quebec		Hydro Quebec Distribution	QC	Forecast	N	8	4,060,195
		Hydro Quebec TransEnergie	QC	Forecast	Y	10	N/A

	U.S.	Canada
Total Number of Customers	19,889,699	3,793,481
Percent with Forecasted Test Year	75.59%	100.00%
Percent with Partially Forecasted Test Year	7.04%	0.00%
Percent with Historical Adjusted Test Year	17.38%	0.00%
Percent with Interim Rates	55.23%	29.45%
Percent with Interim Rates in Financial Emergency	36.62%	0.00%
Rate Case Lag in Months	8.71	9.93

Other Cost Recovery

U.S. Proxy Group Company		Operating Utility	State	Pension Expense	Bad Debt Expense	Storm Cost Recovery	Interest Rate Tracker	Energy Efficiency Cost	# of Customers
Consolidated Edison	ED	Consolidated Edison of New York	NY	Yes	No	Yes	Yes	Yes	3,329,304
NextEra Energy	NEE	Florida Power and Light	FL	No	No	Yes	No	Yes	4,547,052
Northeast Utilities	NU	Connecticut Light and Power	CT	No	No	Yes	No	No	1,212,306
		NSTAR Electric	MA	Yes	Yes	Yes	No	Yes	1,163,077
		Public Service of New Hampshire	NH	No	No	Yes	No	No	498,216
		Western Massachusetts Electric	MA	Yes	Yes	Yes	No	Yes	206,295
Southern Co.	SO	Alabama Power	AL	No	No	Yes	No	No	1,434,487
		Georgia Power	GA	No	No	Yes	No	Yes	2,360,489
		Gulf Power	FL	No	No	Yes	No	Yes	432,403
		Mississippi Power	MS	No	No	Yes	No	No	186,002
Wisconsin Energy Corp.	WEC	Wisconsin Electric Power	WI	Yes	Yes	No	No	No	1,120,990
Xcel Energy Inc.	XEL	Northern States Power - Minnesota	MN	Yes	No	No	No	Yes	1,399,830
		Northern States Power - Wisconsin	WI	No	No	No	No	No	250,133
		Public Service Company of Colorado	CO	No	No	No	No	Yes	1,372,919
		Southwestern Public Service	TX	No	No	Yes	No	Yes	376,196
Canadian Proxy Group		Utility	Province						
Canadian Utilities Ltd.	CU	ATCO Electric Distribution	AB	Yes	No	No	No	No	213,000
		ATCO Electric Transmission	AB	Yes	No	No	No	No	N/A
Emera, Inc.	EMA	Nova Scotia Power	NS	No	No	No	No	Yes	490,000
Enbridge	ENB	Enbridge Gas Distribution	ON	Yes	No	No	No	Yes	1,997,481
Fortis, Inc.	FTS	Fortis Alberta	AB	No	No	No	No	No	499,000
		Fortis BC Electric	BC	Yes	No	No	Yes	Yes	162,000
		Newfoundland Power	NL	Yes	No	No	No	Yes	243,000
TransCanada Corp	TRP	TransCanada PipeLine	NEB	No	No	No	Yes	No	N/A
Valener, Inc.	VNR	Gaz Metro	QC	No	Yes	No	Yes	Yes	189,000
Hydro Quebec		Hydro Quebec Distribution	QC	Yes	No	Limited	No	No	4,060,195
		Hydro Quebec TransEnergie	QC	Yes	No	No	No	No	N/A

	U.S.	Canada
Total Number of Customers	19,889,699	3,793,481
Percent with Pension Expense Cost Recovery	36.30%	68.95%
Percent with Bad Debt Expense Cost Recovery	12.52%	4.98%
Percent with Storm Cost Recovery	79.17%	0.00%
Percent with Interest Rate Tracker for Change in Interest Rates	16.74%	9.25%
Percent with Energy Efficiency and DSM Cost Recovery	76.36%	81.23%

Company Name	Ticker		Debt to Capital Ratio	EBIT to Interest Coverage	FFO to Interest Coverage	FFO / Debt Ratio	Debt to EBITDA
Hydro Quebec Distribution			65%	1.88	3.46	0.24	3.98
Hydro Quebec TransEnergie			70%	1.62	2.66	0.19	5.20
		U.S. Proxy Group					
Consolidated Edison	ED		48%	3.80	5.10	0.28	3.40
NextEra Energy	NEE		61%	3.37	5.17	0.24	4.11
Northeast Utilities	NU		57%	3.28	4.58	0.22	4.69
Southern Co.	SO		53%	5.07	7.38	0.30	3.28
Wisconsin Energy Corp	WEC		57%	4.29	6.43	0.29	3.85
Xcel Energy Inc.	XEL		54%	3.33	5.11	0.29	3.45
U.S. Proxy Group			55%	3.86	5.63	0.27	3.80
		Canadian Proxy Group					
Canadian Utilities Limited	CU		53%	4.07	5.23	0.29	3.14
Emera Incorporated	EMA		66%	2.23	4.03	0.22	5.04
Enbridge Inc.	ENB		64%	3.19	4.22	0.20	4.80
Fortis Inc.	FTS		56%	2.24	3.34	0.19	5.22
TransCanada Corporation	TRP		54%	3.30	4.63	0.21	4.59
Valener, Inc.	VNR	[1]	63%	2.67	3.83	0.22	4.42
Canadian Proxy Group			60%	2.95	4.21	0.22	4.54

Notes & Sources:
Unless otherwise noted, all values are based on holding-company financial data downloaded from SNL Financial.
[1] Credit metrics shown are those for Gaz Métro Limited Partnership.

Capital Asset Pricing Model
Reconciled Approach

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
US Proxy Group	**Ticker**	**Raw Beta**	**Bloomberg**	**Value Line**	**Industry-Adjusted Beta**	**Industry Index Beta**	**Mean Market-Adjusted Beta**	**Average Beta**	**Risk Free Rate**	**Average Market Risk Premium**	**Straight CAPM Calculation**	**Flotation Cost**	**"Simple" CAPM**	**Adjustment for Other Models**	**Total CAPM**
Consolidated Edison	ED	0.44	0.62	0.60	0.50	0.63	0.61	0.56	4.23%	6.67%	7.94%	0.30%	8.24%	0.75%	8.99%
NextEra Energy, Inc.	NEE	0.65	0.77	0.70	0.65	0.63	0.73	0.69	4.23%	6.67%	8.83%	0.30%	9.13%	0.75%	9.88%
Northeast Utilities	NU	0.59	0.73	0.70	0.61	0.63	0.71	0.66	4.23%	6.67%	8.62%	0.30%	8.92%	0.75%	9.67%
Southern Co.	SO	0.34	0.56	0.55	0.44	0.63	0.56	0.50	4.23%	6.67%	7.55%	0.30%	7.85%	0.75%	8.60%
Wisconsin Energy	WEC	0.47	0.65	0.60	0.52	0.63	0.62	0.57	4.23%	6.67%	8.05%	0.30%	8.35%	0.75%	9.10%
Xcel Energy, Inc.	XEL	0.47	0.64	0.60	0.52	0.63	0.62	0.57	4.23%	6.67%	8.05%	0.30%	8.35%	0.75%	9.10%
MEAN		0.49	0.66	0.63	0.54	0.63	0.64	0.59			8.17%		8.47%		9.22%

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
Canada Proxy Group	**Ticker**	**Raw Beta**	**Bloomberg**	**Value Line**	**Industry-Adjusted Beta**	**Industry Index Beta**	**Mean Market-Adjusted Beta**	**Average Beta**	**Risk Free Rate**	**Average Market Risk Premium**	**Straight CAPM Calculation**	**Flotation Cost**	**"Simple" CAPM**	**Adjustment for Other Models**	**Total CAPM**
Canadian Utilities Limited	CU	0.38	0.59		0.44	0.56	0.59	0.52	4.23%	6.67%	7.67%	0.30%	7.97%	0.75%	8.72%
Emera Inc.	EMA	0.44	0.63		0.48	0.56	0.63	0.56	4.23%	6.67%	7.93%	0.30%	8.23%	0.75%	8.98%
Enbridge Inc.	ENB	0.45	0.63	0.60	0.49	0.56	0.62	0.55	4.23%	6.67%	7.91%	0.30%	8.21%	0.75%	8.96%
Fortis Inc.	FTS	0.52	0.68	0.60	0.53	0.56	0.64	0.59	4.23%	6.67%	8.14%	0.30%	8.44%	0.75%	9.19%
TransCanada Corporation	TRP	0.41	0.60	0.85	0.46	0.56	0.73	0.59	4.23%	6.67%	8.18%	0.30%	8.48%	0.75%	9.23%
Valener Inc.	VNR	0.24	0.49		0.35	0.56	0.49	0.42	4.23%	6.67%	7.04%	0.30%	7.34%	0.75%	8.09%
MEAN		0.41	0.60	0.68	0.46	0.56	0.62	0.54			7.81%		8.11%		8.86%

Notes:

[1] Source: Bloomberg Professional; average of five years of weekly raw betas as of February 28, 2013
[2] Source: Bloomberg Professional; average of five years of weekly market-adjusted betas
[3] Source: Value Line as of February 28, 2013
[4] Equals (2/3) x [1] + (1/3) x [5]
[5] Source: Bloomberg Professional; average of five years of weekly betas for S&P utilities index
[6] Equals mean of [2] and [3]
[7] Equals Average of [4],[6]
[8] Source: Equals average long-term Consensus Forecast of 10-year Canadian government bond yield for the period 2013-2022
plus the 30-day average spread between 10- and 30-year bond ending February 28, 2013.
[9] Source: Average of the Ibbotson Canada historcal risk premium (1936-2012),
Ibbotson US historcal risk premium (1926-2012),
Bloomberg; TSX total return less [8] as of March 1, 2013,
Bloomberg; S&P 500 total return less [8] as of March 1, 2013
[10] Equals [8] + [7] x [9]
[11] Flotation Costs Allowed by the Regie in Past Rate Cases
[12] Equals [10] + [11]
[13] Adjustment for Results of Other Models as Noted by Regie in 2012 Rate Case
[14] Equals [12] + [13]

Foward-Looking Market Risk Premium -- U.S.

[1] Estimated Weighted Average Dividend Yield	2.28%
[2] Estimated Weighted Average Long-Term Growth Rate	10.39%
[3] S&P 500 Estimated Required Market Return	12.78%
[4] 10-Year Government Bond Yield Forecast (2013-2022)	3.62%
[5] Credit Spread between 10- and 30-Year Bond Yield	0.61%
[6] Risk-Free Rate	4.23%
[7] Implied Market Risk Premium	8.55%

Company Name	Ticker	[8] Shares Outstanding	[9] Price	[10] Market Cap.	[11] Weight	[12] Div. Yld.	[13] Earnings Growth	[14] Div. Yld. x Weight	[15] Earn. Gr. x Weight
3M Co	MMM	690.0	103.68	71,538.2	0.51%	2.44%	9.67%	0.01%	0.05%
Abbott Laboratories	ABT	1,570.7	33.60	52,774.7	0.38%	1.68%	10.61%	0.01%	0.04%
AbbVie Inc	ABBV	1,570.7	37.96	59,622.9	0.43%	4.21%	5.77%	0.02%	0.02%
Abercrombie & Fitch Co	ANF	79.6	46.22	3,677.4	0.03%	1.64%	16.14%	0.00%	0.00%
Accenture PLC	ACN	644.3	74.77	48,176.9	0.35%	2.18%	12.32%	0.01%	0.04%
ACE Ltd	ACE	340.3	85.54	29,111.1	0.21%	2.24%	8.33%	0.00%	0.02%
Actavis Inc	ACT	127.8	85.50	10,929.7	0.08%	0.00%	12.04%	0.00%	0.01%
Adobe Systems Inc	ADBE	498.8	39.84	19,871.8	0.14%	0.00%	10.20%	0.00%	0.01%
ADT Corp/The	ADT	232.2	48.00	11,146.9	0.08%	1.00%	10.50%	0.00%	0.01%
Advanced Micro Devices Inc	AMD	714.1	2.43	1,735.2	0.01%	0.00%	12.50%	0.00%	0.00%
AES Corp/VA	AES	745.8	11.88	8,859.7	0.06%	1.01%	8.00%	0.00%	0.01%
Aetna Inc	AET	328.0	47.41	15,550.5	0.11%	1.53%	10.40%	0.00%	0.01%
Aflac Inc	AFL	467.7	50.19	23,475.9	0.17%	2.86%	10.67%	0.00%	0.02%
Agilent Technologies Inc	A	347.9	41.89	14,575.0	0.10%	1.05%	8.71%	0.00%	0.01%
AGL Resources Inc	GAS	117.9	40.05	4,721.0	0.03%	4.66%	5.50%	0.00%	0.00%
Air Products & Chemicals Inc	APD	212.9	86.20	18,347.7	0.13%	3.10%	9.40%	0.00%	0.01%
Airgas Inc	ARG	75.9	100.84	7,655.5	0.05%	1.43%	12.87%	0.00%	0.01%
Akamai Technologies Inc	AKAM	177.5	36.59	6,493.5	0.05%	0.00%	15.40%	0.00%	0.01%
Alcoa Inc	AA	1,069.3	8.42	9,003.7	0.06%	1.43%	6.50%	0.00%	0.00%
Alexion Pharmaceuticals Inc	ALXN	195.2	86.69	16,922.7	0.12%	0.00%	40.57%	0.00%	0.05%
Allegheny Technologies Inc	ATI	107.5	30.25	3,251.1	0.02%	2.38%	15.00%	0.00%	0.00%
Allergan Inc/United States	AGN	307.5	108.75	33,446.0	0.24%	0.19%	13.58%	0.00%	0.03%
Allstate Corp/The	ALL	477.4	46.26	22,086.7	0.16%	2.12%	8.33%	0.00%	0.01%
Altera Corp	ALTR	319.8	35.41	11,322.4	0.08%	1.16%	13.50%	0.00%	0.01%
Altria Group Inc	MO	2,009.9	33.49	67,310.0	0.48%	5.51%	7.52%	0.03%	0.04%
Amazon.com Inc	AMZN	454.6	266.18	120,992.4	0.87%	0.00%	34.70%	0.00%	0.30%
Ameren Corp	AEE	242.6	33.84	8,210.8	0.06%	4.78%	-4.00%	0.00%	0.00%
American Electric Power Co Inc	AEP	485.7	46.66	22,661.3	0.16%	4.15%	4.40%	0.01%	0.01%
American Express Co	AXP	1,104.7	62.40	68,930.2	0.49%	1.37%	10.07%	0.01%	0.05%
American International Group Inc	AIG	1,476.3	37.79	55,790.2	0.40%	0.22%	10.75%	0.00%	0.04%
American Tower Corp	AMT	395.1	78.00	30,818.0	0.22%	1.40%	24.63%	0.00%	0.05%
Ameriprise Financial Inc	AMP	203.5	67.98	13,832.0	0.10%	2.54%	12.00%	0.00%	0.01%
AmerisourceBergen Corp	ABC	230.2	48.01	11,050.6	0.08%	1.61%	11.50%	0.00%	0.01%
Amgen Inc	AMGN	748.4	92.56	69,274.7	0.50%	2.01%	8.69%	0.01%	0.04%
Amphenol Corp	APH	159.7	71.68	11,447.2	0.08%	0.62%	18.50%	0.00%	0.02%
Anadarko Petroleum Corp	APC	500.6	79.72	39,905.1	0.29%	0.46%	14.09%	0.00%	0.04%
Analog Devices Inc	ADI	306.0	45.16	13,818.3	0.10%	2.92%	12.50%	0.00%	0.01%
Aon PLC	AON	311.6	60.91	18,977.9	0.14%	1.04%	10.00%	0.00%	0.01%
Apache Corp	APA	392.0	73.69	28,886.5	0.21%	1.03%	6.34%	0.00%	0.01%
Apartment Investment & Management Co	AIV	145.8	29.71	4,332.3	0.03%	3.10%	9.54%	0.00%	0.00%
Apollo Group Inc	APOL	112.1	16.60	1,860.3	0.01%	0.00%	9.26%	0.00%	0.00%
Apple Inc	AAPL	939.1	431.23	404,950.0	2.90%	2.51%	17.63%	0.07%	0.51%
Applied Materials Inc	AMAT	1,200.0	13.61	16,332.6	0.12%	2.56%	9.67%	0.00%	0.01%
Archer-Daniels-Midland Co	ADM	658.6	31.89	21,002.5	0.15%	2.10%	n/a	0.00%	n/a
Assurant Inc	AIZ	78.8	41.68	3,284.8	0.02%	2.21%	9.67%	0.00%	0.00%
AT&T Inc	T	5,491.6	35.99	197,643.0	1.42%	5.03%	5.75%	0.07%	0.08%
Autodesk Inc	ADSK	224.7	37.50	8,426.3	0.06%	0.00%	15.33%	0.00%	0.01%
Automatic Data Processing Inc	ADP	485.0	61.60	29,877.1	0.21%	2.71%	9.57%	0.01%	0.02%

Foward-Looking Market Risk Premium -- U.S.

AutoNation Inc	AN	121.0	43.32	5,241.2	0.04%	n/a	20.48%	n/a	0.01%
AutoZone Inc	AZO	36.1	376.95	13,600.0	0.10%	0.00%	16.47%	0.00%	0.02%
AvalonBay Communities Inc	AVB	114.4	125.84	14,396.8	0.10%	3.36%	8.57%	0.00%	0.01%
Avery Dennison Corp	AVY	100.1	40.84	4,088.3	0.03%	2.67%	7.00%	0.00%	0.00%
Avon Products Inc	AVP	432.2	19.68	8,505.0	0.06%	1.21%	15.29%	0.00%	0.01%
Baker Hughes Inc	BHI	441.8	44.30	19,572.1	0.14%	1.36%	13.00%	0.00%	0.02%
Ball Corp	BLL	149.4	44.16	6,599.2	0.05%	1.13%	10.00%	0.00%	0.00%
Bank of America Corp	BAC	10,778.3	11.36	122,441.0	0.88%	0.93%	8.67%	0.01%	0.08%
Bank of New York Mellon Corp/The	BK	1,162.0	27.15	31,547.0	0.23%	2.19%	12.67%	0.00%	0.03%
Baxter International Inc	BAX	545.9	68.84	37,581.7	0.27%	2.46%	8.68%	0.01%	0.02%
BB&T Corp	BBT	699.8	30.62	21,428.7	0.15%	2.97%	6.50%	0.00%	0.01%
Beam Inc	BEAM	160.3	60.92	9,767.1	0.07%	1.49%	11.92%	0.00%	0.01%
Becton Dickinson and Co	BDX	194.0	88.62	17,188.8	0.12%	2.20%	7.85%	0.00%	0.01%
Bed Bath & Beyond Inc	BBBY	226.1	56.83	12,851.3	0.09%	0.00%	13.78%	0.00%	0.01%
Bemis Co Inc	BMS	103.0	37.42	3,854.2	0.03%	2.74%	7.00%	0.00%	0.00%
Berkshire Hathaway Inc	BRK/B	1,099.8	102.08	112,266.9	0.80%	n/a	n/a	n/a	n/a
Best Buy Co Inc	BBY	338.1	16.84	5,693.4	0.04%	3.86%	1.50%	0.00%	0.00%
Biogen Idec Inc	BIIB	236.3	168.24	39,757.2	0.28%	0.00%	18.38%	0.00%	0.05%
BlackRock Inc	BLK	170.0	236.70	40,229.8	0.29%	2.86%	11.94%	0.01%	0.03%
BMC Software Inc	BMC	142.9	40.49	5,785.6	0.04%	0.00%	15.00%	0.00%	0.01%
Boeing Co/The	BA	756.2	77.19	58,368.4	0.42%	2.43%	11.48%	0.01%	0.05%
BorgWarner Inc	BWA	115.6	74.92	8,663.7	0.06%	0.10%	15.00%	0.00%	0.01%
Boston Properties Inc	BXP	151.6	103.21	15,650.7	0.11%	2.53%	4.84%	0.00%	0.01%
Boston Scientific Corp	BSX	1,357.4	7.37	10,004.2	0.07%	0.00%	7.78%	0.00%	0.01%
Bristol-Myers Squibb Co	BMY	1,637.4	37.17	60,860.5	0.44%	3.75%	7.19%	0.02%	0.03%
Broadcom Corp	BRCM	518.0	33.85	17,531.7	0.13%	1.30%	14.43%	0.00%	0.02%
Brown-Forman Corp	BF/B	129.0	65.55	8,457.5	0.06%	1.50%	12.50%	0.00%	0.01%
CA Inc	CA	455.9	24.44	11,140.5	0.08%	4.11%	10.00%	0.00%	0.01%
Cablevision Systems Corp	CVC	209.0	13.78	2,880.3	0.02%	4.43%	2.00%	0.00%	0.00%
Cabot Oil & Gas Corp	COG	210.2	63.19	13,285.2	0.10%	0.14%	n/a	0.00%	n/a
Cameron International Corp	CAM	247.9	62.85	15,577.6	0.11%	0.00%	17.00%	0.00%	0.02%
Campbell Soup Co	CPB	314.4	42.09	13,233.8	0.09%	2.89%	6.00%	0.00%	0.01%
Capital One Financial Corp	COF	582.2	51.75	30,131.4	0.22%	1.53%	8.00%	0.00%	0.02%
Cardinal Health Inc	CAH	340.9	46.45	15,832.9	0.11%	2.17%	11.40%	0.00%	0.01%
CareFusion Corp	CFN	222.6	32.90	7,323.2	0.05%	0.00%	10.58%	0.00%	0.01%
CarMax Inc	KMX	228.2	38.33	8,747.5	0.06%	n/a	12.78%	n/a	0.01%
Carnival Corp	CCL	594.5	35.81	21,288.5	0.15%	3.37%	15.85%	0.01%	0.02%
Caterpillar Inc	CAT	655.0	91.27	59,786.3	0.43%	2.23%	9.75%	0.01%	0.04%
CBRE Group Inc	CBG	329.2	24.39	8,030.0	0.06%	n/a	11.67%	n/a	0.01%
CBS Corp	CBS	586.4	43.50	25,510.5	0.18%	1.14%	9.69%	0.00%	0.02%
Celgene Corp	CELG	418.7	105.71	44,265.5	0.32%	0.00%	22.42%	0.00%	0.07%
CenterPoint Energy Inc	CNP	427.7	21.48	9,186.4	0.07%	3.86%	5.67%	0.00%	0.00%
CenturyLink Inc	CTL	624.3	34.84	21,749.4	0.16%	6.20%	3.30%	0.01%	0.01%
Cerner Corp	CERN	172.2	89.15	15,352.3	0.11%	0.00%	18.00%	0.00%	0.02%
CF Industries Holdings Inc	CF	63.0	200.97	12,662.0	0.09%	0.80%	10.00%	0.00%	0.01%
CH Robinson Worldwide Inc	CHRW	161.2	57.05	9,196.0	0.07%	2.50%	14.80%	0.00%	0.01%
Charles Schwab Corp/The	SCHW	1,278.0	16.41	20,971.8	0.15%	1.51%	18.39%	0.00%	0.03%
Chesapeake Energy Corp	CHK	664.7	19.64	13,053.8	0.09%	1.73%	22.42%	0.00%	0.02%
Chevron Corp	CVX	1,942.7	116.88	227,062.5	1.63%	3.19%	4.76%	0.05%	0.08%
Chipotle Mexican Grill Inc	CMG	31.0	318.48	9,883.1	0.07%	0.00%	19.34%	0.00%	0.01%
Chubb Corp/The	CB	261.8	84.54	22,132.6	0.16%	2.00%	9.00%	0.00%	0.01%
Cigna Corp	CI	286.0	58.26	16,659.7	0.12%	0.07%	9.87%	0.00%	0.01%
Cincinnati Financial Corp	CINF	163.2	45.08	7,358.3	0.05%	3.62%	5.00%	0.00%	0.00%
Cintas Corp	CTAS	123.3	43.67	5,383.9	0.04%	1.44%	11.17%	0.00%	0.00%
Cisco Systems Inc	CSCO	5,332.0	20.81	110,958.4	0.79%	2.71%	9.88%	0.02%	0.08%
Citigroup Inc	C	3,038.8	42.04	127,749.4	0.91%	0.83%	9.80%	0.01%	0.09%
Citrix Systems Inc	CTXS	186.4	71.41	13,311.1	0.10%	0.00%	15.44%	0.00%	0.01%
Cliffs Natural Resources Inc	CLF	158.2	25.19	3,984.9	0.03%	2.38%	7.50%	0.00%	0.00%
Clorox Co/The	CLX	131.0	83.99	10,999.5	0.08%	3.07%	8.68%	0.00%	0.01%
CME Group Inc/IL	CME	333.4	59.78	19,929.7	0.14%	3.85%	13.68%	0.01%	0.02%
CMS Energy Corp	CMS	265.9	26.40	7,020.7	0.05%	3.86%	6.00%	0.00%	0.00%
Coach Inc	COH	280.8	48.11	13,508.5	0.10%	2.57%	13.51%	0.00%	0.01%

Foward-Looking Market Risk Premium -- U.S.

Coca-Cola Co/The	KO	4,456.7	38.66	172,296.7	1.23%	2.89%	8.23%	0.04%	0.10%
Coca-Cola Enterprises Inc	CCE	279.2	35.58	9,932.8	0.07%	2.25%	8.72%	0.00%	0.01%
Cognizant Technology Solutions Corp	CTSH	301.8	77.94	23,520.9	0.17%	0.00%	18.09%	0.00%	0.03%
Colgate-Palmolive Co	CL	472.5	114.01	53,867.6	0.39%	2.34%	9.02%	0.01%	0.03%
Comcast Corp	CMCSA	2,122.3	39.99	84,869.9	0.61%	1.93%	18.84%	0.01%	0.11%
Comerica Inc	CMA	187.7	34.45	6,465.2	0.05%	1.97%	6.64%	0.00%	0.00%
Computer Sciences Corp	CSC	155.2	48.24	7,486.9	0.05%	1.66%	8.00%	0.00%	0.00%
ConAgra Foods Inc	CAG	413.1	34.25	14,147.1	0.10%	2.90%	6.50%	0.00%	0.01%
ConocoPhillips	COP	1,221.0	58.17	71,025.2	0.51%	4.61%	5.48%	0.02%	0.03%
CONSOL Energy Inc	CNX	228.1	30.47	6,951.2	0.05%	1.64%	12.00%	0.00%	0.01%
Consolidated Edison Inc	ED	292.9	58.89	17,247.6	0.12%	4.17%	3.49%	0.01%	0.00%
Constellation Brands Inc	STZ	160.1	43.80	7,013.9	0.05%	0.00%	11.20%	0.00%	0.01%
Corning Inc	GLW	1,472.4	12.51	18,419.7	0.13%	2.90%	11.50%	0.00%	0.02%
Costco Wholesale Corp	COST	435.6	101.17	44,073.3	0.32%	6.37%	13.40%	0.02%	0.04%
Coventry Health Care Inc	CVH	134.6	45.54	6,129.9	0.04%	1.10%	12.33%	0.00%	0.01%
Covidien PLC	COV	472.0	63.51	29,979.5	0.21%	1.67%	8.65%	0.00%	0.02%
CR Bard Inc	BCR	81.8	98.84	8,084.5	0.06%	0.84%	8.50%	0.00%	0.00%
Crown Castle International Corp	CCI	293.2	70.14	20,562.2	0.15%	0.00%	36.45%	0.00%	0.05%
CSX Corp	CSX	1,020.8	22.95	23,427.3	0.17%	2.56%	12.67%	0.00%	0.02%
Cummins Inc	CMI	189.8	114.97	21,826.5	0.16%	1.81%	10.00%	0.00%	0.02%
CVS Caremark Corp	CVS	1,231.2	51.51	63,418.8	0.45%	1.66%	11.81%	0.01%	0.05%
Danaher Corp	DHR	690.2	61.52	42,463.9	0.30%	0.20%	14.50%	0.00%	0.04%
Darden Restaurants Inc	DRI	129.4	46.06	5,958.2	0.04%	4.41%	12.25%	0.00%	0.01%
DaVita HealthCare Partners Inc	DVA	95.4	119.96	11,444.2	0.08%	0.00%	12.29%	0.00%	0.01%
Dean Foods Co	DF	185.9	16.96	3,153.2	0.02%	0.00%	9.13%	0.00%	0.00%
Deere & Co	DE	389.6	87.83	34,214.7	0.25%	2.13%	9.25%	0.01%	0.02%
Dell Inc	DELL	1,738.6	14.00	24,331.7	0.17%	2.34%	8.33%	0.00%	0.01%
Delphi Automotive PLC	DLPH	315.3	42.21	13,308.8	0.10%	0.81%	12.88%	0.00%	0.01%
Denbury Resources Inc	DNR	387.0	17.92	6,935.0	0.05%	0.00%	9.10%	0.00%	0.00%
DENTSPLY International Inc	XRAY	142.8	41.12	5,874.0	0.04%	0.55%	11.50%	0.00%	0.00%
Devon Energy Corp	DVN	406.0	53.89	21,879.3	0.16%	1.35%	6.80%	0.00%	0.01%
Diamond Offshore Drilling Inc	DO	139.0	69.27	9,630.7	0.07%	5.05%	20.93%	0.00%	0.01%
DIRECTV	DTV	573.1	48.49	27,790.5	0.20%	0.00%	15.90%	0.00%	0.03%
Discover Financial Services	DFS	497.5	39.07	19,437.5	0.14%	1.42%	11.00%	0.00%	0.02%
Discovery Communications Inc	DISCA	145.1	74.75	10,847.4	0.08%	0.00%	19.70%	0.00%	0.02%
Dollar General Corp	DG	328.7	47.42	15,587.5	0.11%	0.00%	16.99%	0.00%	0.02%
Dollar Tree Inc	DLTR	227.2	45.98	10,446.9	0.07%	0.00%	15.98%	0.00%	0.01%
Dominion Resources Inc/VA	D	576.3	56.25	32,417.4	0.23%	3.97%	6.00%	0.01%	0.01%
Dover Corp	DOV	174.7	72.95	12,742.9	0.09%	1.98%	14.25%	0.00%	0.01%
Dow Chemical Co/The	DOW	1,204.4	31.77	38,262.6	0.27%	4.10%	6.50%	0.01%	0.02%
DR Horton Inc	DHI	321.3	22.50	7,229.8	0.05%	0.67%	7.67%	0.00%	0.00%
Dr Pepper Snapple Group Inc	DPS	203.6	43.75	8,908.9	0.06%	3.45%	7.38%	0.00%	0.00%
DTE Energy Co	DTE	172.5	66.33	11,445.0	0.08%	3.86%	5.00%	0.00%	0.00%
Duke Energy Corp	DUK	704.7	68.96	48,592.9	0.35%	4.49%	4.50%	0.02%	0.02%
Dun & Bradstreet Corp/The	DNB	40.9	80.44	3,287.9	0.02%	1.96%	n/a	0.00%	n/a
E*TRADE Financial Corp	ETFC	286.6	10.61	3,041.1	0.02%	0.00%	26.00%	0.00%	0.01%
Eastman Chemical Co	EMN	153.4	69.63	10,679.0	0.08%	1.58%	7.67%	0.00%	0.01%
Eaton Corp PLC	ETN	465.3	62.57	29,114.8	0.21%	2.70%	10.00%	0.01%	0.02%
eBay Inc	EBAY	1,296.5	54.96	71,256.3	0.51%	0.00%	13.38%	0.00%	0.07%
Ecolab Inc	ECL	295.0	76.74	22,634.8	0.16%	1.16%	13.50%	0.00%	0.02%
Edison International	EIX	325.8	48.49	15,798.6	0.11%	2.80%	7.22%	0.00%	0.01%
Edwards Lifesciences Corp	EW	114.1	85.70	9,778.4	0.07%	0.00%	17.68%	0.00%	0.01%
EI du Pont de Nemours & Co	DD	934.3	48.09	44,929.9	0.32%	3.59%	6.26%	0.01%	0.02%
Electronic Arts Inc	EA	300.1	18.06	5,417.9	0.04%	0.00%	14.80%	0.00%	0.01%
Eli Lilly & Co	LLY	1,134.4	54.83	62,199.8	0.45%	3.57%	1.00%	0.02%	0.00%
EMC Corp/MA	EMC	2,104.4	23.26	48,949.0	0.35%	0.00%	13.67%	0.00%	0.05%
Emerson Electric Co	EMR	722.1	56.00	40,436.1	0.29%	2.92%	10.17%	0.01%	0.03%
Ensco PLC	ESV	232.7	59.71	13,895.1	0.10%	2.74%	20.07%	0.00%	0.02%
Entergy Corp	ETR	178.1	62.04	11,048.9	0.08%	5.37%	4.67%	0.00%	0.00%
EOG Resources Inc	EOG	271.7	123.05	33,438.4	0.24%	0.58%	11.86%	0.00%	0.03%
EQT Corp	EQT	150.3	63.87	9,602.7	0.07%	0.49%	30.00%	0.00%	0.02%
Equifax Inc	EFX	120.5	55.86	6,728.5	0.05%	1.58%	11.00%	0.00%	0.01%

Foward-Looking Market Risk Premium -- U.S.

Equity Residential	EQR	325.5	55.31	18,001.3	0.13%	3.42%	6.75%	0.00%	0.01%
Estee Lauder Cos Inc/The	EL	237.2	64.40	15,273.7	0.11%	1.54%	14.02%	0.00%	0.02%
Exelon Corp	EXC	855.0	30.93	26,445.7	0.19%	4.92%	-0.52%	0.01%	0.00%
Expedia Inc	EXPE	122.6	63.87	7,829.7	0.06%	0.69%	13.64%	0.00%	0.01%
Expeditors International of Washington Inc	EXPD	206.5	38.77	8,004.9	0.06%	1.58%	9.33%	0.00%	0.01%
Express Scripts Holding Co	ESRX	818.5	57.36	46,949.1	0.34%	0.00%	16.67%	0.00%	0.06%
Exxon Mobil Corp	XOM	4,480.5	89.34	400,283.4	2.87%	2.65%	3.08%	0.08%	0.09%
F5 Networks Inc	FFIV	78.6	93.62	7,357.7	0.05%	0.00%	18.43%	0.00%	0.01%
Family Dollar Stores Inc	FDO	115.8	58.58	6,783.9	0.05%	1.53%	10.79%	0.00%	0.01%
Fastenal Co	FAST	296.6	51.73	15,341.3	0.11%	0.95%	18.77%	0.00%	0.02%
FedEx Corp	FDX	314.5	105.37	33,134.8	0.24%	0.53%	11.14%	0.00%	0.03%
Fidelity National Information Services Inc	FIS	294.5	37.62	11,078.7	0.08%	2.34%	13.00%	0.00%	0.01%
Fifth Third Bancorp	FITB	882.2	15.84	13,968.9	0.10%	2.83%	7.84%	0.00%	0.01%
First Horizon National Corp	FHN	243.4	10.67	2,597.1	0.02%	1.41%	8.33%	0.00%	0.00%
First Solar Inc	FSLR	87.2	25.33	2,207.7	0.02%	0.00%	9.50%	0.00%	0.00%
FirstEnergy Corp	FE	418.2	39.42	16,486.1	0.12%	5.58%	2.20%	0.01%	0.00%
Fiserv Inc	FISV	133.5	81.41	10,868.5	0.08%	0.00%	11.71%	0.00%	0.01%
FLIR Systems Inc	FLIR	150.0	26.20	3,930.7	0.03%	1.37%	12.50%	0.00%	0.00%
Flowserve Corp	FLS	48.1	161.25	7,759.8	0.06%	1.02%	12.33%	0.00%	0.01%
Fluor Corp	FLR	162.5	60.50	9,831.7	0.07%	0.93%	13.43%	0.00%	0.01%
FMC Corp	FMC	137.7	59.76	8,227.2	0.06%	0.94%	11.57%	0.00%	0.01%
FMC Technologies Inc	FTI	237.5	51.48	12,225.4	0.09%	0.00%	15.33%	0.00%	0.01%
Ford Motor Co	F	3,851.4	12.60	48,527.6	0.35%	3.00%	8.62%	0.01%	0.03%
Forest Laboratories Inc	FRX	266.3	36.73	9,780.6	0.07%	0.00%	10.43%	0.00%	0.01%
Fossil Inc	FOSL	59.3	103.46	6,139.7	0.04%	0.00%	17.05%	0.00%	0.01%
Franklin Resources Inc	BEN	212.5	140.66	29,894.2	0.21%	2.96%	14.68%	0.01%	0.03%
Freeport-McMoRan Copper & Gold Inc	FCX	949.5	31.37	29,786.8	0.21%	3.98%	n/a	0.01%	n/a
Frontier Communications Corp	FTR	998.3	4.18	4,167.8	0.03%	9.58%	-2.22%	0.00%	0.00%
GameStop Corp	GME	121.2	23.97	2,904.7	0.02%	1.14%	11.80%	0.00%	0.00%
Gannett Co Inc	GCI	229.6	20.14	4,624.7	0.03%	4.17%	4.50%	0.00%	0.00%
Gap Inc/The	GPS	479.4	33.81	16,209.2	0.12%	1.50%	12.95%	0.00%	0.02%
Garmin Ltd	GRMN	208.1	35.12	7,307.7	0.05%	5.09%	7.39%	0.00%	0.00%
General Dynamics Corp	GD	353.7	67.69	23,940.2	0.17%	3.12%	5.56%	0.01%	0.01%
General Electric Co	GE	10,398.3	23.14	240,616.0	1.72%	3.36%	9.75%	0.06%	0.17%
General Mills Inc	GIS	646.6	46.35	29,969.7	0.21%	2.83%	8.00%	0.01%	0.02%
Genuine Parts Co	GPC	154.9	70.87	10,975.5	0.08%	3.03%	8.44%	0.00%	0.01%
Genworth Financial Inc	GNW	492.7	8.52	4,197.9	0.03%	0.00%	5.00%	0.00%	0.00%
Gilead Sciences Inc	GILD	1,522.4	43.43	66,117.5	0.47%	0.00%	22.85%	0.00%	0.11%
Goldman Sachs Group Inc/The	GS	465.5	150.31	69,969.8	0.50%	1.31%	10.57%	0.01%	0.05%
Goodyear Tire & Rubber Co/The	GT	245.4	12.95	3,176.7	0.02%	0.00%	24.04%	0.00%	0.01%
Google Inc	GOOG	267.5	805.82	215,556.9	1.54%	0.00%	14.76%	0.00%	0.23%
H&R Block Inc	HRB	271.3	24.76	6,717.2	0.05%	3.23%	11.00%	0.00%	0.01%
Halliburton Co	HAL	928.0	40.56	37,639.1	0.27%	1.17%	16.33%	0.00%	0.04%
Harley-Davidson Inc	HOG	226.2	52.04	11,774.0	0.08%	1.25%	13.00%	0.00%	0.01%
Harman International Industries Inc	HAR	67.9	42.44	2,883.2	0.02%	1.30%	17.50%	0.00%	0.00%
Harris Corp	HRS	112.8	47.72	5,385.2	0.04%	3.11%	4.00%	0.00%	0.00%
Hartford Financial Services Group Inc	HIG	436.3	23.65	10,318.7	0.07%	2.00%	9.00%	0.00%	0.01%
Hasbro Inc	HAS	128.7	40.01	5,151.1	0.04%	3.55%	9.00%	0.00%	0.00%
HCP Inc	HCP	453.4	48.88	22,161.2	0.16%	4.30%	3.66%	0.01%	0.01%
Health Care REIT Inc	HCN	260.4	64.60	16,824.0	0.12%	4.78%	5.48%	0.01%	0.01%
Helmerich & Payne Inc	HP	106.3	65.95	7,008.4	0.05%	0.78%	9.00%	0.00%	0.00%
Hershey Co/The	HSY	163.5	83.42	13,635.7	0.10%	2.00%	7.90%	0.00%	0.01%
Hess Corp	HES	341.5	66.27	22,634.3	0.16%	0.60%	6.31%	0.00%	0.01%
Hewlett-Packard Co	HPQ	1,948.1	20.20	39,352.6	0.28%	2.55%	5.33%	0.01%	0.02%
HJ Heinz Co	HNZ	320.7	72.47	23,237.6	0.17%	2.85%	7.00%	0.00%	0.01%
Home Depot Inc/The	HD	1,495.2	68.97	103,122.5	0.74%	2.28%	15.44%	0.02%	0.11%
Honeywell International Inc	HON	783.8	70.02	54,880.8	0.39%	2.36%	11.00%	0.01%	0.04%
Hormel Foods Corp	HRL	263.6	37.40	9,859.1	0.07%	1.70%	8.50%	0.00%	0.01%
Hospira Inc	HSP	165.2	29.45	4,865.7	0.03%	0.00%	8.92%	0.00%	0.00%
Host Hotels & Resorts Inc	HST	726.7	16.58	12,048.7	0.09%	2.50%	9.97%	0.00%	0.01%
Hudson City Bancorp Inc	HCBK	528.2	8.56	4,518.8	0.03%	3.74%	n/a	0.00%	n/a
Humana Inc	HUM	158.4	67.83	10,741.3	0.08%	1.57%	9.92%	0.00%	0.01%

Foward-Looking Market Risk Premium -- U.S.

Huntington Bancshares Inc/OH	HBAN	842.0	7.08	5,957.2	0.04%	2.60%	5.25%	0.00%	0.00%
Illinois Tool Works Inc	ITW	451.4	61.54	27,781.4	0.20%	2.43%	7.63%	0.00%	0.02%
Ingersoll-Rand PLC	IR	296.3	51.90	15,378.9	0.11%	1.64%	11.00%	0.00%	0.01%
Integrys Energy Group Inc	TEG	78.3	55.97	4,381.8	0.03%	4.86%	5.33%	0.00%	0.00%
Intel Corp	INTC	4,946.0	21.04	104,039.1	0.75%	4.34%	11.33%	0.03%	0.08%
IntercontinentalExchange Inc	ICE	72.7	153.81	11,174.7	0.08%	0.00%	13.45%	0.00%	0.01%
International Business Machines Corp	IBM	1,114.5	202.72	225,933.5	1.62%	1.69%	9.25%	0.03%	0.15%
International Flavors & Fragrances Inc	IFF	81.5	73.22	5,966.7	0.04%	1.85%	6.50%	0.00%	0.00%
International Game Technology	IGT	264.4	16.20	4,283.3	0.03%	1.60%	14.00%	0.00%	0.00%
International Paper Co	IP	441.2	44.23	19,514.6	0.14%	2.73%	5.50%	0.00%	0.01%
Interpublic Group of Cos Inc/The	IPG	413.9	12.79	5,293.9	0.04%	2.21%	9.67%	0.00%	0.00%
Intuit Inc	INTU	296.1	64.99	19,240.5	0.14%	1.04%	13.00%	0.00%	0.02%
Intuitive Surgical Inc	ISRG	40.1	551.96	22,148.5	0.16%	n/a	17.89%	n/a	0.03%
Invesco Ltd	IVZ	440.9	26.76	11,799.4	0.08%	2.84%	13.23%	0.00%	0.01%
Iron Mountain Inc	IRM	189.9	34.58	6,565.6	0.05%	3.17%	12.75%	0.00%	0.01%
Jabil Circuit Inc	JBL	202.1	18.49	3,737.6	0.03%	1.74%	12.00%	0.00%	0.00%
Jacobs Engineering Group Inc	JEC	130.4	47.93	6,247.8	0.04%	0.00%	10.23%	0.00%	0.00%
JC Penney Co Inc	JCP	219.4	17.73	3,890.0	0.03%	0.00%	17.10%	0.00%	0.00%
JDS Uniphase Corp	JDSU	229.8	14.10	3,240.3	0.02%	0.00%	12.00%	0.00%	0.00%
JM Smucker Co/The	SJM	108.5	96.14	10,427.7	0.07%	2.14%	7.33%	0.00%	0.01%
Johnson & Johnson	JNJ	2,795.3	76.67	214,317.1	1.53%	3.24%	6.88%	0.05%	0.11%
Johnson Controls Inc	JCI	684.3	31.48	21,542.4	0.15%	2.36%	12.79%	0.00%	0.02%
Joy Global Inc	JOY	106.0	61.99	6,570.6	0.05%	1.13%	9.43%	0.00%	0.00%
JPMorgan Chase & Co	JPM	3,804.0	48.92	186,091.7	1.33%	2.85%	6.69%	0.04%	0.09%
Juniper Networks Inc	JNPR	509.4	20.48	10,433.1	0.07%	0.00%	13.50%	0.00%	0.01%
Kellogg Co	K	361.9	60.46	21,879.9	0.16%	2.99%	7.93%	0.00%	0.01%
KeyCorp	KEY	923.9	9.35	8,638.1	0.06%	2.64%	5.00%	0.00%	0.00%
Kimberly-Clark Corp	KMB	387.6	94.39	36,587.6	0.26%	3.34%	7.91%	0.01%	0.02%
Kimco Realty Corp	KIM	407.9	21.76	8,875.5	0.06%	3.84%	6.45%	0.00%	0.00%
Kinder Morgan Inc/DE	KMI	1,036.7	37.18	38,545.0	0.28%	4.24%	7.00%	0.01%	0.02%
KLA-Tencor Corp	KLAC	166.1	54.47	9,049.9	0.06%	2.88%	10.00%	0.00%	0.01%
Kohl's Corp	KSS	230.0	46.09	10,601.2	0.08%	2.91%	9.08%	0.00%	0.01%
Kraft Foods Group Inc	KRFT	592.5	48.50	28,738.3	0.21%	3.43%	3.50%	0.01%	0.01%
Kroger Co/The	KR	518.4	29.46	15,273.1	0.11%	1.77%	10.05%	0.00%	0.01%
L-3 Communications Holdings Inc	LLL	89.9	76.34	6,862.7	0.05%	2.82%	0.63%	0.00%	0.00%
Laboratory Corp of America Holdings	LH	94.6	89.06	8,425.1	0.06%	0.00%	11.50%	0.00%	0.01%
Lam Research Corp	LRCX	162.3	42.70	6,932.2	0.05%	0.00%	11.00%	0.00%	0.01%
Legg Mason Inc	LM	129.0	28.25	3,643.0	0.03%	1.58%	14.63%	0.00%	0.00%
Leggett & Platt Inc	LEG	142.1	30.66	4,356.8	0.03%	3.65%	15.00%	0.00%	0.00%
Lennar Corp	LEN	160.7	38.74	6,224.6	0.04%	0.37%	8.00%	0.00%	0.00%
Leucadia National Corp	LUK	244.6	26.51	6,483.9	0.05%	n/a	n/a	n/a	n/a
Life Technologies Corp	LIFE	170.4	59.78	10,185.7	0.07%	0.00%	8.68%	0.00%	0.01%
Lincoln National Corp	LNC	275.0	29.70	8,168.0	0.06%	1.57%	10.00%	0.00%	0.01%
Linear Technology Corp	LLTC	232.6	37.92	8,818.9	0.06%	2.69%	10.07%	0.00%	0.01%
Lockheed Martin Corp	LMT	322.6	88.07	28,409.9	0.20%	5.27%	6.60%	0.01%	0.01%
Loews Corp	L	391.9	43.10	16,890.3	0.12%	0.58%	n/a	0.00%	n/a
Lorillard Inc	LO	379.4	38.25	14,510.5	0.10%	5.65%	9.32%	0.01%	0.01%
Lowe's Cos Inc	LOW	1,110.0	38.47	42,701.7	0.31%	1.82%	16.38%	0.01%	0.05%
LSI Corp	LSI	549.7	6.88	3,779.5	0.03%	n/a	15.33%	n/a	0.00%
Ltd Brands Inc	LTD	288.4	44.95	12,962.3	0.09%	3.27%	10.75%	0.00%	0.01%
LyondellBasell Industries NV	LYB	575.3	59.43	34,190.3	0.24%	2.76%	9.50%	0.01%	0.02%
M&T Bank Corp	MTB	128.7	102.57	13,203.6	0.09%	2.75%	16.54%	0.00%	0.02%
Macy's Inc	M	387.7	40.64	15,756.1	0.11%	2.09%	9.43%	0.00%	0.01%
Marathon Oil Corp	MRO	707.7	32.94	23,311.9	0.17%	2.11%	17.64%	0.00%	0.03%
Marathon Petroleum Corp	MPC	331.4	84.91	28,142.1	0.20%	1.85%	7.59%	0.00%	0.02%
Marriott International Inc/DE	MAR	315.5	39.53	12,473.3	0.09%	1.37%	14.73%	0.00%	0.01%
Marsh & McLennan Cos Inc	MMC	548.4	37.15	20,372.1	0.15%	2.49%	12.00%	0.00%	0.02%
Masco Corp	MAS	356.6	19.17	6,835.4	0.05%	1.58%	10.00%	0.00%	0.00%
Mastercard Inc	MA	118.0	518.08	61,113.6	0.44%	0.26%	19.00%	0.00%	0.08%
Mattel Inc	MAT	344.5	40.45	13,935.5	0.10%	3.40%	9.00%	0.00%	0.01%
McCormick & Co Inc/MD	MKC	120.2	68.35	8,217.8	0.06%	1.99%	n/a	0.00%	n/a
McDonald's Corp	MCD	1,002.8	95.55	95,816.8	0.69%	3.30%	9.89%	0.02%	0.07%

Foward-Looking Market Risk Premium -- U.S.

McGraw-Hill Cos Inc/The	MHP	280.8	47.19	13,251.0	0.09%	2.30%	8.50%	0.00%	0.01%
McKesson Corp	MCK	232.9	107.40	25,012.3	0.18%	0.72%	13.25%	0.00%	0.02%
Mead Johnson Nutrition Co	MJN	203.0	75.17	15,261.3	0.11%	1.79%	10.80%	0.00%	0.01%
MeadWestvaco Corp	MWV	175.7	35.62	6,257.3	0.04%	2.85%	10.00%	0.00%	0.00%
Medtronic Inc	MDT	1,011.4	45.18	45,693.2	0.33%	2.34%	7.73%	0.01%	0.03%
Merck & Co Inc	MRK	3,022.4	42.61	128,783.1	0.92%	4.00%	4.50%	0.04%	0.04%
MetLife Inc	MET	1,093.6	35.29	38,592.8	0.28%	2.90%	8.00%	0.01%	0.02%
MetroPCS Communications Inc	PCS	364.5	9.82	3,579.3	0.03%	0.00%	15.79%	0.00%	0.00%
Microchip Technology Inc	MCHP	195.4	36.44	7,119.0	0.05%	3.87%	n/a	0.00%	n/a
Micron Technology Inc	MU	1,021.8	8.26	8,434.8	0.06%	0.00%	14.04%	0.00%	0.01%
Microsoft Corp	MSFT	8,376.2	27.96	234,157.9	1.68%	3.25%	9.17%	0.05%	0.15%
Molex Inc	MOLX	95.6	27.73	2,649.9	0.02%	3.20%	12.50%	0.00%	0.00%
Molson Coors Brewing Co	TAP	156.8	45.16	7,079.9	0.05%	3.04%	7.67%	0.00%	0.00%
Mondelez International Inc	MDLZ	1,778.3	27.80	49,436.4	0.35%	1.90%	9.87%	0.01%	0.03%
Monsanto Co	MON	535.8	101.58	54,427.9	0.39%	1.27%	12.16%	0.00%	0.05%
Monster Beverage Corp	MNST	165.5	50.58	8,373.3	0.06%	0.00%	17.00%	0.00%	0.01%
Moody's Corp	MCO	223.6	48.88	10,929.6	0.08%	1.64%	15.00%	0.00%	0.01%
Morgan Stanley	MS	1,961.3	22.38	43,893.0	0.31%	1.09%	11.67%	0.00%	0.04%
Mosaic Co/The	MOS	296.9	58.39	17,337.8	0.12%	1.71%	6.32%	0.00%	0.01%
Motorola Solutions Inc	MSI	276.0	62.01	17,113.7	0.12%	1.86%	12.00%	0.00%	0.01%
Murphy Oil Corp	MUR	190.7	60.41	11,518.1	0.08%	2.06%	20.00%	0.00%	0.02%
Mylan Inc/PA	MYL	395.6	30.13	11,916.0	0.09%	0.00%	10.52%	0.00%	0.01%
Nabors Industries Ltd	NBR	290.4	16.45	4,776.8	0.03%	0.00%	9.00%	0.00%	0.00%
NASDAQ OMX Group Inc/The	NDAQ	165.7	31.52	5,222.2	0.04%	1.68%	11.52%	0.00%	0.00%
National Oilwell Varco Inc	NOV	426.6	66.95	28,563.5	0.20%	0.75%	11.33%	0.00%	0.02%
NetApp Inc	NTAP	360.4	33.97	12,243.0	0.09%	0.00%	12.83%	0.00%	0.01%
Netflix Inc	NFLX	56.0	189.13	10,590.0	0.08%	0.00%	25.20%	0.00%	0.02%
Newell Rubbermaid Inc	NWL	287.6	23.32	6,706.8	0.05%	2.62%	8.87%	0.00%	0.00%
Newfield Exploration Co	NFX	135.4	23.16	3,136.7	0.02%	0.00%	11.50%	0.00%	0.00%
Newmont Mining Corp	NEM	491.8	39.65	19,501.4	0.14%	4.59%	1.00%	0.01%	0.00%
News Corp	NWSA	1,568.8	29.11	45,668.2	0.33%	0.56%	13.00%	0.00%	0.04%
NextEra Energy Inc	NEE	423.2	72.23	30,568.2	0.22%	3.63%	5.33%	0.01%	0.01%
NIKE Inc	NKE	721.3	54.75	39,492.3	0.28%	1.48%	12.30%	0.00%	0.03%
NiSource Inc	NI	311.2	27.89	8,679.0	0.06%	3.54%	n/a	0.00%	n/a
Noble Corp	NE	253.2	35.39	8,961.7	0.06%	1.74%	13.67%	0.00%	0.01%
Noble Energy Inc	NBL	178.7	110.02	19,662.2	0.14%	0.86%	7.00%	0.00%	0.01%
Nordstrom Inc	JWN	197.0	54.05	10,647.9	0.08%	1.96%	12.25%	0.00%	0.01%
Norfolk Southern Corp	NSC	314.5	73.78	23,205.0	0.17%	2.73%	15.00%	0.00%	0.02%
Northeast Utilities	NU	314.3	41.74	13,120.5	0.09%	3.48%	7.82%	0.00%	0.01%
Northern Trust Corp	NTRS	239.2	53.20	12,723.2	0.09%	2.39%	14.63%	0.00%	0.01%
Northrop Grumman Corp	NOC	237.1	65.38	15,503.3	0.11%	3.57%	3.33%	0.00%	0.00%
NRG Energy Inc	NRG	323.2	23.95	7,739.8	0.06%	1.33%	n/a	0.00%	n/a
Nucor Corp	NUE	317.7	44.34	14,085.9	0.10%	3.31%	7.33%	0.00%	0.01%
NVIDIA Corp	NVDA	624.9	12.69	7,929.4	0.06%	2.39%	13.00%	0.00%	0.01%
NYSE Euronext	NYX	243.0	37.14	9,025.0	0.06%	3.23%	10.00%	0.00%	0.01%
O'Reilly Automotive Inc	ORLY	113.0	102.72	11,603.6	0.08%	0.00%	16.68%	0.00%	0.01%
Occidental Petroleum Corp	OXY	805.5	82.60	66,535.6	0.48%	2.82%	8.00%	0.01%	0.04%
Omnicom Group Inc	OMC	261.4	57.23	14,960.2	0.11%	2.69%	6.00%	0.00%	0.01%
ONEOK Inc	OKE	205.0	44.62	9,146.8	0.07%	3.38%	10.00%	0.00%	0.01%
Oracle Corp	ORCL	4,734.3	34.65	164,043.4	1.17%	0.74%	13.56%	0.01%	0.16%
Owens-Illinois Inc	OI	164.1	25.29	4,149.5	0.03%	0.00%	7.00%	0.00%	0.00%
PACCAR Inc	PCAR	353.5	46.87	16,567.1	0.12%	2.72%	10.25%	0.00%	0.01%
Pall Corp	PLL	111.1	67.46	7,494.2	0.05%	1.36%	14.26%	0.00%	0.01%
Parker Hannifin Corp	PH	149.2	94.34	14,071.6	0.10%	1.78%	7.57%	0.00%	0.01%
Patterson Cos Inc	PDCO	108.6	36.36	3,949.9	0.03%	1.56%	12.00%	0.00%	0.00%
Paychex Inc	PAYX	363.7	33.37	12,137.2	0.09%	3.90%	9.57%	0.00%	0.01%
Peabody Energy Corp	BTU	269.6	20.49	5,524.7	0.04%	1.68%	12.00%	0.00%	0.00%
Pentair Ltd	PNR	206.1	52.22	10,764.5	0.08%	1.78%	12.50%	0.00%	0.01%
People's United Financial Inc	PBCT	331.3	13.21	4,374.4	0.03%	4.85%	7.00%	0.00%	0.00%
Pepco Holdings Inc	POM	230.1	20.44	4,702.7	0.03%	5.28%	6.00%	0.00%	0.00%
PepsiCo Inc	PEP	1,542.8	75.81	116,958.4	0.84%	2.96%	7.66%	0.02%	0.06%
PerkinElmer Inc	PKI	113.7	34.62	3,937.5	0.03%	0.81%	10.65%	0.00%	0.00%

Foward-Looking Market Risk Premium -- U.S.

Perrigo Co	PRGO	93.5	113.00	10,570.8	0.08%	0.26%	11.86%	0.00%	0.01%
PetSmart Inc	PETM	107.5	64.66	6,949.3	0.05%	0.96%	18.08%	0.00%	0.01%
Pfizer Inc	PFE	7,189.1	27.40	196,980.3	1.41%	3.48%	3.81%	0.05%	0.05%
PG&E Corp	PCG	438.7	42.81	18,782.7	0.13%	4.28%	3.05%	0.01%	0.00%
Philip Morris International Inc	PM	1,647.8	91.55	150,855.1	1.08%	3.95%	11.51%	0.04%	0.12%
Phillips 66	PSX	625.8	63.73	39,882.6	0.29%	1.95%	7.50%	0.01%	0.02%
Pinnacle West Capital Corp	PNW	109.8	55.97	6,143.1	0.04%	3.95%	4.39%	0.00%	0.00%
Pioneer Natural Resources Co	PXD	133.7	123.84	16,558.7	0.12%	0.08%	15.98%	0.00%	0.02%
Pitney Bowes Inc	PBI	201.3	13.01	2,619.5	0.02%	11.45%	n/a	0.00%	n/a
Plum Creek Timber Co Inc	PCL	162.3	48.64	7,895.6	0.06%	3.45%	5.00%	0.00%	0.00%
PNC Financial Services Group Inc	PNC	528.0	62.66	33,084.5	0.24%	2.83%	3.64%	0.01%	0.01%
PPG Industries Inc	PPG	142.8	134.72	19,244.2	0.14%	1.78%	8.00%	0.00%	0.01%
PPL Corp	PPL	581.7	30.82	17,928.2	0.13%	4.75%	0.33%	0.01%	0.00%
Praxair Inc	PX	296.2	113.41	33,590.8	0.24%	2.11%	10.25%	0.01%	0.02%
Precision Castparts Corp	PCP	146.5	185.69	27,194.8	0.19%	0.07%	13.96%	0.00%	0.03%
priceline.com Inc	PCLN	49.9	694.94	34,657.3	0.25%	0.00%	18.17%	0.00%	0.05%
Principal Financial Group Inc	PFG	293.4	31.51	9,245.1	0.07%	2.86%	11.50%	0.00%	0.01%
Procter & Gamble Co/The	PG	2,731.7	76.48	208,916.7	1.50%	2.97%	8.83%	0.04%	0.13%
Progressive Corp/The	PGR	603.9	24.37	14,717.5	0.11%	1.58%	8.25%	0.00%	0.01%
Prologis Inc	PLD	462.8	39.23	18,155.9	0.13%	2.90%	4.83%	0.00%	0.01%
Prudential Financial Inc	PRU	463.0	54.96	25,446.5	0.18%	3.19%	12.00%	0.01%	0.02%
Public Service Enterprise Group Inc	PEG	506.0	32.75	16,570.2	0.12%	4.41%	0.67%	0.01%	0.00%
Public Storage	PSA	171.7	151.80	26,068.3	0.19%	3.18%	5.56%	0.01%	0.01%
PulteGroup Inc	PHM	386.6	19.21	7,426.6	0.05%	0.00%	10.00%	0.00%	0.01%
PVH Corp	PVH	81.0	121.80	9,865.8	0.07%	0.12%	14.18%	0.00%	0.01%
QEP Resources Inc	QEP	178.6	29.88	5,335.1	0.04%	0.27%	15.00%	0.00%	0.01%
QUALCOMM Inc	QCOM	1,718.1	66.41	114,101.0	0.82%	1.44%	15.14%	0.01%	0.12%
Quanta Services Inc	PWR	209.3	28.10	5,882.3	0.04%	n/a	20.67%	n/a	0.01%
Quest Diagnostics Inc	DGX	158.2	56.09	8,874.4	0.06%	1.88%	10.56%	0.00%	0.01%
Ralph Lauren Corp	RL	60.8	173.79	10,572.5	0.08%	0.88%	12.25%	0.00%	0.01%
Range Resources Corp	RRC	162.8	77.36	12,597.5	0.09%	0.19%	10.00%	0.00%	0.01%
Raytheon Co	RTN	326.4	54.63	17,828.8	0.13%	4.04%	9.00%	0.01%	0.01%
Red Hat Inc	RHT	193.2	51.63	9,974.6	0.07%	0.00%	17.00%	0.00%	0.01%
Regions Financial Corp	RF	1,413.4	7.69	10,869.0	0.08%	1.69%	8.00%	0.00%	0.01%
Republic Services Inc	RSG	362.6	31.13	11,287.6	0.08%	3.03%	2.30%	0.00%	0.00%
Reynolds American Inc	RAI	552.9	43.33	23,959.2	0.17%	5.77%	7.32%	0.01%	0.01%
Robert Half International Inc	RHI	139.6	35.11	4,899.6	0.04%	1.84%	14.33%	0.00%	0.01%
Rockwell Automation Inc	ROK	139.8	89.34	12,490.1	0.09%	2.13%	10.33%	0.00%	0.01%
Rockwell Collins Inc	COL	136.6	59.96	8,188.7	0.06%	2.01%	8.90%	0.00%	0.01%
Roper Industries Inc	ROP	98.9	124.81	12,342.6	0.09%	0.60%	15.00%	0.00%	0.01%
Ross Stores Inc	ROST	222.4	58.17	12,935.9	0.09%	1.02%	13.20%	0.00%	0.01%
Rowan Cos Plc	RDC	124.2	34.93	4,338.1	0.03%	0.03%	25.53%	0.00%	0.01%
Ryder System Inc	R	51.5	55.42	2,852.9	0.02%	2.21%	9.90%	0.00%	0.00%
Safeway Inc	SWY	239.6	23.96	5,740.8	0.04%	3.00%	10.60%	0.00%	0.00%
SAIC Inc	SAI	341.9	11.95	4,085.4	0.03%	4.04%	7.00%	0.00%	0.00%
Salesforce.com Inc	CRM	146.4	181.59	26,593.3	0.19%	0.00%	27.91%	0.00%	0.05%
SanDisk Corp	SNDK	241.8	50.28	12,160.1	0.09%	0.00%	19.01%	0.00%	0.02%
SCANA Corp	SCG	131.8	48.88	6,442.0	0.05%	4.13%	4.01%	0.00%	0.00%
Schlumberger Ltd	SLB	1,328.3	77.62	103,099.2	0.74%	1.58%	17.00%	0.01%	0.13%
Scripps Networks Interactive Inc	SNI	114.6	64.09	7,342.8	0.05%	0.79%	13.29%	0.00%	0.01%
Seagate Technology PLC	STX	358.9	32.38	11,619.9	0.08%	4.46%	6.09%	0.00%	0.01%
Sealed Air Corp	SEE	194.5	22.37	4,351.3	0.03%	2.29%	5.50%	0.00%	0.00%
Sempra Energy	SRE	243.3	78.26	19,039.9	0.14%	3.23%	7.00%	0.00%	0.01%
Sherwin-Williams Co/The	SHW	103.4	162.19	16,770.8	0.12%	1.08%	11.09%	0.00%	0.01%
Sigma-Aldrich Corp	SIAL	120.4	77.34	9,315.2	0.07%	1.11%	6.64%	0.00%	0.00%
Simon Property Group Inc	SPG	313.7	159.78	50,117.3	0.36%	2.95%	7.15%	0.01%	0.03%
SLM Corp	SLM	453.3	19.68	8,921.8	0.06%	2.91%	-4.30%	0.00%	0.00%
Snap-on Inc	SNA	58.3	79.47	4,630.8	0.03%	n/a	10.00%	n/a	0.00%
Southern Co/The	SO	869.0	44.75	38,886.4	0.28%	4.50%	5.28%	0.01%	0.01%
Southwest Airlines Co	LUV	728.1	11.82	8,606.1	0.06%	0.21%	15.16%	0.00%	0.01%
Southwestern Energy Co	SWN	351.1	35.13	12,334.1	0.09%	0.00%	n/a	0.00%	n/a
Spectra Energy Corp	SE	668.1	28.79	19,235.5	0.14%	4.31%	5.50%	0.01%	0.01%

Foward-Looking Market Risk Premium -- U.S.

Sprint Nextel Corp	S	3,004.6	5.79	17,396.7	0.12%	0.00%	5.50%	0.00%	0.01%
St Jude Medical Inc	STJ	282.9	41.33	11,691.1	0.08%	2.39%	10.17%	0.00%	0.01%
Stanley Black & Decker Inc	SWK	160.3	77.52	12,422.6	0.09%	2.53%	12.50%	0.00%	0.01%
Staples Inc	SPLS	673.9	12.97	8,740.2	0.06%	3.32%	8.50%	0.00%	0.01%
Starbucks Corp	SBUX	749.3	54.81	41,069.1	0.29%	1.56%	18.49%	0.00%	0.05%
Starwood Hotels & Resorts Worldwide Inc	HOT	196.0	60.43	11,842.9	0.08%	2.05%	12.47%	0.00%	0.01%
State Street Corp	STT	456.9	56.30	25,722.4	0.18%	1.94%	11.14%	0.00%	0.02%
Stericycle Inc	SRCL	86.1	95.97	8,262.0	0.06%	n/a	16.00%	n/a	0.01%
Stryker Corp	SYK	380.5	64.76	24,642.0	0.18%	1.53%	9.88%	0.00%	0.02%
SunTrust Banks Inc	STI	538.9	27.52	14,831.7	0.11%	1.74%	8.25%	0.00%	0.01%
Symantec Corp	SYMC	689.2	23.62	16,278.6	0.12%	0.00%	7.14%	0.00%	0.01%
Sysco Corp	SYY	586.0	32.44	19,009.5	0.14%	3.46%	8.07%	0.00%	0.01%
T Rowe Price Group Inc	TROW	257.9	71.62	18,467.3	0.13%	2.07%	14.15%	0.00%	0.02%
Target Corp	TGT	645.3	64.03	41,318.6	0.30%	2.32%	11.75%	0.01%	0.03%
TE Connectivity Ltd	TEL	420.3	40.16	16,877.7	0.12%	2.27%	15.00%	0.00%	0.02%
TECO Energy Inc	TE	217.3	17.31	3,760.7	0.03%	5.12%	3.67%	0.00%	0.00%
Tenet Healthcare Corp	THC	104.3	39.43	4,112.0	0.03%	0.00%	11.00%	0.00%	0.00%
Teradata Corp	TDC	165.8	58.67	9,727.5	0.07%	0.00%	16.00%	0.00%	0.01%
Teradyne Inc	TER	187.9	16.61	3,120.2	0.02%	1.20%	11.75%	0.00%	0.00%
Tesoro Corp	TSO	140.4	58.17	8,169.1	0.06%	1.26%	38.82%	0.00%	0.02%
Texas Instruments Inc	TXN	1,104.8	34.41	38,010.2	0.27%	2.64%	9.33%	0.01%	0.03%
Textron Inc	TXT	271.5	28.51	7,741.7	0.06%	0.31%	15.61%	0.00%	0.01%
Thermo Fisher Scientific Inc	TMO	360.2	74.68	26,900.8	0.19%	0.80%	10.51%	0.00%	0.02%
Tiffany & Co	TIF	126.8	69.05	8,753.8	0.06%	1.82%	14.32%	0.00%	0.01%
Time Warner Cable Inc	TWC	295.5	88.45	26,138.2	0.19%	2.95%	12.80%	0.01%	0.02%
Time Warner Inc	TWX	934.8	53.46	49,973.9	0.36%	2.13%	10.52%	0.01%	0.04%
TJX Cos Inc	TJX	729.3	44.88	32,728.9	0.23%	1.25%	11.64%	0.00%	0.03%
Torchmark Corp	TMK	93.7	56.25	5,268.2	0.04%	1.16%	9.00%	0.00%	0.00%
Total System Services Inc	TSS	186.6	23.75	4,431.4	0.03%	1.64%	10.50%	0.00%	0.00%
Travelers Cos Inc/The	TRV	378.0	80.58	30,455.6	0.22%	2.37%	6.48%	0.01%	0.01%
TripAdvisor Inc	TRIP	130.1	45.57	5,928.9	0.04%	n/a	16.34%	n/a	0.01%
Tyco International Ltd	TYC	466.0	31.65	14,749.5	0.11%	1.99%	11.00%	0.00%	0.01%
Tyson Foods Inc	TSN	284.5	23.12	6,578.1	0.05%	1.03%	8.50%	0.00%	0.00%
Union Pacific Corp	UNP	469.3	136.53	64,073.4	0.46%	2.03%	12.65%	0.01%	0.06%
United Parcel Service Inc	UPS	730.4	82.83	60,495.5	0.43%	2.94%	9.73%	0.01%	0.04%
United States Steel Corp	X	144.3	20.21	2,915.9	0.02%	0.99%	6.00%	0.00%	0.00%
United Technologies Corp	UTX	916.6	90.03	82,525.1	0.59%	2.45%	12.15%	0.01%	0.07%
UnitedHealth Group Inc	UNH	1,024.9	53.46	54,792.5	0.39%	1.66%	11.50%	0.01%	0.05%
Unum Group	UNM	269.8	24.57	6,628.9	0.05%	2.25%	9.50%	0.00%	0.00%
Urban Outfitters Inc	URBN	145.9	40.75	5,945.9	0.04%	0.00%	18.67%	0.00%	0.01%
US Bancorp	USB	1,863.4	34.01	63,373.7	0.45%	2.61%	8.06%	0.01%	0.04%
Valero Energy Corp	VLO	553.5	46.68	25,839.3	0.19%	1.63%	7.85%	0.00%	0.01%
Varian Medical Systems Inc	VAR	109.1	70.83	7,728.5	0.06%	0.00%	11.75%	0.00%	0.01%
Ventas Inc	VTR	291.9	71.23	20,795.2	0.15%	3.76%	5.99%	0.01%	0.01%
VeriSign Inc	VRSN	155.3	46.10	7,157.3	0.05%	0.00%	13.80%	0.00%	0.01%
Verizon Communications Inc	VZ	2,858.3	46.67	133,395.7	0.96%	4.45%	7.15%	0.04%	0.07%
VF Corp	VFC	110.2	160.50	17,692.4	0.13%	2.20%	12.82%	0.00%	0.02%
Viacom Inc	VIAB	443.8	59.66	26,477.6	0.19%	1.91%	12.67%	0.00%	0.02%
Visa Inc	V	529.4	158.39	83,849.1	0.60%	0.80%	18.88%	0.00%	0.11%
Vornado Realty Trust	VNO	186.7	80.09	14,955.6	0.11%	3.62%	-2.56%	0.00%	0.00%
Vulcan Materials Co	VMC	129.9	51.89	6,739.1	0.05%	0.08%	9.67%	0.00%	0.00%
Wal-Mart Stores Inc	WMT	3,340.0	71.78	239,745.2	1.72%	2.59%	9.87%	0.04%	0.17%
Walgreen Co	WAG	945.1	41.26	38,995.0	0.28%	2.46%	12.31%	0.01%	0.03%
Walt Disney Co/The	DIS	1,805.4	55.31	99,858.7	0.72%	1.24%	12.14%	0.01%	0.09%
Washington Post Co/The	WPO	6.2	394.02	2,444.6	0.02%	n/a	n/a	n/a	n/a
Waste Management Inc	WM	465.2	36.84	17,138.0	0.12%	4.00%	3.10%	0.00%	0.00%
Waters Corp	WAT	85.9	93.69	8,046.7	0.06%	0.00%	9.57%	0.00%	0.01%
WellPoint Inc	WLP	304.0	61.88	18,813.7	0.13%	1.93%	10.83%	0.00%	0.01%
Wells Fargo & Co	WFC	5,270.9	35.41	186,641.9	1.34%	2.87%	11.08%	0.04%	0.15%
Western Digital Corp	WDC	240.7	48.16	11,590.4	0.08%	1.92%	2.49%	0.00%	0.00%
Western Union Co/The	WU	568.8	14.28	8,122.0	0.06%	3.49%	11.00%	0.00%	0.01%
Weyerhaeuser Co	WY	541.5	29.51	15,980.6	0.11%	2.31%	5.33%	0.00%	0.01%

Foward-Looking Market Risk Premium -- U.S.

Whirlpool Corp	WHR	78.5	114.22	8,971.2	0.06%	1.75%	n/a	0.00%	n/a
Whole Foods Market Inc	WFM	185.3	85.67	15,877.4	0.11%	2.83%	18.09%	0.00%	0.02%
Williams Cos Inc/The	WMB	681.5	33.89	23,097.1	0.17%	4.29%	13.00%	0.01%	0.02%
Windstream Corp	WIN	590.5	8.70	5,137.2	0.04%	11.49%	-1.99%	0.00%	0.00%
Wisconsin Energy Corp	WEC	229.0	41.28	9,453.3	0.07%	3.28%	4.80%	0.00%	0.00%
WPX Energy Inc	WPX	200.1	14.45	2,891.9	0.02%	n/a	n/a	n/a	n/a
WW Grainger Inc	GWW	69.5	227.59	15,822.7	0.11%	1.50%	15.03%	0.00%	0.02%
Wyndham Worldwide Corp	WYN	136.6	60.49	8,265.0	0.06%	1.92%	19.60%	0.00%	0.01%
Wynn Resorts Ltd	WYNN	100.6	116.43	11,710.7	0.08%	3.44%	9.00%	0.00%	0.01%
Xcel Energy Inc	XEL	488.3	28.66	13,994.2	0.10%	3.86%	5.00%	0.00%	0.01%
Xerox Corp	XRX	1,223.8	8.15	9,974.3	0.07%	2.53%	10.00%	0.00%	0.01%
Xilinx Inc	XLNX	261.6	36.70	9,598.0	0.07%	2.39%	12.75%	0.00%	0.01%
XL Group PLC	XL	295.0	28.77	8,485.9	0.06%	1.65%	7.50%	0.00%	0.00%
Xylem Inc/NY	XYL	186.2	27.48	5,115.7	0.04%	1.69%	5.00%	0.00%	0.00%
Yahoo! Inc	YHOO	1,182.7	21.90	25,895.0	0.19%	0.00%	13.83%	0.00%	0.03%
Yum! Brands Inc	YUM	450.7	65.03	29,310.9	0.21%	2.12%	12.18%	0.00%	0.03%
Zimmer Holdings Inc	ZMH	169.4	74.89	12,682.9	0.09%	0.71%	10.65%	0.00%	0.01%
Zions Bancorporation	ZION	184.2	24.05	4,429.7	0.03%	0.63%	7.75%	0.00%	0.00%

Notes:

[1] Equals sum of column [14]
[2] Equals sum of column [15]
[3] Equals [1] x (1 + 0.5 x [2]) + [2]
[4] Source: Equals average long-term Consensus Forecast of 10-year Canadian government bond yield for the period 2013-2022
[5] Equals 30-day average spread between 10- and 30-year Canadian government bond ending February 28, 2013.
[6] Equals [5] + [6]
[7] Equals [3]+[6]
[8] Source: Bloomberg
[9] Source: Bloomberg
[10] Equals [8] x [9]
[11] Equals [10] / sum of column [10]
[12] Source: Bloomberg
[13] Source: Bloomberg
[14] Equals [11] x [12]
[15] Equals [11] x [13]

Foward-Looking Market Risk Premium -- Canada

[1] Estimated Weighted Average Dividend Yield	3.06%
[2] Estimated Weighted Average Long-Term Growth Rate	7.19%
[3] TSX Estimated Required Market Return	10.36%
[4] 10-Year Government Bond Yield Forecast (2013-2022)	3.62%
[5] Credit Spread between 10- and 30-Year Bond Yield	0.61%
[6] Risk-Free Rate	4.23%
[7] Implied Market Risk Premium	6.14%

Company Name	Ticker	[8] Shares Outstanding	[9] Price	[10] Market Cap.	[11] Weight	[12] Div. Yld.	[13] Earnings Growth	[14] Div. Yld. x Weight	[15] Earn. Gr. x Weight
Advantage Oil & Gas Ltd	AAV	168.4	3.12	525.4	0.03%	0.00%	n/a	0.00%	n/a
Aecon Group Inc	ARE	55.8	12.18	679.8	0.04%	2.03%	10.00%	0.00%	0.00%
AGF Management Ltd	AGF/B	89.2	11.82	1,054.3	0.06%	9.14%	n/a	0.01%	n/a
Agnico-Eagle Mines Ltd	AEM	172.5	41.23	7,112.1	0.41%	2.06%	16.50%	0.01%	0.07%
Agrium Inc	AGU	149.4	107.33	16,030.7	0.93%	1.73%	16.23%	0.02%	0.15%
Aimia Inc	AIM	172.3	15.60	2,688.5	0.16%	4.15%	n/a	0.01%	n/a
Alacer Gold Corp	ASR	286.9	3.40	975.4	0.06%	0.00%	12.37%	0.00%	0.01%
Alamos Gold Inc	AGI	127.5	14.19	1,808.6	0.11%	1.45%	19.46%	0.00%	0.02%
Algonquin Power & Utilities Corp	AQN	200.5	7.75	1,553.9	0.09%	3.87%	n/a	0.00%	n/a
Alimentation Couche Tard Inc	ATD/B	138.1	52.86	7,301.4	0.42%	0.56%	12.00%	0.00%	0.05%
Allied Properties Real Estate Investment Trust	AP-U	64.1	34.11	2,188.0	0.13%	3.87%	n/a	0.00%	n/a
AltaGas Ltd	ALA	105.6	35.45	3,744.1	0.22%	4.12%	n/a	0.01%	n/a
ARC Resources Ltd	ARX	309.4	26.15	8,089.7	0.47%	4.59%	n/a	0.02%	n/a
Argonaut Gold Inc	AR	148.6	8.02	1,192.0	0.07%	n/a	71.00%	n/a	0.05%
Artis Real Estate Investment Trust	AX-U	120.3	15.98	1,922.2	0.11%	6.78%	n/a	0.01%	n/a
Astral Media Inc	ACM/A	53.4	48.01	2,564.9	0.15%	2.08%	n/a	0.00%	n/a
Atco Ltd/Canada	ACO/X	50.7	90.50	4,586.5	0.27%	1.66%	n/a	0.00%	n/a
Athabasca Oil Corp	ATH	400.5	9.86	3,949.0	0.23%	n/a	-229.00%	n/a	-0.53%
Atlantic Power Corp	ATP	119.5	7.30	872.3	0.05%	13.07%	n/a	0.01%	n/a
AuRico Gold Inc	AUQ	246.4	6.38	1,572.0	0.09%	0.00%	5.00%	0.00%	0.00%
Aurizon Mines Ltd	ARZ	164.6	4.37	719.1	0.04%	0.00%	8.38%	0.00%	0.00%
B2Gold Corp	BTO	645.6	3.02	1,949.8	0.11%	n/a	n/a	n/a	n/a
Bank of Montreal	BMO	652.0	63.96	41,702.6	2.43%	4.59%	7.00%	0.11%	0.17%
Bank of Nova Scotia	BNS	1,191.9	61.10	72,823.7	4.24%	3.85%	8.33%	0.16%	0.35%
Bankers Petroleum Ltd	BNK	253.9	3.06	776.8	0.05%	n/a	n/a	n/a	n/a
Banro Corp	BAA	201.9	2.19	442.1	0.03%	0.47%	n/a	0.00%	n/a
Barrick Gold Corp	ABX	1,001.1	30.17	30,203.4	1.76%	2.66%	-4.00%	0.05%	-0.07%
Baytex Energy Corp	BTE	122.4	43.53	5,329.6	0.31%	6.07%	n/a	0.02%	n/a
BCE Inc	BCE	775.4	46.58	36,117.3	2.10%	5.00%	1.75%	0.11%	0.04%
Bell Aliant Inc	BA	227.8	26.92	6,132.9	0.36%	7.06%	3.00%	0.03%	0.01%
Birchcliff Energy Ltd	BIR	141.8	7.82	1,109.0	0.06%	n/a	n/a	n/a	n/a
Black Diamond Group Ltd	BDI	41.4	21.32	883.0	0.05%	3.28%	n/a	0.00%	n/a
BlackPearl Resources Inc	PXX	296.1	2.47	731.4	0.04%	0.00%	n/a	0.00%	n/a
Boardwalk Real Estate Investment Trust	BEI-U	47.9	65.14	3,117.5	0.18%	3.04%	n/a	0.01%	n/a
Bombardier Inc	BBD/B	1,440.4	4.10	5,905.7	0.34%	2.13%	10.81%	0.01%	0.04%
Bonavista Energy Corp	BNP	178.7	13.71	2,450.6	0.14%	6.24%	n/a	0.01%	n/a
Bonterra Energy Corp	BNE	30.6	48.43	1,483.0	0.09%	6.51%	n/a	0.01%	n/a
Brookfield Asset Management Inc	BAM/A	625.2	39.50	24,694.2	1.44%	1.52%	n/a	0.02%	n/a
Brookfield Office Properties Inc	BPO	505.0	17.20	8,685.5	0.51%	3.37%	n/a	0.02%	n/a
CAE Inc	CAE	259.7	10.10	2,622.9	0.15%	1.72%	12.05%	0.00%	0.02%
Calfrac Well Services Ltd	CFW	45.2	25.15	1,135.6	0.07%	4.06%	23.10%	0.00%	0.02%
Calloway Real Estate Investment Trust	CWT-U	114.1	29.05	3,315.7	0.19%	5.35%	n/a	0.01%	n/a
Cameco Corp	CCO	395.4	21.45	8,480.3	0.49%	1.86%	19.96%	0.01%	0.10%
Canadian Apartment Properties REIT	CAR-U	101.8	25.32	2,578.1	0.15%	4.45%	n/a	0.01%	n/a
Canadian Imperial Bank of Commerce/Canada	CM	402.0	82.92	33,330.6	1.94%	4.61%	6.67%	0.09%	0.13%
Canadian National Railway Co	CNR	428.4	103.90	44,507.7	2.59%	1.66%	13.80%	0.04%	0.36%
Canadian Natural Resources Ltd	CNQ	1,092.3	32.17	35,140.0	2.04%	1.30%	6.00%	0.03%	0.12%
Canadian Oil Sands Ltd	COS	484.6	20.96	10,156.3	0.59%	6.67%	-9.00%	0.04%	-0.05%

Foward-Looking Market Risk Premium -- Canada

Canadian Pacific Railway Ltd	CP	174.2	126.93	22,111.5	1.29%	1.15%	11.75%	0.01%	0.15%
Canadian Real Estate Investment Trust	REF-U	68.3	46.77	3,193.6	0.19%	3.31%	n/a	0.01%	n/a
Canadian Tire Corp Ltd	CTC/A	77.7	69.28	5,384.5	0.31%	2.05%	5.41%	0.01%	0.02%
Canadian Utilities Ltd	CU	88.3	78.18	6,906.9	0.40%	2.48%	n/a	0.01%	n/a
Canadian Western Bank	CWB	79.0	30.69	2,424.3	0.14%	2.24%	10.00%	0.00%	0.01%
Canexus Corp	CUS	135.3	9.42	1,274.5	0.07%	5.84%	n/a	0.00%	n/a
Canfor Corp	CFP	142.8	19.25	2,748.0	0.16%	n/a	n/a	n/a	n/a
Capital Power Corp	CPX	70.3	23.10	1,622.9	0.09%	5.45%	n/a	0.01%	n/a
Capstone Mining Corp	CS	380.0	2.34	889.2	0.05%	0.00%	5.00%	0.00%	0.00%
Catamaran Corp	CCT	205.5	56.44	11,596.3	0.67%	0.00%	25.50%	0.00%	0.17%
CCL Industries Inc	CCL/B	31.5	61.00	1,918.5	0.11%	1.41%	n/a	0.00%	n/a
Celestica Inc	CLS	164.1	8.47	1,389.6	0.08%	0.00%	10.00%	0.00%	0.01%
Cenovus Energy Inc	CVE	755.1	32.72	24,706.6	1.44%	2.90%	11.00%	0.04%	0.16%
Centerra Gold Inc	CG	236.4	6.49	1,534.1	0.09%	2.76%	4.00%	0.00%	0.00%
CGI Group Inc	GIB/A	274.6	27.01	7,417.5	0.43%	n/a	10.00%	n/a	0.04%
Chartwell Retirement Residences	CSH-U	171.9	10.95	1,882.1	0.11%	4.93%	n/a	0.01%	n/a
China Gold International Resources Corp Ltd	CGG	396.4	3.14	1,242.6	0.07%	0.43%	n/a	0.00%	n/a
Chorus Aviation Inc	CHR/B	108.7	3.89	422.9	0.02%	15.42%	n/a	0.00%	n/a
CI Financial Corp	CIX	283.2	26.93	7,626.5	0.44%	3.76%	n/a	0.02%	n/a
Cineplex Inc	CGX	62.8	33.86	2,125.8	0.12%	4.11%	n/a	0.01%	n/a
CML HealthCare Inc	CLC	90.0	7.34	660.5	0.04%	10.22%	-11.00%	0.00%	0.00%
Cogeco Cable Inc	CCA	33.1	43.04	1,425.6	0.08%	2.59%	14.94%	0.00%	0.01%
Colossus Minerals Inc	CSI	106.6	2.75	293.1	0.02%	0.00%	n/a	0.00%	n/a
Cominar Real Estate Investment Trust	CUF-U	124.3	22.47	2,794.1	0.16%	6.41%	n/a	0.01%	n/a
Constellation Software Inc/Canada	CSU	21.2	120.27	2,548.7	0.15%	3.42%	n/a	0.01%	n/a
Corus Entertainment Inc	CJR/B	80.4	25.55	2,053.6	0.12%	3.95%	5.80%	0.00%	0.01%
Cott Corp	BCB	95.4	9.74	928.9	0.05%	1.03%	n/a	0.00%	n/a
Crescent Point Energy Corp	CPG	377.5	38.64	14,585.4	0.85%	7.14%	n/a	0.06%	n/a
Crew Energy Inc	CR	121.6	6.48	788.1	0.05%	n/a	n/a	n/a	n/a
Crombie Real Estate Investment Trust	CRR-U	53.4	14.65	781.7	0.05%	6.08%	n/a	0.00%	n/a
Davis + Henderson Corp	DH	59.2	21.86	1,294.8	0.08%	5.90%	n/a	0.00%	n/a
Detour Gold Corp	DGC	117.9	19.55	2,304.8	0.13%	0.00%	5.00%	0.00%	0.01%
Dollarama Inc	DOL	73.1	60.19	4,399.3	0.26%	0.78%	n/a	0.00%	n/a
Dorel Industries Inc	DII/B	27.4	36.77	1,007.9	0.06%	2.31%	16.00%	0.00%	0.01%
Dundee Corp	DC/A	50.9	33.95	1,729.6	0.10%	n/a	n/a	n/a	n/a
Dundee Precious Metals Inc	DPM	125.7	7.49	941.3	0.05%	0.00%	n/a	0.00%	n/a
Dundee Real Estate Investment Trust	D-U	97.7	36.55	3,571.1	0.21%	6.10%	n/a	0.01%	n/a
Eldorado Gold Corp	ELD	714.5	10.25	7,323.5	0.43%	1.78%	65.50%	0.01%	0.28%
Emera Inc	EMA	131.0	35.93	4,706.0	0.27%	3.92%	n/a	0.01%	n/a
Empire Co Ltd	EMP/A	33.7	64.95	2,188.0	0.13%	1.48%	7.00%	0.00%	0.01%
Enbridge Inc	ENB	806.2	46.00	37,087.4	2.16%	2.76%	11.50%	0.06%	0.25%
Enbridge Income Fund Holdings Inc	ENF	56.5	25.18	1,422.4	0.08%	5.32%	n/a	0.00%	n/a
Encana Corp	ECA	735.4	18.32	13,473.4	0.78%	4.49%	29.00%	0.04%	0.23%
Endeavour Silver Corp	EDR	99.7	5.72	570.2	0.03%	n/a	n/a	n/a	n/a
Enerflex Ltd	EFX	77.7	12.75	990.7	0.06%	2.10%	n/a	0.00%	n/a
Enerplus Corp	ERF	198.9	14.14	2,813.0	0.16%	7.64%	n/a	0.01%	n/a
Ensign Energy Services Inc	ESI	153.2	17.20	2,635.3	0.15%	2.49%	21.50%	0.00%	0.03%
Extendicare Inc/US	EXE	86.2	7.99	688.3	0.04%	10.51%	n/a	0.00%	n/a
Fairfax Financial Holdings Ltd	FFH	19.9	390.85	7,764.5	0.45%	2.63%	n/a	0.01%	n/a
Finning International Inc	FTT	171.9	25.90	4,452.7	0.26%	2.22%	10.00%	0.01%	0.03%
First Capital Realty Inc	FCR	206.5	18.96	3,914.4	0.23%	4.43%	n/a	0.01%	n/a
First Majestic Silver Corp	FR	116.8	16.24	1,896.1	0.11%	n/a	17.07%	n/a	0.02%
First Quantum Minerals Ltd	FM	476.3	18.97	9,035.6	0.53%	1.02%	10.39%	0.01%	0.05%
FirstService Corp/Canada	FSV	28.8	33.57	965.6	0.06%	n/a	13.00%	n/a	0.01%
Fortis Inc/Canada	FTS	191.7	33.68	6,455.8	0.38%	3.69%	n/a	0.01%	n/a
Fortuna Silver Mines Inc	FVI	125.3	3.94	493.6	0.03%	n/a	28.00%	n/a	0.01%
Franco-Nevada Corp	FNV	146.5	48.31	7,079.8	0.41%	1.15%	4.00%	0.00%	0.02%
Freehold Royalties Ltd	FRU	66.3	21.49	1,425.6	0.08%	7.82%	n/a	0.01%	n/a
Gabriel Resources Ltd	GBU	380.5	2.50	951.3	0.06%	n/a	n/a	n/a	n/a
Genivar Inc	GNV	51.4	23.44	1,205.2	0.07%	6.40%	n/a	0.00%	n/a
Genworth MI Canada Inc	MIC	98.7	25.25	2,491.6	0.14%	5.13%	n/a	0.01%	n/a
George Weston Ltd	WN	127.6	73.85	9,426.5	0.55%	2.06%	10.00%	0.01%	0.05%

Foward-Looking Market Risk Premium -- Canada

Gibson Energy Inc	GEI	120.6	25.08	3,024.7	0.18%	4.05%	n/a	0.01%	n/a
Gildan Activewear Inc	GIL	121.6	38.05	4,628.5	0.27%	0.98%	12.50%	0.00%	0.03%
Goldcorp Inc	G	811.5	33.44	27,137.2	1.58%	1.78%	45.50%	0.03%	0.72%
Granite Real Estate Investment Trust	GRT-U	46.9	39.92	1,871.6	0.11%	5.15%	n/a	0.01%	n/a
Great-West Lifeco Inc	GWO	950.9	27.28	25,940.5	1.51%	4.51%	10.00%	0.07%	0.15%
H&R Real Estate Investment Trust	HR-U	194.9	22.95	4,474.1	0.26%	5.14%	n/a	0.01%	n/a
Harry Winston Diamond Corp	HW	84.9	15.95	1,353.9	0.08%	0.00%	n/a	0.00%	n/a
Home Capital Group Inc	HCG	34.6	56.55	1,958.0	0.11%	1.92%	n/a	0.00%	n/a
HudBay Minerals Inc	HBM	172.0	9.64	1,658.2	0.10%	1.73%	43.00%	0.00%	0.04%
Husky Energy Inc	HSE	982.4	31.85	31,290.0	1.82%	3.77%	2.00%	0.07%	0.04%
IAMGOLD Corp	IMG	376.6	6.75	2,541.8	0.15%	3.75%	6.50%	0.01%	0.01%
IGM Financial Inc	IGM	252.0	45.34	11,424.3	0.66%	4.87%	n/a	0.03%	n/a
Imperial Oil Ltd	IMO	847.6	43.04	36,480.7	2.12%	1.15%	3.00%	0.02%	0.06%
Industrial Alliance Insurance & Financial Services Inc	IAG	97.4	37.04	3,607.8	0.21%	2.65%	11.00%	0.01%	0.02%
Inmet Mining Corp	IMN	69.4	66.55	4,616.3	0.27%	0.31%	-1.12%	0.00%	0.00%
Intact Financial Corp	IFC	133.3	65.97	8,796.0	0.51%	2.67%	n/a	0.01%	n/a
Inter Pipeline Fund	IPL-U	275.7	23.07	6,360.4	0.37%	4.82%	n/a	0.02%	n/a
Jean Coutu Group PJC Inc/The	PJC/A	100.7	15.75	1,585.7	0.09%	1.78%	n/a	0.00%	n/a
Just Energy Group Inc	JE	141.3	7.82	1,104.8	0.06%	15.86%	n/a	0.01%	n/a
Keyera Corp	KEY	77.8	54.39	4,233.1	0.25%	3.99%	n/a	0.01%	n/a
Kinross Gold Corp	K	1,140.3	7.86	8,962.7	0.52%	2.03%	28.00%	0.01%	0.15%
Kirkland Lake Gold Inc	KGI	70.2	6.08	426.5	0.02%	n/a	n/a	n/a	n/a
Labrador Iron Ore Royalty Corp	LIF	64.0	35.82	2,292.5	0.13%	3.92%	42.00%	0.01%	0.06%
Laurentian Bank of Canada	LB	28.1	45.18	1,271.3	0.07%	4.47%	5.00%	0.00%	0.00%
Legacy Oil + Gas Inc	LEG	143.3	6.19	887.3	0.05%	n/a	n/a	n/a	n/a
Linamar Corp	LNR	64.7	25.80	1,669.6	0.10%	1.24%	n/a	0.00%	n/a
Loblaw Cos Ltd	L	281.7	41.19	11,604.9	0.68%	2.14%	8.00%	0.01%	0.05%
Lundin Mining Corp	LUN	584.1	4.60	2,687.0	0.16%	n/a	15.81%	n/a	0.02%
MacDonald Dettwiler & Associates Ltd	MDA	31.9	71.00	2,262.3	0.13%	1.83%	6.00%	0.00%	0.01%
Magna International Inc	MG	233.3	56.81	13,256.2	0.77%	2.14%	12.11%	0.02%	0.09%
Major Drilling Group International	MDI	79.1	8.77	694.1	0.04%	2.17%	n/a	0.00%	n/a
Manitoba Telecom Services Inc	MBT	67.3	32.50	2,186.2	0.13%	5.23%	-6.00%	0.01%	-0.01%
Manulife Financial Corp	MFC	1,827.7	15.25	27,872.8	1.62%	3.44%	11.33%	0.06%	0.18%
Maple Leaf Foods Inc	MFI	140.0	13.45	1,883.6	0.11%	1.19%	n/a	0.00%	n/a
Martinrea International Inc	MRE	83.0	8.79	729.5	0.04%	n/a	n/a	n/a	n/a
MEG Energy Corp	MEG	220.7	33.04	7,290.8	0.42%	0.00%	40.00%	0.00%	0.17%
Methanex Corp	MX	94.4	38.39	3,622.8	0.21%	1.98%	25.00%	0.00%	0.05%
Metro Inc	MRU	96.3	64.90	6,249.0	0.36%	1.53%	8.00%	0.01%	0.03%
Mullen Group Ltd	MTL	87.9	21.97	1,930.2	0.11%	5.01%	n/a	0.01%	n/a
National Bank of Canada	NA	162.2	77.99	12,650.5	0.74%	4.37%	8.50%	0.03%	0.06%
Nevsun Resources Ltd	NSU	199.0	3.80	756.2	0.04%	2.71%	19.00%	0.00%	0.01%
New Gold Inc	NGD	476.1	9.49	4,517.9	0.26%	0.00%	24.50%	0.00%	0.06%
Niko Resources Ltd	NKO	70.2	6.75	474.0	0.03%	0.73%	n/a	0.00%	n/a
Nordion Inc	NDN	61.9	7.08	438.3	0.03%	n/a	n/a	n/a	n/a
North West Co Inc/The	NWC	48.4	22.96	1,110.8	0.06%	4.53%	n/a	0.00%	n/a
Northern Property Real Estate Investment Trust	NPR-U	31.9	31.74	1,014.1	0.06%	4.82%	n/a	0.00%	n/a
Northland Power Inc	NPI	86.2	18.85	1,624.9	0.09%	5.73%	n/a	0.01%	n/a
Novagold Resources Inc	NG	316.6	4.03	1,276.0	0.07%	n/a	n/a	n/a	n/a
OceanaGold Corp	OGC	293.5	2.43	713.2	0.04%	n/a	n/a	n/a	n/a
Onex Corp	OCX	114.0	46.72	5,323.9	0.31%	n/a	n/a	n/a	n/a
Open Text Corp	OTC	58.6	56.42	3,305.9	0.19%	n/a	10.00%	n/a	0.02%
Osisko Mining Corp	OSK	436.5	5.90	2,575.5	0.15%	0.25%	n/a	0.00%	n/a
Pacific Rubiales Energy Corp	PRE	322.4	25.11	8,094.5	0.47%	1.79%	30.26%	0.01%	0.14%
Pan American Silver Corp	PAA	151.8	16.68	2,532.3	0.15%	2.45%	0.00%	0.00%	0.00%
Paramount Resources Ltd	POU	90.1	37.76	3,400.3	0.20%	n/a	n/a	n/a	n/a
Parkland Fuel Corp	PKI	68.4	17.43	1,192.1	0.07%	5.97%	n/a	0.00%	n/a
Pason Systems Inc	PSI	82.0	15.99	1,312.0	0.08%	2.38%	2.60%	0.00%	0.00%
Pembina Pipeline Corp	PPL	294.1	28.99	8,525.5	0.50%	5.55%	n/a	0.03%	n/a
Pengrowth Energy Corp	PGF	512.6	4.60	2,357.8	0.14%	10.43%	n/a	0.01%	n/a
Penn West Petroleum Ltd	PWT	482.1	10.01	4,826.2	0.28%	10.28%	n/a	0.03%	n/a
PetroBakken Energy Ltd	PBN	191.6	8.46	1,620.5	0.09%	11.35%	n/a	0.01%	n/a
Petrobank Energy & Resources Ltd	PBG	97.6	0.77	75.1	0.00%	0.00%	n/a	0.00%	n/a

Foward-Looking Market Risk Premium -- Canada

Petrominerales Ltd	PMG	84.5	8.47	715.8	0.04%	6.09%	n/a	0.00%	n/a
Peyto Exploration & Development Corp	PEY	148.7	24.86	3,696.0	0.22%	2.90%	n/a	0.01%	n/a
Potash Corp of Saskatchewan Inc	POT	865.0	40.66	35,170.7	2.05%	2.74%	7.18%	0.06%	0.15%
Power Corp of Canada	POW	411.1	27.44	11,281.8	0.66%	4.23%	n/a	0.03%	n/a
Power Financial Corp	PWF	709.1	29.68	21,046.2	1.22%	4.72%	n/a	0.06%	n/a
Precision Drilling Corp	PD	276.5	8.41	2,325.2	0.14%	2.00%	30.45%	0.00%	0.04%
Premier Gold Mines Ltd	PG	149.0	2.78	414.3	0.02%	n/a	n/a	n/a	n/a
Pretium Resources Inc	PVG	96.5	7.75	747.7	0.04%	0.00%	n/a	0.00%	n/a
Primaris Retail Real Estate Investment Trust	PMZ-U	98.4	27.23	2,680.0	0.16%	4.48%	n/a	0.01%	n/a
Progressive Waste Solutions Ltd	BIN	115.2	21.28	2,450.7	0.14%	2.72%	1.20%	0.00%	0.00%
Quebecor Inc	QBR/B	42.7	44.70	1,910.8	0.11%	0.45%	4.31%	0.00%	0.00%
Reitmans Canada Ltd	RET/A	51.1	10.76	550.3	0.03%	7.43%	n/a	0.00%	n/a
Research In Motion Ltd	BB	524.2	13.62	7,139.1	0.42%	0.00%	20.00%	0.00%	0.08%
Rio Alto Mining Ltd	RIO	175.9	4.75	835.5	0.05%	0.00%	n/a	0.00%	n/a
RioCan Real Estate Investment Trust	REI-U	298.1	27.59	8,225.2	0.48%	5.11%	n/a	0.02%	n/a
Rogers Communications Inc	RCI/B	402.8	48.98	19,728.6	1.15%	3.53%	7.91%	0.04%	0.09%
RONA Inc	RON	121.4	11.46	1,391.3	0.08%	1.22%	n/a	0.00%	n/a
Royal Bank of Canada	RY	1,446.3	63.90	92,415.8	5.38%	3.92%	6.77%	0.21%	0.36%
Rubicon Minerals Corp	RMX	288.3	2.20	634.2	0.04%	n/a	n/a	n/a	n/a
Russel Metals Inc	RUS	60.2	28.52	1,717.0	0.10%	4.91%	n/a	0.00%	n/a
Saputo Inc	SAP	197.2	50.61	9,982.0	0.58%	1.63%	10.00%	0.01%	0.06%
Savanna Energy Services Corp	SVY	86.0	7.15	614.8	0.04%	3.90%	63.20%	0.00%	0.02%
Secure Energy Services Inc	SES	104.7	10.44	1,093.3	0.06%	0.00%	n/a	0.00%	n/a
SEMAFO Inc	SMF	273.2	2.76	754.1	0.04%	0.97%	n/a	0.00%	n/a
Shaw Communications Inc	SJR/B	424.6	24.45	10,382.6	0.60%	4.07%	9.24%	0.02%	0.06%
ShawCor Ltd	SCL/A	57.5	40.25	2,314.7	0.13%	0.99%	19.20%	0.00%	0.03%
Sherritt International Corp	S	296.9	5.20	1,544.1	0.09%	3.08%	30.00%	0.00%	0.03%
Shoppers Drug Mart Corp	SC	204.1	42.85	8,744.0	0.51%	2.63%	5.00%	0.01%	0.03%
Silver Standard Resources Inc	SSO	80.7	10.27	829.3	0.05%	0.00%	18.00%	0.00%	0.01%
Silver Wheaton Corp	SLW	354.4	32.62	11,559.7	0.67%	1.18%	29.77%	0.01%	0.20%
Silvercorp Metals Inc	SVM	170.8	3.72	635.2	0.04%	n/a	n/a	n/a	n/a
SNC-Lavalin Group Inc	SNC	151.1	46.00	6,951.9	0.40%	1.89%	8.00%	0.01%	0.03%
Stantec Inc	STN	46.0	42.84	1,972.1	0.11%	1.54%	10.15%	0.00%	0.01%
Sun Life Financial Inc	SLF	599.8	28.34	16,998.8	0.99%	5.08%	8.00%	0.05%	0.08%
Suncor Energy Inc	SU	1,522.6	30.93	47,093.4	2.74%	1.94%	-6.00%	0.05%	-0.16%
Superior Plus Corp	SPB	112.9	11.49	1,297.0	0.08%	5.22%	n/a	0.00%	n/a
Tahoe Resources Inc	THO	145.6	15.49	2,254.8	0.13%	n/a	n/a	n/a	n/a
Talisman Energy Inc	TLM	1,032.7	12.67	13,084.9	0.76%	2.19%	-3.00%	0.02%	-0.02%
Taseko Mines Ltd	TKO	191.1	2.86	546.5	0.03%	n/a	36.00%	n/a	0.01%
Teck Resources Ltd	TCK/B	572.9	31.07	17,800.5	1.04%	2.86%	7.46%	0.03%	0.08%
TELUS Corp	T	326.0	70.76	23,070.5	1.34%	3.75%	7.85%	0.05%	0.11%
Thompson Creek Metals Co Inc	TCM	169.0	3.34	564.3	0.03%	0.00%	61.50%	0.00%	0.02%
Thomson Reuters Corp	TRI	827.3	31.30	25,893.9	1.51%	4.31%	5.95%	0.06%	0.09%
Tim Hortons Inc	THI	153.4	50.23	7,705.5	0.45%	2.01%	12.00%	0.01%	0.05%
TMX Group Ltd	X	53.8	55.07	2,960.9	0.17%	2.91%	n/a	0.01%	n/a
Torex Gold Resources Inc	TXG	604.5	1.75	1,057.8	0.06%	n/a	n/a	n/a	n/a
Toromont Industries Ltd	TIH	76.4	23.69	1,811.0	0.11%	2.14%	n/a	0.00%	n/a
Toronto-Dominion Bank/The	TD	922.4	85.05	78,447.1	4.56%	3.83%	8.27%	0.17%	0.38%
Tourmaline Oil Corp	TOU	175.4	36.63	6,426.0	0.37%	0.00%	n/a	0.00%	n/a
TransAlta Corp	TA	258.4	15.42	3,984.8	0.23%	7.52%	n/a	0.02%	n/a
TransCanada Corp	TRP	705.9	47.81	33,746.9	1.96%	3.85%	n/a	0.08%	n/a
Transcontinental Inc	TCL/A	63.0	12.76	804.5	0.05%	4.98%	2.00%	0.00%	0.00%
TransForce Inc	TFI	92.9	20.86	1,937.3	0.11%	2.68%	n/a	0.00%	n/a
TransGlobe Energy Corp	TGL	73.8	8.23	607.3	0.04%	n/a	n/a	n/a	n/a
Trican Well Service Ltd	TCW	148.8	13.64	2,030.1	0.12%	2.20%	30.50%	0.00%	0.04%
Trilogy Energy Corp	TET	91.1	27.21	2,479.4	0.14%	1.54%	n/a	0.00%	n/a
Trinidad Drilling Ltd	TDG	120.9	6.99	844.8	0.05%	2.86%	n/a	0.00%	n/a
Turquoise Hill Resources Ltd	TRQ	1,005.6	7.19	7,230.2	0.42%	0.00%	n/a	0.00%	n/a
Uranium One Inc	UUU	957.2	2.73	2,613.1	0.15%	0.00%	53.00%	0.00%	0.08%
Valeant Pharmaceuticals International Inc	VRX	298.1	69.77	20,795.8	1.21%	n/a	14.67%	n/a	0.18%
Veresen Inc	VSN	198.1	12.96	2,567.5	0.15%	7.72%	n/a	0.01%	n/a
Vermilion Energy Inc	VET	99.2	53.30	5,289.4	0.31%	4.28%	n/a	0.01%	n/a

Foward-Looking Market Risk Premium -- Canada

Wajax Corp	WJX	16.7	42.85	717.2	0.04%	7.29%	n/a	0.00%	n/a
West Fraser Timber Co Ltd	WFT	40.3	84.94	3,421.5	0.20%	0.66%	n/a	0.00%	n/a
Westjet Airlines Ltd	WJA	124.1	22.52	2,793.8	0.16%	1.78%	18.51%	0.00%	0.03%
Westport Innovations Inc	WPT	55.3	29.10	1,609.1	0.09%	0.00%	30.00%	0.00%	0.03%
Westshore Terminals Investment Corp	WTE	74.3	27.39	2,033.7	0.12%	4.29%	n/a	0.01%	n/a
Whitecap Resources Inc	WCP	129.3	8.87	1,146.8	0.07%	0.00%	n/a	0.00%	n/a
Wi-Lan Inc	WIN	121.5	4.42	537.2	0.03%	n/a	n/a	n/a	n/a
Yamana Gold Inc	YRI	752.3	15.21	11,442.7	0.67%	1.65%	27.70%	0.01%	0.18%

Notes:

[1] Equals sum of column [14]
[2] Equals sum of column [15]
[3] Equals [1] x (1 + 0.5 x [2]) + [2]
[4] Source: Equals average long-term Consensus Forecast of 10-year Canadian government bond yield for the period 2013-2022
[5] Equals 30-day average spread between 10- and 30-year Canadian government bond ending February 28, 2013.
[6] Equals [5] + [6]
[7] Equals [3]+[6]
[8] Source: Bloomberg
[9] Source: Bloomberg
[10] Equals [8] x [9]
[11] Equals [10] / sum of column [10]
[12] Source: Bloomberg
[13] Source: Bloomberg
[14] Equals [11] x [12]
[15] Equals [11] x [13]

30-DAY CONSTANT GROWTH DCF -- U.S. PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Zacks EPS Growth	SNL EPS Growth	Value Line EPS Growth	First Call Growth	Average Growth Rate	Low DCF ROE	Mean DCF ROE	High DCF ROE
Consolidated Edison	ED	$2.46	$59.63	4.13%	4.19%	2.97%	3.20%	3.50%	2.00%	2.92%	6.17%	7.10%	7.70%
NextEra Energy, Inc.	NEE	$2.64	$72.18	3.66%	3.77%	5.95%	6.60%	5.50%	6.37%	6.11%	9.26%	9.87%	10.38%
Northeast Utilities	NU	$1.47	$40.68	3.61%	3.74%	7.05%	8.00%	6.50%	6.58%	7.03%	10.23%	10.77%	11.76%
Southern Co.	SO	$1.96	$44.15	4.44%	4.55%	4.98%	5.00%	4.50%	4.83%	4.83%	9.04%	9.37%	9.55%
Wisconsin Energy	WEC	$1.36	$39.53	3.44%	3.54%	5.53%	4.80%	6.50%	5.37%	5.55%	8.32%	9.09%	10.05%
Xcel Energy, Inc.	XEL	$1.08	$27.80	3.88%	3.98%	4.73%	5.00%	6.00%	4.95%	5.17%	8.71%	9.15%	10.00%
MEAN		$1.83	$47.33	3.86%	3.96%	5.20%	5.43%	5.42%	5.02%	5.27%	8.62%	9.23%	9.91%
MEDIAN		$1.72	$42.41	3.77%	3.88%	5.26%	5.00%	5.75%	5.16%	5.36%	8.87%	9.26%	10.03%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, 30-day average as of February 28, 2013

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [9])

[5] Source: Zacks at February 28, 2013

[6] Source: SNL Financial at February 28, 2013

[7] Source: Value Line

[8] Source: Yahoo! Finance at February 28, 2013

[9] Equals Average([5], [6], [7], [8])

[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])

[11] Equals [4] + [9]

[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

90-DAY CONSTANT GROWTH DCF -- U.S. PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Zacks EPS Growth	SNL EPS Growth	Value Line EPS Growth	First Call Growth	Average Growth Rate	Low DCF ROE	Mean DCF ROE	High DCF ROE
Consolidated Edison	ED	$2.46	$56.68	4.34%	4.40%	2.97%	3.20%	3.50%	2.00%	2.92%	6.38%	7.32%	7.92%
NextEra Energy, Inc.	NEE	$2.64	$70.32	3.75%	3.87%	5.95%	6.60%	5.50%	6.37%	6.11%	9.36%	9.97%	10.48%
Northeast Utilities	NU	$1.47	$39.50	3.72%	3.85%	7.05%	8.00%	6.50%	6.58%	7.03%	10.34%	10.89%	11.87%
Southern Co.	SO	$1.96	$43.88	4.47%	4.57%	4.98%	5.00%	4.50%	4.83%	4.83%	9.07%	9.40%	9.58%
Wisconsin Energy	WEC	$1.36	$38.09	3.57%	3.67%	5.53%	4.80%	6.50%	5.37%	5.55%	8.46%	9.22%	10.19%
Xcel Energy, Inc.	XEL	$1.08	$27.32	3.95%	4.05%	4.73%	5.00%	6.00%	4.95%	5.17%	8.78%	9.22%	10.07%
MEAN		$1.83	$45.97	3.97%	4.07%	5.20%	5.43%	5.42%	5.02%	5.27%	8.73%	9.34%	10.02%
MEDIAN		$1.72	$41.69	3.85%	3.96%	5.26%	5.00%	5.75%	5.16%	5.36%	8.92%	9.31%	10.13%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, 90-day average as of February 28, 2013

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [9])

[5] Source: Zacks at February 28, 2013

[6] Source: SNL Financial at February 28, 2013

[7] Source: Value Line

[8] Source: Yahoo! Finance at February 28, 2013

[9] Equals Average([5], [6], [7], [8])

[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])

[11] Equals [4] + [9]

[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

180-DAY CONSTANT GROWTH DCF -- U.S. PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Zacks EPS Growth	SNL EPS Growth	Value Line EPS Growth	First Call Growth	Average Growth Rate	Low DCF ROE	Mean DCF ROE	High DCF ROE
Consolidated Edison	ED	$2.46	$59.63	4.13%	4.19%	2.97%	3.20%	3.50%	2.00%	2.92%	6.17%	7.10%	7.70%
NextEra Energy, Inc.	NEE	$2.64	$69.60	3.79%	3.91%	5.95%	6.60%	5.50%	6.37%	6.11%	9.40%	10.01%	10.52%
Northeast Utilities	NU	$1.47	$39.06	3.76%	3.90%	7.05%	8.00%	6.50%	6.58%	7.03%	10.39%	10.93%	11.91%
Southern Co.	SO	$1.96	$45.18	4.34%	4.44%	4.98%	5.00%	4.50%	4.83%	4.83%	8.94%	9.27%	9.45%
Wisconsin Energy	WEC	$1.36	$38.50	3.53%	3.63%	5.53%	4.80%	6.50%	5.37%	5.55%	8.42%	9.18%	10.15%
Xcel Energy, Inc.	XEL	$1.08	$27.83	3.88%	3.98%	4.73%	5.00%	6.00%	4.95%	5.17%	8.70%	9.15%	10.00%
MEAN		$1.83	$46.63	3.91%	4.01%	5.20%	5.43%	5.42%	5.02%	5.27%	8.67%	9.27%	9.95%
MEDIAN		$1.72	$42.12	3.84%	3.95%	5.26%	5.00%	5.75%	5.16%	5.36%	8.82%	9.23%	10.07%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, 180-day average as of February 28, 2013

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [9])

[5] Source: Zacks at February 28, 2013

[6] Source: SNL Financial at February 28, 2013

[7] Source: Value Line

[8] Source: Yahoo! Finance at February 28, 2013

[9] Equals Average([5], [6], [7], [8])

[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])

[11] Equals [4] + [9]

[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

30-DAY CONSTANT GROWTH DCF -- CANADIAN PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Zacks EPS Growth	SNL EPS Growth	Value Line EPS Growth	First Call Growth	Average Growth Rate	Low DCF ROE	Mean DCF ROE	High DCF ROE
Canadian Utilities Limited	CU	$1.94	$74.76	2.60%	2.70%	--	7.70%	--	7.80%	7.75%	10.39%	10.45%	10.50%
Emera Inc.	EMA	$1.40	$35.60	3.93%	4.08%	--	7.50%	--	7.45%	7.48%	11.53%	11.55%	11.58%
Enbridge Inc.	ENB	$1.26	$44.49	2.83%	2.98%	9.85%	10.00%	10.00%	12.60%	10.61%	12.82%	13.60%	15.61%
Fortis Inc.	FTS	$1.24	$34.00	3.65%	3.73%	--	4.90%	--	3.97%	4.44%	7.69%	8.16%	8.64%
TransCanada Corporation	TRP	$1.76	$48.09	3.66%	3.82%	--	--	11.50%	6.47%	8.99%	10.25%	12.81%	15.37%
Valener Inc.	VNR	$1.00	$16.15	6.19%	6.41%	--	6.00%	--	8.00%	7.00%	12.38%	13.41%	14.44%
MEAN		$1.43	$42.18	3.81%	3.95%	--	7.22%	10.75%	7.72%	7.71%	10.84%	11.66%	12.69%
MEDIAN		$1.33	$40.04	3.65%	3.78%	--	7.50%	10.75%	7.63%	7.61%	10.96%	12.18%	13.01%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, 30-day average as of February 28, 2013

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [9])

[5] Source: Zacks at February 28, 2013

[6] Source: SNL Financial at February 28, 2013

[7] Source: Value Line

[8] Source: Yahoo! Finance at February 28, 2013

[9] Equals Average([5], [6], [7], [8])

[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])

[11] Equals [4] + [9]

[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

90-DAY CONSTANT GROWTH DCF -- CANADIAN PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Zacks EPS Growth	SNL EPS Growth	Value Line EPS Growth	First Call Growth	Average Growth Rate	Low DCF ROE	Mean DCF ROE	High DCF ROE
Canadian Utilities Limited	CU	$1.94	$70.53	2.75%	2.86%	--	7.70%	--	7.80%	7.75%	10.56%	10.61%	10.66%
Emera Inc.	EMA	$1.40	$34.92	4.01%	4.16%	--	7.50%	--	7.45%	7.48%	11.61%	11.63%	11.66%
Enbridge Inc.	ENB	$1.26	$42.07	3.00%	3.15%	9.85%	10.00%	10.00%	12.60%	10.61%	12.99%	13.77%	15.78%
Fortis Inc.	FTS	$1.24	$33.80	3.67%	3.75%	--	4.90%	--	3.97%	4.44%	7.71%	8.19%	8.66%
TransCanada Corporation	TRP	$1.76	$46.59	3.78%	3.95%	--	--	11.50%	6.47%	8.99%	10.37%	12.93%	15.50%
Valener Inc.	VNR	$1.00	$16.06	6.23%	6.45%	--	6.00%	--	8.00%	7.00%	12.41%	13.45%	14.48%
MEAN		$1.43	$40.66	3.91%	4.05%	--	7.22%	10.75%	7.72%	7.71%	10.94%	11.76%	12.79%
MEDIAN		$1.33	$38.49	3.72%	3.85%	--	7.50%	10.75%	7.63%	7.61%	11.08%	12.28%	13.07%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, 90-day average as of February 28, 2013

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [9])

[5] Source: Zacks at February 28, 2013

[6] Source: SNL Financial at February 28, 2013

[7] Source: Value Line

[8] Source: Yahoo! Finance at February 28, 2013

[9] Equals Average([5], [6], [7], [8])

[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])

[11] Equals [4] + [9]

[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

180-DAY CONSTANT GROWTH DCF -- CANADIAN PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Zacks EPS Growth	SNL EPS Growth	Value Line EPS Growth	First Call Growth	Average Growth Rate	Low DCF ROE	Mean DCF ROE	High DCF ROE
Canadian Utilities Limited	CU	$1.94	$69.35	2.80%	2.91%	--	7.70%	--	7.80%	7.75%	10.61%	10.66%	10.71%
Emera Inc.	EMA	$1.40	$34.69	4.04%	4.19%	--	7.50%	--	7.45%	7.48%	11.64%	11.66%	11.69%
Enbridge Inc.	ENB	$1.26	$40.87	3.08%	3.25%	9.85%	10.00%	10.00%	12.60%	10.61%	13.08%	13.86%	15.88%
Fortis Inc.	FTS	$1.24	$33.46	3.71%	3.79%	--	4.90%	--	3.97%	4.44%	7.75%	8.22%	8.70%
TransCanada Corporation	TRP	$1.76	$45.46	3.87%	4.05%	--	--	11.50%	6.47%	8.99%	10.47%	13.03%	15.59%
Valener Inc.	VNR	$1.00	$15.91	6.28%	6.50%	--	6.00%	--	8.00%	7.00%	12.47%	13.50%	14.54%
MEAN		$1.43	$39.96	3.96%	4.11%	--	7.22%	10.75%	7.72%	7.71%	11.00%	11.82%	12.85%
MEDIAN		$1.33	$37.78	3.79%	3.92%	--	7.50%	10.75%	7.63%	7.61%	11.12%	12.35%	13.11%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, 180-day average as of February 28, 2013

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [9])

[5] Source: Zacks at February 28, 2013

[6] Source: SNL Financial at February 28, 2013

[7] Source: Value Line

[8] Source: Yahoo! Finance at February 28, 2013

[9] Equals Average([5], [6], [7], [8])

[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])

[11] Equals [4] + [9]

[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

30-DAY SUSTAINABLE GROWTH DCF -- U.S. PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Zacks EPS Growth	SNL EPS Growth	Value Line EPS Growth	First Call	Sustainable Growth Estimate	Average Growth Rate	Low DCF ROE	Mean DCF ROE	High DCF ROE
Consolidated Edison	ED	$2.46	$59.63	4.13%	4.19%	2.97%	3.20%	3.50%	2.00%	3.36%	3.14%	6.17%	7.33%	7.70%
NextEra Energy, Inc.	NEE	$2.64	$72.18	3.66%	3.77%	5.95%	6.60%	5.50%	6.37%	6.25%	6.18%	9.26%	9.95%	10.38%
Northeast Utilities	NU	$1.47	$40.68	3.61%	3.71%	7.05%	8.00%	6.50%	6.58%	3.74%	5.39%	7.42%	9.10%	11.76%
Southern Co.	SO	$1.96	$44.15	4.44%	4.54%	4.98%	5.00%	4.50%	4.83%	4.02%	4.42%	8.55%	8.96%	9.55%
Wisconsin Energy	WEC	$1.36	$39.53	3.44%	3.54%	5.53%	4.80%	6.50%	5.37%	5.62%	5.59%	8.32%	9.12%	10.05%
Xcel Energy, Inc.	XEL	$1.08	$27.80	3.88%	3.98%	4.73%	5.00%	6.00%	4.95%	4.18%	4.67%	8.14%	8.65%	10.00%
MEAN		$1.83	$47.33	3.86%	3.95%	5.20%	5.43%	5.42%	5.02%	4.53%	4.90%	7.98%	8.85%	9.91%
MEDIAN		$1.72	$42.41	3.77%	3.87%	5.26%	5.00%	5.75%	5.16%	4.10%	5.03%	8.23%	9.03%	10.03%

Notes:

[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, 30-day average as of February 28, 2013
[3] Equals [1] / [2]
[4] Equals [3] x (1+(0.5 x [10]))
[5] Source: Zacks at February 28, 2013
[6] Source: SNL Financial at February 28, 2013
[7] Source: Value Line
[8] Source: Yahoo! Finance at February 28, 2013
[9] Source: Sustainable Growth Calculation
[10] Equals 0.5 x Average ([5], [6], [7], [8]) + 0.5 x [9]
[11] Equals [3] x (1 + (0.5 x Minimum ([5], [6], [7], [8], [9]))) + Minimum ([5], [6], [7], [8], [9])
[12] Equals [4] + [10]
[13] Equals [3] x (1 + (0.5 x Maximum ([5], [6], [7], [8], [9]))) + Maximum ([5], [6], [7], [8], [9])

90-DAY SUSTAINABLE GROWTH DCF -- U.S. PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
Company		Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Zacks EPS Growth	SNL EPS Growth	Value Line EPS Growth	First Call	Sustainable Growth Estimate	Average Growth Rate	Low DCF ROE	Mean DCF ROE	High DCF ROE
Consolidated Edison	ED	$2.46	$56.68	4.34%	4.41%	2.97%	3.20%	3.50%	2.00%	3.36%	3.14%	6.38%	7.55%	7.92%
NextEra Energy, Inc.	NEE	$2.64	$70.32	3.75%	3.87%	5.95%	6.60%	5.50%	6.37%	6.25%	6.18%	9.36%	10.05%	10.48%
Northeast Utilities	NU	$1.47	$39.50	3.72%	3.82%	7.05%	8.00%	6.50%	6.58%	3.74%	5.39%	7.53%	9.21%	11.87%
Southern Co.	SO	$1.96	$43.88	4.47%	4.57%	4.98%	5.00%	4.50%	4.83%	4.02%	4.42%	8.58%	8.99%	9.58%
Wisconsin Energy	WEC	$1.36	$38.09	3.57%	3.67%	5.53%	4.80%	6.50%	5.37%	5.62%	5.59%	8.46%	9.26%	10.19%
Xcel Energy, Inc.	XEL	$1.08	$27.32	3.95%	4.04%	4.73%	5.00%	6.00%	4.95%	4.18%	4.67%	8.21%	8.72%	10.07%
MEAN		$1.83	$45.97	3.97%	4.06%	5.20%	5.43%	5.42%	5.02%	4.53%	4.90%	8.09%	8.96%	10.02%
MEDIAN		$1.72	$41.69	3.85%	3.96%	5.26%	5.00%	5.75%	5.16%	4.10%	5.03%	8.34%	9.10%	10.13%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, 90-day average as of February 28, 2013

[3] Equals [1] / [2]

[4] Equals [3] x (1+(0.5 x [10]))

[5] Source: Zacks at February 28, 2013

[6] Source: SNL Financial at February 28, 2013

[7] Source: Value Line

[8] Source: Yahoo! Finance at February 28, 2013

[9] Source: Sustainable Growth Calculation

[10] Equals 0.5 x Average ([5], [6], [7], [8]) + 0.5 x [9]

[11] Equals [3] x (1 + (0.5 x Minimum ([5], [6], [7], [8], [9]))) + Minimum ([5], [6], [7], [8], [9])

[12] Equals [4] + [10]

[13] Equals [3] x (1 + (0.5 x Maximum ([5], [6], [7], [8], [9]))) + Maximum ([5], [6], [7], [8], [9])

180-DAY SUSTAINABLE GROWTH DCF -- U.S. PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
Company		Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Zacks EPS Growth	SNL EPS Growth	Value Line EPS Growth	First Call	Sustainable Growth Estimate	Average Growth Rate	Low DCF ROE	Mean DCF ROE	High DCF ROE
Consolidated Edison	ED	$2.46	$59.63	4.13%	4.19%	2.97%	3.20%	3.50%	2.00%	3.36%	3.14%	6.17%	7.33%	7.70%
NextEra Energy, Inc.	NEE	$2.64	$69.60	3.79%	3.91%	5.95%	6.60%	5.50%	6.37%	6.25%	6.18%	9.40%	10.09%	10.52%
Northeast Utilities	NU	$1.47	$39.06	3.76%	3.86%	7.05%	8.00%	6.50%	6.58%	3.74%	5.39%	7.57%	9.25%	11.91%
Southern Co.	SO	$1.96	$45.18	4.34%	4.43%	4.98%	5.00%	4.50%	4.83%	4.02%	4.42%	8.45%	8.86%	9.45%
Wisconsin Energy	WEC	$1.36	$38.50	3.53%	3.63%	5.53%	4.80%	6.50%	5.37%	5.62%	5.59%	8.42%	9.22%	10.15%
Xcel Energy, Inc.	XEL	$1.08	$27.83	3.88%	3.97%	4.73%	5.00%	6.00%	4.95%	4.18%	4.67%	8.14%	8.65%	10.00%
MEAN		$1.83	$46.63	3.91%	4.00%	5.20%	5.43%	5.42%	5.02%	4.53%	4.90%	8.02%	8.90%	9.95%
MEDIAN		$1.72	$42.12	3.84%	3.94%	5.26%	5.00%	5.75%	5.16%	4.10%	5.03%	8.28%	9.04%	10.07%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, 180-day average as of February 28, 2013

[3] Equals [1] / [2]

[4] Equals [3] x (1+(0.5 x [10]))

[5] Source: Zacks at February 28, 2013

[6] Source: SNL Financial at February 28, 2013

[7] Source: Value Line

[8] Source: Yahoo! Finance at February 28, 2013

[9] Source: Sustainable Growth Calculation

[10] Equals 0.5 x Average ([5], [6], [7], [8]) + 0.5 x [9]

[11] Equals [3] x (1 + (0.5 x Minimum ([5], [6], [7], [8], [9]))) + Minimum ([5], [6], [7], [8], [9])

[12] Equals [4] + [10]

[13] Equals [3] x (1 + (0.5 x Maximum ([5], [6], [7], [8], [9]))) + Maximum ([5], [6], [7], [8], [9])

SUSTAINABLE GROWTH RATE CALCULATION -- U.S. PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]
			Payout Ratio		Average Retention		Return on Common Equity		Average Return on Common			Common Shares Outstanding			Price (2015-17)		0.75%	Book Value per Share	Market/ Book				
Company	Ticker	2012	2013	2015-17	Ratio	2012	2013	2015-17	Equity	B*R	2011	2015-17	Growth	High	Low	Mid	2015-17	Ratio	"S"	"V"	S*V	BR + SV
Consolidated Edison	ED	65.00%	63.00%	60.00%	37.33%	9.00%	9.00%	9.00%	9.00%	3.36%	293.00	293.00	0.00%	65.00	50.00	57.5	47.75	1.20	0.00%	16.96%	0.00%	3.36%
NextEra Energy, Inc.	NEE	53.00%	54.00%	55.00%	46.00%	12.50%	12.50%	12.50%	12.50%	5.75%	422.00	438.00	0.75%	100.00	75.00	87.5	52.25	1.67	1.25%	40.29%	0.50%	6.25%
Northeast Utilities	NU	59.00%	58.00%	56.00%	42.33%	8.50%	8.50%	9.50%	8.83%	3.74%	314.00	314.00	0.00%	50.00	40.00	45	35.25	1.28	0.00%	21.67%	0.00%	3.74%
Southern Co.	SO	73.00%	73.00%	73.00%	27.00%	13.00%	13.00%	12.50%	12.83%	3.47%	872.00	905.00	0.75%	50.00	40.00	45	25.75	1.75	1.30%	42.78%	0.56%	4.02%
Wisconsin Energy	WEC	51.00%	56.00%	64.00%	43.00%	13.00%	13.00%	13.50%	13.17%	5.66%	230.49	230.00	-0.04%	45.00	35.00	40	20.50	1.95	-0.08%	48.75%	-0.04%	5.62%
Xcel Energy, Inc.	XEL	58.00%	58.00%	60.00%	41.33%	10.00%	9.50%	10.00%	9.83%	4.06%	507.00	515.00	0.31%	35.00	25.00	30	22.00	1.36	0.43%	26.67%	0.11%	4.18%
MEAN																						4.53%
MEDIAN																						4.10%

Notes:

[1] Source: Value Line; "All Div'ds to Net Prof"
[2] Source: Value Line; "All Div'ds to Net Prof"
[3] Source: Value Line; "All Div'ds to Net Prof"
[4] Equals 1 − Average ([1]:[3])
[5] Source: Value Line; "Return on Com Eq"
[6] Source: Value Line; "Return on Com Eq"
[7] Source: Value Line; "Return on Com Eq"
[8] Equals Average ([5]:[7])
[9] Equals [4] x [6]
[10] Source: Value Line; “Common Shs Outst'g"
[11] Source: Value Line; “Common Shs Outst'g"
[12] Equals ([10] / [11]) ^ 0.2) − 1
[13] Source: Value Line
[14] Source: Value Line
[15] Average ([13], [14])
[16] Source: Value Line; “Book Value per sh"
[17] Equals [15] / [16]
[18] Equals [12] x [17]
[19] Equals 1 − (1 / [17])
[20] Equals [18] x [19]
[21] Equals [9] + [20]

30-DAY MULTI-STAGE DCF -- U.S. PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Company	Ticker	Annualized Dividend	Stock Price	Growth Rate, Years 1-5	Year 6	Year 7	Year 8	Year 9	Year 10	GDP Growth (perpetuity)	ROE
Consolidated Edison	ED	$2.46	$59.63	2.92%	3.26%	3.60%	3.94%	4.28%	4.62%	4.96%	8.76%
NextEra Energy, Inc.	NEE	$2.64	$72.18	6.11%	5.91%	5.72%	5.53%	5.34%	5.15%	4.96%	2.06%
Northeast Utilities	NU	$1.47	$40.68	7.03%	6.69%	6.34%	6.00%	5.65%	5.31%	4.96%	9.27%
Southern Co.	SO	$1.96	$44.15	4.83%	4.85%	4.87%	4.89%	4.92%	4.94%	4.96%	9.58%
Wisconsin Energy	WEC	$1.36	$39.53	5.55%	5.45%	5.35%	5.25%	5.16%	5.06%	4.96%	8.71%
Xcel Energy, Inc.	XEL	$1.08	$27.80	5.17%	5.14%	5.10%	5.06%	5.03%	4.99%	4.96%	9.09%
MEAN		$1.83	$47.33	5.27%	5.22%	5.16%	5.11%	5.06%	5.01%	4.96%	7.91%
MEDIAN		$1.72	$42.41	5.36%	5.29%	5.23%	5.16%	5.09%	5.03%	4.96%	8.92%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, 30-day average as of January 18, 2013

[3] Source: Constant Growth DCF

[4] Equals [3] − ([3] − [9]) / 6

[5] Equals [4] − ([3] − [9]) / 6

[6] Equals [5] − ([3] − [9]) / 6

[7] Equals [6] − ([3] − [9]) / 6

[8] Equals [7] − ([3] − [9]) / 6

[9] Consensus Economics Inc., Consensus Forecasts, October 8, 2012

[10] Internal rate of return

90-DAY MULTI-STAGE DCF -- U.S. PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Company	Ticker	Annualized Dividend	Stock Price	Growth Rate, Years 1-5	Year 6	Year 7	Year 8	Year 9	Year 10	GDP Growth (perpetuity)	ROE
Consolidated Edison	ED	$2.46	$56.68	2.92%	3.26%	3.60%	3.94%	4.28%	4.62%	4.96%	8.96%
NextEra Energy, Inc.	NEE	$2.64	$70.32	6.11%	5.91%	5.72%	5.53%	5.34%	5.15%	4.96%	9.19%
Northeast Utilities	NU	$1.47	$39.50	7.03%	6.69%	6.34%	6.00%	5.65%	5.31%	4.96%	9.40%
Southern Co.	SO	$1.96	$43.88	4.83%	4.85%	4.87%	4.89%	4.92%	4.94%	4.96%	9.61%
Wisconsin Energy	WEC	$1.36	$38.09	5.55%	5.45%	5.35%	5.25%	5.16%	5.06%	4.96%	8.85%
Xcel Energy, Inc.	XEL	$1.08	$27.32	5.17%	5.14%	5.10%	5.06%	5.03%	4.99%	4.96%	9.16%
MEAN		$1.83	$45.97	5.27%	5.22%	5.16%	5.11%	5.06%	5.01%	4.96%	9.20%
MEDIAN		$1.72	$41.69	5.36%	5.29%	5.23%	5.16%	5.09%	5.03%	4.96%	9.18%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, 90-day average as of January 18, 2013

[3] Source: Constant Growth DCF

[4] Equals [3] − ([3] − [9]) / 6

[5] Equals [4] − ([3] − [9]) / 6

[6] Equals [5] − ([3] − [9]) / 6

[7] Equals [6] − ([3] − [9]) / 6

[8] Equals [7] − ([3] − [9]) / 6

[9] Consensus Economics Inc., Consensus Forecasts, October 8, 2012

[10] Internal rate of return

180-DAY MULTI-STAGE DCF -- U.S. PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Company	Ticker	Annualized Dividend	Stock Price	Growth Rate, Years 1-5	Year 6	Year 7	Year 8	Year 9	Year 10	GDP Growth (perpetuity)	ROE
Consolidated Edison	ED	$2.46	$59.63	2.92%	3.26%	3.60%	3.94%	4.28%	4.62%	4.96%	8.76%
NextEra Energy, Inc.	NEE	$2.64	$69.60	6.11%	5.91%	5.72%	5.53%	5.34%	5.15%	4.96%	9.23%
Northeast Utilities	NU	$1.47	$39.06	7.03%	6.69%	6.34%	6.00%	5.65%	5.31%	4.96%	9.45%
Southern Co.	SO	$1.96	$45.18	4.83%	4.85%	4.87%	4.89%	4.92%	4.94%	4.96%	9.47%
Wisconsin Energy	WEC	$1.36	$38.50	5.55%	5.45%	5.35%	5.25%	5.16%	5.06%	4.96%	8.81%
Xcel Energy, Inc.	XEL	$1.08	$27.83	5.17%	5.14%	5.10%	5.06%	5.03%	4.99%	4.96%	9.09%
MEAN		$1.83	$46.63	5.27%	5.22%	5.16%	5.11%	5.06%	5.01%	4.96%	9.13%
MEDIAN		$1.72	$42.12	5.36%	5.29%	5.23%	5.16%	5.09%	5.03%	4.96%	9.16%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, 180-day average as of January 18, 2013

[3] Source: Constant Growth DCF

[4] Equals [3] − ([3] − [9]) / 6

[5] Equals [4] − ([3] − [9]) / 6

[6] Equals [5] − ([3] − [9]) / 6

[7] Equals [6] − ([3] − [9]) / 6

[8] Equals [7] − ([3] − [9]) / 6

[9] Consensus Economics Inc., Consensus Forecasts, October 8, 2012

[10] Internal rate of return

30-DAY MULTI-STAGE DCF -- CANADIAN PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Company	Ticker	Annualized Dividend	Stock Price	Growth Rate, Years 1-5	Year 6	Year 7	Year 8	Year 9	Year 10	GDP Growth (perpetuity)	ROE
Canadian Utilities Limited	CU	$1.94	$74.76	7.75%	7.13%	6.51%	5.90%	5.28%	4.66%	4.04%	7.46%
Emera Inc.	EMA	$1.40	$35.60	7.48%	6.90%	6.33%	5.76%	5.19%	4.61%	4.04%	9.09%
Enbridge Inc.	ENB	$1.26	$44.49	10.61%	9.52%	8.42%	7.33%	6.23%	5.14%	4.04%	8.47%
Fortis Inc.	FTS	$1.24	$34.00	4.44%	4.37%	4.30%	4.24%	4.17%	4.11%	4.04%	7.93%
TransCanada Corporation	TRP	$1.76	$48.09	8.99%	8.16%	7.34%	6.51%	5.69%	4.86%	4.04%	9.19%
Valener Inc.	VNR	$1.00	$16.15	7.00%	6.51%	6.01%	5.52%	5.03%	4.53%	4.04%	11.67%
MEAN		$1.43	$42.18	7.71%	7.10%	6.49%	5.87%	5.26%	4.65%	4.04%	8.97%
MEDIAN		$1.33	$40.04	7.61%	7.02%	6.42%	5.83%	5.23%	4.64%	4.04%	8.78%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, 30-day average as of January 18, 2013

[3] Source: Constant Growth DCF

[4] Equals [3] − ([3] − [9]) / 6

[5] Equals [4] − ([3] − [9]) / 6

[6] Equals [5] − ([3] − [9]) / 6

[7] Equals [6] − ([3] − [9]) / 6

[8] Equals [7] − ([3] − [9]) / 6

[9] Consensus Economics Inc., Consensus Forecasts, October 8, 2012

[10] Internal rate of return

90-DAY MULTI-STAGE DCF -- CANADIAN PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Company	Ticker	Annualized Dividend	Stock Price	Growth Rate, Years 1-5	Year 6	Year 7	Year 8	Year 9	Year 10	GDP Growth (perpetuity)	ROE
Canadian Utilities Limited	CU	$1.94	$70.53	7.75%	7.13%	6.51%	5.90%	5.28%	4.66%	4.04%	7.66%
Emera Inc.	EMA	$1.40	$34.92	7.48%	6.90%	6.33%	5.76%	5.19%	4.61%	4.04%	9.19%
Enbridge Inc.	ENB	$1.26	$42.07	10.61%	9.52%	8.42%	7.33%	6.23%	5.14%	4.04%	8.71%
Fortis Inc.	FTS	$1.24	$33.80	4.44%	4.37%	4.30%	4.24%	4.17%	4.11%	4.04%	7.95%
TransCanada Corporation	TRP	$1.76	$46.59	8.99%	8.16%	7.34%	6.51%	5.69%	4.86%	4.04%	9.35%
Valener Inc.	VNR	$1.00	$16.06	7.00%	6.51%	6.01%	5.52%	5.03%	4.53%	4.04%	11.71%
MEAN		$1.43	$40.66	7.71%	7.10%	6.49%	5.87%	5.26%	4.65%	4.04%	9.10%
MEDIAN		$1.33	$38.49	7.61%	7.02%	6.42%	5.83%	5.23%	4.64%	4.04%	8.95%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, 90-day average as of January 18, 2013

[3] Source: Constant Growth DCF

[4] Equals [3] − ([3] − [9]) / 6

[5] Equals [4] − ([3] − [9]) / 6

[6] Equals [5] − ([3] − [9]) / 6

[7] Equals [6] − ([3] − [9]) / 6

[8] Equals [7] − ([3] − [9]) / 6

[9] Consensus Economics Inc., Consensus Forecasts, October 8, 2012

[10] Internal rate of return

180-DAY MULTI-STAGE DCF -- CANADIAN PROXY GROUP

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Company	Ticker	Annualized Dividend	Stock Price	Growth Rate, Years 1-5	Year 6	Year 7	Year 8	Year 9	Year 10	GDP Growth (perpetuity)	ROE
Canadian Utilities Limited	CU	$1.94	$69.35	7.75%	7.13%	6.51%	5.90%	5.28%	4.66%	4.04%	7.72%
Emera Inc.	EMA	$1.40	$34.69	7.48%	6.90%	6.33%	5.76%	5.19%	4.61%	4.04%	9.22%
Enbridge Inc.	ENB	$1.26	$40.87	10.61%	9.52%	8.42%	7.33%	6.23%	5.14%	4.04%	8.84%
Fortis Inc.	FTS	$1.24	$33.46	4.44%	4.37%	4.30%	4.24%	4.17%	4.11%	4.04%	7.99%
TransCanada Corporation	TRP	$1.76	$45.46	8.99%	8.16%	7.34%	6.51%	5.69%	4.86%	4.04%	9.47%
Valener Inc.	VNR	$1.00	$15.91	7.00%	6.51%	6.01%	5.52%	5.03%	4.53%	4.04%	11.78%
MEAN		$1.43	$39.96	7.71%	7.10%	6.49%	5.87%	5.26%	4.65%	4.04%	9.17%
MEDIAN		$1.33	$37.78	7.61%	7.02%	6.42%	5.83%	5.23%	4.64%	4.04%	9.03%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, 180-day average as of January 18, 2013

[3] Source: Constant Growth DCF

[4] Equals [3] − ([3] − [9]) / 6

[5] Equals [4] − ([3] − [9]) / 6

[6] Equals [5] − ([3] − [9]) / 6

[7] Equals [6] − ([3] − [9]) / 6

[8] Equals [7] − ([3] − [9]) / 6

[9] Consensus Economics Inc., Consensus Forecasts, October 8, 2012

[10] Internal rate of return